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Your Ref:

Our Ref: SDW3152/21  
WYP11481/19

Enquiries: Andrew Quach  
Tel: (03) 9742 0760

17 November 2021

Spiire Australia Pty Ltd  
L 6 414 La Trobe St  
MELBOURNE VIC 3000

Dear Mithun Ranjanan

**RE: MAMBOURIN STAGE 15 - CONSTRUCTION PLAN APPROVAL**

Please be advised that the road and drainage construction plans submitted to Council for Mambourin Stage 15 are approved subject to the following conditions:-

1. **Prior to commencement of works, an on-site pre-commencement meeting must be held between Council, the Engineering Consultant and the Contractor. Please contact Darren Maskell from Council on 0419 373 676 to book a precommencement meeting.**
2. **Prior to installation of any Tactile Ground Surface Indicators, the proposed product must be inspected and approved by Council. Please notify Councils construction supervisor to book an inspection prior to installation.**
3. **Prior to commencement of works, the Plan of Subdivision must be certified by Council.**
4. **Prior to commencement of approved works within ANY existing road reserves, the consultant/contractor MUST apply for consent to work within the road reserves from Council or any other relevant responsible authorities. The Contractor will be responsible for maintain all existing assets within the limit of works as demonstrated on the approved plans.**
5. **A free-flowing drainage outlet must be established and maintained throughout the entirety of construction works. No road boxing works are to commence in the absence of a free-flowing drainage outlet.**
6. Prior to commencement of works, the consultant/contractor shall provide to Council the following information:-
  - source of quarry material; and
  - optimum moisture content and maximum modified dry density of the F.C.R to be used (from N.A.T.A. approved laboratory).

If the source of the quarry material is changed during the course of the works, new test results shall be provided.

7. Prior to the commencement of works, a Site Environmental Management Plan (SEMP) must be submitted to and **approved** by Council.
8. Construction is to commence within twelve (12) months of approval, otherwise construction plans and specifications are to comply with design standards current at the time of re-submission.
9. Filled allotments shall be compacted in 150mm maximum layers, with compaction tests being taken at not more than 300mm lift on all allotments and filled areas. The test results and location of the tests on each allotment shall be forwarded to Council.

10. Wyndham City Council Specifications and standard details shall be read in conjunction with the approved plans.
11. Prior to Council issuing a Statement of Compliance, pursuant to the Subdivision Act 1988, your firm shall provide to Council the following:
  - Payment of construction supervision fees amounting to 2.5% of the total cost of road and drainage works;
  - Payment of a maintenance bond amounting to 5% of the total cost of road and drainage works;
  - An electronic copy of all as constructed drawings and relevant files in both AutoCad DWG and Adobe PDF file formats, to either [subdiveng@wyndham.vic.gov.au](mailto:subdiveng@wyndham.vic.gov.au) or via Objective Connect. Please note that the minimum resolution of PDF files required is 300dpi;
  - An electronic copy of drainage catchment plans and detailed computations in Adobe PDF file format to either [subdiveng@wyndham.vic.gov.au](mailto:subdiveng@wyndham.vic.gov.au) or via Objective Connect;
  - As constructed asset information for drainage and related assets in digital format in accordance with "D-Spec" to either [subdiveng@wyndham.vic.gov.au](mailto:subdiveng@wyndham.vic.gov.au) or via Objective Connect; and
  - As-constructed asset information for assets within the road reserve in digital format in accordance with "R-Spec" to either [subdiveng@wyndham.vic.gov.au](mailto:subdiveng@wyndham.vic.gov.au) or via Objective Connect; and
  - The A.H.D levels and M.G.A co-ordinates of the high stability P.S.Ms.
  - For further information please see: <https://www.wyndham.vic.gov.au/subdivisionguidelines>
12. Easements are to be created to cover all services which cross any part of private allotments.
13. During construction of works under this permit, access to and egress from the subject land must be via a route designed and approved by the Council. Where practical this access should be remote from established residential areas.
14. Provide Landscaping Plan for approval by Council. Please contact [subdivlud@wyndham.vic.gov.au](mailto:subdivlud@wyndham.vic.gov.au) to arrange a pre-application meeting prior to the submission of landscape plans for municipal reserves and/or public open space.
15. WorkSafe Victoria is to be advised via E-mail ([construction@workcover.vic.gov.au](mailto:construction@workcover.vic.gov.au)) of these Subdivisional works with the following details:
  - Name of the principal contractor
  - Name and phone contact of relevant Engineering Consultants supervisor dealing with the works
  - Brief description of the works
  - Locality/address of the works
  - Estimated commencement date of the works, and
  - Expected completion date of the works.
16. In undertaking the construction works, the developer shall ensure all works are undertaken in accordance with the OH & S Act, Regulation and Codes, and shall maintain a safe workplace for Council's staff undertaking inspections. The supervision of works by Council staff only extends to the quality of Council's future infrastructure and does not include ensuring that the works are undertaken safely.

Please find a set of stamped approved plans attached.

Yours sincerely,



APRYL ASTUDILLO

**SENIOR DEVELOPMENT ENGINEER**

Encl: (1) Stamped approved plans

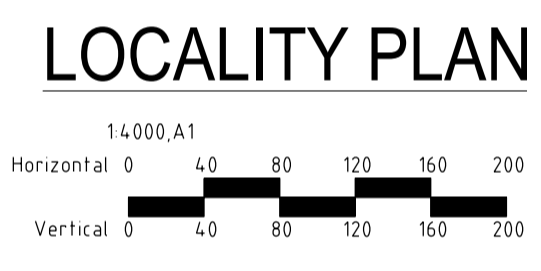
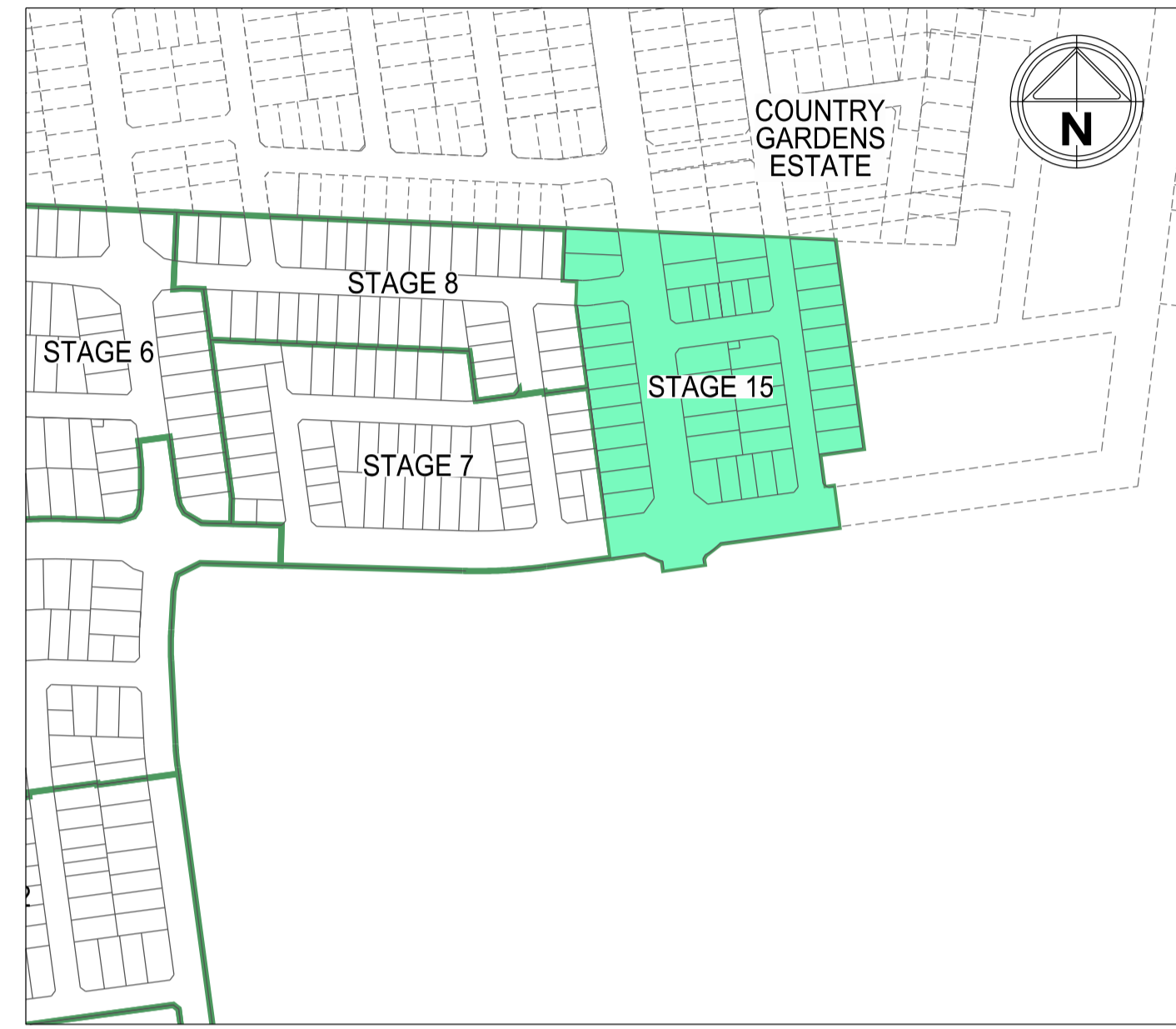
GENERAL NOTES:

1. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD)
2. ALL CO-ORDINATES ARE TO MAP GRID OF AUSTRALIA (MGA) ZONE 55
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE
4. 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
5. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH MPA AND HUME CITY COUNCIL STANDARD DRAWINGS, SPECIFICATIONS, APPROVED PLANS AND TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE
6. ROAD CHAINAGES REFER TO ROAD CENTRELINES. CHAINAGES FOR INTERSECTIONS AND CUL-DE-SACS REFER TO THE LIP OF KERB
7. 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
8. WHERE REQUIRED 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
9. THE DISPOSAL SITE FOR SPOIL REMOVAL FROM SITE AND TRUCK ROUTE IS TO BE SUBMITTED TO AND APPROVED BY THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE IN WRITING PRIOR TO THE COMMENCEMENT OF ANY WORKS
10. ALL REDUNDANT ASSETS ARE TO BE REMOVED AND DISPOSED OFF SITE
11. AT THE COMPLETION OF ALL WORKS, ALL RUBBISH, DEBRIS AND SURPLUS SPOIL SHALL BE REMOVED AND THE SITE SHALL BE CLEARED TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER OR THEIR REPRESENTATIVE
12. ALL FILLING ON LOTS AND WITHIN ROAD RESERVES GREATER THAN 200mm IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE WITH AS 3798-2007. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL (WHERE REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS
13. FILL AREAS TO BE STRIPPED OF TOPSOIL, FILLED AND TOPSOIL REPLACED TO OBTAIN FINAL FILL LEVELS AS SHOWN ON PLAN. FILLING IS TO BE CLEAN CLAY COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH A S.1289.5.1.1-2003
14. 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.488 (SEPT '95) AND SUBSEQUENT REVISIONS. THE CONTRACTOR SHALL IF REQUIRED PROVIDE VERIFICATION INCLUDING TEST CERTIFICATES TO THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVES
15. ALL BATTERS SHALL BE 1 IN 6, UNLESS OTHERWISE SHOWN
16. NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE FOR PUBLIC OPEN SPACE UNLESS OTHERWISE DIRECTED OR APPROVED BY THE SUPERINTENDENT
17. TBM'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 TBM'S THEREAFTER
18. AT LEAST 3 DAYS PRIOR TO COMMENCING WORK ON EXCAVATIONS IN EXCESS OF 150mm DEEP, A NOTIFICATION FORM MUST BE SENT TO WORKSAFE. THE CONTRACTOR IS TO COMPLY WITH WORKSAFE, THE MINES (TRENCHES) REGULATION 1982, THE MINES ACT 1958 AND OCCUPATIONAL HEALTH AND SAFETY ACT 1985, 2004
19. ALL SERVICE CONDUITS/TRENCHES UNDER ROAD PAVEMENTS ARE TO BE BACKFILLED WITH 20mm 3% CEMENT TREATED CLASS 3 CRUSHED ROCK COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE MODIFIED COMPACTION TEST IN ACCORDANCE WITH A S.1289.5.2.1-2003. ALL SERVICE CONDUITS/TRENCHES UNDER FOOTPATH, VEHICULAR CROSSINGS, PARKING BAYS, WITHIN 750mm OF PARKING BAYS AND ANY CONCRETE WORKS TO BE BACKFILLED WITH CLASS 3 CRUSHED ROCK
20. ALL DRAINS BEHIND KERB AND CHANNEL SHALL BE BACKFILLED TO MATCH PAVEMENT SUBGRADE LEVEL WITH 20mm CLASS 3 FCR COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE MODIFIED COMPACTION TEST IN ACCORDANCE WITH A S.1289.5.2.1-2003. ALL DRAINS, SEWERS, GAS & WATER MAINS LAID THROUGH THE ROAD PAVEMENT (EXCEPT CONDUITS) ARE TO BE BACKFILLED WITH 20mm CLASS 2 FCR COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE MODIFIED COMPACTION TEST IN ACCORDANCE WITH A S.1289.5.2.1-2003
21. WHERE REQUIRED, ALL EXISTING DAMS, DEPRESSIONS AND DRAINS 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
22. NO BLASTING TO BE CARRIED OUT WITHIN THE MUNICIPALITY WITHOUT OBTAINING COUNCIL'S PERMISSION
23. GAS AND WATER CONDUITS ARE TO BE:  
a. 950mm CLASS 12 P.V.C. - SINGLE SERVICE  
b. 810mm CLASS 12 P.V.C. - DUAL SERVICE (DRINKING AND NON DRINKING WATER)  
c. WITH THE FOLLOWING MINIMUM COVER TO FINISHED SURFACE LEVELS:  
d. ROAD PAVEMENT - 0.80m  
e. VERGE, FOOTPATHS - 0.45m
24. AG/SUBSOIL DRAIN TO BE LAID BEHIND KERB AND CHANNEL, KERB ONLY AND EDGE STRIPS WHERE REQUIRED IN ACCORDANCE WITH THE COUNCIL STANDARD DRAWING SD282 AND CONNECTED TO UNDERGROUND DRAINAGE
25. ALL STORMWATER DRAINS ARE TO BE CLASS 2 P.C. OR RIGID F.R.C. PIPES WITH ADCOL FLEXIBLE COLLARS UNLESS OTHERWISE SHOWN. ALL PIPES UP TO AND INCLUDING 750mm DIA. ARE TO BE RUBBER RING JOINTED (R.R.J.) INTERLOCKING / FLUSH JOINTS WITH EXTERNAL BANDS CAN ONLY BE USED ON PIPE SIZES OVER 750mm DIA.
26. CENTRELINES OF ALL EASEMENT DRAINS ARE OFFSET 10m OR 2.2m (WHERE OUTSIDE OF SEWER) FROM THE PROPERTY LINE UNLESS SHOWN OTHERWISE
27. WHERE CURVED PIPE ALIGNMENTS ARE SHOWN ON THE FACE PLANS THEY ARE TO BE LAID PARALLEL TO THE BACK OF KERB, EXCEPT WHERE A RADIUS HAS BEEN SPECIFICALLY NOMINATED. CURVED PIPES ARE TO BE APPROVED BY COUNCIL AND IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS
28. WATER TAPPINGS TO BE LOCATED IN CENTRE OF ALLOTMENTS UNLESS OTHERWISE SHOWN
29. TELSTRA IS TO BE NOTIFIED 7 DAYS PRIOR TO PLACEMENT OF CONCRETE WORKS
30. PAVEMENT DEPTHS MAY BE MODIFIED AS DIRECTED BY THE SUPERINTENDENT. PAVEMENT TO BE BOXED OUT TO MINIMUM DEPTH DENOTED, INSPECTED AND IF SUBGRADE IS IN QUESTION, FURTHER TESTING CARRIED OUT TO DETERMINE FINAL PAVEMENT DEPTH
31. WHERE PAVEMENT IS CONSTRUCTED ON FILLING, FILL MATERIAL IS TO BE APPROVED BY THE SUPERINTENDENT AND COUNCIL. FILLING TO BE CONSTRUCTED IN LAYERS 150mm THICK WITH COMPACTION ACHIEVING 95% AUSTRALIAN STANDARD DENSITY
32. WHEN PAVEMENT EXCAVATION IS IN ROCK, ALL LOOSE MATERIAL (INCLUDING ROCKS AND CLAY) MUST BE REMOVED. THE SUB-GRADE MUST THEN BE REGULATED WITH COUNCIL APPROVED MATERIAL
33. ALL TRAFFIC CONTROL MEASURES, SIGNS AND LINEMARKING SHALL BE IN ACCORDANCE WITH A S.174.2 - 1, 2 & 3. STREET NAME SIGNS ARE TO BE IN ACCORDANCE WITH COUNCIL STANDARD DRAWING SD409. ALL LINEMARKING PAINT SHALL BE LONG LIFE TYPE IN ACCORDANCE WITH SECTION 95C OF THE HUME CITY COUNCIL SPECIFICATIONS. LATERAL WORKS AND ARROWS BEING COLoured APPLIED PLASTIC TROWELLED INTO PLACE. MATERIAL DEGRADEUR PLASTELINE AND LONGITUDINAL LINES BEING EXTRUDED THERMOPLASTIC MATERIAL. ALL SIGNS TO BE CLASS 1 HIGH INTENSITY TYPE AND TO COMPLY WITH THE REQUIREMENTS OF A S.174.3 - 2001
34. ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE SUPPLIED AND MAINTAINED IN ACCORDANCE WITH AS 174.2-3

35. ON COMMENCEMENT OF CONSTRUCTION WORKS, THE CONTRACTOR MUST COMPLY WITH THE RECOMMENDATIONS OF THE ENVIRONMENT 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
36. ALL TREES AND SHRUBS ARE TO BE RETAINED UNLESS OTHERWISE SHOWN OR DIRECTED BY THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE
37. NO TREE OR NATIVE VEGETATION IS TO BE DISTURBED OR REMOVED WITHOUT PRIOR APPROVAL FROM COUNCILS SUSTAINABLE ENVIRONMENT DEPARTMENT. ANY TREES REMOVED, VEGETATION OR OTHER MATERIALS ARE NOT TO BE BURNT ON SITE
38. WHERE, AS A CONDITION OF THE PLANNING PERMIT OR AS A RESULT OF THE PRE-CONSTRUCTION MEETING, FENCING OF AREAS CONTAINING TREES, NATIVE GRASSES AND SHRUBS IS REQUIRED, A THREE STRAND STAR PICKET AND WIRE FENCE SHALL BE CONSTRUCTED
39. THE CONTRACTOR IS REQUIRED TO OBTAIN A 'PERMIT TO WORK' FROM MELBOURNE WATER'S SURVEILLANCE OFFICER AT THE PRE-COMMENCEMENT MEETING. THE CONTRACTOR IS REQUIRED TO ENSURE THAT THE 'PERMIT TO WORK' IS KEPT UP TO DATE FOR THE DURATION OF THE CONTRACT
40. CONTRACTOR TO ENSURE SEWER MANHOLES ARE WHOLLY LOCATED IN PROPOSED FOOTPATHS
41. COUNCIL TO BE NOTIFIED SEVEN (7) CLEAR WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORKS WITH A PRE-COMMENCEMENT MEETING BEING HELD BETWEEN HUME CITY COUNCIL, THE CONSULTANT AND THE CONTRACTOR BEFORE WORKS COMMENCE. A SITE MANAGEMENT PLAN IS TO BE SUBMITTED PRIOR TO COMMENCEMENT OF WORKS AND PRIOR TO AN ONSITE PRE-COMMENCEMENT MEETING
42. PRIOR TO COMMENCEMENT OF THE WORKS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION:  
a. SOURCE OF QUARRY MATERIAL  
b. N.A.T.A. APPROVED TESTS RESULTS FOR THE F.C.R. THAT IS TO BE USED  
c. IF THE SOURCE OF THE QUARRY MATERIAL IS CHANGED DURING THE COURSE OF THE WORKS, THEN NEW TEST RESULTS SHALL BE PROVIDED
43. PRIOR TO COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR MUST ENSURE THAT ALL MATTERS RELATING TO THE OCCUPATIONAL HEALTH AND SAFETY ACT 2004 AND OHS REGULATIONS 2007 HAVE BEEN AND WILL BE COMPLIED WITH
44. THE CONTRACTOR MUST ARRANGE THE REQUISITE INSPECTIONS OF THE WORKS WITH THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE AS PER THE HOLD POINTS IN THE MPA MANUAL AND HUME CITY COUNCIL SPECIFICATIONS
45. THE CONTRACTOR IS TO OBTAIN A BUILDING PERMIT FOR ANY STRUCTURES / FENCES AND FOR ANY RETAINING WALLS OVER 1.0m IN HEIGHT
46. PRIOR TO STATEMENT OF COMPLIANCE ALL DISTURBED AREAS (INCLUDING NATURE STRIPS, BATTERS, ALLOTMENTS WITH GRADES OF 1% AND GREATER, AND RESERVES) ARE TO BE REINSTATED TO A CLEAN, TIDY CONDITION, TOP DRESSED 100mm LOAMY TOP SOIL FREE OF RUBBISH, DEBRIS, CLUMPS, SODS AND CLAY LUMPS), LIGHTLY COMPACTED AND HYDRO MULCHED. HYDROMULCH AND SEED MIX TO BE:  
- 40kg/ha KIKUYU  
- 200kg/ha TURF TYPE PERENNIAL RYE  
- 100kg/ha CREEPING RED FESCUE  
- 1500kg/ha CELLULOSE FIBRE  
- SOIL BINDER, SPECIFICALLY MANUFACTURED FOR HYDROMULCHING, USED AT MANUFACTURER'S RECOMMENDATION RATES (IE g. ORGANIC GAUR TACKIFIERS @ 20 - 30 kg/ha, BASED ON SITE CONDITIONS)
- NOTE: BITUMEN BINDERS ARE NOT ACCEPTED BY COUNCIL. GRASS IS TO BE ESTABLISHED PRIOR TO THE END OF THE MAINTENANCE PERIOD, UNLESS OTHERWISE AGREED IN WRITING
47. FOOTPATHS ARE TO BE 50mm OFFSET FROM TITLE BOUNDARIES UNLESS NOTED OTHERWISE. VEHICLE CROSSING ALIGNMENTS ARE GENERALLY TO BE PARALLEL TO THE SIDE BOUNDARY OR AS OTHERWISE SHOWN
48. ALL NEW CONCRETE WORKS SHALL BE JOINED INTO ABUTTING EXISTING CONCRETE WITH 450mm LONG Y20 DOWEL BARS @ 600 CENTRES, UNLESS OTHERWISE SPECIFIED
49. ANY EXPOSED AGGREGATE (CONCRETE WORKS) TO BE ACHIEVED BY SAND-BLASTING ONLY. WASHING AGGREGATE OFF WITH WATER IS NOT PERMITTED
50. WHERE NEW ASPHALT, CONCRETE K & C, PATHS AND DRIVEWAYS MATCH INTO EXISTING, THE EXISTING SURFACE IS TO BE SAW CUT AND MATCHED NEATLY
51. PAVEMENT DEPTH SPECIFIED IS A MINIMUM DEPTH AND MAY BE VARIED BY THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE. SOFT SPOTS SHALL BE EXCAVATED TO A PROOF ROLLED BASE AND BACKFILLED WITH APPROVED MATERIAL COMPACTED IN 150mm LAYERS TO ACHIEVE TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH A S.1289.5.1.1-2003
52. 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
53. 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.I. MARKINGS TO BE VIA BLUE PAVEMENT MARKER AND A (RED TOPPED) WHITE POST OR IN ACCORDANCE WITH WATER PLANS
54. ALL TABLE DRAINS AND VERGES ARE TO BE REINSTATED UPON COMPLETION OF WORKS TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE
55. HOUSE DRAIN CONNECTIONS TO 150mm DIAMETER PIPES TO BE VIA A MANUFACTURED JUNCTION PIECE. 150mm DIAMETER STORMWATER PIPES ARE TO BE HEAVY DUTY SEWER GRADE. PVC PIPES SHALL BE BACKFILLED WITH 10mm MINUS F.C.R. TO 150mm ABOVE TOP OF PIPE IN ALL LOCATIONS
56. 100mm HOUSE DRAIN CONNECTIONS TO BE LAID AT AN OFFSET OF 5.5m FROM THE LOW SIDE TITLE BOUNDARY AND PROPERTY INLETS 1.0m FROM THE LOW CORNER OF THE LOT UNLESS OTHERWISE
57. BEFORE COMMENCING WORK ON TRENCHES IN EXCESS OF 15m DEEP, NOTICE OF SUCH PROPOSAL IS TO BE FORWARDED BY THE CONTRACTOR TO WORKSAFE VICTORIA
58. ANY INFRASTRUCTURE DAMAGE DURING THE DEFECTS LIABILITY PERIOD IS THE RESPONSIBILITY OF THE DEVELOPER OR HIS REPRESENTATIVE AND IS TO BE REINSTATED TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER OR HIS REPRESENTATIVE
59. AGRICULTURAL DRAINS ARE TO BE PLACED BEHIND ALL KERB AND CHANNEL, KERB ONLY AND EDGE STRIPS IN ACCORDANCE WITH COUNCIL STANDARD DRAWING SD282
60. BLASTING GENERALLY IS NOT ENCOURAGED. HOWEVER BLASTING MAY BE REQUIRED AS A LAST RESORT DEPENDING ON GROUND CONDITIONS. COUNCIL IS TO BE NOTIFIED IN WRITING IF ANY BLASTING IS NECESSARY. RESIDENTS LIKELY TO BE AFFECTED BY THE BLASTING AND ALL SERVICE AUTHORITIES SHALL BE NOTIFIED IN WRITING PRIOR TO WORK COMMENCING. COPIES OF THESE NOTIFICATIONS ARE TO BE SUBMITTED TO COUNCIL. RESIDENT NOTIFICATION LETTER IS TO INCLUDE BLASTING GUIDELINES, FIRING AND MISFIRE PROCEDURES AND CONTRACTOR AND CONSULTANT CONTACT NAMES AND PHONE NUMBERS. ALL BLASTING IS TO BE WITHIN THE LIMITS FOR AIR AND GROUND VIBRATION LEVELS AS SET DOWN IN A.S.2187.2-1993. AK BLASTS SHALL BE MONITORED FOR AIR AND NOISE VIBRATION AT POTENTIALLY AFFECTED RESIDENCES. "FORM A" FROM AS 2187.2-1993, AND WAVE TRACE COPIES ARE TO BE SUBMITTED TO COUNCIL FOR EACH BLAST. BLASTING IS TO BE RESTRICTED TO BETWEEN 9:00am AND 3:00pm. BLASTING IS NOT TO OCCUR ON WEEKENDS OR PUBLIC HOLIDAYS. BLASTING AREA SIGNS ARE TO BE PLACED AT ALL ENTRANCES TO THE SITE
61. ALL VEHICLE CROSSINGS SHOULD BE AS PER EDM 501 & 502
62. ALL KERB PROFILES SHOULD BE AS PER EDM 301 & 302

# MAMBOURIN ESTATE STAGE 15

## FRASERS PROPERTY AUSTRALIA



DRAWING	DESCRIPTION	SHEET No.	REVISION
305180R01	FACE SHEET	1	E
305180R02	ROAD & DRAINAGE FACE PLAN	2	E
305180R03	OUTFALL DRAIN DETAIL PLAN	3	E
305180R04	LONGITUDINAL SECTION - PLANE AVENUE, ELLIMATTA ROAD & WITHER STREET	4	E
305180R05	LONGITUDINAL SECTION - PANKINA ROAD & HEIDELBERG ROAD	5	E
305180R06	CROSS SECTIONS - PLANE AVENUE	6	E
305180R07	CROSS SECTIONS - PLANE AVENUE PANKINA ROAD	7	E
305180R08	CROSS SECTIONS - PANKINA ROAD & HEIDELBERG AVENUE	8	E
305180R09	CROSS SECTIONS - ELLIMATTA ROAD	9	E
305180R10	CROSS SECTIONS - WITHERS STREET	10	E
305180R11	INTERSECTION DETAILS - SHEET 1 OF 4	11	E
305180R12	INTERSECTION DETAILS - SHEET 2 OF 4	12	E
305180R13	INTERSECTION DETAILS - SHEET 3 OF 4	13	E
305180R14	INTERSECTION DETAILS - SHEET 4 OF 4	14	E
305180R15	DRAINAGE LONG SECTION SHEET 1 OF 3	15	E
305180R16	DRAINAGE LONG SECTION SHEET 2 OF 3	16	E
305180R17	DRAINAGE LONG SECTION SHEET 3 OF 3	17	E
305180R18	PIT SCHEDULE	18	E
305180R19	PAVEMENT PLAN AND TYPICAL DETAILS	19	E
305180R20	SIGNAGE & LINEMARKING - SHEET 1 OF 2	20	E
305180R21	SIGNAGE & LINEMARKING - SHEET 2 OF 2	21	E
305180R22	RAISED PAVEMENT DETAILS	22	E

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**

**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**



**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.

DESCRIPTION	EXISTING	PROPOSED
WATER MAIN, VALVE AND HYDRANT	DW	DW
WATER RECYCLED	NDW	NDW
UNDERGROUND ELECTRICITY	E	E
OVERHEAD ELECTRICITY & POLE	OE	OE
TELECOMMUNICATIONS & SERVICE PIT	T	T
OPTIC FIBRE	OF	OF
OVERHEAD TELECOMMUNICATIONS	OT	OT
GAS MAIN	G	G
BRANCH SEWER & MAINTENANCE STRUCTURE	S	S
SEWER & MAINTENANCE STRUCTURE	S	S
SEWER RISING MAIN	SRM	SRM
CENTRAL INVERT		
COUNCIL STORMWATER DRAIN AND PIT		
STORM WATER DRAINAGE PROPERTY INLETS		
COUNCIL STORM WATER PITS		
HOUSE DRAIN	H	H
AG DRAIN AND FLUSHER	AG	AG
MWC STORM WATER DRAIN & PIT		
MWC STORM WATER PITS		
STORM WATER DRAINAGE PIT NUMBER		
GAS & WATER CONDUITS	GW	GW
CONCRETE VEHICLE CROSSING		
PAVEMENT SAWCUT LINE		SAWCUT
RIDGE / CHANGE OF GRADE LINE		
SURFACE CONTOUR MINOR	169.00	169.00
SURFACE CONTOUR MAJOR	168.90	168.90
SURFACE LEVEL	123.45	F124.68
BATTER LEVEL (TOP / TOE)	T124.80	T124.80
RETAINING WALL LEVEL (TOP/BOTTOM)	TW112.76	TW128.50 / BW126.74
EARTHWORKS GRADE		1 in 150
SIGN AND POST		
LIGHT & POLE (BY OTHERS)		
STREET SIGN		
PERMANENT SURVEY MARK		
TEMPORARY BENCH MARK		
BOLLARD		
ROAD CHAINAGES	CH116 57 (L/R)BTP CH116 57	CH116 57 (L/R)BTP CH116 57
LOT CHAINAGES	CH20 06	CH20 06
SETOUT POINT		
LIMIT OF WORKS		
BATTER		
EXCAVATION GREATER THAN 0.20m		
FILLING GREATER THAN 0.20m		
ROCK BEACHING		
RETAINING WALL		
FENCE - TREE PROTECTION		
FENCE - VEHICLE EXCLUSION		
FENCES		
GUARD RAIL		
TREE ( & SURVEYED CANOPY) TO BE RETAINED		
TREE TO BE PROTECTED		
TREE TO BE REMOVED		
VEGETATION LINE		
STREET TREE CLEARANCE ZONE		
FOOTPATH		
TACTILE GROUND SURFACE INDICATOR		
KERB TRANSITION		

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21

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Designed  
R. WEINBER

Checked  
M. READMAN

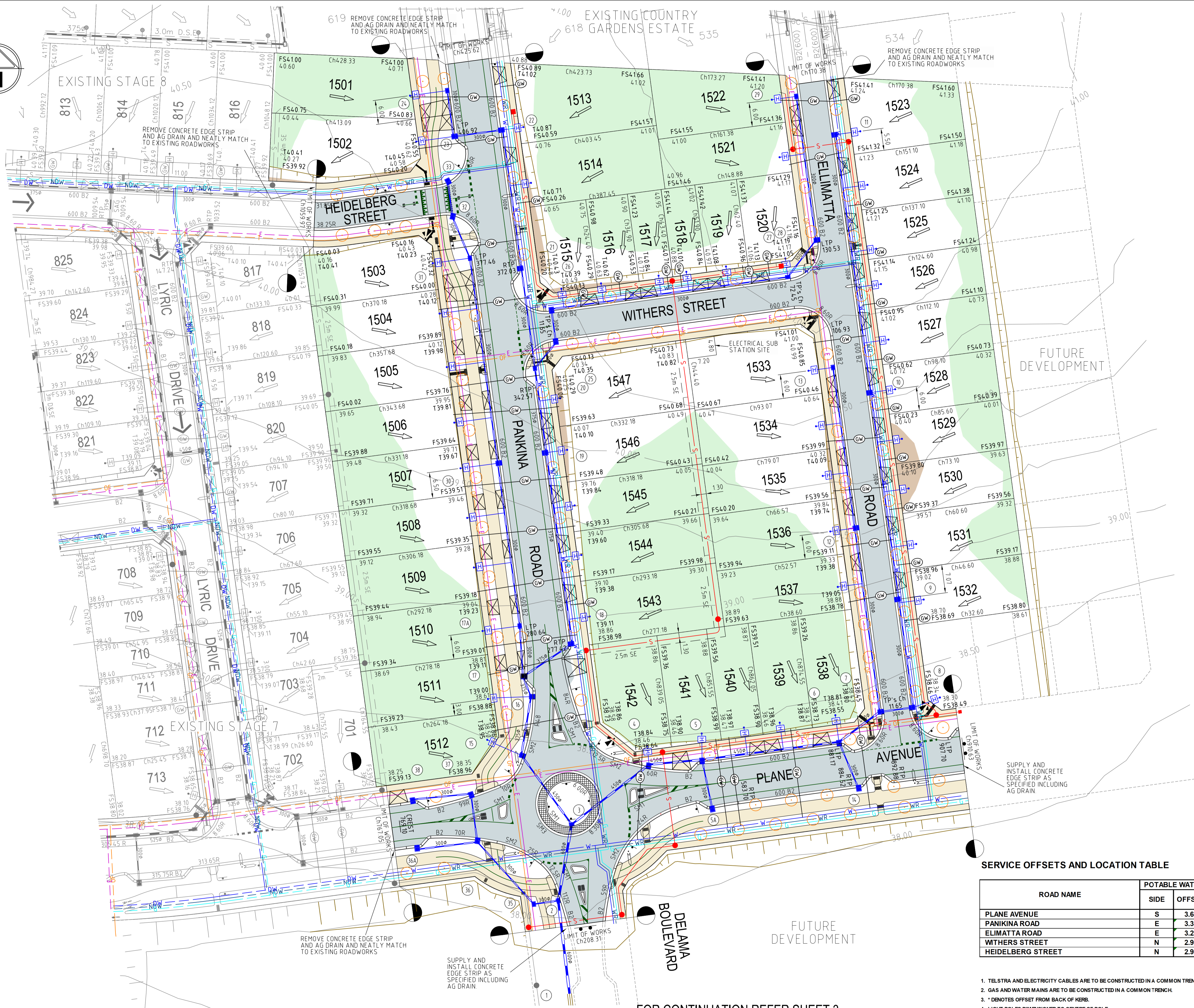
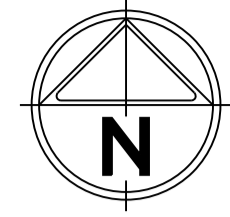
Authorised  
D. CAMERON

Date  
04/05/21

**MAMBOURIN ESTATE**  
**STAGE 15**  
**FACE SHEET**

FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

**PRELIMINARY** Drg No **305180R01** Rev **E**



Planning and Environment Act 1987  
 Wyndham Planning Scheme  
  
 Approved Plan As Required  
 under Condition 43  
 Permit No WYP11481/19  
 Date 17/11/2021

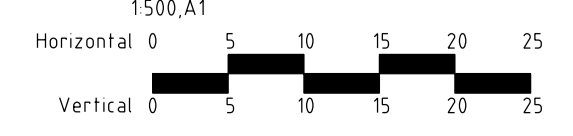
**SERVICE OFFSETS AND LOCATION TABLE**

ROAD NAME	POTABLE WATER		RECYCLED WATER		GAS		ELECTRICITY				TELECOM	
	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	POLE		U/G CABLE		SIDE	OFFSET
							SIDE	OFFSET	SIDE	OFFSET		
PLANE AVENUE	S	3.65	S	2.90	S	2.25	N	0.80*	N	2.60	N	1.725
PANIKINA ROAD	E	3.30	E	2.70	E	2.10	W	0.80*	W	2.60	W	1.850
ELIMATTA ROAD	E	3.20	E	2.70	E	2.10	W	0.80*	W	2.60	W	1.850
WITHERS STREET	N	2.95	N	2.50	N	2.10	S	0.80*	S	2.60	S	1.720
HEIDELBERG STREET	N	2.95	N	2.50	N	2.10	S	0.80*	S	2.60	S	1.725

1. TELSTRA AND ELECTRICITY CABLES ARE TO BE CONSTRUCTED IN A COMMON TRENCH IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRAWINGS.
2. GAS AND WATER MAINS ARE TO BE CONSTRUCTED IN A COMMON TRENCH.
3. \* DENOTES OFFSET FROM BACK OF KERB.
4. LIGHT POLES DIMENSIONED TO CENTRE OF POLE.

FOR CONTINUATION REFER SHEET 3

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21



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Designed  
R. WEINBER  
Authorised  
D. CAMERON

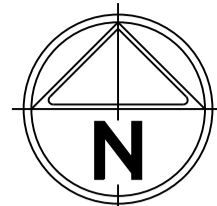
Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE  
 STAGE 15  
 DETAIL PLAN**  
  
 FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

PRELIMINARY

Drg No  
305180R02

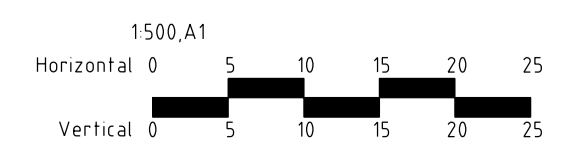
Rev  
E



**Planning and Environment Act 1987  
Wyndham Planning Scheme**

**Approved Plan As Required  
under Condition 43  
Permit No WYP11481/19  
Date 17/11/2021**

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21



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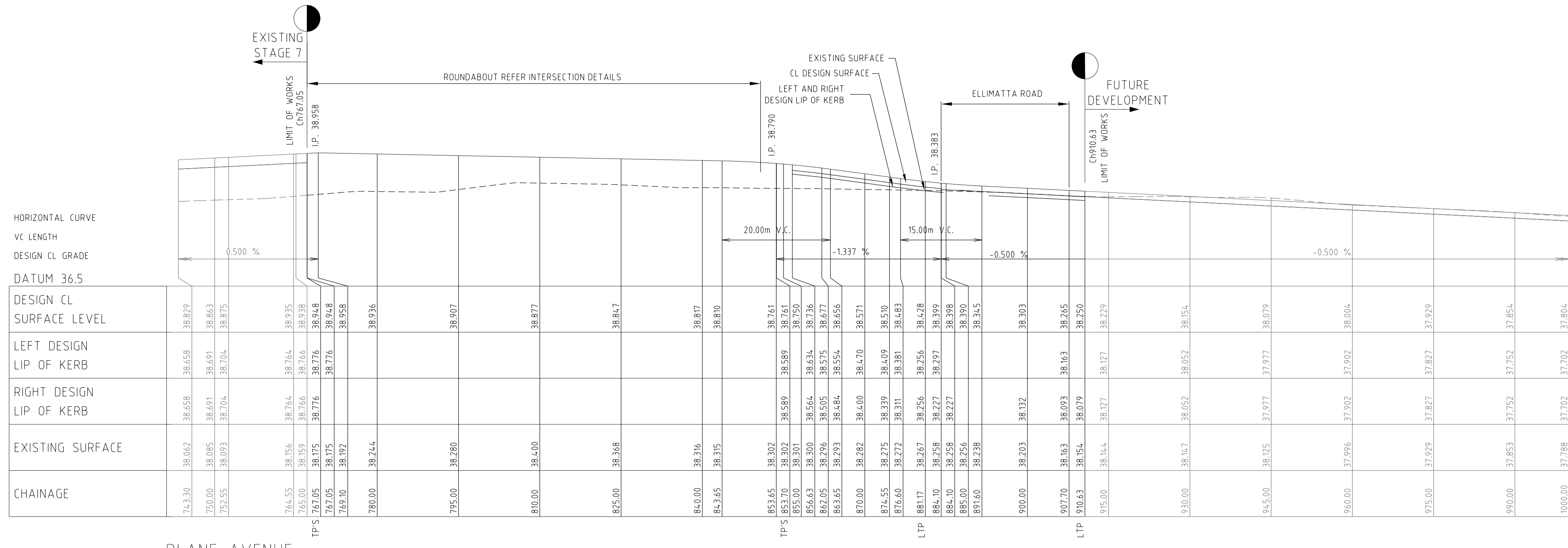
FRASERS PROPERTY  
Designed: R. WEINBER  
Authorised: D. CAMERON

Checked: M. READMAN  
Date: 04/05/21

**MAMBOURIN ESTATE  
STAGE 15  
OUTFALL DRAIN DETAIL PLAN**

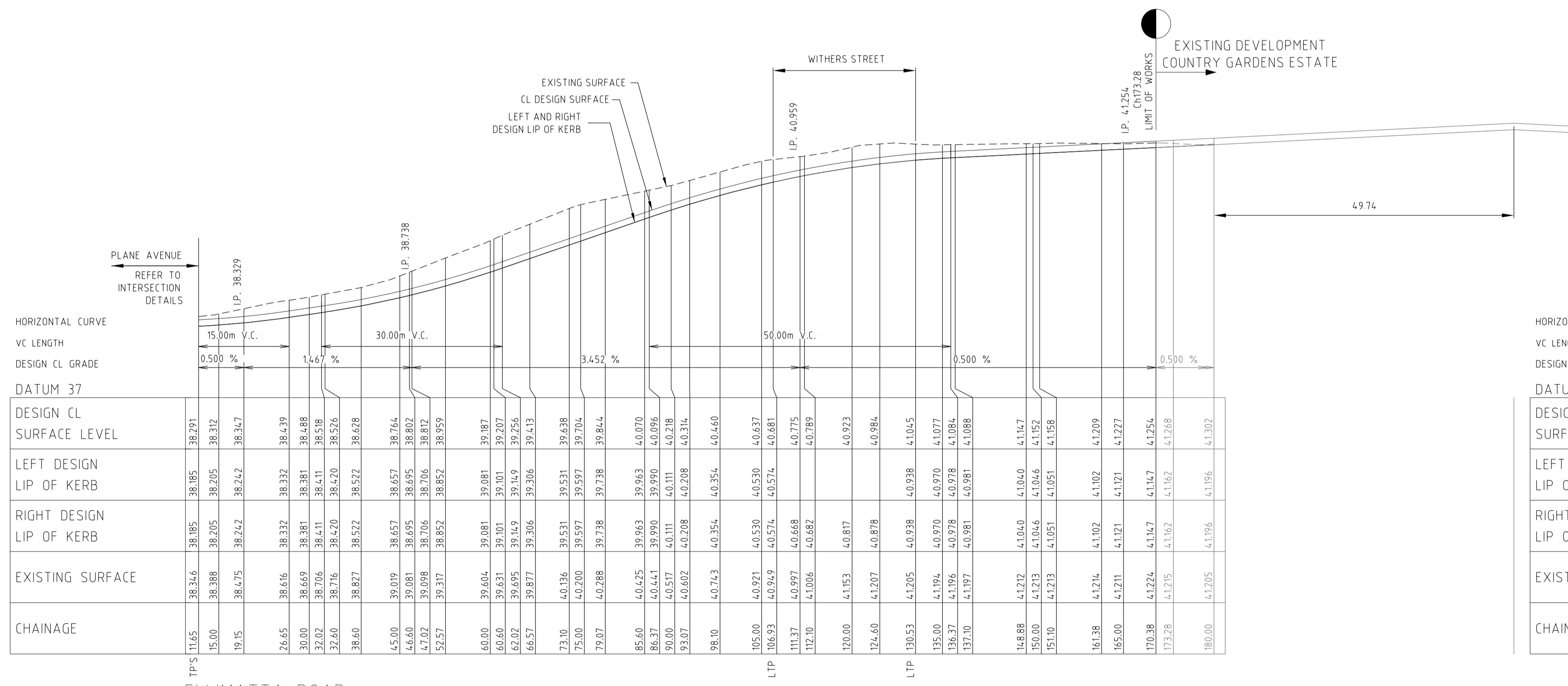
FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM

**PRELIMINARY** Drg No **305180R03** Rev **E**

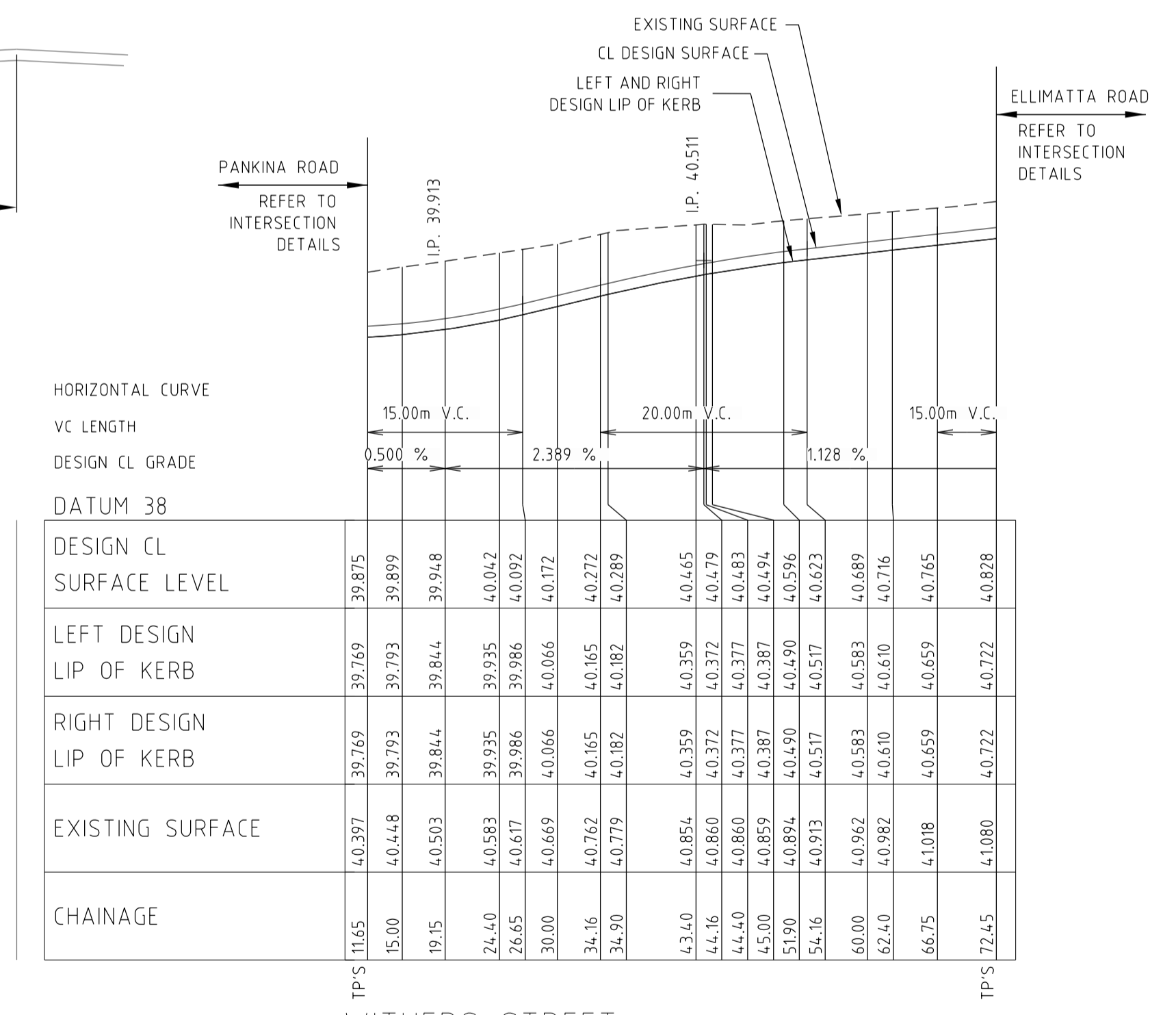


PLANE AVENUE

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

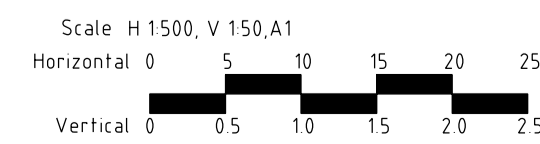


ELLIMATTA ROAD



WITHERS STREET

Rev	Amendments	Approved	Date
A	ISSUE TO COUNCIL	M.R	04/05/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
E	COUNCIL COMMENTS ADDED	M.R	09/11/21



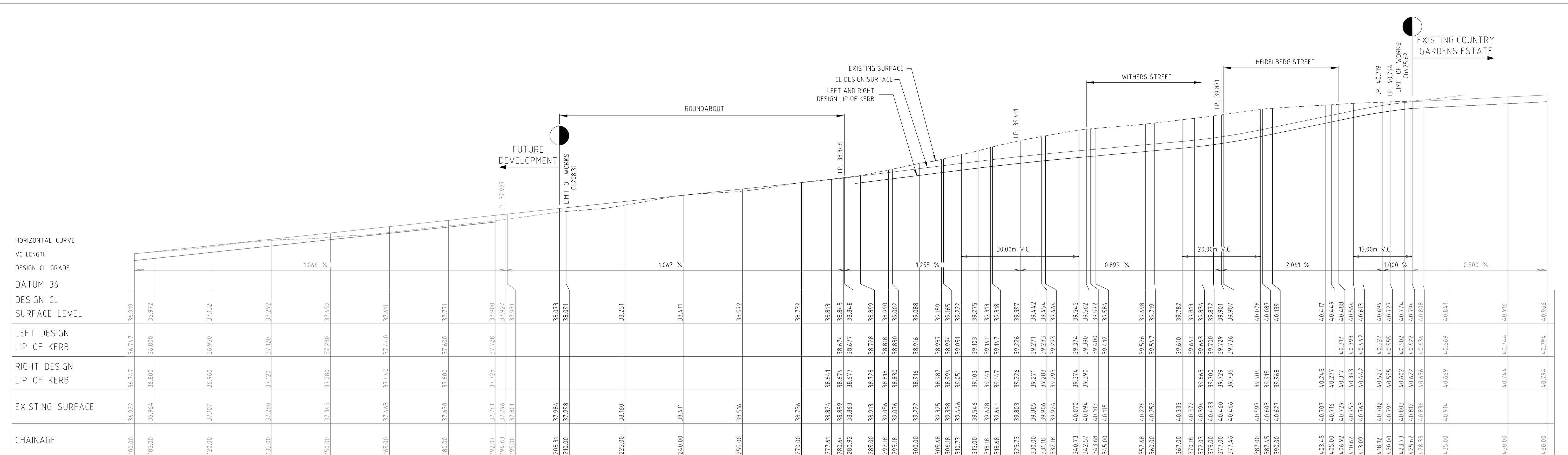
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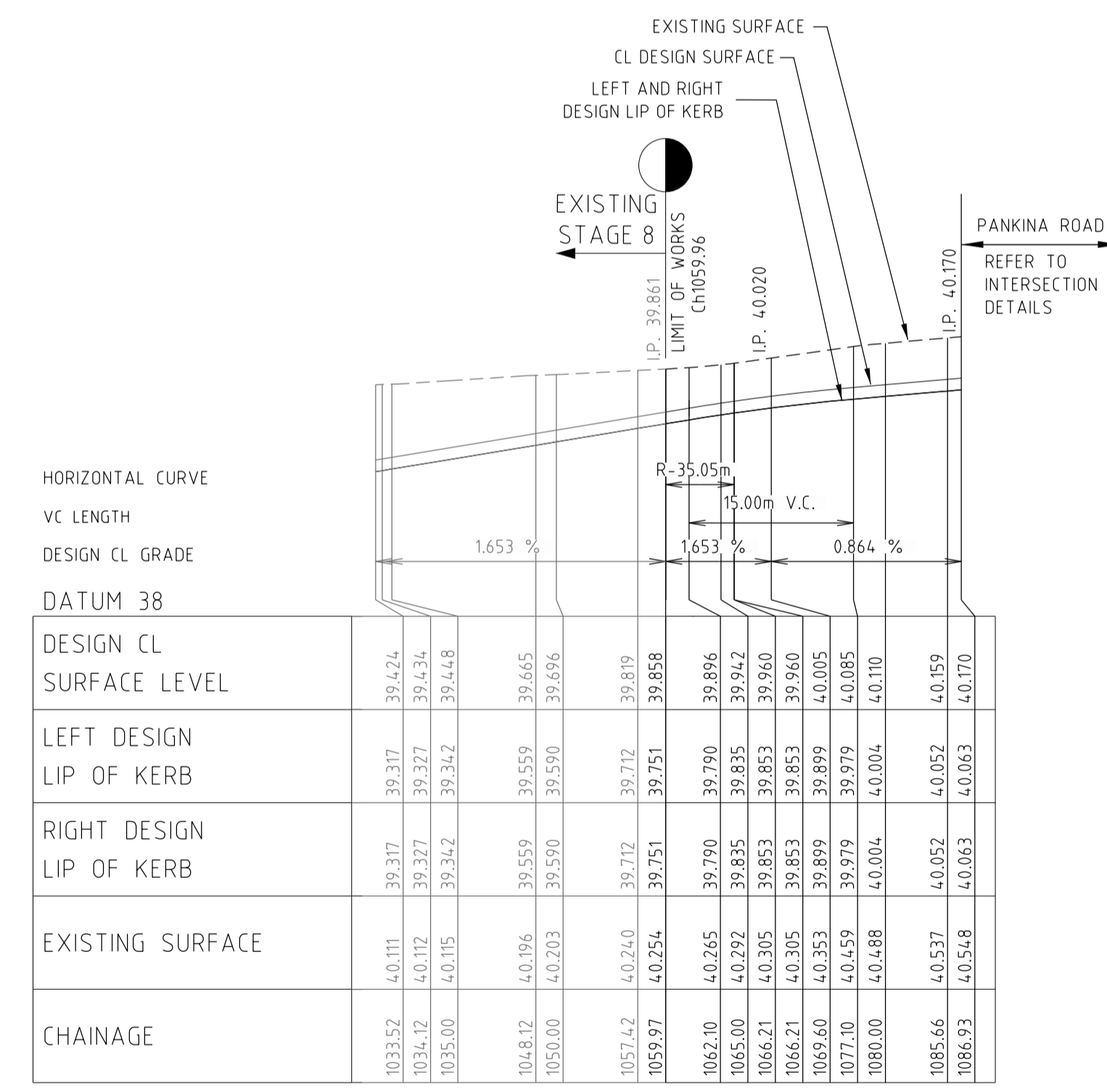
Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE**  
**STAGE 15**  
**LONGITUDINAL SECTION - PLANE AVENUE,**  
**ELLIMATTA ROAD & WITHERS STREET**  
 FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM  
**PRELIMINARY** Drg No **305180R04** Rev **E**



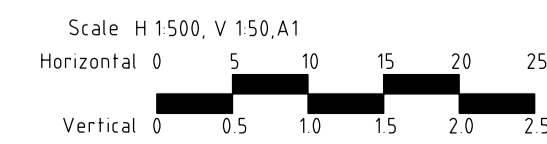
PANKINA ROAD



HEIDELBERG AVENUE

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21



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**R. WEINBER**

Authorised  
**D. CAMERON**

Checked  
**M. READMAN**

Date  
**04/05/21**

**MAMBOURIN ESTATE**  
**STAGE 15**  
**LONGITUDINAL SECTION - PANKINA ROAD & HEIDELBERG AVENUE**  
 FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

**PRELIMINARY**      Drg No **305180R05**      Rev **E**



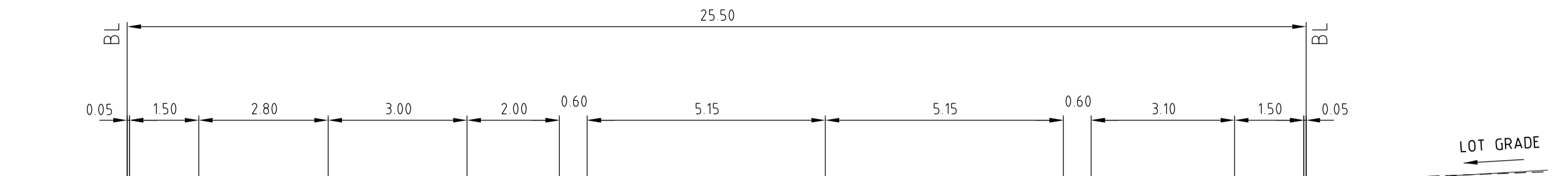




STRUCTURAL FILL  
IN ACCORDANCE  
WITH AS3798-2007,  
LEVEL 1.

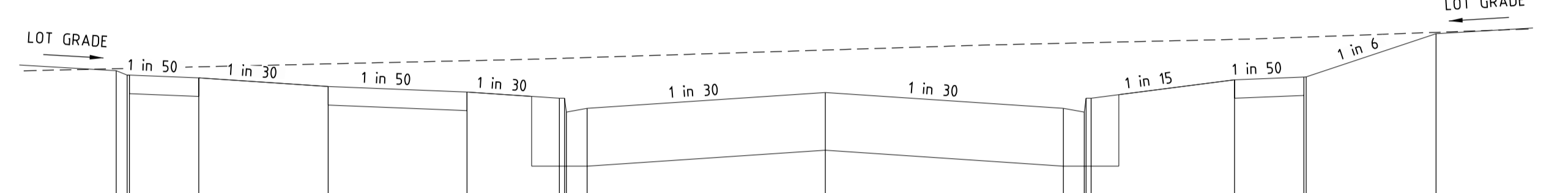
**Planning and Environment Act 1987  
Wyndham Planning Scheme**

**Approved Plan As Required  
under Condition 43  
Permit No WYP11481/19  
Date 17/11/2021**



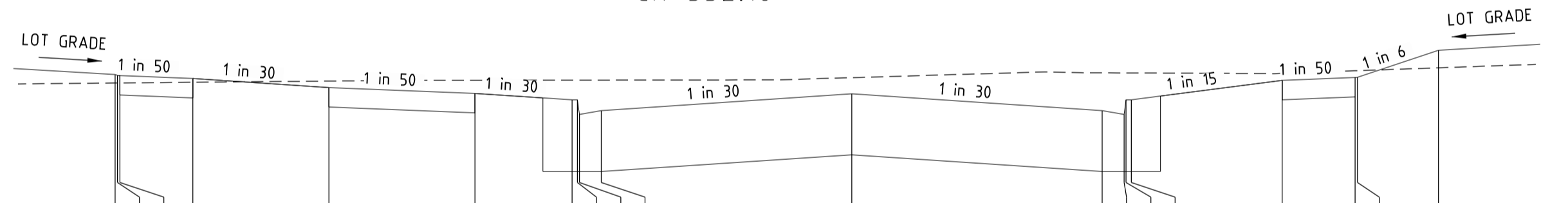
DATUM 38	
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EXISTING SURFACE LEVEL	38.925, 39.728, 39.750, 39.945, 39.977, 40.011, 40.034, 40.035, 40.035, 40.040, 40.094, 40.149, 40.153, 40.154, 40.155, 40.188, 40.204, 40.204, 40.257
OFFSET	-15.338, -15.100, -15.050, -13.550, -10.750, -7.750, -5.750, -5.640, -5.600, -5.150, 0.000, 5.150, 5.600, 5.640, 5.750, 8.850, 10.350, 10.400, 13.534

PANKINA ROAD Ch 342.57



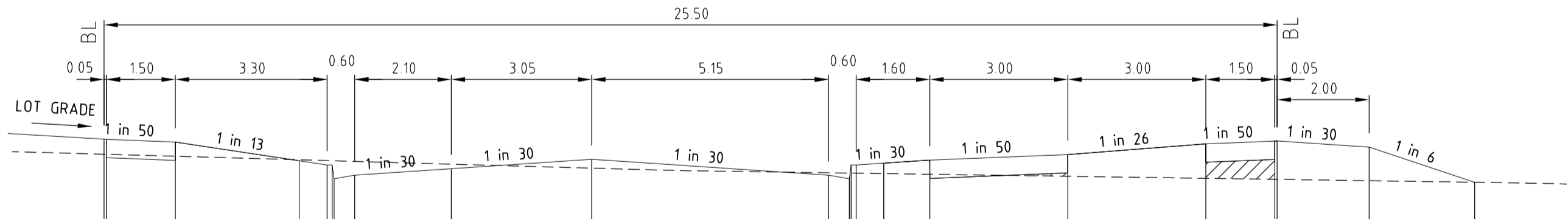
DATUM 38	
DESIGN SURFACE LEVEL	39.701, 39.654, 39.653, 39.633, 39.529, 39.469, 39.403, 39.403, 39.253, 39.293, 39.464, 39.293, 39.403, 39.403, 39.603, 39.633, 39.634, 40.102
EXISTING SURFACE LEVEL	39.723, 39.725, 39.726, 39.743, 39.775, 39.809, 39.834, 39.836, 39.836, 39.843, 39.874, 39.924, 39.998, 40.003, 40.003, 40.005, 40.040, 40.064, 40.065, 40.116
OFFSET	-15.337, -15.100, -15.050, -13.550, -10.750, -7.750, -5.750, -5.640, -5.600, -5.150, 0.000, 5.150, 5.600, 5.640, 5.750, 8.850, 10.350, 10.400, 13.211

PANKINA ROAD Ch 332.18



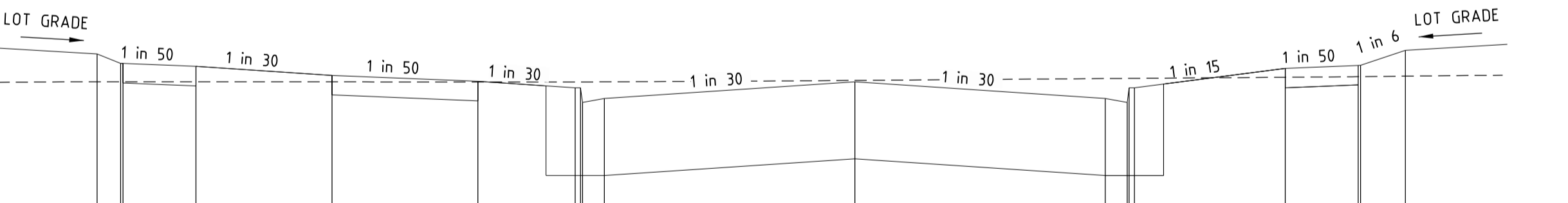
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DESIGN SURFACE LEVEL	39.358, 39.348, 39.348, 39.274, 39.274, 39.164, 39.097, 39.097, 39.097, 39.097, 39.159, 39.097, 39.097, 39.097, 39.297, 39.327, 39.328, 39.606
EXISTING SURFACE LEVEL	39.270, 39.348, 39.347, 39.290, 39.298, 39.298, 39.299, 39.299, 39.299, 39.300, 39.325, 39.375, 39.374, 39.374, 39.374, 39.374, 39.396, 39.397, 39.426
OFFSET	-15.147, -15.100, -15.050, -13.550, -10.750, -7.750, -5.750, -5.640, -5.600, -5.150, 0.000, 5.150, 5.600, 5.640, 5.750, 8.850, 10.350, 10.400, 12.066

PANKINA ROAD Ch 305.68



DATUM 37	
DESIGN SURFACE LEVEL	38.470, 38.469, 38.439, 38.189, 38.189, 38.039, 38.079, 38.149, 38.250, 38.302, 38.419, 38.449, 38.450, 38.383, 38.001, 38.001
EXISTING SURFACE LEVEL	38.306, 38.305, 38.284, 38.189, 38.189, 38.039, 38.079, 38.149, 38.154, 38.066, 38.044, 38.033, 38.032, 38.018, 38.001, 38.001
OFFSET	-10.600, -10.550, -9.050, -5.750, -5.640, -5.150, -3.050, 0.000, 5.150, 5.600, 5.640, 7.350, 10.350, 13.350, 14.850, 14.900, 16.900, 19.195

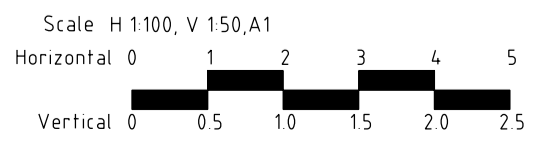
PLANE AVENUE Ch 910.63



DATUM 37	
DESIGN SURFACE LEVEL	38.131, 38.035, 38.034, 38.004, 38.910, 38.850, 38.784, 38.784, 38.634, 38.674, 38.845, 38.845, 38.674, 38.984, 39.014, 38.015, 38.168
EXISTING SURFACE LEVEL	38.845, 38.845, 38.845, 38.845, 38.845, 38.844, 38.844, 38.844, 38.844, 38.844, 38.859, 38.878, 38.880, 38.880, 38.881, 38.881, 38.898, 38.903
OFFSET	-15.582, -15.100, -15.050, -13.550, -10.750, -7.750, -5.750, -5.640, -5.600, -5.150, 0.000, 5.150, 5.600, 5.640, 5.750, 8.850, 10.350, 10.400, 11.523

PANKINA ROAD Ch 280.64

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21



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Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE  
STAGE 15  
CROSS SECTIONS - PLANE AVENUE, PANKINA ROAD**

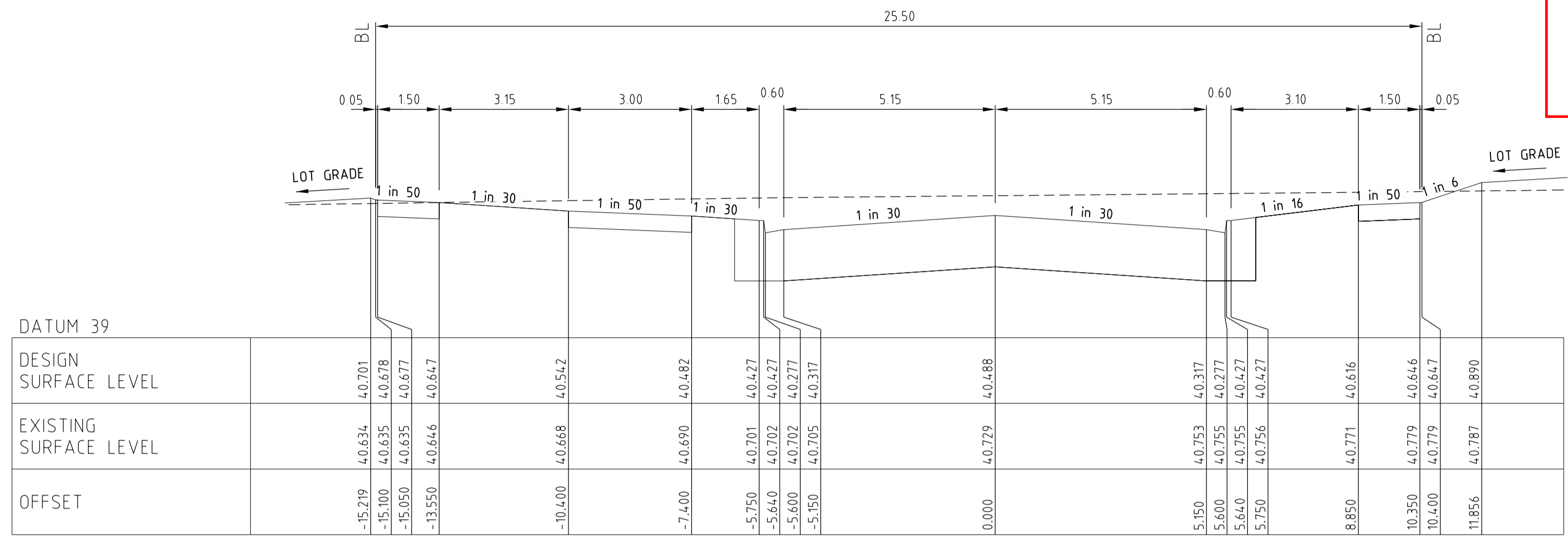
FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM

**PRELIMINARY** Drg No **305180R07** Rev **E**



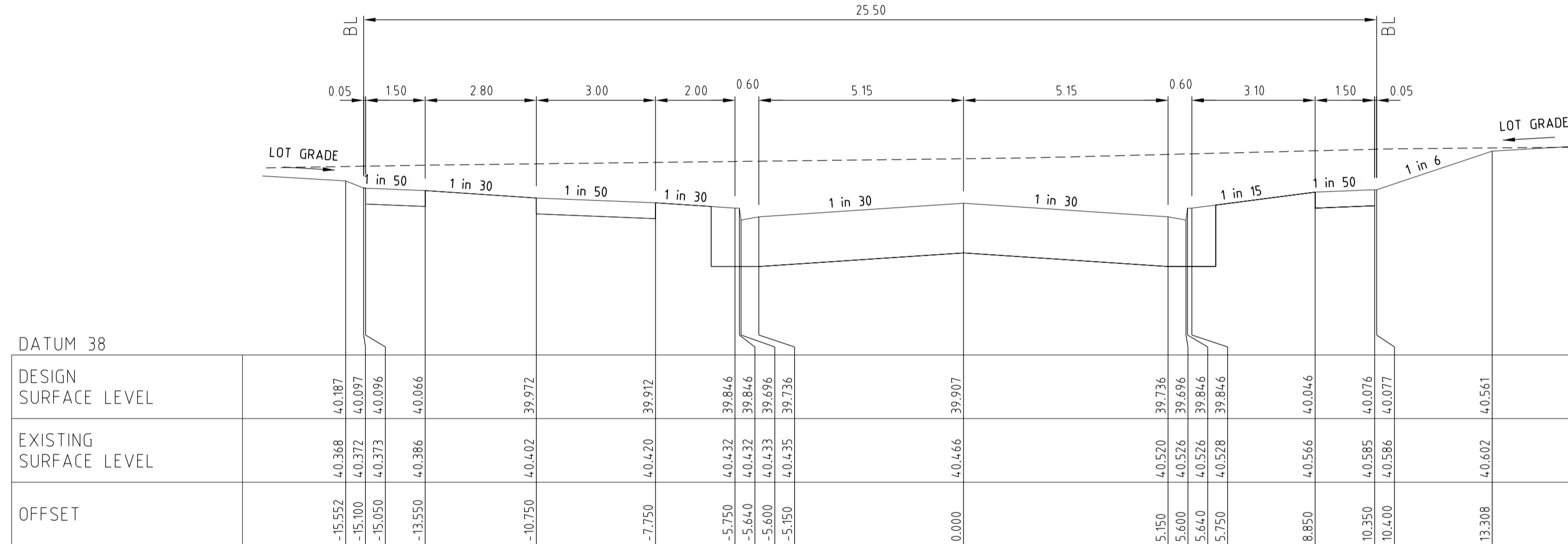
STRUCTURAL FILL  
IN ACCORDANCE  
WITH AS3798-2007,  
LEVEL 1.

**Planning and Environment Act 1987  
Wyndham Planning Scheme**  
  
**Approved Plan As Required  
under Condition 43  
Permit No WYP11481/19  
Date 17/11/2021**



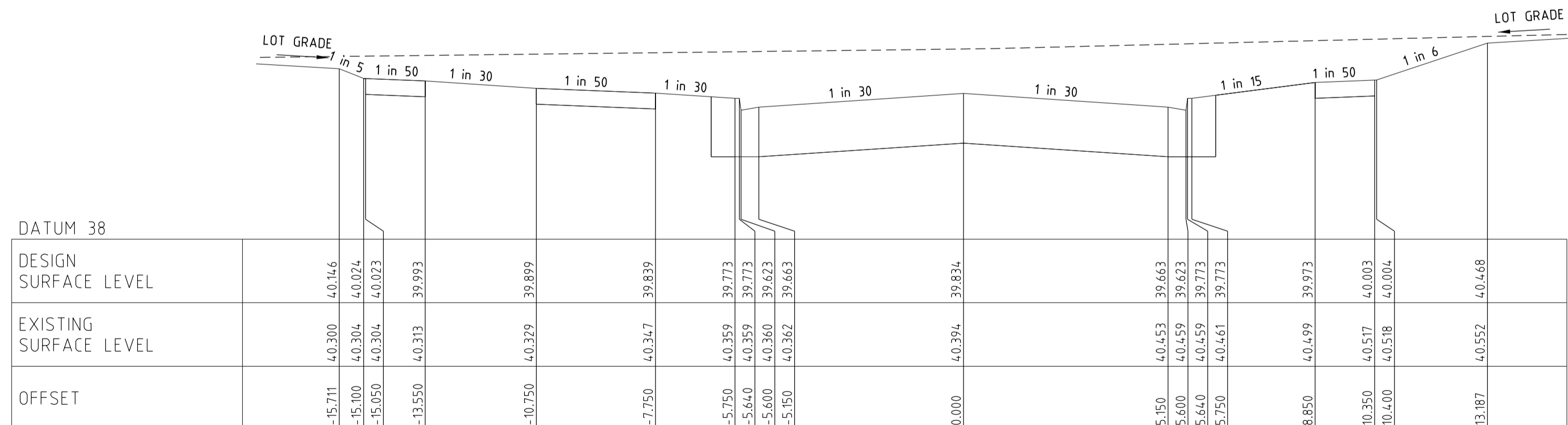
PANKINA ROAD

Ch 406.92



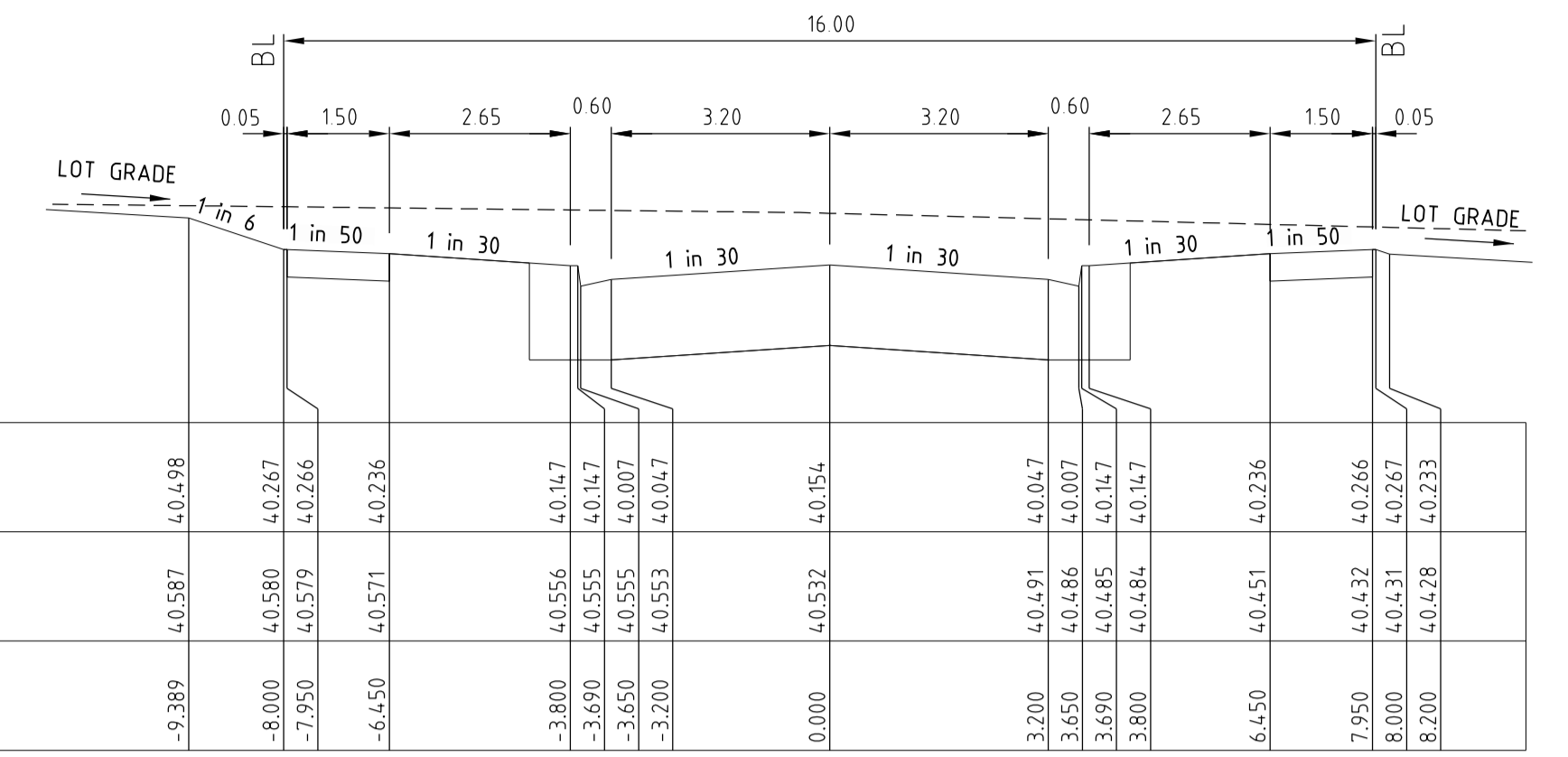
PANKINA ROAD

Ch 377.46



PANKINA ROAD

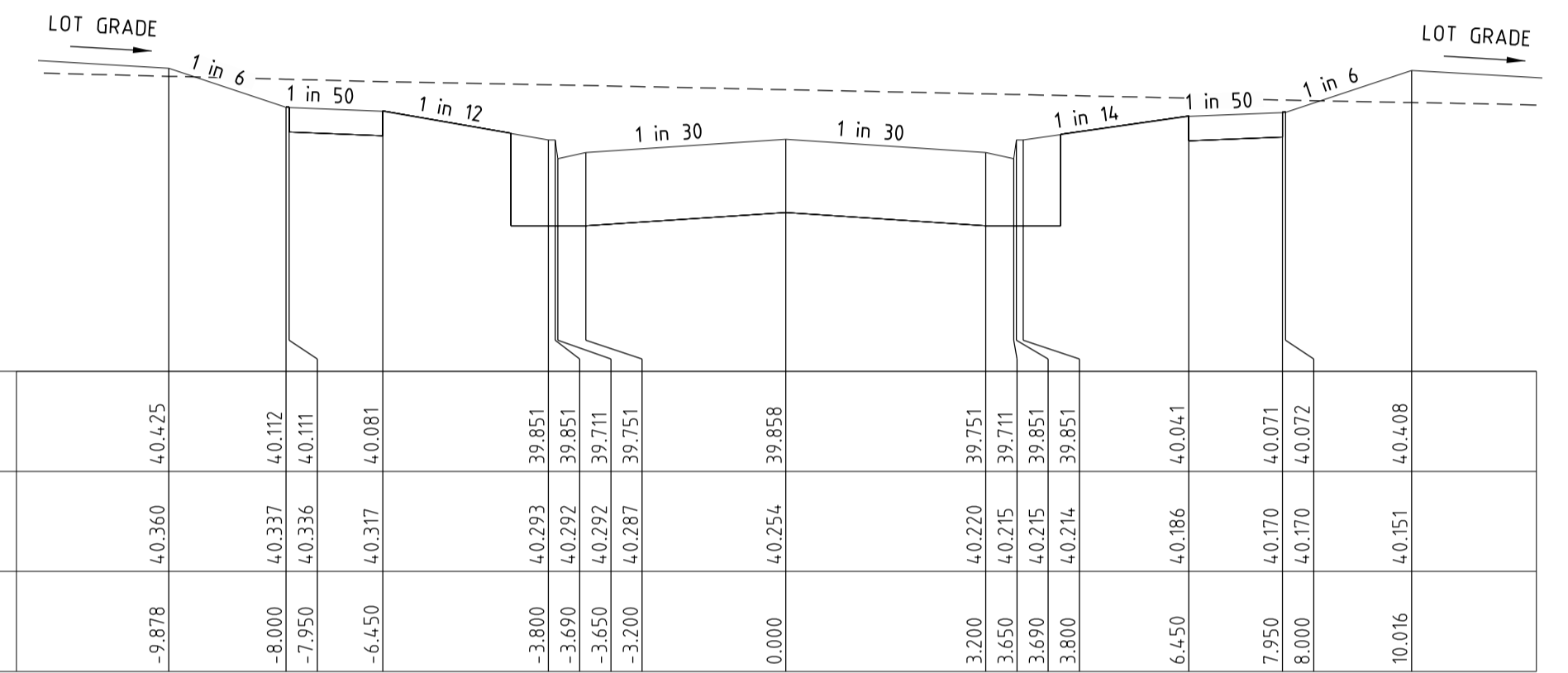
Ch 372.03



DATUM 39

HEIDELBERG AVENUE

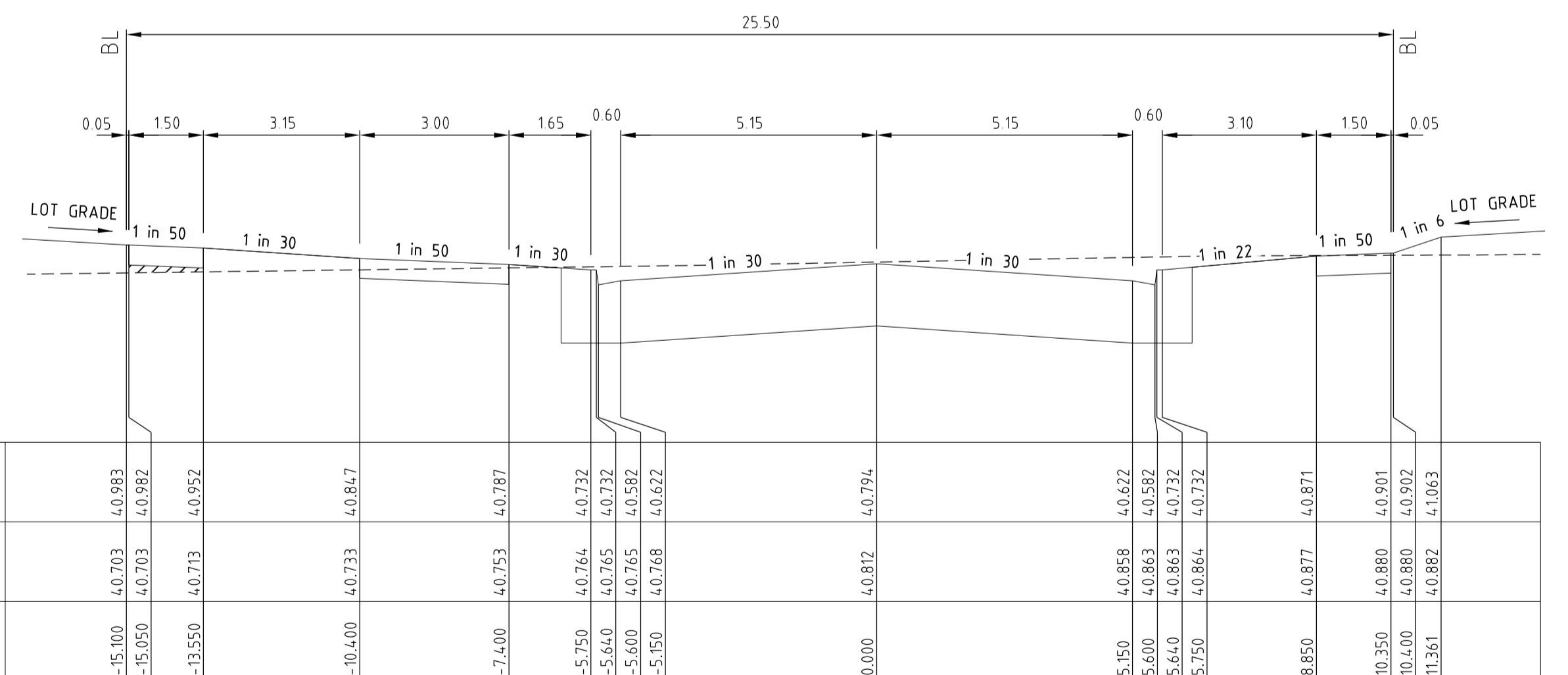
Ch 1085.08



DATUM 38

HEIDELBERG AVENUE

Ch 1059.97

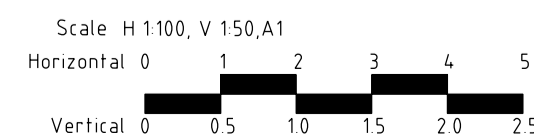


DATUM 39

PANKINA ROAD

Ch 425.62

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21



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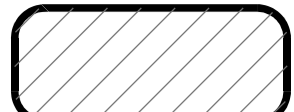


Designed  
R. WEINBER  
Authorised  
D. CAMERON

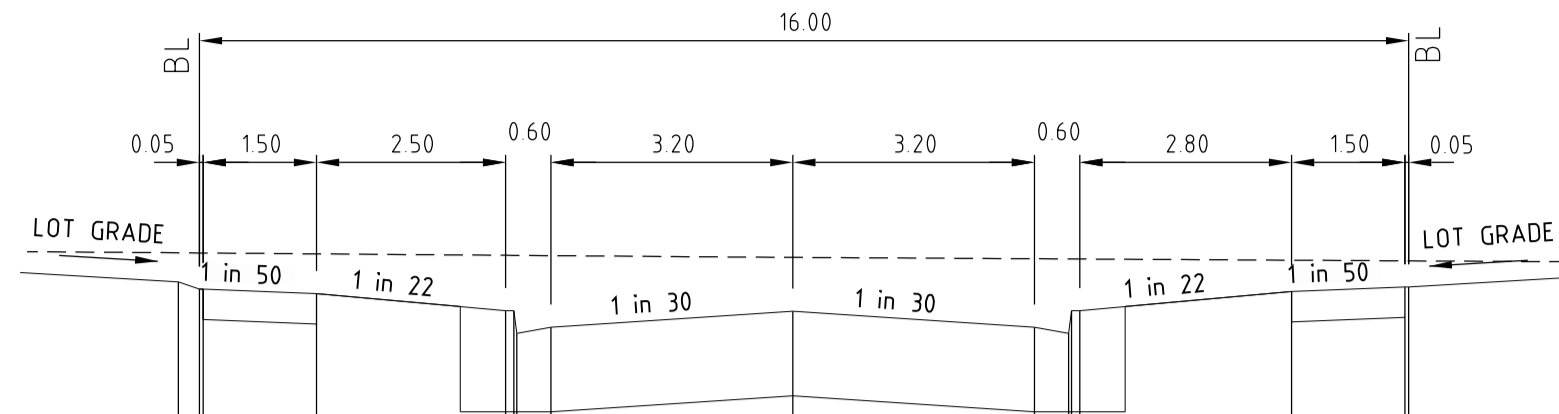
Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE  
STAGE 15  
CROSS SECTIONS - PANKINA ROAD  
& HEIDELBERG AVENUE**  
FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM

**PRELIMINARY** Drg No **305180R08** Rev **E**

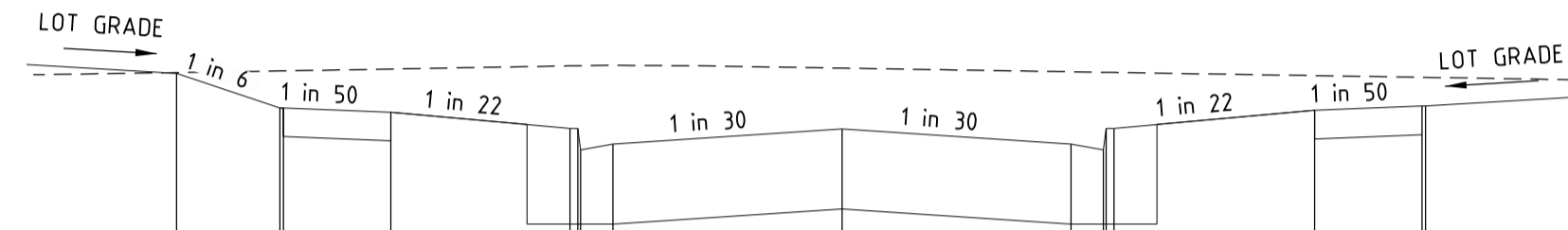


STRUCTURAL FILL  
IN ACCORDANCE  
WITH AS3798-2007,  
LEVEL 1.



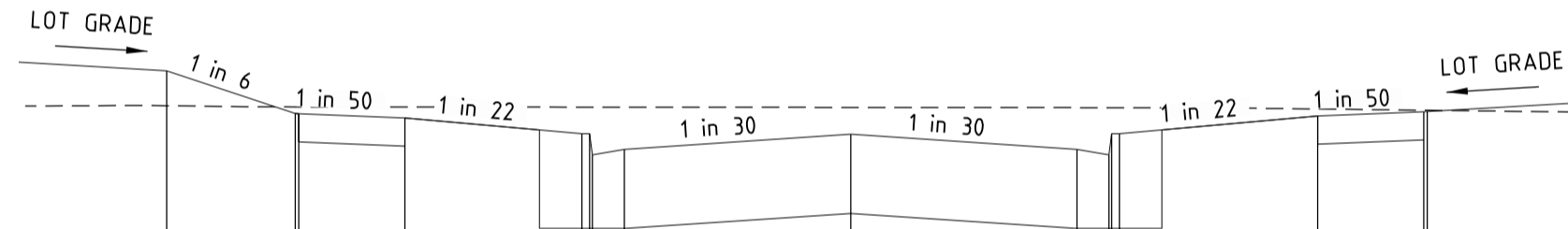
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EXISTING SURFACE LEVEL	40.455, 40.454, 40.454, 40.448, 40.439, 40.438, 40.438, 40.436, 40.425, 40.406, 40.402, 40.402
OFFSET	-8.129, -7.850, -7.800, -6.300, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 85.60



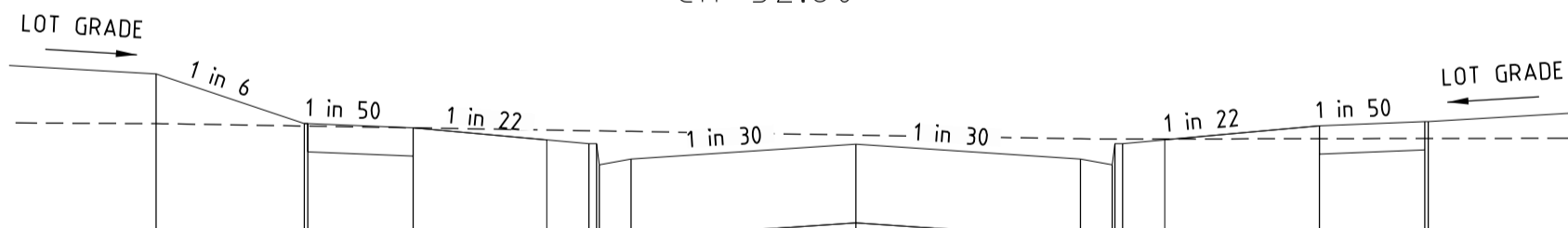
DATUM 38	
DESIGN SURFACE LEVEL	39.594, 39.354, 39.353, 39.323, 39.211, 39.211, 39.061, 39.011, 39.207, 39.337, 39.367, 39.368
EXISTING SURFACE LEVEL	39.600, 39.612, 39.612, 39.625, 39.647, 39.648, 39.648, 39.651, 39.631, 39.606, 39.602, 39.601, 39.602, 39.601, 39.601, 39.601, 39.579, 39.567, 39.566, 39.566
OFFSET	-6.295, -7.850, -7.800, -6.300, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 60.60



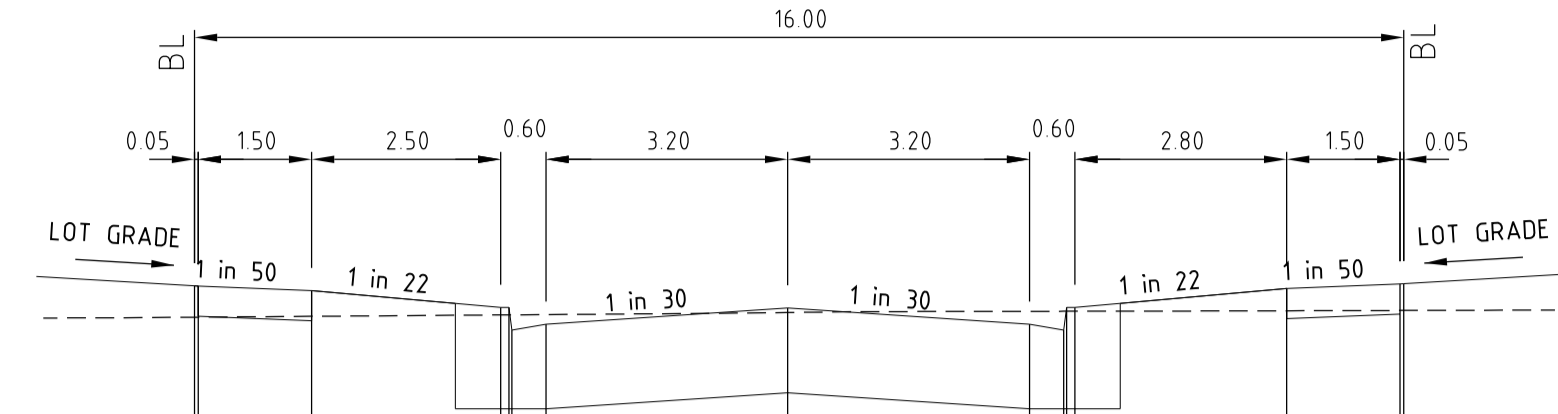
DATUM 37	
DESIGN SURFACE LEVEL	38.976, 38.673, 38.672, 38.642, 38.530, 38.530, 38.380, 38.420, 38.526, 38.656, 38.720, 38.686, 38.687
EXISTING SURFACE LEVEL	38.729, 38.720, 38.720, 38.719, 38.718, 38.718, 38.718, 38.718, 38.716, 38.705, 38.696, 38.686, 38.687
OFFSET	-9.668, -7.850, -7.800, -6.300, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 32.60



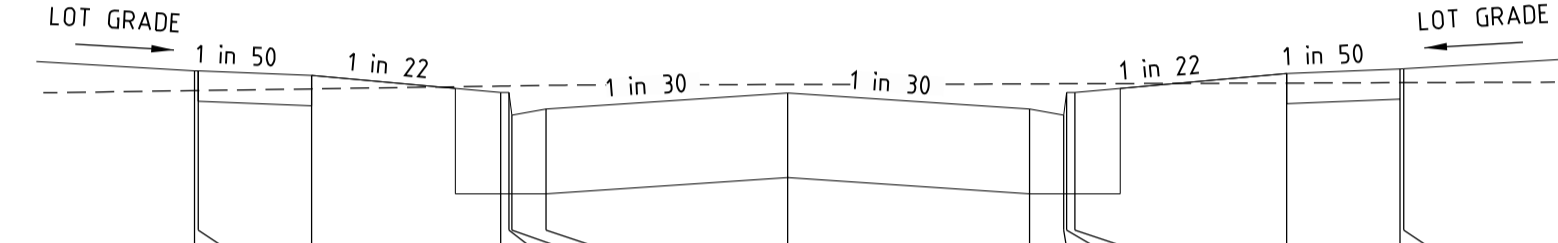
DATUM 37	
DESIGN SURFACE LEVEL	38.800, 38.449, 38.448, 38.418, 38.306, 38.306, 38.156, 38.196, 38.302, 38.432, 38.462, 38.463
EXISTING SURFACE LEVEL	38.448, 38.431, 38.430, 38.418, 38.398, 38.397, 38.338, 38.338, 38.367, 38.341, 38.342, 38.342
OFFSET	-9.960, -7.850, -7.800, -6.300, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 13.60



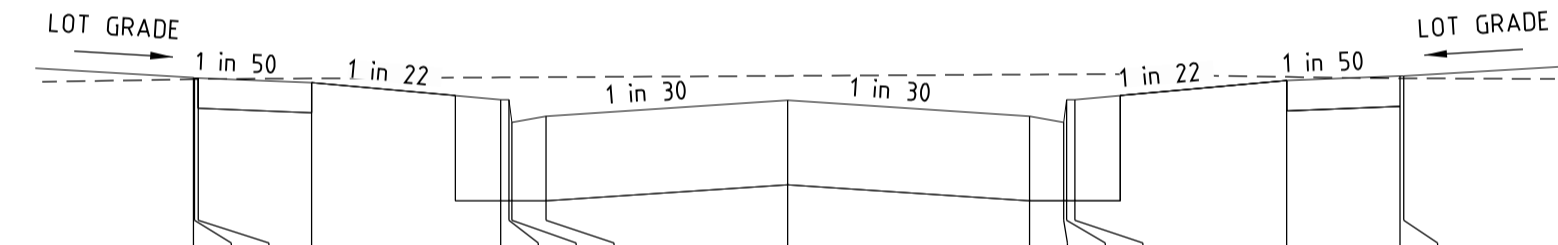
DATUM 40	
DESIGN SURFACE LEVEL	41.400, 41.399, 41.257, 41.257, 41.147, 41.254, 41.117, 41.107, 41.257, 41.257, 41.383, 41.413, 41.414
EXISTING SURFACE LEVEL	41.193, 41.194, 41.208, 41.209, 41.209, 41.274, 41.232, 41.232, 41.232, 41.236, 41.236, 41.238, 41.238, 41.238
OFFSET	-7.850, -7.800, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 170.38



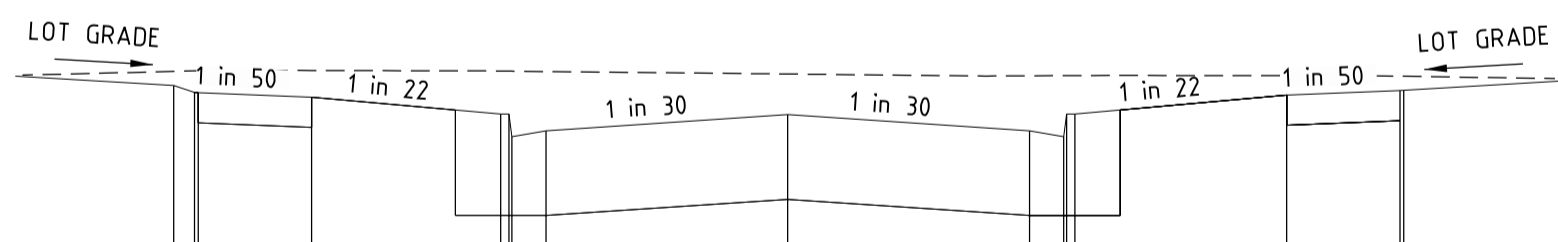
DATUM 40	
DESIGN SURFACE LEVEL	41.304, 41.303, 41.161, 41.161, 41.051, 41.158, 41.051, 41.011, 41.161, 41.161, 41.287, 41.317, 41.318
EXISTING SURFACE LEVEL	41.173, 41.174, 41.204, 41.204, 41.204, 41.273, 41.238, 41.238, 41.238, 41.233, 41.233, 41.236, 41.236, 41.236
OFFSET	-7.850, -7.800, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 151.10



DATUM 40	
DESIGN SURFACE LEVEL	41.194, 41.191, 41.048, 41.048, 41.048, 41.045, 40.938, 40.898, 41.048, 41.048, 41.174, 41.204, 41.205
EXISTING SURFACE LEVEL	41.183, 41.183, 41.195, 41.195, 41.195, 41.205, 40.938, 40.898, 41.048, 41.048, 41.198, 41.189, 41.189
OFFSET	-7.864, -7.850, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 130.53



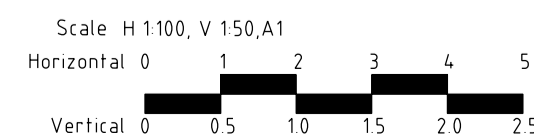
DATUM 39	
DESIGN SURFACE LEVEL	40.873, 40.827, 40.684, 40.684, 40.574, 40.681, 40.574, 40.534, 40.684, 40.684, 40.810, 40.840, 40.841
EXISTING SURFACE LEVEL	40.967, 40.970, 40.968, 40.968, 40.966, 40.949, 40.938, 40.939, 40.968, 40.968, 40.810, 40.835, 40.841
OFFSET	-8.126, -7.850, -3.800, -3.650, -3.200, 0.000, 3.200, 3.650, 3.800, 6.600, 8.100, 8.150

ELLIMATTA ROAD Ch 106.93

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**

**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21
Rev	Amendments	Approved	Date



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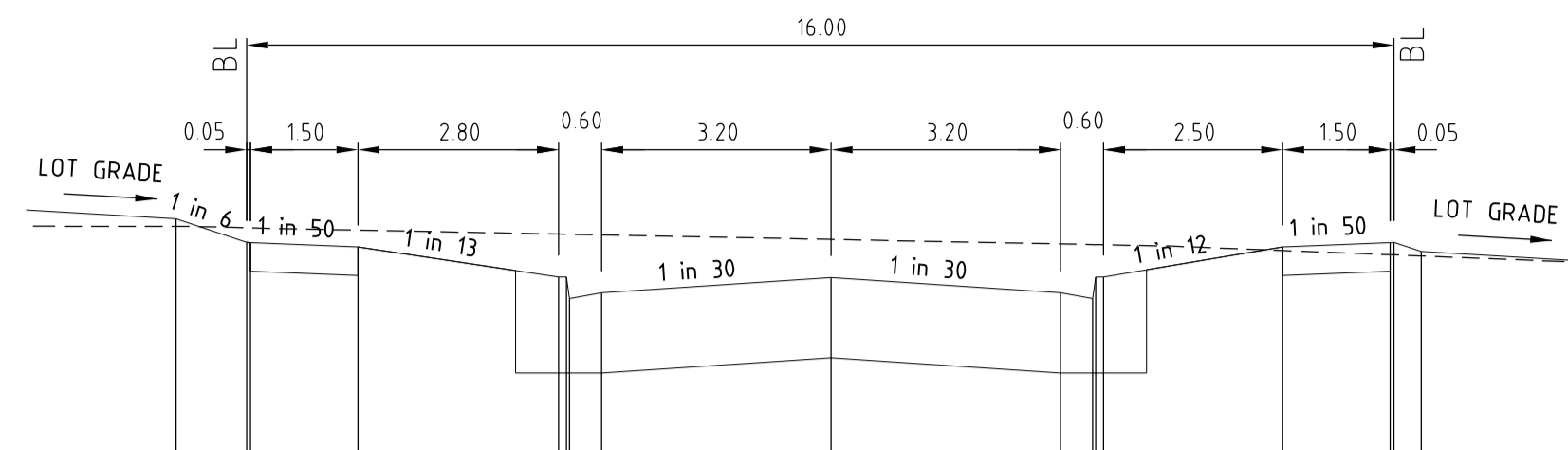
**FRASERS PROPERTY**  
Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE**  
**STAGE 15**  
**CROSS SECTIONS - ELLIMATTA ROAD**  
FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM  
**PRELIMINARY** Drg No **305180R09** Rev **E**

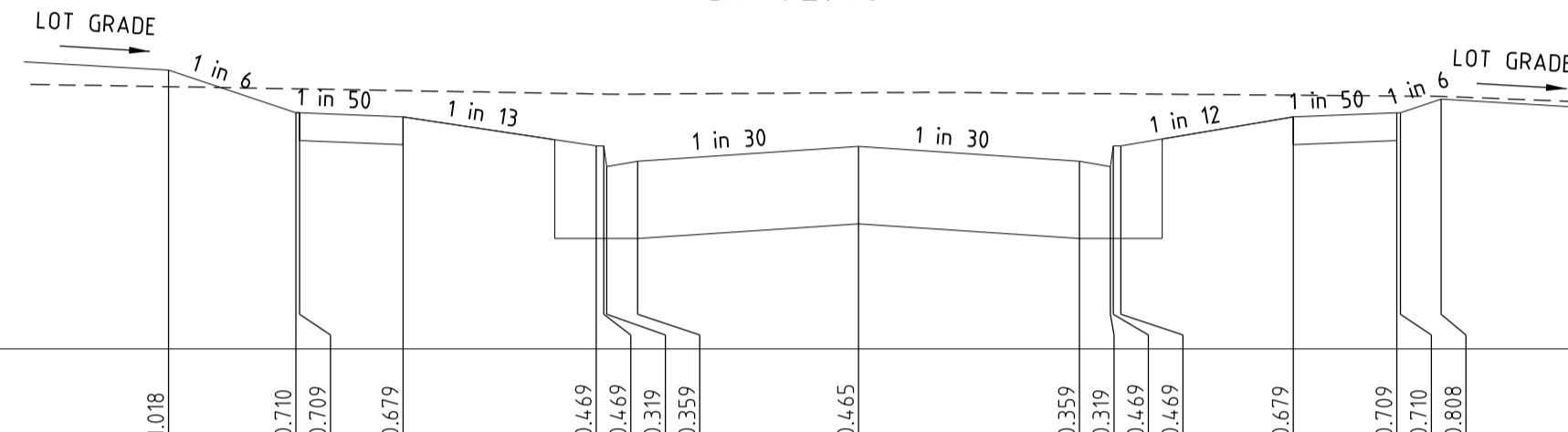


STRUCTURAL FILL  
IN ACCORDANCE  
WITH AS3798-2007,  
LEVEL 1.



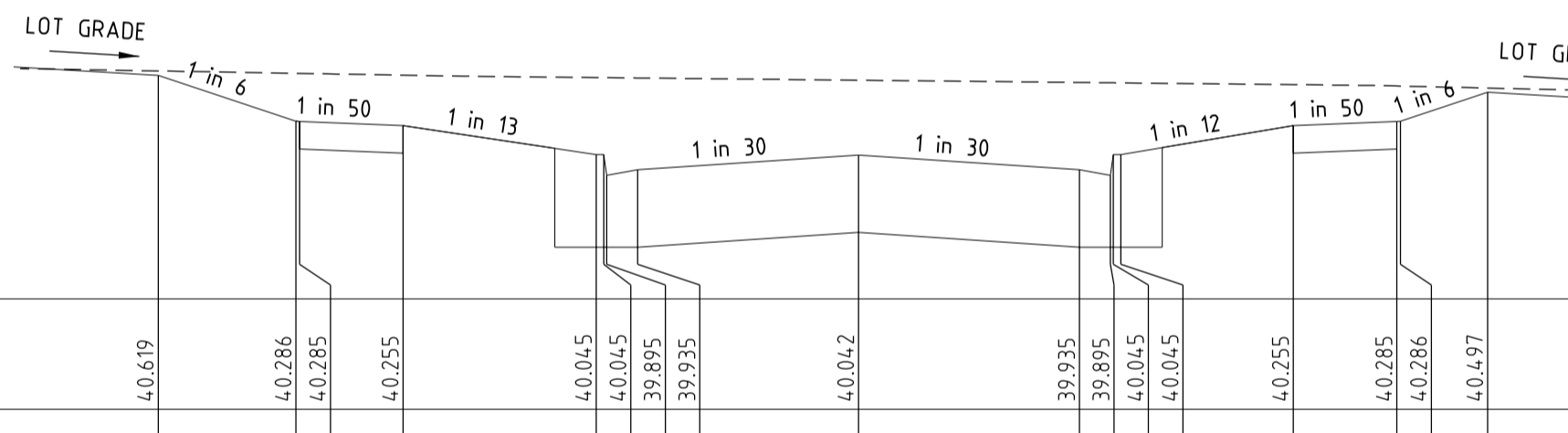
DATUM 39	
DESIGN SURFACE LEVEL	4.1195, 4.0961, 4.0960, 4.0930, 4.0720, 4.0720, 4.0570, 4.0610, 4.0720, 4.0930, 4.0960, 4.0891, 4.0866
EXISTING SURFACE LEVEL	4.1072, 4.1062, 4.1062, 4.1046, 4.1019, 4.1018, 4.1017, 4.1013, 4.0944, 4.0904, 4.0875, 4.0876, 4.0866
OFFSET	-9.195, -8.150, -8.100, -6.600, -3.800, -3.650, -3.650, -3.200, 3.200, 3.650, 3.690, 3.800, 6.300, 7.800, 7.850, 8.232

WITHERS STREET Ch 62.40



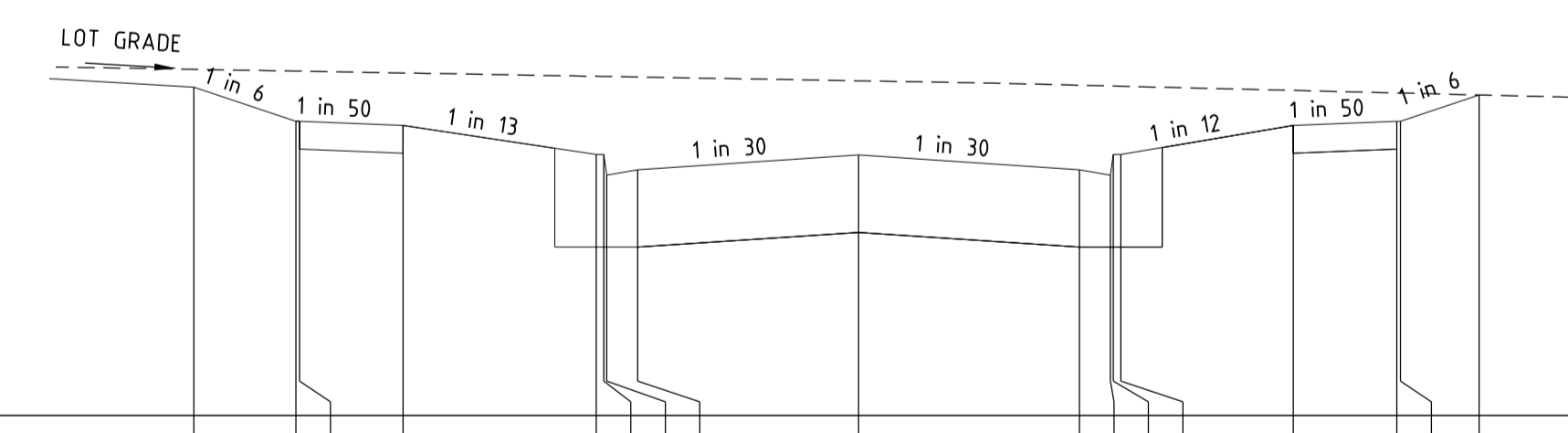
DATUM 39	
DESIGN SURFACE LEVEL	4.1018, 4.0710, 4.0709, 4.0679, 4.0469, 4.0469, 4.0319, 4.0359, 4.0359, 4.0319, 4.0679, 4.0709, 4.0808
EXISTING SURFACE LEVEL	4.0898, 4.0883, 4.0883, 4.0870, 4.0846, 4.0845, 4.0844, 4.0845, 4.0847, 4.0847, 4.0837, 4.0831, 4.0831, 4.0828
OFFSET	-9.997, -8.150, -8.100, -6.600, -3.800, -3.650, -3.650, -3.200, 3.200, 3.650, 3.690, 3.800, 6.300, 7.800, 7.850, 8.439

WITHERS STREET Ch 43.40



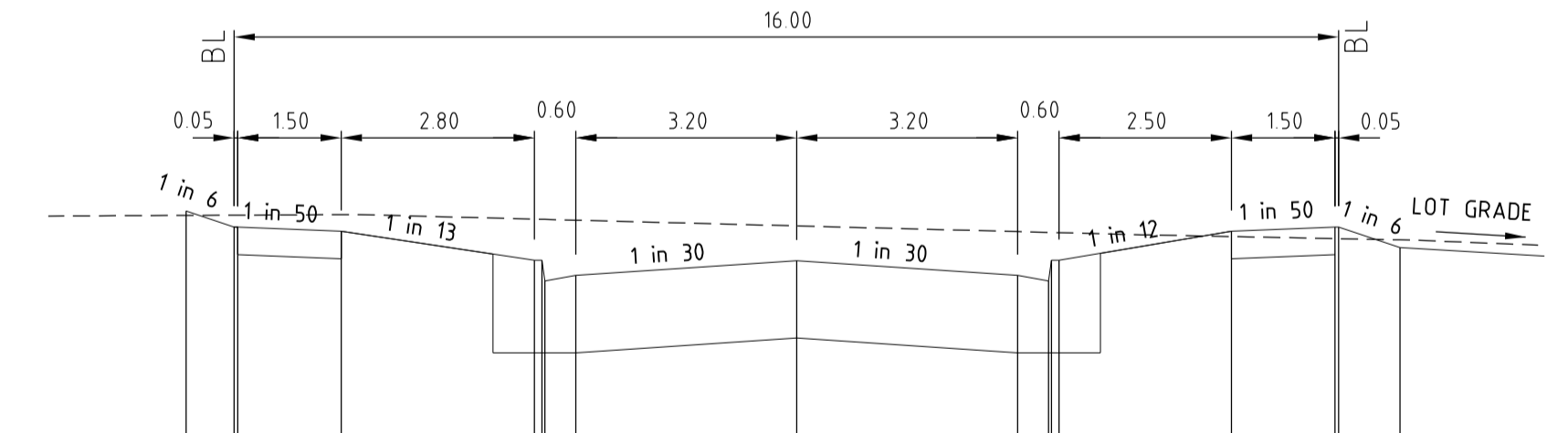
DATUM 39	
DESIGN SURFACE LEVEL	4.0619, 4.0286, 4.0285, 4.0255, 4.0045, 4.0045, 39.935, 39.935, 4.0045, 4.0045, 4.0255, 4.0285, 4.0497
EXISTING SURFACE LEVEL	4.0650, 4.0633, 4.0633, 4.0620, 4.0602, 4.0602, 4.0599, 4.0599, 4.0584, 4.0584, 4.0551, 4.0541, 4.0541, 4.0526
OFFSET	-10.147, -8.150, -8.100, -6.600, -3.800, -3.650, -3.650, -3.200, 3.200, 3.650, 3.690, 3.800, 6.300, 7.800, 7.850, 9.115

WITHERS STREET Ch 24.40



DATUM 38	
DESIGN SURFACE LEVEL	4.0377, 4.0130, 4.0129, 4.0099, 39.889, 39.889, 39.739, 39.739, 4.0099, 4.0099, 4.0129, 4.0129, 4.0321
EXISTING SURFACE LEVEL	4.0506, 4.0493, 4.0493, 4.0480, 4.0456, 4.0455, 4.0455, 4.0451, 4.0386, 4.0385, 4.0384, 4.0354, 4.0335, 4.0335, 4.0321
OFFSET	-9.630, -8.150, -8.100, -6.600, -3.800, -3.650, -3.650, -3.200, 3.200, 3.650, 3.690, 3.800, 6.300, 7.800, 7.850, 8.993

WITHERS STREET Ch 13.38

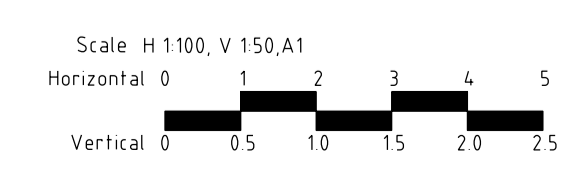


DATUM 39	
DESIGN SURFACE LEVEL	4.1189, 4.0832, 4.0832, 4.0722, 4.1042, 4.1042, 4.0828, 4.1042, 4.1072, 4.1073, 4.0924
EXISTING SURFACE LEVEL	4.1157, 4.1073, 4.1073, 4.1072, 4.1042, 4.1042, 4.1081, 4.1081, 4.0988, 4.0988, 4.0988, 4.0979
OFFSET	-8.845, -8.150, -8.100, -6.600, -3.800, -3.650, -3.650, -3.200, 3.200, 3.650, 3.690, 3.800, 6.300, 7.800, 7.850, 8.742

WITHERS STREET Ch 72.45

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
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B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21



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Designed  
**R. WEINBER**  
  
 Authorised  
**D. CAMERON**

Checked  
**M. READMAN**  
  
 Date  
**04/05/21**

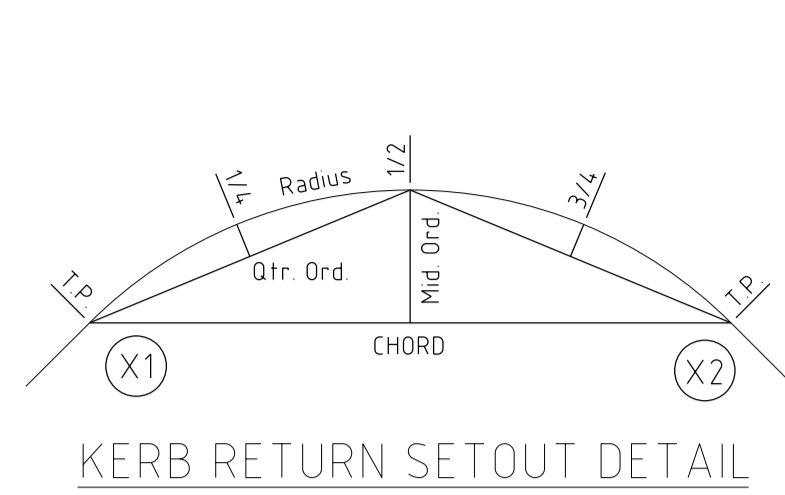
**MAMBOURIN ESTATE**  
**STAGE 15**  
**CROSS SECTIONS - WITHERS STREET**

FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

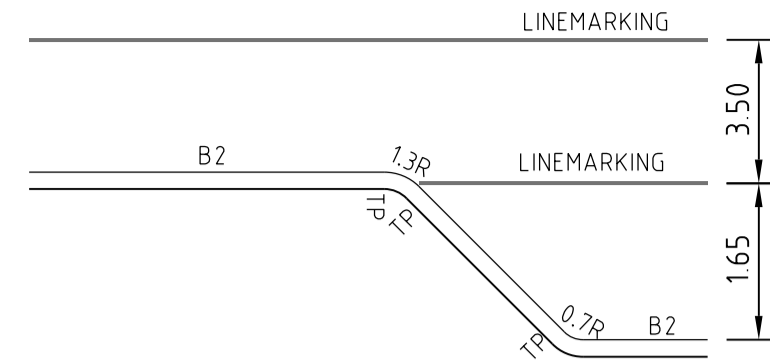
**PRELIMINARY**

Drg No  
**305180R10**

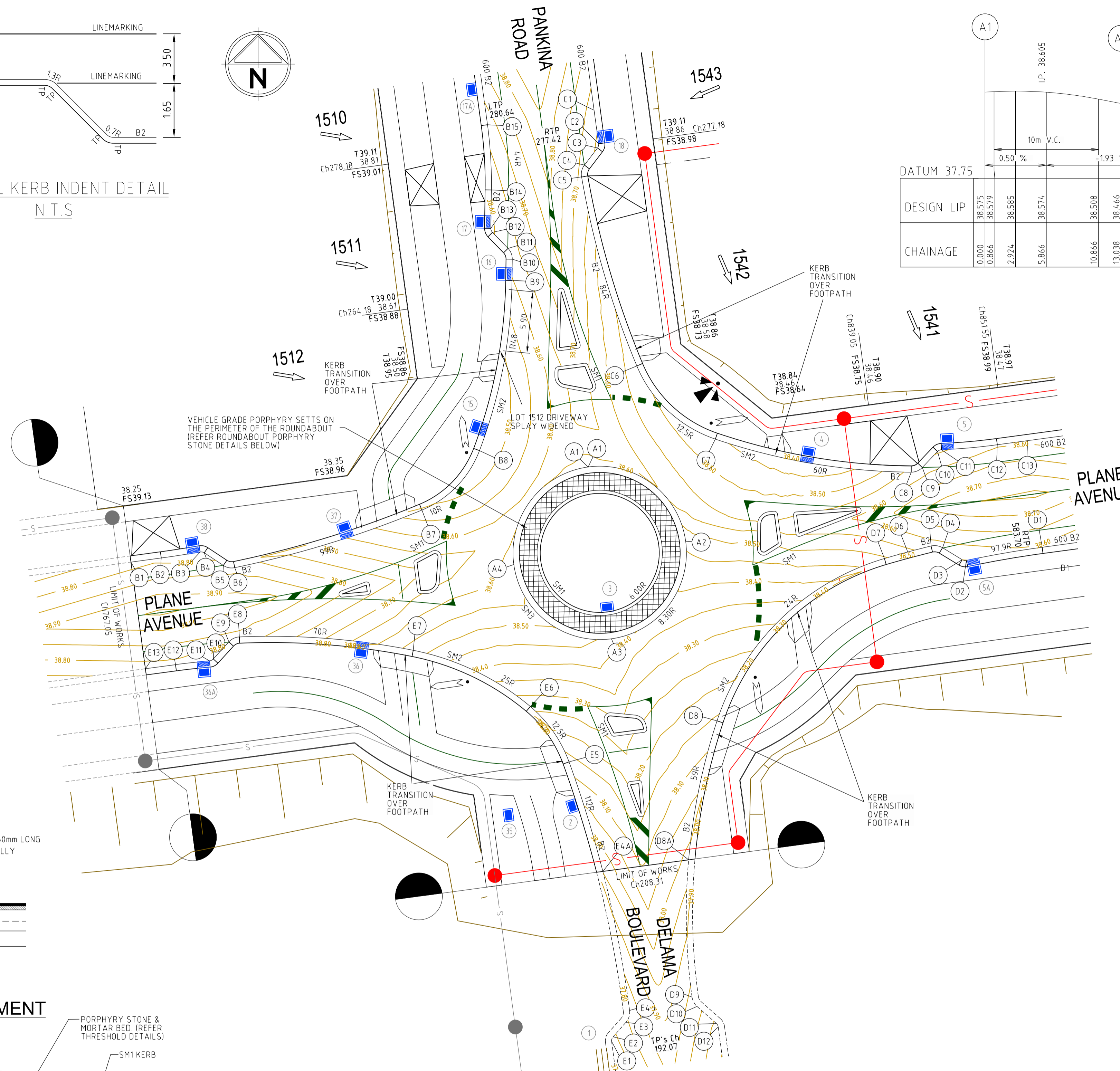
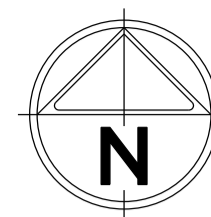
Rev  
**E**



KERB RETURN SETOUT DETAIL



TYPICAL KERB INDENT DETAIL  
N.T.S



DESIGN LIP	CHAINAGE	IP	V.C.	IP	V.C.	IP	V.C.	IP	V.C.	IP
38.575	0.000	38.575	10m	38.605	12m	38.515	10m	38.620	10m	38.575
38.575	0.000	38.575	0.50%	38.585	-1.93%	38.574	1.39%	38.509	0.94%	38.575
38.575	0.000	38.575	2.924	38.585	38.509	38.574	38.509	38.575	38.575	38.575

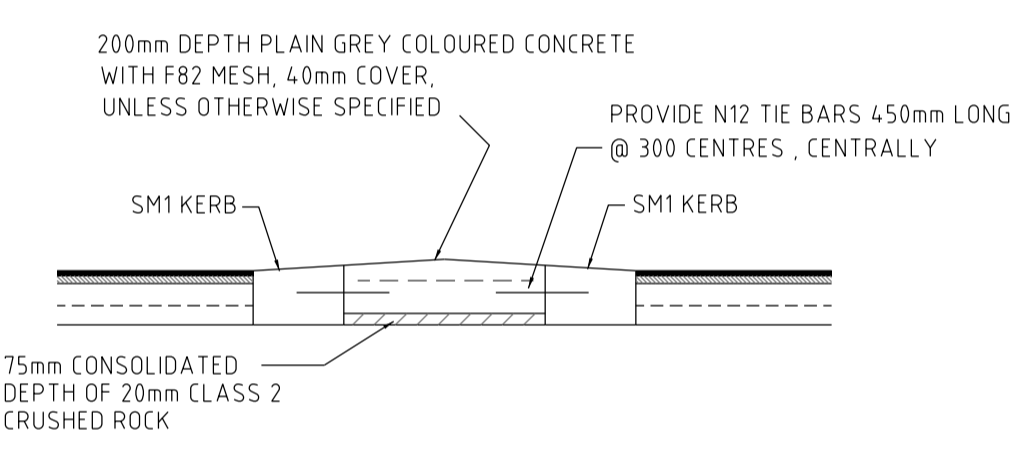
LIP LINE A  
Hor250  
Ver25

ALIGNMENT A

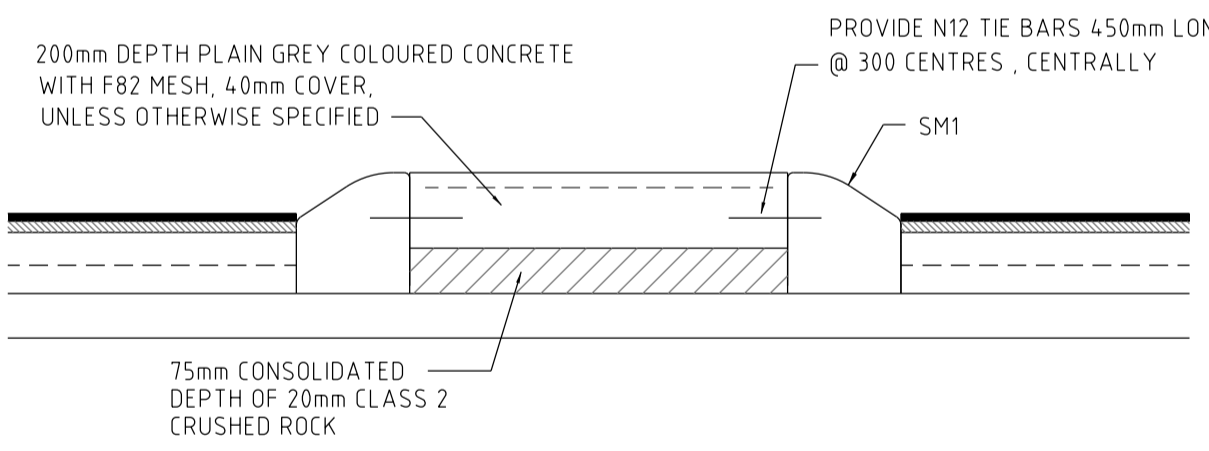
POINT NO	EASTING	NORTHING	RL
A1	288824.096	5803471.727	38.575
1/4	288817.185	5803465.621	38.599
1/2	288818.607	5803468.531	38.603
3/4	288832.383	5803467.679	38.527
A3	288833.435	5803464.616	38.466
1/4	288833.235	5803461.384	38.413
1/2	288831.814	5803458.474	38.390
3/4	288829.387	5803456.330	38.396
A4	288826.324	5803455.278	38.431
1/4	288823.092	5803455.477	38.475
1/2	288820.182	5803456.899	38.515
1/2	288820.182	5803456.899	38.515
3/4	288818.038	5803459.326	38.550
A5	288816.985	5803462.388	38.580
1/4	288817.185	5803465.621	38.599
1/2	288818.607	5803468.531	38.603
3/4	288832.383	5803467.679	38.527
A6	288824.096	5803471.727	38.575

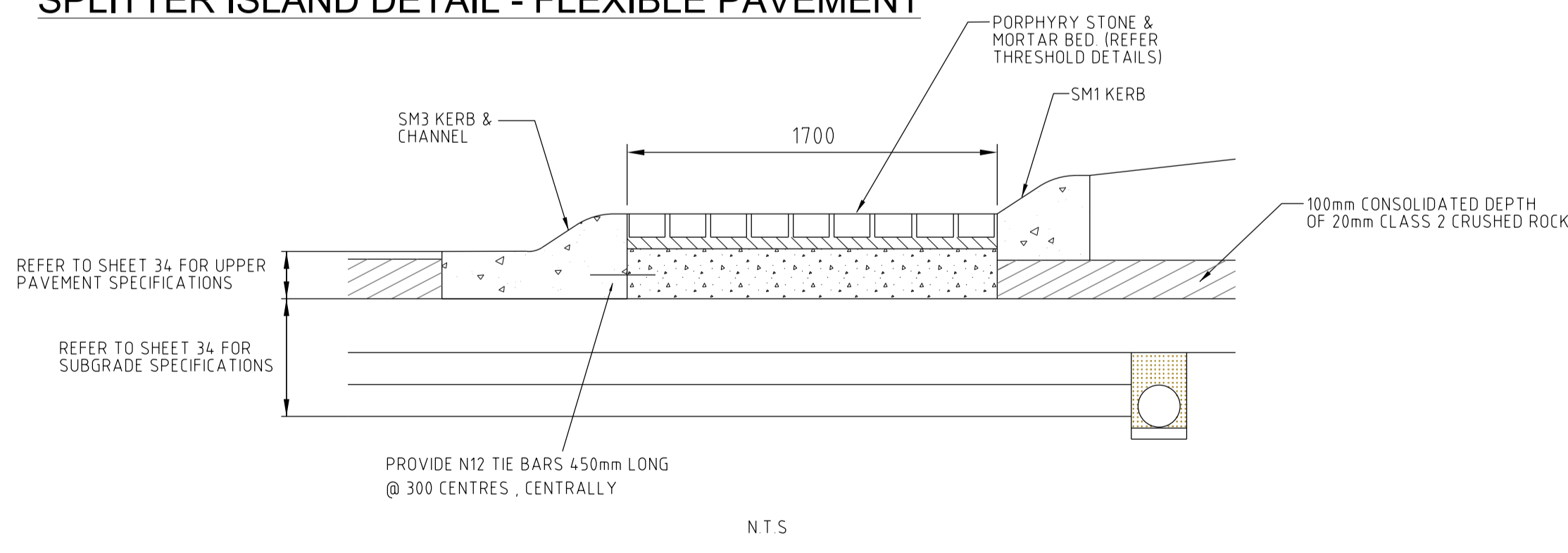
CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
A2-A3	8.300	-39.113	-11.738	14.169	5.124
A3-A4	8.300	13.038	11.738	2.431	0.632
A4-A5	8.300	13.038	11.738	2.431	0.632
A5-A1	8.300	-39.113	-11.738	14.169	5.124



SECTION IN PEDESTRIAN CROSSINGS  
SPLITTER ISLAND DETAIL  
(Dimensions in millimetres)  
N.T.S



SECTION OUTSIDE PEDESTRIAN CROSSINGS  
SPLITTER ISLAND DETAIL - FLEXIBLE PAVEMENT



ROUNDBOUT PAVING DETAIL

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

**PAVEMENT DETAILS**

THE PAVEMENT DESIGNS SHOWN HERE HAVE BEEN DESIGNED/PROVIDED BY COFFEY SERVICES AUSTRALIA PTY LTD WHO ARE RESPONSIBLE FOR THE GEOTECHNICAL WORK ON THIS PROJECT. SPIRE IS NOT RESPONSIBLE FOR THE WORK OF COFFEY SERVICES AUSTRALIA PTY LTD.

THE DESIGN HAS BEEN EXTRACTED FROM THE COFFEY SERVICES AUSTRALIA PTY LTD REPORT TITLED "GEOTECHNICAL INVESTIGATION INCLUDING PAVEMENT DESIGN, FILL SPECIFICATION AND RECOMMENDATIONS FOR SEWERS, RETAINING WALLS AND WETLANDS". THIS DOCUMENT SHOULD BE REVIEWED TO ENSURE THAT THE DESIGN HAS BEEN ACCURATELY REPRODUCED. A COPY OF THE DOCUMENT WILL BE PROVIDED TO YOU ON REQUEST.

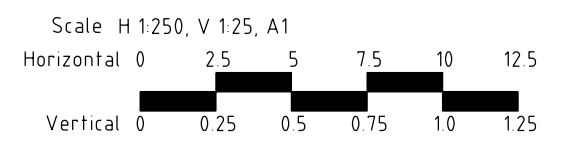
SPIRE DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY, ADEQUACY OR APPROPRIATENESS OF THE GEOTECHNICAL WORK AND PAVEMENT DESIGNS.

ANY QUERIES IN RESPECT TO THE GEOTECHNICAL WORK AND PAVEMENT DESIGNS SHOULD BE ADDRESSED TO COFFEY SERVICES AUSTRALIA PTY LTD AND SENT TO SPIRE.

ROUNDBOUT PORPHYRY STONE DETAILS

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)	
			PORPHYRY STONE
BASALT PORPHYRY STONE	90mm X 90mm BASALT PORPHYRY STONE (AS PER PHOTO)	60	
MORTAR BED	10mm - 15mm MORTAR JOINTS	35	
EXPOSED AGGREGATE	GREY COLOURED MORTAR K&LBA MIDWAY MINI MIX CONCRETE (AS PER PHOTO) OR 14mm-20mm BLUE METAL (60%), 10mm-14mm QUARTZ (30%), 1mm-10mm YELLOW CHIP / PEBBLE (10%), FINISH = WATER WASHED MEDIUM EXPOSED (2mm). CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	-	-
CONCRETE BASE COURSE	CHARACTERISTIC FLEXURAL STRENGTH = 4.5MPa, SL92 TOP REINFORCEMENT, 40mm COVER	195	
DE-BONDING TREATMENT	BITUMEN SPRAYED SEAL WITH 5mm-7mm AGGREGATE	Y	
UPPER PAVEMENT TOTAL		290	
LOWER SUBBASE	Class 3 Crushed Rock (size 20mm) Compacted in 2 layers	150	
CAPPING LAYER	Type A - Working platform achieving CBR = 5%, Properties: CBR +15.9%, Swell +15%, Permeability + 1E-9 m/s (Thickness to be confirmed during construction)	160	
TOTAL PAVEMENT DEPTH		600	

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
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A	ISSUE TO COUNCIL	M.R	04/05/21



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**FRASERS PROPERTY**  
 Designed  
**R. WEINBER**  
 Authorised  
**D. CAMERON**

Checked  
**M. READMAN**  
 Date  
**04/05/21**

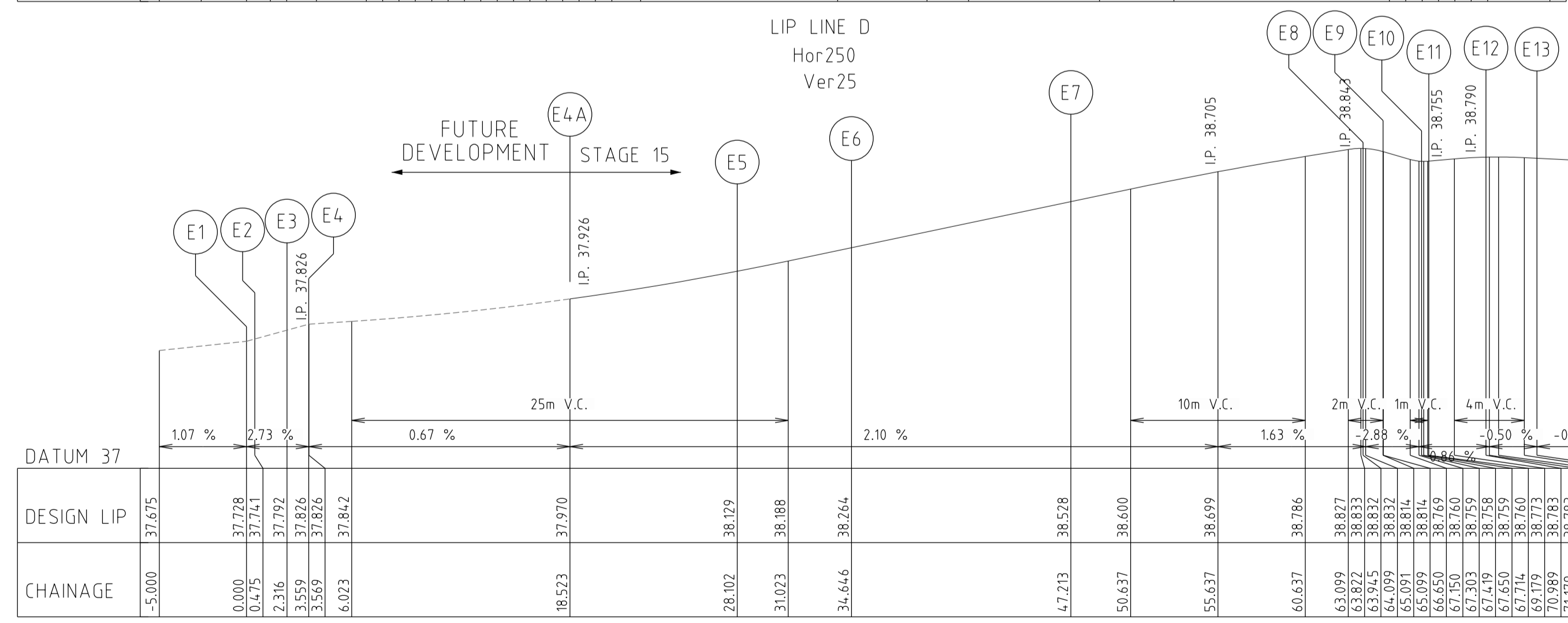
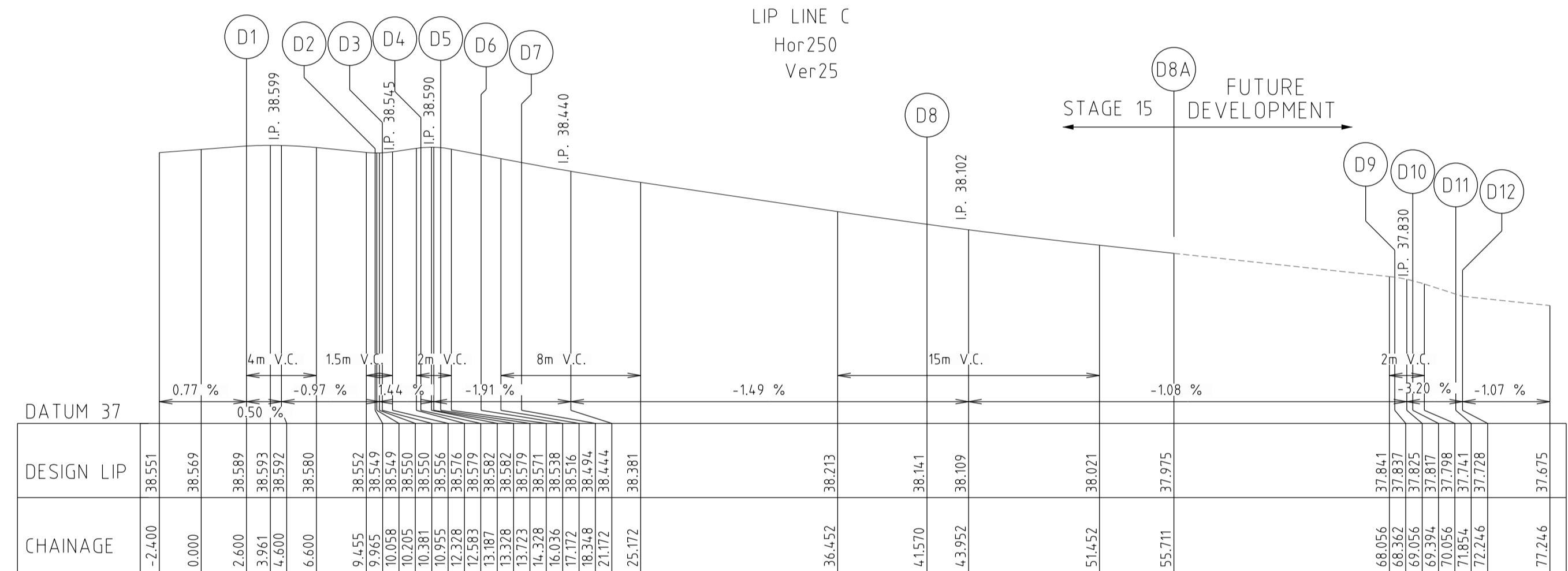
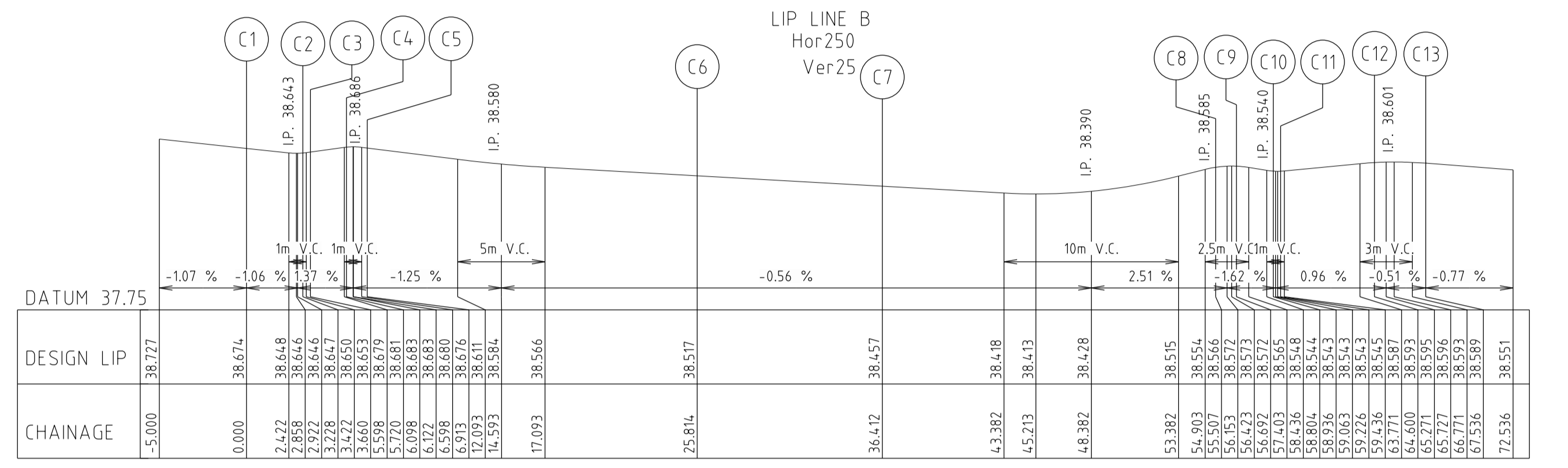
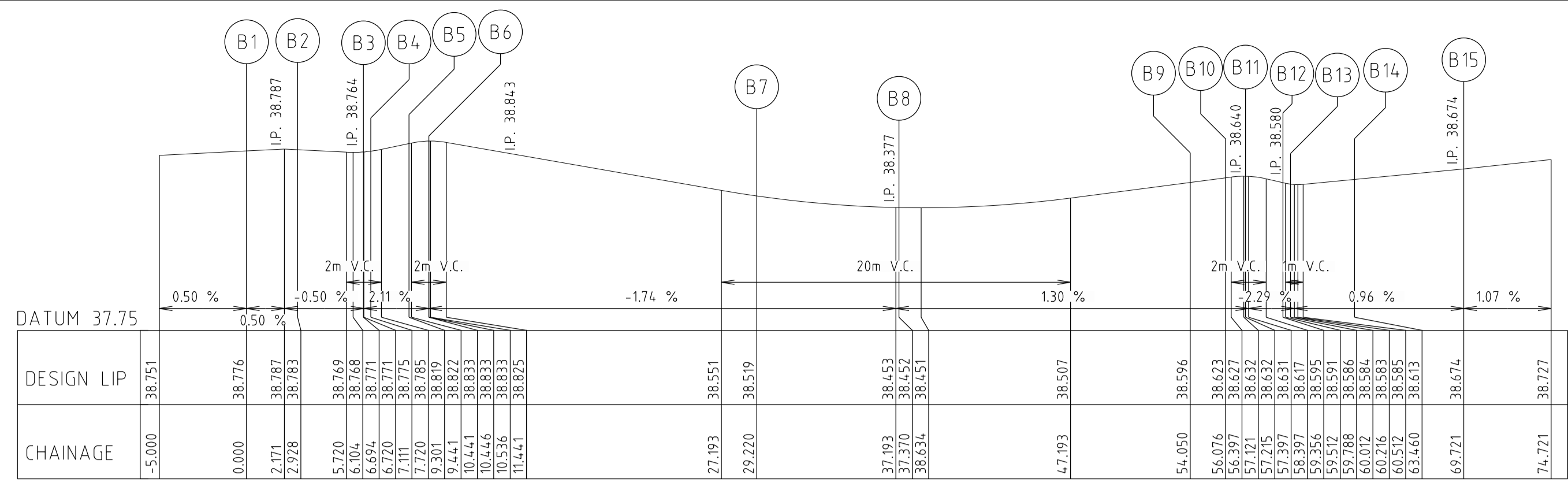
**MAMBOURIN ESTATE**  
**STAGE 15**  
**INTERSECTION DETAILS - SHEET 1 OF 4**

FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

PRELIMINARY

Drg No  
**305180R11**

Rev  
**E**



**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

ALIGNMENT B

POINT NO	EASTING	NORTHING	RL
B1	288780.323	5803462.620	38.776
B2	288783.224	5803463.013	38.783
1/4	288784.156	5803463.144	38.779
1/2	288785.088	5803463.283	38.774
3/4	288786.017	5803463.432	38.769
B3	288786.946	5803463.591	38.771
1/4	288787.049	5803463.599	38.772
1/2	288787.153	5803463.587	38.773
3/4	288787.252	5803463.556	38.774
B4	288787.344	5803463.507	38.775
B5	288789.170	5803462.298	38.819
1/4	288789.422	5803462.164	38.825
1/2	288789.686	5803462.083	38.829
3/4	288789.980	5803462.057	38.832
B6	288790.264	5803462.087	38.833
1/4	288794.837	5803463.146	38.761
1/2	288799.353	5803464.420	38.679
3/4	288803.805	5803465.907	38.597
B7	288808.181	5803467.604	38.519
1/4	288809.970	5803468.570	38.493
1/2	288811.527	5803469.879	38.473
3/4	288812.786	5803471.476	38.460
B8	288813.697	5803473.295	38.452
1/4	288815.004	5803477.254	38.458
1/2	288815.962	5803481.311	38.489
3/4	288816.585	5803491.431	38.442
B9	288816.807	5803489.597	38.596
B10	288816.837	5803491.623	38.623
1/4	288816.814	5803491.906	38.626
1/2	288816.735	5803492.179	38.630
3/4	288816.605	5803492.432	38.631
B11	288816.428	5803492.654	38.632
1/4	288814.936	5803494.191	38.595
1/2	288814.869	5803494.275	38.593
3/4	288814.820	5803494.371	38.590
B12	288814.790	5803494.475	38.588
B13	288814.781	5803494.582	38.586
B14	288814.835	5803498.254	38.613
1/4	288814.829	5803499.819	38.628
1/2	288814.765	5803501.383	38.643
3/4	288814.642	5803502.943	38.659
B15	288814.461	5803504.497	38.674

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
B2-B3	96.900	3.766	3.766	0.018	-0.005
B3-B4	0.550	0.417	0.407	0.039	0.010
B5-B6	1.450	1.144	1.115	0.111	-0.028
B6-B7	99.000	18.774	18.746	0.445	-0.111
B7-B8	10.000	8.150	7.926	0.819	-0.207
B8-B9	48.000	16.680	16.596	0.723	-0.181
B10-B11	1.450	1.139	1.110	0.110	-0.028
B12-B13	0.550	0.432	0.421	0.042	0.011
B14-B15	41.900	6.261	6.255	0.117	-0.029

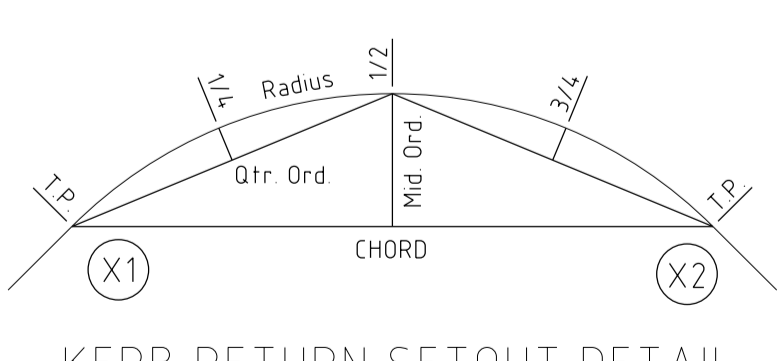
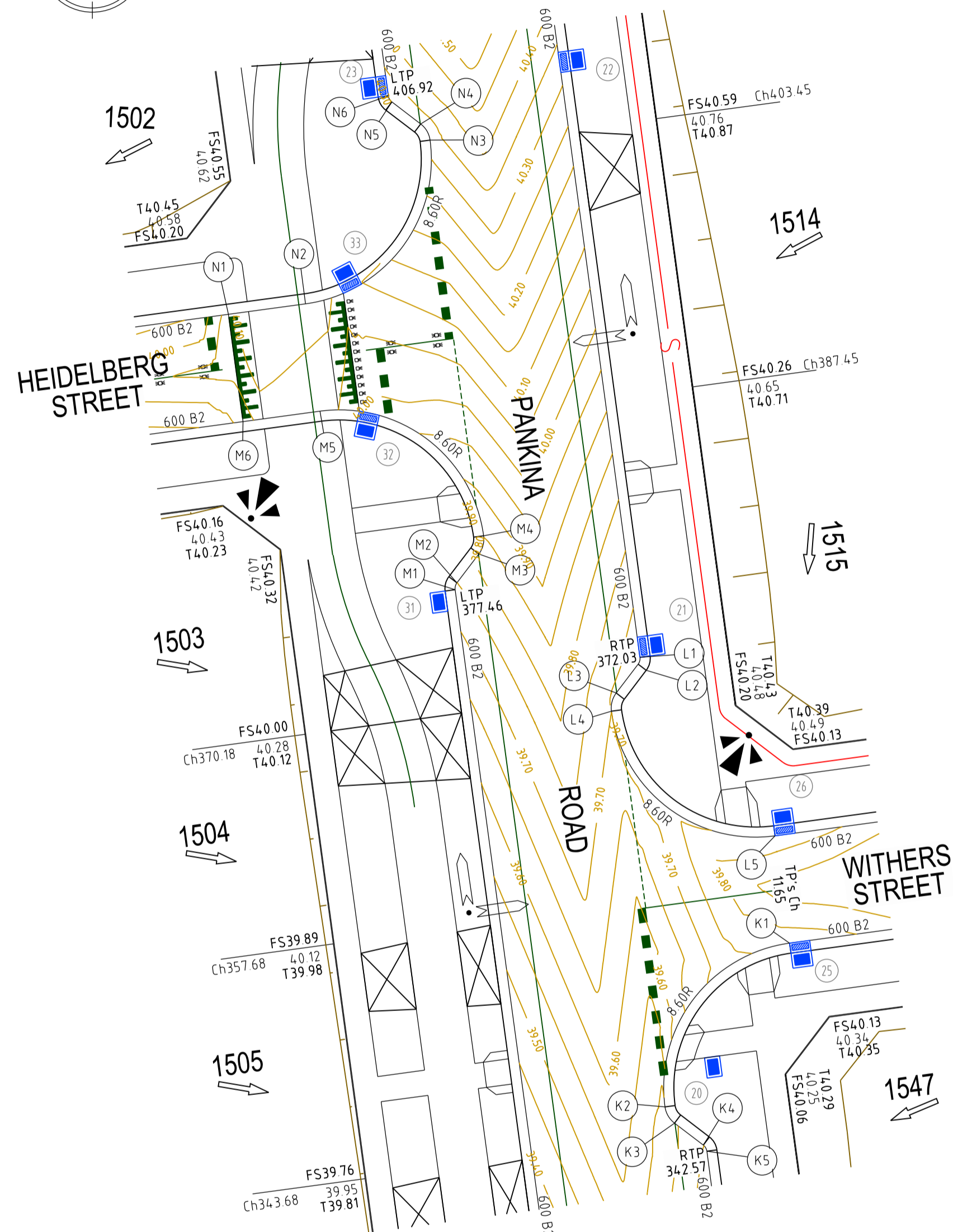
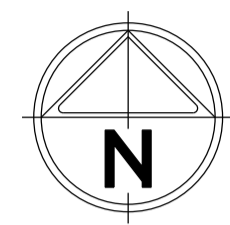
ALIGNMENT D

POINT NO	EASTING	NORTHING	RL
D1	288867.569	5803464.043	38.589
1/4	288865.747	5803463.779	38.592
1/2	288863.930	5803463.481	38.583
3/4	288862.118	5803463.148	38.565
D2	288860.314	5803462.782	38.549
1/4	288860.211	5803462.710	38.549
1/2	288860.107	5803462.778	38.549
3/4	288860.007	5803462.805	38.550
D3	288859.914	5803462.850	38.550
D4	288858.032	5803463.994	38.579
1/4	288857.776	5803464.117	38.581
1/2	288857.500	5803464.188	38.582
3/4	288857.216	5803464.204	38.581
D5	288856.935	5803464.163	38.579
D6	288854.688	5803463.614	38.538
D7	288852.469	5803462.961	38.494
1/4	288847.151	5803460.669	38.396
1/2	288842.537	5803457.169	38.310
3/4	288838.895	5803452.665	38.223
D8	288836.439	5803447.421	38.141
1/4	288834.716	5803440.952	38.056
1/2	288833.736	5803434.330	37.983
3/4	288833.513	5803427.639	37.910
D9	288834.050	5803420.967	37.837
1/4	288834.107	5803420.716	37.833
1/2	288834.209	5803420.479	37.829
3/4	288834.350	5803420.264	37.823
D10	288834.528	5803420.077	37.817
1/4	288836.374	5803418.451	37.741
1/2	288836.441	5803418.380	37.738
3/4	288836.495	5803418.298	37.735
D11	288836.534	5803418.207	37.731
D12	288836.555	5803418.112	37.728

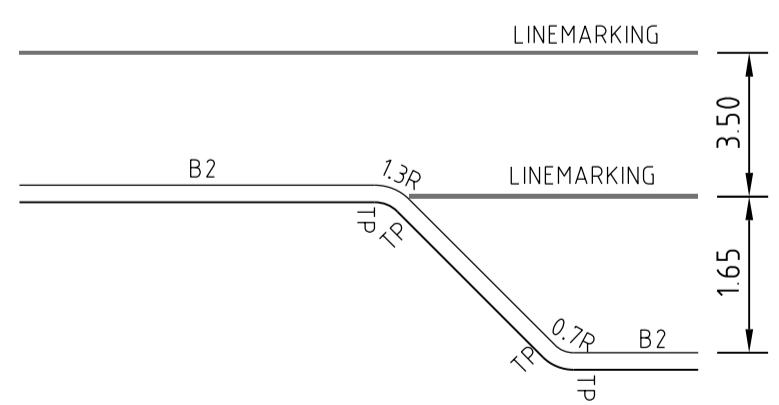
CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
D1-D2	97.900	7.366	7.364	0.069	-0.017
D2-D3	0.550	0.416	0.406	0.039	0.010
D4-D5	1.450	1.140	1.111	0.111	-0.028
D7-D8	24.000	23.222	22.327	2.754	-0.699
D8-D9	59.000	26.791	26.562	1.514	-0.380
D9-D10	1.450	1.032	1.010	0.091	-0.023
D11-D12	0.550	0.393	0.384	0.035	0.009

ALIGNMENT C

POINT NO	EASTING	NORTHING	RL
C1	288824.667	5803505.880	38.674
C2	288825.101	5803502.682	38.647
1/4	288825.105	5803502.574	38.648
1/2	288825.087	5803502.467	38.650
3/4	288825.050	5803502.366	38.651
C3	288824.993	5803502.275	38.653
C4	288823.745	5803500.635	38.681
1/4	288823.590	5803500.381	38.683
1/2	288823.490	5803500.100	38.683
3/4	288823.449	5803499.806	38.680
C5	288823.470	5803499.509	38.676
1/4	288824.408	5803494.878	38.617
1/2	288825.605	5803490.308	38.570
3/4	288827.057	5803485.812	38.543
C6	288828.759	5803481.405	38.517
1/4	288830.033	5803479.087	38.502
1/2	288831.767	5803477.090	38.487
3/4	288833.882	5803475.502	38.472
C7	288836.283	5803474.394	38.457
1/4	288840.861	5803473.066	38.430
1/2	288845.532	5803472.066	38.414
3/4	288850.266	5803471.461	38.460
C8	288855.032	5803471.233	38.566
1/4	288855.327	5803471.261	38.570
1/2	288855.610	58034	

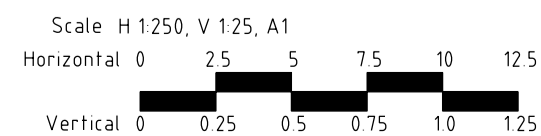


KERB RETURN SETOUT DETAIL



TYPICAL KERB INDENT DETAIL  
N.T.S

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**



Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21

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Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

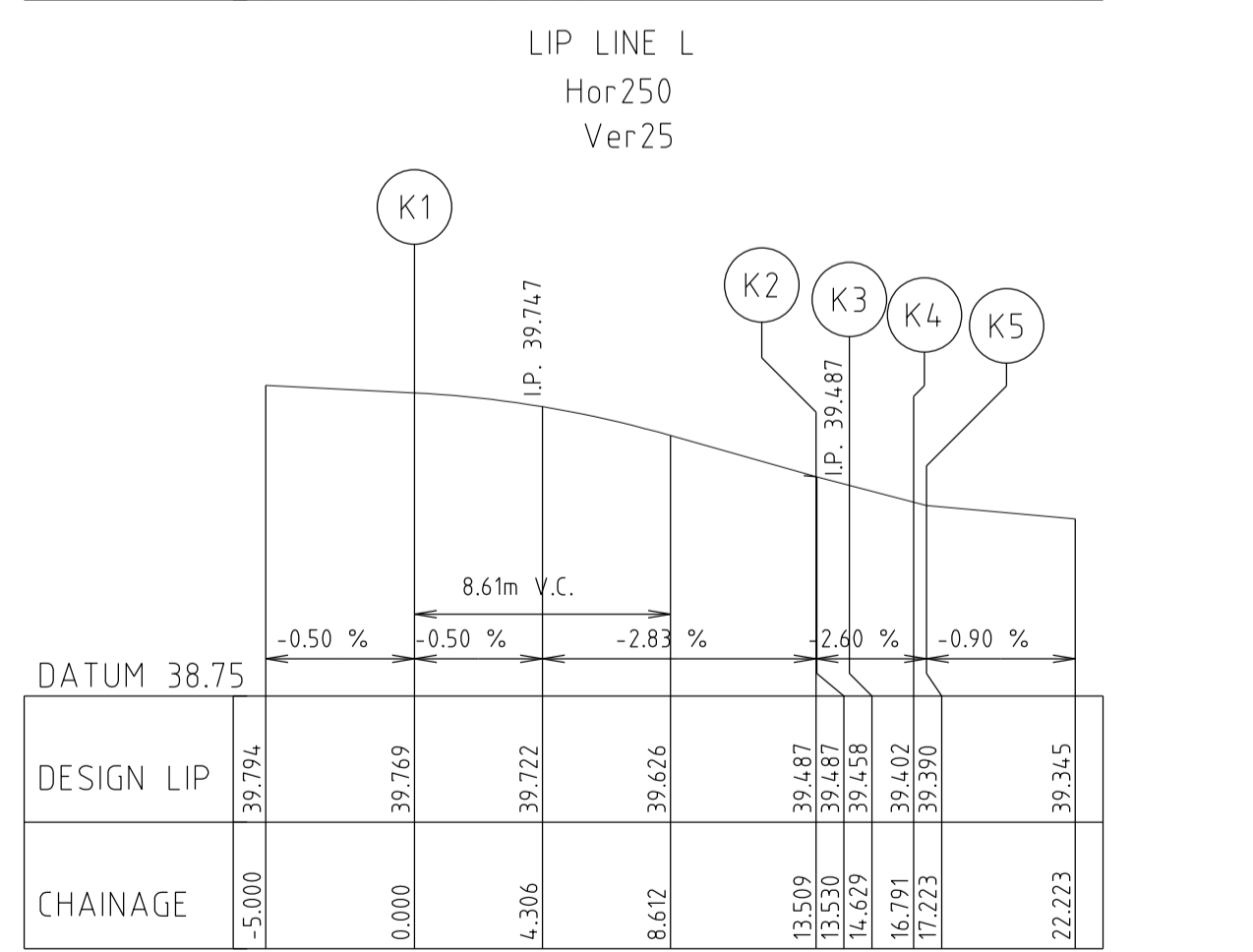
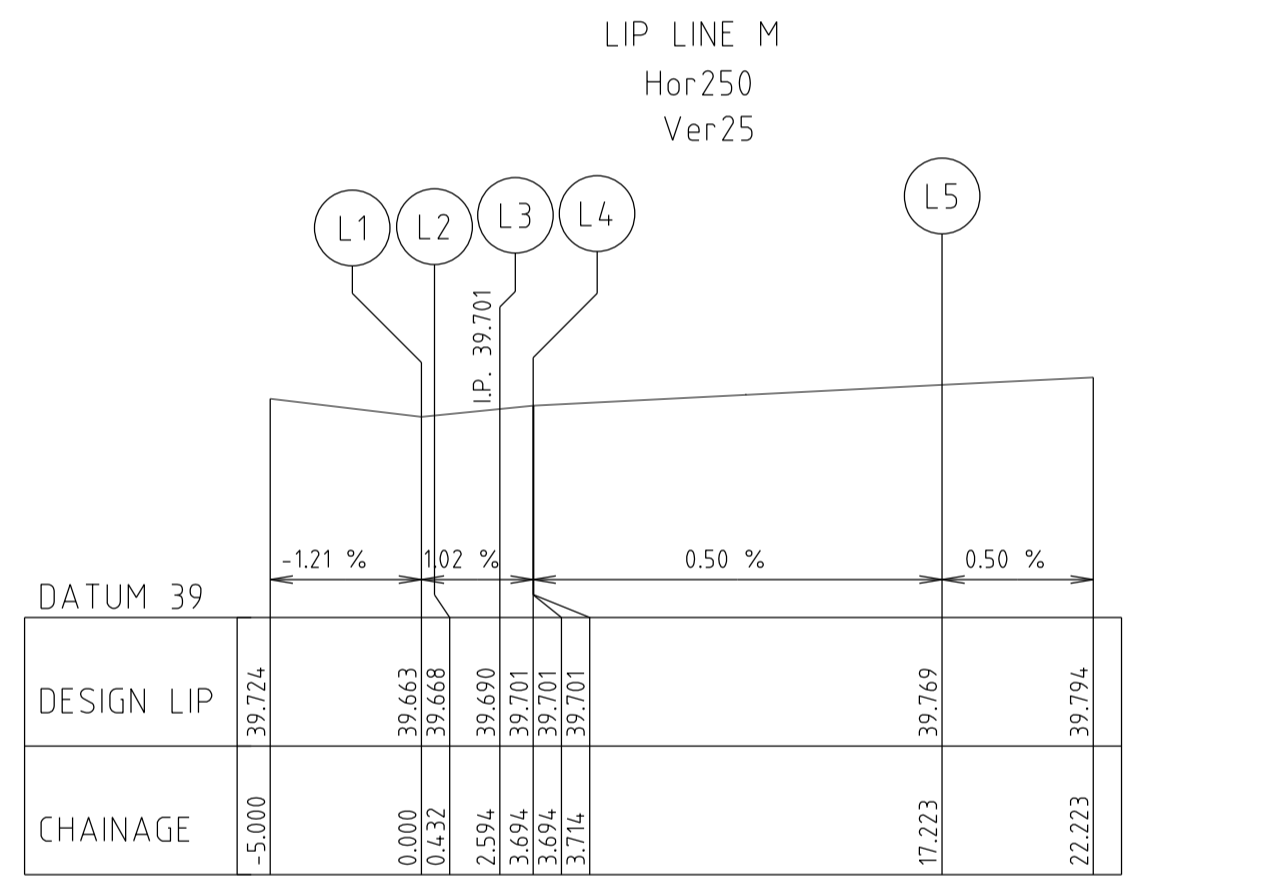
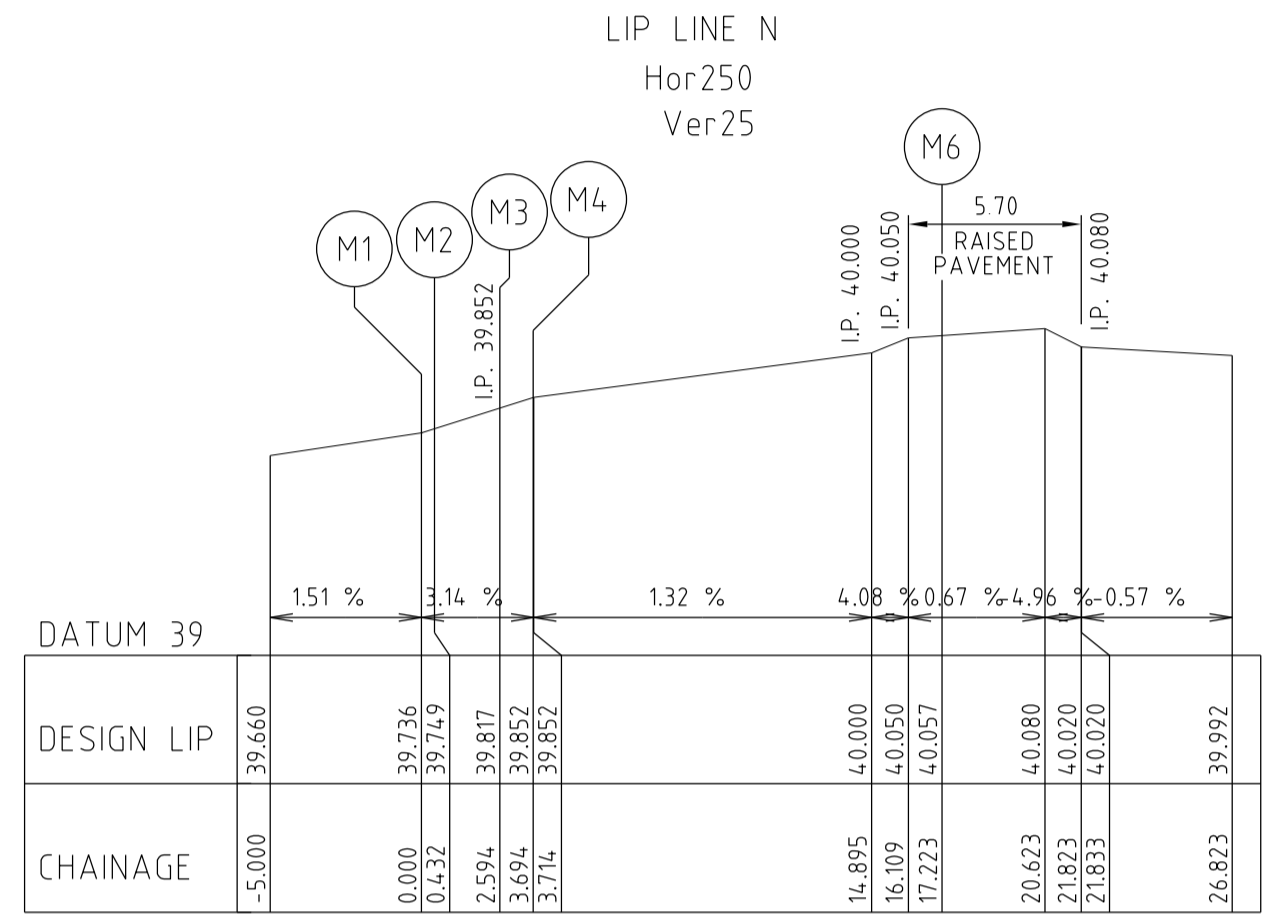
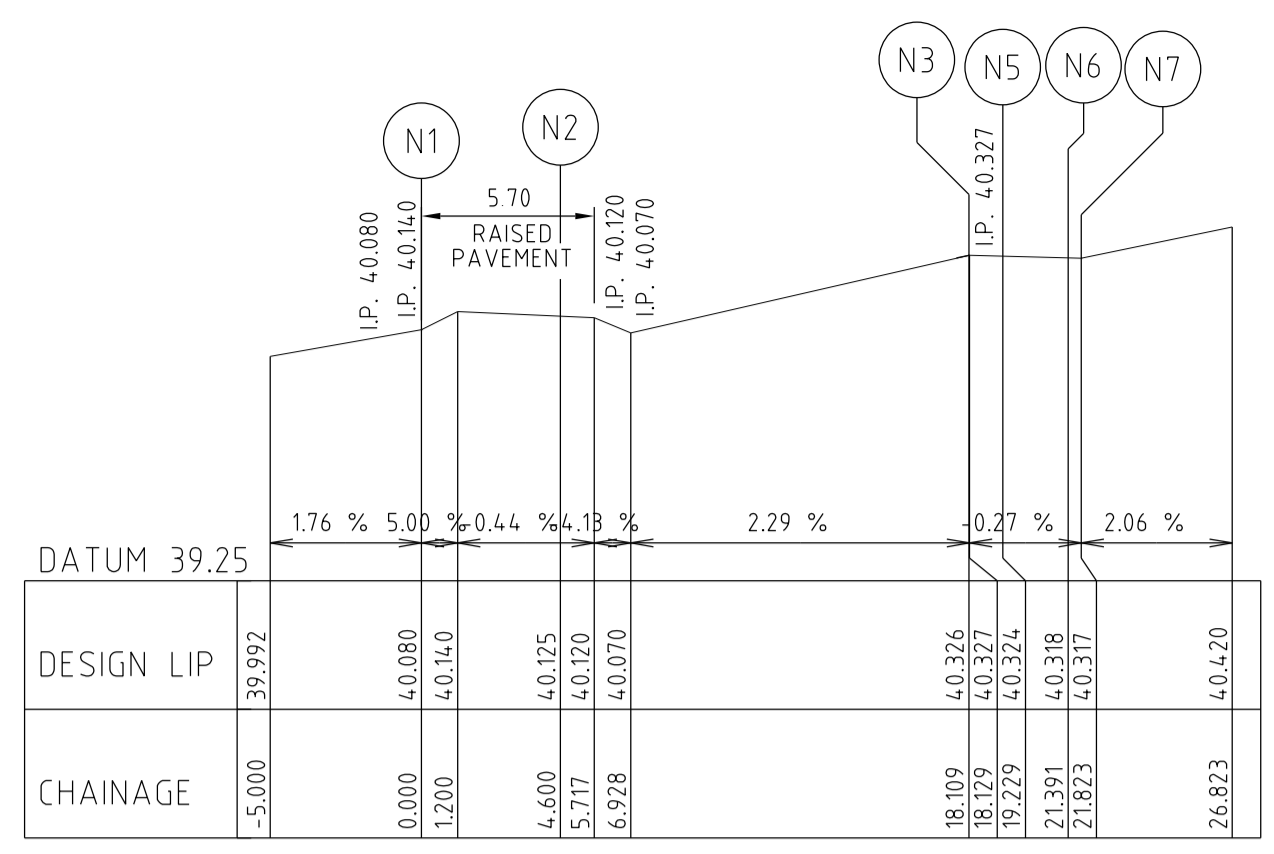
**MAMBOURIN ESTATE**  
**STAGE 15**  
**INTERSECTION DETAILS - SHEET 3 OF 4**

FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

**PRELIMINARY**

Drg No  
**305180R13**

Rev  
**E**



ALIGNMENT N

POINT NO	EASTING	NORTHING	RL
N1	288788.060	5803616.713	40.080
N2	288792.618	5803617.330	40.125
1/4	288795.792	5803618.421	40.094
1/2	288798.306	5803620.643	40.171
3/4	288799.779	5803623.658	40.249
N3	288799.986	5803627.007	40.326
N4	288799.984	5803627.027	40.327
1/4	288799.920	5803627.294	40.326
1/2	288799.806	5803627.544	40.325
3/4	288799.645	5803627.766	40.324
N5	288799.444	5803627.953	40.324
N6	288797.724	5803629.263	40.318
1/4	288797.645	5803629.336	40.317
1/2	288797.582	5803629.424	40.317
3/4	288797.537	5803629.522	40.317
N7	288797.512	5803629.627	40.317

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
N2-N3	8.600	13.509	12.162	2.519	-0.655
N4-N5	1.400	1.100	1.072	0.107	-0.027
N6-N7	0.550	0.432	0.421	0.042	0.011

ALIGNMENT M

POINT NO	EASTING	NORTHING	RL
M1	288801.466	5803600.436	39.736
1/4	288801.462	5803600.544	39.739
1/2	288801.479	5803600.651	39.743
3/4	288801.517	5803600.752	39.746
M2	288801.573	5803600.843	39.749
M3	288802.883	5803602.564	39.817
1/4	288803.027	5803602.797	39.826
1/2	288803.123	5803603.055	39.835
3/4	288803.167	5803603.325	39.843
M4	288803.157	5803603.600	39.852
M5	288803.154	5803603.620	39.852
1/4	288802.063	5803606.794	39.897
1/2	288799.842	5803609.308	39.942
3/4	288796.827	5803610.781	39.986
M6	288793.477	5803610.988	40.057
M7	288788.919	5803610.371	40.020

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
M1-M2	0.550	0.432	0.421	0.042	0.011
M3-M4	1.400	1.100	1.072	0.107	-0.027
M5-M6	8.600	13.509	12.162	2.519	-0.655

ALIGNMENT L

POINT NO	EASTING	NORTHING	RL
L1	288812.401	5803596.440	39.663
1/4	288812.405	5803596.332	39.664
1/2	288812.388	5803596.226	39.665
3/4	288812.351	5803596.125	39.666
L2	288812.294	5803596.033	39.668
L3	288810.984	5803594.313	39.690
1/4	288810.840	5803594.079	39.692
1/2	288810.744	5803593.822	39.695
3/4	288810.701	5803593.551	39.698
L4	288810.711	5803593.277	39.701
L5	288810.713	5803593.256	39.701
1/4	288811.804	5803590.083	39.718
1/2	288814.026	5803587.568	39.735
3/4	288817.041	5803586.095	39.752
L6	288820.390	5803585.888	39.769

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
L1-L2	0.550	0.432	0.421	0.042	0.011
L3-L4	1.400	1.100	1.072	0.107	-0.027
L5-L6	8.600	13.509	12.162	2.519	-0.655

ALIGNMENT K

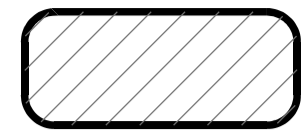
POINT NO	EASTING	NORTHING	RL
K1	288821.249	5803579.546	39.769
1/4	288818.075	5803578.456	39.737
1/2	288815.561	5803576.234	39.673
3/4	288814.088	5803573.219	39.583
K2	288813.881	5803569.870	39.487
K3	288813.884	5803569.849	39.487
1/4	288813.947	5803569.582	39.479
1/2	288814.061	5803569.333	39.472
3/4	288814.222	5803569.110	39.465
K4	288814.423	5803568.923	39.458
K5	288816.143	5803567.613	39.402
1/4	288816.222	5803567.540	39.399
1/2	288816.285	5803567.453	39.396
3/4	288816.330	5803567.354	39.393
K6	288816.355	5803567.250	39.390

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
K1-K2	8.600	13.509	12.162	2.519	-0.655
K3-K4	1.400	1.100	1.072	0.107	-0.027
K5-K6	0.550	0.432	0.421	0.042	0.011

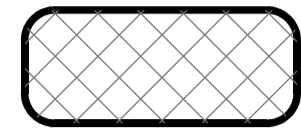




CRUSHED ROCK BACKFILL LEGEND



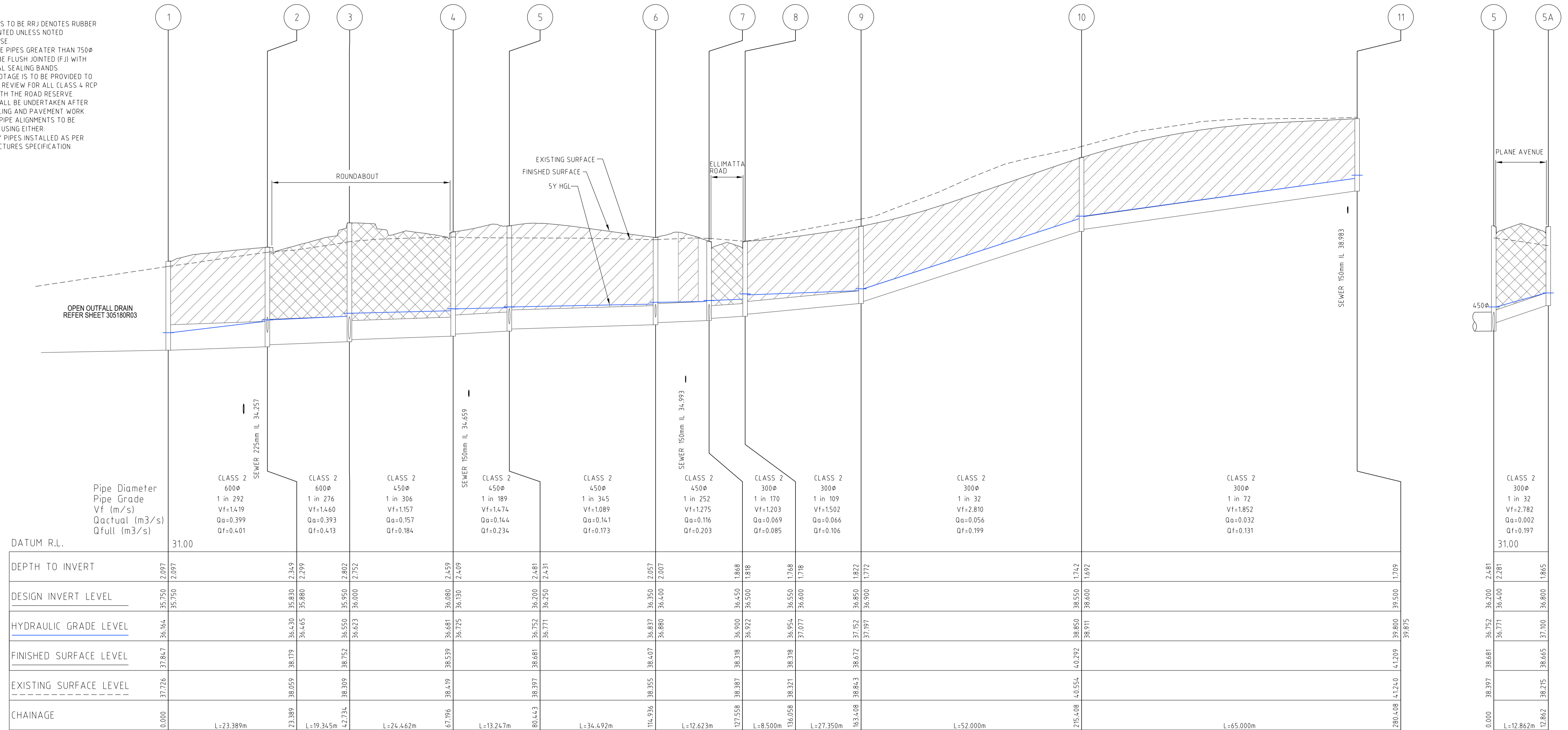
CLASS 2 CRUSHED ROCK



CLASS 3 CRUSHED ROCK

NOTE:

- 1 ALL PIPES TO BE RRJ DENOTES RUBBER RING JOINTED UNLESS NOTED OTHERWISE
- 2 DRAINAGE PIPES GREATER THAN 750Ø ARE TO BE FLUSH JOINTED (FJ) WITH EXTERNAL SEALING BANDS
- 3 CCTV FOOTAGE IS TO BE PROVIDED TO WCC FOR REVIEW FOR ALL CLASS 4 RCP PIPES WITH THE ROAD RESERVE. CCTV SHALL BE UNDERTAKEN AFTER BACKFILLING AND PAVEMENT WORK.
- 4 CURVED PIPE ALIGNMENTS TO BE ACHIEVED USING EITHER:
  - a) SPLAY PIPES INSTALLED AS PER MANUFACTURERS SPECIFICATION



**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21
Rev	Amendments	Approved	Date

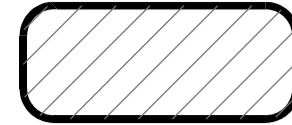
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Designed  
R. WEINBER  
Authorised  
D. CAMERON  
Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE**  
**STAGE 15**  
**DRAINAGE LONG SECTION**  
**SHEET 1 OF 3**  
 FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM  
**PRELIMINARY** Drg No **305180R15** Rev **E**

CRUSHED ROCK BACKFILL LEGEND



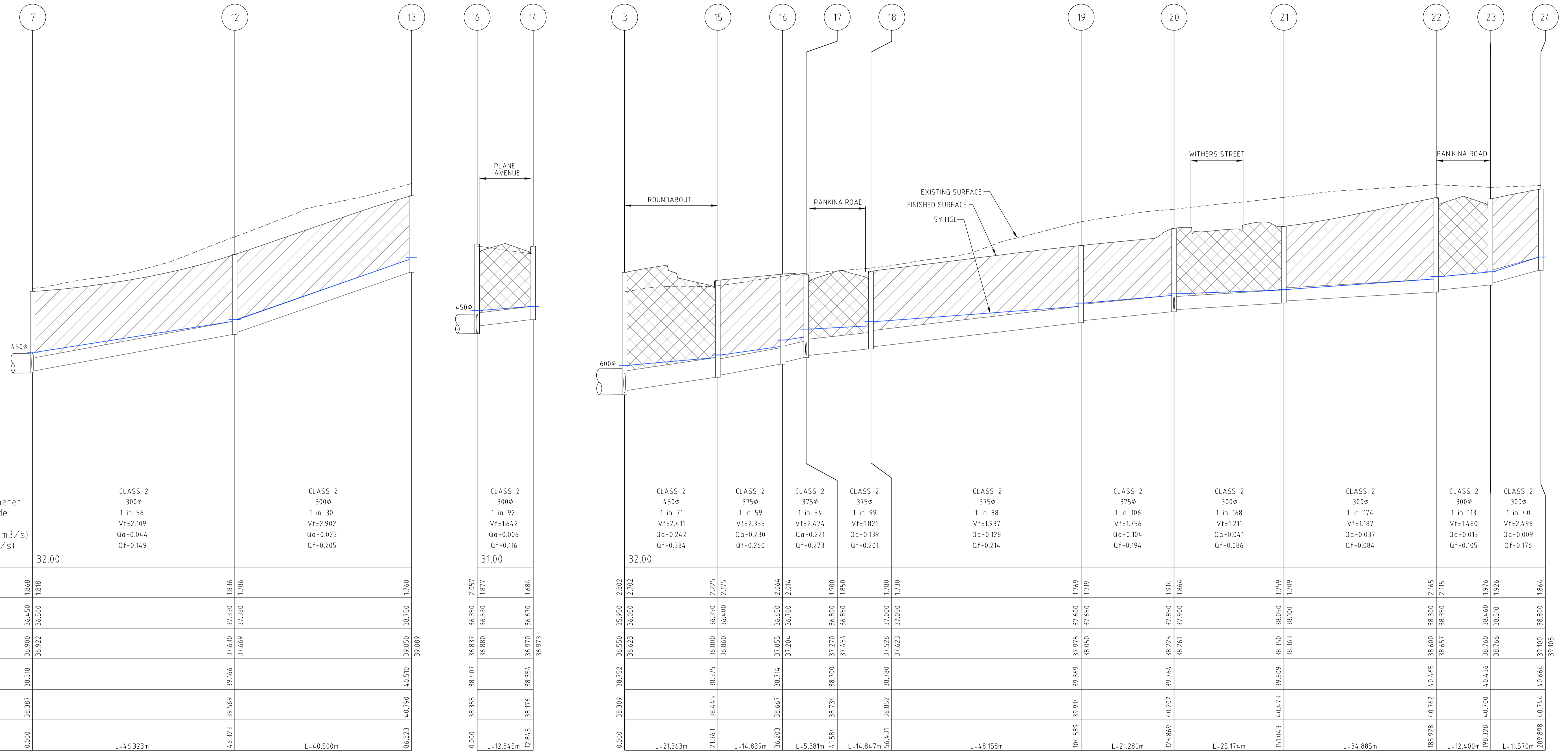
CLASS 2 CRUSHED ROCK



CLASS 3 CRUSHED ROCK

NOTE:

- ALL PIPES TO BE RRJ DENOTES RUBBER RING JOINTED UNLESS NOTED OTHERWISE
- DRAINAGE PIPES GREATER THAN 750Φ ARE TO BE FLUSH JOINTED (FJ) WITH EXTERNAL SEALING BANDS
- CCTV FOOTAGE IS TO BE PROVIDED TO WCC FOR REVIEW FOR ALL CLASS 4 RCP PIPES WITH THE ROAD RESERVE
- CCTV SHALL BE UNDERTAKEN AFTER BACKFILLING AND PAVEMENT WORK
- CURVED PIPE ALIGNMENTS TO BE ACHIEVED USING EITHER:
  - SPLAY PIPES INSTALLED AS PER MANUFACTURERS SPECIFICATION



Station	Pipe Diameter	Pipe Grade	Vf (m/s)	Qactual (m3/s)	Qfull (m3/s)
7	300Φ	1 in 56	2.109	0.044	0.149
12	300Φ	1 in 30	2.902	0.023	0.205
13	300Φ	1 in 30	2.902	0.023	0.205
6	300Φ	1 in 92	1.642	0.006	0.116
14	300Φ	1 in 92	1.642	0.006	0.116
3	450Φ	1 in 71	2.411	0.242	0.384
15	375Φ	1 in 59	2.355	0.230	0.260
16	375Φ	1 in 54	2.474	0.221	0.273
17	375Φ	1 in 54	2.474	0.221	0.273
18	375Φ	1 in 99	1.821	0.139	0.201
19	375Φ	1 in 88	1.937	0.128	0.214
20	375Φ	1 in 106	1.756	0.104	0.194
21	300Φ	1 in 168	1.211	0.041	0.086
22	300Φ	1 in 174	1.187	0.037	0.084
23	300Φ	1 in 113	1.480	0.015	0.105
24	300Φ	1 in 40	2.496	0.009	0.176

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

Rev	Amendments	Approved	Date
A	ISSUE TO COUNCIL	M.R	04/05/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
E	COUNCIL COMMENTS ADDED	M.R	09/11/21

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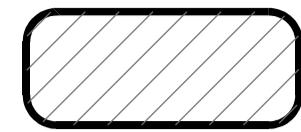
Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

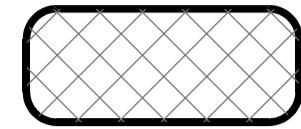
**MAMBOURIN ESTATE**  
**STAGE 15**  
**DRAINAGE LONG SECTION**  
**SHEET 2 OF 3**  
 FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

**PRELIMINARY** Drg No  
**305180R16** Rev  
**E**

CRUSHED ROCK BACKFILL LEGEND



CLASS 2 CRUSHED ROCK



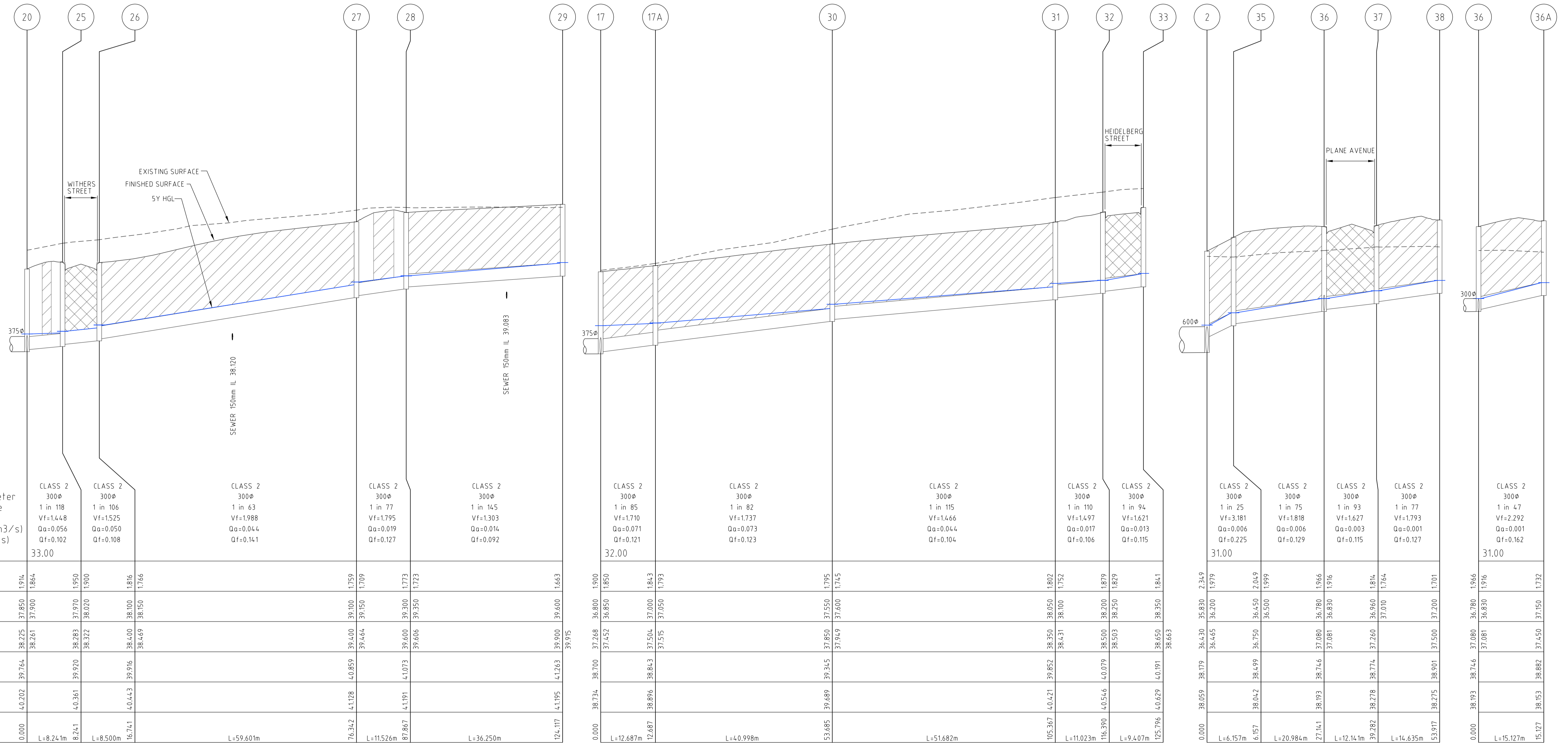
CLASS 3 CRUSHED ROCK

NOTE:

- 1 ALL PIPES TO BE RRJ DENOTES RUBBER RING JOINTED UNLESS NOTED OTHERWISE
- 2 DRAINAGE PIPES GREATER THAN 750mm ARE TO BE FLUSH JOINTED (FJ) WITH EXTERNAL SEALING BANDS
- 3 CCTV FOOTAGE IS TO BE PROVIDED TO WCC FOR REVIEW FOR ALL CLASS 4 RCP PIPES WITH THE ROAD RESERVE
- 4 CURVED PIPE ALIGNMENTS TO BE ACHIEVED USING EITHER:
  - a) SPLAY PIPES INSTALLED AS PER MANUFACTURES SPECIFICATION

Planning and Environment Act 1987  
Wyndham Planning Scheme

Approved Plan As Required  
under Condition 43  
Permit No WYP11481/19  
Date 17/11/2021



Pipe Diameter	Pipe Grade	Vf (m/s)	Qactual (m3/s)	Qfull (m3/s)	DATUM R.L.
300mm	1 in 118	Vf=1.448	Qa=0.056	Qf=0.102	33.00
300mm	1 in 106	Vf=1.525	Qa=0.050	Qf=0.108	
300mm	1 in 63	Vf=1.988	Qa=0.044	Qf=0.141	
300mm	1 in 77	Vf=1.795	Qa=0.019	Qf=0.127	
300mm	1 in 145	Vf=1.303	Qa=0.014	Qf=0.092	
300mm	1 in 85	Vf=1.710	Qa=0.071	Qf=0.121	32.00
300mm	1 in 82	Vf=1.737	Qa=0.073	Qf=0.123	
300mm	1 in 115	Vf=1.466	Qa=0.044	Qf=0.104	
300mm	1 in 110	Vf=1.497	Qa=0.017	Qf=0.106	
300mm	1 in 94	Vf=1.621	Qa=0.013	Qf=0.115	
300mm	1 in 25	Vf=3.181	Qa=0.006	Qf=0.225	31.00
300mm	1 in 75	Vf=1.818	Qa=0.006	Qf=0.129	
300mm	1 in 93	Vf=1.627	Qa=0.003	Qf=0.115	
300mm	1 in 77	Vf=1.793	Qa=0.001	Qf=0.127	
300mm	1 in 47	Vf=2.292	Qa=0.001	Qf=0.162	31.00

DEPTH TO INVERT	DESIGN INVERT LEVEL	HYDRAULIC GRADE LEVEL	FINISHED SURFACE LEVEL	EXISTING SURFACE LEVEL	CHAINAGE
1.914	37.850	38.225	39.764	40.202	0.000
1.864	37.900	38.261	39.764	40.202	L=8.241m
1.950	37.970	38.283	39.920	40.361	8.241
1.900	38.020	38.322	39.920	40.361	L=8.500m
1.816	38.100	38.400	39.916	40.443	16.741
1.766	38.150	38.469	39.916	40.443	L=8.500m
1.759	38.100	39.400	40.859	41.128	16.741
1.709	38.150	39.464	40.859	41.128	L=11.526m
1.773	38.300	39.600	41.073	41.191	87.867
1.723	38.350	39.606	41.073	41.191	L=11.526m
1.663	38.600	39.900	41.263	41.195	124.117
1.663	38.600	39.915	41.263	41.195	L=59.601m
1.950	36.800	37.268	38.700	38.734	0.000
1.850	36.850	37.452	38.700	38.734	L=12.687m
1.843	37.000	37.504	38.843	38.896	12.687
1.793	37.050	37.515	38.843	38.896	L=4.0.998m
1.795	37.550	37.850	39.345	39.689	53.685
1.745	37.600	37.949	39.345	39.689	L=4.0.998m
1.802	38.050	38.350	39.852	40.421	105.367
1.752	38.100	38.431	39.852	40.421	L=11.023m
1.879	38.200	38.500	40.079	40.546	116.390
1.829	38.250	38.503	40.079	40.546	L=9.407m
1.841	38.350	38.650	40.191	40.629	125.796
1.841	38.350	38.663	40.191	40.629	L=9.407m
2.349	35.830	36.430	38.179	38.059	0.000
1.979	36.200	36.465	38.179	38.059	L=6.157m
2.049	36.450	36.750	38.042	38.042	6.157
1.999	36.500	36.500	38.042	38.042	L=20.984m
1.966	36.780	37.080	38.746	38.193	27.141
1.916	36.830	37.081	38.746	38.193	L=12.141m
1.814	36.960	37.260	38.774	38.278	39.282
1.764	37.010	37.260	38.774	38.278	L=14.635m
1.701	37.200	37.500	38.901	38.275	53.917
1.701	37.200	37.500	38.901	38.275	L=14.635m
1.966	36.780	37.080	38.746	38.193	0.000
1.916	36.830	37.081	38.746	38.193	L=15.127m
1.732	37.150	37.450	38.882	38.153	15.127
1.732	37.150	37.450	38.882	38.153	L=15.127m

Rev	Amendments	Approved	Date
A	ISSUE TO COUNCIL	M.R	04/05/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
E	COUNCIL COMMENTS ADDED	M.R	09/11/21

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Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE**  
**STAGE 15**  
**DRAINAGE LONG SECTION**  
**SHEET 3 OF 3**  
FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM

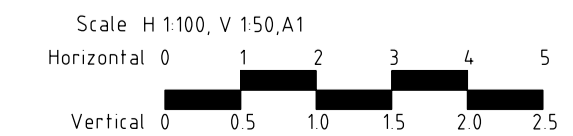
**PRELIMINARY** Drg No **305180R17** Rev **E**

## DRAINAGE PIT SCHEDULE

NAME	PIT TYPE	INTERNAL		INLET		OUTLET		PIT		REMARKS
		LENGTH	WIDTH	DIA	INV LEVEL	DIA	INV LEVEL	FS LEVEL	DEPTH	
1	TEMPORARY ENDWALL			600	35.750			37.847	2.097	TEMPORARY SANDBAG ENDWALL
2	JUNCTION PIT	900	900	600	35.880	600	35.830	38.179	2.349	REFER DRAWING - EDCM 605 (PROVIDE HAUNCHING AS PER EDCM 607)
				300	36.200					PROVIDE HEAVY DUTY COVER
3	JUNCTION PIT	900	900	450	36.000	600	35.950	38.752	2.802	REFER DRAWING - EDCM 605 (PROVIDE HAUNCHING AS PER EDCM 607)
				450	36.050					
4	SIDE ENTRY PIT GRATED	900	900	450	36.130	450	36.080	38.539	2.459	REFER DRAWING - EDCM 601 (PROVIDE HAUNCHING AS PER EDCM 607)
										PROVIDE HEAVY DUTY COVER
5	SIDE ENTRY PIT GRATED	900	900	450	36.250	450	36.200	38.681	2.481	REFER DRAWING - EDCM 601 (PROVIDE HAUNCHING AS PER EDCM 607)
				300	36.400					
5A	SIDE ENTRY PIT GRATED	900	600			300	36.800	38.665	1.865	REFER DRAWING - EDCM 605
6	SIDE ENTRY PIT GRATED	900	900	450	36.400	450	36.350	38.407	2.057	REFER DRAWING - EDCM 601 (PROVIDE HAUNCHING AS PER EDCM 607)
				300	36.530					
7	SIDE ENTRY PIT GRATED	900	900	300	36.500	450	36.450	38.318	1.868	REFER DRAWING - EDCM 605
				300	36.500					
8	SIDE ENTRY PIT GRATED	900	600	300	36.600	300	36.550	38.318	1.768	REFER DRAWING - EDCM 605
9	SIDE ENTRY PIT GRATED	900	600	300	36.900	300	36.850	38.672	1.822	REFER DRAWING - EDCM 605
10	SIDE ENTRY PIT GRATED	900	600	300	38.600	300	38.550	40.292	1.742	REFER DRAWING - EDCM 605
11	SIDE ENTRY PIT GRATED	900	600			300	39.500	41.209	1.709	REFER DRAWING - EDCM 605
12	SIDE ENTRY PIT GRATED	900	600	300	37.380	300	37.330	39.166	1.836	REFER DRAWING - EDCM 605
13	JUNCTION PIT	900	600			300	38.750	40.510	1.760	REFER DRAWING - EDCM 605
14	SIDE ENTRY PIT GRATED	900	600			300	36.670	38.354	1.684	REFER DRAWING - EDCM 605
15	SIDE ENTRY PIT GRATED	900	900	375	36.400	450	36.350	38.575	2.225	REFER DRAWING - EDCM 601 (PROVIDE HAUNCHING AS PER EDCM 607)
										PROVIDE HEAVY DUTY COVER
16	SIDE ENTRY PIT GRATED	900	900	375	36.700	375	36.650	38.714	2.064	REFER DRAWING - EDCM 601 (PROVIDE HAUNCHING AS PER EDCM 607)
17	SIDE ENTRY PIT GRATED	900	600	375	36.850	375	36.800	38.700	1.900	REFER DRAWING - EDCM 605
				300	36.850					
17A	JUNCTION PIT			300	37.050	300	37.000	38.843	1.843	REFER DRAWING - EDCM 605
18	SIDE ENTRY PIT GRATED	900	600	375	37.050	375	37.000	38.780	1.780	REFER DRAWING - EDCM 605
19	SIDE ENTRY PIT GRATED	900	600	375	37.650	375	37.600	39.369	1.769	REFER DRAWING - EDCM 605
20	JUNCTION PIT	900	600	300	37.900	375	37.850	39.764	1.914	REFER DRAWING - EDCM 605
20				300	37.900			39.764	1.914	REFER DRAWING - EDCM 605
21	SIDE ENTRY PIT GRATED	900	600	300	38.100	300	38.050	39.809	1.759	REFER DRAWING - EDCM 605
22	SIDE ENTRY PIT GRATED	900	600	300	38.350	300	38.300	40.465	2.165	REFER DRAWING - EDCM 601 (PROVIDE HAUNCHING AS PER EDCM 607)
23	SIDE ENTRY PIT GRATED	900	600	300	38.510	300	38.460	40.436	1.976	REFER DRAWING - EDCM 605
24	JUNCTION PIT	900	600			300	38.800	40.664	1.864	REFER DRAWING - EDCM 605
25	SIDE ENTRY PIT GRATED	900	600	300	38.020	300	37.970	39.920	1.950	REFER DRAWING - EDCM 605
26	SIDE ENTRY PIT GRATED	900	600	300	38.150	300	38.100	39.916	1.816	REFER DRAWING - EDCM 605
27	JUNCTION PIT	900	600	300	39.150	300	39.100	40.859	1.759	REFER DRAWING - EDCM 605
28	SIDE ENTRY PIT GRATED	900	600	300	39.350	300	39.300	41.073	1.773	REFER DRAWING - EDCM 605
29	JUNCTION PIT	900	600			300	39.600	41.263	1.663	REFER DRAWING - EDCM 605
30	SIDE ENTRY PIT GRATED	900	600	300	37.600	300	37.550	39.345	1.795	REFER DRAWING - EDCM 605
31	JUNCTION PIT	900	600	300	38.100	300	38.050	39.852	1.802	REFER DRAWING - EDCM 605
32	SIDE ENTRY PIT GRATED	900	600	300	38.250	300	38.200	40.079	1.879	REFER DRAWING - EDCM 605
33	SIDE ENTRY PIT GRATED	900	600			300	38.350	40.191	1.841	REFER DRAWING - EDCM 605
35	JUNCTION PIT	900	600	300	36.500	300	36.450	38.499	2.049	REFER DRAWING - EDCM 605 (PROVIDE HAUNCHING AS PER EDCM 607)
36	SIDE ENTRY PIT GRATED	900	600	300	36.830	300	36.780	38.746	1.966	REFER DRAWING - EDCM 605
				300	36.830					PROVIDE HEAVY DUTY COVER
36A	SIDE ENTRY PIT GRATED	900	600			300	37.150	38.882	1.732	REFER DRAWING - EDCM 605
37	SIDE ENTRY PIT GRATED	900	600	300	37.010	300	36.960	38.774	1.814	REFER DRAWING - EDCM 605
										PROVIDE HEAVY DUTY COVER
38	SIDE ENTRY PIT GRATED	900	600			300	37.200	38.901	1.701	REFER DRAWING - EDCM 605 PROVIDE HEAVY DUTY COVER

**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21
Rev	Amendments	Approved	Date



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Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE**  
**STAGE 15**  
**PIT SCHEDULE**

FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

PRELIMINARY

Drg No  
**305180R18**

Rev  
**E**

DESIGN PAVEMENT PROFILE FOR ACCESS STREET LEVEL 1

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)
<b>ACCESS STREET LVL 1</b>		
A	ASPHALT WEARING COURSE VicRoads Size 10 Type N, Class 170 binder	40
B	ASPHALT BASE COURSE VicRoads Size 10 Type N, Class 170 binder	40
C	BITUMINOUS PRIME	nominal
D	GRANULAR BASE VicRoads 20mm Class 2 Fine Crushed Rock or Equivalent	110
UPPER PAVEMENT TOTAL		190
E	GRANULAR SUBBASE VicRoads Class 3 Crushed Rock or Equivalent	160
F	GRANULAR SUBBASE VicRoads Class 3 Crushed Rock or Equivalent	130
G	CAPPING LAYER Type A material -Properties: CBR >8.0%, Swell <15 %, Permeability < 5x10e <sup>-9</sup> m/s To be Compacted in Two Layers	150
H	CONSTRUCTION LAYER Type A material -Properties: CBR >8.0%, Swell <15 %, Permeability < 5x10e <sup>-9</sup> m/s To be Compacted in Two Layers	150
TOTAL PAVEMENT DEPTH		760

NOTE: ACCESS STREET LEVEL 1  
Subgrade = Clay with design CBR of 2% or to be improved to a depth not less than 150 mm using subgrade improvement layer or in-situ stabilised with a CBR value >10%

DESIGN PAVEMENT PROFILE FOR CONNECTOR STREET

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)
<b>CONNECTOR STREET</b>		
A	ASPHALT WEARING COURSE VicRoads Size 14mm Type H, Class 320 binder	40
B	ASPHALT INTERMEDIATE COURSE VicRoads Size 20mm Type SI, Class 320 binder	75
C	ASPHALT BASE COURSE VicRoads Size 20mm Type SF, Class 320 binder	75
D	BITUMINOUS PRIME	nominal
UPPER PAVEMENT TOTAL		190
E	GRANULAR BASE VicRoads 20mm Class 2 Crushed Rock or Equivalent	150
F	GRANULAR SUBBASE VicRoads 100mm Class 3 Crushed Rock or equivalent	120
G	GRANULAR SUBBASE VicRoads 100mm Class 3 Crushed Rock or equivalent	130
H	CAPPING LAYER Type A material -Properties: CBR >8.0%, Swell <15 %, Permeability < 5x10e <sup>-9</sup> m/s To be Compacted in Two Layers	150
I	CONSTRUCTION LAYER Type A material -Properties: CBR >8.0%, Swell <15 %, Permeability < 5x10e <sup>-9</sup> m/s To be Compacted in Two Layers	150
TOTAL PAVEMENT DEPTH		890

NOTE: CONNECTOR STREET  
Subgrade = Clay with design CBR of 2%

DESIGN PAVEMENT PROFILE FOR ROUNDABOUT

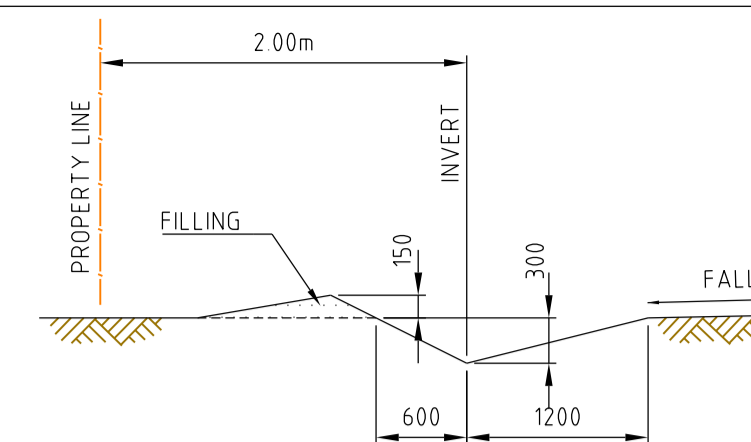
PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)
<b>CONNECTOR STREET</b>		
A	ASPHALT WEARING COURSE VicRoads Size 14mm Type V, Class 320 binder	40
B	ASPHALT INTERMEDIATE COURSE VicRoads Size 20mm Type SI, Class 320 binder	80
C	ASPHALT BASE COURSE VicRoads Size 20mm Type SF, Class 320 binder	75
D	BITUMINOUS PRIME	nominal
UPPER PAVEMENT TOTAL		195
E	GRANULAR BASE VicRoads 20mm Class 2 Crushed Rock or Equivalent	150
F	GRANULAR SUBBASE VicRoads 100mm Class 3 Crushed Rock or equivalent	120
G	GRANULAR SUBBASE VicRoads 100mm Class 3 Crushed Rock or equivalent	150
H	CAPPING LAYER Type A material -Properties: CBR >8.0%, Swell <15 %, Permeability < 5x10e <sup>-9</sup> m/s To be Compacted in Two Layers	150
I	CONSTRUCTION LAYER Type A material -Properties: CBR >8.0%, Swell <15 %, Permeability < 5x10e <sup>-9</sup> m/s To be Compacted in Two Layers	150
TOTAL PAVEMENT DEPTH		915

NOTE: CONNECTOR STREET  
Subgrade = Clay with design CBR of 2%

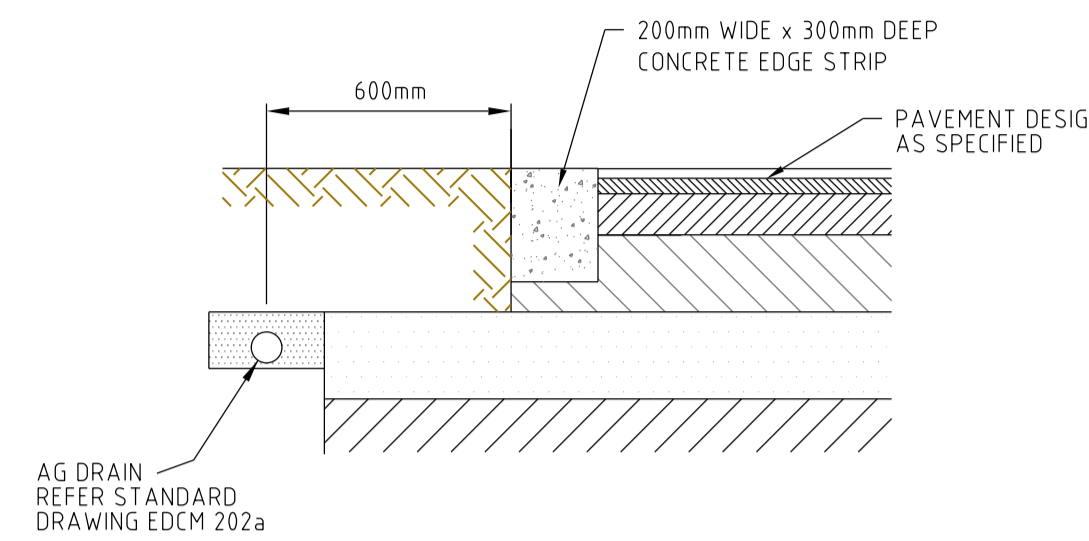
ROAD TYPE DESIGNATIONS

ROAD NAME	ROAD PAVEMENT TYPE
PLANE AVENUE	CONNECTOR STREET
PANKINA ROAD	CONNECTOR STREET
HEIDELBERG STREET	ACCESS STREET LEVEL 1
WITHERS STREET	ACCESS STREET LEVEL 1
ELLMATA ROAD	ACCESS STREET LEVEL 1
ROUNDABOUT	CONNECTOR STREET

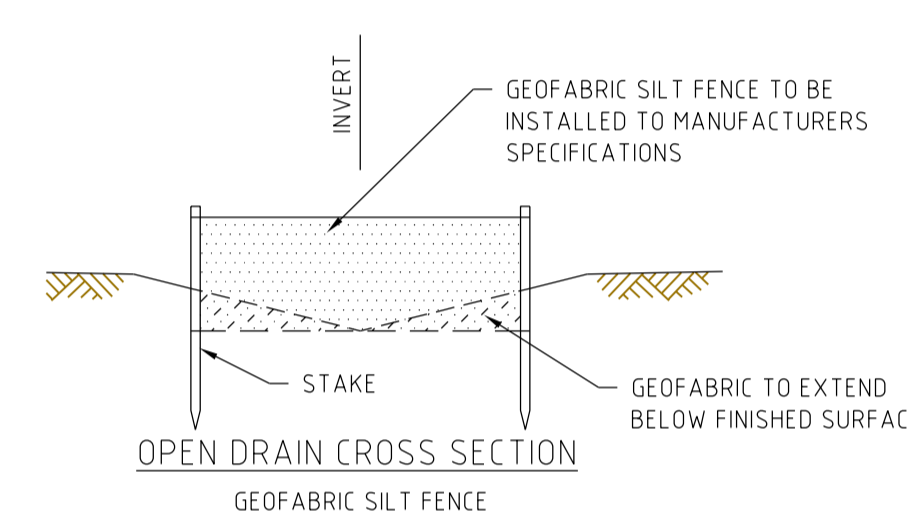
**Planning and Environment Act 1987  
Wyndham Planning Scheme**  
  
**Approved Plan As Required  
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Permit No WYP11481/19  
Date 17/11/2021**



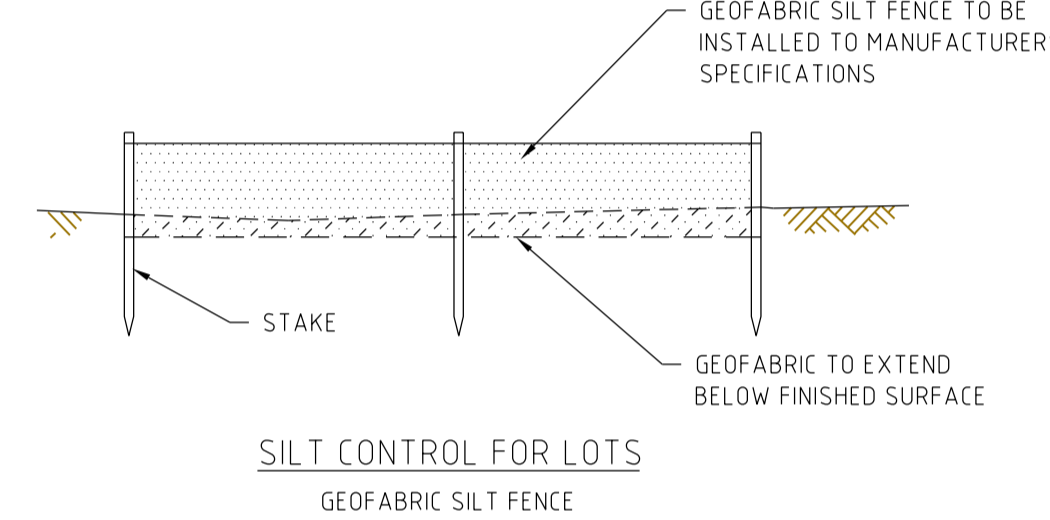
TYPICAL CATCH DRAIN SECTION  
N.T.S.



LIMIT OF WORKS CONCRETE EDGE STRIP & PAVEMENT INTERFACE - DETAIL



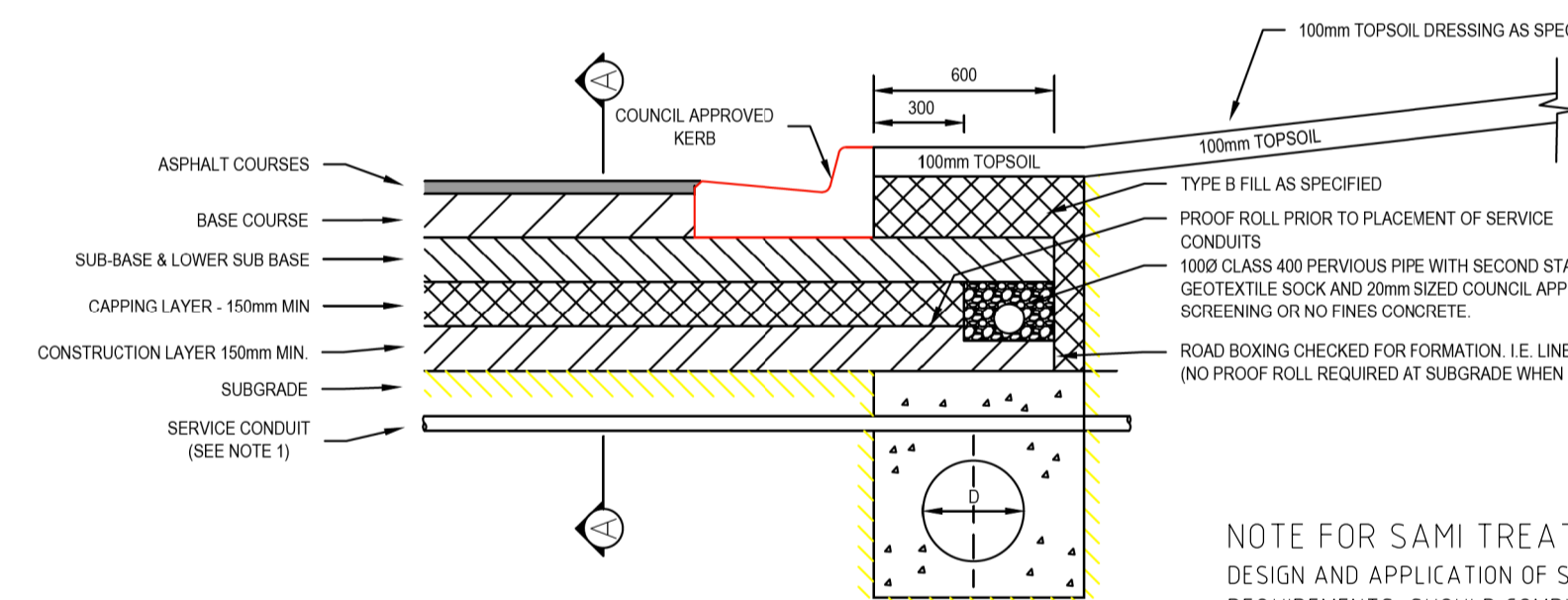
OPEN DRAIN CROSS SECTION  
GEOFABRIC SILT FENCE



SILT CONTROL FOR LOTS  
GEOFABRIC SILT FENCE

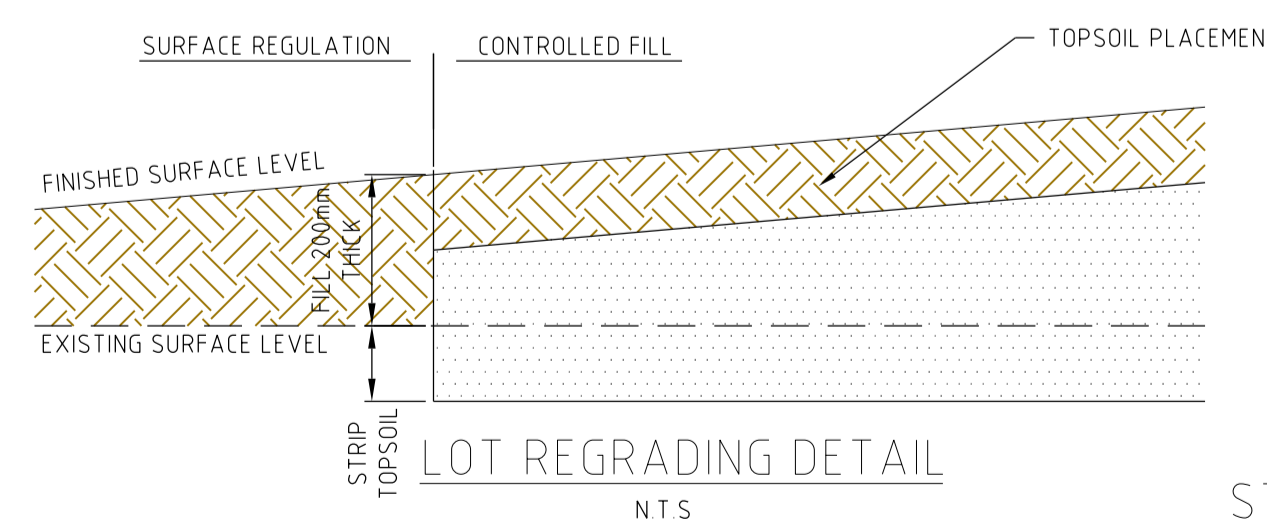
SILT CONTROL OPTIONS

NOT TO SCALE



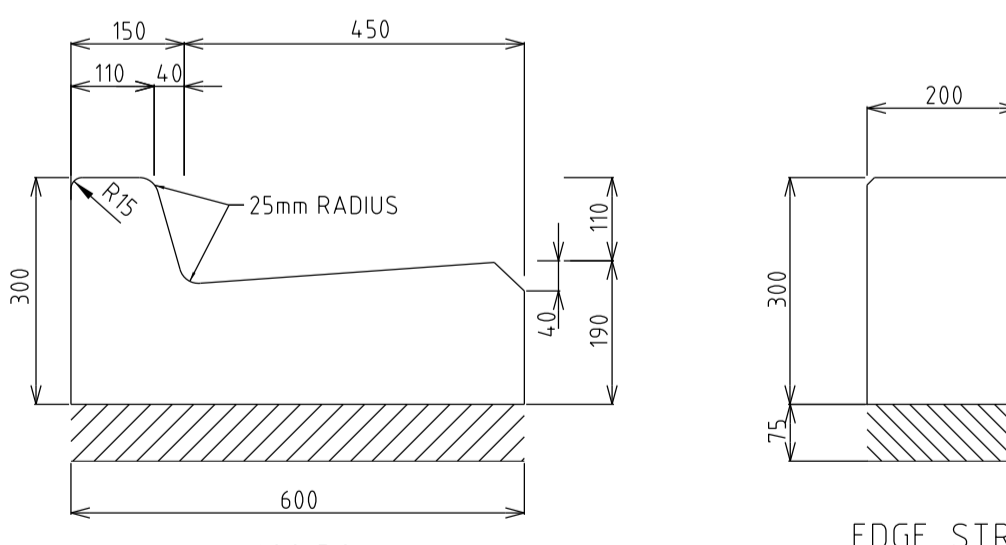
PAVEMENT MAKEUP  
N.T.S.

REFER STANDARD DRAWING EDCM 202a



LOT REGRADING DETAIL  
N.T.S.

NOTE FOR SAMI TREATMENT  
DESIGN AND APPLICATION OF SAMI, INCLUDING MATERIAL REQUIREMENTS, SHOULD COMPLY WITH STANDARD SPECIFICATION FOR ROADWORKS AND BRIDGEWORKS SECTION 4.08 AND THE CURRENT AUSTRROADS SPRAYED SEAL DESIGN METHOD.

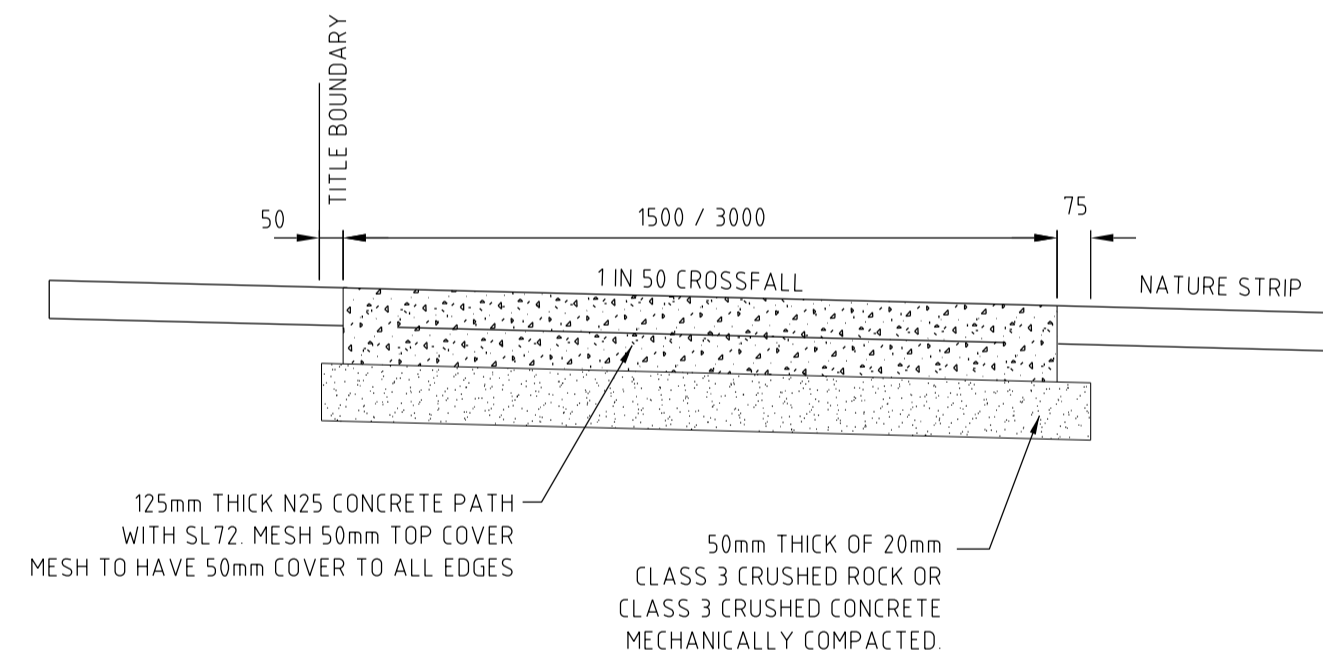


STANDARD KERB PROFILES  
NOT TO SCALE

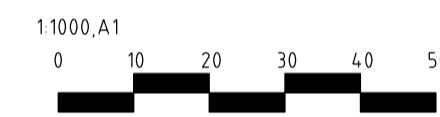
- NOTES:
- ALL KERBS AND KERB & CHANNEL TO BE REINFORCED IN ACCORDANCE WITH MUNICIPALITY STD DRAWINGS
  - ALL KERBS AND KERB & CHANNEL TO HAVE 190mm DEPTH OF CONCRETE BELOW TOP OF PAVEMENT LEVEL

TYPICAL RESIDENTIAL FOOTPATH CROSS SECTION

N.T.S.



PAVEMENT PLAN



GENERAL NOTES:

- ALL WORKS TO BE COMPLETED IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS AND CCAA LITERATURE, OR VIC ROADS STANDARDS FOR NON RESIDENTIAL STREETS
- ALL CONCRETE TO BE MINIMUM 32MPa COMPRESSIVE STRENGTH
- CONCRETE TO BE THOROUGHLY COMPACTED USING EITHER SURFACE AND/OR IMMERSION VIBRATORS, PARTICULARLY AROUND REINFORCEMENT AND IN CORNERS OF FORMS
- PRIOR TO CASTING, THE UNBOUND GRANULAR SUBBASE MUST BE DAMP TO ENSURE NO EARLY "DRYING OUT" OF THE CONCRETE
- CURING OF CONCRETE IS ESSENTIAL - IDEALLY BY MAINTAINING WET HESSIAN OR SEALING WITH PLASTIC SHEETING
- SAW CUTTING OF CONCRETE SHOULD BE COMMENCED AS SOON AS CONCRETE PERMITS BY EXPERIENCED CONTRACTORS, BUT NO LATER THAN 12 HOURS AFTER POUR
- ALL DOWELS TO BE GRADE 250R STEEL BARS, 450mm LONG AND PLACED AT 300mm CENTRES. REFER CCAA - "CONCRETE PAVEMENT DESIGN FOR RESIDENTIAL STREETS" FOR DOWEL DIAMETERS. DOWELS MUST BE ACCURATELY PLACED TO ENSURE THE JOINT DOES NOT "LOCK". INSERTION OF DOWELS DURING THE PLACING OF CONCRETE IS NOT ACCEPTABLE. DOWELS MUST BE SAWN AND NOT CROPPED
- ALL JOINTS TO BE APPROPRIATELY SEALED TO RESIST THE INTRUSION OF SAND AND GRAVEL AND TO MINIMISE THE INGRESS OF WATER

PAVEMENT DETAILS

THE PAVEMENT DESIGNS SHOWN HERE HAVE BEEN DESIGNED/PROVIDED BY COFFEY SERVICES AUSTRALIA PTY LTD WHO ARE RESPONSIBLE FOR THE GEOTECHNICAL WORK ON THIS PROJECT. SPIIRE IS NOT RESPONSIBLE FOR THE WORK OF COFFEY SERVICES AUSTRALIA PTY LTD

THE DESIGN HAS BEEN EXTRACTED FROM THE COFFEY SERVICES AUSTRALIA PTY LTD REPORT TITLED "GEOTECHNICAL INVESTIGATION INCLUDING PAVEMENT DESIGN, FILL SPECIFICATION AND RECOMMENDATIONS FOR SEWERS, RETAINING WALLS AND WETLANDS". THIS DOCUMENT SHOULD BE REVIEWED TO ENSURE THAT THE DESIGN HAS BEEN ACCURATELY REPRODUCED. A COPY OF THE DOCUMENT WILL BE PROVIDED TO YOU ON REQUEST.

SPIIRE DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY, ADEQUACY OR APPROPRIATENESS OF THE GEOTECHNICAL WORK AND PAVEMENT DESIGNS. ANY QUERIES IN RESPECT TO THE GEOTECHNICAL WORK AND PAVEMENT DESIGNS SHOULD BE ADDRESSED TO COFFEY SERVICES AUSTRALIA PTY LTD AND SENT TO SPIIRE.

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
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A	ISSUE TO COUNCIL	M.R	04/05/21

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Designed  
R. WEINBER  
Authorised  
D. CAMERON

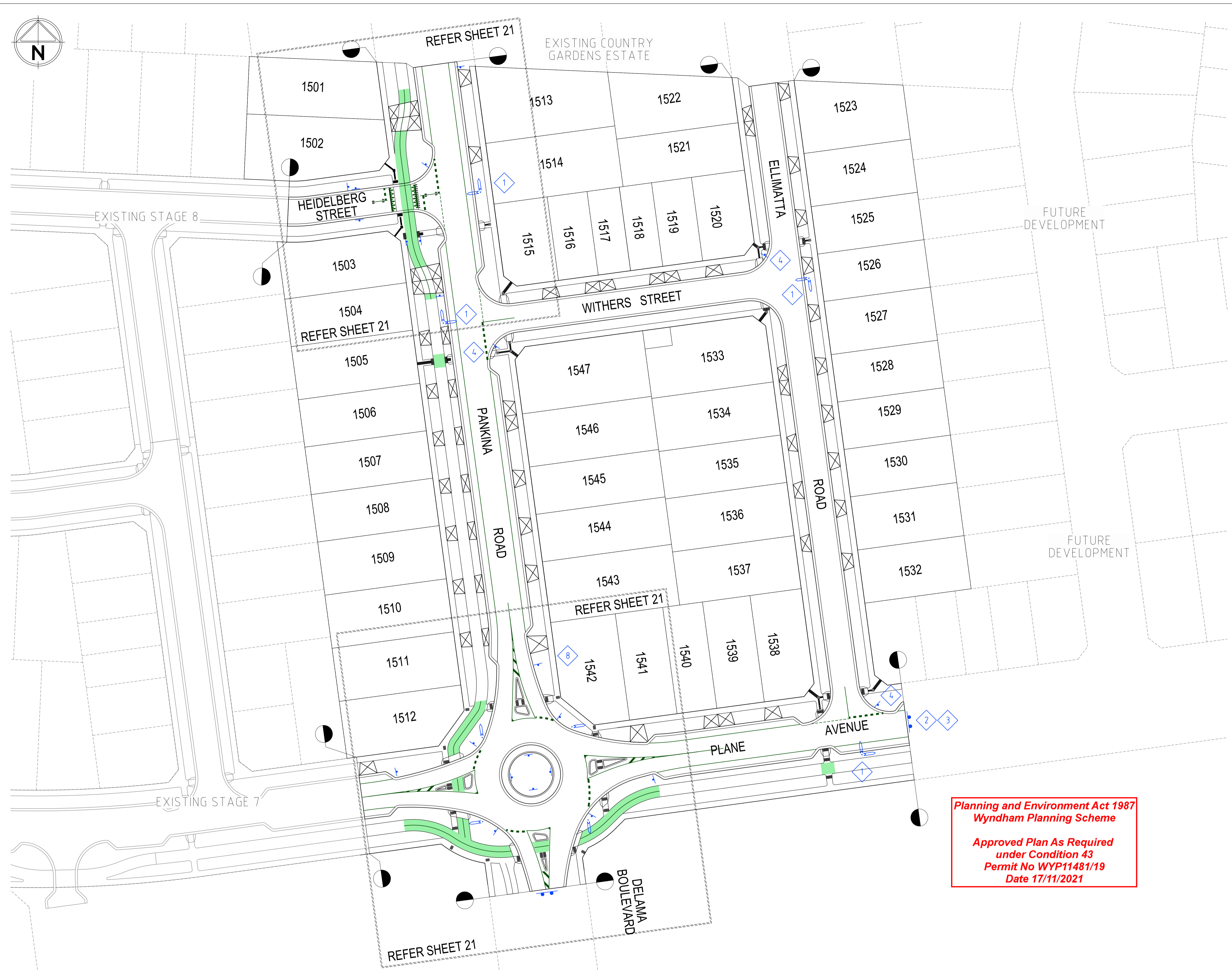
Checked  
M. READMAN  
Date  
04/05/21

MAMBOURIN ESTATE  
STAGE 15  
PAVEMENT PLAN AND TYPICAL DETAILS

FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM

**PRELIMINARY** Drg No **305180R19**

Rev **E**



**Planning and Environment Act 1987  
Wyndham Planning Scheme**

**Approved Plan As Required  
under Condition 43  
Permit No WYP11481/19  
Date 17/11/2021**

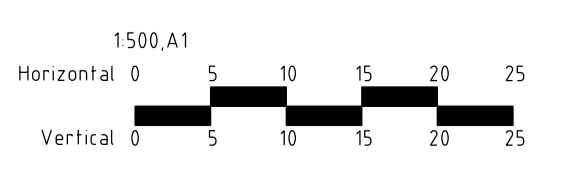
**LEGEND**

- 1 STREET NAME PLATES TO BE IN ACCORDANCE WITH HCC SD4-08 & SD4-12, INCLUDING "NO THROUGH ROAD" NOMINATION WHERE APPLICABLE.
- 2 ROAD CLOSED G9-20
- 3 D4-5
- 4 GIVE WAY R1-2A
- 5 W6-9
- 6 W6-9
- 7 W6-9
- 8 W6-9
- BIKE PATH CONTRASTING SURFACE COLOUR FOR ENHANCED VISIBILITY AT ALL ROAD CROSSINGS AND DRIVEWAY CROSSINGS AS SHOWN. USE GREEN EPOXY MODIFIED ACELYLIC COATING WITH A NON SLIP SURFACE.
- TGSi KERB RAMP } HAZARD / DIRECTIONAL TGSi'S SHOW INDICATIVELY. FOOTPATH RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH EDM 4.03. TGSi'S SHALL CONFORM TO AS1428.4
- TGSi DIRECTIONAL
- 1-WAY RRPM (5m SPACING)

**NOTE**

1. STREET SIGNS ARE TO BE MOUNTED ON LIGHT POLES, WITH A COUNCIL APPROVED BRACKET, IN LIEU OF SIGN POLES WHERE THE TWO POLES ARE IN CLOSE PROXIMITY AND WHERE THE STREET SIGN WOULD NOT BE COMPROMISED IN ITS PURPOSE BY THE RELOCATION.

Rev	Amendments	Approved	Date
A	ISSUE TO COUNCIL	M.R	04/05/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
E	COUNCIL COMMENTS ADDED	M.R	09/11/21



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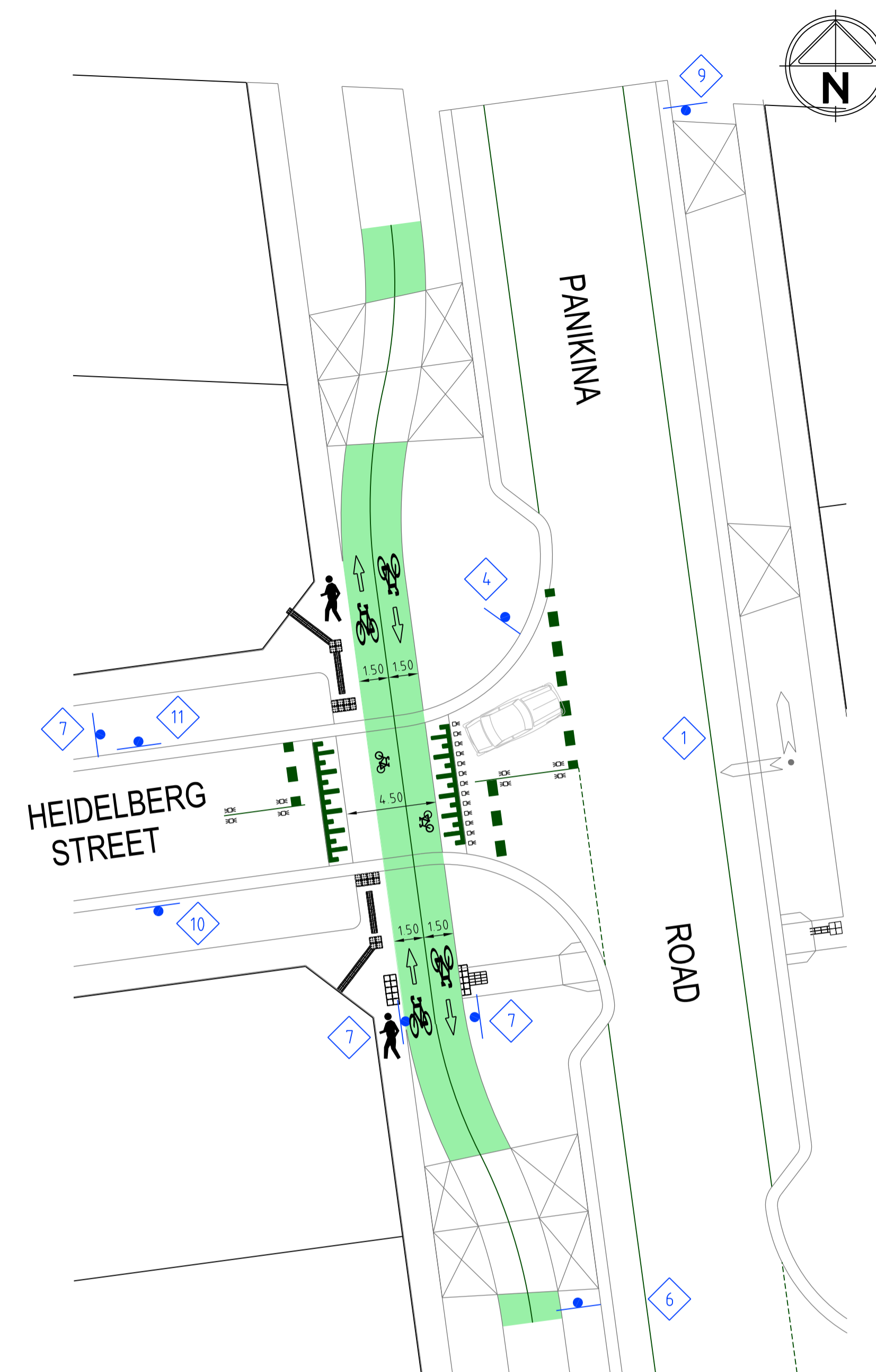
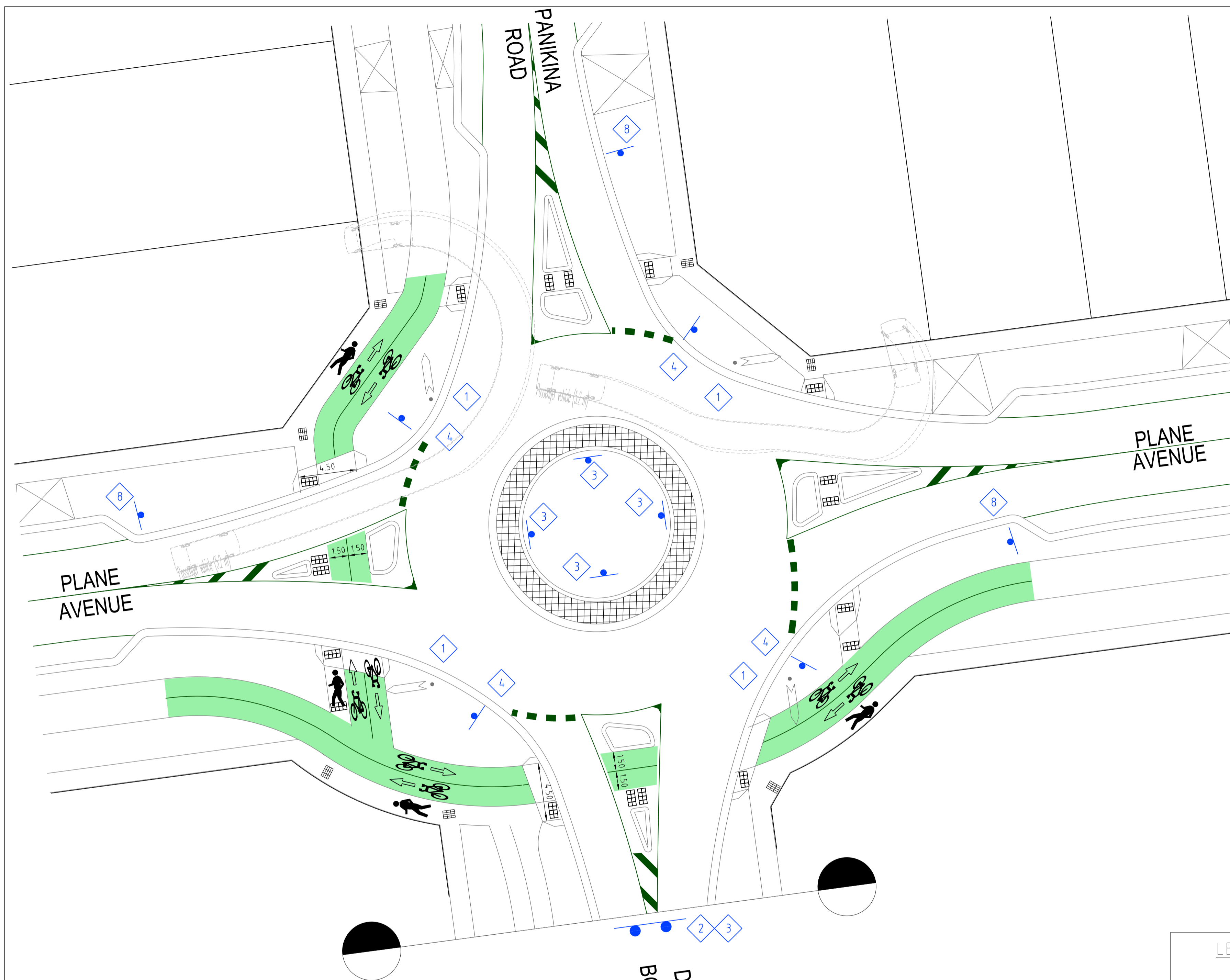
**FRASERS PROPERTY**  
Designed  
R. WEINBER  
Authorised  
D. CAMERON

Checked  
M. READMAN  
Date  
04/05/21

**MAMBOURIN ESTATE  
STAGE 15  
SIGNAGE & LINEMARKING  
SHEET 1 OF 2**

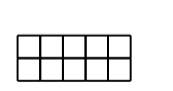
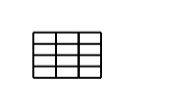

FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM

**PRELIMINARY** Drg No  
**305180R20** Rev  
**E**














**Planning and Environment Act 1987**  
**Wyndham Planning Scheme**  
  
**Approved Plan As Required**  
**under Condition 43**  
**Permit No WYP11481/19**  
**Date 17/11/2021**

**BIKE PATH CONTRASTING SURFACE COLOUR**  
 FOR ENHANCED VISIBILITY AT ALL ROAD CROSSINGS AND DRIVEWAY CROSSINGS AS SHOWN USE GREEN EPOXY MODIFIED ACELYLIC COATING WITH A NON SLIP SURFACE.

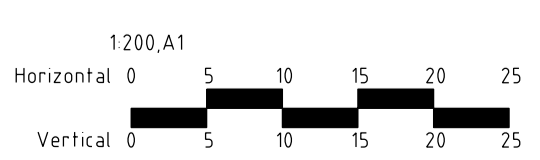
-  TGSi KERB RAMP
-  TGSi DIRECTIONAL
-  1-WAY RRPM (5m SPACING)

**NOTE:**  
 1. STREET SIGNS ARE TO BE MOUNTED ON LIGHT POLES, WITH A COUNCIL APPROVED BRACKET, IN LIEU OF SIGN POLES WHERE THE TWO POLES ARE IN CLOSE PROXIMITY AND WHERE THE STREET SIGN WOULD NOT BE COMPROMISED IN ITS PURPOSE BY THE RELOCATION.

**LEGEND**

- 1  STREET NAME  
STREET NAME PLATES TO BE IN ACCORDANCE WITH HCC SD4/08 & SD4/12, INCLUDING "NO THROUGH ROAD" NOMINATION WHERE APPLICABLE.
- 2  ROAD CLOSED  
G9-20
- 3  D4-5
- 4  GIVE WAY  
R1-2A
- 5  W6-9
- 6  W6-9
- 7  W6-9
- 8  W2-7
- 9  W6-9
- 10  R5-35L
- 11  R5-35R

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
C	ISSUE TO COUNCIL	M.R	21/10/21
B	COUNCIL COMMENTS ADDED	M.R	20/10/21
A	ISSUE TO COUNCIL	M.R	04/05/21



    
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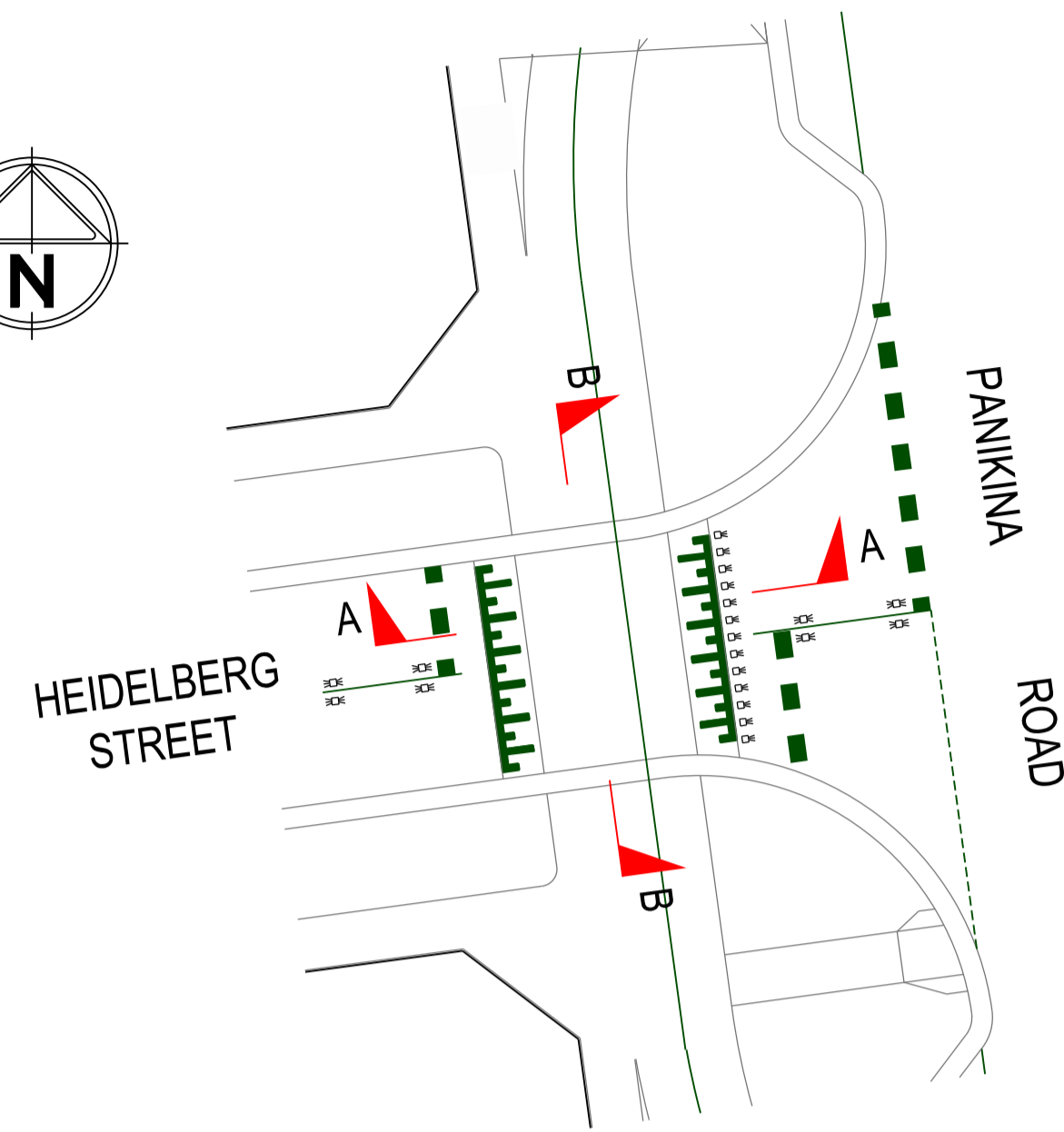
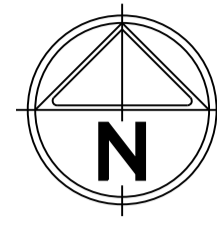
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**FRASERS PROPERTY**  
 Designed  
 R. WEINBER  
 Authorised  
 D. CAMERON

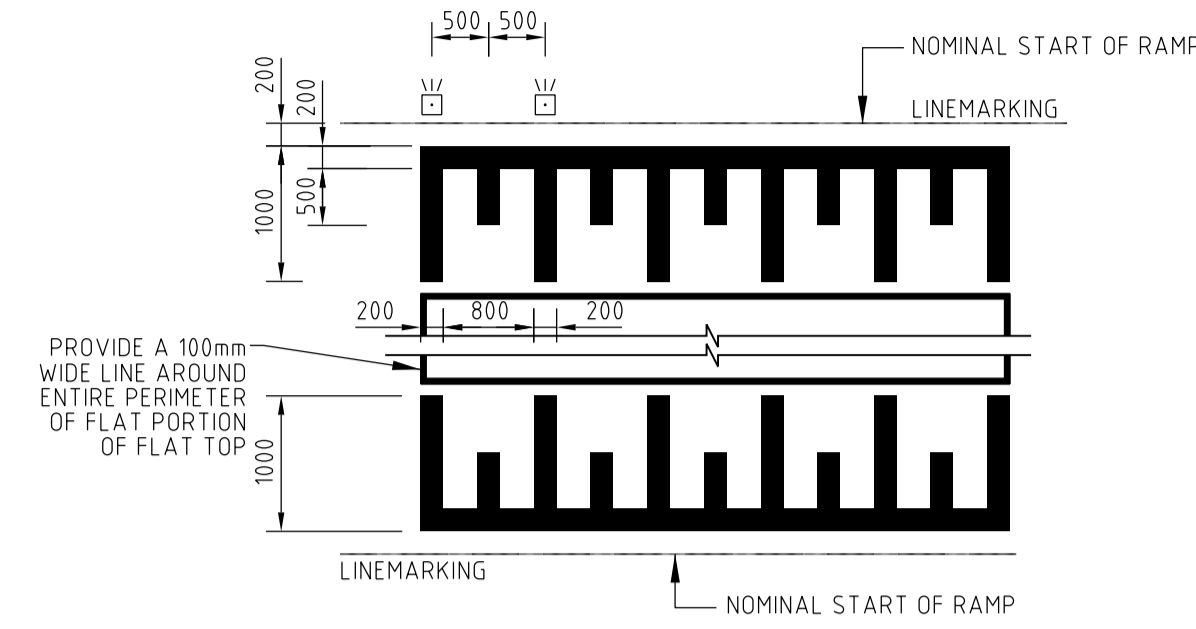
Checked  
 M. READMAN  
 Date  
 04/05/21

**MAMBOURIN ESTATE**  
**STAGE 15**  
**SIGNAGE AND LINEMARKING**  
**DETAIL SHEET 2 OF 2**  
 FRASER PROPERTY AUSTRALIA  
 CITY OF WYNDHAM

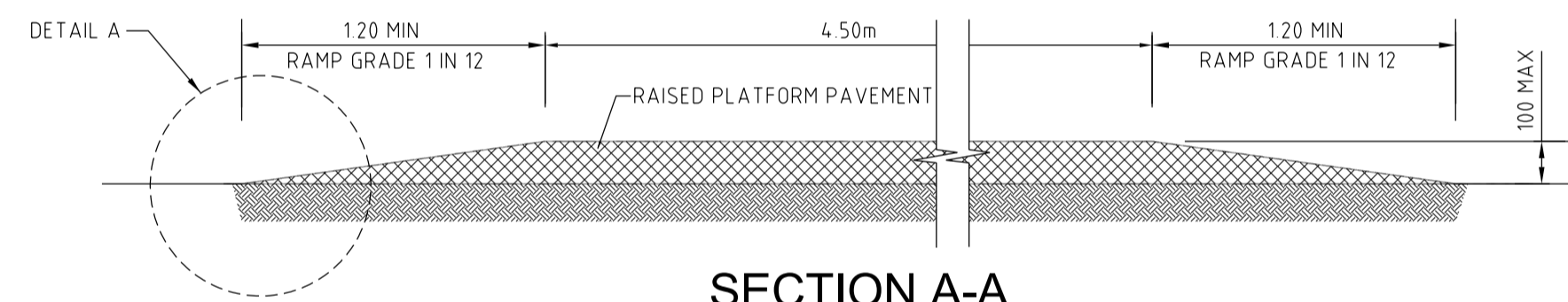
**PRELIMINARY** Drg No **305180R21** Rev **E**



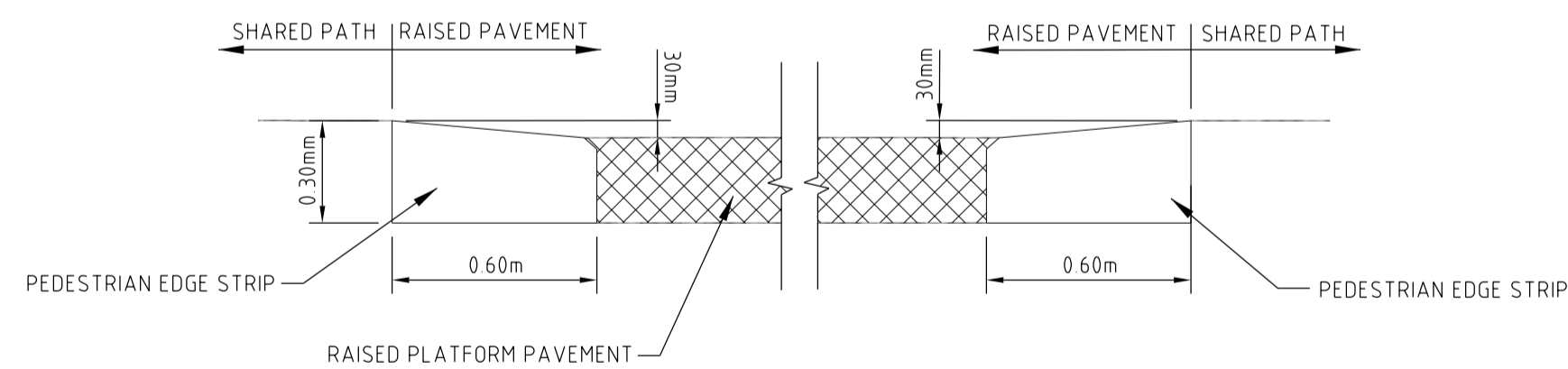
**PLAN  
FLAT TOP ROAD HUMP  
(HEIDELBERG STREET)**  
SCALE 1 TO 200



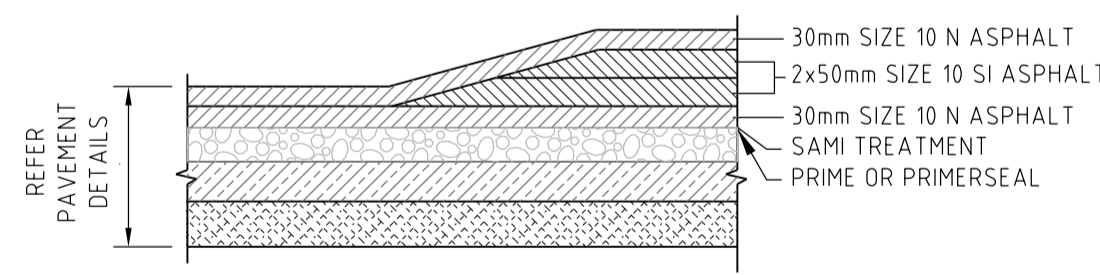
**LINEMARKING DETAILS**  
NOT TO SCALE



**SECTION A-A  
FLAT TOP RAISED PAVEMENT**  
NOT TO SCALE



**SECTION B-B**  
NOT TO SCALE

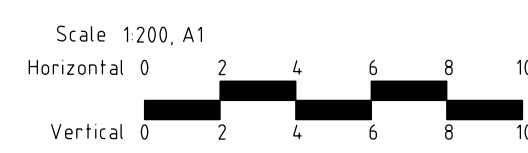


**DETAIL A  
RAISED PLATFORM PROFILE**  
NOT TO SCALE

**Planning and Environment Act 1987  
Wyndham Planning Scheme**

**Approved Plan As Required  
under Condition 43  
Permit No WYP11481/19  
Date 17/11/2021**

Rev	Amendments	Approved	Date
E	COUNCIL COMMENTS ADDED	M.R	09/11/21
D	COUNCIL COMMENTS ADDED	M.R	26/10/21
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A	ISSUE TO COUNCIL	M.R	04/05/21



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Designed  
**R. WEINBER**  
Authorised  
**D. CAMERON**

Checked  
**M. READMAN**  
Date  
04/05/21

**MAMBOURIN ESTATE  
STAGE 15  
RAISED PAVEMENT DETAILS**

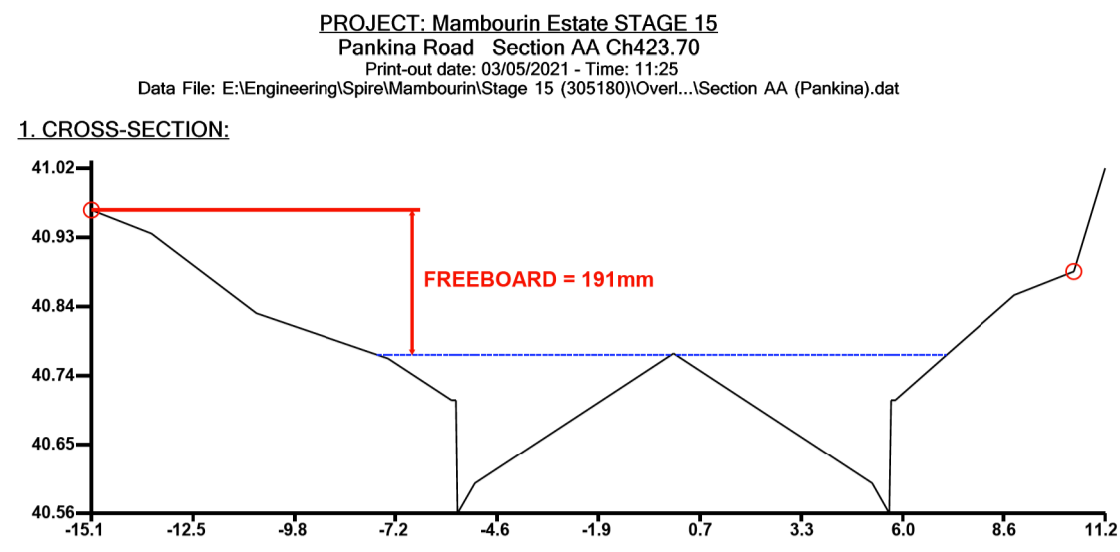
FRASER PROPERTY AUSTRALIA  
CITY OF WYNDHAM

**PRELIMINARY** Drg No **305180R22** Rev **E**









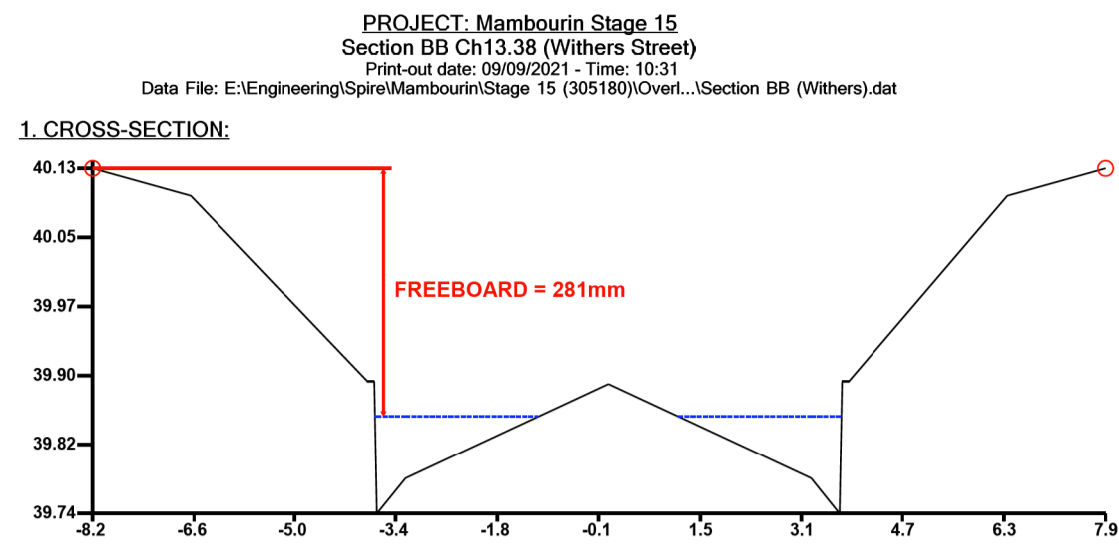
2. DISCHARGE INFORMATION:  
100 year (1%) storm event  
Total discharge = 820.0 litres per second  
There is no pipe discharge  
Overland/channel/watercourse discharge = 820.0 litres per second

3. RESULTS: Water surface elevation = 40.772m  
Grade = 1 in 200

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (litres per second):	0.00	820.00	0.00	820.00
D(Max) = Max. Depth (m):	0.00	0.21	0.00	0.21
D(Ave) = Ave. Depth (m):	0.00	0.08	0.00	0.08
V = Ave. Velocity (m/s):	0.00	0.74	0.00	0.74
D(Max) x V (cumecs/m):	0.00	0.16	0.00	0.16
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	0.84	0.00	N/A
Area (m <sup>2</sup> ):	0.00	1.15	0.00	1.15
Wetted Perimeter (m):	0.00	14.90	0.00	14.90
Flow Width (m):	0.00	14.65	0.00	14.65
Hydraulic Radius (m):	0.00	0.08	0.00	0.08
Composite Manning's n:	0.000	0.017	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-15.100	40.963	-13.550	40.932	0.013
2	-13.550	40.932	-10.827	40.827	0.035
3	-10.827	40.827	-7.400	40.767	0.013
4	-7.400	40.767	-5.750	40.712	0.013
5	-5.750	40.712	-5.640	40.712	0.013
6	-5.640	40.712	-5.600	40.662	0.013
7	-5.600	40.562	-5.150	40.562	0.013
8	-5.150	40.602	0.000	40.774	0.015
9	0.000	40.774	5.150	40.602	0.015
10	5.150	40.602	5.600	40.562	0.013
11	5.600	40.562	5.640	40.712	0.013
12	5.640	40.712	5.750	40.712	0.013



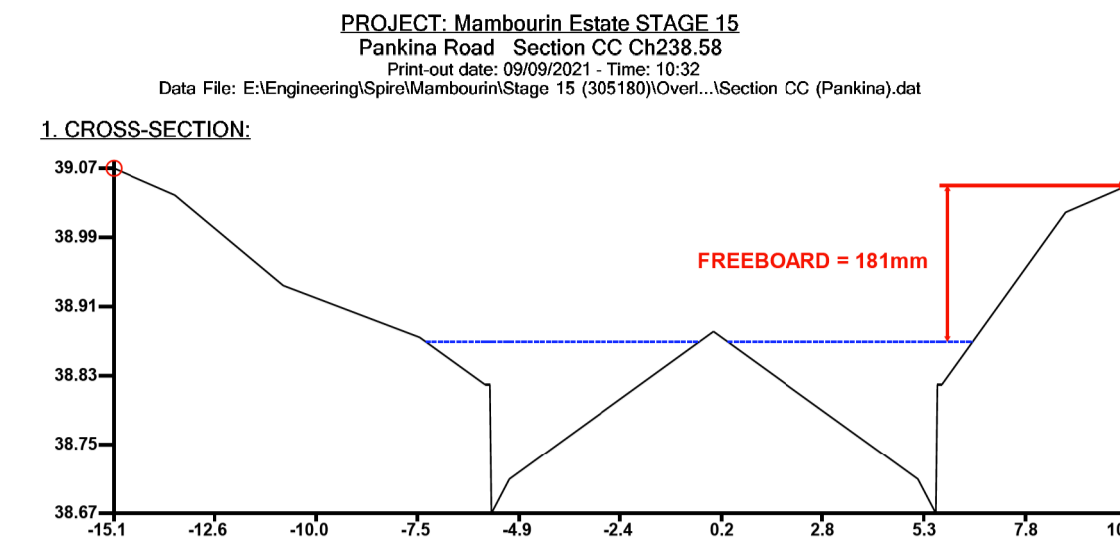
2. DISCHARGE INFORMATION:  
100 year (1%) storm event  
Total discharge = 110.0 litres per second  
There is no pipe discharge  
Overland/channel/watercourse discharge = 110.0 litres per second

3. RESULTS: Water surface elevation = 39.849m  
Grade = 1 in 200

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (litres per second):	0.00	110.00	0.00	110.00
D(Max) = Max. Depth (m):	0.00	0.11	0.00	0.11
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	0.60	0.00	0.60
D(Max) x V (cumecs/m):	0.00	0.07	0.00	0.07
D(Ave) x V (cumecs/m):	0.00	0.03	0.00	0.03
Froude Number:	0.00	0.90	0.00	N/A
Area (m <sup>2</sup> ):	0.00	0.23	0.00	0.23
Wetted Perimeter (m):	0.00	5.32	0.00	5.32
Flow Width (m):	0.00	5.15	0.00	5.15
Hydraulic Radius (m):	0.00	0.04	0.00	0.04
Composite Manning's n:	0.000	0.015	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.150	40.130	-6.600	40.099	0.013
2	-6.600	40.099	-3.800	39.889	0.035
3	-3.800	39.889	-3.690	39.889	0.013
4	-3.690	39.889	-3.650	39.739	0.013
5	-3.650	39.739	-3.200	39.779	0.013
6	-3.200	39.779	0.000	39.886	0.015
7	0.000	39.886	3.200	39.779	0.015
8	3.200	39.779	3.650	39.739	0.013
9	3.650	39.739	3.690	39.889	0.013
10	3.690	39.889	3.800	39.889	0.013
11	3.800	39.889	6.300	40.099	0.013
12	6.300	40.099	7.850	40.130	0.013



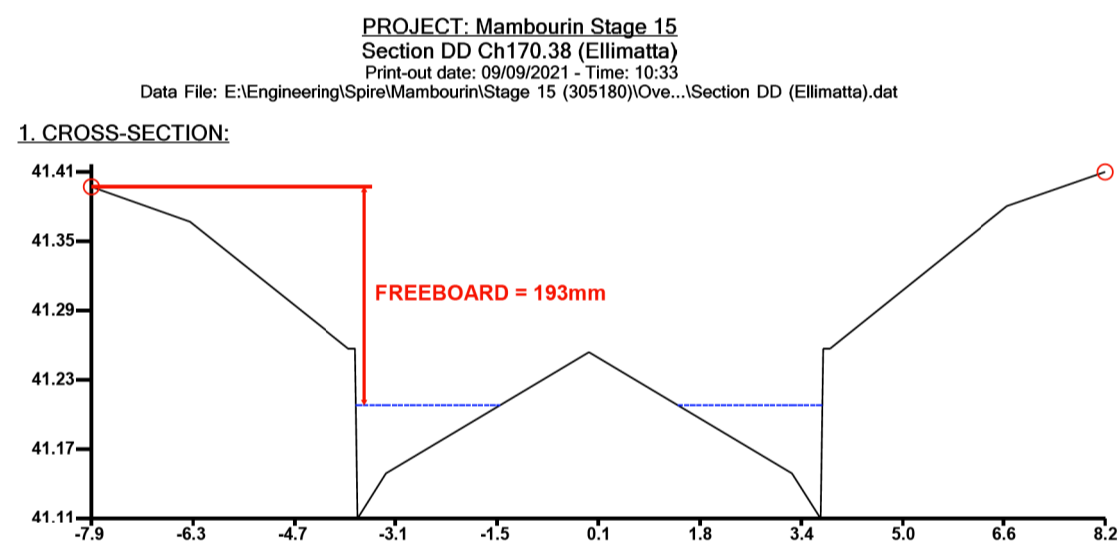
2. DISCHARGE INFORMATION:  
100 year (1%) storm event  
Total discharge = 950.0 litres per second  
There is no pipe discharge  
Overland/channel/watercourse discharge = 950.0 litres per second

3. RESULTS: Water surface elevation = 38.870m  
Grade = 1 in 100

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (litres per second):	0.00	1053.69	0.00	1053.69
D(Max) = Max. Depth (m):	0.00	0.20	0.00	0.20
D(Ave) = Ave. Depth (m):	0.00	0.08	0.00	0.08
V = Ave. Velocity (m/s):	0.00	1.09	0.00	1.09
D(Max) x V (cumecs/m):	0.00	0.22	0.00	0.22
D(Ave) x V (cumecs/m):	0.00	0.08	0.00	0.08
Froude Number:	0.00	1.25	0.00	N/A
Area (m <sup>2</sup> ):	0.00	1.01	0.00	1.01
Wetted Perimeter (m):	0.00	13.30	0.00	13.30
Flow Width (m):	0.00	13.06	0.00	13.06
Hydraulic Radius (m):	0.00	0.08	0.00	0.08
Composite Manning's n:	0.000	0.016	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-15.100	39.071	-13.550	39.040	0.013
2	-13.550	39.040	-10.827	38.935	0.035
3	-10.827	38.935	-7.400	38.875	0.013
4	-7.400	38.875	-5.750	38.820	0.013
5	-5.750	38.820	-5.640	38.820	0.013
6	-5.640	38.820	-5.600	38.670	0.013
7	-5.600	38.670	-5.150	38.710	0.013
8	-5.150	38.710	0.000	38.882	0.015
9	0.000	38.882	5.150	38.710	0.015
10	5.150	38.710	5.600	38.670	0.013
11	5.600	38.670	5.640	38.820	0.013
12	5.640	38.820	5.750	38.820	0.013



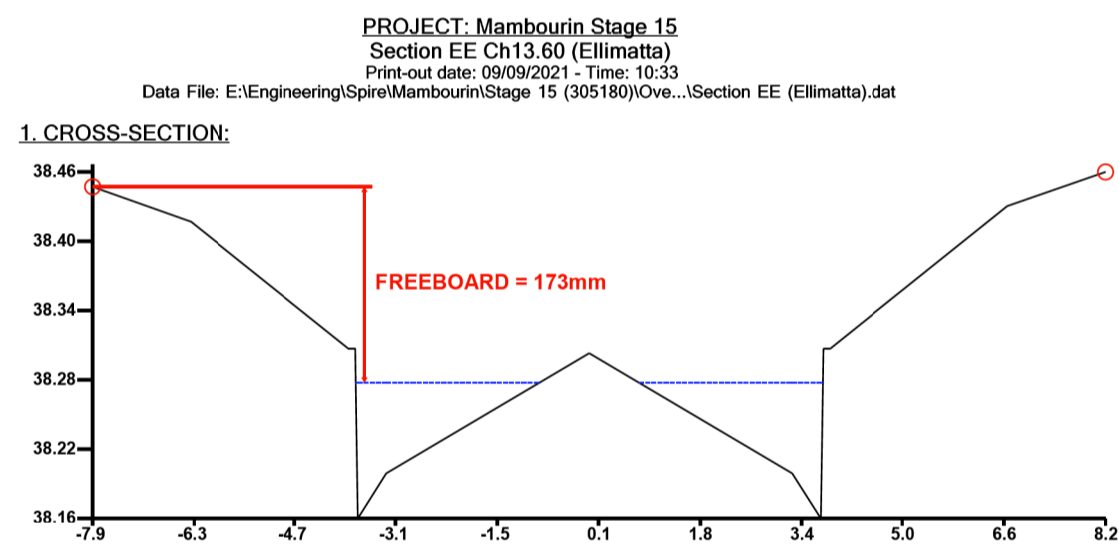
2. DISCHARGE INFORMATION:  
100 year (1%) storm event  
Total discharge = 90.0 litres per second  
There is no pipe discharge  
Overland/channel/watercourse discharge = 90.0 litres per second

3. RESULTS: Water surface elevation = 41.207m  
Grade = 1 in 200

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (litres per second):	0.00	90.00	0.00	90.00
D(Max) = Max. Depth (m):	0.00	0.10	0.00	0.10
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	0.56	0.00	0.56
D(Max) x V (cumecs/m):	0.00	0.06	0.00	0.06
D(Ave) x V (cumecs/m):	0.00	0.02	0.00	0.02
Froude Number:	0.00	0.89	0.00	N/A
Area (m <sup>2</sup> ):	0.00	0.18	0.00	0.18
Wetted Perimeter (m):	0.00	4.70	0.00	4.70
Flow Width (m):	0.00	4.54	0.00	4.54
Hydraulic Radius (m):	0.00	0.04	0.00	0.04
Composite Manning's n:	0.000	0.015	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-7.850	41.400	-6.300	41.369	0.013
2	-6.300	41.369	-3.800	41.257	0.035
3	-3.800	41.257	-3.690	41.257	0.013
4	-3.690	41.257	-3.650	41.107	0.013
5	-3.650	41.107	-3.200	41.147	0.013
6	-3.200	41.147	0.000	41.254	0.015
7	0.000	41.254	3.200	41.147	0.015
8	3.200	41.147	3.650	41.107	0.013
9	3.650	41.107	3.690	41.257	0.013
10	3.690	41.257	3.800	41.257	0.013
11	3.800	41.257	6.600	41.383	0.035
12	6.600	41.383	8.150	41.413	0.013



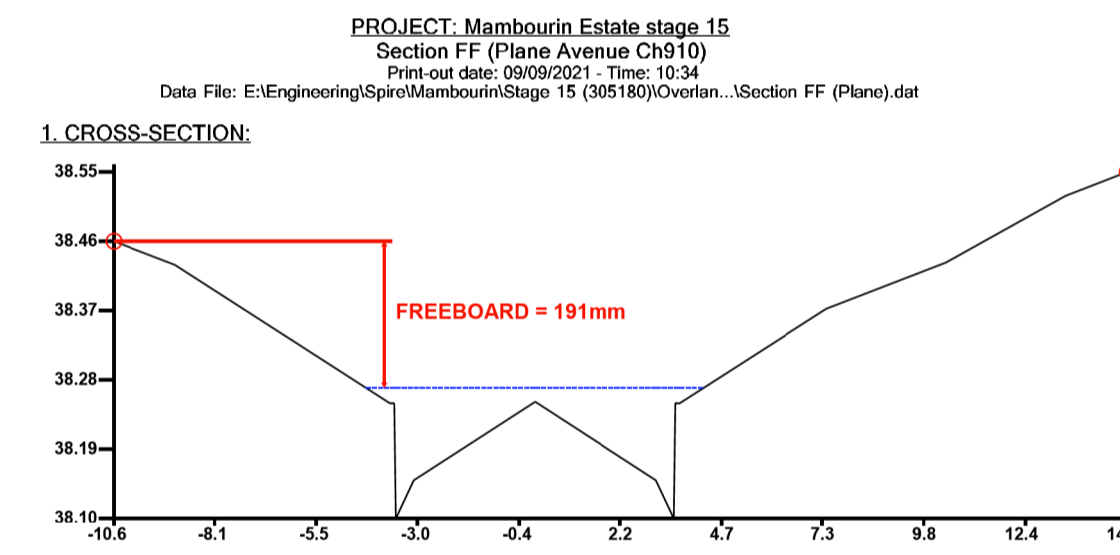
2. DISCHARGE INFORMATION:  
100 year (1%) storm event  
Total discharge = 170.0 litres per second  
There is no pipe discharge  
Overland/channel/watercourse discharge = 170.0 litres per second

3. RESULTS: Water surface elevation = 38.276m  
Grade = 1 in 200

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (litres per second):	0.00	169.00	0.00	169.00
D(Max) = Max. Depth (m):	0.00	0.12	0.00	0.12
D(Ave) = Ave. Depth (m):	0.00	0.05	0.00	0.05
V = Ave. Velocity (m/s):	0.00	0.64	0.00	0.64
D(Max) x V (cumecs/m):	0.00	0.08	0.00	0.08
D(Ave) x V (cumecs/m):	0.00	0.03	0.00	0.03
Froude Number:	0.00	0.81	0.00	N/A
Area (m <sup>2</sup> ):	0.00	0.29	0.00	0.29
Wetted Perimeter (m):	0.00	5.98	0.00	5.98
Flow Width (m):	0.00	5.79	0.00	5.79
Hydraulic Radius (m):	0.00	0.05	0.00	0.05
Composite Manning's n:	0.000	0.015	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-7.850	38.449	-6.300	38.418	0.013
2	-6.300	38.418	-3.800	38.306	0.035
3	-3.800	38.306	-3.690	38.306	0.013
4	-3.690	38.306	-3.650	38.156	0.013
5	-3.650	38.156	-3.200	38.196	0.013
6	-3.200	38.196	0.000	38.302	0.015
7	0.000	38.302	3.200	38.196	0.015
8	3.200	38.196	3.650	38.156	0.013
9	3.650	38.156	3.690	38.306	0.013
10	3.690	38.306	3.800	38.306	0.013
11	3.800	38.306	6.600	38.432	0.035
12	6.600	38.432	8.150	38.462	0.013



2. DISCHARGE INFORMATION:  
100 year (1%) storm event  
Total discharge = 320.0 litres per second  
There is no pipe discharge  
Overland/channel/watercourse discharge = 320.0 litres per second

3. RESULTS: Water surface elevation = 38.272m  
Grade = 1 in 200

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (litres per second):	0.00	320.00	0.00	320.00
D(Max) = Max. Depth (m):	0.00	0.17	0.00	0.17
D(Ave) = Ave. Depth (m):	0.00	0.07	0.00	0.07
V = Ave. Velocity (m/s):	0.00	0.61	0.00	0.61
D(Max) x V (cumecs/m):	0.00	0.10	0.00	0.10
D(Ave) x V (cumecs/m):	0.00	0.04	0.00	0.04
Froude Number:	0.00	0.75	0.00	0.75
Area (m <sup>2</sup> ):	0.00	0.58	0.00	0.58
Wetted Perimeter (m):	0.00	8.74	0.00	8.74
Flow Width (m):	0.00	8.50	0.00	8.50
Hydraulic Radius (m):	0.00	0.07	0.00	0.07
Composite Manning's n:	0.000	0.019	0.000	0.019
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-10.600	38.463	-9.050	38.432	0.013
2	-9.050	38.432	-6.500	38.252	0.035
3	-6.500	38.252	-3.540	38.252	0.013
4	-3.540	38.252	-3.500	38.102	0.013
5	-3.500	38.102	-3.050	38.152	0.013
6	-3.050	38.152	0.000	38.254	0.015