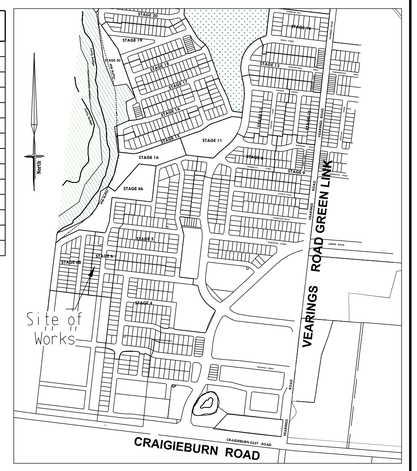
SERVICES OFFSETS AND LOCATIONS

Location	Gas	Water		Telecommunications		Electricity		BOK	Road Width	Joint Trenching	Street Classification
		NDW	DW	Cables	Pits	Cables	Poles				
PROVIDENCE AVENUE	2.25 S	2.70 S	3.20 S	1.85 N	1.78 N/S	2.40 N	1.00 BOK	4.35 S 4.05 N	16.00	G & W, FTTH & E	STREET-LEVEL 1
BRASSWOOD WAY	2.25 S	2.70 S	3.20 S	1.85 N	1.78 N/S	2.60 N	1.00 BOK	4.35 S 4.05 N	16.00	G & W, FTTH & E	STREET-LEVEL 1
PREVELI WAY	2.25 W	2.70 W	3.20 W	1.85 E	1.78 E/W	2.45 E	1.00 BOK	4.35 E 4.05 W	16.00	G & W, FTTH & E	STREET-LEVEL 1
PORTOFINO WAY	2.25 N	2.70 N	3.20 N	1.85 S	1.78 N/S	2.60 S	1.00 BOK	4.35 N 4.05 S	16.00	G & W, FTTH & E	STREET-LEVEL 1
LAKERIDGE DRIVE	1.80 S/E	2.20 S/E	2.65 S/E	0.80 S/E	0.80 S/E	1.00 N/W	0.90 BOK	1.85 N/W 4.05 S/E	13.50	G & W, FTTH & E	STREET-LEVEL 1

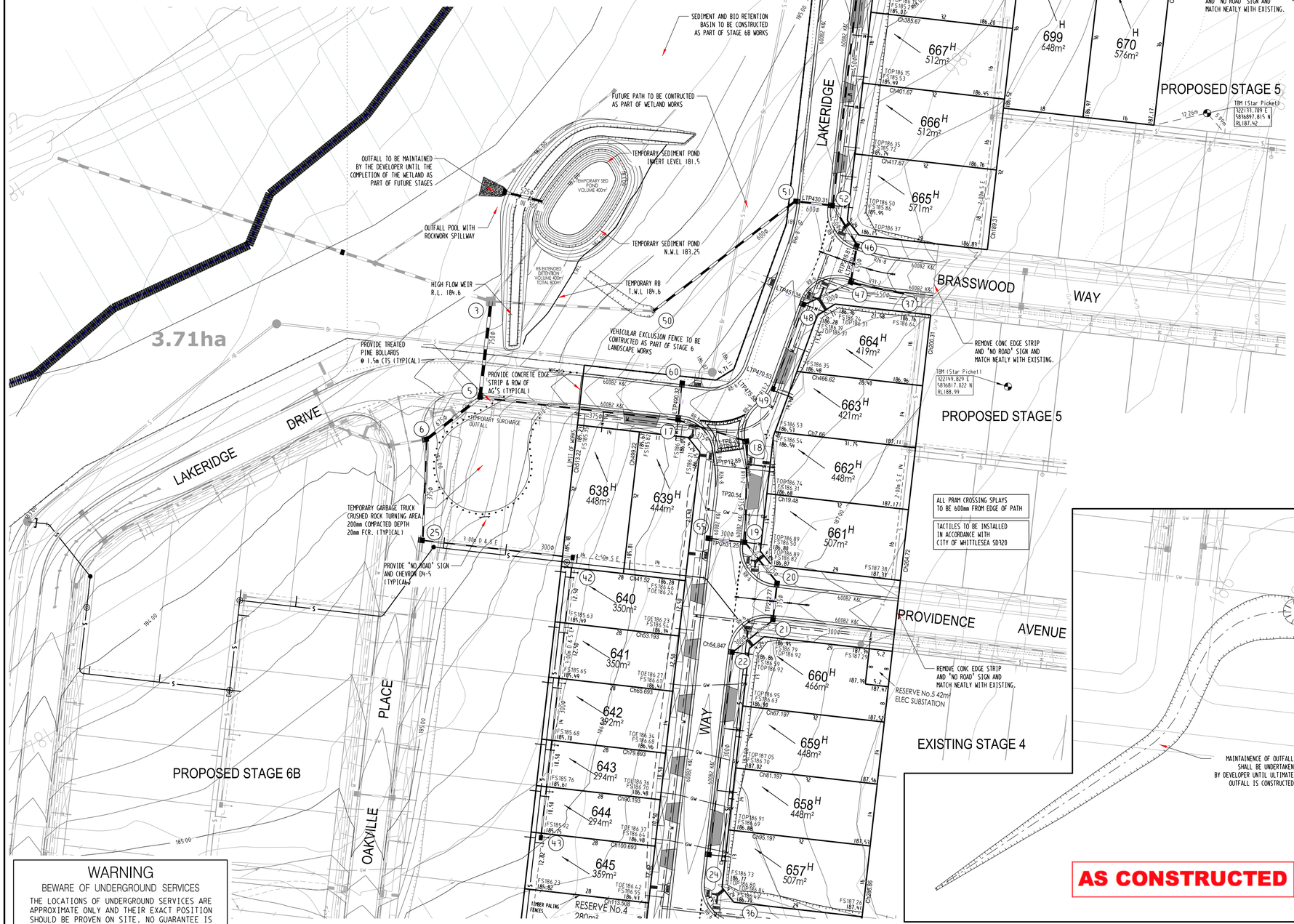
NOTE: a) At the court bowl where water and gas mains pass, the watermain offset is to be increased by 0.5 metres.
b) * Indicates offsets from back of kerb where services do not run parallel to title boundary.
c) * Indicates Telecommunication pits placed within concrete footpath.

SHEET INDEX

SHT No.	VER	DESCRIPTION
1	D	DETAIL PLAN SHEET 1
2	A	NOTES AND TYPICAL SECTIONS
3	A	INTERSECTION DETAILS 1
4	B	INTERSECTION DETAILS 2
5	B	LAKERIDGE DRIVE - LONGDITUDINAL SECTIONS
6	A	LAKERIDGE DRIVE - CROSS SECTIONS
7	B	PREVELI WAY - LONGDITUDINAL SECTION
8	A	PREVELI WAY - CROSS SECTIONS
9	A	BRASSWOOD WAY - LONGDITUDINAL & CROSS SECTIONS
10	A	PROVIDENCE AVENUE - LONGDITUDINAL & CROSS SECTIONS
11	A	PORTOFINO WAY - LONGDITUDINAL & CROSS SECTIONS
12	C	DRAINAGE LONGDITUDINAL SECTIONS 1
13	C	DRAINAGE LONGDITUDINAL SECTIONS 2, PIT SCHEDULE
14	A	SIGNAGE AND LINEMARKING PLAN



LOCALITY PLAN
N.T.S.
MELWAYS: 388 C 10



FOR CONTINUATION REFER TO INSET RIGHT

PLAN
SCALE 1:500
SCALE 1 : 500
10 5 0 10 20 40
LENGTHS ARE IN METRES

INSET
SCALE 1:500

AS CONSTRUCTED

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.

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.

SYMBOL LEGEND

	Prop	Exist
Drains		
Sewer <300	S	S
Sewer >300	S	S
Water	W	W
House Drain	H	H
Property Inlet		
Street Sign		
PSM		
Retaining Wall		
Conduits 50mm	GW	GW
Conduits 100mm	W100	W100
Ex Gas/Elect/Tel	G	E T
Vehicular Exclusion Fence		

Ex/Natural/FS Level	+18·57 +NS28·57 (28·57)
FS @ Building Line	(FL28·57)
Top/Toe of Batter	(TOP28·57) (TOE28·57)
Top Ret. Wall Level	(TW28·57)
100yr Flood Level	(FL28·57)
Fill Prop/Ex	
Cut Prop/Ex	

VER.	DATE	REMARKS
D	12·05·20	DRAINAGE LINE 25-3 ADDED. SOUTHERN OUTFALL CHANNEL REALIGNED
C	19·03·20	PIT 3 AMENDED TO PIT 50
B	12·03·20	VARIOUS LOT LEVELS/ PIT NUMBERS UPDATED
A	30·08·19	ISSUE 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	BPD
DESIGN	RGW
DRAWN	RGW
CHECKED	NM

RATHDOWNE ESTATE
STAGE 6
DETAIL PLAN AND SHEET INDEX

MUNICIPALITY	WHITTLESEA
REFERENCE	9365 E/06
SCALE	AS SHOWN
DATUM	AHD
DATE	AUG '19
SHEET	1 OF 14 | D

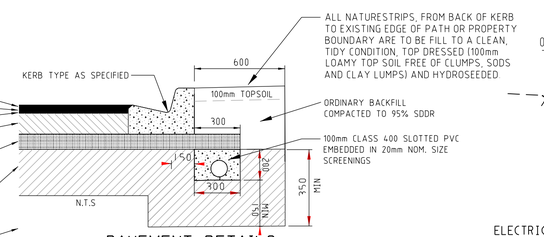
Plotted: 07/09/2020
J:\9365\Eng\Stage 6\E6_R01_DET.dgn

NOTES

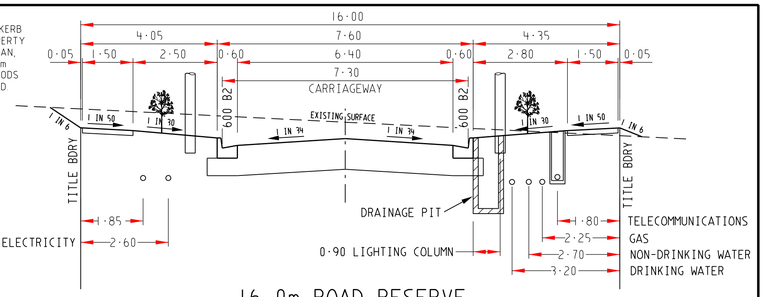
1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH PLANS AND CURRENT CITY OF WHITTLESEA SPECIFICATIONS AND STANDARD DRAWINGS APPROVED BY COUNCIL AND TO THE SATISFACTION OF THE ENGINEER. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION:
   a) SOURCES OF QUARRYMATERIAL
   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.
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 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 TO CONSIST OF: LAKERIDGE DRIVE 13.5m, PREVELI WAY, BRASSWOOD WAY, PROVIDENCE AVENUE.
(310mm DEPTH)

a) 20mm COMPACTED DEPTH SIZE 7 TYPE L ASHPHALT WITH A C170 BINDER
b) 30mm COMPACTED DEPTH SIZE 10 TYPE N ASHPHALT WITH A C170 BINDER
c) 10mm SAMI SEAL WITH CLASS S18RF BINDER AND BITUMINUS PRIME
d) 140mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 2 FCR, COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITH A MEAN VALUE OF AT LEAST 100% MODIFIED DRY DENSITY RATIO AND WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT
e) 110mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 FCR, COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITH A MEAN VALUE OF AT LEAST 98% MODIFIED DRY DENSITY RATIO AND WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT
g) 300mm SUBGRADE IMPROVEMENT - SELECT GRANULAR MATERIAL WITH A MINIMUM SOAKED CBR OF 10% COMPACTED TO AT LEAST 98% STANDARD DRY DENSITY RATIO WITH A MEAN VALUE OF AT LEAST 100% STANDARD DRY DENSITY RATIO AND WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%
h) NATURAL SILTY CLAY TESTED TO CONFIRM AN IN-SITU CBR OF AT LEAST 2.0% OR APPROVED FILL COMPACTED TO AT LEAST 100% STANDARD DRY DENSITY RATIO (SOAKED CBR?2.0%) WITHIN 2% OF THE STANDARD OPTIMUM MOISTURE CONTENT



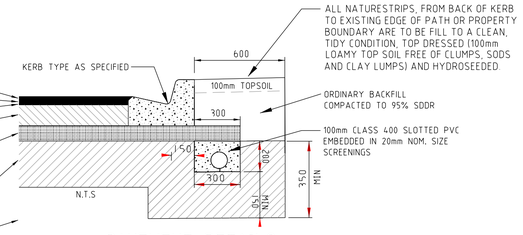
PAVEMENT DETAILS
LAKERIDGE DRIVE 13.5m, PREVELI WAY, BRASSWOOD WAY, PROVIDENCE AVENUE.



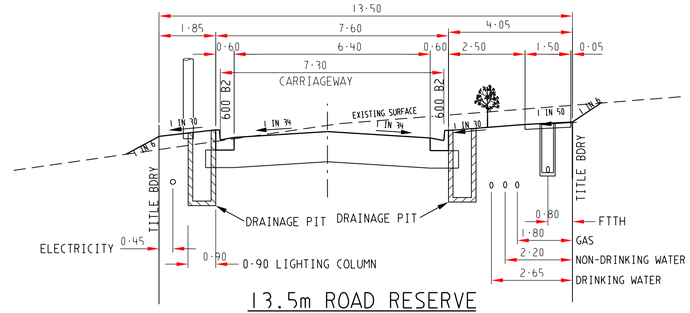
16.0m ROAD RESERVE
PROVIDENCE AVENUE, BRASSWOOD WAY, PORTOFINO WAY, OAKVILLE PLACE
LOCAL ACCESS STREET - LEVEL 1

PAVEMENT TO CONSIST OF: PORTOFINO WAY
(360mm DEPTH)

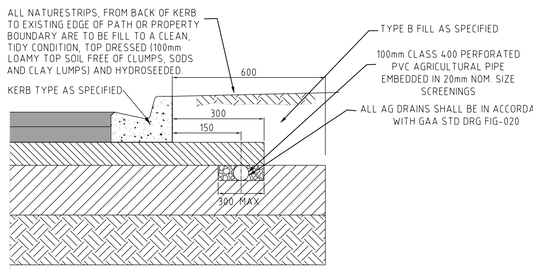
a) 30mm COMPACTED DEPTH SIZE 10 TYPE L ASHPHALT WITH A C170 BINDER
b) 30mm COMPACTED DEPTH SIZE 10 TYPE N ASHPHALT WITH A C170 BINDER
c) 10mm SAMI SEAL WITH CLASS S18RF BINDER AND BITUMINUS PRIME
d) 130mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 2 FCR, COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO WITH A MEAN VALUE OF AT LEAST 100% MODIFIED DRY DENSITY RATIO AND WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT
e) 160mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 FCR, COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITH A MEAN VALUE OF AT LEAST 98% MODIFIED DRY DENSITY RATIO AND WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT
g) 300mm SUBGRADE IMPROVEMENT - SELECT GRANULAR MATERIAL WITH A MINIMUM SOAKED CBR OF 10% COMPACTED TO AT LEAST 98% STANDARD DRY DENSITY RATIO WITH A MEAN VALUE OF AT LEAST 100% STANDARD DRY DENSITY RATIO AND WITHIN 1% OF THE STANDARD OPTIMUM MOISTURE CONTENT AND A PERCENTAGE SWELL OF LESS THAN 1.5%
h) NATURAL SILTY CLAY TESTED TO CONFIRM AN IN-SITU CBR OF AT LEAST 2.0% OR APPROVED FILL COMPACTED TO AT LEAST 100% STANDARD DRY DENSITY RATIO (SOAKED CBR?2.0%) WITHIN 2% OF THE STANDARD OPTIMUM MOISTURE CONTENT



PAVEMENT DETAILS
PORTOFINO WAY

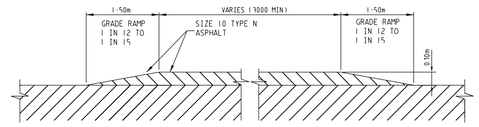


13.5m ROAD RESERVE
LAKERIDGE DRIVE
LOCAL ACCESS STREET - LEVEL 1



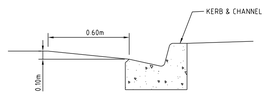
PAVEMENT COMPOSITION
NOT TO SCALE

ALL SPEED HUMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WHITTLESEA STD DRG 621

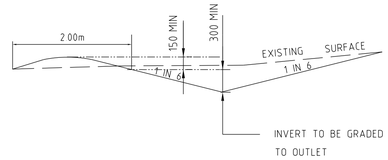


SPEED HUMP DETAIL
NOT TO SCALE

SECTION A-A



SECTION B-B



CUT-OFF DRAIN DETAIL
NOT TO SCALE

AS CONSTRUCTED

VER.	DATE	REMARKS
A	30·08·19	ISSUE FOR CONSTRUCTION

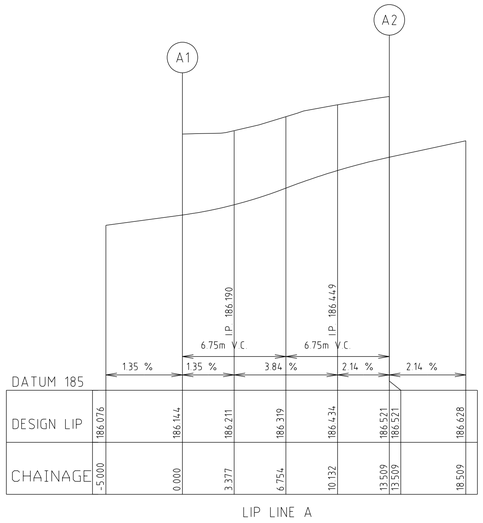
breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

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

RATHDOWNE ESTATE
STAGE 6
NOTES AND TYPICAL SECTIONS

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/06
SCALE AS SHOWN | DATUM AHD | DATE AUG '19
SHEET 2 OF 14 | A

J:\9365\Engs\Stage 6\E6_R02_NOTE.dgn
Plotted:8/10/2020

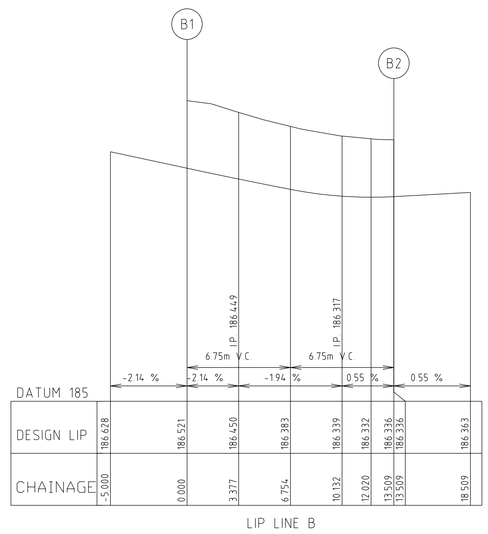


LIP LINE A

Alignment A

	Point no	Easting	Northing	RL
A	1	322028·852	5836800·964	186·144
A	2	322036·424	5836791·447	186·521
A	3	322029·130	5836797·620	186·211
A	4	322030·667	5836794·637	186·319
A	5	322033·228	5836792·469	186·434

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
A	1 2	-90·000	-8·600	13·509	2·519	1·864	2·790	3·291	3·377	186·319



LIP LINE B

Alignment B

	Point no	Easting	Northing	RL
B	1	322035·700	5836785·088	186·521
B	2	322026·182	5836777·516	186·336
B	3	322032·356	5836784·810	186·450
B	4	322029·373	5836783·273	186·383
B	5	322027·205	5836780·712	186·339

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
B	1 2	-90·000	-8·600	13·509	2·519	1·864	2·790	3·291	3·377	186·383

NOTES

a) TRAFFIC ISLAND KERB TO BE SM1.

b) ROUNDABOUT KERB TO BE SM3.

c) ALL SIGNS TO BE SLEEVED USING A SL27 SLEEVE.

d) SWLM - INDICATES SOLID WHITE "LONGLIFE" LINE MARKING
BWLM - INDICATES BROKEN WHITE "LONGLIFE" LINE MARKING

e) ⊐E ∃⊐E INDICATES UNIDIRECTIONAL & BIDIRECTIONAL RRPM'S PLACED AT 3·00m CTS

f) 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

g) SHARED FOOTWAY/BICYCLE PATH TO CONSIST:
a) 100mm DEPTH CONCRETE REINFORCED WITH F62 MESH
b) 50mm DEPTH COMPACTED DEPTH 20mm CLASS 3CR

ALL PRAM CROSSING SPLAYS TO BE 600mm FROM EDGE OF PATH

TACTILES TO BE INSTALLED IN ACCORDANCE WITH CITY OF WHITTLESEA SD320

LIP LINE C

Alignment C

	Point no	Easting	Northing	RL
C	1	322020·220	5836725·154	186·384
C	2	322027·792	5836715·637	186·073
C	3	322020·498	5836721·810	186·332
C	4	322022·035	5836718·827	186·225
C	5	322024·596	5836716·659	186·119

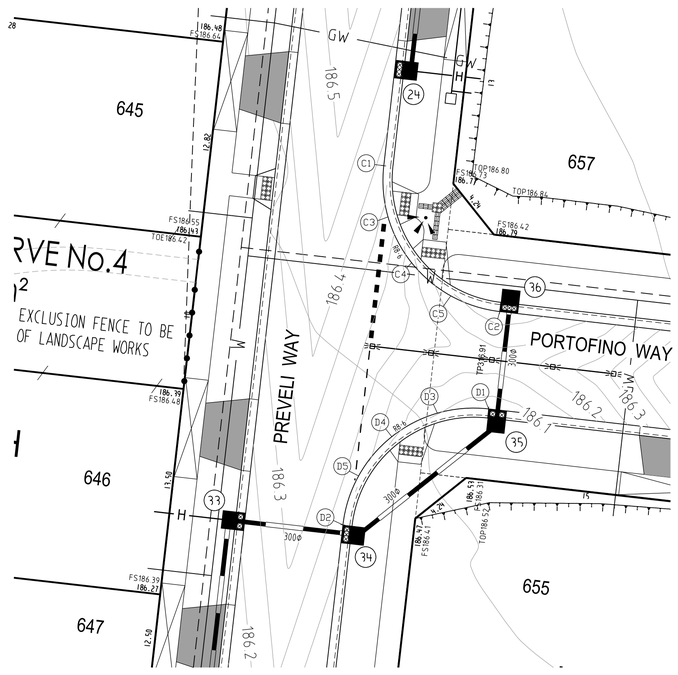
	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
C	1 2	-90·000	-8·600	13·509	2·519	1·864	2·790	3·291	3·377	186·225

LIP LINE D

Alignment D

	Point no	Easting	Northing	RL
D	1	322027·068	5836709·278	186·073
D	2	322017·550	5836701·706	186·219
D	3	322023·724	5836709·000	186·104
D	4	322020·741	5836707·463	186·166
D	5	322018·573	5836704·902	186·218

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
D	1 2	-90·000	-8·600	13·509	2·519	1·864	2·790	3·291	3·377	186·166



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

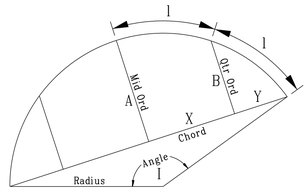
LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20

INTERSECTION DETAILS

SCALE 1:200
SCALE 1 : 200

4 2 0 4 8 16
LENGTHS ARE IN METRES



CURVE SETOUT DIAGRAM

AS CONSTRUCTED

AMENDMENTS			
VER.	DATE	REMARKS	
A	30·08·19	ISSUE 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	BPD
DESIGN	RGW
DRAWN	RGW
CHECKED	NM

RATHDOWNE ESTATE STAGE 6
INTERSECTION DETAILS 1

SCALE	AS SHOWN	DATUM	AHD	DATE	AUG '19

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/06
SHEET 3 OF 14

Plotted:28/01/2020
\\bpd-fs03.corporate.bpd.com.au\Work2\H9365\Eng\Stage 6\E6_R03_INT1.dgn

INTERSECTION DETAILS

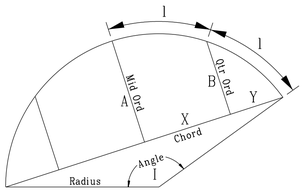
SCALE 1:200
SCALE 1 : 200

4 2 0 4 8 16
LENGTHS ARE IN METRES

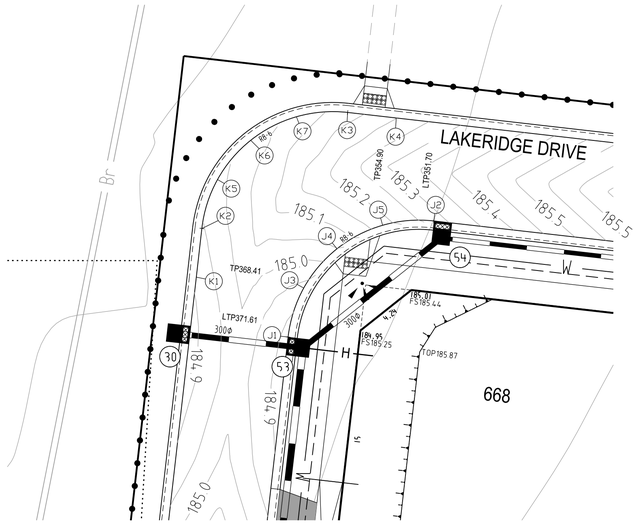
ALL PRAM CROSSING SPLAYS TO BE 600mm FROM EDGE OF PATH

TACTILES TO BE INSTALLED IN ACCORDANCE WITH CITY OF WHITTLESEA SD320

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

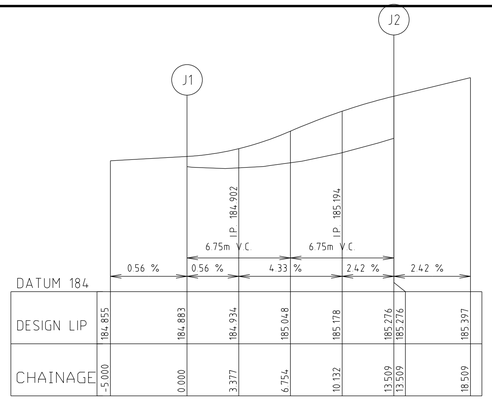


CURVE SETOUT DIAGRAM



LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20



LIP LINE J

Alignment J

	Point no	Easting	Northing	RL
J	1	322055·179	5836934·946	184·883
J	2	322064·696	5836942·518	185·276
J	3	322056·201	5836938·142	184·934
J	4	322058·369	5836940·703	185·048
J	5	322061·352	5836942·240	185·178

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
J	1 2	90·000	8·600	13·509	2·519	1·864	2·790	3·291	3·377	185·048

Alignment E

	Point no	Easting	Northing	RL
E	1	322048·533	5836876·598	185·615
E	2	322054·176	5836867·469	185·580
E	3	322055·617	5836866·931	185·597
E	4	322048·666	5836873·724	185·637
E	5	322049·740	5836871·042	185·618
E	6	322051·634	5836868·888	185·581

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
E	1 2	-77·033	-8·600	11·563	1·871	1·390	2·519	2·837	2·891	185·618

Alignment F

	Point no	Easting	Northing	RL
F	1	322053·434	5836860·915	185·597
F	2	322042·416	5836855·764	185·937
F	3	322050·117	5836861·422	185·603
F	4	322046·859	5836860·621	185·717
F	5	322044·154	5836858·635	185·856

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
F	1 2	-90·000	-8·600	13·509	2·519	1·864	2·790	3·291	3·377	185·717

Alignment N

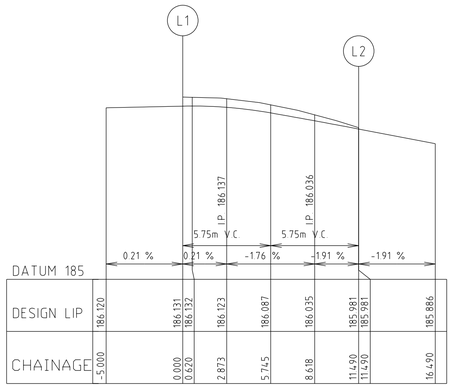
	Point no	Easting	Northing	RL
N	1	322015·585	5836829·855	185·871
N	2	322023·126	5836822·525	185·965
N	3	322018·293	5836829·083	185·913
N	4	322020·606	5836827·477	185·937
N	5	322022·277	5836825·210	185·951

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
N	1 2	75·385	8·600	11·315	1·795	1·334	2·480	2·778	2·829	185·937

Alignment M

	Point no	Easting	Northing	RL
M	1	322029·293	5836824·608	185·959
M	2	322032·150	5836832·300	186·109
M	3	322029·256	5836826·741	185·970
M	4	322029·745	5836828·817	186·023
M	5	322030·730	5836830·709	186·082

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
M	1 2	56·989	8·600	8·554	1·042	0·777	1·986	2·117	2·138	186·023

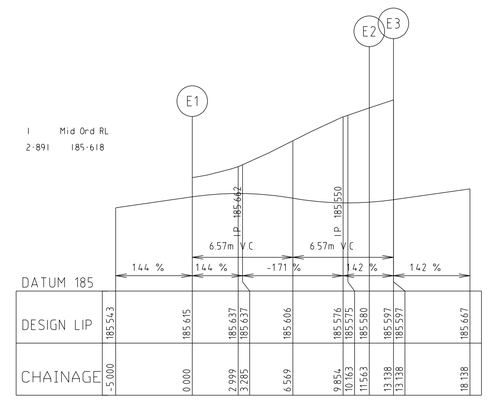


LIP LINE L

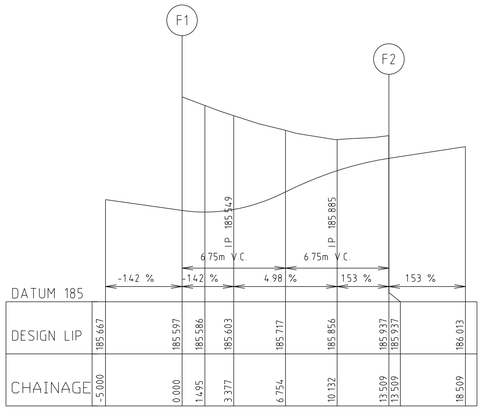
Alignment L

	Point no	Easting	Northing	RL
L	1	322030·344	5836841·258	186·131
L	2	322021·287	5836835·647	185·981
L	3	322028·936	5836838·770	186·123
L	4	322026·789	5836836·881	186·087
L	5	322024·142	5836835·800	186·035

	Curve no	I	Radius	Arc	Mid Ord	Qtr Ord	X	Y	I	Mid Ord RL
L	1 2	76·551	8·600	11·490	1·849	1·373	2·508	2·819	2·873	186·087

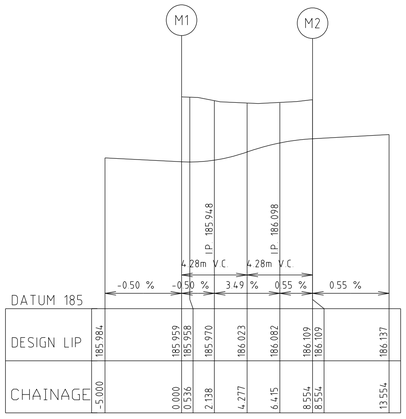


LIP LINE E

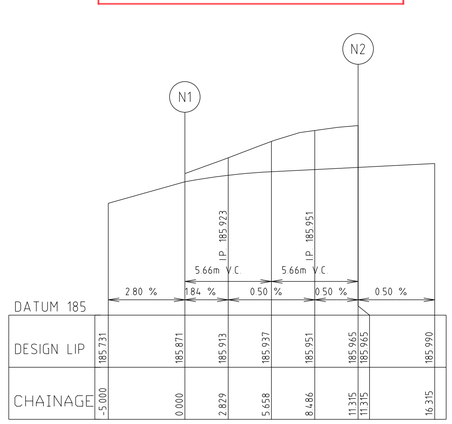


LIP LINE F

AS CONSTRUCTED



LIP LINE M



LIP LINE N

AMENDMENTS			
VER.	DATE	REMARKS	
B	11·03·20	SETOUT TABLE L INCLUDED	
A	30·08·19	ISSUE 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	BPD
DESIGN	RGW
DRAWN	RGW
CHECKED	NM

RATHDOWNE ESTATE
STAGE 6
INTERSECTION DETAILS 2

SCALE	AS SHOWN
DATUM	AHD
DATE	AUG '19

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/06
SHEET 4 OF 14 B

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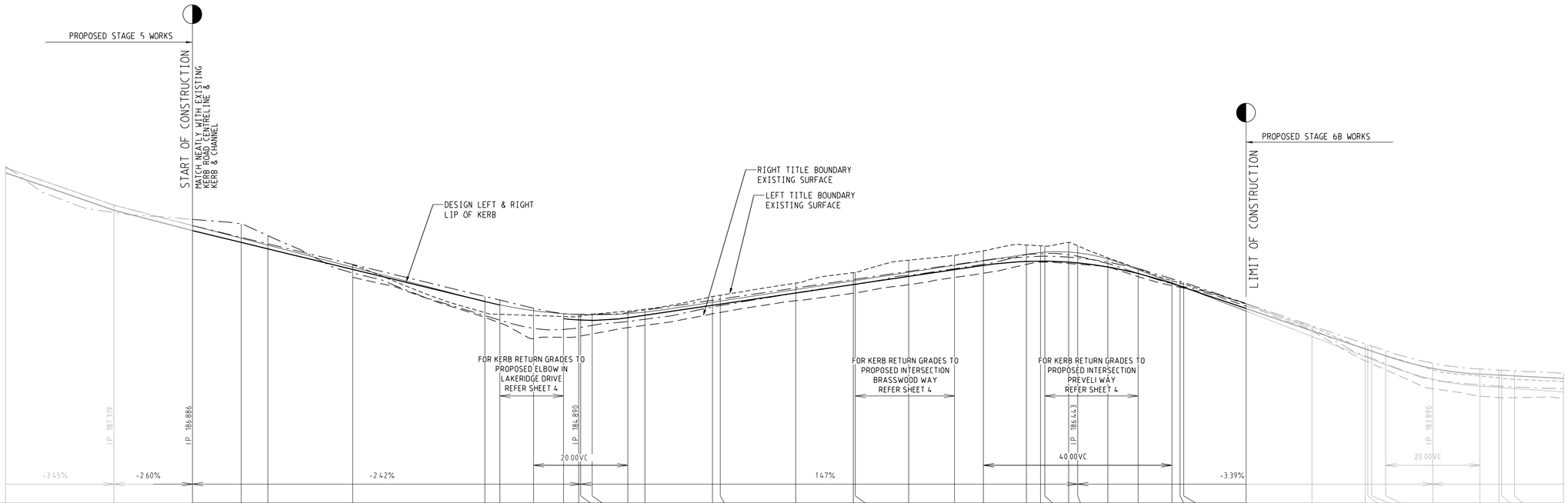
Plotted:20/09/2020

AS CONSTRUCTED

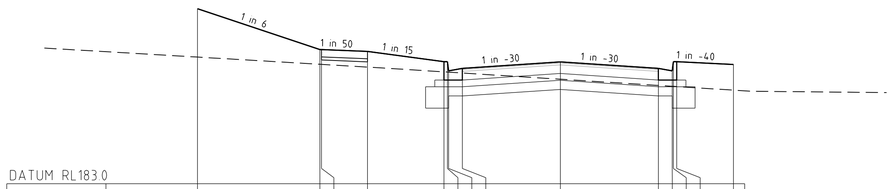


VC LENGTH

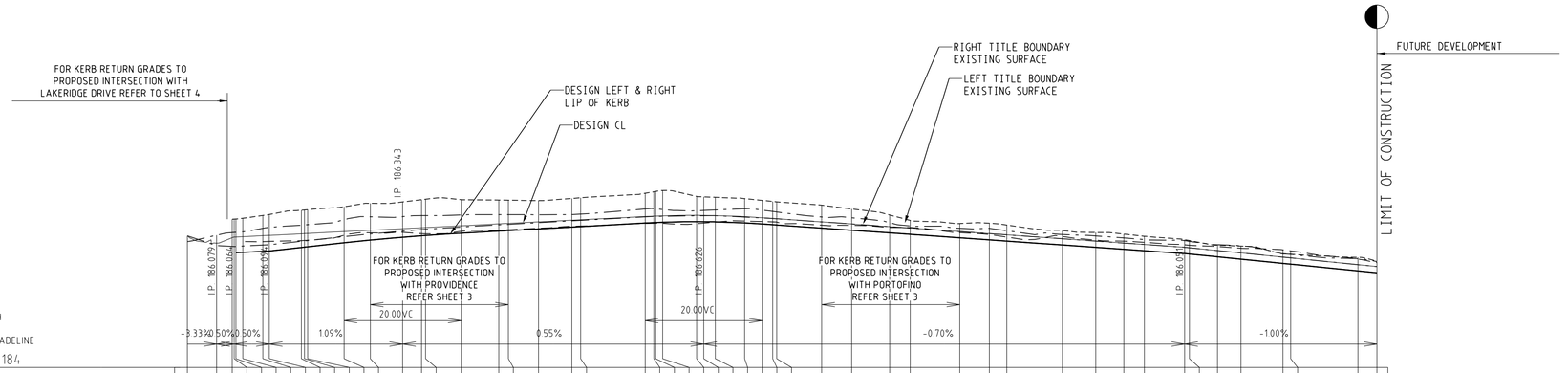
DESIGN GRADELINE

DATUM 181

| | | |



| DATUM RL183.0 | | |



CHAINAGE CENTRE LINE	ES LEFT TITLE BDY	FS LEFT TITLE BDY	LEFT LIP OF KERB	DESIGN CL	RIGHT LIP OF KERB	FS RIGHT TITLE BDY	ES RIGHT TITLE BDY
0.00				186.25			
4.99	186.53			186.08			
7.66	186.53			186.07			
7.99	186.53			186.06			
8.28	186.55			186.07			
9.47	186.59		185.97	186.07	185.98		
12.89	186.61		185.98	186.09	186.09	185.98	186.15
13.99	186.68		185.99	186.09	185.99	185.99	186.15
19.48	186.69		186.05	186.15	186.05	186.05	186.16
20.00	186.69		186.05	186.16	186.05	186.05	186.17
20.54	186.74	186.28	186.06	186.17	186.06	186.06	186.17
26.77	186.80	186.35	186.13	186.23	186.13	186.13	186.26
31.25	186.83	186.40	186.17	186.28	186.17	186.38	186.30
36.77	186.86		186.22	186.33	186.22	186.43	186.31
40.00	186.86		186.25	186.35	186.25	186.46	186.28
40.69	186.87		186.25	186.36	186.25	186.46	186.28
44.77	186.86		186.29	186.40	186.29	186.50	186.32
53.19	186.86		186.33	186.43	186.33	186.54	186.34
54.85	186.86		186.34	186.44	186.34	186.55	186.35
60.00	186.85	186.59	186.36	186.47	186.36	186.58	186.38
65.69	186.89	186.62	186.40	186.50	186.40	186.61	186.41
67.20	186.90	186.63	186.40	186.51	186.40	186.61	186.41
78.21	186.97	186.69	186.46	186.57	186.46	186.68	186.46
79.69	187.00	186.70	186.47	186.58	186.47	186.68	186.46
80.00	187.00	186.70	186.47	186.58	186.47	186.68	186.46
87.20	187.02	186.70	186.48	186.58	186.48	186.69	186.46
87.01	186.92	186.71	186.49	186.60	186.49	186.70	186.45
88.21	186.91	186.71	186.49	186.59	186.49	186.70	186.46
90.19	186.90	186.71	186.49	186.59	186.49	186.70	186.48
95.20	186.88	186.69	186.47	186.57	186.47	186.68	186.50
98.21	186.85	186.67	186.45	186.56	186.45	186.66	186.49
100.00	186.83	186.66	186.44	186.54	186.44	186.65	186.49
100.69	186.83	186.66	186.43	186.54	186.43	186.64	186.48
108.37	186.77		186.38	186.48	186.38	186.59	186.43
113.51	186.71		186.34	186.45	186.34	186.55	186.43
120.00	186.60		186.30	186.40	186.30	186.51	186.39
123.51	186.51		186.27	186.38	186.27	186.48	186.39
131.97	186.46	186.44	186.21	186.32	186.21	186.42	186.30
137.01	186.46	186.40	186.18	186.28	186.18	186.39	186.27
140.00	186.43	186.38	186.16	186.26	186.16	186.37	186.23
149.51	186.34	186.31	186.09	186.20	186.09	186.30	186.24
155.20	186.30	186.28	186.05	186.16	186.05	186.26	186.17
160.00	186.28	186.24	186.02	186.12	186.02	186.23	186.16
163.51	186.24	186.22	185.99	186.10	185.99	186.20	186.13
170.40	186.18	186.17	185.94	186.05	185.94	186.16	186.09
171.20	186.17	186.16	185.94	186.04	185.94	186.15	186.09
176.01	186.09	186.11	185.89	185.99	185.89	186.10	186.07
180.00	186.07	186.07	185.85	185.95	185.85	186.06	186.03
187.20	186.07	186.00	185.78	185.88	185.78	185.99	186.01
188.51	185.93	185.99	185.76	185.87	185.76	185.97	185.99
200.00	185.88	185.87	185.65	185.75	185.65	185.86	185.85
203.24		185.84	185.62	185.72	185.62	185.83	185.79

TP LTP LTP LTP LTP

PREVELI WAY

LONGITUDINAL SECTION

SCALE HORIZONTAL 1:500
VERTICAL 1:50

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

AS CONSTRUCTED

VER.	DATE	REMARKS
B	12·03·20	ISSUE FOR CONSTRUCTION
A	30·08·19	ISSUE 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	BPD
DESIGN	RGW
DRAWN	RGW
CHECKED	NM

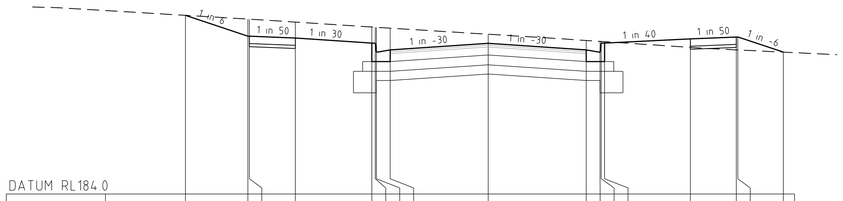
RATHDOWNE ESTATE
STAGE 6

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/06

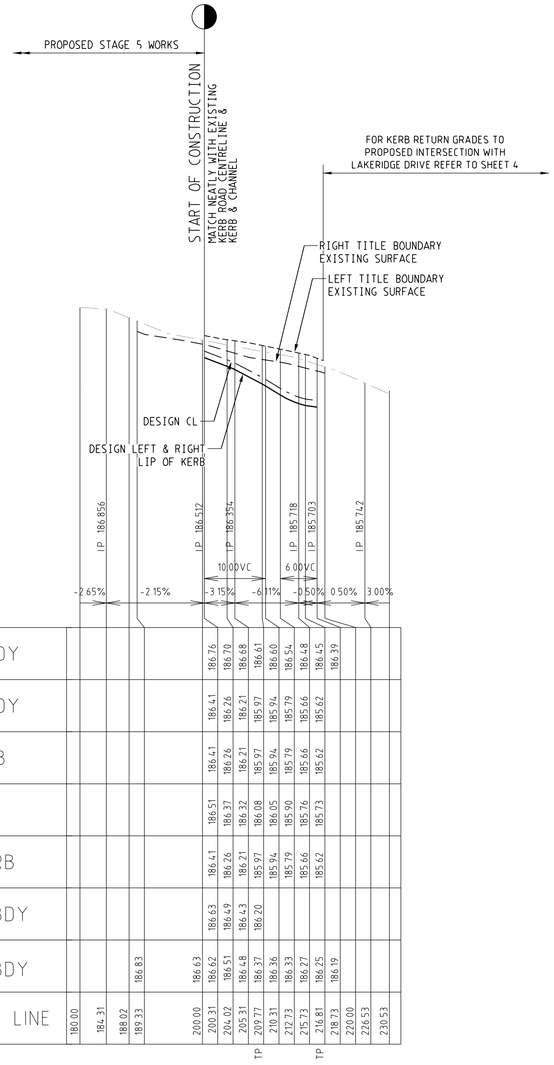
SCALE AS SHOWN | DATUM AHD | DATE AUG '19 | SHEET 7 OF 14 | B

J:\9365\Eng\Stage 6\Eb_RD7_PRE_LS.dgn

Plotted: 27/07/2020


1 in -6
1 in 50
1 in 30
1 in -30
1 in -30
1 in 40
1 in 50
1 in -6

| | | |

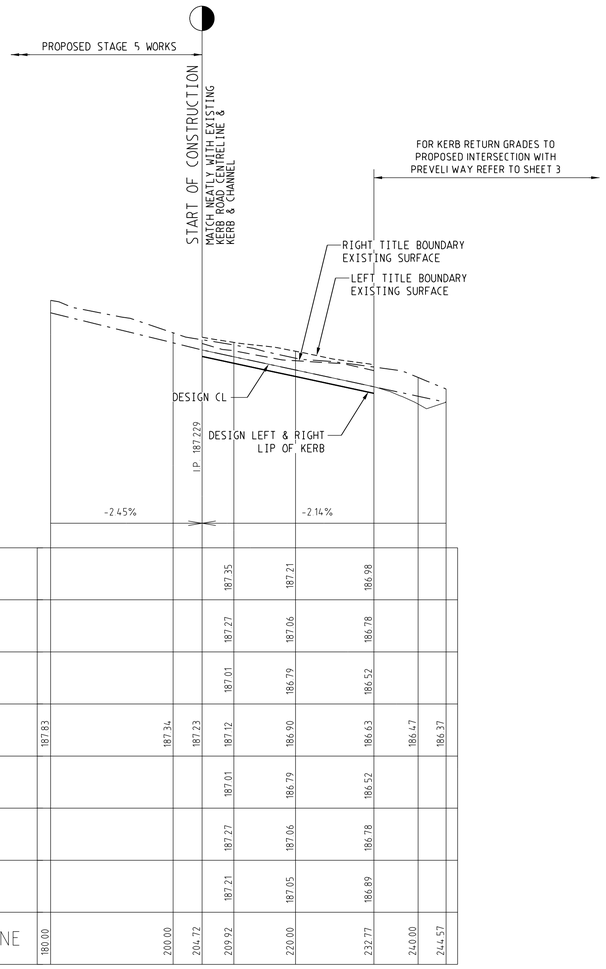


VC LENGTH

DESIGN GRADELINE

DATUM 182

| | | |



VC LENGTH

DESIGN GRADELINE

DATUM 184

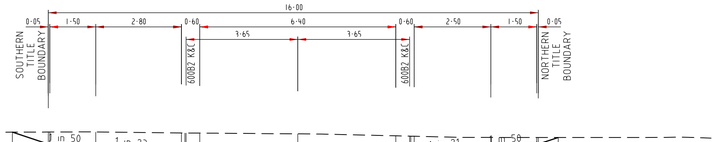
ES LEFT TITLE BDY				187.35		187.21		186.98				
FS LEFT TITLE BDY				187.27		187.06		186.78				
LEFT LIP OF KERB				187.01		186.79		186.52				
DESIGN CL	187.83		187.34		187.23	187.12		186.90		186.63	186.47	186.37
RIGHT LIP OF KERB				187.01		186.79		186.52				
FS RIGHT TITLE BDY				187.27		187.06		186.78				
ES RIGHT TITLE BDY				187.21		187.05		186.89				
CHAINAGE CENTRE LINE	180.00		200.00	204.72		209.92		220.00		232.77	240.00	244.57

PROVIDENCE AVENUE

LONGITUDINAL SECTION

SCALE HORIZONTAL 1:500
VERTICAL 1:50

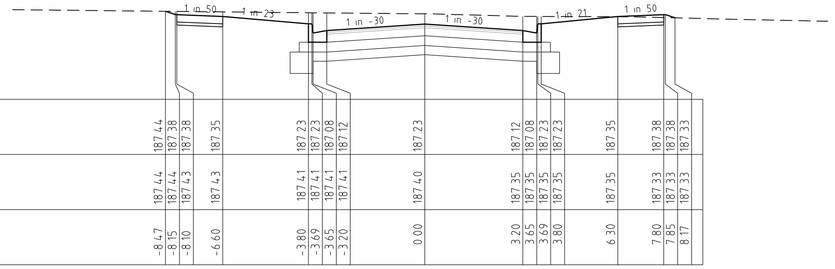
1:500 10 5 00 10 20 40
1:50 1 0.5 00 1 2 4



DATUM RL185.0

DESIGN SURFACE	186.98	186.78	186.78	186.75	186.63	186.63	186.48	186.52	186.63	186.52	186.48	186.63	186.63	186.75	186.78	186.78	186.89
EXISTING SURFACE	186.98	186.98	186.98	186.98	186.96	186.96	186.96	186.96	186.95	186.92	186.91	186.91	186.91	186.89	186.89	186.89	186.89
OFFSET	-9.32	-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	8.50

Ch232.77



DATUM RL186.0

DESIGN SURFACE	187.44	187.38	187.38	187.35	187.23	187.23	187.08	187.12	187.23	187.12	187.08	187.23	187.23	187.35	187.38	187.38	187.38
EXISTING SURFACE	187.44	187.44	187.43	187.43	187.41	187.41	187.41	187.41	187.40	187.35	187.35	187.35	187.35	187.35	187.33	187.33	187.33
OFFSET	-8.47	-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	8.17

Ch204.72

PROVIDENCE AVENUE

CROSS SECTION

SCALE HORIZONTAL 1:100
VERTICAL 1:50

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

AS CONSTRUCTED

VER.	DATE	REMARKS
A	30·08·19	ISSUE FOR CONSTRUCTION

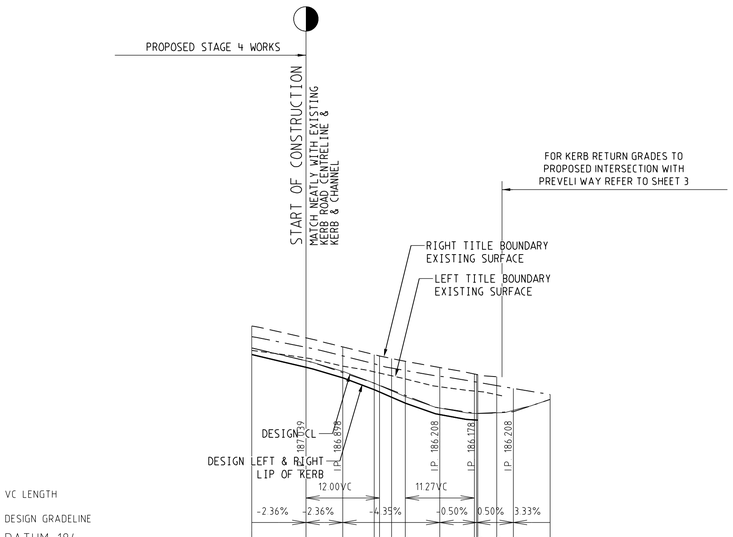
breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

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

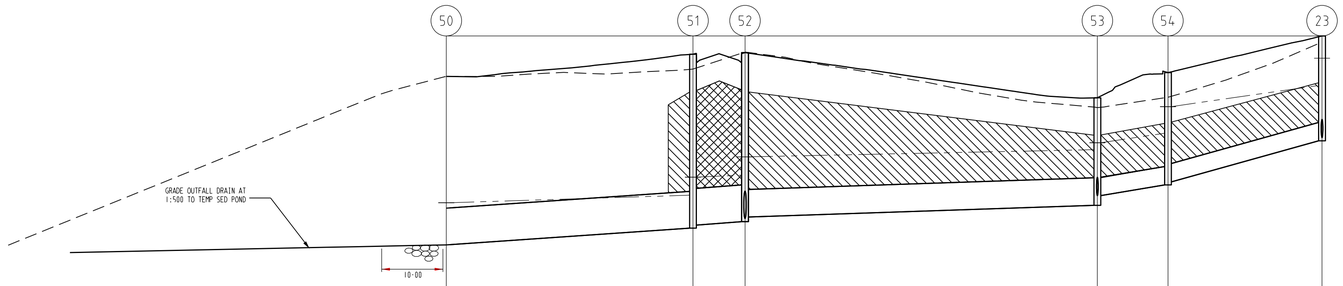
RATHDOWNE ESTATE
STAGE 6

MUNICIPALITY	WHITTLESEA
REFERENCE	9365 E/06
SCALE	AS SHOWN
DATUM	AHD
DATE	AUG '19
SHEET	10 OF 14 A

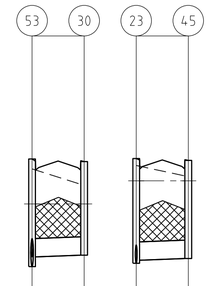
J:\9365\Eng\Stage 6\E6_R10_PRO_LXS.dgn
Plotted:6/03/2020


PROPOSED STAGE 4 WORKS
START OF CONSTRUCTION
MATCH NEATLY WITH EXISTING KERB ROAD CENTRELINE & KERB & CHANNEL
FOR KERB RETURN GRADES TO PROPOSED INTERSECTION WITH PREVELI WAY REFER TO SHEET 3
RIGHT TITLE BOUNDARY EXISTING SURFACE
LEFT TITLE BOUNDARY EXISTING SURFACE
DESIGN CL
DESIGN LEFT & RIGHT LIP OF KERB
187.59
186.878
IP 186.208
IP 186.178
IP 186.208
VC LENGTH
12.00VC
11.27VC
DESIGN GRADELINE
-2.36%
-2.36%
-4.35%
-0.50%
0.50%
3.33%
DATUM 184

| | | |

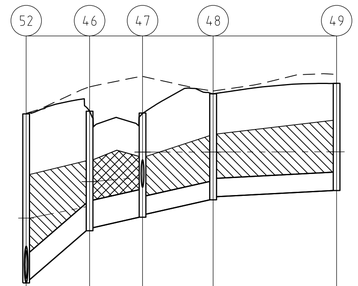


VELOCITY (m/sec)	2.31m/s	2.31m/s	1.35m/s	2.79m/s	2.90m/s
DESIGN (m3/s)	0.48m3/s	0.48m3/s	0.17m3/s	0.15m3/s	0.15m3/s
CAPACITY (m3/s)	0.65m3/s	0.65m3/s	0.21m3/s	0.20m3/s	0.21m3/s
DIAMETER AND TYPE (CLASS 2)	600 RRJ	CLASS 4 600 RRJ	450 RRJ	300 RRJ	300 RRJ
GRADE	1 in 150	1 in 150	1 in 300	1 in 65.7	1 in 37.5
DATUM RL	177.0				
DEPTH FS TO INVERT	2.795 / 2.745	2.840 / 2.790	2.759 / 2.684	1.756 / 1.598	1.832 / 1.782	1.710 / 1.665
HGL LEVEL	183.024 / 183.307	183.431 / 183.726	183.758 / 184.056	184.174 / 184.287	184.442 / 184.876	185.222 / 185.665
INVERT	182.574 / 182.624	182.892 / 182.942	182.999 / 183.074	183.265 / 183.423	183.598 / 183.648	184.319
FINISHED SURFACE	185.369	185.732	185.758	185.021	185.431	186.029
NATURAL SURFACE	185.370	185.489	185.767	184.860	185.029	185.916
CHAINAGE	36.558	76.835	85.333	142.859	154.385	179.535
	L=40.276m	L=8.498m	L=57.526m	L=11.526m	L=25.150m	

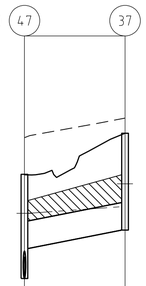


VELOCITY (m/sec)	1.03m/s	
DESIGN (m3/s)	0.00m3/s	
CAPACITY (m3/s)	0.07m3/s	
DIAMETER AND TYPE (CLASS 2)	CLASS 4 300 RRJ	
GRADE	1 in 300	
DATUM RL	178.0	
DEPTH FS TO INVERT	1.756	1.598 / 1.529
HGL LEVEL	184.174	184.287 / 184.287
INVERT	183.265	183.423 / 183.451
FINISHED SURFACE	185.021	184.980
NATURAL SURFACE	184.860	184.592
CHAINAGE	0.000	8.500
		L=8.500m

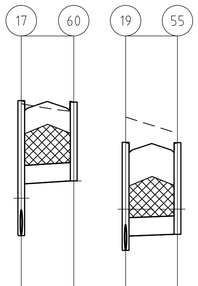
VELOCITY (m/sec)	1.03m/s	
DESIGN (m3/s)	0.00m3/s	
CAPACITY (m3/s)	0.07m3/s	
DIAMETER AND TYPE (CLASS 2)	CLASS 4 300 RRJ	
GRADE	1 in 300	
DATUM RL	179.0	
DEPTH FS TO INVERT	1.710	1.660 / 1.602
HGL LEVEL	185.222	185.665 / 185.665
INVERT	184.319	184.389 / 184.397
FINISHED SURFACE	186.029	185.999
NATURAL SURFACE	185.916	185.743
CHAINAGE	0.000	8.500
		L=8.500m



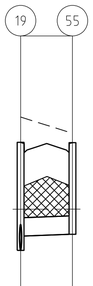
VELOCITY (m/sec)	6.49m/s	3.27m/s	2.54m/s	1.26m/s
DESIGN (m3/s)	0.32m3/s	0.32m3/s	0.01m3/s	0.01m3/s
CAPACITY (m3/s)	1.03m3/s	0.52m3/s	0.18m3/s	0.09m3/s
DIAMETER AND TYPE (CLASS 2)	450 RRJ	CLASS 4 450 RRJ	300 RRJ	300 RRJ
GRADE	1 in 12.9	1 in 50.8	1 in 49	1 in 200
DATUM RL	178.0			
DEPTH FS TO INVERT	2.759 / 2.709	1.952 / 1.902	1.644	1.730 / 1.680	1.750
HGL LEVEL	183.758 / 184.056	184.242 / 184.653	184.718 / 185.135	185.135 / 185.137	185.138
INVERT	182.999 / 183.049	183.850 / 183.900	184.070 / 184.120	184.356 / 184.406	184.506
FINISHED SURFACE	185.758	185.803	185.764	186.085	186.256
NATURAL SURFACE	185.767	186.199	186.370	186.131	186.402
CHAINAGE	0.000	10.352	18.997	30.523	50.685
		L=10.352m	L=8.645m	L=11.526m	L=20.162m



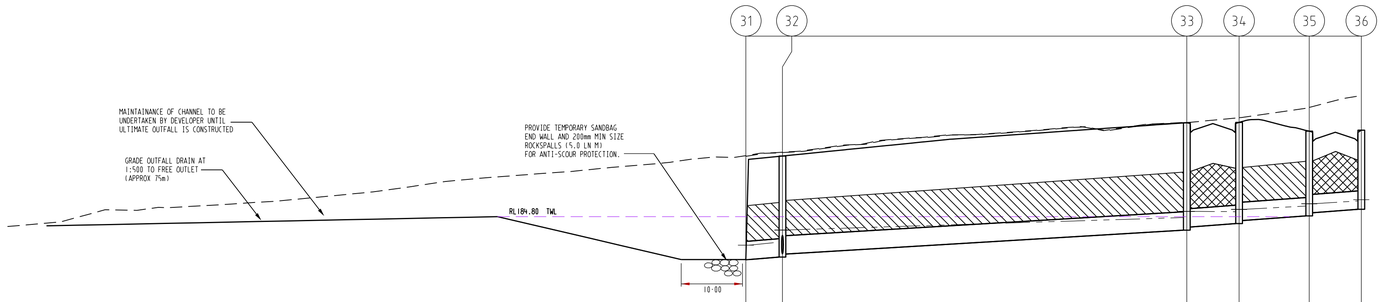
VELOCITY (m/sec)	3.16m/s	
DESIGN (m3/s)	0.30m3/s	
CAPACITY (m3/s)	0.50m3/s	
DIAMETER AND TYPE (CLASS 2)	450 RRJ	
GRADE	1 in 54.5	
DATUM RL	179.0	
DEPTH FS TO INVERT	1.694 / 1.205	1.581
HGL LEVEL	184.718 / 185.135	185.244
INVERT	184.070 / 184.559	184.861
FINISHED SURFACE	185.764	186.442
NATURAL SURFACE	186.370	186.689
CHAINAGE	0.000	16.415
		L=16.415m



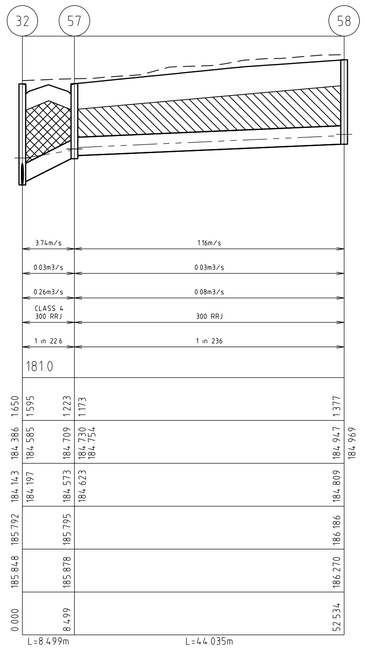
VELOCITY (m/sec)	0.84m/s	
DESIGN (m3/s)	0.00m3/s	
CAPACITY (m3/s)	0.01m3/s	
DIAMETER AND TYPE (CLASS 2)	CLASS 4 300 RRJ	
GRADE	1 in 180	
DATUM RL	178.0	
DEPTH FS TO INVERT	2.203 / 1.359	1.286
HGL LEVEL	184.087 / 184.382	184.663
INVERT	183.771 / 184.615	184.663
FINISHED SURFACE	185.974	185.949
NATURAL SURFACE	185.923	185.796
CHAINAGE	0.000	8.564
		L=8.564m



VELOCITY (m/sec)	1.03m/s	
DESIGN (m3/s)	0.01m3/s	
CAPACITY (m3/s)	0.07m3/s	
DIAMETER AND TYPE (CLASS 2)	CLASS 4 300 RRJ	
GRADE	1 in 300	
DATUM RL	179.0	
DEPTH FS TO INVERT	1.763 / 1.529	1.497
HGL LEVEL	184.933 / 185.202	185.203
INVERT	184.530 / 184.763	184.792
FINISHED SURFACE	186.293	186.288
NATURAL SURFACE	186.706	186.439
CHAINAGE	0.000	8.467
		L=8.467m



VELOCITY (m/sec)	1.46m/s	1.37m/s		1.45m/s	1.45m/s	1.45m/s
DESIGN (m3/s)	0.10m3/s	0.07m3/s		0.04m3/s	0.04m3/s	0.03m3/s
CAPACITY (m3/s)	0.10m3/s	0.10m3/s		0.10m3/s	0.10m3/s	0.10m3/s
DIAMETER AND TYPE (CLASS 2)	300 RRJ	300 RRJ		CLASS 4 300 RRJ	300 RRJ	CLASS 4 300 RRJ
GRADE	1 in 148	1 in 169		1 in 150	1 in 150	1 in 150
DATUM RL	179.0					
DEPTH FS TO INVERT	-0.003 / -0.003	1.650	1.600	1.754 / 1.704	1.652	1.602	1.383 / 1.333	1.291
HGL LEVEL	184.337	184.386	184.585	184.789 / 184.889	184.884	184.921	184.975 / 185.012	185.059
INVERT	184.103 / 184.103	184.143	184.193	184.582 / 184.632	184.689	184.739	184.816 / 184.866	184.922
FINISHED SURFACE	184.100	185.792		186.336	186.341		186.199	186.214
NATURAL SURFACE	185.788	185.848		186.337	186.418		186.585	186.777
CHAINAGE	0.000	5.974		71.992	80.527		91.982	100.482
		L=5.974m	L=66.018m		L=8.535m	L=11.454m	L=8.500m	



VELOCITY (m/sec)	3.74m/s	1.14m/s
DESIGN (m3/s)	0.03m3/s	0.03m3/s
CAPACITY (m3/s)	0.26m3/s	0.08m3/s
DIAMETER AND TYPE (CLASS 2)	CLASS 4 300 RRJ	300 RRJ
GRADE	1 in 22.6	1 in 236
DATUM RL	181.0	
DEPTH FS TO INVERT	1.650 / 1.595	1.223 / 1.173	1.377
HGL LEVEL	184.386 / 184.585	184.709 / 184.730 / 184.754	184.947	184.969
INVERT	184.143 / 184.197	184.573 / 184.623	184.809
FINISHED SURFACE	185.792	185.795	186.186
NATURAL SURFACE	185.848	185.878	186.270
CHAINAGE	0.000	8.499	52.534
	L=8.499m	L=44.035m	

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

AS CONSTRUCTED

INDICATES CRUSHED ROCK BACKFILL CLASS 2

INDICATES CRUSHED ROCK BACKFILL CLASS 3

INDICATES 5YR HGL

VER.	DATE	REMARKS
C	19·03·20	PIT 3 REMOVED
B	18·03·20	PIT NAMES UPDATED
A	30·08·19	ISSUE 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	BPD
DESIGN	RGW
DRAWN	RGW
CHECKED	NM

RATHDOWNE ESTATE
STAGE 6
DRAINAGE LONGDITUDINAL SECTIONS 1

SCALE	AS SHOWN	DATUM	AHD	DATE	AUG '19

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/06
SHEET 12 OF 14 C

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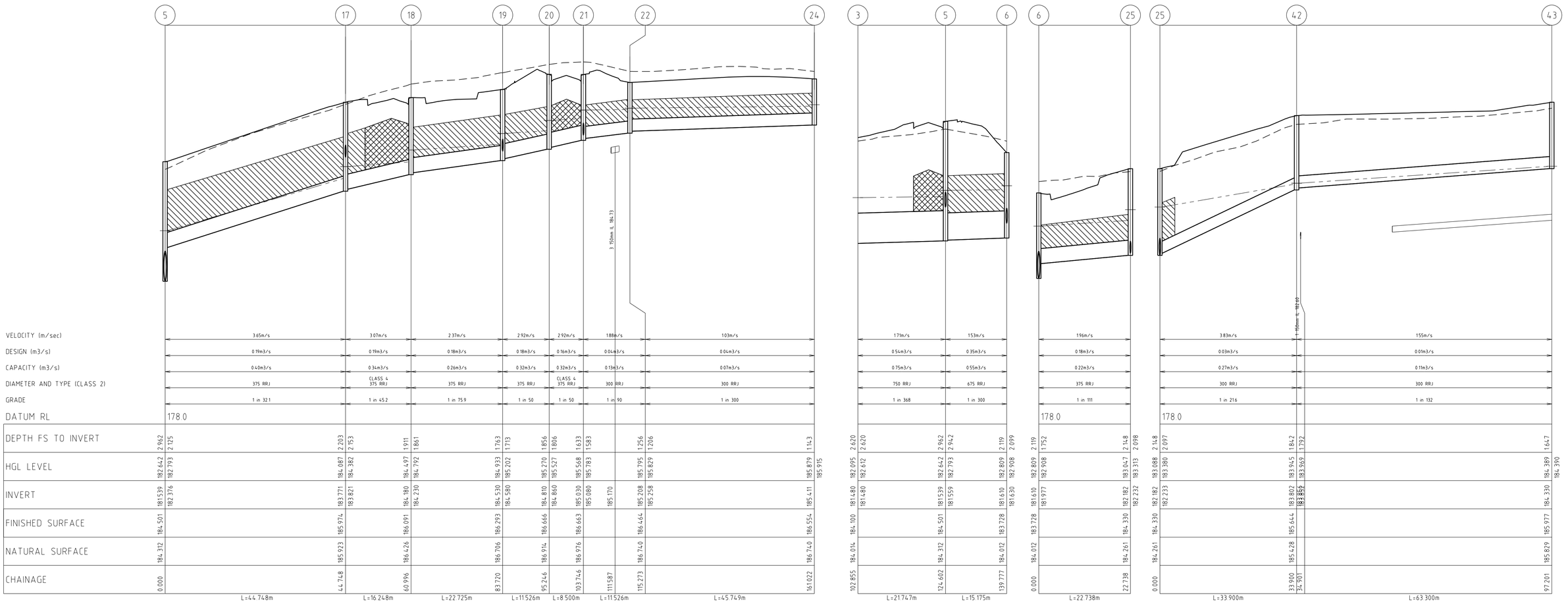
Plotted:19/03/2020



PIT SCHEDULE

PIT No.	PIT DESCRIPTION	LENGTH	WIDTH	INLET INVERT	INLET DIA	OUTLET INVERT	OUTLET DIA	TOP PIT RL	DEPTH INVERT	REMARKS
3	END PIPE	900	900	181.48	750	181.48	750	184.10	2.62	GRADE TO FREE OUTLET
5	GRATED ENTRY PIT	900	900	181.56	675	181.54	750	184.50	2.96	GAA STD DWG EDCM607 (HAUNCHED)
				182.38	375					
6	GRATED ENTRY PIT	900	900	181.63	600	181.61	675	183.73	2.12	GAA STD DWG EDCM607 (HAUNCHED)
17	GRATED ENTRY PIT	900	600	183.82	375	183.77	375	185.97	2.20	GAA STD DWG EDCM603
				184.62	300					
18	GRATED ENTRY PIT	900	600	184.23	375	184.18	375	186.09	1.91	GAA STD DWG EDCM603
19	GRATED ENTRY PIT	900	600	184.58	375	184.53	375	186.29	1.76	GAA STD DWG EDCM603
				184.76	300					
20	GRATED ENTRY PIT	900	600	184.86	300	184.81	375	186.67	1.86	GAA STD DWG EDCM603
21	GRATED ENTRY PIT	900	600	185.08	300	185.03	300	186.66	1.63	GAA STD DWG EDCM603
				185.16	300					
22	GRATED ENTRY PIT	900	600	185.26	300	185.21	300	186.46	1.26	GAA STD DWG EDCM603
23	END PIPE			184.37	300			186.03	1.83	CONNECT TO EXISTING STUB
						184.20	300			
24	JUNCTION PIT	900	600			185.41	300	186.55	1.14	GAA STD DWG EDCM605
25	GRATED ENTRY PIT	900	600	182.23	375	182.18	375	184.33	2.15	GAA STD DWG EDCM605
30	GRATED ENTRY PIT	900	600			183.45	300	184.98	1.53	GAA STD DWG EDCM603
32	GRATED ENTRY PIT	900	600	184.19	300	184.14	300	185.79	1.65	GAA STD DWG EDCM603
				184.20	300					
33	GRATED ENTRY PIT	900	600	184.63	300	184.58	300	186.34	1.75	GAA STD DWG EDCM603
34	GRATED ENTRY PIT	900	600	184.74	300	184.69	300	186.34	1.65	GAA STD DWG EDCM603
35	GRATED ENTRY PIT	900	600	184.87	300	184.82	300	186.20	1.38	GAA STD DWG EDCM603
36	GRATED ENTRY PIT	900	600			184.92	300	186.21	1.29	GAA STD DWG EDCM603
37	END PIPE					184.86	450	186.44	1.58	CONNECT TO EXISTING STUB
42	JUNCTION PIT	900	600	183.85	300	183.80	300	185.64	1.84	GAA STD DWG EDCM605
43	JUNCTION PIT	900	600			184.33	300	185.98	1.65	GAA STD DWG EDCM605
45	GRATED ENTRY PIT	900	600			184.40	300	186.00	1.60	GAA STD DWG EDCM603
46	GRATED ENTRY PIT	900	600	183.90	450	183.85	450	185.80	1.95	GAA STD DWG EDCM603
47	GRATED ENTRY PIT	900	600	184.56	450			185.76	1.69	GAA STD DWG EDCM603
				184.12	300	184.07	450			
48	GRATED ENTRY PIT	900	600	184.41	300	184.36	300	186.09	1.73	GAA STD DWG EDCM603
49	JUNCTION PIT	900	600			184.51	300	186.26	1.75	GAA STD DWG EDCM605
50	END PIPE	900	900	182.62	600	182.57	600	185.37	2.80	GRADE TO FREE OUTLET
51	GRATED ENTRY PIT	900	900	182.94	600	182.89	600	185.73	2.84	GAA STD DWG EDCM603&607 (HAUNCHED)
52	GRATED ENTRY PIT	900	600	183.05	450			185.76	2.76	GAA STD DWG EDCM603
				183.07	450	183.00	600			
53	GRATED ENTRY PIT	900	600	183.42	300			185.02	1.76	GAA STD DWG EDCM603
				183.42	300	183.27	450			
54	GRATED ENTRY PIT	900	600	183.65	300	183.60	300	185.43	1.83	GAA STD DWG EDCM603
55	GRATED ENTRY PIT	900	600			184.79	300	186.29	1.50	GAA STD DWG EDCM603
56	END PIPE					185.76	300	187.23	1.47	GRADE TO FREE OUTLET
57	GRATED ENTRY PIT	900	600	184.62	300	184.57	300	185.80	1.22	GAA STD DWG EDCM603
58	GRATED ENTRY PIT	900	600			184.81	300	186.19	1.38	GAA STD DWG EDCM603
60	GRATED ENTRY PIT	900	600			184.66	300	185.95	1.29	GAA STD DWG EDCM603

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
D	12·05·20	PIT SCHEDULE UPDATED, DRAINGE LINES AMENDED
C	19·03·20	PIT SCHEDULE UPDATED
B	18·03·20	PIT SCHEDULE UPDATED
A	30·08·19	ISSUE 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	BPD
DESIGN	RGW
DRAWN	RGW
CHECKED	NM

RATHDOWNE ESTATE STAGE 6

DRAINAGE LONGDITUDINAL SECTIONS 2

SCALE	AS SHOWN
DATUM	AHD
DATE	AUG '19
MUNICIPALITY	WHITTLESEA
REFERENCE	9365 E/06
SHEET	13 OF 14 D

Plotted:12/05/2020

J:\9916\Engi\Stage 6\E6_R13_DRN2.dgn

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	"RAISED PAVEMENT AHEAD" WARNING SIGN	W3-4
S8	ROAD HUMP SIGN & ADVISORY SPEED SIGN (20km/h)	W5-10, W8-2

North

AS CONSTRUCTED

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"

3.71ha

DRIVE
LAKERIDGE
WAY
PLACE
OAKVILLE
BRASSWOOD
PROVIDENCE
AVENUE
PORTOFINO
PREVELI
RESERVE No.4 280m²
RESERVE No.5 42m² ELEC SUBSTATION
5836972.041

PLAN
SCALE 1:500
SCALE 1 : 500
10 5 0 10 20 40
LENGTHS ARE IN METRES

AMENDMENTS			
VER.	DATE	REMARKS	
A	30·08·19	ISSUE 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	BPD
DESIGN	RGW
DRAWN	RGW
CHECKED	NM

RATHDOWNE ESTATE STAGE 6
SIGNAGE AND LINEMARKING PLAN

SCALE	AS SHOWN	DATUM AHD	DATE AUG '19

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/06
SHEET OF 14 A

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Plotted:07/02/2020