ATTENTION TO CONTRACTOR

1. **IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM COORDINATES SHOWN.**
2. **Contractor to ensure that the site is pegged and or set out checked by the licenced surveyor responsible for certifying the Plan of Subdivision prior to underground infrastructure being installed.**
3. Where concrete works abut a sewer access chamber surround or similar structure, an expansion joint of approved material shall be provided between the two faces.

WARNING

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

AS CONSTRUCTED

FUTURE STAGE 5

FUTURE STAGE 6

FUTURE DEVELOPMENT

PROPOSED STAGE 2

FUTURE INTE STAG

PORTOFINO WAY

VARANASI DRIVE

TREETON DRIVE

TIERRA CIRCUIT

NEWRY DRIVE

NORTH

PROVIDE 'NO ROAD' SIGN AND CHEVRON D4-5 (TYPICAL)

PROVIDE CONCRETE EDGE STRIP & ROW OF AC'S (TYPICAL)

TEMPORARY GARBAGE TRUCK TURNING AREA. CRUSHED ROCK 200mm COMPACTED DEPTH 20mm FCR. (TYPICAL)

PROVIDE TREATED PINE BOLLARDS Ø 1.5m CTS (TYPICAL)

BLUESTONE TREATMENT TO BE COMPLETED AS PART OF LANDSCAPE WORKS

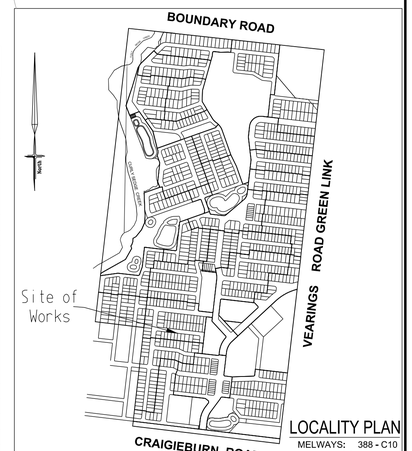
REMOVE CONC. EDGE STRIP AND 'NO ROAD' SIGN AND MATCH NEATLY WITH EXISTING.

TBM (PSM) 5221.08, 69.71 E 5819692.826 N RL

TBM (Star Picket) 5220.65, 51.11 E 5819694.90 N RL 185.84

SHEET INDEX

SHT No.	VER	DESCRIPTION
1	L	DETAIL PLAN SHEET 1 OF 2
2	I	DETAIL PLAN SHEET 2 OF 2
3	F	NOTES AND TYPICAL SECTIONS
4	A	INTERSECTION DETAILS 1
5	C	INTERSECTION DETAILS 2
6	B	INTERSECTION DETAILS 3, ROUNDABOUT
7	C	INTERSECTION DETAILS 4, ROUNDABOUT
8	B	BRIGHTON AVENUE - LONGDITUDINAL AND CROSS SECTIONS
9	B	BRIGHTON AVENUE - CROSS SECTIONS
10	A	TREETON DRIVE - LONGDITUDINAL AND CROSS SECTIONS
11	A	TREETON DRIVE - CROSS SECTIONS 1
12	A	TREETON DRIVE - CROSS SECTIONS 2
13	A	PORTOFINO WAY - LONGDITUDINAL AND CROSS SECTIONS
14	A	PORTOFINO WAY - CROSS SECTIONS
15	B	VARANASSI DRIVE - CROSS SECTIONS
16	A	NEWRY STREET - LONGDITUDINAL AND CROSS SECTIONS
17	A	NEWRY STREET - CROSS SECTIONS
18	B	TIERRA CIRCUIT - LONGDITUDINAL AND CROSS SECTIONS
19	B	TIERRA CIRCUIT - CROSS SECTIONS
20	D	DRAINAGE LONGDITUDINAL SECTIONS AND PIT SCHEDULE 1
21	C	DRAINAGE LONGDITUDINAL SECTIONS AND PIT SCHEDULE 2
22	F	DRAINAGE LONGDITUDINAL SECTIONS AND PIT SCHEDULE 3
23	E	DRAINAGE LONGDITUDINAL SECTIONS
24	E	DRAINAGE LONGDITUDINAL SECTIONS
25	A	SIGNAGE AND LINEMARKING PLAN



LOCALITY PLAN
MELWAYS: 388 - C10
NTS

SERVICES OFFSETS AND LOCATIONS

STREET NAME	Rd.RESERVE	WATER DW	WATER NDW	GAS	ELECTRICITY CABLES	ELECTRICITY POLES	FIBRE TO THE HOME FTTH CABLES	FIBRE TO THE HOME FTTH PITS	Bk. of KERB	JOINT TRENCHING	STREET CLASIFICATION
BRIGHTON AVENUE (LOTS 401-403)	20·00	5·30 S	4·80 S	4·30 S	2·60 N	0·80 BOK	1·85 N	1·78 N/S	4·95 N 7·45 S	G & W, FTTH & E	STREET - LEVEL 1
BRIGHTON AVENUE (LOTS 403-407 & 490-491)	16·00	3·20 N	2·70 N	2·25 N	2·60 S	0·80 BOK	1·78 S	1·78 S	4·35 N 4·05 S	G & W, FTTH & E	STREET - LEVEL 1
TREETON DRIVE	20·00	5·30 E	4·80 E	4·30 E	2·60 W	0·80 BOK	1·85 W	1·78N/3·55E	4·95 W 7·45 E	G & W, FTTH & E	STREET - LEVEL 1
PORTOFINO WAY (LOTS 454-462)	20·00	5·30 S	4·80 S	4·30 S	2·60 N	0·80 BOK	1·85 N	1·78N/3·55S	4·95 N 7·45 S	G & W, FTTH & E	STREET - LEVEL 1
PORTOFINO WAY (LOTS 473 - 476)	16·00	3·20 N	2·70 N	2·25 N	2·60 S	0·80 BOK	1·85 S	1·78 N/S	4·35 N 4·05 S	G & W, FTTH & E	STREET - LEVEL 1
VARANASI DRIVE	16·00	3·20 W	2·70 W	2·25 W	2·60 E	0·80 BOK	1·85 E	1·78 E/W	4·35 W 4·05 E	G & W, FTTH & E	STREET - LEVEL 1
TIERRA CIRCUIT (LOTS 442-450)	16·00	3·00 N	2·50 N	2·05 N	2·60 S	0·80 BOK	1·85 S	1·78 N/S	4·35 N 4·05 S	G & W, FTTH & E	STREET - LEVEL 1
TIERRA CIRCUIT (LOTS 419-421)	16·00	3·00 W	2·50 W	2·05 W	2·60 E	0·80 BOK	1·85 E	1·78 E/W	4·35 W 4·05 E	G & W, FTTH & E	STREET - LEVEL 1
NEWRY STREET	16·00	3·00 N	2·50 N	2·05 N	2·60 S	0·80 BOK	1·85 S	1·78 N/S	4·35 N 4·05 S	G & W, FTTH & E	STREET - LEVEL 1
WASHINGTON AVENUE	16·00	3·10 E	2·60 E	2·15 E	2·60 W	0·80 BOK	1·85 W	1·78 E/W	4·35 E 4·05 W	G & W, FTTH & E	STREET - LEVEL 1
PALACE WALK	16·00	3·20 W	2·70 W	2·25 W	2·60 E	0·80 BOK	1·85 E	1·78 E/W	4·35 W 4·05 E	G & W, FTTH & E	STREET - LEVEL 1

NOTE : LOCATION OF STREET TREES ARE IN THE CENTRE OF NATURE STRIP

SCALE 1 : 500

10 5 0 10 20 40

LENGTHS ARE IN METRES

SYMBOL LEGEND

Drains, Sewer <300, Sewer >300, Water, House Drain, Property Inlet, Street Sign, PSM, Retaining Wall, Conduits 50mm, Conduits 100mm, Ex Gas/Elect/Tel

Ex/Natural/FS Level, FS @ Building Line, Top/Toe of Batter, Top Ret. Wall Level, 100yr Flood Level, Fill Prop/Ex, Cut Prop/Ex

VER	DATE	REMARKS
L	13·09·19	FS LEVELS UPDATED
I	13·06·19	SHEET INDEX UPDATED
F	15·11·18	DRAINAGE LINE 23-71 & 56-60 AMENDED
D	24·09·18	WATER OFFSETS, TIERRA, NEWRY, WASH'TON UPDATED
C	12·09·18	DRAINAGE EDITS / SCHEDULE UPDATED
B	06·09·18	ULTIMATE OUTFALL ADDED
A	18.07.18	ISSUED FOR CONSTRUCTION

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE STAGE 4
DETAIL PLAN

MUNICIPALITY	WHITTLESEA
REFERENCE	9365 E/4
SCALE	AS SHOWN
DATUM	AHD
DATE	APR'18
SHEET	1 OF 25 L

Plotted:29/10/2019

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PLAN

SCALE 1:500

SCALE 1 : 500

LENGTHS ARE IN METRES

EXISTING STAGE 4

FUTURE STAGE

FUTURE STAGE 10

EXISTING STAGE 1

NEWRY STREET

TREETON DRIVE

PREVELI WAY

BRIGHTON AVENUE

PALACE WALK

TIERRA

Pedestrian Access

Maintenance Shed

BCS RESERVE

Pickle Ball Court

Lawn

FUTURE DEVELOP

REMOVE CONC. EDGE STRIP AND 'NO ROAD' SIGN AND MATCH NEATLY WITH EXISTING.

PROVIDE 'NO ROAD' SIGN AND CHEVRON D4-5 (TYPICAL)

PROVIDE CONCRETE EDGE STRIP & ROW OF 'TEMPORARY SURCHARGE' AC'S (TYPICAL)

VEHICULAR EXCLUSION FENCE

FINAL LOCATION OF PATH SUBJECT TO LANDSCAPE PLANS

OUTFALL GRADE @ 1:800

APPROX DAYLIGHT OF OPEN TRENCH OUTFALL

PROVIDE WIRE FARM FENCE ON BOTH SIDES OF THE OPEN CHANNEL TO A POINT WHERE THE DRAIN DEPTH IS > 1m

AS CONSTRUCTED

WARNING

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ATTENTION TO CONTRACTOR

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2. **Contractor to ensure that the site is pegged and or set out checked by the licenced surveyor responsible for certifying the Plan of Subdivision prior to underground infrastructure being installed.**
3. Where concrete works abut a sewer access chamber surround or similar structure, an expansion joint of approved material shall be provided between the two faces.

AMENDMENTS	VER.	DATE	REMARKS
	J	13·09·19	FS LEVELS UPDATED
	I	13·09·19	DRAINGE 86-89 UPDATED
	G	26.04.19	DRAINAGE OUTFALL EXTENSION UPDATED
	F	15.11.18	DRAINAGE OUTFALL EXTENSION UPDATED
	E	12.10.18	DRAINAGE OUTFALL EXTENSION SHOWN
	C	12.09.18	DRAINAGE EDITS
	A	18.07.18	ISSUED FOR CONSTRUCTION

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

RATHDOWNE ESTATE STAGE 4
DETAIL PLAN

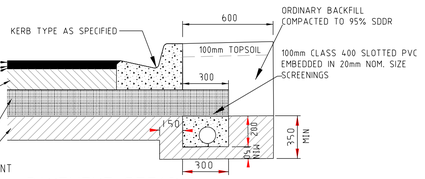
MUNICIPALITY	WHITTLESEA		
REFERENCE	9365 E/4		
SCALE	AS SHOWN	DATUM AHD	DATE APR'18
SHEET	2 OF 25		J

J:\A9365\Engi\Stage 4\EN_R02_DET2.dgn

Plotted:29/10/2019

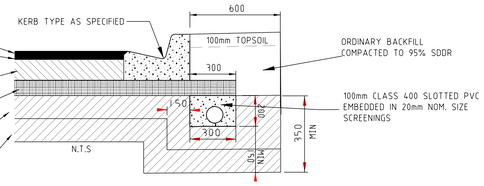
NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH PLANS AND CURRENT CITY OF WHITTLESEA SPECIFICATIONS AND STANDARD DRAWINGS APPROVED BY COUNCIL AND TO THE SATISFACTION OF THE ENGINEER. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION:
   a) SOURCES OF QUARRYMATERIAL
   b) N.A.T.A. APPROVED TEST RESULTS FOR THE F.C.R. THAT IS TO BE USED.
   c) IF THE SOURCE THE QUARRY MATERIAL IS CHANGED DURING THE COURSE OF THE WORKS, THEN NEW TEST RESULTS SHALL BE PROVIDED.
2. COUNCIL TO BE NOTIFIED 2 CLEAR DAYS PRIOR TO COMMENCEMENT OF WORKS.
3. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE
4. ALL LEVELS ARE TO BE AUSTRALIAN HEIGHT DATUM (AHD)
5. DRAINAGE AND PITS TO BE SETOUT FROM OFFSETS SHOWN RATHER THAN FROM CENTRELINE PIPE CHAINAGES.
6. ALL PIPES TO BE CLASS 2 UNLESS OTHERWISE SPECIFIED AND SHALL BE RRJ UP TO AND INCLUDING 750mm DIAMETER. ALL DRAINS THAT CROSS UNDER ROAD PAVEMENTS ARE TO BE RRJ CLASS 4 R.C.P.
7. JOINTING FOR CURVED PIPE ALIGNMENT SHALL CONFORM TO MANUFACTURER'S SPECIFICATIONS (RRJ'S FOR MINOR DEFLECTIONS OR COMPLETE R.C. BANDAGES)
8. PROPERTY INLETS ARE TO BE PLACED 1.0m FROM THE LOW CORNER OF LOT UNLESS OTHERWISE SHOWN.
9. LOTS DENOTED THUS 416H ARE TO BE PROVIDED WITH A 100mm HOUSE DRAIN PLACED 7.00m FROM THE LOW CORNER OF THE LOT UNLESS OTHERWISE SHOWN. HOUSE DRAINS TO BE CONNECTED TO STREET DRAINAGE WITH 27A & CAP, CLEAR OF ANY PAVING. IF CONNECTION IS WITHIN PAVING A PIT MUST BE USED.
10. APPROVED GRANULAR BACKFILL TO BE PROVIDED WHERE PIPE TRENCHES ENCROACH UNDER ROADWAY DUE TO DEEP EXCAVATIONS IN ROCK.
11. SHALLOW CUT OFF DRAINS ARE TO BE PROVIDED ON SUBDIVISION BOUNDARY WHERE NECESSARY.
12. WHERE CONCRETE PAVING CROSSES SERVICE TRENCHES, SEWERAGE AND DRAINAGE, TRENCHES SHALL BE BACKFILL WITH COMPACTED FINE CRUSH ROCK.
13. ALL CROSSOVERS MUST BE 0.75m FROM THE DRAINAGE PITS AND PRAM CROSSINGS. IN ADDITION, THE PRAM CROSSING MUST BE 2m FROM THE DRAINAGE PITS.
14. PRIOR TO COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR MUST ENSURE THAT ALL MATTERS RELATING TO THE OCCUPATIONAL HEALTH AND SAFETY ACT 2004, INCLUDING ALL RELEVANT REGULATIONS, HAVE BEEN ADDRESSED. IN PARTICULAR, THE REQUIRED NOTIFICATIONS MUST BE CONVEYED TO THE VICTORIAN WORKCOVER AUTHORITY - HEALTH & SAFETY DIVISION WITH RESPECT TO TRENCHING OPERATIONS. DETAILS OF THE CONTRACTORS OCCUPATIONAL HEALTH & SAFETY PROCEDURES MUST BE LODGED WITH THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.
15. AGRICULTURAL PIPE DRAINS 100mm PVC CLASS 4 TO BE PLACED BEHIND ALL KERB AND CHANNEL AND BUFFER PITCHERS AND WHERE DIRECTED BY THE ENGINEER (REFER TO COUNCIL STANDARD DRAWINGS). WHERE KERB AND CHANNEL IS LOCATED ON TITLE BOUNDARY AG's ARE TO BE PLACED BENEATH KERB AND 750mm BELOW TOP OF KERB.
16. ALL DRAINS BEHIND KERB AND CHANNEL SHALL BE BACKFILLED TO MATCH PAVEMENT SUBGRADE LEVEL WITH 20mm CLASS 2 F.C.R. 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. EXCEPT WHERE DRAINS UP TO AND INCLUDING 450mm DIA. PIPES ARE LOCATED BEHIND KERB, THESE TRENCHES ARE TO BE BACKFILLED WITH SCREENINGS IN LIEU OF AG'S.
17. AGRICULTURAL DRAINS ARE TO BE 760mm BELOW TOP OF KERB.
18. BATTERS SHALL BE 1 IN 6 FOR CUT & FILL UNLESS OTHERWISE SHOWN.
19. ALL NATIVE TREES AND SHRUBS TO BE RETAINED UNLESS ROAD CONSTRUCTION NECESSITATES THEIR REMOVAL OR REMOVAL IS DIRECTED BY THE ENGINEER.
20. LOTS TO BE GRADED AND LEFT CLEAN TO THE SATISFACTION OF THE ENGINEER.
21. ON COMPLETION THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF RUBBISH AND SPOIL FROM SITE.
22. WHERE WORKS ARE IN THE VICINITY OF EXISTING SERVICES, THESE SERVICES ARE TO BE LOCATED AND THE VARIOUS AUTHORITIES NOTIFIED PRIOR TO COMMENCEMENT OF WORKS.
23. ALL MATERIAL SURROUNDING SERVICE AUTHORITY PITS LOCATED IN FOOTPATHS MUST BE ADEQUATELY COMPACTED IN 150mm LAYERS AND TESTED TO THE SATISFACTION OF THE CITY OF WHITTLESEA,PRIOR TO THE CONSTRUCTION OF FOOTPATH BAYS ADJACENT TO THESE PITS.
24. THE WATER CONDUIT OFFSET FROM THE LOT BOUNDARY IS GIVEN ON THE WATER RETICULATION PLAN. THE CONTRACTOR MUST CONSTRUCT CONDUITS TO ACCORD WITH THE GIVEN OFFSET AND ENSURE THAT THE CONCRETER MARKS THE KERB AND FOOTPATH EXACTLY ABOVE THE CONDUIT.
25. ALL GAS AND WATER CONDUIT TYPES ARE PVC CLASS 12 WITH A 50mm DIAMETER FOR RESIDENTIAL LOTS.
26. TELSTRA/NBN Co TO BE NOTIFIED 7 DAYS PRIOR TO CONCRETE BEING PLACED.
27. CONDUITS ARE TO BE EXTENDED 450mm BEHIND FACE OF KERB AND TO BE REFERENCED ON FACE OF KERB.
28. ALL STREET SIGNS TO BE CONSTRUCTED AND ERECTED TO CURRENT CITY OF WHITTLESEA STANDARDS. STREET NAME PLATES TO BE IN ACCORDANCE WITH STANDARD DRAWING SD812, INCLUDING "NO THROUGH ROAD" NOMINATION WHERE APPLICABLE.
29. TRAFFIC CONTROL SIGNS, MARKINGS & DELINEATORS TO BE INSTALLED IN ACCORDANCE WITH AS1742.2. ALL LINE MARKING IS TO BE LONG LIFE ROAD MARKING, WITH LONGITUDINAL LINES IN THERMOPLASTIC & TRANSVERSE MARKINGS IN COLD APPLIED.
30. ALL DRIVEWAYS TO BE OFFSET 0.75m FROM SIDE BOUNDARY OR EASEMENT UNLESS OTHERWISE SHOWN. REFER EDCM STD. DWG 501 FOR DETAILS.
31. ALL DRIVEWAY RAMPS INTO PROPERTIES ARE TO BE CUT IN AT A MAXIMUM GRADE OF 1 IN 6.
32. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND TOPSOIL REPLACED TO OBTAIN FINAL FILL LEVELS AS SHOWN ON PLANS. FILLING TO BE CLEAN CLAY COMPACTED TO A DRY DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE STANDARD COMPACTION TEST IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1289.5.2.1-1993. TESTING TO COMPLY WITH AS3798-1996 APPENDIX B, LEVEL 1.
33. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL IMPORTED FILL MATERIAL, INCLUDING TOPSOIL, SATISFIES THE DESCRIPTION FOR CLEAN FILL MATERIAL IN EPA BULLETIN PUBLICATION No. 448 (SEPT '95) AND SUBSEQUENT REVISIONS. THE CONTRACTOR SHALL PROVIDE VERIFICATION INCLUDING TEST CERTIFICATES TO THE SUPERVISING ENGINEER.
34. FILL REQUIRED UNDER ROADWAY KERB AND CHANNEL AND FOOTPATH TO BE APPROVED GRANULAR MATERIAL COMPACTED TO 95% AASHO IN 150mm LAYERS.
35. PAVEMENT TO CONSIST OF: VARANASI DRIVE, TREETON DRIVE (500mm DEPTH)
    a) 30mm COMPACTED DEPTH SIZE 10 TYPE N ASHPHALT WITH A C170 BINDER
    b) 30mm COMPACTED DEPTH SIZE 10 TYPE N ASHPHALT WITH A C170 BINDER
    c) SAMI SEAL WITH CLASS S18RF BINDER AND BITUMINUS PRIME
    d) BITUMINOUS PRIME
    e) 130mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 2 FCR, COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT.
    f) 160mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 CEMENT MODIFIED CR, (MAX 1% CEMENT), COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 2% OF THE MODIFIED OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500MPa AND A MAXIMUM YOUNG'S MODULUS OF 1500MPa.
    g) 150mm COMPACTED DEPTH OF SELECT GRANULAR MATERIAL "TYPE A" WITH A MINIMUM CBR OF 10% COMPACTED TO 98% STANDARD DRY DENSTIY RATIO WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%
    h) SUBGRADE TO CONSIST OF SILTY CLAY COMPACTED TO AT LEAST 100% STANDARD DRY DENSITY RATIO (SOAKED CBR>2.5%) WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. SUBGRADE IMPROVEMENT FOR SOFT OR ROCK AREAS, TO BE 150mm MINIMUM DEPTH OF COMPACTED CLASS 3 FCR" OR APPROVED EQUIVALENT MATERIAL.



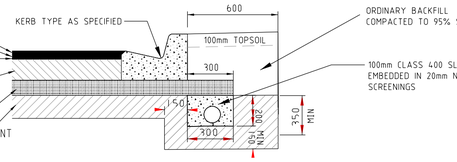
PAVEMENT DETAILS
VARANASI DRIVE
& TREETON DRIVE

PAVEMENT TO CONSIST OF: BRIGHTON AVENUE & PORTOFINO WAY (580mm DEPTH)
    a) 30mm COMPACTED DEPTH SIZE 14 TYPE N ASHPHALT WITH A C170 BINDER
    b) 30mm COMPACTED DEPTH SIZE 7 TYPE N ASHPHALT WITH A C170 BINDER
    c) SAMI SEAL WITH CLASS S18RF BINDER AND BITUMINUS PRIME
    d) 130mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 2 FCR, COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT.
    e) 100mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 CEMENT MODIFIED CR, MAX 1% CEMENT, COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 2% OF THE MODIFIED OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500MPa AND A MAXIMUM YOUNG'S MODULUS OF 1500MPa.
    f) 140mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 RECYCLED CRUSHED CONCTRETE, COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT.
    g) 150mm COMPACTED DEPTH OF SELECT GRANULAR MATERIAL "TYPE A" WITH A MINIMUM CBR OF 10% COMPACTED TO 98% STANDARD DRY DENSTIY RATIO WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%
    h) SUBGRADE TO CONSIST OF SILTY CLAY COMPACTED TO AT LEAST 100% STANDARD DRY DENSITY RATIO (SOAKED CBR>2.5%) WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. SUBGRADE IMPROVEMENT FOR SOFT OR ROCK AREAS, TO BE 150mm MINIMUM DEPTH OF COMPACTED CLASS 3 FCR" OR APPROVED EQUIVALENT MATERIAL.



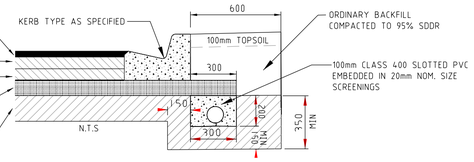
PAVEMENT DETAILS
BRIGHTON AVENUE, PORTOFINO WAY

PAVEMENT TO CONSIST OF: TIERRA CIRCUIT, NEWRY STREET, WASHINGTON AVENUE & PALACE WALK (450mm DEPTH)
    a) 30mm COMPACTED DEPTH SIZE 10 TYPE N ASHPHALT WITH A C170 BINDER
    b) 30mm COMPACTED DEPTH SIZE 10 TYPE N ASHPHALT WITH A C170 BINDER
    c) SAMI SEAL WITH CLASS S18RF BINDER AND BITUMINUS PRIME
    d) BITUMINOUS PRIME
    e) 140mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 2 FCR, COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT.
    f) 110mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 CEMENT MODIFIED CR, (MAX 1% CEMENT), COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 2% OF THE MODIFIED OPTIMUM MOISTURE CONTENT WITH A MINIMUM YOUNG'S MODULUS OF 500MPa AND A MAXIMUM YOUNG'S MODULUS OF 1500MPa.
    g) 150mm COMPACTED DEPTH OF SELECT GRANULAR MATERIAL "TYPE A" WITH A MINIMUM CBR OF 10% COMPACTED TO 98% STANDARD DRY DENSTIY RATIO WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%
    h) SUBGRADE TO CONSIST OF SILTY CLAY COMPACTED TO AT LEAST 100% STANDARD DRY DENSITY RATIO (SOAKED CBR>2.5%) WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. SUBGRADE IMPROVEMENT FOR SOFT OR ROCK AREAS, TO BE 150mm MINIMUM DEPTH OF COMPACTED CLASS 3 FCR" OR APPROVED EQUIVALENT MATERIAL.



PAVEMENT DETAILS
TIERRA CIRCUIT, NEWRY STREET, PALACE WALK
WASHINGTON AVENUE

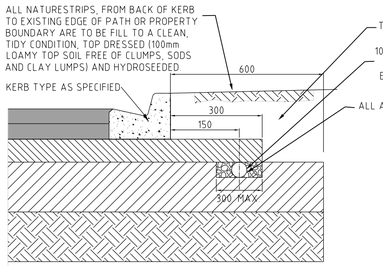
PAVEMENT TO CONSIST OF: ROUNDABOUT (570mm DEPTH)
    a) 40mm COMPACTED DEPTH SIZE 14 TYPE V ASHPHALT WITH A C320 BINDER (ASPHALT TO BE 5mm PROUD OF LIP OF KERB)
    b) 75mm COMPACTED DEPTH SIZE 20 TYPE SI ASHPHALT WITH A C320 BINDER
    c) 75mm COMPACTED DEPTH SIZE 20 TYPE SF ASHPHALT WITH A C320 BINDER
    d) BITUMINOUS PRIME
    e) 100mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 2 CR, COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT.
    f) 280mm COMPACTED DEPTH OF SELECT GRANULAR MATERIAL "TYPE A" WITH A MINIMUM SOAKED CBR OF 10% COMPACTED TO 98% STANDARD DRY DENSTIY RATIO WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%
    g) SUBGRADE TO CONSIST OF SILTY CLAY COMPACTED TO AT LEAST 100% STANDARD DRY DENSITY RATIO (SOAKED CBR>2.0%) WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. SUBGRADE IMPROVEMENT FOR SOFT OR ROCK AREAS, TO BE 150mm MINIMUM DEPTH OF COMPACTED RCR" OR APPROVED EQUIVALENT MATERIAL.



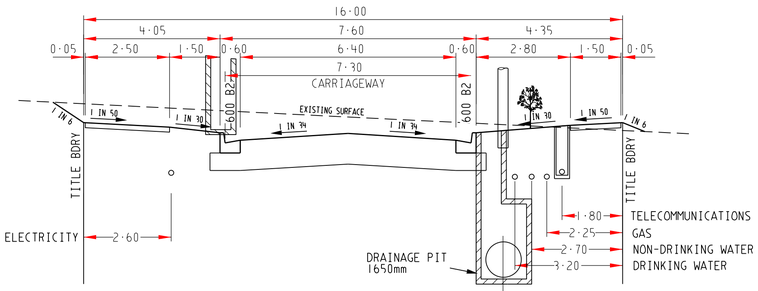
PAVEMENT DETAILS
ROUNDABOUT

SAMI TREATMENT (STRAIN ALLEVIATING MEMBRANE INTERLAYER) CONSISTING SIZE 10 SPRAYED SEAL USING CLASS S18RF BITUMEN CRUMB RUBBER BINDER PLACED AT AN APPLICATION RATE ≥ 1.8 l/m2 AND COVERED WITH A LIGHT APPLICATION OF PRE-COATED SIZE 10 AGGREGATE.

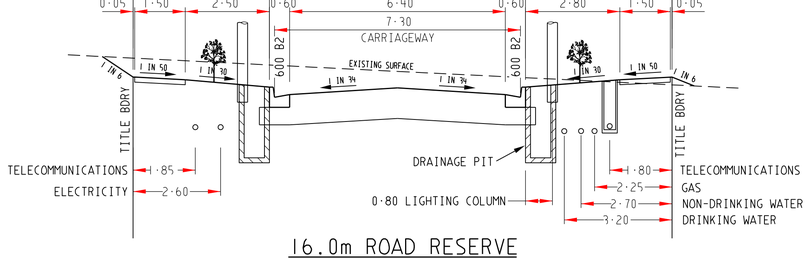
36. PAVEMENT DEPTH MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.
37. ALL 125mm THICK FOOTPATH CONCRETE PAVING TO BE REINFORCED WITH SL72 MESH AND MUST BE CONSTRUCTED WITH A 50mm UNDERLAYER OF 20mm COMPACTED CLASS 3 FCR IN ACCORDANCE WITH EDCM STANDARD DRAWING 401.
38. THE CONTRACTOR IS TO ORGANISE AND PAY FOR TESTING OF PAVEMENT BASE COURSE MATERIAL AND FINAL LAYER OF CRUSHED ROCK. A COPY OF RESULTS IS TO BE FORWARDED TO THE DIRECTOR OF ENGINEERING OR HIS REPRESENTATIVE. THE RESULTS MUST MEET THE REQUIREMENTS OF THE CITY OF WHITTLESEA SPECIFICATION BEFORE ANY FURTHER WORKS ARE REQUIRED.
39. THE CONTRACTOR MUST COMPLETE A LEVEL CHECK BETWEEN ALL TBM'S TO VERIFY LEVEL VALUES BEFORE COMMENCEMENT OF WORKS. ALL TBM,s AND CONTROL POINTS ARE TO BE MAINTAINED AND PROTECTED AT ALL TIMES DURING CONSTRUCTION. SHOULD ANY MARKS BE DISTURBED, THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE DEVELOPER'S CONSULTANT TO ARRANGE RE-INSTATEMENT AT THE CONTRACTORS EXPENSE.
40. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR MUST SUBMIT A SMP TO THE DEVELOPER'S CONSULTANT FOR APPROVAL. THE CONTRACTOR MUST COMPLY WITH THE RECOMMENDATIONS OF THE ENVIRONMENT PROTECTION AUTHORITY PUBLICATION No.275 "CONSTRUCTION TECHNIQUES FOR SEDIMENT POLLUTION CONTROL" AND MW SITE ENVIRONMENTAL MANAGEMENT POLICY 3.8.2. APPROPRIATE SILTATION CONTROL IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PERIOD OF THE WORKS.
41. ALL FOOTPATHS IN ROADS TO BE OFFSET 50mm FROM PROPERTY BOUNDARY. FOOTPATHS CONSTRUCTED ABOVE EXISTING LEVEL TO BE CONSTRUCTED ON APPROVED FILL (TO AS-3798) OF F.C.R. INTO NATURAL GROUND.
42. REFER TO LANDSCAPE ARCHITECT PLANS FOR DETAILS OF VEHICLE EXCLUSION FENCING AROUND PERIMETER OF WORKS.
43. PRIOR TO COMMENCEMENT OF WORKS A RINGLOCK WIRE MESH FENCE, APPROX 1.8m HIGH, SHALL BE ERECTED AROUND TREES NOTED "TO BE RETAINED". CORNER POSTS TO BE TREATED PINE WITH TREATED PINE STAYS. INTERMEDIATE POSTS TO BE STAR PICKETS AT 3m INTERVALS,EVERY THIRD POST TO BE TREATED PINE, NO CONCRETE IS TO BE USED TO SECURE POSTS. NO EXCAVATION SHALL BE CARRIED OUT WITHIN 5.0m OF ANY TREE UNTIL APPROVAL IS GIVEN BY THE ENGINEER.
44. ALL FENCES ADJOINING ALL RESERVES (OTHER THAN ROAD RESERVES) ARE TO BE ERECTED BY THE DEVELOPER (OR OWNER) AT NO COST TO COUNCIL AND SHALL BE CONSTRUCTED PRIOR TO STATEMENT OF COMPLIANCE IN ACCORDANCE WITH CONDITION 43 OF THE PERMIT.
45. EXISTING DAM OR WATERCOURSES TO BE EXCAVATED TO A FIRM BASE AND BACKFILLED AS SPECIFIED. DEVELOPER'S CONSULTANT TO BE NOTIFIED WHEN THE DAM OR WATERCOURSES ARE EXCAVATED TO A FIRM BASE. NO FILLING IS TO BE PLACED PRIOR TO DAMS BEING INSPECTED AND LEVELS TAKEN. BACKFILLING IS TO BE CARRIED OUT TO THE SATISFACTION OF THE COUNCIL SUPERVISING ENGINEER.
46. TACTILE GROUND SURFACE INDICATORS (TGSI) ARE TO BE INSTALLED WHERE SHOWN IN ACCORDANCE WITH AS1428 AND SD320.
47. THE CONTRACTOR MUST ARRANGE THE REQUISITE INSPECTIONS OF THE WORKS WITH THE CHIEF EXECUTIVE OFFICER/OR THEIR REPRESENTATIVE AS PER THE HOLD POINTS IN THE WHITTLESEA CITY COUNCIL SPECIFICATIONS.
48. THE CONTRACTOR IS TO OBTAIN A BUILDING PERMIT FOR ANY STRUCTURE / FENCES AND OR ANY RETAINING WALLS 600mm IN HEIGHT.
49. 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 CHEIF EXECUTIVE OFFICER / OR THEIR REPRESENTATIVE.
50. 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 CHEIF EXECUTIVE OFFICER / OR THEIR REPRESENTATIVE.
51. ALL FIRE HYDRANTS ARE TO BE MARKED IN ACCORDANCE WITH "IDENTIFICATION OF STREET HYDRANTS FOR FIRE-FIGHTING PURPOSES" PUBLICATION (DEVELOPED BY C.F.A., M.F.E.S.B. & N.R.E.). MARKINGS TO BE VIA BLUE PAVEMENT MARKER AND A (RED TOPPED) WHITE POST.



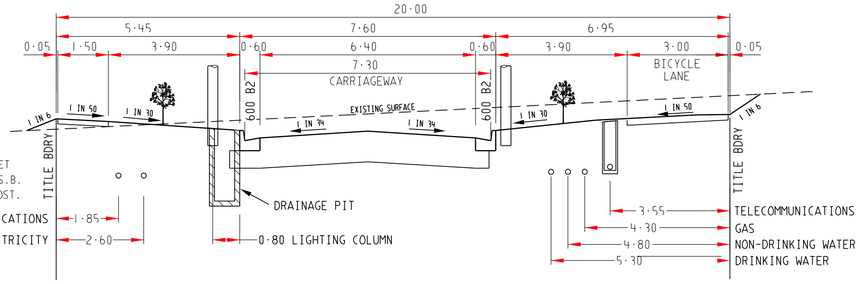
PAVEMENT COMPOSITION
NOT TO SCALE



16.0m ROAD RESERVE
BRIGHTON AVENUE
LOCAL ACCESS STREET - LEVEL 1



16.0m ROAD RESERVE
PORTOFINO WAY, VARANASI DRIVE, TIERRA CIRCUIT,
NEWRY STREET, WASHINGTON AVENUE & PALACE WALK
LOCAL ACCESS STREET - LEVEL 1



20.0m ROAD RESERVE
BRIGHTON AVENUE, TREETON DRIVE & PORTOFINO WAY
LOCAL ACCESS STREET - LEVEL 1

AS CONSTRUCTED

AMENDMENTS	VER.	DATE	REMARKS
	F	13·09·19	RNDBT PAVEMENT TO INCLUDE RCR IN PLACE OF FCR
	E	09·08·19	PORTOFINO PAVEMENT UPDATED (580mm) TREETON DRIVE PAVEMENT UPDATED (500mm)
	D	13·06·19	BRIGHTON/ PORTOFINO AVENUE PAVMENT UPDATED
	C	29·04·19	TYPICAL XS BRIGHTON AVENUE UPDATED
	B	06·09·18	SAMI NOTE ADDED
	A	18.07.18	ISSUED FOR CONSTRUCTION

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE
STAGE 4
NOTES AND TYPICAL SECTIONS

SCALE	AS SHOWN
DATUM	AHD
DATE	APR'18
MUNICIPALITY	WHITTLESEA
REFERENCE	9365 E/4
SHEET	3 OF 25
	F

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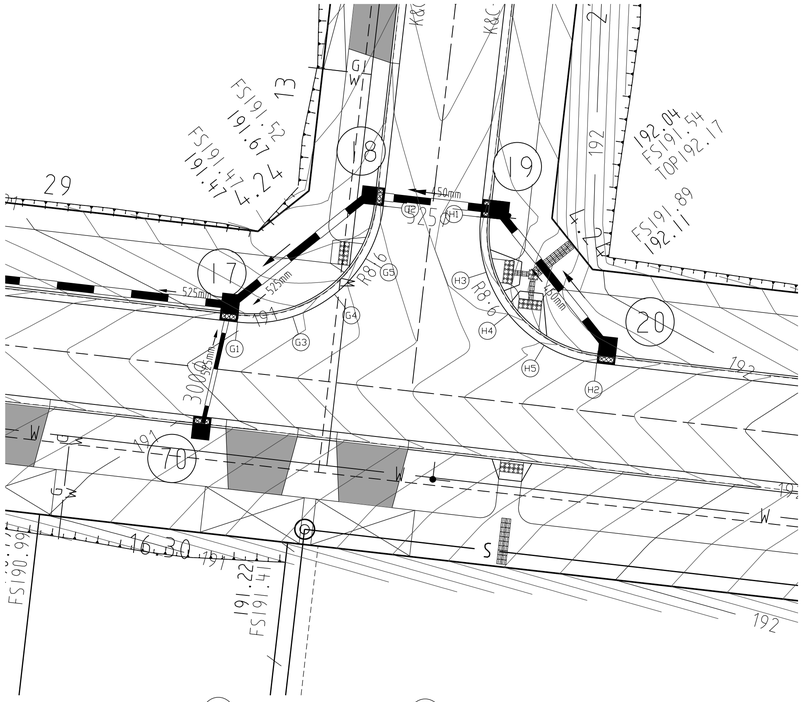
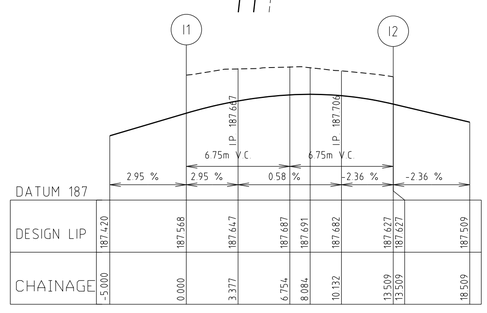
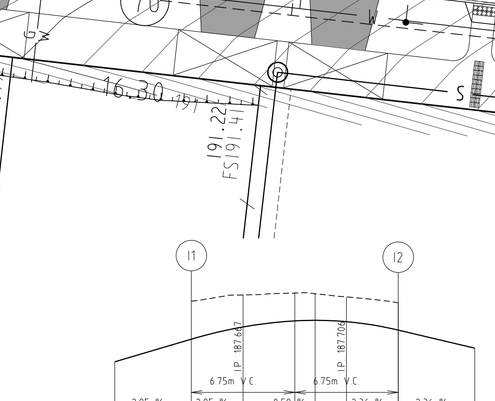
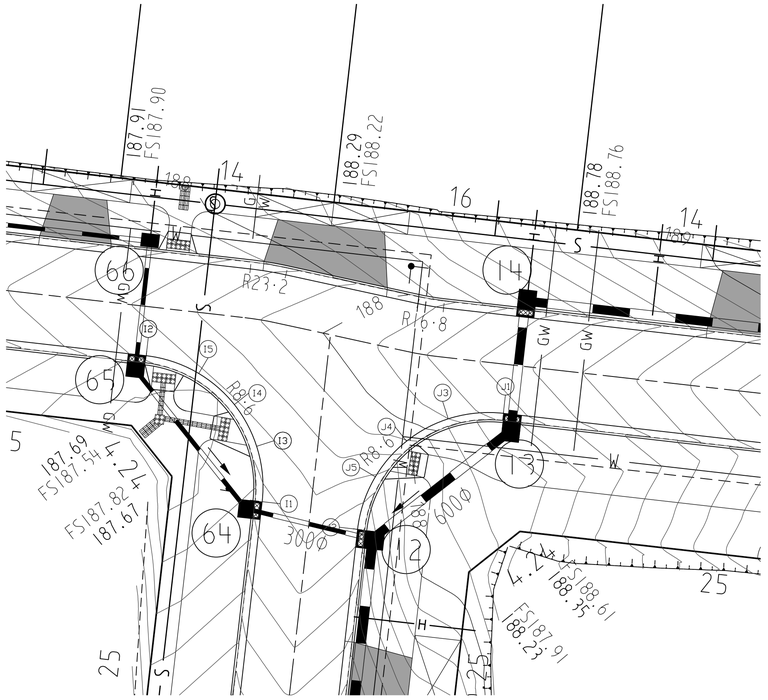
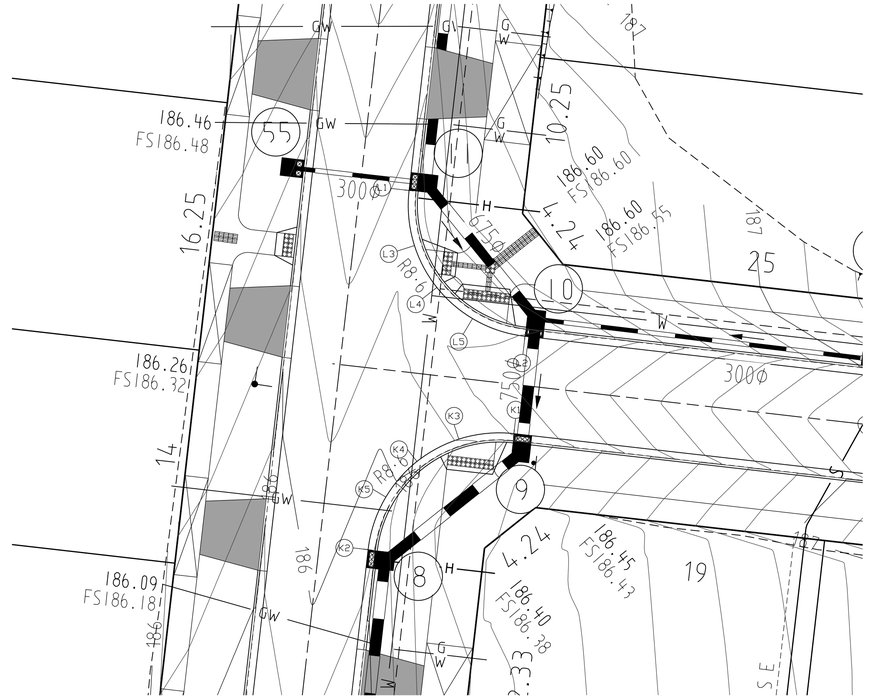
Plotted:13/09/2019











1) HAZARD / DIRECTIONAL TGSI'S SHOWN THUS ⁘ / ▤ AND FOOTPATH RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH VICROADS STD DWGS SD2031 TO SD2035. TGSI'S SHALL CONFORM TO AS1428.4

AS CONSTRUCTED

Alignment I

Point no	Easting	Northing	RL
I 1	322091·771	5836693·255	187·568
I 2	322094·199	5836702·773	187·627
I 3	322091·414	5836696·857	187·652
I 4	322089·956	5836699·582	187·687
I 5	322087·628	5836701·616	187·684

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
I 1 2	-8·600	12·162	2·519	1·963	187·687

Alignment J

Point no	Easting	Northing	RL
J 1	322107·522	5836699·010	188·254
J 2	322098·005	5836691·418	187·535
J 3	322103·921	5836698·653	188·100
J 4	322101·196	5836697·195	187·895
J 5	322099·162	5836694·867	187·689

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
J 1 2	-8·600	12·162	2·519	1·963	187·895

Alignment G

Point no	Easting	Northing	RL
G 1	322250·825	5836689·901	191·070
G 2	322251·550	5836691·359	191·148
G 3	322255·584	5836693·687	191·226

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
G 0 0	-8·600	12·162	2·519	1·963	191·148

Alignment H

Point no	Easting	Northing	RL
H 1	322263·456	5836692·791	191·313
H 2	322264·915	5836690·065	191·387
H 3	322267·242	5836688·032	191·495

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
H 0 0	-8·600	12·162	2·519	1·963	191·387

Alignment L

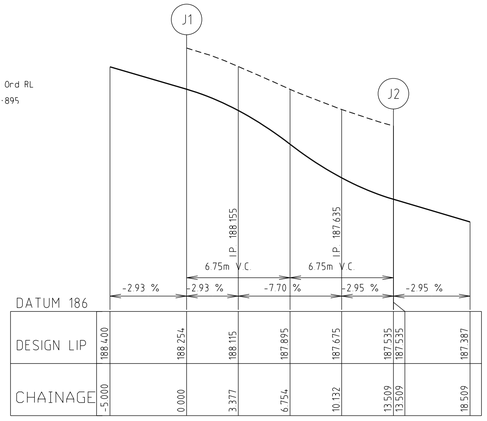
Point no	Easting	Northing	RL
L 1	322091·297	5836632·519	186·162
L 2	322098·869	5836623·001	186·209
L 3	322091·653	5836628·917	186·156
L 4	322093·111	5836626·192	186·152
L 5	322095·439	5836624·158	186·153

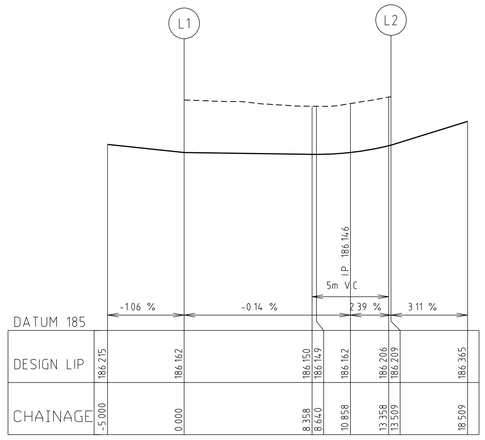
Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
L 1 2	-8·600	12·162	2·519	1·963	186·152

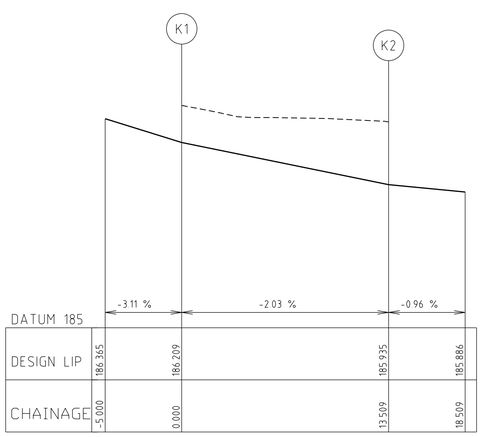
Alignment K

Point no	Easting	Northing	RL
K 1	322098·144	5836616·642	186·209
K 2	322088·627	5836609·070	185·935
K 3	322094·543	5836616·286	186·107
K 4	322091·817	5836614·827	186·036
K 5	322089·784	5836612·500	185·980

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
K 1 2	-8·600	12·162	2·519	1·963	186·036







LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20

INTERSECTION DETAILS

SCALE 1:200
SCALE 1 : 200

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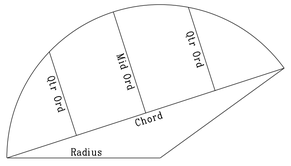
LENGTHS ARE IN METRES



CURVE SETOUT DIAGRAM

VER.	DATE	REMARKS
A	18.07.18	ISSUED FOR CONSTRUCTION

AMENDMENTS

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF. 388-C-10
SURVEY SPIIRE
DESIGN RGW
DRAWN RGW
CHECKED

RATHDOWNE ESTATE STAGE 4

INTERSECTION DETAILS

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/4
SCALE AS SHOWN | DATUM AHD | DATE APR'18
SHEET 4 OF 25 | A

Plotted:5/12/2018

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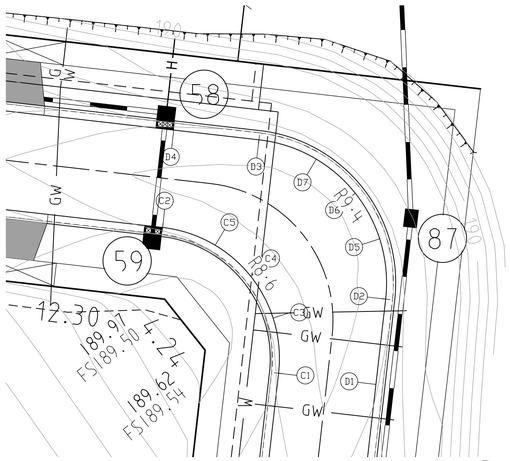

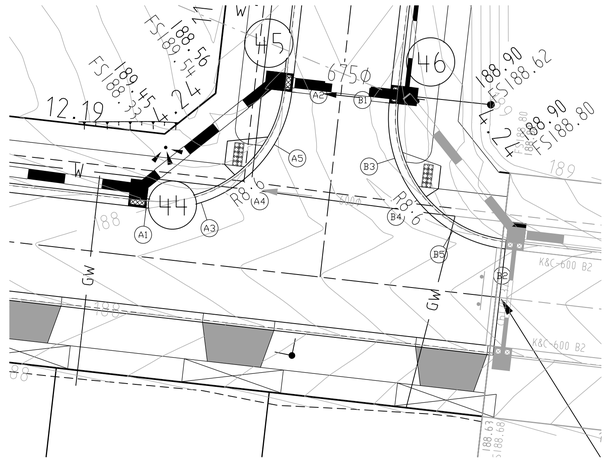

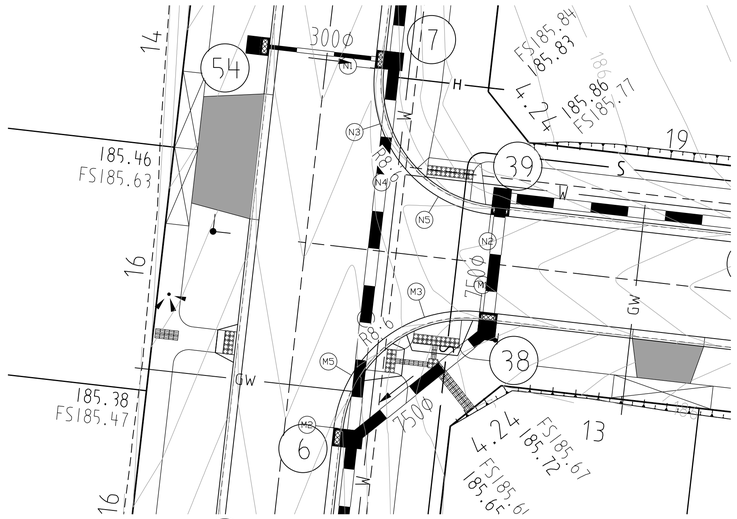

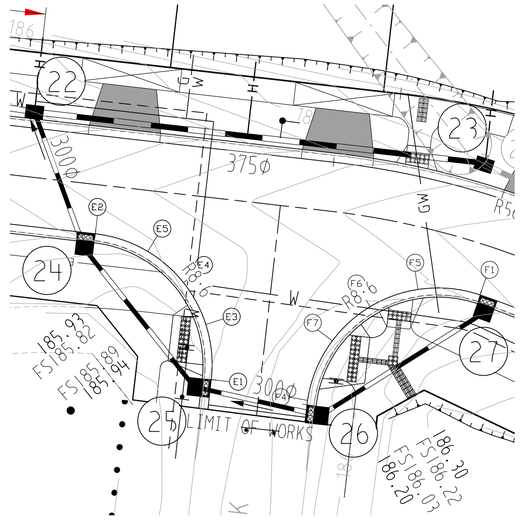

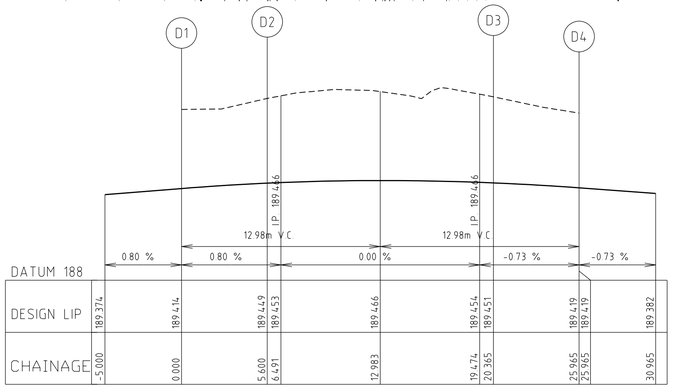

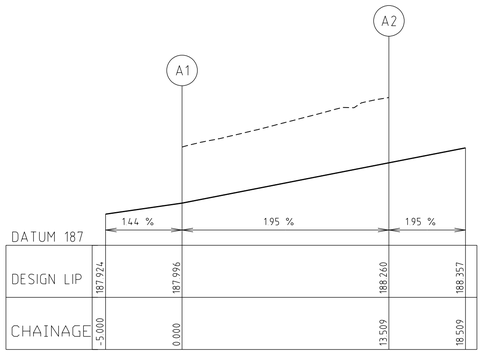

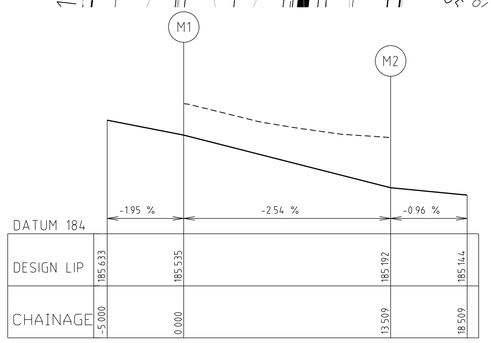

INTERSECTION DETAILS

SCALE 1:200
SCALE 1 : 200

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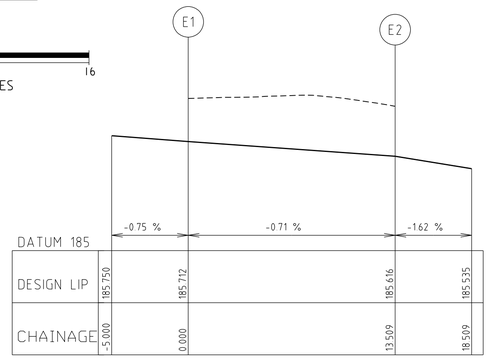
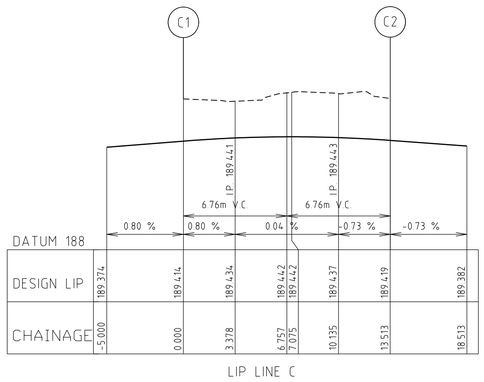
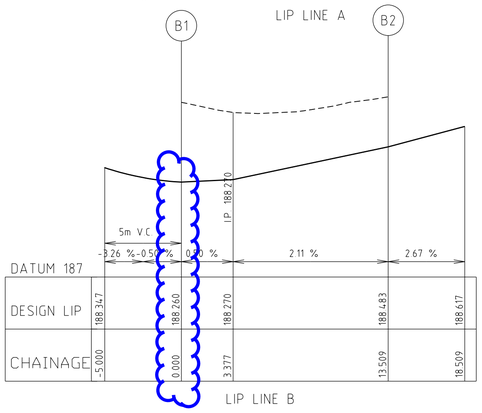
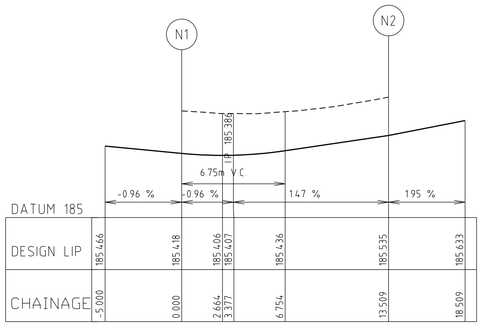
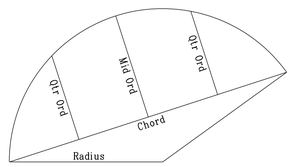
LENGTHS ARE IN METRES



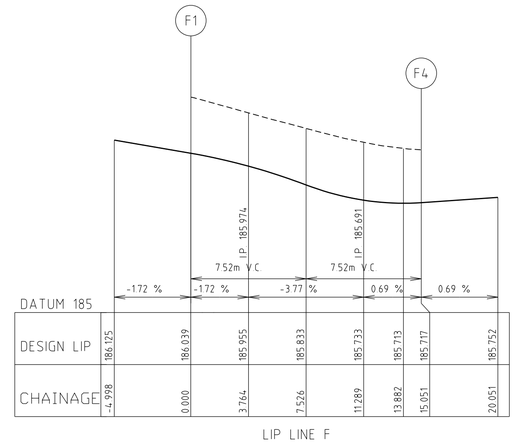








CURVE SETOUT DIAGRAM



Alignment C

	Point no	Easting	Northing	RL
C	1	322245·911	5836591·162	189·414
C	2	322238·339	5816600·679	189·419
C	3	322245·556	5836594·769	189·435
C	4	322244·099	5836597·491	189·442
C	5	322241·774	5836599·522	189·438

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
C 1 2	-8·590	12·148	2·516	1·961	189·442

Alignment D

	Point no	Easting	Northing	RL
D	1	322252·269	5836590·438	189·414
D	2	322252·903	5816596·002	189·449
D	3	322249·627	5816606·405	189·451
D	4	322239·063	5816607·038	189·419
D	5	322252·513	5836599·938	189·462
D	6	322250·919	5836602·917	189·466
D	7	322248·375	5816605·140	189·463

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
D 2 3	-9·400	13·294	2·753	2·146	189·466

Alignment A

	Point no	Easting	Northing	RL
A	1	322229·184	5836520·274	187·996
A	2	322218·701	5816527·846	188·260
A	3	322232·785	5836520·630	188·067
A	4	322235·511	5836522·089	188·128
A	5	322237·544	5816524·416	188·189

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
A 1 2	-8·600	12·162	2·519	1·963	188·128

Alignment B

	Point no	Easting	Northing	RL
B	1	322245·060	5836527·122	188·253
B	2	322252·632	5816517·604	188·483
B	3	322245·417	5836523·520	188·276
B	4	322246·875	5836520·795	188·941
B	5	322249·203	5816518·761	188·407

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
B 1 2	-8·600	12·162	2·519	1·963	188·341

Alignment N

	Point no	Easting	Northing	RL
N	1	322082·549	5836555·690	185·418
N	2	322090·121	5836546·172	185·535
N	3	322082·905	5836552·088	185·407
N	4	322084·364	5836549·363	185·436
N	5	322086·691	5836547·329	185·482

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
N 1 2	-8·600	12·162	2·519	1·963	185·436

Alignment M

	Point no	Easting	Northing	RL
M	1	322089·397	5836539·813	185·535
M	2	322079·879	5836532·242	185·192
M	3	322085·795	5836539·457	185·443
M	4	322083·070	5836537·999	185·364
M	5	322081·036	5836535·671	185·284

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
M 1 2	-8·600	12·162	2·519	1·963	185·364

Alignment E

	Point no	Easting	Northing	RL
E	1	322142·863	5836444·553	185·712
E	2	322135·291	5836454·071	185·616
E	3	322142·507	5836448·155	185·686
E	4	322141·048	5836450·880	185·664
E	5	322138·721	5836452·914	185·642

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
E 1 2	-8·600	12·162	2·519	1·963	185·664

Alignment F

	Point no	Easting	Northing	RL
F	1	322160·416	5836450·080	186·039
F	4	322149·148	5836443·197	185·717
F	5	322156·359	5836450·435	185·946
F	6	322153·234	5836449·309	185·835
F	7	322150·769	5836447·082	185·741

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
F 2 3	-8·600	13·037	2·990	2·349	185·835

LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20

AS CONSTRUCTED

VER.	DATE	REMARKS
C	19.04.19	LIP LINE B UPDATED
B	13.06.19	LIP LINES 'E' & 'F' UPDATED
A	18.07.18	ISSUED FOR CONSTRUCTION

ADJUSTMENTS

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE
STAGE 4
INTERSECTION DETAILS

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/4
SCALE: AS SHOWN DATUM: AHD DATE: APR'18
SHEET 5 OF 25 C

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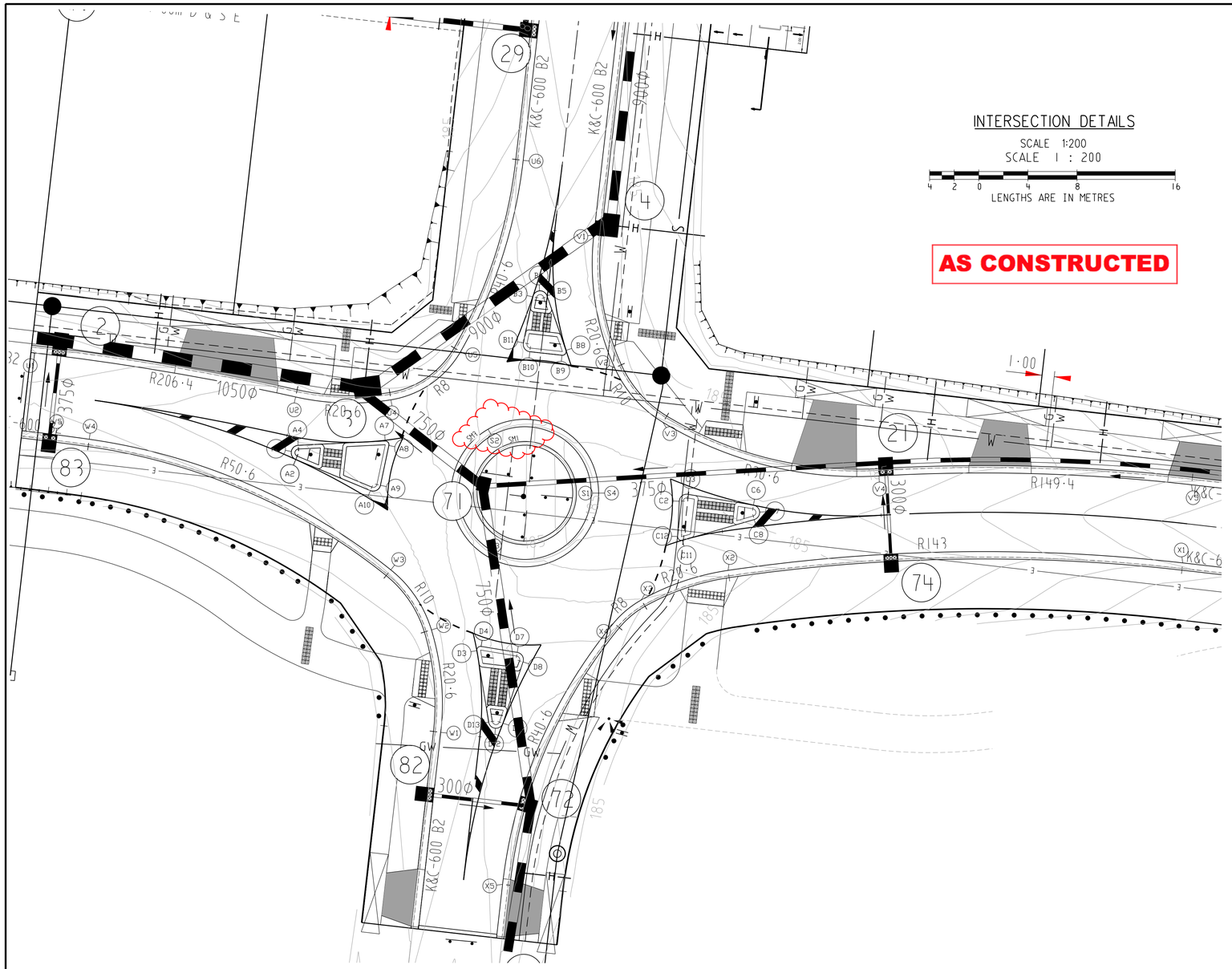
Plotted: 29/10/2019



INTERSECTION DETAILS

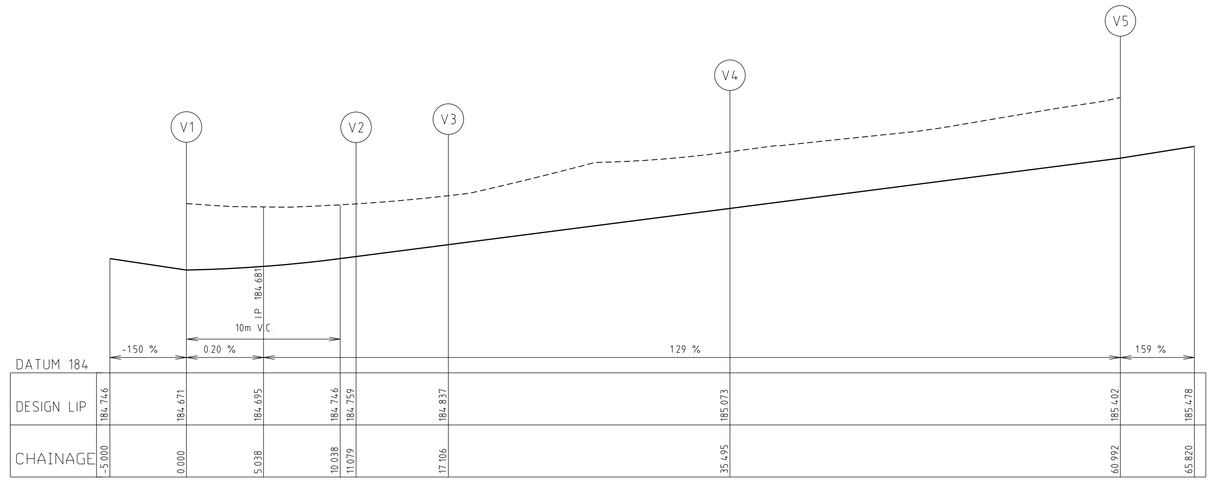
SCALE 1:200

SCALE 1 : 200

4 2 0 4 8 16

LENGTHS ARE IN METRES

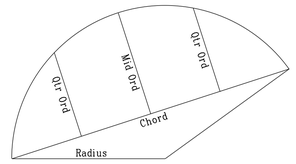
AS CONSTRUCTED



LIP LINE V

LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20



CURVE SETOUT DIAGRAM

Alignment U

Point no	Easting	Northing	RL
U 1	322028·361	5836472·688	184·094
U 2	322049·905	5836469·071	184·364
U 3	322057·673	5836468·842	184·460
U 4	322063·941	5836472·767	184·548
U 5	322068·438	5836488·333	184·752

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
U 1 2	206·400	21·846	0·289	0·217	184·229
U 3 4	-20·600	7·770	0·370	0·278	184·412
U 4 5	-8·000	6·894	0·781	0·593	184·504
U 5 6	-40·600	16·379	0·835	0·628	184·650

Alignment V

Point no	Easting	Northing	RL
V 1	322074·188	5836482·257	184·671
V 2	322075·883	5836471·944	184·759
V 3	322079·823	5836467·004	184·837
V 4	322097·404	5836462·642	185·073
V 5	322122·860	5836461·928	185·402

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
V 0 2	-20·600	10·946	0·740	0·558	184·699
V 2 3	-10·000	5·936	0·451	0·340	184·798
V 3 4	-10·600	8·114	1·371	1·034	184·955
V 4 5	149·400	25·466	0·544	0·408	185·238

Island Alignment A

Point no	Easting	Northing	RL
A 2	322049·922	5836463·985	184·364
A 3	322049·562	5836464·642	184·378
A 4	322050·123	5836465·138	184·393
A 7	322057·195	5836465·488	184·427
A 8	322057·503	5836465·126	184·430
A 9	322056·818	5836461·885	184·408
A 10	322056·000	5836461·455	184·401

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
A 2 3	0·600	0·521	1·141	0·045	184·421
A 3 4	0·600	0·749	0·131	0·101	184·386
A 7 8	0·300	0·475	0·117	0·092	184·428
A 9 10	0·600	0·924	0·217	0·171	184·404

Island Alignment B

Point no	Easting	Northing	RL
B 3	322069·576	5836477·659	184·720
B 4	322069·980	5836477·685	184·723
B 5	322070·147	5836477·608	184·724
B 6	322071·868	5836472·579	184·740
B 9	322071·767	5836472·498	184·740
B 10	322068·722	5836472·843	184·711
B 11	322068·557	5836472·997	184·709

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
B 3 4	0·600	0·728	0·123	0·095	184·719
B 4 5	0·600	0·728	0·123	0·095	184·724
B 8 9	0·900	0·507	0·199	0·111	184·740
B 10 11	0·600	0·888	0·196	0·154	184·709

Island Alignment C

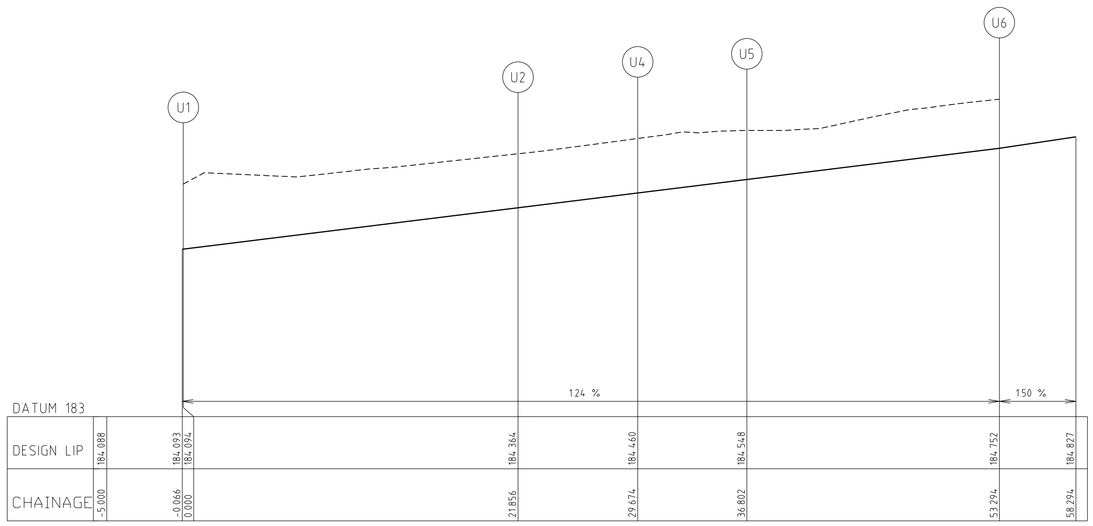
Point no	Easting	Northing	RL
C 2	322081·370	5836461·026	184·967
C 3	322081·572	5836461·173	184·969
C 6	322087·637	5836459·914	185·019
C 7	322087·661	5836459·496	185·022
C 8	322087·577	5836459·327	185·024
C 11	322081·374	5836457·405	184·892
C 12	322081·374	5836457·405	184·892

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
C 2 3	0·600	0·899	0·203	0·159	184·967
C 6 7	0·600	0·748	0·131	0·101	185·017
C 7 8	0·600	0·748	0·131	0·101	185·024
C 11 12	0·100	0·050	0·599	0·001	185·008

Island Alignment D

Point no	Easting	Northing	RL
D 3	322084·671	5836448·426	184·562
D 4	322065·016	5836448·770	184·565
D 7	322067·953	5836448·287	184·579
D 8	322068·425	5836447·509	184·584
D 11	322066·792	5836442·520	184·568
D 12	322066·176	5836442·109	184·564
D 13	322065·629	5836442·609	184·560

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
D 3 4	0·300	0·493	0·129	0·102	184·564
D 7 8	0·600	0·911	0·210	0·165	184·582
D 11 12	0·600	0·741	0·128	0·099	184·566
D 12 13	0·600	0·741	0·128	0·099	184·562



LIP LINE U

VER.	DATE	REMARKS
B	13·06·19	LIP LINE V UPDATED
A	18.07.18	ISSUED FOR CONSTRUCTION

AMENDMENTS

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE
STAGE 4
INTERSECTION DETAILS

SCALE	AS SHOWN	DATUM	AHD	DATE	APR'18

MUNICIPALITY: WHITTLESEA

REFERENCE: 9365 E/4

SHEET 6 OF 25 B

Plotted:29/07/2019

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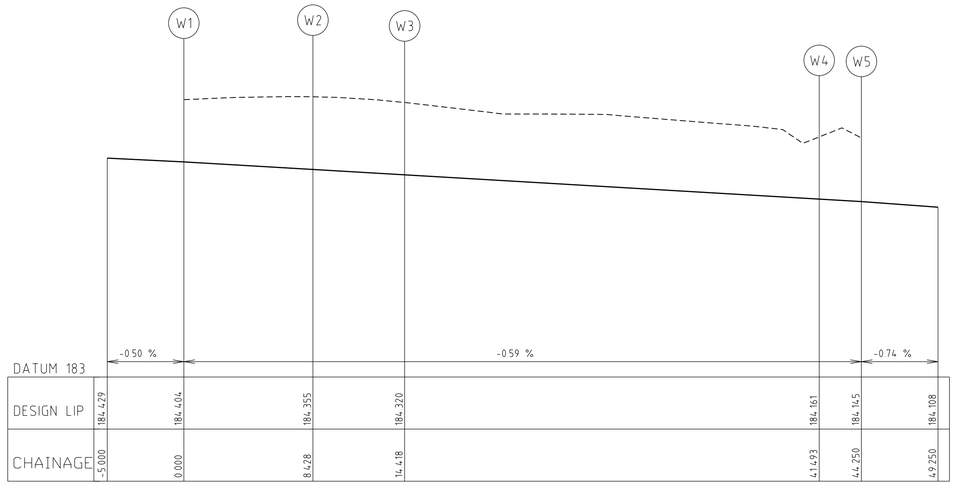
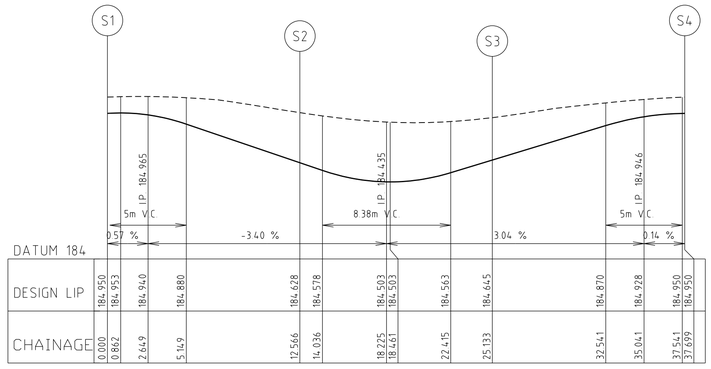


LIP LINE W

Alignment W

Point no	Easting	Northing	RL
W 1	322061·729	5836441·782	184·404
W 2	322060·967	5836450·116	184·355
W 3	322057·658	5836455·003	184·320
W 4	322033·106	5836465·630	184·161
W 5	322030·376	5836466·017	184·145

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
W 1 2	-20·600	8·369	0·429	0·323	184·379
W 2 3	-10·000	5·981	0·445	0·316	184·337
W 3 4	-50·600	26·753	1·800	1·356	184·241



LIP LINE R4 Kerb S

Alignment R4 Kerb S

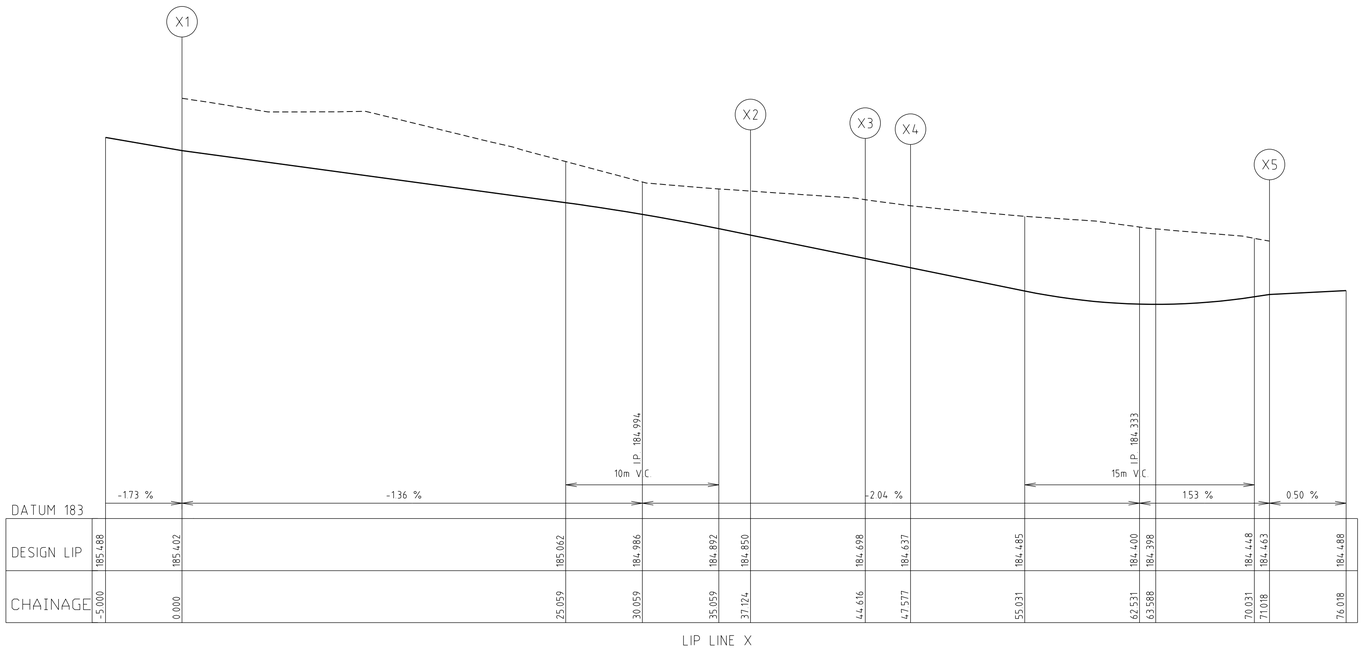
Point no	Easting	Northing	RL
R4 Kerb S 1	322074·575	5836461·251	184·950
R4 Kerb S 2	322065·575	5836466·447	184·628
R4 Kerb S 3	322064·575	5836456·055	184·645
R4 Kerb S 4	322074·575	5836461·251	184·950
R4 Kerb S 5	322073·529	5836464·636	184·923
R4 Kerb S 6	322071·575	5836466·447	184·841
R4 Kerb S 7	322069·029	5836467·234	184·750
R4 Kerb S 8	322063·167	5836463·849	184·523
R4 Kerb S 9	322062·575	5836461·251	184·503
R4 Kerb S 10	322063·167	5836458·653	184·539
R4 Kerb S 11	322069·029	5836455·268	184·754
R4 Kerb S 12	322071·575	5836456·055	184·836
R4 Kerb S 13	322073·529	5836457·866	184·910

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
R4 Kerb S 1 2	-6·000	10·392	3·000	2·408	184·841
R4 Kerb S 2 3	-6·000	10·392	3·000	2·408	184·503
R4 Kerb S 3 1	-6·000	-10·392	9·000	2·408	184·628

Alignment R4 Kerb ROUNDABOUT ISLAND (SEE DETAIL BELOW)

Point no	Easting	Northing	RL
R4 Kerb T 1	322072·775	5836461·251	185·042
R4 Kerb T 2	322066·475	5836464·888	184·789
R4 Kerb T 3	322066·475	5836457·614	184·794
R4 Kerb T 4	322072·775	5836461·251	185·042

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
R4 Kerb T 1 2	-4·200	7·275	2·100	1·686	184·953
R4 Kerb T 2 3	-4·200	7·275	2·100	1·686	184·702
R4 Kerb T 3 1	-4·200	-7·275	6·100	1·686	184·789

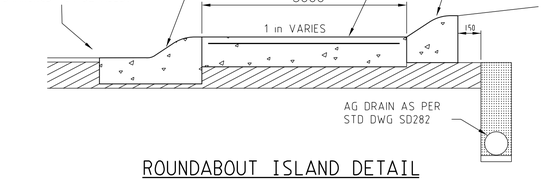


LIP LINE X

Alignment X

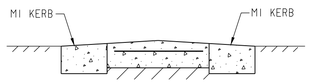
Point no	Easting	Northing	RL
X 1	322122·136	5836455·569	184·402
X 2	322086·121	5836454·961	184·850
X 3	322078·068	5836452·560	184·698
X 4	322075·806	5836450·675	184·637
X 5	322066·760	5836429·401	184·463

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
X 1 2	-143·000	37·020	1·203	0·903	185·150
X 2 3	-20·600	7·451	0·940	0·255	184·774
X 3 4	-8·000	2·944	0·137	0·103	184·667
X 4 5	-40·600	23·117	1·680	1·267	184·420

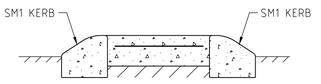


ROUNDABOUT ISLAND DETAIL SECTION A-A

(Dimensions in millimetres)
(N.T.S.)



SECTION AT PEDESTRIAN CROSSINGS



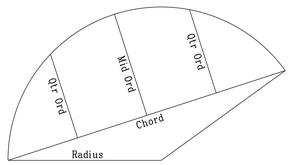
TYPICAL SECTION OUTSIDE OF PEDESTRIAN CROSSING

SPLITTER ISLAND DETAIL

(Dimensions in millimetres)
(N.T.S.)

LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20



CURVE SETOUT DIAGRAM

AS CONSTRUCTED

VER.	DATE	REMARKS
C	13·09·19	LIP LINE S UPADATED
B	13·06·19	LIP LINE X UPDATED
A	18.07.18	ISSUED FOR CONSTRUCTION

AMENDMENTS

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE STAGE 4
INTERSECTION DETAILS

SCALE	AS SHOWN	DATUM	AHD	DATE APR'18

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/4
SHEET 07 OF 25 C

Plotted: 10/09/2019
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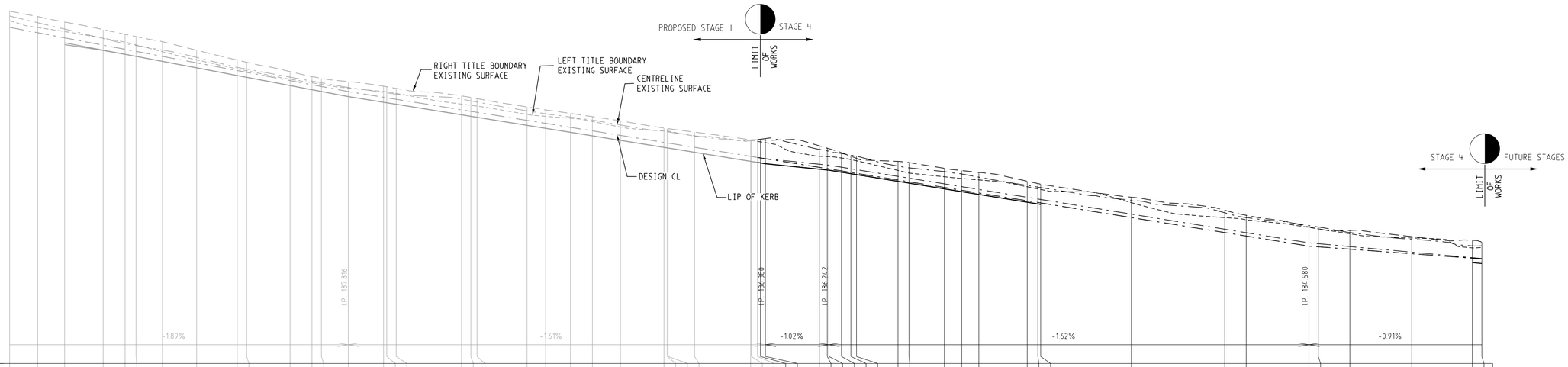
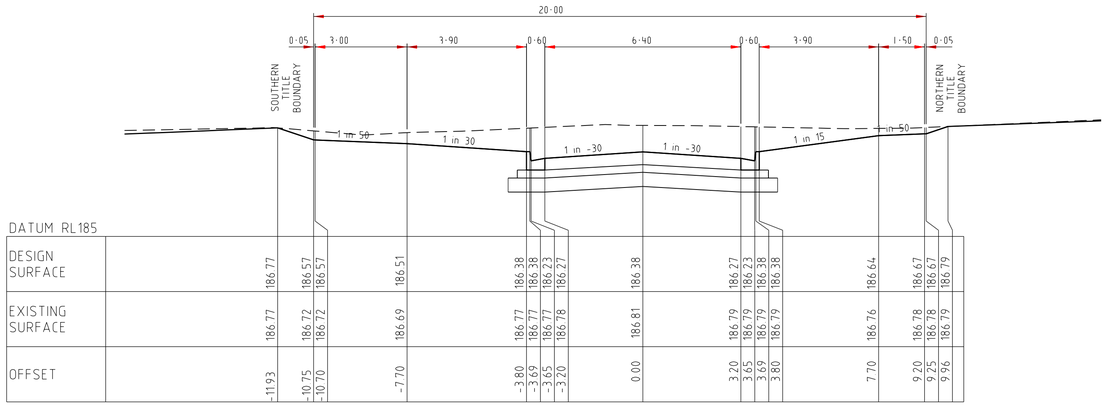


CHAINAGE CENTRE LINE	ES RIGHT TITLE BDY	FS RIGHT TITLE BDY	RIGHT LIP OF KERB	DESIGN CL	LEFT LIP OF KERB	FS LEFT TITLE BDY	ES LEFT TITLE BDY
300.00	189.53			189.19			189.33
306.61	189.42			189.07			189.19
311.77	189.30	189.26	188.86	188.97	188.82	189.08	189.10
320.00	189.14	189.10	188.70	188.81	188.69	188.99	188.96
324.69	189.04	189.01	188.61	188.72	188.61	188.91	188.88
327.03	188.99	188.97	188.57	188.68	188.57	188.87	188.82
332.69	188.88	188.86	188.46	188.57	188.46	188.76	188.67
340.00	188.70	188.72	188.32	188.43	188.32	188.62	188.49
348.69	188.49	188.56	188.16	188.27	188.16	188.46	188.30
350.69	188.44	188.52	188.12	188.23	188.12	188.42	188.26
360.00	188.24	188.35	187.94	188.05	187.94	188.25	188.08
364.69	188.14	188.26	187.86	187.96	187.86	188.16	188.00
366.69	188.10	188.22	187.82	187.92	187.82	188.12	187.97
372.45	188.03	188.11	187.71	187.82	187.71	188.01	187.89
380.00	187.93	187.99	187.59	187.69	187.59	187.89	187.82
380.69	187.92	187.98	187.58	187.68	187.58	187.88	187.81
382.69	187.88	187.95	187.54	187.65	187.54	187.85	187.78
396.69	187.72	187.72	187.32	187.43	187.32	187.62	187.55
398.69	187.69	187.69	187.29	187.39	187.29	187.59	187.52
400.00	187.67	187.67	187.27	187.37	187.27	187.57	187.50
410.69	187.49	187.49	187.09	187.20	187.09	187.39	187.33
414.69	187.42	187.43	187.03	187.14	187.03	187.33	187.29
420.00	187.35	187.35	186.94	187.05	186.94	187.25	187.24
424.69	187.28	187.27	186.87	186.98	186.87	187.17	187.18
430.69	187.19	187.17	186.77	186.88	186.77	187.07	187.06
440.00	187.04	187.02	186.62	186.73	186.62	186.92	186.97
440.69	187.02	187.01	186.61	186.72	186.61	186.91	186.97
440.88	187.02	187.01	186.61	186.71	186.61	186.91	186.97
444.55	186.95	186.92	186.52	186.62	186.52	186.82	186.86
458.54	186.79	186.73	186.32	186.43	186.32	186.62	186.77
458.72	186.79	186.72	186.32	186.43	186.32	186.62	186.77
460.00	186.78	186.70	186.30	186.41	186.30	186.60	186.75
461.62	186.78	186.69	186.29	186.40	186.29	186.59	186.74
461.69	186.78	186.67	186.27	186.38	186.27	186.57	186.72
473.23	186.66	186.43	186.16	186.26	186.16	186.46	186.43
474.94	186.61	186.42	186.14	186.25	186.14	186.44	186.42
475.28	186.60	186.42	186.13	186.24	186.13	186.44	186.42
477.98	186.51	186.39	186.09	186.20	186.09	186.39	186.39
480.00	186.43	186.36	186.06	186.17	186.06	186.36	186.36
481.19	186.39	186.35	186.04	186.15	186.04		186.34
490.09	186.32	186.22	185.90	186.00	185.90		186.13
492.44	186.30	186.19	185.86	185.96	185.86		186.07
500.00	186.18	186.06	185.74	185.84	185.74		185.99
503.72	186.13	186.00	185.67	185.78	185.67		185.96
507.37	186.09	185.94	185.62	185.72	185.62		185.93
517.72	185.90	185.78	185.45	185.56	185.45	185.71	185.78
520.00	185.85	185.74	185.41	185.52	185.41	185.67	185.73
520.61	185.84	185.73	185.40	185.51	185.40	185.66	185.72
540.00	185.56			185.19			185.44
560.00	185.28			184.87			185.12
564.59	185.17			184.80			185.07
578.00	184.92			184.58			184.91
580.00	184.88			184.56			184.88
586.75	184.85			184.50			184.78
600.00	184.71			184.38			184.69
612.96	184.63			184.26	184.16	184.46	184.47
615.00	184.59			184.25	184.14	184.45	184.48

LONGITUDINAL SECTION

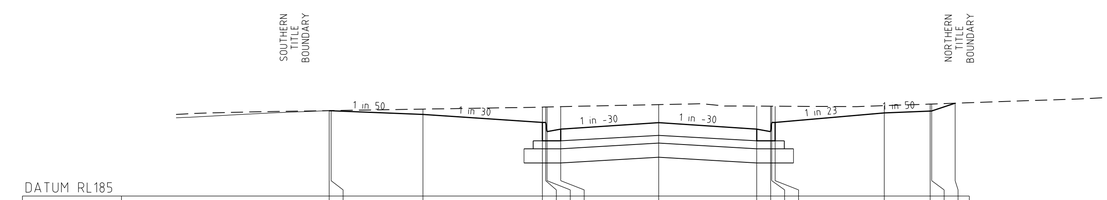
SCALE HORIZONTAL 1:500
VERTICAL 1:50

1:50 1 0.5 00 1 2 4
1:500 10 5 00 10 20 40



DATUM RL185												
DESIGN SURFACE	186.77	186.57	186.57	186.51	186.38	186.38	186.38	186.27	186.38	186.27	186.64	186.67	186.67	186.79
EXISTING SURFACE	186.77	186.72	186.72	186.69	186.77	186.77	186.77	186.78	186.81	186.79	186.76	186.78	186.78	186.79
OFFSET	-11.93	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	7.70	9.20	9.25	9.96

Ch 461.69



DATUM RL185																								
DESIGN SURFACE	186.39	186.39	186.33	186.20	186.20	186.05	186.09	186.20	186.09	186.05	186.20	186.20	186.36	186.39	186.39	186.52
EXISTING SURFACE	186.39	186.39	186.42	186.45	186.45	186.45	186.46	186.49	186.47	186.47	186.47	186.47	186.47	186.50	186.50	186.52
OFFSET	-10.76	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.36	8.86	8.91	9.68

Ch 477.98

AS CONSTRUCTED

BRIGHTON AVENUE

CROSS SECTIONS

SCALE HORIZONTAL 1:100
VERTICAL 1:50

1:50 1 0.5 00 1 2 4
1:100 2 1 00 2 4 8

AMENDMENTS	VER.	DATE	REMARKS
	B	13.06.19	BRIGHTON AVENUE AMENDED
	A	18.07.18	ISSUED FOR CONSTRUCTION

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

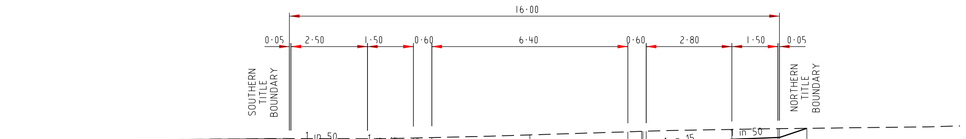
MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE
STAGE 4
BRIGHTON AVENUE

SCALE	AS SHOWN	DATUM	AHD
DATE	APR'18	SHEET	8 OF 25

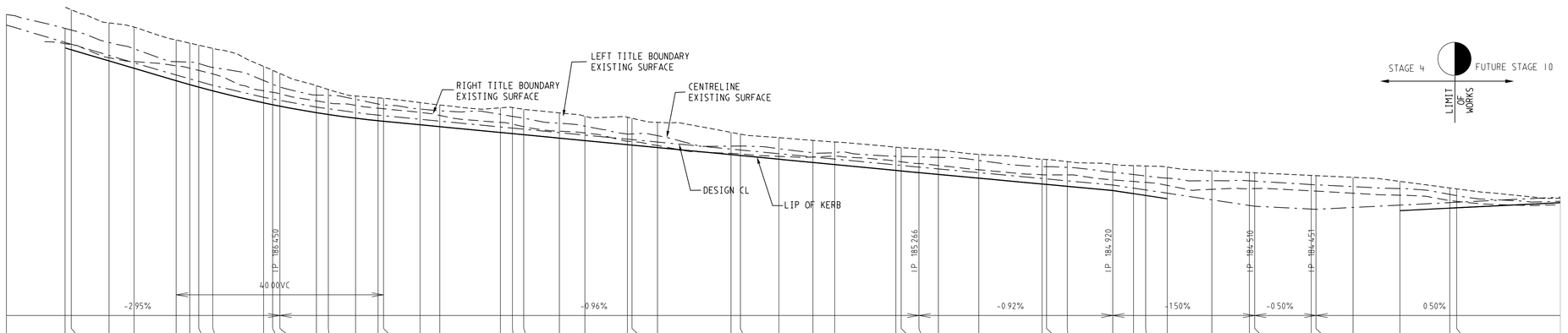
MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/4
B

J:\9365\Eng\Stage 4\EN_RDB_BALSXS.dgn
Plotted:20/07/2019

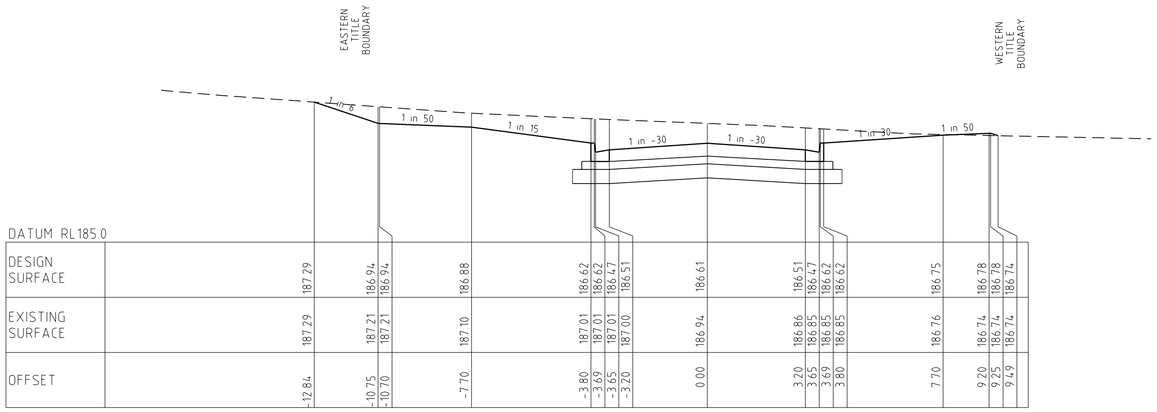

16·00
0·05
2·50
1·50
0·60
6·40
0·60
2·80
1·50
0·05
SOUTHERN TITLE BOUNDARY
NORTHERN TITLE BOUNDARY
1 in 50
1 in 15
1 in -30
1 in -30
1 in 15
1 in 50

DATUM RL184

| | | |

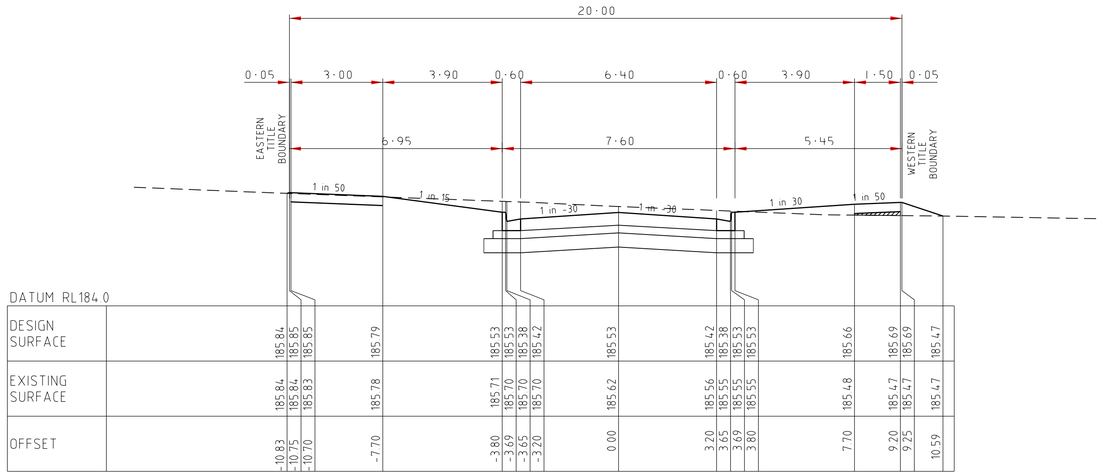

RIGHT TITLE BOUNDARY EXISTING SURFACE
LEFT TITLE BOUNDARY EXISTING SURFACE
CENTRELINE EXISTING SURFACE
DESIGN CL
LIP OF KERB
STAGE 4
FUTURE STAGE 10
LIMIT OF WORKS
TRUE LEFT & RIGHT ARE IN THE DIRECTION OF THE INCREASING CHAINAGE
VC LENGTH
40.00VC
IP 186.450
IP 185.266
IP 184.970
IP 184.510
IP 184.451
DESIGN GRADELINE
-2.95%
-0.96%
-0.92%
-1.50%
-0.50%
0.50%
DATUM 182

| | | |



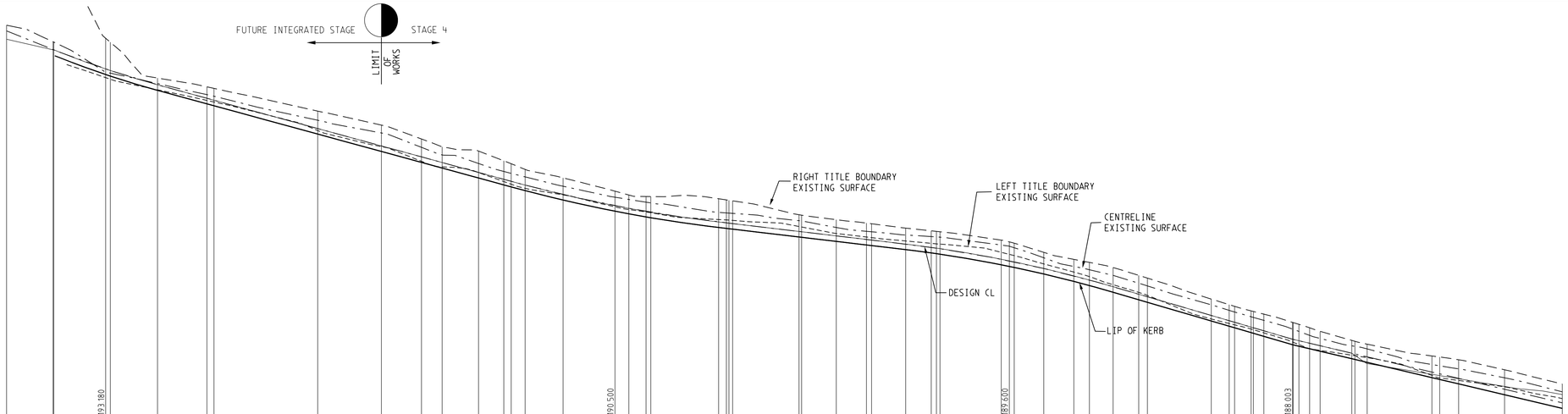
DATUM RL185.0

| | | |

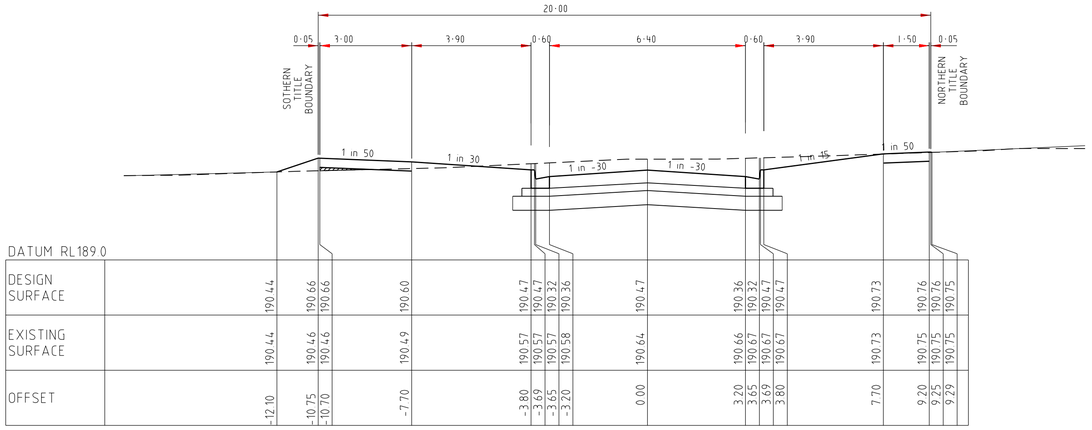


DATUM RL184.0

| | | |

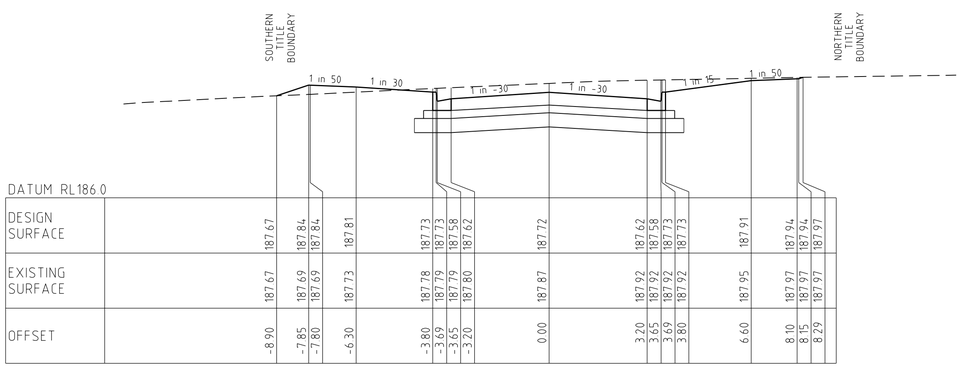


| CHAINAGE CENTRE LINE | 0.00 | 8.96 | 9.11 | 19.11 | 20.00 | 29.11 | 38.63 | 40.00 | 60.00 | 72.28 | 80.00 | 83.99 | 91.01 | 95.88 | 97.31 | 100.00 | 107.31 | 117.31 | 120.00 | 123.31 | 124.23 | 137.31 | 138.81 | 139.31 | 140.00 | 152.81 | 153.31 | 160.00 | 165.81 | 166.81 | 173.37 | 178.31 | 179.31 | 180.00 | 191.81 | 193.37 | 194.31 | 200.00 | 205.81 | 208.81 | 213.37 | 218.31 | 220.00 | 232.31 | 235.76 | 236.81 | 240.00 | 240.41 | 242.44 | 247.97 | 248.10 | 249.21 | 251.26 | 253.29 | 259.41 | 260.00 | 262.36 | 274.86 | 276.36 | 280.00 | 288.86 | 300.00 |
|---|---|---



DATUM RL189.0

| | | |



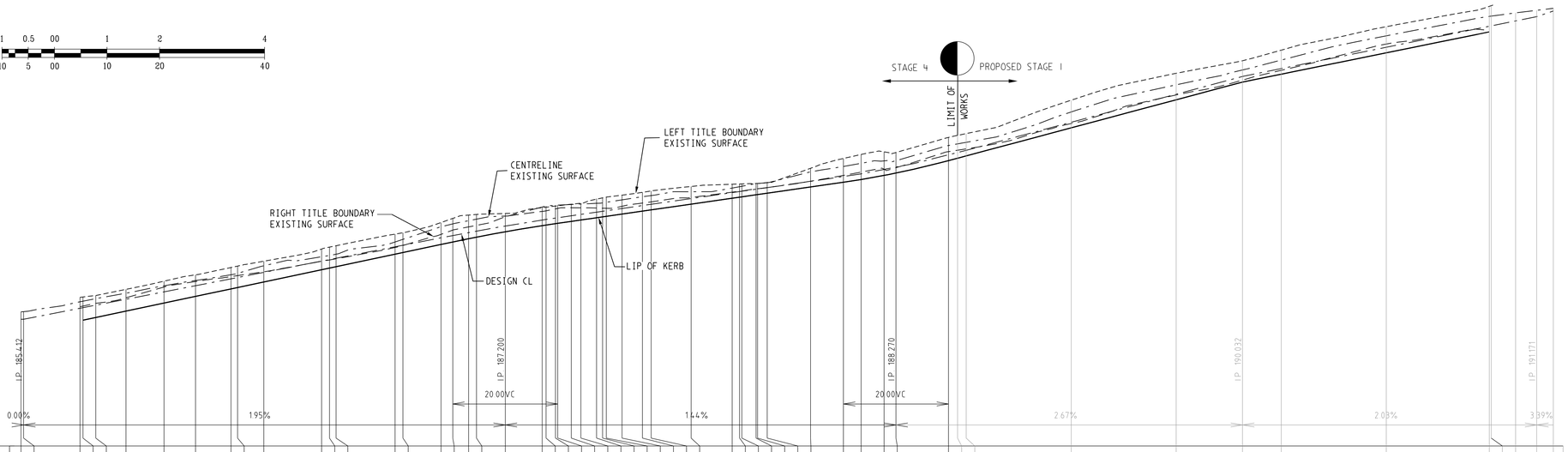
DATUM RL186.0

| | | |

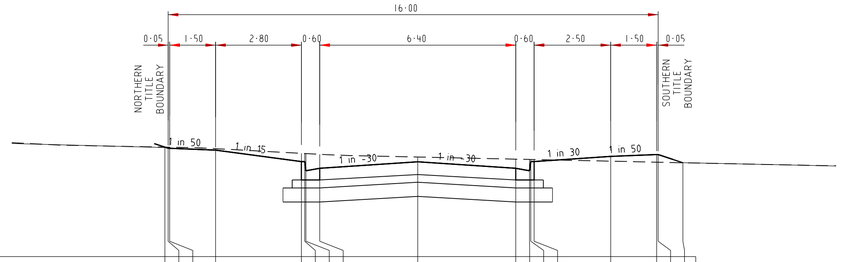
LONGITUDINAL SECTION

SCALE HORIZONTAL 1:500
VERTICAL 1:50

1:50 1 0.5 00 1 2 4
1:500 10 5 00 10 20 40

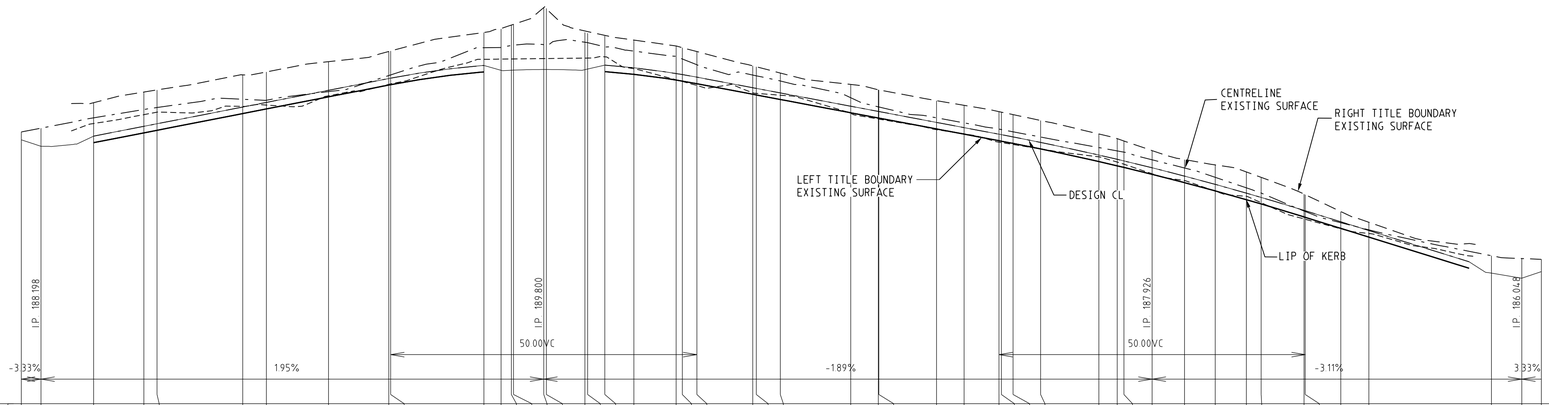


| VC LENGTH | | |



DATUM RL185.0

| | | |



TRUE LEFT & RIGHT ARE IN THE DIRECTION OF THE INCREASING CHAINAGE

VC LENGTH

DESIGN GRADELINE

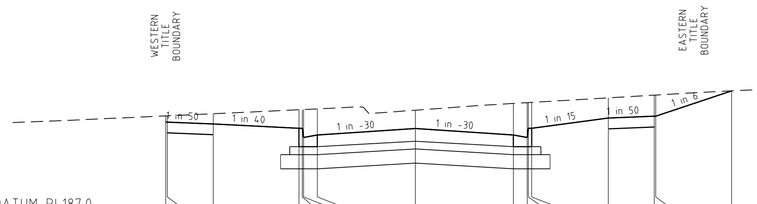
DATUM 184

CHAINAGE CENTRE LINE	0.00	3.20	11.80	20.00	22.15	36.15	40.00	50.15	60.00	60.29	75.53	78.32	80.00	80.36	85.29	85.71	92.02	92.46	95.26	100.00	106.91	107.91	110.29	119.41	120.00	123.91	135.41	139.91	140.00	149.41	153.91	159.61	160.00	161.91	166.41	175.91	178.91	180.00	184.61	189.91	194.91	200.00	202.41	209.41	209.61	215.41	220.00	240.00	244.96	248.16
ES RIGHT TITLE BDY			188.91	189.09	189.12	189.37	189.41	189.58	189.75	189.76	190.06	190.12	190.18	190.19	190.46	190.45	190.06	190.05	190.00	189.93	189.84	189.81	189.75	189.51	189.50	189.40	189.21	189.12	189.12	188.94	188.87	188.77	188.76	188.72	188.62	188.40	188.33	188.29	188.13	187.98	187.90	187.78	187.69	187.42	187.41	187.14	186.96			
FS RIGHT TITLE BDY			188.57	188.73	188.77	189.04	189.12	189.32	189.51	189.51	189.72	189.77	189.81	189.82	189.82	189.82	189.75	189.72	189.70	189.70	189.61	189.59	189.55	189.38	189.37	189.29	189.08	188.99	188.99	188.81	188.73	188.62	188.61	188.57	188.48	188.28	188.21	188.18	188.07	187.93	187.80	187.66	187.59	187.38	187.37	187.19	187.05			
LEFT LIP OF KERB			188.26	188.42	188.46	188.73	188.81	189.01	189.20	189.21	189.41	189.47	189.51	189.52	189.52	189.52	189.42	189.41	189.38	189.38	189.28	189.26	189.22	189.05	189.04	188.96	188.75	188.66	188.66	188.48	188.40	188.29	188.28	188.25	188.16	187.95	187.88	187.86	187.74	187.61	187.47	187.33	187.26	187.05	187.04	186.86	186.72			
DESIGN CL			188.37	188.53	188.57	188.84	188.92	189.11	189.31	189.31	189.52	189.58	189.62	189.63	189.63	189.63	189.53	189.52	189.48	189.48	189.39	189.37	189.33	189.16	189.15	189.07	188.95	188.77	188.77	188.59	188.51	188.40	188.39	188.35	188.26	188.06	187.99	187.96	187.85	187.71	187.58	187.44	187.37	187.15	187.15	186.97	186.83			
RIGHT LIP OF KERB			188.26	188.42	188.46	188.73	188.81	189.01	189.20	189.21	189.41	189.47	189.51	189.52	189.52	189.52	189.42	189.41	189.38	189.38	189.28	189.26	189.22	189.05	189.04	188.96	188.75	188.66	188.66	188.48	188.40	188.29	188.28	188.25	188.16	187.95	187.88	187.86	187.74	187.61	187.47	187.33	187.26	187.05	187.04	186.86	186.72			
FS LEFT TITLE BDY			188.47	188.63	188.67	188.95	189.02	189.22	189.41	189.42	189.62	189.64	189.64	189.64	189.63	189.63	189.62	189.62	189.66	189.58	189.48	189.47	189.43	189.25	189.24	189.17	188.95	188.87	188.86	188.69	188.60	188.49	188.49	188.45	188.36	188.15	188.08	188.06	187.95	187.81	187.68	187.53	187.46	187.25	187.25	187.06	186.92			
ES LEFT TITLE BDY			188.57	188.72	188.76	188.85	188.87	189.02	189.21	189.22	189.62	189.64	189.64	189.64	189.63	189.63	189.62	189.62	189.66	189.47	189.28	189.26	189.19	189.07	189.06	189.03	188.74	188.65	188.64	188.47	188.40	188.27	188.26	188.23	188.16	188.03	187.94	187.91	187.75	187.64	187.47	187.38	187.28	187.02	187.01	186.85	186.78			

LONGITUDINAL SECTION

SCALE HORIZONTAL 1:500
VERTICAL 1:50

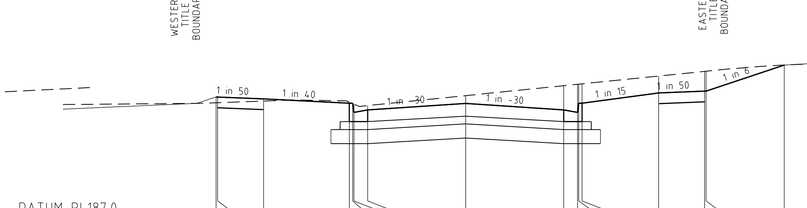
1:50 1 0.5 00 1 2 4
1:500 10 5 00 10 20 40



DATUM RL187.0

DESIGN SURFACE	188.47	188.47	188.44	188.37	188.37	188.22	188.26	188.37	188.26	188.22	188.37	188.22	188.37	188.37	188.37	188.37	188.54	188.57	188.57	188.98																															
EXISTING SURFACE	188.57	188.57	188.61	188.47	188.47	188.68	188.69	188.66	188.77	188.79	188.79	188.79	188.79	188.79	188.79	188.79	188.87	188.91	188.91	188.98																															
OFFSET	-8.15	-8.10	-6.60	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.30	7.80	7.85	10.33																																			

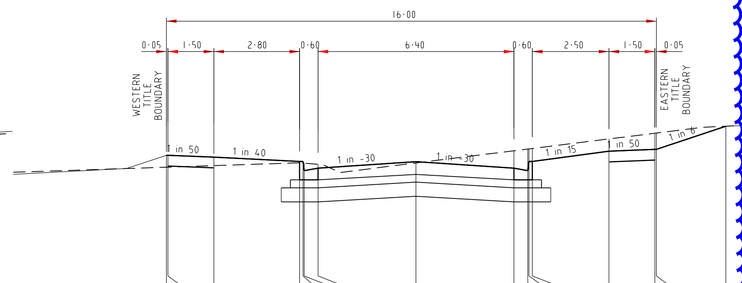
Ch 11.80



DATUM RL187.0

DESIGN SURFACE	188.95	188.94	188.91	188.84	188.86	188.84	188.69	188.84	188.73	188.69	188.84	188.84	189.01	189.04	189.04	189.47																																			
EXISTING SURFACE	188.85	188.85	188.88	188.86	188.84	188.83	188.69	188.97	189.13	189.15	189.16	189.16	189.29	189.36	189.37	189.47																																			
OFFSET	-8.15	-8.10	-6.60	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.30	7.80	7.85	10.40																																			

Ch 36.15



DATUM RL187.0

DESIGN SURFACE	189.22	189.22	189.19	189.12	189.12	188.97	189.01	189.11	189.01	189.32	189.32	189.32	189.28	189.31	189.32	189.69																																			
EXISTING SURFACE	189.02	189.02	189.05	189.10	189.09	189.09	189.07	189.09	189.29	189.32	189.32	189.33	189.49	189.58	189.58	189.69																																			
OFFSET	-8.15	-8.10	-6.60	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.30	7.80	7.85	10.12																																			

Ch 50.15

CROSS SECTIONS

SCALE HORIZONTAL 1:100
VERTICAL 1:50

1:50 1 0.5 00 1 2 4
1:100 2 1 00 2 4 8

CRUSHED ROCK BACKFILL

TIERRA CIRCUIT

AS CONSTRUCTED

VER.	DATE	REMARKS
B	28·10·19	XS's UPDATED
A	18.07.18	ISSUED FOR CONSTRUCTION

AMENDMENTS

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF. 388-C-10
SURVEY SPIIRE
DESIGN RGW
DRAWN RGW
CHECKED

RATHDOWNE ESTATE
STAGE 4
TIERRA CIRCUIT

MUNICIPALITY WHITTLESEA
REFERENCE 9365 E/4
SCALE AS SHOWN DATUM AHD DATE APR'18
SHEET 18 OF 25 B

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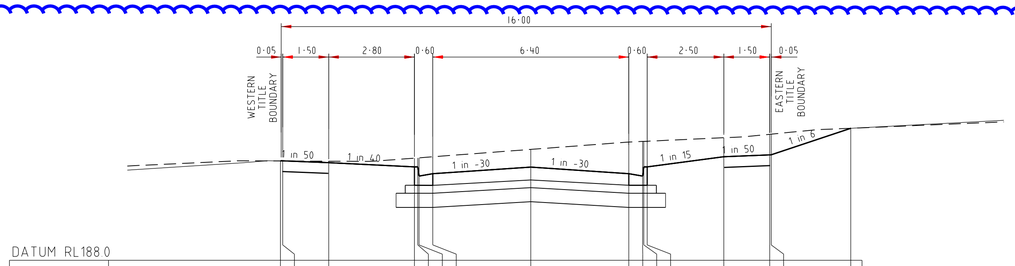
Plotted:29/10/2019



DATUM RL188.0

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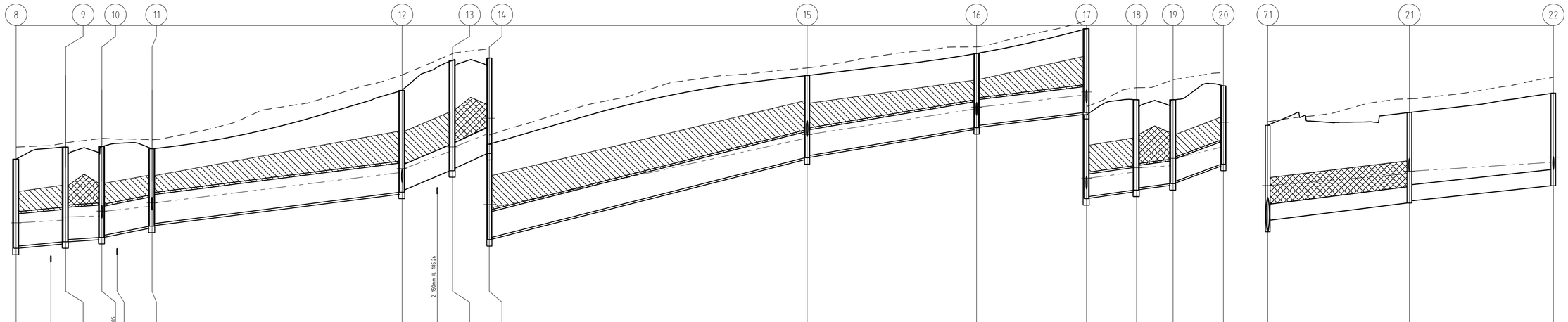
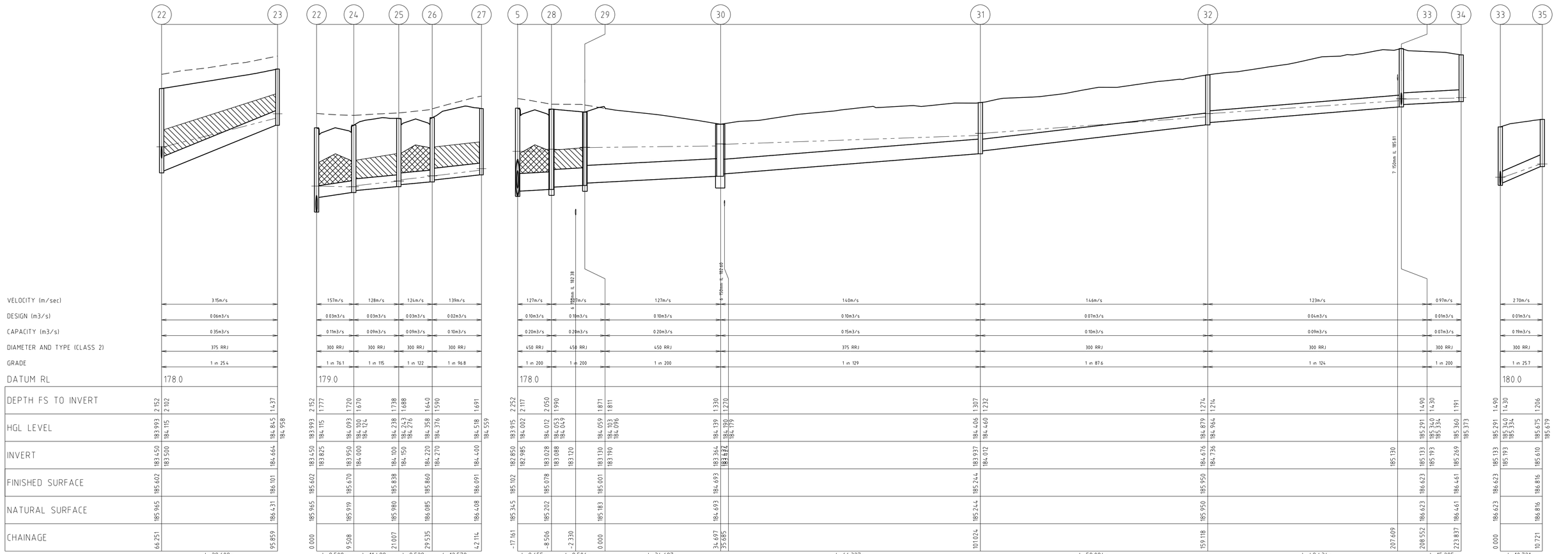
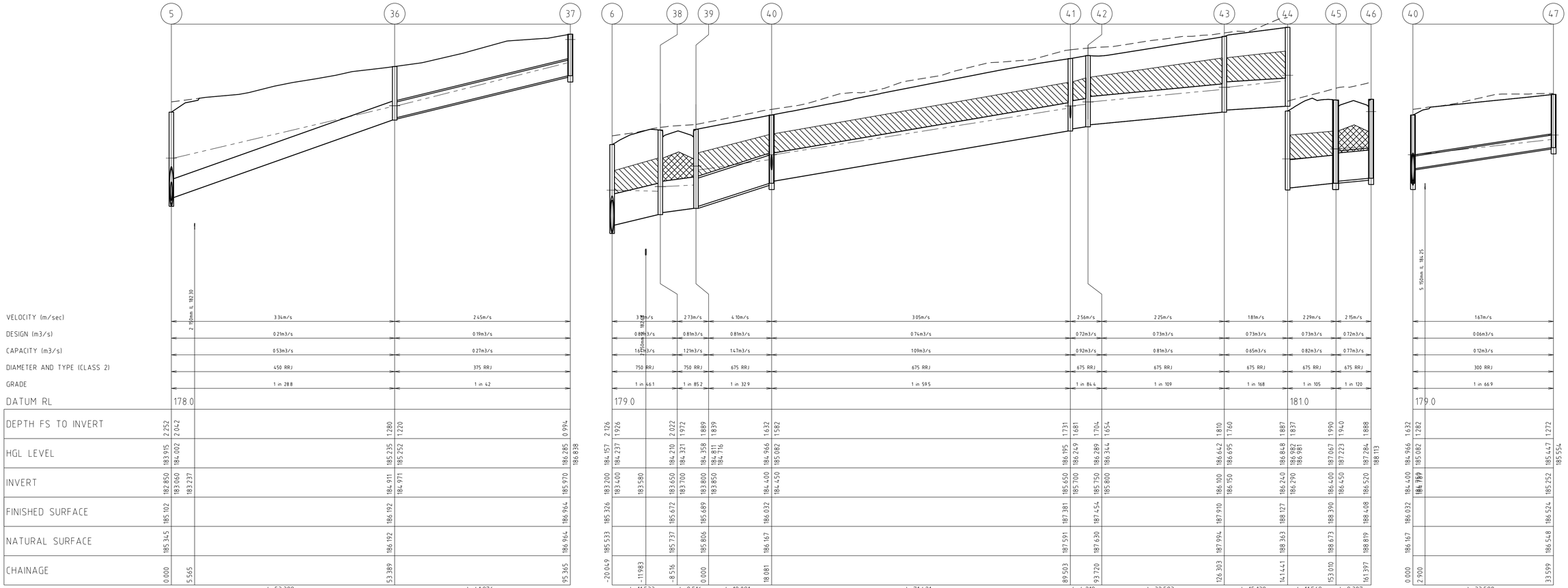
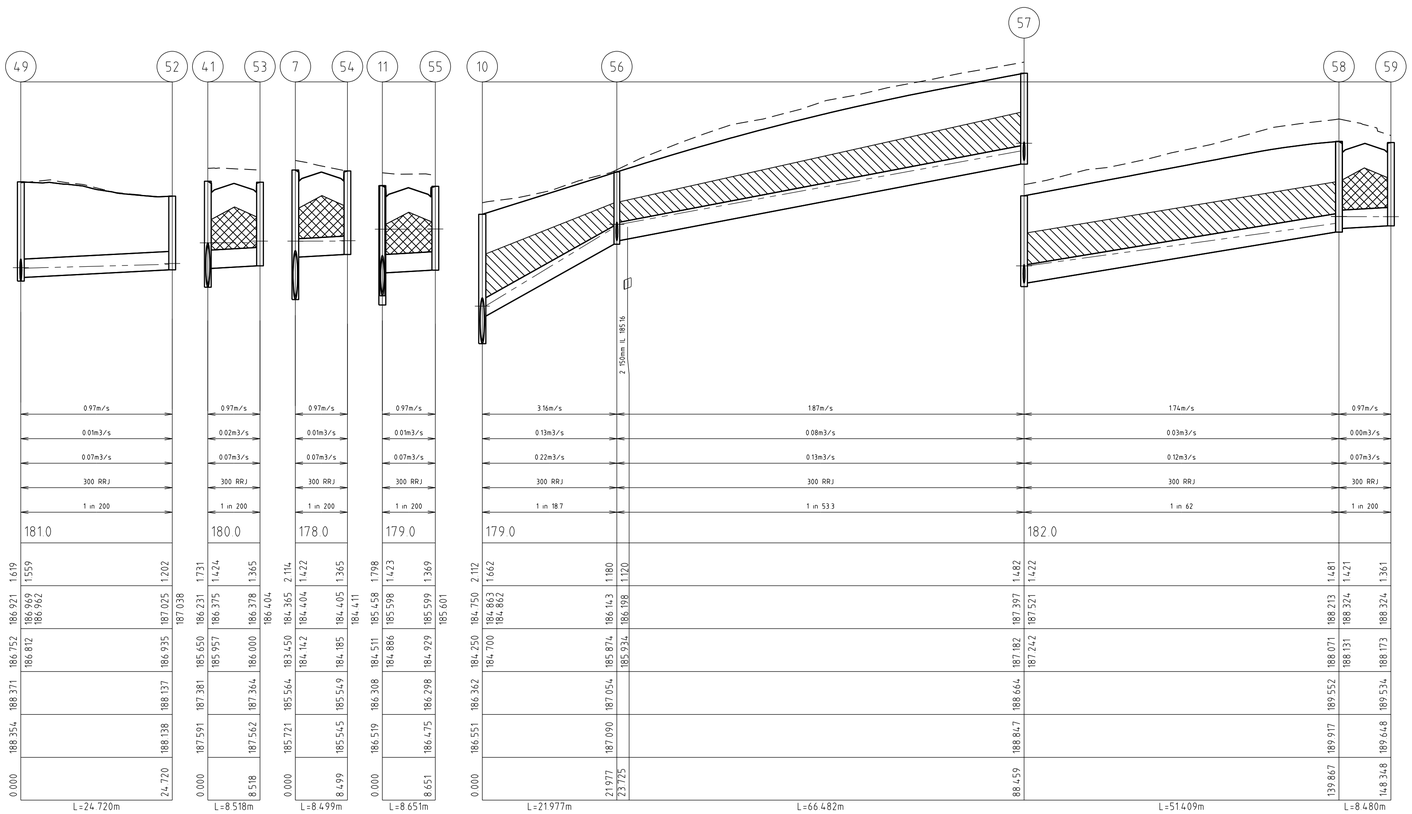

8
9
10
11
12
13
14
15
16
17
18
19
20
71
21
22
2 150mm ø, 180.26

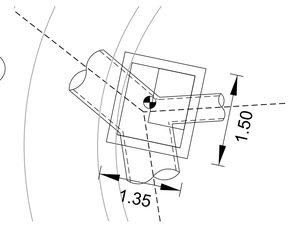
| | | |


22
23
22
24
25
26
27
5
28
29
30
31
32
33
34
33
35
7 150mm IL 189.81
6 150mm IL 182.38
4 150mm IL 183.40

| | | |







PIT 71 DETAILS
SCALE 1:50

PIT SCHEDULE

PIT No.	PIT DESCRIPTION	LENGTH	WIDTH	INLET INVERT	INLET DIA	OUTLET INVERT	OUTLET DIA	TOP PIT RL	DEPTH INVERT	REMARKS
57	GRATED ENTRY PIT (B2)	900	600	187·242	300	187·182	300	188·664	1·482	GAA STD DWG 012
				187·242	300					
58	GRATED ENTRY PIT (B2)	900	600	188·131	300	188·071	300	189·552	1·481	GAA STD DWG 012
59	GRATED ENTRY PIT (B2)	900	600			188·173	300	189·534	1·361	GAA STD DWG 012
60	JUNCTION PIT	900	600	187·154	300	187·094	300	188·337	1·242	GAA STD DWG 014
61	JUNCTION PIT	900	600	188·451	300	188·391	300	189·654	1·263	GAA STD DWG 014
62	JUNCTION PIT	900	600			189·091	300	190·311	1·22	GAA STD DWG 014
63	GRATED ENTRY PIT (B2)	900	600			187·284	300	188·645	1·361	GAA STD DWG 012
64	GRATED ENTRY PIT (B2)	900	600	185·678	300	185·618	300	187·674	2·056	GAA STD DWG 012
65	GRATED ENTRY PIT (B2)	900	600	185·796	300	185·736	300	187·737	2·001	GAA STD DWG 012
66	JUNCTION PIT	900	600	185·899	300	185·839	300	187·763	1·924	GAA STD DWG 014
67	JUNCTION PIT	900	600			186·016	300	187·202	1·187	GAA STD DWG 014
68	GRATED ENTRY PIT (B2)	900	600			188·632	375	189·996	1·363	GAA STD DWG 012
69	JUNCTION PIT	900	600			190·022	300	191·227	1·205	GAA STD DWG 014
70	GRATED ENTRY PIT (B2)	900	600			189·699	300	191·061	1·362	GAA STD DWG 012
71	JUNCTION PIT	1050	1200	182·86	375			184·852	2·472	SEE PIT DETAIL
				182·43	750	182·38	750			
72	GRATED ENTRY PIT (B2)	900	900	182·63	750	182·58	750	184·58	2·00	GAA STD DWG 012 (HAUNCHED)
				183·1	300					
78	JUNCTION PIT	900	1350	178·994	1200	178·315	1200	181·457	3·141	#N/A
79	JUNCTION PIT	900	1350	179·939	1200	179·889	1200	183·107	3·218	#N/A
80	JUNCTION PIT	900	1350	180·329	1200	180·279	1200	183·333	3·053	#N/A
81	JUNCTION PIT	900	600	186·083	300	186·083	300	187·334	1·25	GAA STD DWG 014
82	GRATED ENTRY PIT (B2)	900	600	182·464	300	182·41	375	184·424	2·014	GAA STD DWG 012
83	GRATED ENTRY PIT (B2)	900	600			183·19	300	184·554	1·364	GAA STD DWG 012
84	JUNCTION PIT	900	600			183·242	300	185·08	1·839	GAA STD DWG 014
85	JUNCTION PIT	900	1350	180·65	1050	180·6	1200	183·569	2·969	#N/A

AS CONSTRUCTED

DRAINAGE LONGITUDINAL SECTIONS
SCALE HORIZONTAL 1:500
VERTICAL 1:50

1:50 1 0.5 00 1 2 4
1:500 10 5 00 10 20 40

INDICATES CRUSHED ROCK BACKFILL CLASS 2

INDICATES CRUSHED ROCK BACKFILL CLASS 3

INDICATES 5YR HGL

AMENDMENTS

VER.	DATE	REMARKS
F	14·11·18	PIT 56 MOVED LS UPDATED
E	12·10·18	SCHEDULE UPDATED
C	12·09·18	DRAINAGE EDITS / SCHEDULE UPDATED
B	06·09·18	DRAINAGE EDITS / SCHEDULE UPDATED
A	18.07.18	ISSUED FOR CONSTRUCTION

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF. 388-C-10
SURVEY SPIIRE
DESIGN RGW
DRAWN RGW
CHECKED

RATHDOWNE ESTATE STAGE 4

DRAINAGE LONGDITUDINAL SECTIONS 3

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/4
SCALE AS SHOWN DATUM AHD DATE APR'18
SHEET 22 OF 25 G

Plotted:26/04/2019
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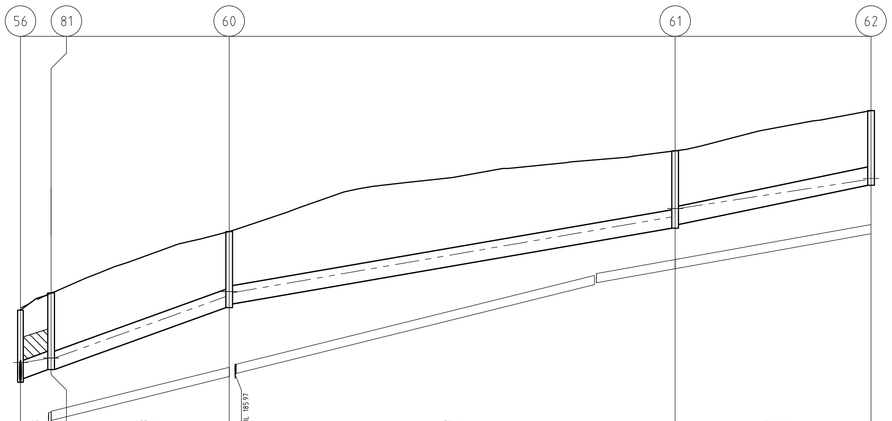
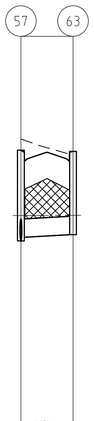
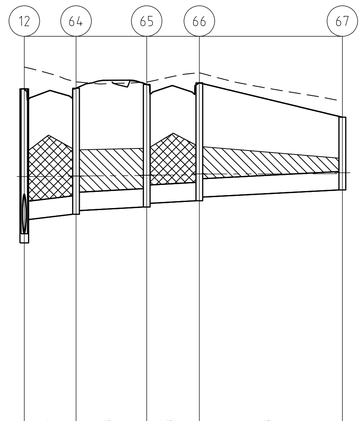


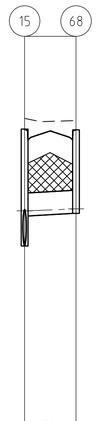
VELOCITY (m/sec)	2.36m/s	2.55m/s		1.78m/s	1.94m/s
DESIGN (m3/s)	0.05m3/s	0.05m3/s		0.06m3/s	0.02m3/s
CAPACITY (m3/s)	0.17m3/s	0.18m3/s		0.13m3/s	0.14m3/s
DIAMETER AND TYPE (CLASS 2)	300 RRJ	300 RRJ		300 RRJ	300 RRJ
GRADE	1 in 335	1 in 28.8		1 in 58.9	1 in 50
DATUM RL	183.0				
DEPTH FS TO INVERT	1.180	1.120	1.250	1.250	1.242 / 1.182 / 1.338	1.263	1.203	1.220
HGL LEVEL	186.143	186.198	186.263	186.271	187.275 / 187.255	188.575	188.712	189.185	189.202
INVERT	185.874	185.934	186.083	186.083	187.094 / 187.164	188.391	188.451	189.091
FINISHED SURFACE	187.054	187.334	188.337	189.654	190.311
NATURAL SURFACE	187.090	187.334	188.337	189.654	190.311
CHAINAGE	0.000	4.998	34.072 / 35.061	106.886	138.860
	L=4.998m	L=29.073m		L=72.814m	L=31.974m



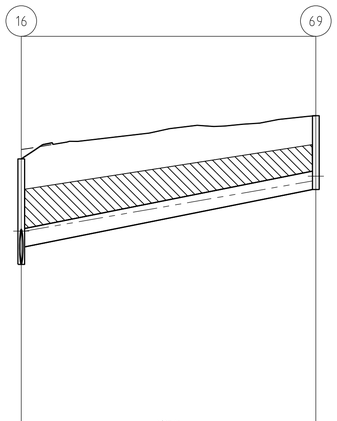
VELOCITY (m/sec)	0.97m/s	
DESIGN (m3/s)	0.01m3/s	
CAPACITY (m3/s)	0.07m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ CLASS 4	
GRADE	1 in 200	
DATUM RL	182.0	
DEPTH FS TO INVERT	1.482	1.422	1.361
HGL LEVEL	187.421	187.598	187.598	187.600
INVERT	187.182	187.242	187.284
FINISHED SURFACE	188.664	188.645
NATURAL SURFACE	188.847	188.586
CHAINAGE	0.000	8.512
	L=8.512m	



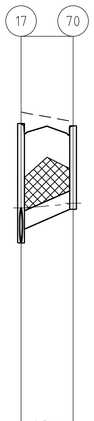
VELOCITY (m/sec)	1.40m/s	0.97m/s	0.97m/s	0.97m/s	
DESIGN (m3/s)	0.03m3/s	0.03m3/s	0.02m3/s	0.01m3/s	
CAPACITY (m3/s)	0.10m3/s	0.07m3/s	0.07m3/s	0.07m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ CLASS 4	300 RRJ	300 RRJ CLASS 4	300 RRJ	
GRADE	1 in 95.8	1 in 200	1 in 200	1 in 200	
DATUM RL	180.0				
DEPTH FS TO INVERT	2.364	2.134	2.056	1.996	2.001	1.941	1.924	1.864	1.187
HGL LEVEL	186.061	186.234 / 186.231	186.238	186.242	186.250	186.255	186.261	186.278 / 186.275	186.280	186.295
INVERT	185.300	185.530	185.618	185.678	185.736	185.796	185.839	185.899	186.016
FINISHED SURFACE	187.664	187.674	187.737	187.763	187.927	187.462	187.202
NATURAL SURFACE	188.020	187.779	187.775	187.927	187.462
CHAINAGE	0.000	8.448	19.985	28.579	51.930
	L=8.448m	L=11.537m	L=8.593m	L=23.352m	



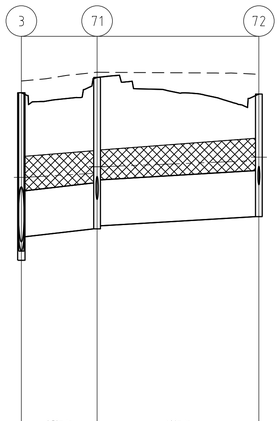
VELOCITY (m/sec)	1.12m/s	
DESIGN (m3/s)	0.01m3/s	
CAPACITY (m3/s)	0.12m3/s	
DIAMETER AND TYPE (CLASS 2)	375 RRJ CLASS 4	
GRADE	1 in 200	
DATUM RL	183.0	
DEPTH FS TO INVERT	1.909	1.418	1.363
HGL LEVEL	188.565	188.674	188.704	188.707
INVERT	188.100	188.590	188.632
FINISHED SURFACE	190.009	189.996
NATURAL SURFACE	190.183	190.137
CHAINAGE	0.000	8.396
	L=8.396m	



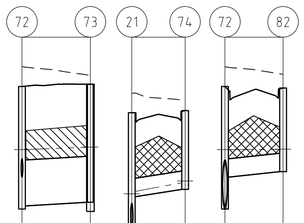
VELOCITY (m/sec)	1.91m/s	
DESIGN (m3/s)	0.03m3/s	
CAPACITY (m3/s)	0.14m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ	
GRADE	1 in 513	
DATUM RL	184.0	
DEPTH FS TO INVERT	1.721	1.436	1.205
HGL LEVEL	189.253	189.343	190.162	190.239
INVERT	188.800	189.085	190.022
FINISHED SURFACE	190.521	191.227
NATURAL SURFACE	190.675	191.227
CHAINAGE	0.000	48.085
	L=48.085m	



VELOCITY (m/sec)	2.67m/s	
DESIGN (m3/s)	0.01m3/s	
CAPACITY (m3/s)	0.19m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ CLASS 4	
GRADE	1 in 26.2	
DATUM RL	184.0	
DEPTH FS TO INVERT	1.948	1.723	1.362
HGL LEVEL	189.589	189.723 / 189.721	189.786	189.799
INVERT	189.150	189.375	189.699
FINISHED SURFACE	191.098	191.061
NATURAL SURFACE	191.287	191.129
CHAINAGE	0.000	8.493
	L=8.493m	



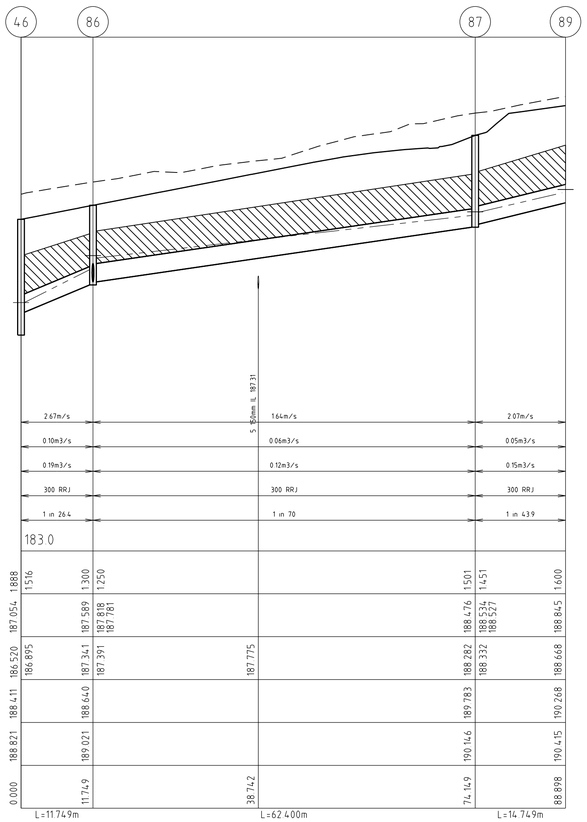
VELOCITY (m/sec)	2.58m/s	1.90m/s
DESIGN (m3/s)	0.83m3/s	0.68m3/s
CAPACITY (m3/s)	1.14m3/s	0.84m3/s
DIAMETER AND TYPE (CLASS 2)	750 RRJ CLASS 4	750 RRJ CLASS 4
GRADE	1 in 95.2	1 in 176
DATUM RL	177.0	
DEPTH FS TO INVERT	2.584	2.351	2.422	2.000
HGL LEVEL	183.017	183.219	183.287 / 183.393	183.493	183.550
INVERT	182.017	182.250	182.380 / 182.430	182.580
FINISHED SURFACE	184.601	184.852	184.580
NATURAL SURFACE	184.794	184.935	184.903
CHAINAGE	0.000	12.371	38.783
	L=12.371m	L=26.411m	



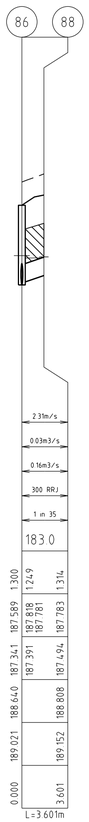
VELOCITY (m/sec)	1.85m/s	
DESIGN (m3/s)	0.66m3/s	
CAPACITY (m3/s)	0.82m3/s	
DIAMETER AND TYPE (CLASS 2)	750 RRJ	
GRADE	1 in 186	
DATUM RL	177.0	
DEPTH FS TO INVERT	2.000	1.950	1.926
HGL LEVEL	183.493	183.550	183.590
INVERT	182.580	182.630	182.690
FINISHED SURFACE	184.580	184.616
NATURAL SURFACE	184.903	184.762
CHAINAGE	38.783	49.943
	L=11.161m	

VELOCITY (m/sec)	1.60m/s	
DESIGN (m3/s)	0.02m3/s	
CAPACITY (m3/s)	0.11m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ	
GRADE	1 in 733	
DATUM RL	178.0	
DEPTH FS TO INVERT	1.900	1.369	1.287
HGL LEVEL	183.724	183.828 / 183.868	184.009	184.039
INVERT	183.250	183.781	183.900
FINISHED SURFACE	185.150	185.187
NATURAL SURFACE	185.469	185.353
CHAINAGE	0.000	8.707
	L=8.707m	

VELOCITY (m/sec)	1.33m/s	
DESIGN (m3/s)	0.01m3/s	
CAPACITY (m3/s)	0.09m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ	
GRADE	1 in 106	
DATUM RL	177.0	
DEPTH FS TO INVERT	2.000	1.680	1.364
HGL LEVEL	183.493	183.550	183.551	183.556
INVERT	182.580	183.100	183.190
FINISHED SURFACE	184.580	184.554
NATURAL SURFACE	184.903	184.778
CHAINAGE	0.000	9.489
	L=9.489m	



VELOCITY (m/sec)	2.67m/s	1.64m/s	2.07m/s	
DESIGN (m3/s)	0.10m3/s	0.06m3/s	0.05m3/s	
CAPACITY (m3/s)	0.19m3/s	0.12m3/s	0.15m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ	300 RRJ	300 RRJ	
GRADE	1 in 264	1 in 70	1 in 439	
DATUM RL	183.0			
DEPTH FS TO INVERT	1.888	1.516	1.300	1.250	1.501	1.451	1.600
HGL LEVEL	187.054	187.589	187.818 / 187.781	188.476	188.534 / 188.527	188.845
INVERT	186.520	186.895	187.341 / 187.391	187.775	188.282	188.332	188.668
FINISHED SURFACE	188.411	188.640	189.783	190.268
NATURAL SURFACE	188.821	189.021	190.146	190.415
CHAINAGE	0.000	11.749	38.742	74.149	88.898
	L=11.749m	L=62.400m	L=14.749m	



VELOCITY (m/sec)	2.33m/s	
DESIGN (m3/s)	0.03m3/s	
CAPACITY (m3/s)	0.16m3/s	
DIAMETER AND TYPE (CLASS 2)	300 RRJ	
GRADE	1 in 35	
DATUM RL	183.0	
DEPTH FS TO INVERT	1.300	1.249	1.314
HGL LEVEL	187.589	187.818 / 187.781	187.783
INVERT	187.341	187.391	187.494
FINISHED SURFACE	188.640	188.808
NATURAL SURFACE	189.021	189.152
CHAINAGE	0.000	3.601
	L=3.601m	

PIT SCHEDULE

PIT No.	PIT DESCRIPTION	LENGTH	WIDTH	INLET		OUTLET		TOP PIT RL	DEPTH INVERT	REMARKS
				INVERT	DIA	INVERT	DIA			
86	JUCNTION PIT	900	600	187·391	300	187·351	300	188·640	1·300	GAA STD DWG 014
				187·391	300					
87	JUCNTION PIT	900	600	188·282	300	188·332	300	189·783	1·501	GAA STD DWG 014
88	ENDPIPE	900	600	187·494	300				1·314	CAP END
89	ENDPIPE	900	600	188·845	300				1·600	CAP END

AS CONSTRUCTED

DRAINAGE LONGITUDINAL SECTIONS

SCALE HORIZONTAL 1:500
VERTICAL 1:50

1:50 1 0.5 00 1 2 4
1:500 10 5 00 10 20 40

SCHEDULE NOTES:-

1. WHERE PIT HAUNCHING IS REQUIRED, INTERNAL PIT WALL DIMENSIONS MUST ALLOW 50mm CLEARANCE EACH SIDE OF PIPE OUTSIDE DIAMETER, INCLUDING ANGULAR PIPE ENTRY TO PIT. MINIMUM DIMENSIONS OF PIT BASE ARE TO BE AS PER SIZES SPECIFIED IN THE PIT SCHEDULE. TOP OF PIT OPENING FOR ALL HAUNCHED PITS TO BE 900mm x 600mm.
2. PIT BASE TO BE SHAPED TO MATCH LOWER HALF OF PIPE WHERE DROP ACROSS PIT IS LESS THAN 50mm.
3. PROVIDE BICYCLE SAFE "V" SHAPED CLASS D GRATE (600mm MIN WIDTH).

INDICATES CRUSHED ROCK BACKFILL CLASS 2

INDICATES CRUSHED ROCK BACKFILL CLASS 3

INDICATES 5YR HGL

VER.	DATE	REMARKS
E	13·09·19	DRAINAGE LINE 86-86 ADDED
D	14·11·18	DRAINAGE EDITS 60-56
C	12·09·18	DRAINAGE EDITS / SCHEDULE UPDATED
B	06·09·18	DRAINAGE UPDATED
A	18.07.18	ISSUED FOR CONSTRUCTION

AMENDMENTS

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE STAGE 4

DRAINAGE LONGITUDINAL SECTIONS 4

SCALE	AS SHOWN	DATUM	AHD	DATE	APR'18

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/4
SHEET 23 OF 25 E

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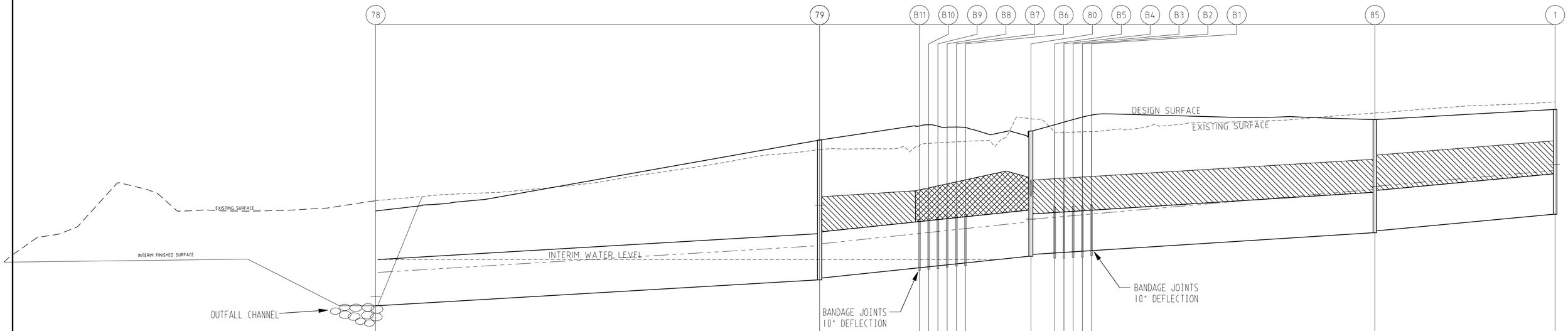
Plotted:17/09/2019


78
79
B11
B10
B9
B8
B7
B6
80
B5
B4
B3
B2
B1
85
1
DESIGN SURFACE
EXISTING SURFACE
EXISTING SURFACE
INTERIM FINISHED SURFACE
INTERIM WATER LEVEL
OUTFALL CHANNEL
BANDAGE JOINTS
10° DEFLECTION
BANDAGE JOINTS
10° DEFLECTION

| | | |

SIGNAGE & LINEMARKING LEGEND

- S1 "STREET NAME" SIGN
- S2 "GIVE WAY" SIGN (R1-2A) — R1-2
- S3 "NO ROAD" SIGN & "HAZARD" SIGN (G9-18)
- S4 ROUNDABOUT SIGN — R1-3
- S5 "KEEP LEFT" SIGN (R2-3L) — R2-3(L)
- S6 HAZARD BOARD (D4-1-1)
- S7 SHARED FOOTWAY (8-2A)
- S7 SHARED FOOTWAY (8-2A) + END (7-4A)

NOTE:
- STREET NAME SIGN TO MOUNT ON LIGHTING POLE WHERE POSSIBLE
- STREET SIGNS TO HAVE MINIMUM 2 WEDGES IN THE POLE SLEEVES
- REFER HCC SD407 FOR "NO ROAD SIGN"

AS CONSTRUCTED

PLAN

SCALE 1:500

SCALE 1 : 500

10 5 0 10 20 40

LENGTHS ARE IN METRES

North

VER.	DATE	REMARKS
B	16.07.19	LINEMARKING UPDATED
A	18.07.18	ISSUED FOR CONSTRUCTION

AMENDMENTS

breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C-10
SURVEY	SPIIRE
DESIGN	RGW
DRAWN	RGW
CHECKED	

RATHDOWNE ESTATE
STAGE 4
SIGNAGE AND LINEMARKING PLAN

MUNICIPALITY: WHITTLESEA

REFERENCE: 9365 E/4

SCALE AS SHOWN | DATUM AHD | DATE APR'18 | SHEET 25 OF 25 | B

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Plotted: 16/07/2019