AS CONSTRUCTED

SHEET INDEX

SHT No.	VER	DESCRIPTION
1	P	DETAIL PLAN SHEET 1 OF 2
2	K	DETAIL PLAN SHEET 2 OF 2
3	B	NOTES AND TYPICAL SECTIONS
4	E	INTERSECTION DETAILS SHEET 1 OF 2
5	C	INTERSECTION DETAILS SHEET 2 OF 2
6	B	JARDIN ROAD - LONGITUDINAL SECTIONS & INTERSECTION DETAILS
7	A	JARDIN ROAD - CROSS SECTIONS
8	B	NORTH STREET WEST - LONGITUDINAL AND CROSS SECTIONS
9	C	NORTH STREET WEST - CROSS SECTIONS
10	A	MEADOW LANE - LONGITUDINAL AND CROSS SECTIONS
11	A	GLENWOOD AVENUE AND CARMICHAEL DRIVE - LONGITUDINAL SECTIONS
12	A	GLENWOOD AVENUE - CROSS SECTIONS
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14	A	YORK PARADE - LONGITUDINAL AND CROSS SECTIONS
15	A	PORTOFINO WAY AND NORTH STREET EAST - LONGITUDINAL AND CROSS SECTIONS
16	C	DRAINAGE LONGITUDINAL SECTIONS SHEET 1 OF 4
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18	I	DRAINAGE LONGITUDINAL SECTIONS & PIT SCHEDULE SHEET 3 OF 4
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20	C	SIGNAGE AND LINEMARKING PLAN SHEET 1 OF 2
21	G	SIGNAGE AND LINEMARKING PLAN SHEET 2 OF 2

FUTURE STAGE 3

FUTURE STAGE 3

FUTURE STAGE 3

CONSTRUCT TEMPORARY OPEN DRAIN GRADE AT 1 in 500 TO EXISTING SURFACE (TYPICAL).

CONSTRUCT TEMPORARY OPEN DRAIN GRADE AT 1 in 500 TO EXISTING SURFACE (TYPICAL).

CONSTRUCT TEMPORARY OPEN DRAIN GRADE AT 1 in 500 TO EXISTING SURFACE (TYPICAL).

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

LIMIT OF WORKS

CARMICHAEL DRIVE

BLANK END

FUTURE STAGE 7

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

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

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

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

LIMIT OF WORKS

YORK PARADE

GLENWOOD AVENUE

MEADOW LANE

STREET

NORTH

TREE PROTECTION ZONE

VEHICLE EXCLUSION FENCE. PROVIDE STD PALING FENCE ALONG RESERVE BOUNDARY TO BE CONSTRUCTED AS PART OF THE LANDSCAPE WORKS

STAGE 5A OPEN SPACE

FUTURE STAGE 7

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

BLANK END

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

PROVIDE 'NO ROAD' SIGN

ELECTRICAL SUBSTATION

FOR CONTINUATION REFER SHEET 2

North

PLAN

SCALE 1:500

SCALE 1 : 500

10 5 0 10 20 40

LENGTHS ARE IN METRES

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	RETAINING WALL	RETAINING WALL
Conduits 50mm	GW	GW
Conduits 100mm	W100	W100
Ex Gas/Elect/Tel	G E T	G E T

Ex/Natural/FS Level +28.57 +W628.57 28.57

FS @ Building Line 16.28.57

Top/Toe of Batter 100.28.57 100.28.57

Top Ret. Wall Level W28.57

100yr Flood Level 1128.57

Fill Prop/Ex

Cut Prop/Ex

BOUNDARY ROAD

VEARINGS ROAD GREEN LINK

CRAIGIEBURN ROAD

Site of Works

North

LOCALITY PLAN

MELWAYS: 388 - C10

NTS

WARNING

CONTRACTOR TO TAKE EXTRA CAUTION OF OPTIC FIBER CABLE IN DAVIS ROAD

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.

AMENDMENTS

VER.	DATE	REMARKS
P	24.05.19	BUS HARDSTANDS REMOVED, SHEET INDEX UPDATED
O	29.04.19	COUNCIL COMMENTS
N	26.04.19	COUNCIL COMMENTS
M	18.04.19	BUS HARDSTANDS INCLUDED ON NORTH & RATHDOWNE SHEET INDEX UPDATED
L	05.04.19	NORTH / PORTOFINO INTERSECTION UPDATED SHEET INDEX UPDATED
K	18.01.19	CYCLE/PED PATH SEPERATED ON NORTH STREET SHEET INDEX UPDATED
A	19.12.17	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-C10
SURVEY	BPD
DESIGN	SS
DRAWN	SS
CHECKED	

RATHDOWNE ESTATE STAGE 2

DETAIL PLAN SHEET 1 OF 2

SCALE	AS SHOWN
DATUM	AHD
DATE	JUL '17

MUNICIPALITY: WHITTLESEA

REFERENCE: 9365 E/2

SHEET 1 OF 21 P

Plotted:27/08/2019

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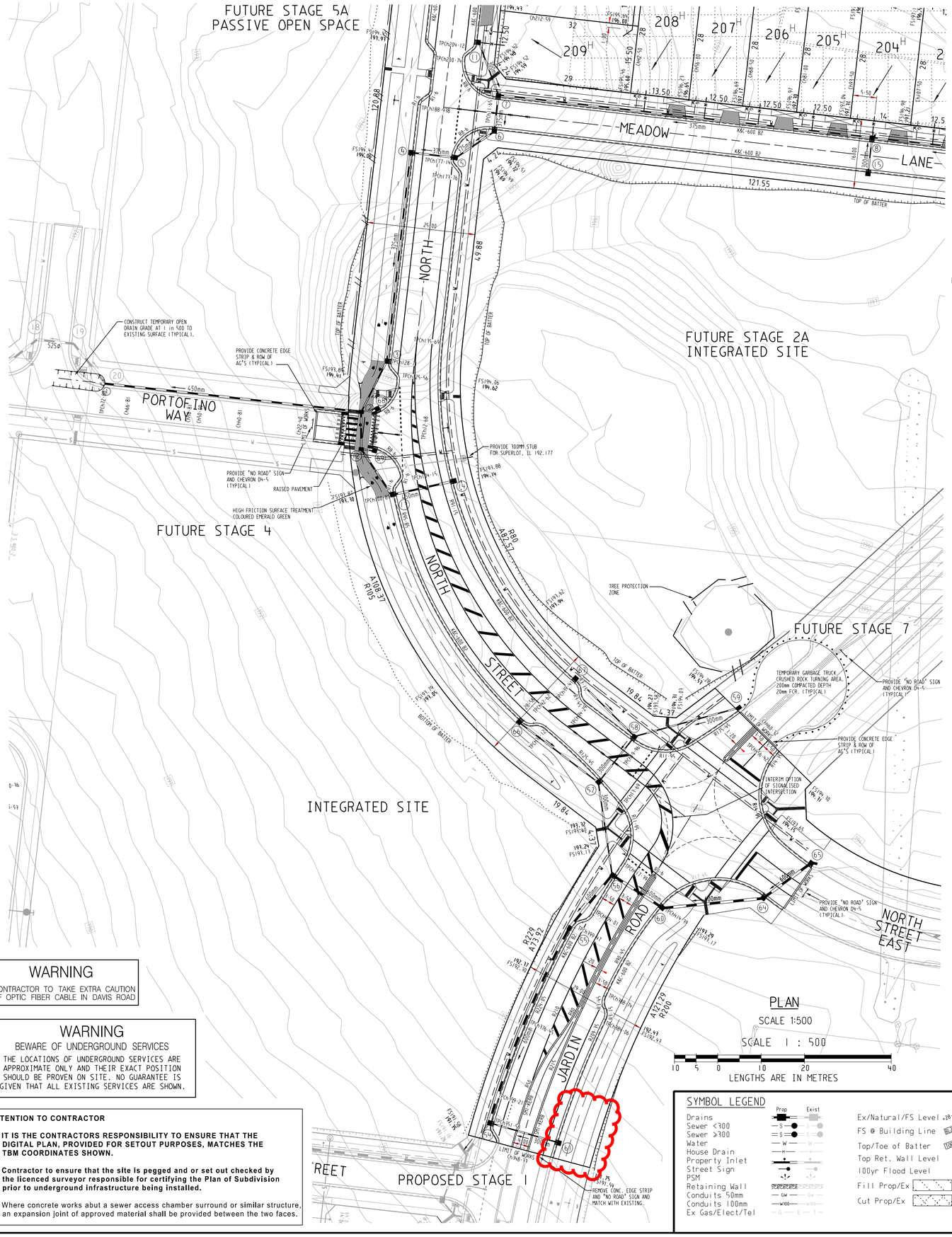
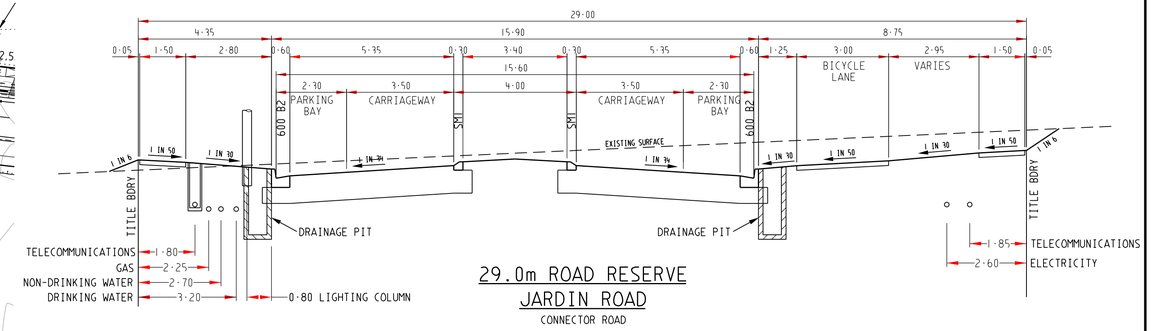
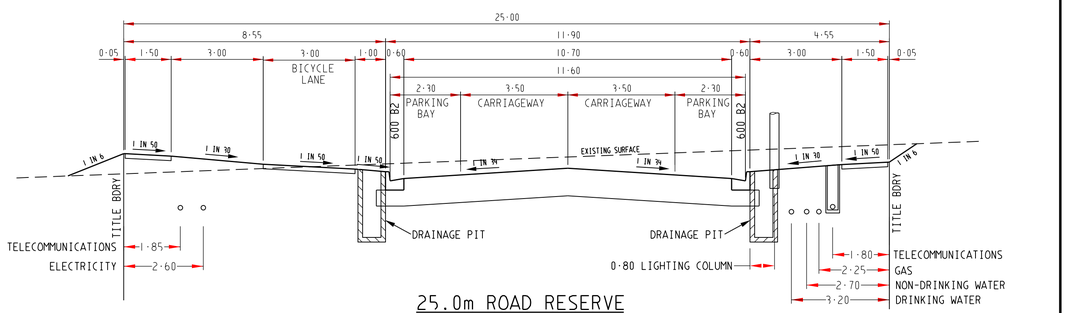




29.0m ROAD RESERVE
JARDIN ROAD
CONNECTOR ROAD



25.0m ROAD RESERVE
NORTH STREET
CONNECTOR ROAD

AS CONSTRUCTED

TYPICAL ROAD CROSS SECTIONS
SCALE HORIZONTAL 1:100
VERTICAL 1:50

WARNING
CONTRACTOR TO TAKE EXTRA CAUTION OF OPTIC FIBER CABLE IN DAVIS ROAD

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	G

Ex/Natural/FS Level 18.57 NE28.57 (18.57)
FS @ Building Line BL28.57
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

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	STREET TREES
JARDIN ROAD	29·00	3·20 W	2·70 W	2·25 W	2·60 E	0·90 BOK	1·85 E	1·78 E/W	4·35 W 8·75 E	G & W, FTTH & E	CONNECTOR ROAD	2·95W, 3·05E
NORTH STREET	25·00	3·20 E	2·70 E	2·25 E	2·60 W	0·90 BOK	1·85 W	1·78 E/W	4·55 E 8·55 W	G & W, FTTH & E	STREET - LEVEL 1	3·25N, 4·72S
MEADOW LANE	16·00	3·20 N	2·70 N	2·25 N	2·50 S	0·90 BOK	1·85 S	1·78 N/S	4·35 N 4·05 S	G & W, FTTH & E	STREET - LEVEL 1	2·95N, 2·80S
GLENWOOD AVENUE	20·00	5·30 N	4·80 N	4·30 N	2·60 S	0·90 BOK	1·85 S	1·78 N/S	4·95 S 7·45 N	G & W, FTTH & E	STREET - LEVEL 1	4·72N, 3·25S
YORK PARADE	16·00	3·20 E	2·70 E	2·25 E	2·50 W	0·90 BOK	1·85 W	1·78 E/W	4·35 E 4·05 W	G & W, FTTH & E	STREET - LEVEL 1	2·80W, 2·95E
CARMICHAEL DRIVE	16·00	3·20 S	2·70 S	2·25 S	2·60 N	0·90 BOK	1·85 N	1·78 N/S	4·95 S 4·05 N	G & W, FTTH & E	STREET - LEVEL 1	2·80N, 2·95S
PORTOFINO WAY	20·00	5·30 S	4·80 S	4·30 S	2·60 N	0·90 BOK	1·85 N	1·78 N/S	4·95 N 7·45 S	G & W, FTTH & E	STREET - LEVEL 1	

VER.	DATE	REMARKS
K	24·05·19	BUS HARDSTANDS REMOVED
J	26·04·19	COUNCIL COMMENTS
I	18·04·19	BUS HARDSTANDS ADDED TO NORTH & RATHDOWNE RAISED PAVEMENT AMENDED
H	07·03·19	RAISED PAVEMENT AT PORTOFINO / NORTH PATHS & TGSI AMENDMENTS
G	07·03·19	PATHS SEPERATED ALONG NORTH STREET
F	22·01·19	DRAINAGE PITS 66 & 67 INCLUDED
A	19.12.17	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-C10
SURVEY BPD
DESIGN SS
DRAWN SS
CHECKED

RATHDOWNE ESTATE STAGE 2
DETAIL PLAN SHEET 2 OF 2

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/2
SCALE AS SHOWN | DATUM AHD | DATE JUL'17 | SHEET 2 OF 21 | K

Plotted:24/05/2019
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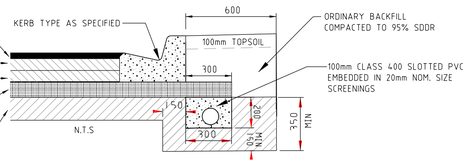
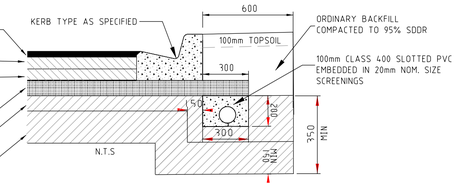
NOTES

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 2 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 (REFER EDCM501) UNLESS OTHERWISE SHOWN.
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: JARDIN ROAD AND NORTH STREET (540mm DEPTH)
    a) 40mm COMPACTED DEPTH SIZE 14 TYPE H 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) 250mm 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 CLASS 3 FCR" OR APPROVED EQUIVALENT MATERIAL.
    Refer to "Technical Specification for Roads and Drainage Works" Section 20.35 & Table 20.35 for requirements
    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.



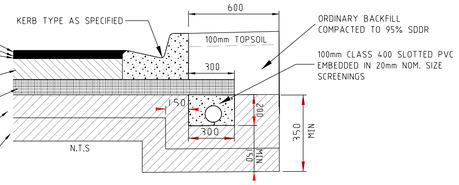
PAVEMENT DETAILS
JARDIN ROAD & NORTH STREET

PAVEMENT TO CONSIST OF: INTERSECTION NORTH STREET / JARDIN ROAD (600mm 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
    f) 100mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 CEMENT MODIFIED CR, 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) 100mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 4 CR, COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT.
    g) 210mm 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%
    h) 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 CLASS 3 FCR" OR APPROVED EQUIVALENT MATERIAL.



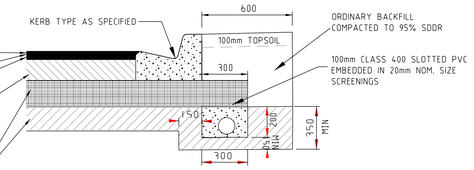
PAVEMENT DETAILS
INTERSECTION JARDIN ROAD & NORTH STREET

PAVEMENT TO CONSIST OF: PORTOFINO WAY (580mm 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) 100mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 CEMENT MODIFIED CR, 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) 140mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 4 FCR, COMPACTED TO AT LEAST 95% MODIFIED DRY DENSITY RATIO WITHIN 1% OF THE MODIFIED OPTIMUM MOISTURE CONTENT.
    h) 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%
    i) 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.



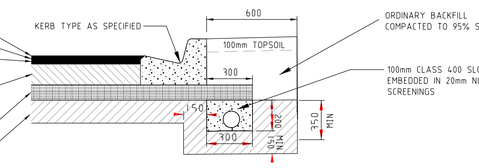
PAVEMENT DETAILS
PORTOFINO WAY

PAVEMENT TO CONSIST OF: GLENWOOD AVENUE AND YORK PARADE (500mm DEPTH)
    a) 40mm COMPACTED DEPTH SIZE 14 TYPE N ASHPHALT WITH A C170 BINDER
    b) GLASGRID GG85/11TF PLACED AS PER MANUFACTURERS SPECIFICATIONS
    c) 20mm COMPACTED DEPTH SIZE 7 TYPE N ASHPHALT WITH A C170 BINDER
    d) SAMI SEAL WITH CLASS S18RF BINDER AND BITUMINUS 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, 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.



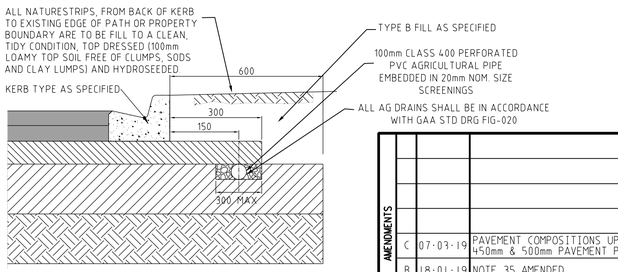
PAVEMENT DETAILS
GLENWOOD AVENUE AND YORK PARADE

PAVEMENT TO CONSIST OF: MEADOW LANE AND CARMICHAEL DRIVE (450mm DEPTH)
    a) 40mm COMPACTED DEPTH SIZE 14 TYPE N ASHPHALT WITH A C170 BINDER
    b) GLASGRID GG85/11TF PLACED AS PER MANUFACTURERS SPECIFICATIONS
    c) 20mm COMPACTED DEPTH SIZE 7 TYPE N ASHPHALT WITH A C170 BINDER
    d) SAMI SEAL WITH CLASS S18RF BINDER AND BITUMINUS 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) 110mm COMPACTED DEPTH OF 20mm NOMINAL SIZE CLASS 3 CEMENT MODIFIED CR, 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
MEADOW LANE AND CARMICHAEL DRIVE

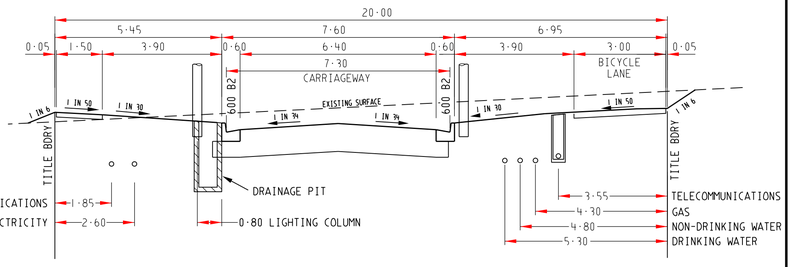
36. PAVEMENT DEPTH MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.
37. ALL 125mm THICK FOOTPATH CONCRETE PAVING TO BE REINFORCED WITH SL72 MESH AND MUST BE CONSTRUCTED WITH A 50mm UNDERLAYER OF 20mm COMPACTED CLASS 3 FCR IN ACCORDANCE WITH EDCM STANDARD DRAWING 401.
38. THE CONTRACTOR IS TO ORGANISE AND 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.



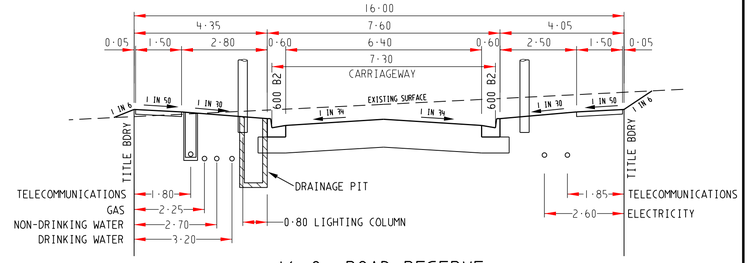
PAVEMENT COMPOSITION
NOT TO SCALE

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.

AS CONSTRUCTED



20.0m ROAD RESERVE
GLENWOOD AVENUE & PORTOFINO WAY
LOCAL ACCESS STREET - LEVEL 1



16.0m ROAD RESERVE
MEADOW LANE, YORK PARADE & CARMICHAEL DRIVE
LOCAL ACCESS STREET - LEVEL 1

TYPICAL ROAD CROSS SECTIONS
SCALE HORIZONTAL 1:100
VERTICAL 1:50

VER.	DATE	REMARKS
C	07·03·19	PAVEMENT COMPOSITIONS UPDATED FOR 450mm & 500mm PAVEMENT PROFILES
B	18·01·19	NOTE 35 AMENDED
A	19.12.17	ISSUED FOR CONSTRUCTION

AMENDMENTS

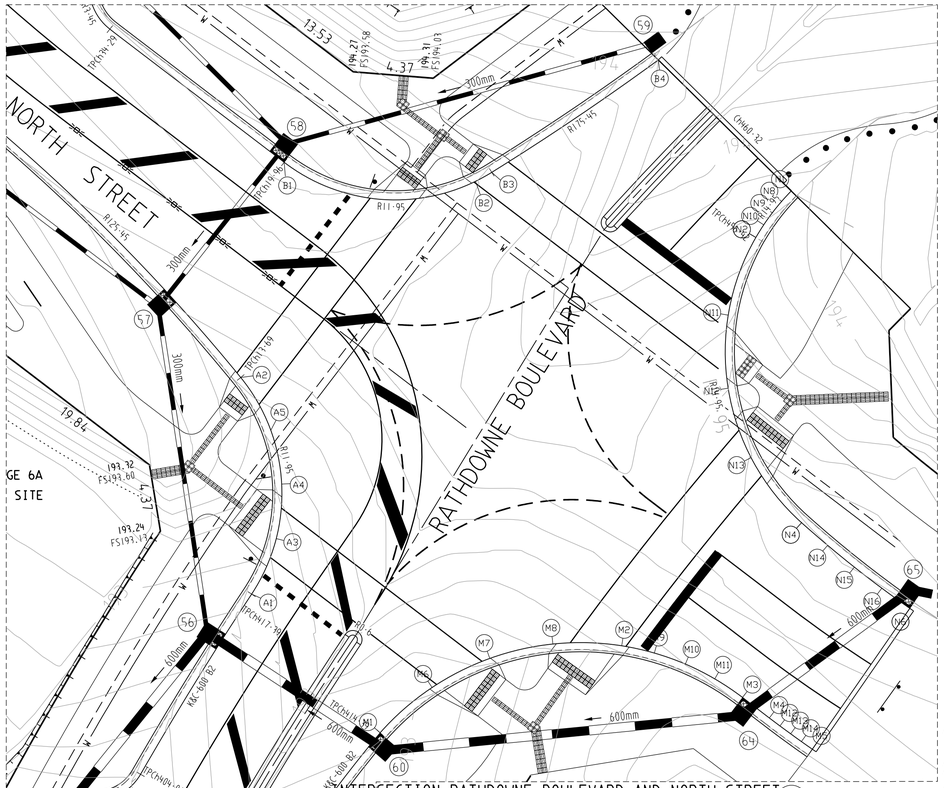
breese pitt dixon pty. ltd.
land surveyors civil engineers
1/19 cato street
hawthorn east, 3123
telephone 8823 2300
fax no. 8823 2310

MELWAY REF.	388-C10
SURVEY	BPD
DESIGN	SS
DRAWN	SS
CHECKED	

RATHDOWNE ESTATE
STAGE 2
NOTES AND LOCALITY PLAN

MUNICIPALITY	WHITTLESEA
REFERENCE	8352 E/2
SCALE	AS SHOWN
DATUM	AHD
DATE	JUL '17
SHEET	3 OF 21
	C

Printed:7/07/2019
J:\8352\Eng\Stage 2\E02_R03_NOTE.dgn



Alignment A

Point no	Easting	Northing	RL
A 1	322391·315	5836576·902	192·832
A 2	322390·604	5836591·042	193·235
A 3	322392·921	5836580·527	192·933
A 4	322393·279	5836584·089	193·040
A 5	322392·566	5836587·597	193·144

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
A 1 2	-11·950	14·158	2·322	1·786	193·040

Alignment B

Point no	Easting	Northing	RL
B 1	322393·437	5836605·091	193·260
B 2	322405·936	5836603·852	193·495
B 3	322406·996	5836604·498	193·533
B 4	322417·875	5836611·775	193·925
B 5	322396·427	5836603·424	193·288
B 6	322399·511	5836602·697	193·335
B 7	322402·677	5836602·805	193·401
B 8	322406·206	5836603·988	193·504
B 9	322406·473	5836604·131	193·514
B 10	322406·776	5836604·281	193·523
B 11	322409·767	5836606·196	193·635
B 12	322412·504	5836608·005	193·734
B 13	322415·206	5836609·864	193·831

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
B 1 2	-11·950	12·560	1·783	1·363	193·335
B 2 3	-11·950	1·212	0·015	0·012	193·514
B 3 4	-175·450	13·122	0·123	0·092	193·794

Alignment C

Point no	Easting	Northing	RL
C 1	322338·434	5836662·868	193·704
C 2	322338·581	5836663·676	193·708
C 3	322339·852	5836665·435	193·708
C 4	322340·121	5836666·616	193·703
C 5	322342·519	5836673·391	193·473

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
C 1 2	1·000	0·810	0·091	0·069	193·706
C 3 4	-1·600	1·212	0·123	0·093	193·706
C 4 5	-8·600	10·179	1·668	1·283	193·636

Alignment D

Point no	Easting	Northing	RL
D 1	322329·890	5836680·132	193·335
D 2	322339·368	5836688·689	193·797
D 3	322338·992	5836689·839	193·816
D 4	322337·661	5836691·406	193·838
D 5	322337·428	5836692·146	193·843

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
D 1 2	-8·600	12·769	2·818	2·224	193·593
D 3 4	-1·600	1·189	0·115	0·087	193·807
D 5 6	1·000	0·775	0·078	0·059	193·841

Alignment F

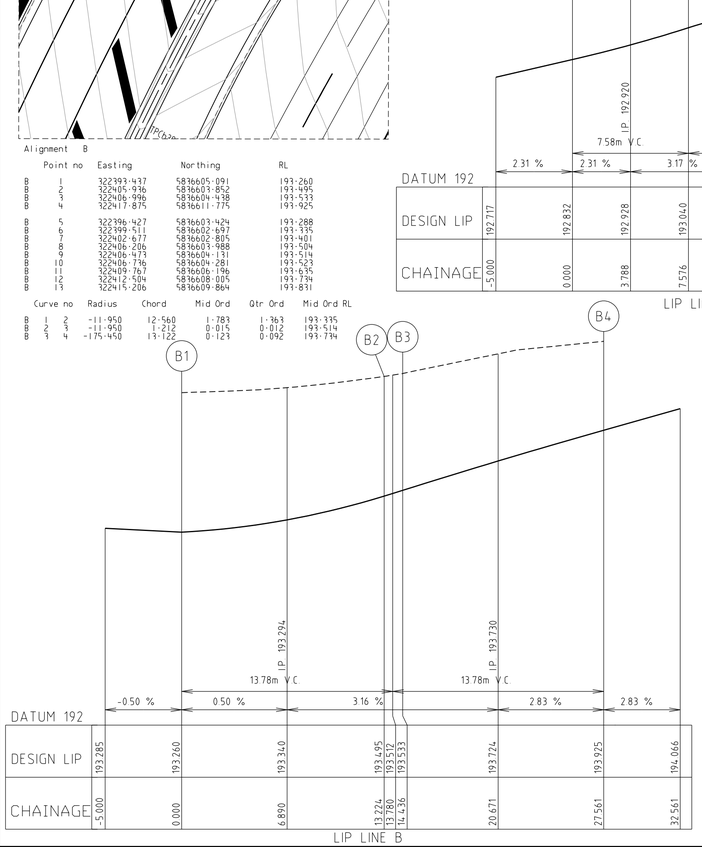
Point no	Easting	Northing	RL
F 1	322356·571	5836765·877	194·122
F 2	322356·200	5836765·208	194·126
F 3	322354·497	5836763·853	194·137
F 4	322353·903	5836762·782	194·143
F 5	322361·475	5836753·264	194·247

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
F 1 2	1·000	0·765	0·076	0·058	194·124
F 3 4	-1·600	1·225	0·122	0·092	194·140
F 4 5	-8·600	12·162	2·519	1·961	194·182

Alignment E

Point no	Easting	Northing	RL
E 1	322360·751	5836746·906	194·247
E 2	322351·234	5836739·334	194·092
E 3	322351·571	5836738·157	194·086
E 4	322352·926	5836736·454	194·073
E 5	322353·137	5836735·718	194·069

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
E 1 2	-8·600	12·162	2·519	1·963	194·143
E 2 3	-1·600	1·225	0·122	0·092	194·088
E 4 5	1·000	0·765	0·076	0·058	194·071



DATUM 192

DESIGN LIP	192.717	192.832	192.928	193.040	193.149	193.235	193.298
CHAINAGE	-5.000	0.000	3.788	7.576	11.364	15.153	20.153

2.31 % | 2.31 % | 3.17 % | 1.99 % | 1.26 %

LIP LINE A

DATUM 192

DESIGN LIP	193.350	193.335	193.503	193.664	193.787	193.797	193.816	193.838	193.843	193.868
CHAINAGE	-5.000	0.000	4.624	9.249	13.873	14.390	15.631	17.687	18.498	23.498

3.72 % | 3.72 % | 3.39 % | 0.50 % | 0.50 %

LIP LINE D

DATUM 192

DESIGN LIP	193.681	193.704	193.708	193.709	193.708	193.705	193.703	193.671	193.594	193.473	193.268
CHAINAGE	-5.000	0.000	0.869	1.995	3.019	3.827	4.264	7.655	11.482	15.162	20.310

0.50 % | 0.48 % | -1.35 % | -3.98 % | -3.98 %

LIP LINE C

DATUM 193

DESIGN LIP	194.096	194.122	194.126	194.137	194.143	194.144	194.195	194.247	194.348
CHAINAGE	-5.000	0.000	0.785	2.961	4.218	4.432	13.295	17.727	22.727

0.51 % | 0.51 % | 0.57 % | 1.18 % | 2.02 %

LIP LINE F

DATUM 193

DESIGN LIP	194.348	194.247	194.172	194.124	194.094	194.092	194.085	194.073	194.069	194.044
CHAINAGE	-5.000	0.000	4.432	8.863	13.295	13.509	14.765	16.941	17.727	22.727

-2.02 % | -2.02 % | -0.75 % | -0.50 % | -0.50 %

LIP LINE E

DATUM 192

DESIGN LIP	192.285	193.260	193.340	193.495	193.512	193.533	193.724	193.925	194.066
CHAINAGE	-5.000	0.000	6.890	13.224	13.780	14.436	20.671	27.561	32.561

-0.50 % | 0.50 % | 3.16 % | 2.83 % | 2.83 %

LIP LINE B

LIP OF KERB PROFILES

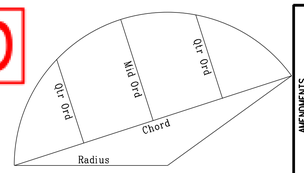
SCALE: HORIZONTAL 1:200
VERTICAL 1:20

AS CONSTRUCTED

INTERSECTION DETAILS

SCALE 1:200
SCALE 1 : 200

4 2 0 4 8 16
LENGTHS ARE IN METRES



CURVE SETOUT DIAGRAM

VER	DATE	REMARKS
E	24·05·19	PORTOFINO/NORTH STREET INTERSECTION UPDATED
D	26·04·19	COUNCIL COMMENTS
C	05·04·19	PORTOFINO / NOTH INTERSECTION UPDATED
B	23·11·18	RATHDOWNE/NORTH INTERSECTION UPDATED
A	19.12.17	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

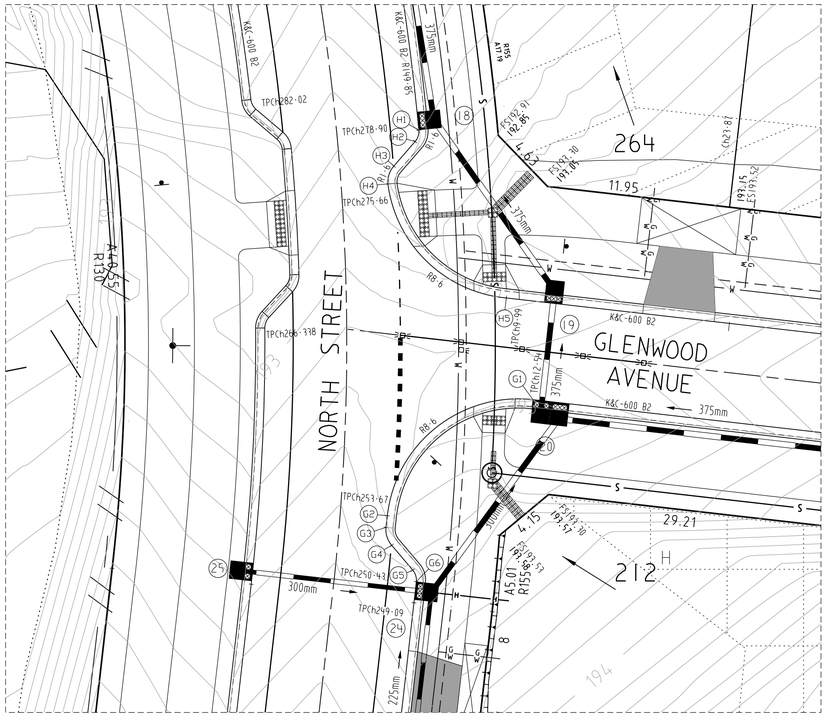
MELWAY REF. 388-C10
SURVEY BPD
DESIGN SS
DRAWN SS
CHECKED

RATHDOWNE ESTATE STAGE 2
INTERSECTION DETAILS

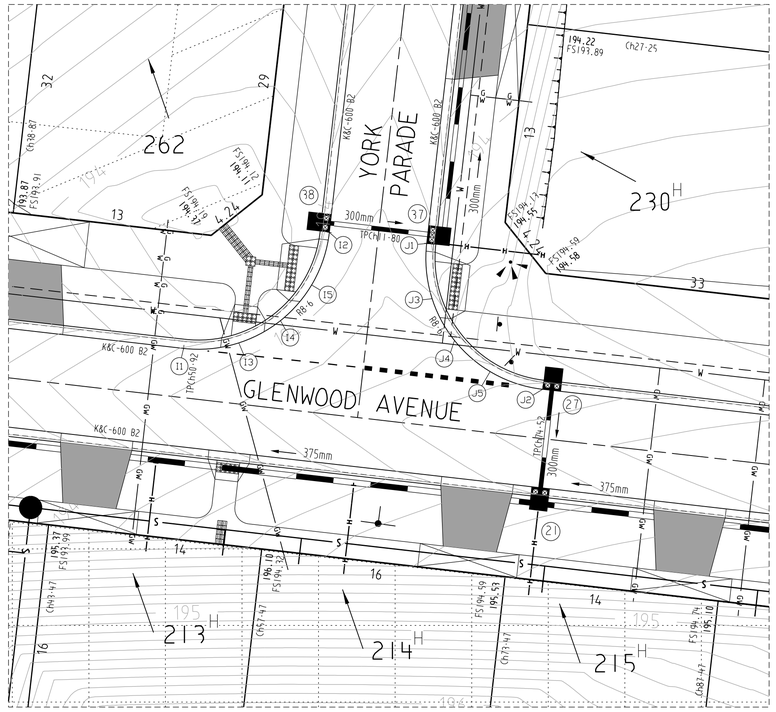
SCALE AS SHOWN | DATUM AHD | DATE JUL'17

MUNICIPALITY: WHITTLESEA
REFERENCE: 9365 E/2
SHEET 4 OF 21 | E

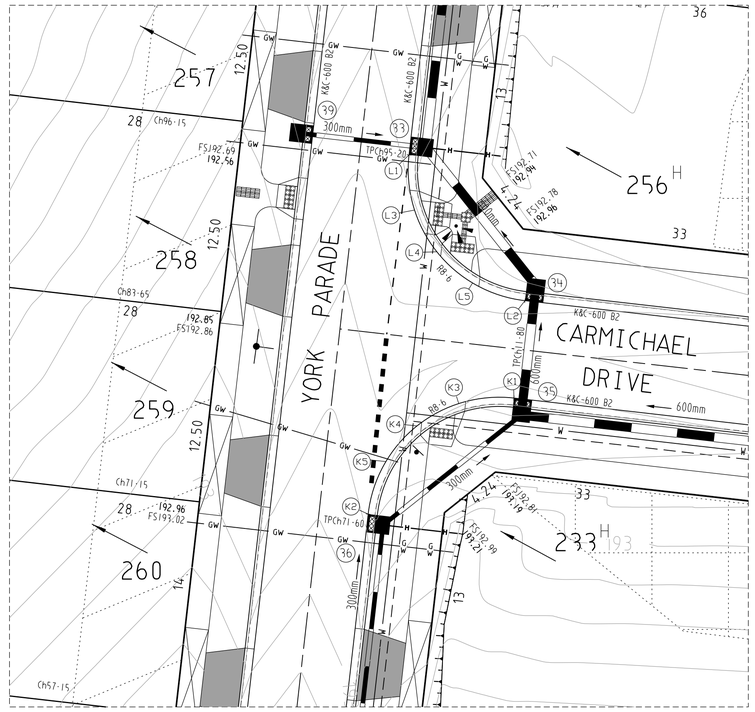
J:\W9365\Eng\Stage 2\E02_ROW_INTI.dgn
Plotted:31/05/2019



INTERSECTION NORTH STREET AND GLENWOOD AVENU



INTERSECTION YORK PARADE AND GLENWOOD AVENUE



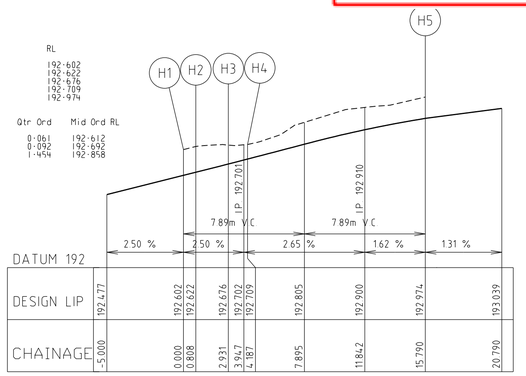
INTERSECTION YORK PARADE AND CARMICHAEL DRIVE

AS CONSTRUCTED

Alignment H

Point no	Easting	Northing	RL
H 1	322361·973	5836841·420	192·602
H 2	322361·733	5836840·612	192·622
H 3	322360·341	5836839·069	192·676
H 4	322359·954	5836837·907	192·709
H 5	322367·692	5836830·457	192·974

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
H 1 2	1·000	0·786	0·080	0·061	192·612
H 3 4	-1·600	1·225	0·122	0·092	192·692
H 4 5	-8·600	10·743	1·884	1·454	192·858



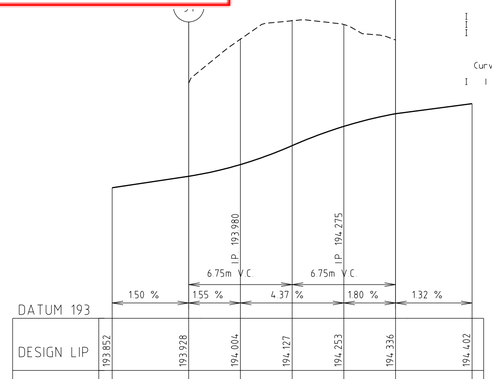
DATUM 192							
DESIGN LIP	192.477	192.602	192.622	192.676	192.702	192.805	192.900	192.974	193.039
CHAINAGE	-5.000	0.000	0.808	2.931	3.947	4.487	7.895	11.842	15.790	20.790

LIP LINE H

Alignment J

Point no	Easting	Northing	RL
J 1	322424·163	5836832·682	193·928
J 2	322431·735	5836823·165	194·336
J 3	322424·520	5836829·080	194·012
J 4	322425·978	5836826·355	194·128
J 5	322428·306	5836824·322	194·249

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
J 1 2	-8·600	12·162	2·519	1·963	194·128



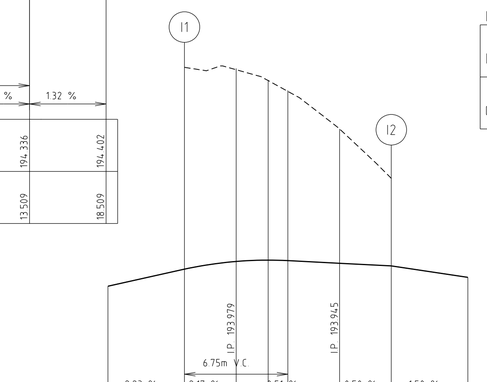
DATUM 193							
DESIGN LIP	193.852	193.928	194.004	194.127	194.253	194.336	194.402
CHAINAGE	-5.000	0.000	3.377	6.754	10.132	13.509	18.509

LIP LINE J

Alignment I

Point no	Easting	Northing	RL
I 1	322408·287	5836825·835	193·906
I 2	322417·804	5836833·406	193·928
I 3	322411·889	5836826·191	193·958
I 4	322414·614	5836827·649	193·962
I 5	322416·647	5836829·977	193·946

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
I 1 2	-8·600	12·162	2·519	1·963	193·962



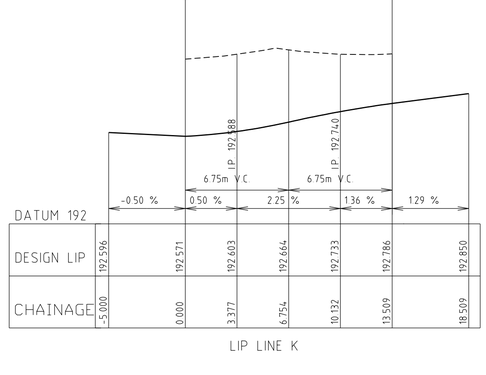
DATUM 193							
DESIGN LIP	193.795	193.906	193.956	193.965	193.962	193.945	193.928	193.852
CHAINAGE	-5.000	0.000	3.377	5.466	6.754	10.132	13.509	18.509

LIP LINE I

Alignment K

Point no	Easting	Northing	RL
K 1	322440·390	5836899·173	192·571
K 2	322430·872	5836891·602	192·786
K 3	322436·788	5836898·817	192·607
K 4	322434·063	5836897·359	192·664
K 5	322432·029	5836895·031	192·728

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
K 1 2	-8·600	12·162	2·519	1·963	192·664



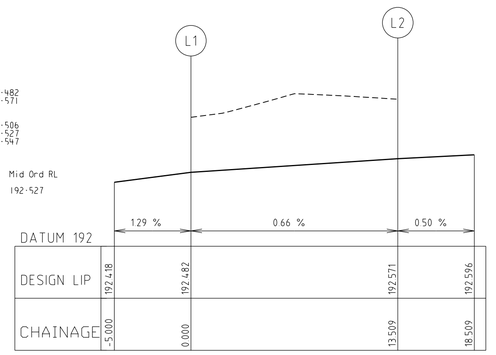
DATUM 192							
DESIGN LIP	192.596	192.571	192.603	192.664	192.733	192.786	192.850
CHAINAGE	-5.000	0.000	3.377	6.754	10.132	13.509	18.509

LIP LINE K

Alignment L

Point no	Easting	Northing	RL
L 1	322433·542	5836915·050	192·482
L 2	322441·114	5836905·532	192·571
L 3	322433·898	5836911·448	192·506
L 4	322435·357	5836908·723	192·527
L 5	322437·684	5836906·689	192·547

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
L 1 2	-8·600	12·162	2·519	1·963	192·527



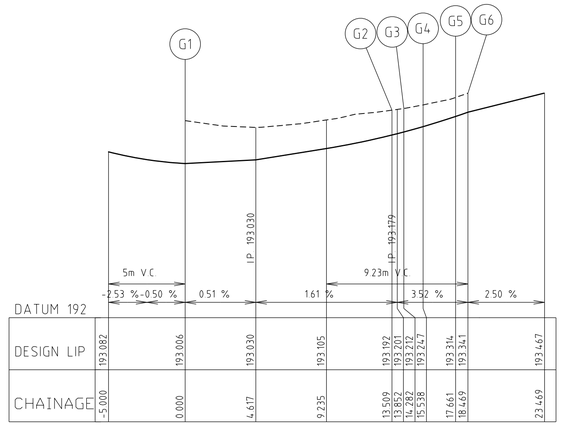
DATUM 192				
DESIGN LIP	192.418	192.482	192.571	192.596
CHAINAGE	-5.000	0.000	13.509	18.509

LIP LINE L

Alignment G

Point no	Easting	Northing	RL
G 1	322369·434	5836821·817	193·006
G 2	322359·916	5836816·245	193·192
G 3	322359·829	5836814·477	193·212
G 4	322360·204	5836814·311	193·247
G 5	322361·577	5836812·693	193·314
G 6	322361·809	5836811·942	193·341

Curve no	Radius	Chord	Mid Ord	Qtr Ord	Mid Ord RL
G 1 2	-8·600	12·162	2·519	1·963	193·064
G 3 4	-1·600	1·225	0·122	0·092	193·229
G 5 6	1·000	0·786	0·080	0·061	193·327



DATUM 192								
DESIGN LIP	193.082	193.006	193.030	193.105	193.192	193.201	193.212	193.247	193.314	193.341	193.467
CHAINAGE	-5.000	0.000	4.617	9.235	13.509	13.852	14.282	15.538	17.661	18.469	23.469

LIP LINE G

LIP OF KERB PROFILES

SCALE: HORIZONTAL 1:200
VERTICAL 1:20

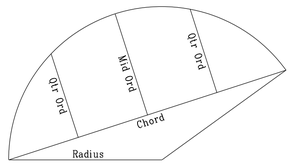
INTERSECTION DETAILS

SCALE 1:200

SCALE 1 : 200

4 2 0 4 8 16

LENGTHS ARE IN METRES



CURVE SETOUT DIAGRAM

VER.	DATE	REMARKS
C	05·04·19	TGSI UPDATES
B	24·08·18	AMENDMENTS MADE TO DRAINAGE PIT 20
A	19.12.17	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

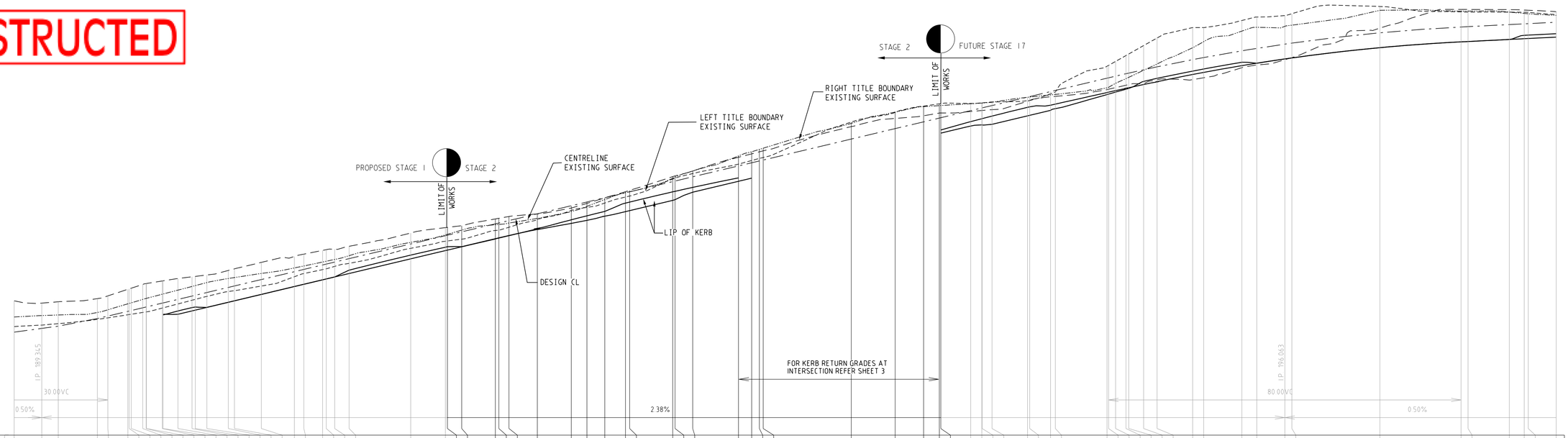
MELWAY REF. 388-C10
SURVEY BPD
DESIGN SS
DRAWN SS
CHECKED

RATHDOWNE ESTATE STAGE 2
INTERSECTION DETAILS

MUNICIPALITY: WHITTLESEA
REFERENCE: 8352 E/2
SCALE AS SHOWN | DATUM AHD | DATE JUL'17
SHEET 5 OF 21 | C

J:\HW365\Engi\Stage 2\E02_R05_INTZ.dgn
Plotted:5/9/2019

AS CONSTRUCTED



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

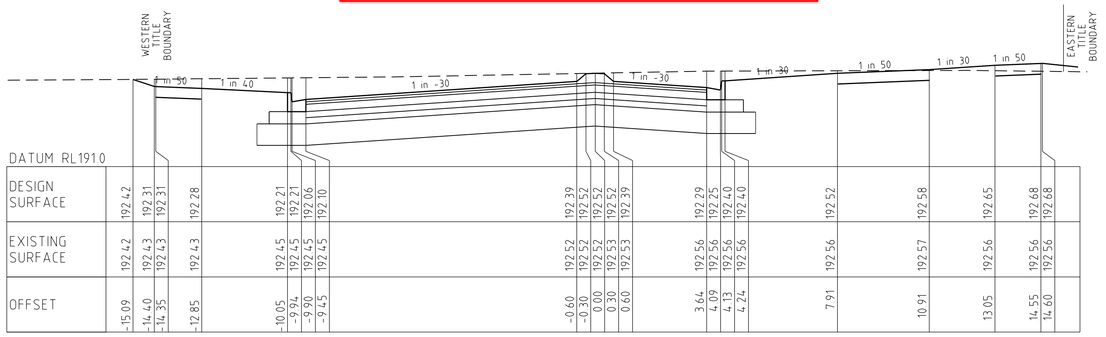
VC LENGTH

DESIGN GRADELINE

DATUM 187

| CHAINAGE | 189.46 | 189.50 | 189.53 | 189.63 | 189.66 | 189.73 | 189.74 | 189.74 | 189.78 | 189.80 | 189.80 | 189.88 | 189.89 | 189.98 | 190.06 | 190.08 | 190.15 | 190.26 | 190.28 | 190.38 | 190.60 | 190.67 | 190.76 | 190.78 | 190.83 | 190.90 | 191.24 | 191.40 | 191.41 | 191.45 | 191.65 | 191.65 | 191.71 | 191.88 | 192.10 | 192.17 | 192.27 | 192.40 | 192.43 | 192.81 | 192.83 | 192.94 | 193.15 | 193.23 | 193.28 | 193.29 | 194.11 | 194.31 | 194.47 | 194.52 | 194.52 | 194.53 | 194.54 | 194.54 | 194.56 | 194.59 | 194.59 | 194.73 | 194.77 | 195.37 | 195.40 | 195.49 | 195.63 | 195.65 | 195.85 | 196.03 | 196.25 | 196.25 | 196.41 | 196.49 | 196.52 | 196.56 | 196.73 | 196.60 | 196.60 | 196.60 | 196.60 | 196.59 | 196.54 |
|---|---|---

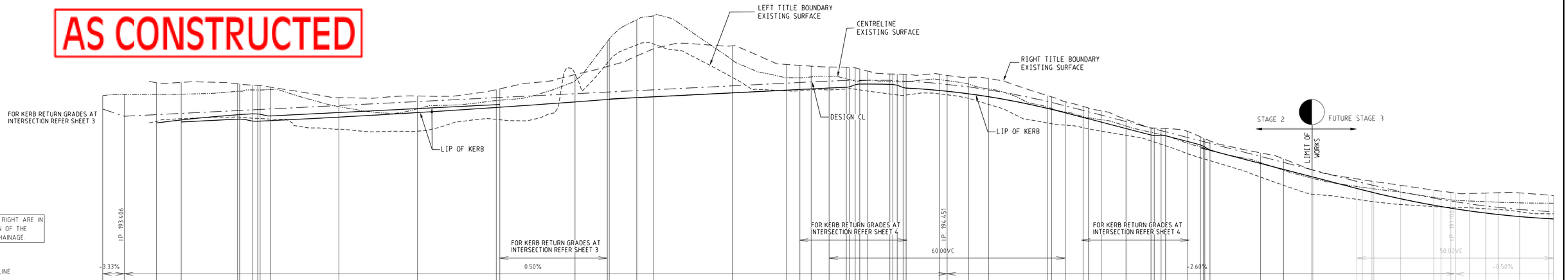
AS CONSTRUCTED



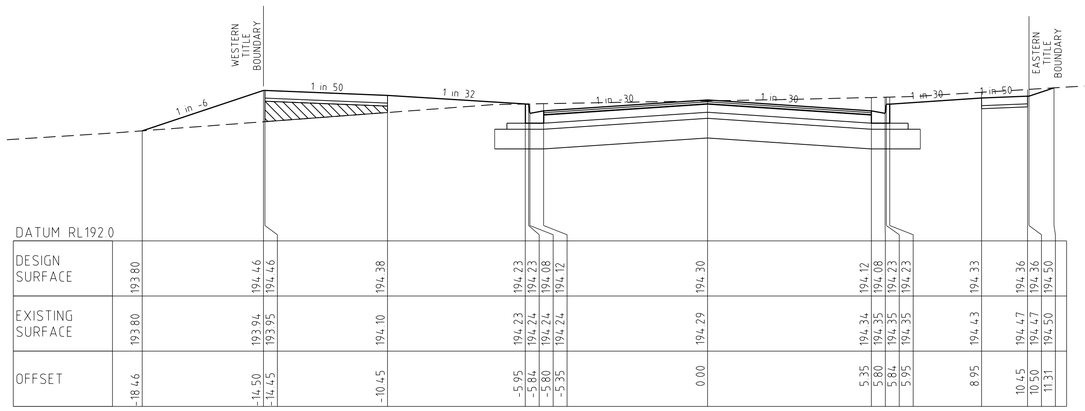
DATUM RL191.0

| | | |

AS CONSTRUCTED



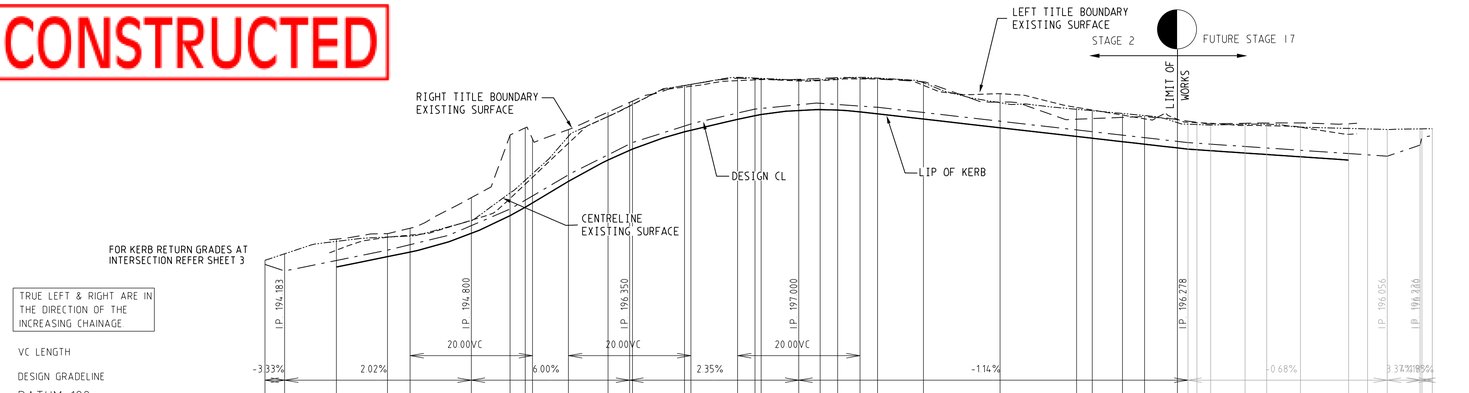
| CHAINAGE CENTRE LINE | 0.00 | 5.50 | 13.69 | 19.96 | 34.29 | 34.80 | 38.12 | 39.41 | 40.00 | 42.62 | 60.00 | 80.00 | 100.00 | 100.89 | 120.00 | 128.21 | 128.71 | 135.69 | 140.00 | 160.00 | 173.76 | 177.14 | 180.00 | 184.55 | 188.94 | 189.70 | 191.19 | 192.33 | 194.24 | 200.00 | 200.74 | 201.87 | 203.36 | 204.12 | 212.59 | 214.55 | 220.00 | 225.09 | 240.00 | 241.09 | 244.55 | 249.09 | 250.43 | 253.67 | 260.00 | 266.34 | 267.17 | 268.89 | 270.00 | 275.66 | 278.90 | 279.61 | 280.00 | 281.33 | 294.16 | 300.00 | 307.25 | 307.51 | 318.63 | 320.00 | 322.45 | 329.94 | 329.79 | 338.19 | 340.00 | 342.52 | 343.63 | 347.26 | 351.37 | 354.53 | 360.00 | 367.37 | 368.63 |
|---|---|---



DATUM RL192.0

| | | |

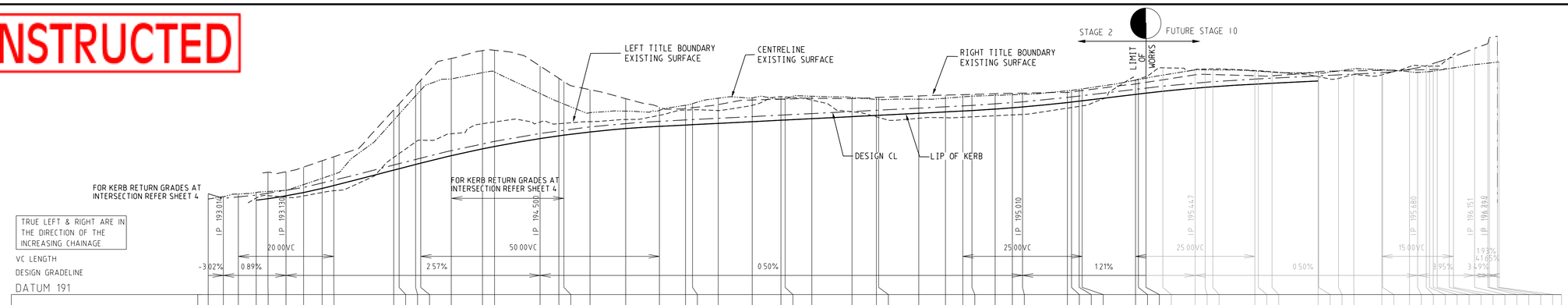
AS CONSTRUCTED



DATUM 192

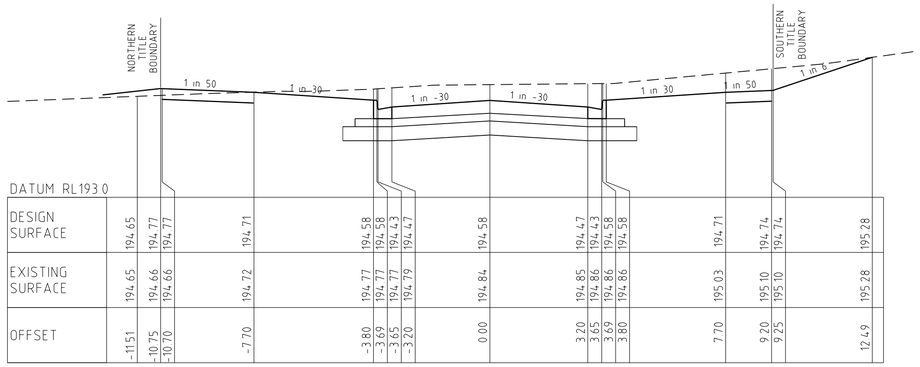
| | | |

AS CONSTRUCTED



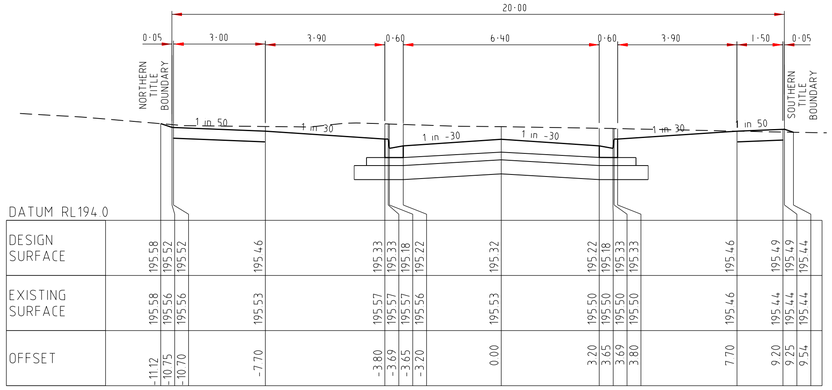
| CHAINAGE CENTRE LINE | 0.00 | 3.19 | 6.32 | 10.07 TPCH | 12.54 TPCH | 16.32 | 20.00 | 23.87 | 26.32 | 38.87 | 40.00 | 43.47 | 44.53 | 50.92 TPCH | 57.47 | 60.00 | 69.53 | 73.47 | 74.52 TPCH | 80.00 | 87.47 | 94.53 | 100.00 | 101.47 | 106.87 | 113.97 | 120.00 | 120.87 | 126.47 | 134.87 | 140.00 | 140.47 | 148.87 | 154.47 | 158.10 | 160.00 | 164.87 | 168.47 | 170.60 | 180.00 | 180.87 | 182.47 | 183.10 | 194.28 | 194.87 | 196.47 | 200.00 | 206.78 | 209.87 | 210.47 | 219.28 | 220.00 | 222.87 | 232.54 | 232.64 | 236.79 | 240.00 | 245.88 | 246.64 | 251.66 | 253.38 | 255.18 | 255.82 | 256.65 | 257.42 | 260.00 | 260.88 | 265.30 | 268.10 | 268.40 | 270.08 | 270.42 |
|---|---|---

AS CONSTRUCTED



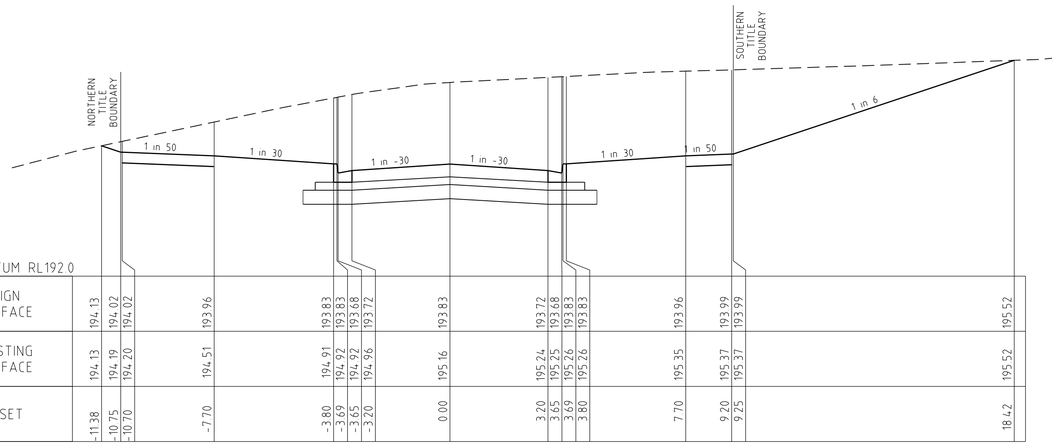
DATUM RL193.0														
DESIGN SURFACE	194.65	194.77	194.77	194.71	194.58	194.58	194.43	194.47	194.58	194.47	194.43	194.58	194.58	194.71	194.74	194.74	195.28
EXISTING SURFACE	194.65	194.66	194.66	194.72	194.77	194.77	194.77	194.79	194.84	194.85	194.86	194.86	194.86	195.03	195.10	195.10	195.28
OFFSET	-11.51	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25	12.49

87.47



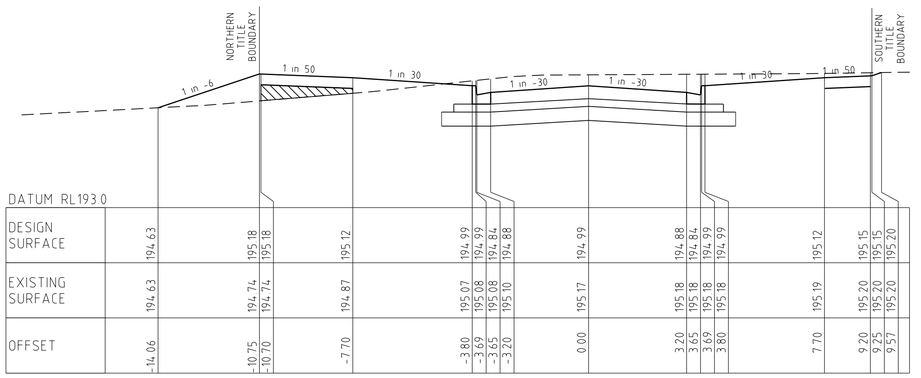
DATUM RL194.0														
DESIGN SURFACE	195.58	195.52	195.52	195.46	195.33	195.33	195.18	195.22	195.32	195.22	195.18	195.33	195.33	195.46	195.49	195.49	195.44
EXISTING SURFACE	195.58	195.56	195.56	195.53	195.57	195.57	195.57	195.56	195.53	195.50	195.50	195.50	195.50	195.46	195.44	195.44	195.44
OFFSET	-11.12	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25	9.54

196.47



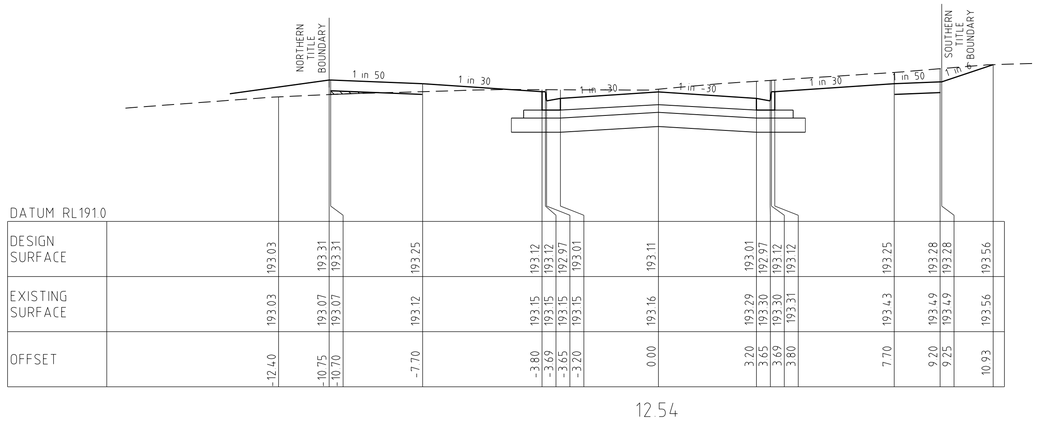
DATUM RL192.0														
DESIGN SURFACE	194.13	194.02	194.02	193.96	193.83	193.83	193.68	193.72	193.83	193.72	193.68	193.83	193.83	193.96	193.99	193.99	195.52
EXISTING SURFACE	194.13	194.19	194.20	194.51	194.91	194.92	194.92	194.96	195.16	195.24	195.25	195.26	195.26	195.35	195.37	195.37	195.52
OFFSET	-11.38	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25	18.42

43.47



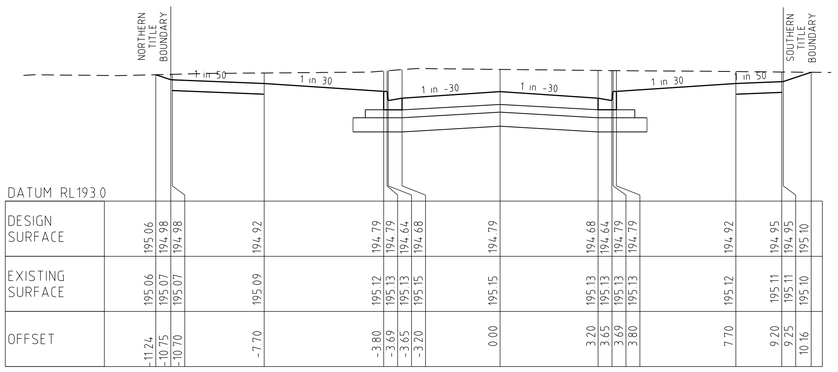
DATUM RL193.0														
DESIGN SURFACE	194.63	195.18	195.18	195.12	194.99	194.99	194.84	194.88	194.99	194.88	194.84	194.99	194.99	195.12	195.15	195.15	195.20
EXISTING SURFACE	194.63	194.74	194.74	194.87	195.07	195.08	195.08	195.10	195.17	195.18	195.18	195.18	195.18	195.19	195.20	195.20	195.20
OFFSET	-14.06	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25	9.57

164.87



DATUM RL191.0														
DESIGN SURFACE	193.03	193.31	193.31	193.25	193.12	193.12	192.97	193.01	193.11	193.01	192.97	193.12	193.12	193.25	193.28	193.28	193.56
EXISTING SURFACE	193.03	193.07	193.07	193.12	193.15	193.15	193.15	193.15	193.16	193.29	193.30	193.30	193.31	193.43	193.49	193.49	193.56
OFFSET	-12.40	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25	10.93

12.54



DATUM RL193.0														
DESIGN SURFACE	195.06	194.98	194.98	194.92	194.79	194.79	194.64	194.68	194.79	194.68	194.64	194.79	194.79	194.92	194.95	194.95	195.10
EXISTING SURFACE	195.06	195.07	195.07	195.09	195.12	195.13	195.13	195.15	195.15	195.13	195.13	195.13	195.13	195.12	195.11	195.11	195.10
OFFSET	-11.24	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25	10.16

126.47

GLENWOOD AVENUE

CROSS SECTIONS

SCALE HORIZONTAL 1:100
VERTICAL 1:50

1:50 1 0.5 0 0 1 2 4

1:100 2 1 0 0 2 4 8

CRUSHED ROCK BACKFILL

AMENDMENTS			
A	19.12.17	ISSUED FOR CONSTRUCTION	
VER.	DATE	REMARKS	

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-C10
SURVEY	BPD
DESIGN	SS
DRAWN	SS
CHECKED	

RATHDOWNE ESTATE
STAGE 2
GLENWOOD AVENUE

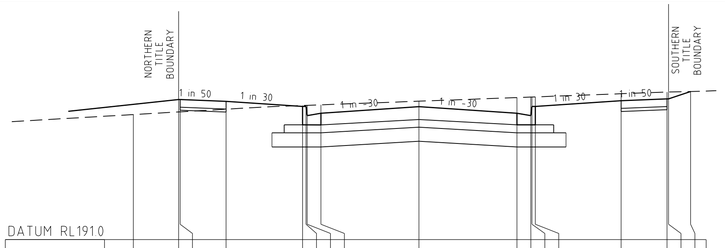
MUNICIPALITY: WHITTLESEA
REFERENCE: 8352 E/2

SCALE AS SHOWN | DATUM AHD | DATE JUL'17 | SHEET 12 OF 21 | A

J:\W8\8352\Eng\Stage 2\E82_R12.GAKS.dgn

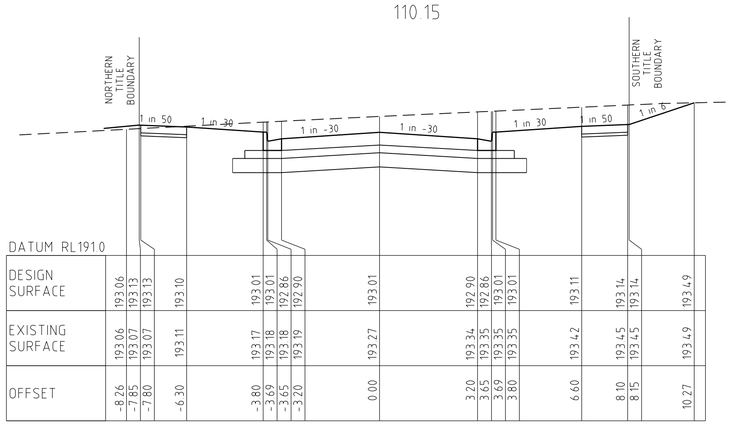
Plotted:19-Dec-17

AS CONSTRUCTED



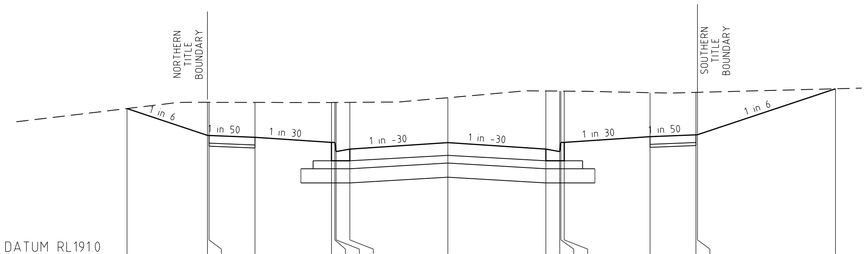
DATUM RL191.0												
DESIGN SURFACE	193.04	193.29	193.29	193.26	193.17	193.17	193.02	193.06	193.17	193.06	193.02	193.17	193.17	193.27	193.30	193.30	193.42
EXISTING SURFACE	193.04	193.08	193.08	193.13	193.19	193.19	193.19	193.20	193.26	193.32	193.33	193.33	193.33	193.38	193.41	193.41	193.42
OFFSET	-9.33	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.60	8.10	8.15	8.87

110.15



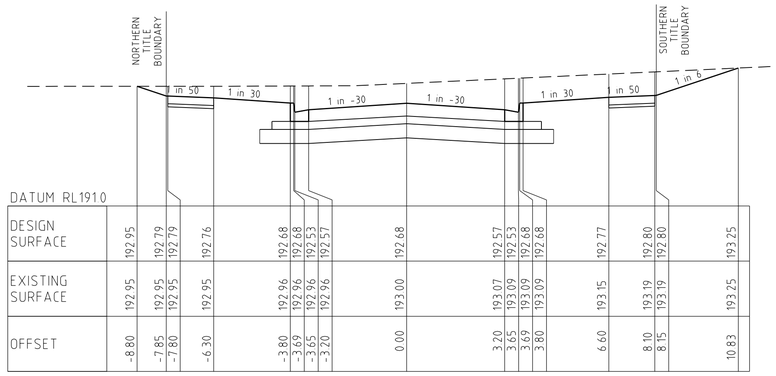
DATUM RL191.0												
DESIGN SURFACE	193.06	193.13	193.13	193.10	193.01	193.01	192.86	192.90	193.01	192.90	192.86	193.01	193.11	193.14	193.14	193.49
EXISTING SURFACE	193.06	193.07	193.07	193.11	193.17	193.18	193.18	193.19	193.27	193.34	193.35	193.35	193.35	193.42	193.45	193.45	193.49
OFFSET	-8.26	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.60	8.10	8.15	10.27

78.15



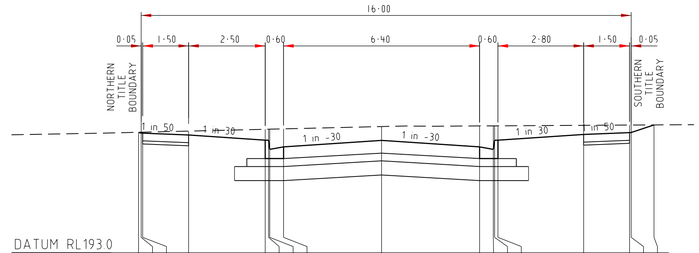
DATUM RL191.0												
DESIGN SURFACE	193.39	192.96	192.96	192.93	192.84	192.84	192.69	192.73	192.84	192.73	192.69	192.84	192.94	192.97	192.97	193.72
EXISTING SURFACE	193.39	193.50	193.50	193.49	193.49	193.49	193.49	193.50	193.57	193.68	193.68	193.68	193.65	193.66	193.66	193.72
OFFSET	-10.48	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.60	8.10	8.15	12.65

44.15



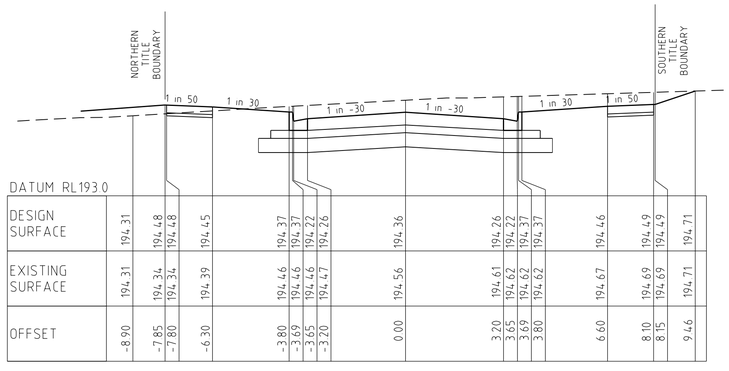
DATUM RL191.0												
DESIGN SURFACE	192.95	192.79	192.79	192.76	192.68	192.68	192.53	192.57	192.68	192.57	192.53	192.68	192.77	192.80	192.80	193.25
EXISTING SURFACE	192.95	192.95	192.95	192.95	192.96	192.96	192.96	192.96	193.00	193.07	193.09	193.09	193.15	193.19	193.19	193.25
OFFSET	-8.80	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.60	8.10	8.15	10.83

11.80



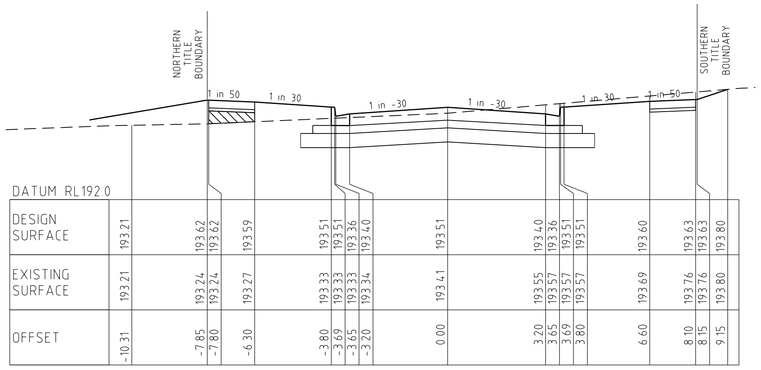
DATUM RL193.0												
DESIGN SURFACE	194.96	194.95	194.95	194.92	194.84	194.84	194.69	194.73	194.83	194.73	194.69	194.84	194.93	194.96	194.96	195.08
EXISTING SURFACE	194.96	194.97	194.97	194.98	195.01	195.01	195.02	195.02	195.06	195.07	195.07	195.07	195.08	195.08	195.08	195.08
OFFSET	-7.93	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.60	8.10	8.15	8.90

210.15



DATUM RL193.0												
DESIGN SURFACE	194.31	194.48	194.48	194.45	194.37	194.37	194.22	194.26	194.36	194.26	194.22	194.37	194.46	194.49	194.49	194.71
EXISTING SURFACE	194.31	194.34	194.34	194.39	194.46	194.46	194.46	194.47	194.56	194.61	194.62	194.62	194.67	194.69	194.69	194.71
OFFSET	-8.90	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.60	8.10	8.15	9.46

180.15



DATUM RL192.0												
DESIGN SURFACE	193.21	193.62	193.62	193.59	193.51	193.51	193.36	193.40	193.51	193.40	193.36	193.51	193.60	193.63	193.63	193.80
EXISTING SURFACE	193.21	193.24	193.24	193.27	193.33	193.33	193.33	193.34	193.41	193.55	193.57	193.57	193.69	193.76	193.76	193.80
OFFSET	-10.31	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	6.60	8.10	8.15	9.15

144.15

CARMICHAEL DRIVE

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

VER.	DATE	REMARKS
A	19.12.17	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-C10
SURVEY	BPD
DESIGN	SS
DRAWN	SS
CHECKED	

RATHDOWNE ESTATE
STAGE 2
CARMICHAEL DRIVE

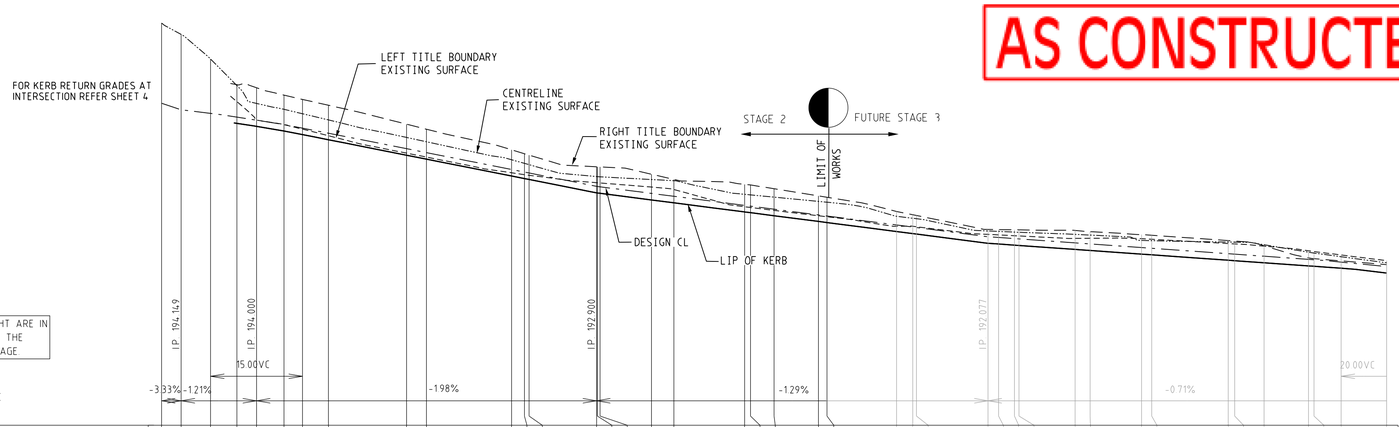
MUNICIPALITY: WHITTLESEA
REFERENCE: 8352 E/2

SCALE AS SHOWN | DATUM AHD | DATE JUL'17 | SHEET 13 OF 21 | A

Plotted:19-Dec-17

J:\8352\Eng\Stage 2\E02_R13_CDXS.dgn

AS CONSTRUCTED



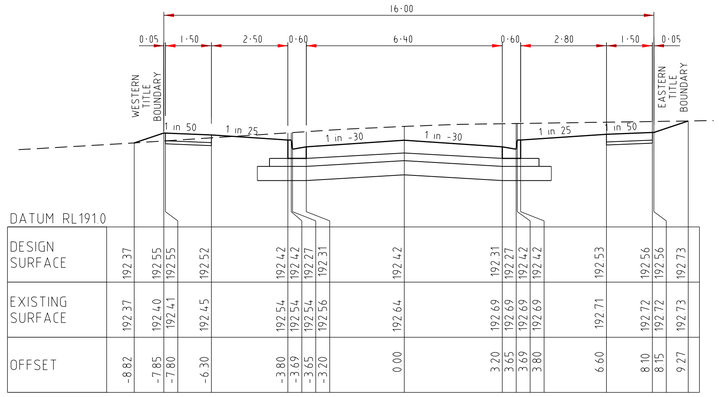
CHAINAGE CENTRE LINE	0.00	3.20	8.00	12.30	15.50	20.00	23.00	27.25	40.00	43.25	57.15	59.25	60.00	71.03	71.15	71.60	80.00	83.65	95.20	96.15	100.00	107.25	108.65	120.00	122.65	123.25	134.94	136.65	139.25	140.00	146.95	151.60	160.00	161.65	174.15	175.20	180.00	187.25	188.15	192.58	200.00
ES RIGHT TITLE BDY				194.56	194.51	194.39	194.32	194.22	193.91	193.83	193.50	193.43	193.41	193.22	193.22	193.22	193.10	193.01	192.93	192.92	192.86	192.74	192.72	192.49	192.44	192.42	192.20	192.19	192.19	192.19	192.18	192.16	192.11	192.10	192.01	192.01	191.93	191.89	191.73	191.72	191.68	191.62
FS RIGHT TITLE BDY				194.16	194.11	194.04	193.98	193.89	193.64	193.58	193.30	193.26	193.25	193.03	193.03	193.02			192.70	192.65	192.56	192.56		192.40	192.36	192.36	192.20	192.19	192.17	192.17	192.10	192.09								191.84	191.83	191.80	
RIGHT LIP OF KERB				193.93	193.88	193.80	193.74	193.66	193.41	193.34	193.07	193.03	193.01	192.79	192.79	192.79	192.68	192.63	192.48	192.47	192.42	192.33	192.31	192.16	192.13	192.12	191.97	191.96	191.94	191.93	191.87	191.85	191.79	191.78	191.69	191.69	191.65	191.76	191.60	191.60	191.56	191.48
DESIGN CL	194.26	194.15	194.09	194.03	193.99	193.91	193.85	193.77	193.51	193.45	193.17	193.13	193.12	192.90	192.90	192.89	192.78	192.74	192.59	192.58	192.53	192.43	192.42	192.27	192.24	192.23	192.08	192.07	192.05	192.04	191.98	191.96	191.90	191.89	191.80	191.79	191.76	191.71	191.70	191.67	191.59
LEFT LIP OF KERB				193.93	193.88	193.80	193.74	193.66	193.41	193.34	193.07	193.03	193.01	192.79	192.79	192.79	192.68	192.63	192.48	192.47	192.42	192.33	192.31	192.16	192.13	192.12	191.97	191.96	191.94	191.93	191.87	191.85	191.79	191.78	191.69	191.69	191.65	191.65	191.60	191.60	191.56	191.48
FS LEFT TITLE BDY				194.15	194.10	194.03	193.97	193.88	193.63	193.57	193.29	193.25	193.24	193.02	193.02	193.01	192.90	192.86	192.71	192.69	192.64	192.55	192.55	192.39	192.35	192.35	192.19	192.18	192.16	192.16	192.09	192.08	192.02	192.01	191.92	191.91	191.88	191.88	191.83	191.82	191.79	191.71
ES LEFT TITLE BDY				194.28	193.98	193.91	193.83	193.73	193.44	193.38	193.12	193.09	193.08	192.96	192.96	192.96	192.89	192.85	192.57	192.56	192.51	192.42	192.40	192.25	192.25	192.24	192.12	192.11	192.09	192.09	192.05	192.05	192.05	192.04	191.97	191.96	191.92	191.92	191.85	191.84	191.78	191.69

TPCH TPCH TPCH

LONGITUDINAL SECTION

SCALE HORIZONTAL 1:500
VERTICAL 1:50

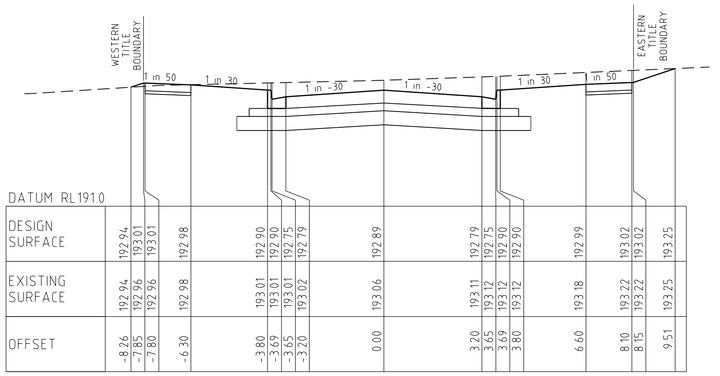
1:50 1 0.5 00 1 2 4
1:500 10 5 00 10 20 40



DATUM RL191.0

DESIGN SURFACE	192.37	192.55	192.52		192.42	192.42	192.31		192.42		192.31	192.27	192.42	192.42		192.53	192.56	192.56	192.73
EXISTING SURFACE	192.37	192.40	192.45		192.54	192.54	192.56		192.64		192.69	192.69	192.69	192.69		192.71	192.72	192.72	192.73
OFFSET	-8.82	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00		3.20	3.65	3.69	3.80		6.60	8.10	8.15	9.27

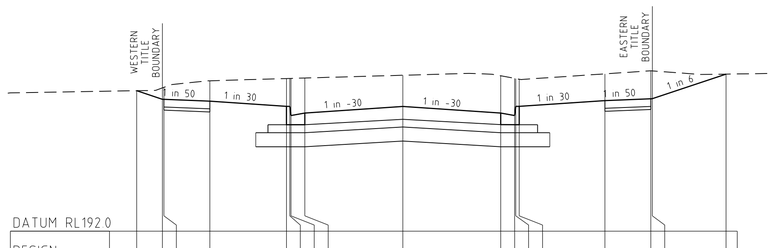
108.65



DATUM RL191.0

DESIGN SURFACE	192.94	193.01	192.98		192.90				192.89		192.79	192.75	192.90	192.90		192.99	193.02	193.02	193.25
EXISTING SURFACE	192.94	192.96	192.98		193.01	193.01	193.01	193.02	193.06		193.11	193.12	193.12	193.12		193.18	193.22	193.22	193.25
OFFSET	-8.26	-7.85	-7.80	-6.30	-3.80	-3.69	-3.65	-3.20	0.00		3.20	3.65	3.69	3.80		6.60	8.10	8.15	9.51

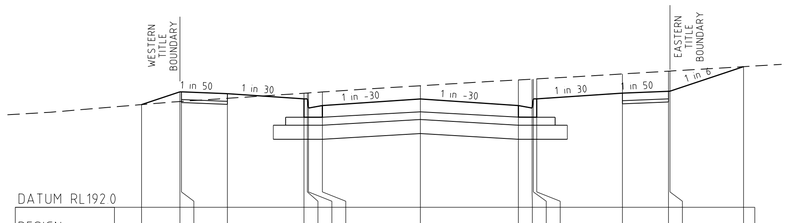
71.60



DATUM RL192.0

DESIGN SURFACE	194.29	194.15	194.15	194.12		194.04	194.04	193.89	193.93		194.03			193.93	193.89	194.04	194.04	194.13	194.16	194.16	194.56
EXISTING SURFACE	194.29	194.34	194.35	194.45		194.49	194.49	194.49	194.50		194.54			194.54	194.49	194.49	194.48	194.57	194.62	194.61	194.56
OFFSET	-8.69	-7.85	-7.80	-6.30		-3.80	-3.69	-3.65	-3.20		0.00			3.20	3.65	3.69	3.80	6.60	8.10	8.15	10.56

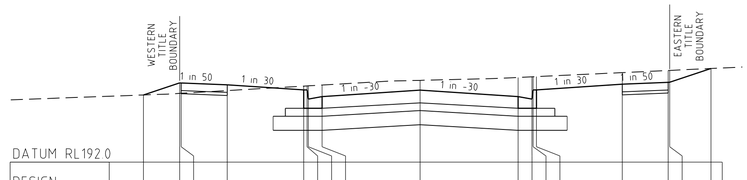
12.30



DATUM RL192.0

DESIGN SURFACE	193.68	193.88	193.88	193.85		193.77	193.77	193.62	193.66		193.77			193.66	193.62	193.77	193.77	193.86	193.89	193.89	194.30
EXISTING SURFACE	193.68	193.73	193.73	193.78		193.86	193.87	193.87	193.88		193.98			194.08	194.09	194.09	194.10	194.18	194.22	194.22	194.30
OFFSET	-9.10	-7.85	-7.80	-6.30		-3.80	-3.69	-3.65	-3.20		0.00			3.20	3.65	3.69	3.80	6.60	8.10	8.15	10.55

27.25



DATUM RL192.0

DESIGN SURFACE	193.10	193.29	193.29	193.26		193.18	193.18	193.03	193.07		193.17			193.07	193.03	193.18	193.18	193.27	193.30	193.30	193.53
EXISTING SURFACE	193.10	193.12	193.12	193.17		193.24	193.24	193.24	193.26		193.33			193.38	193.39	193.39	193.40	193.46	193.49	193.50	193.53
OFFSET	-9.03	-7.85	-7.80	-6.30		-3.80	-3.69	-3.65	-3.20		0.00			3.20	3.65	3.69	3.80	6.60	8.10	8.15	9.50

57.15

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

YORK PARADE

CRUSHED ROCK BACKFILL

VER.	DATE	REMARKS
A	19.12.17	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-C10
SURVEY BPD
DESIGN SS
DRAWN SS
CHECKED

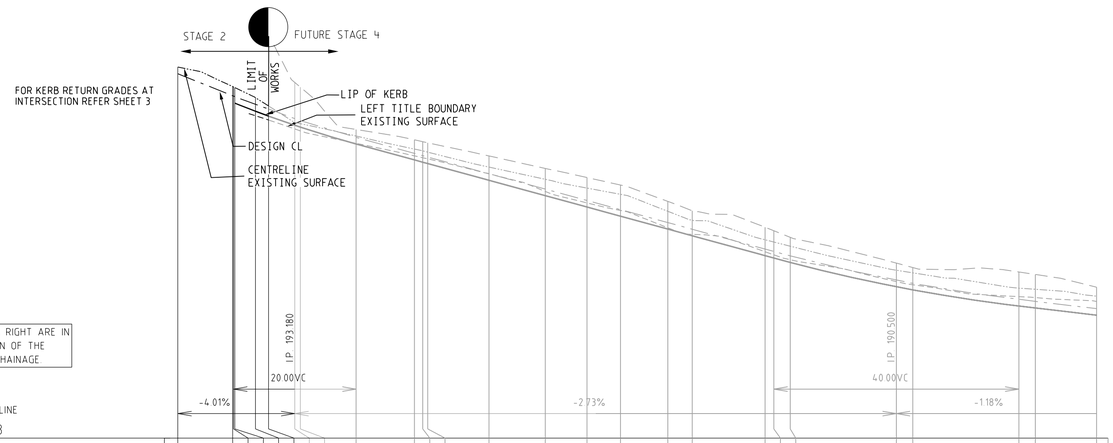
RATHDOWNE ESTATE
STAGE 2
YORK PARADE

MUNICIPALITY: WHITTLESEA
REFERENCE: 8352 E/2

SCALE AS SHOWN | DATUM AHD | DATE JUL'17 | SHEET 14 OF 21 | A

J:\8976\Eng\Stage 2\E02_R14_YPLS45.dgn
Plotted:19-Dec-17

AS CONSTRUCTED



DATUM 188

CHAINAGE CENTRE LINE	0.00	8.86	9.11	9.31	12.68	14.82	19.11	20.00	29.11	38.63	40.00	40.81	50.81	60.00	66.81	72.28	80.00	83.99	95.88	97.31	100.00	117.31	120.00	137.31	140.00	150.00
ES RIGHT TITLE BDY							193.80	193.73	193.04	192.87	192.84	192.82	192.61	192.40	192.25	192.13	191.86	191.71	191.44	191.38	191.28	190.86	190.78	190.71	190.67	190.46
FS RIGHT TITLE BDY					193.74	193.66	193.51	193.48	193.20	192.94	192.90	192.88	192.61	192.36	192.17	192.02			191.94	191.87	191.27	190.87	190.82	190.56	190.53	190.41
RIGHT LIP OF KERB				193.34	193.34	193.26	193.11	193.08	192.80	192.54	192.50	192.48	192.21	191.96	191.77	191.62	191.41	191.30	190.98	190.94	190.87	190.47	190.42	190.16	190.12	190.01
DESIGN CL	193.95		193.59	193.58	193.57	193.44	193.36	193.21	192.91	192.65	192.61	192.59	192.31	192.06	191.88	191.73	191.52	191.41	191.08	191.05	190.97	190.58	190.53	190.26	190.23	190.11
LEFT LIP OF KERB				193.47	193.34	193.26	193.08	193.05	192.80	192.54	192.50	192.48	192.21	191.96	191.77	191.62	191.41	191.30	190.98	190.94	190.87	190.47	190.42	190.16	190.12	190.01
FS LEFT TITLE BDY				193.77	193.64	193.56	193.41	193.38	193.10	192.84	192.80	192.78	192.51	192.26	192.07	191.92	191.71	191.60	191.28	191.24	191.17	190.77	190.72	190.46	190.43	190.31
ES LEFT TITLE BDY				193.26	193.19	193.05	193.02		192.81	192.61	192.58	192.56	192.31	192.03	191.84	191.72	191.43	191.33	191.04	190.99	190.91	190.55	190.50	190.31	190.29	190.23
DATUM 188																										

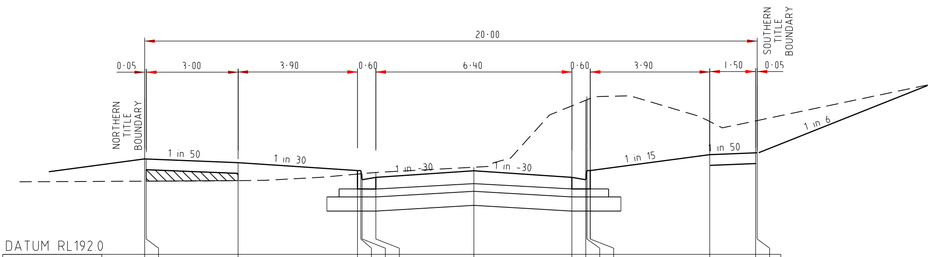
TPCH TPCH

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

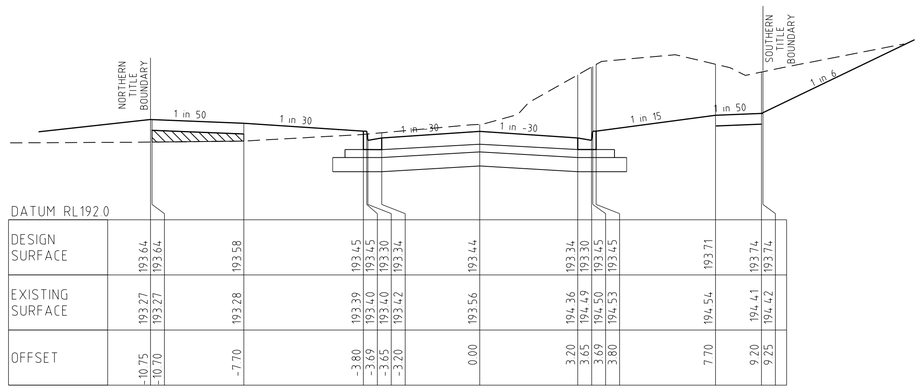
PORTOFINO WAY



DATUM RL192.0

DESIGN SURFACE	193.56	193.56	193.50	193.37	193.37	193.22	193.26	193.36	193.26	193.22	193.37	193.37	193.63	193.66	193.66
EXISTING SURFACE	193.19	193.19	193.20	193.31	193.31	193.32	193.34	193.42	194.42	194.51	194.52	194.54	194.17	194.18	194.18
OFFSET	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25

14.82



DATUM RL192.0

DESIGN SURFACE	193.64	193.64	193.58	193.45	193.45	193.30	193.34	193.44	193.34	193.30	193.45	193.45	193.71	193.74	193.74
EXISTING SURFACE	193.27	193.27	193.28	193.39	193.40	193.40	193.42	193.56	194.36	194.49	194.50	194.53	194.54	194.41	194.42
OFFSET	-10.75	-10.70	-7.70	-3.80	-3.69	-3.65	-3.20	0.00	3.20	3.65	3.69	3.80	7.70	9.20	9.25

12.68

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

AMENDMENTS

VER.	DATE	REMARKS
A	19.12.17	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-C10
SURVEY BPD
DESIGN SS
DRAWN SS
CHECKED

RATHDOWNE ESTATE
STAGE 2
PORTOFINO WAY & NORTH STREET EAST

MUNICIPALITY WHITTLESEA
REFERENCE 8352 E/2
SCALE AS SHOWN DATUM AHD DATE JUL'17
SHEET 15 OF 21 A

Plotted:19-Dec-17
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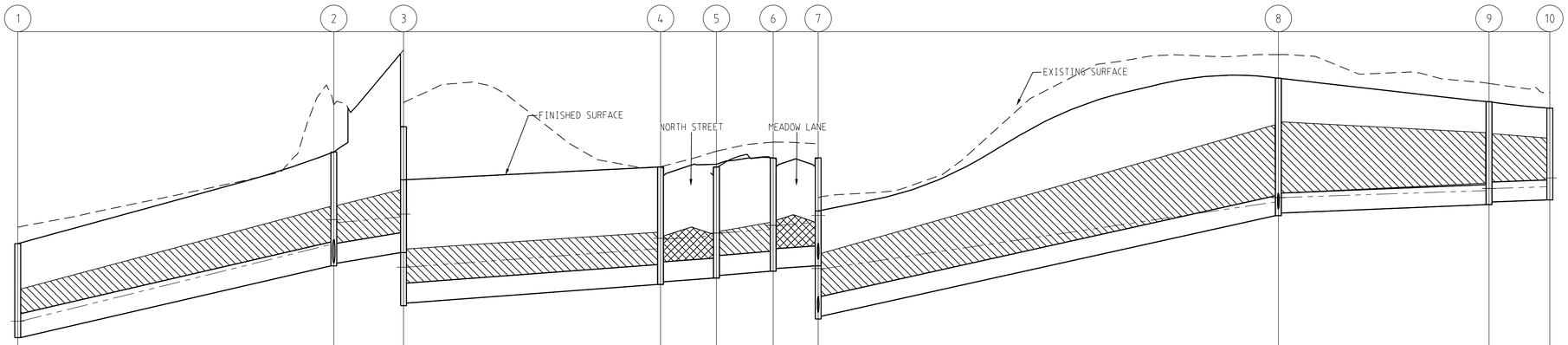
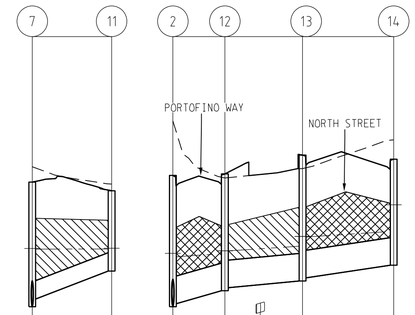
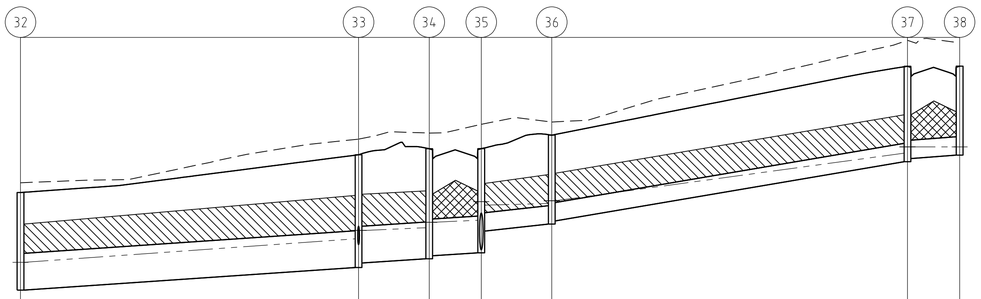
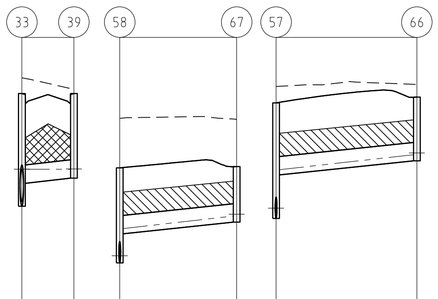




	1		2		3		4		5	6	7		8		9	10		7	11		2		12		13		14
VELOCITY (m/sec)	2.70m/s		1.96m/s		1.35m/s		1.29m/s		1.37m/s	1.22m/s		2.35m/s			1.00m/s	0.92m/s		2.57m/s		2.82m/s		1.67m/s		2.11m/s		
DESIGN (m3/s)	0.35m3/s		0.16m3/s		0.15m3/s		0.14m3/s		0.14m3/s	0.14m3/s		0.12m3/s			0.09m3/s	0.08m3/s		0.01m3/s		0.22m3/s		0.22m3/s		0.22m3/s		
CAPACITY (m3/s)	0.43m3/s		0.22m3/s		0.15m3/s		0.14m3/s		0.15m3/s	0.13m3/s		0.26m3/s			0.11m3/s	0.10m3/s		0.18m3/s		0.45m3/s		0.27m3/s		0.34m3/s		
DIAMETER AND TYPE (CLASS 2)	450 RRJ		375 RRJ		375 RRJ		375 RRJ CLASS 4		375 RRJ	375 RRJ CLASS 4		375 RRJ			375 RRJ	375 RRJ		300 RRJ		450 RRJ CLASS 4		450 RRJ		450 RRJ CLASS 4		
GRADE	1 in 44.1		1 in 65.7		1 in 138		1 in 151		1 in 134	1 in 170		1 in 458			1 in 250	1 in 300		1 in 28.4		1 in 404		1 in 115		1 in 719		
DATUM RL	186.0				187.0						188.0							187.0		186.0						
DEPTH FS TO INVERT	1.768	1.768	2.144	2.094	2.370	2.320	2.213	2.163	2.142	2.092	2.134	2.084	2.034	1.984	2.589	2.539	1.936	1.886	1.727	2.034	1.969	1.312	2.144	2.094	1.908	1.858	2.055	2.005	1.730
HGL LEVEL	190.309		191.754	192.221 192.165	192.268	192.325	192.674	192.871 192.847	192.917	192.967	193.037	193.113 193.112	193.163	193.301 193.290	194.553	194.636	194.767	194.807	194.839	195.006	193.163	193.201 193.200	193.292	193.304						
INVERT	190.000	190.000	191.350	191.400	191.600	191.650	192.000	192.050	192.120	192.170	192.250	192.300	192.350	192.400	194.295	194.345	194.504	194.554	194.592		192.350	192.475	192.932		191.350	191.400	191.610	191.660	191.710	191.770	191.820		192.338	192.499 192.488		192.578	192.027	
FINISHED SURFACE	191.768		193.494		193.970		194.213		194.262		194.384		194.384		196.884		196.440		196.319		194.384		194.243		193.494		193.518			193.825						193.757		
NATURAL SURFACE	192.076		194.383		195.415		194.216		194.508		194.681		194.635		197.329		196.784		196.609		194.635		194.352		193.383		193.451			193.604						194.074		
CHAINAGE	0.000		59.602		72.748		121.201		131.744		142.441		150.935		237.701		277.432		288.894		0.000		12.955		0.000		8.491			14.263			21.169			36.049		
	L=59.602m			L=13.146m		L=48.453m		L=10.544m		L=10.697m	L=8.493m		L=86.767m			L=39.731m	L=11.462m		L=12.955m		L=8.491m		L=12.678m		L=14.881m		





	32		33		34	35	36		37	38	33	39	58		67	57		66
	1.77m/s		1.67m/s		1.62m/s	1.37m/s	1.77m/s			1.12m/s	1.37m/s		1.37m/s			1.37m/s		
	0.48m3/s		0.45m3/s		0.44m3/s	0.05m3/s	0.03m3/s			0.00m3/s	0.01m3/s		0.02m3/s			0.02m3/s		
	0.50m3/s		0.47m3/s		0.46m3/s	0.10m3/s	0.12m3/s			0.08m3/s	0.10m3/s		0.10m3/s			0.10m3/s		
	600 RRJ		600 RRJ		600 RRJ CLASS 4	300 RRJ	300 RRJ			300 RRJ CLASS 4	300 RRJ CLASS 4		300 RRJ			300 RRJ		
	1 in 150		1 in 170		1 in 180	1 in 100	1 in 60			1 in 150	1 in 100		1 in 100			1 in 100		
	186.0										185.0		187.0			186.0		
DEPTH FS TO INVERT	1.593	1.593	1.841	1.766	1.797	1.747	1.702	1.347	1.451	1.401	1.841	1.466	1.551	1.076	0.906	1.885	1.175	1.041
HGL LEVEL	190.844		191.228	191.363 191.363	191.408	191.497	191.530	191.833 191.776	191.804	191.848	191.228	191.363 191.363	191.942	191.951 192.394	192.599	192.627	191.706	191.726 192.356	192.599	192.627
INVERT	190.390	190.390	190.758	190.833	190.901	190.951	190.998	191.353	191.468	191.518	190.758	191.133	191.834	192.309	192.500	192.527	191.560	192.270	192.500	192.527
FINISHED SURFACE	191.983		192.599		192.698	192.700	192.919			194.043	192.599		193.385		193.406	193.541	193.446		193.541	193.747
NATURAL SURFACE	192.141		192.854		192.953	193.097	193.134			194.426	192.854	192.666	194.193		194.176	193.747	193.714		193.747	193.974
CHAINAGE	0.000		55.192		66.726	75.226	86.734			144.812	153.323	0.000	8.492		19.090	0.000	22.986		
	L=55.192m			L=11.534m	L=8.500m	L=11.508m		L=58.078m		L=8.511m	L=8.492m		L=19.090m			L=22.986m		

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

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

AMENDMENTS	VER.	DATE	REMARKS
	C	22·01·19	LS PITS 58-67, 57-66 ADDED
	B	29·05·18	VARIOUS PIT LOWERED AT INTERSECTIONS
	A	19.12.17	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-C10
SURVEY	BPD
DESIGN	SS
DRAWN	SS
CHECKED	

RATHDOWNE ESTATE
STAGE 2
DRAINAGE LONGITUDINAL SECTION

MUNICIPALITY	WHITTLESEA
REFERENCE	8352 E/2
SCALE	AS SHOWN
DATUM	AHD
DATE	JUL '17
SHEET	16 OF 21
	C

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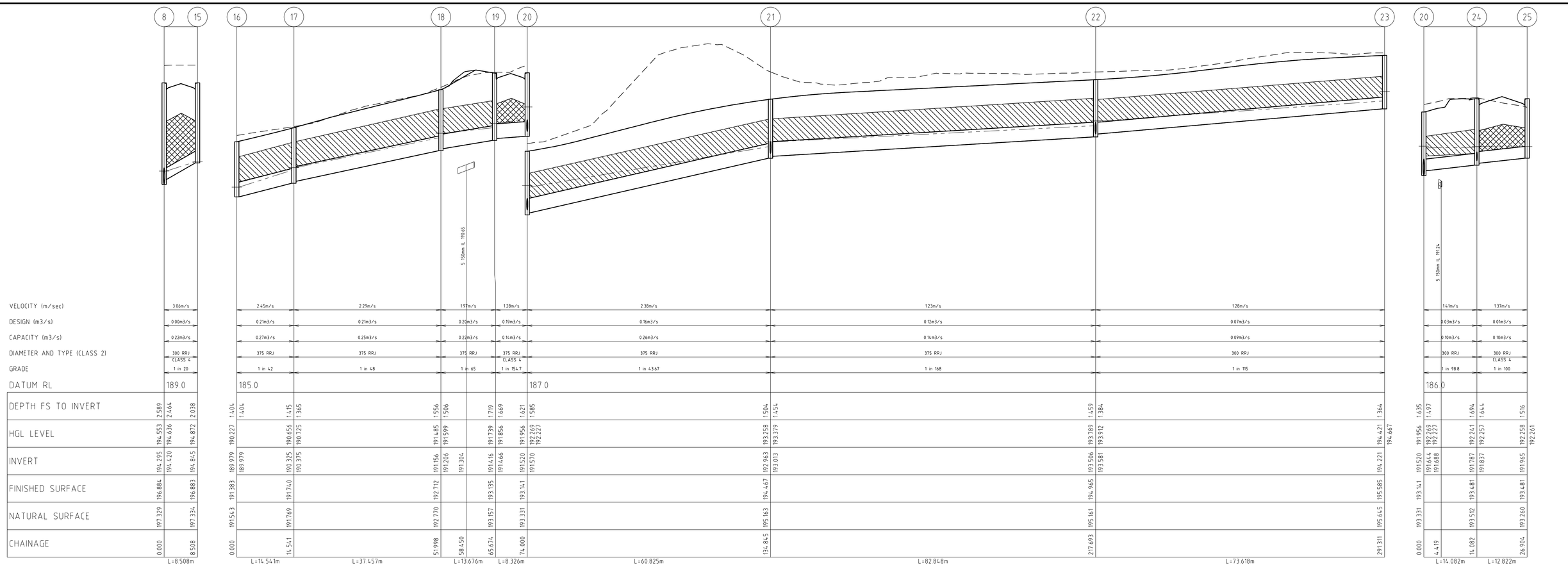
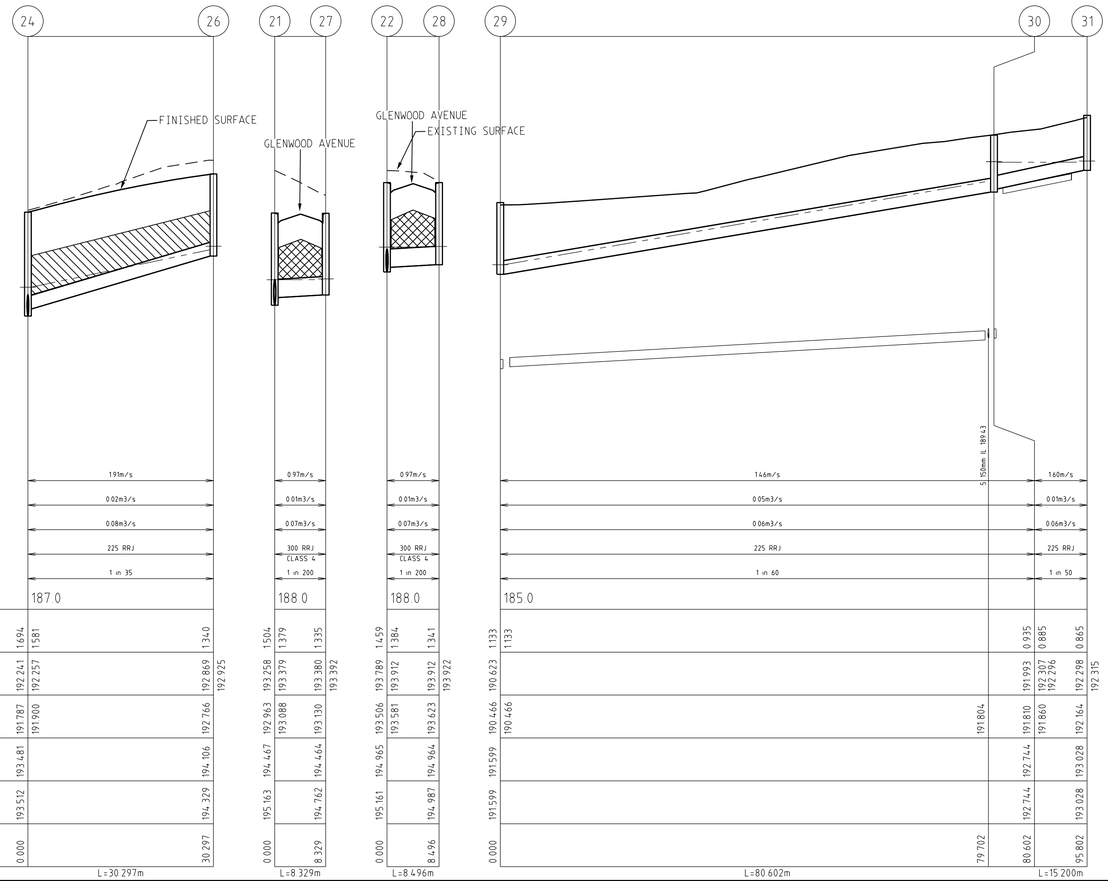
Plotted:29/01/2019





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

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

AMENDMENTS

VER.	DATE	REMARKS
D	24·08·20	AMENDMENTS TO DRAINAGE PIT 20
C	15·08·18	AMENDMENTS TO DRAINAGE PIT 20
B	29·05·18	VARIOUS S/W PITS LOWERED AT INTERSECTIONS
A	19.12.17	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-C10
SURVEY	BPD
DESIGN	SS
DRAWN	SS
CHECKED	

RATHDOWNE ESTATE STAGE 2

DRAINAGE LONGITUDINAL SECTION

MUNICIPALITY	WHITTLESEA
REFERENCE	8352 E/2
SCALE	AS SHOWN
DATUM	AHD
DATE	JUL'17
SHEET	17 OF 21
	D

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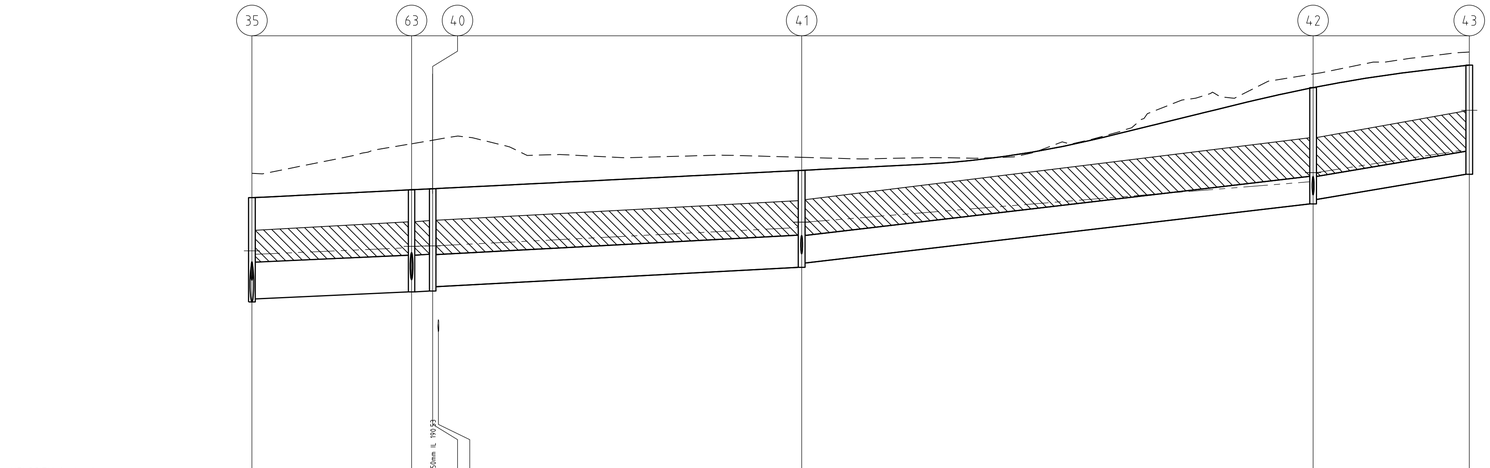
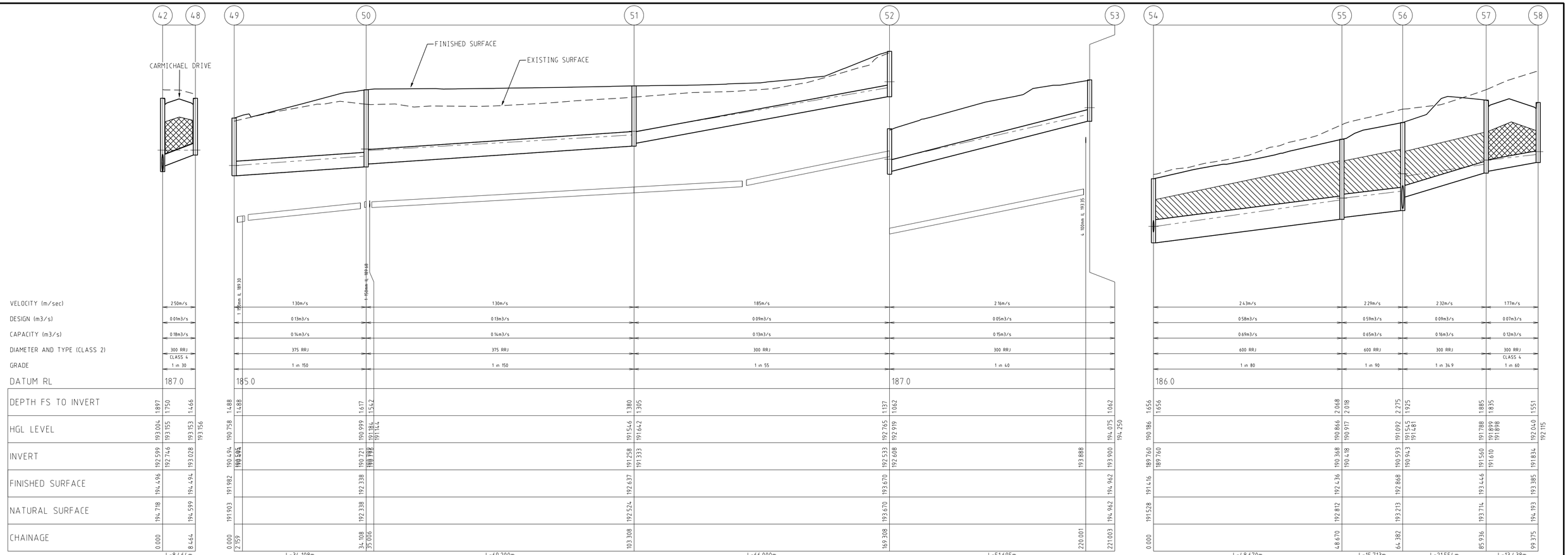
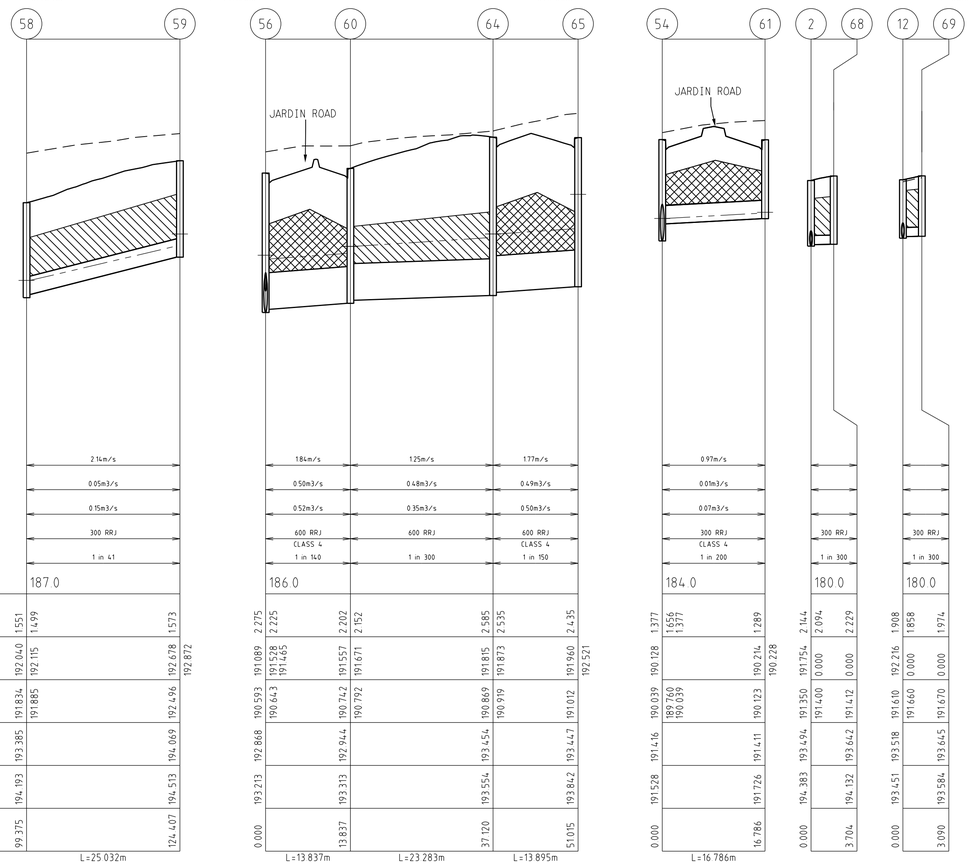
Plotted:29/08/2018


35
63
40
41
42
43
1650mm RL 190.93

| | | |





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

AS CONSTRUCTED

VER.	DATE	REMARKS
D	24.05.19	DRAINAGE LINES 68-69 ADDED
C	23.11.18	DRAINAGE LINE 60-65 ADDED
B	29.05.18	VARIOUS S/W PITS LOWERED AT INTERSECTIONS
A	19.12.17	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-C10
SURVEY BPD
DESIGN SS
DRAWN SS
CHECKED

RATHDOWNE ESTATE STAGE 2

DRAINAGE LONGITUDINAL SECTION

SCALE AS SHOWN DATUM AHD DATE JUL'17

MUNICIPALITY WHITTLESEA
REFERENCE 9365 E/2
SHEET 19 OF 21 D

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Plotted:29/05/2019

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.

WARNING

CONTRACTOR TO TAKE EXTRA CAUTION OF OPTIC FIBER CABLE IN DAVIS ROAD

FUTURE STAGE 3

FUTURE STAGE 3

FUTURE STAGE 3

FUTURE STAGE 9

FUTURE STAGE 7

FUTURE STAGE 7

FUTURE STAGE 7

CARMICHAEL DRIVE

PARADE

YORK

STREET

GLENWOOD AVENUE

MEADOW LANE

NORTH

5A SPACE

257 258 259 260 261 264 263 262

256 255 254 253 252 251 250 249 248 247 246 245 244 243 242 241 240 239 238 237 236 235 234 233 232 231 230 229 228 227 226 225 224

707 448m² 708 448m² 709 512m² 710 448m² 711 448m² 712 448m² 713

212 211 210 209 213 214 215 216 217 218 219 220 221 222 223 706 705 208 207 206 205 204 203 202 201 701H 702H 703H 704H

S1 "STREET" SIGN

S2 "GIVE WAY" SIGN (R1-2A)

S3 "KEEP LEFT" SIGN (R2-3L)

S4 "NO ROAD" SIGN & "HAZARD" SIGN (G9-18)

S5 SEGREGATED FOOTWAY (R8-3)

S6 BICYCLE / PEDESTRIAN WARNING (W6-9) & W8-23

GIVE WAY

KEEP LEFT

NO THROUGH ROAD

ONLY ONLY R8-3(R)

W6-9

W8-23

North

PLAN

SCALE 1:500

SCALE 1 : 500

10 5 0 10 20 40

LENGTHS ARE IN METRES

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	RETAINING WALL	RETAINING WALL
Conduits 50mm	GW	GW
Conduits 100mm	W100	W100
Ex Gas/Elect/Tel	G	G

Ex/Natural/FS Level +28.57 +N28.47 28.57

FS @ Building Line 28.28.57

Top/Toe of Batter 1128.57 1128.57

Top Ret. Wall Level 1128.57

100yr Flood Level 1128.57

Fill Prop/Ex

Cut Prop/Ex

FOR CONTINUATION REFER SHEET 2

AS CONSTRUCTED

SIGNAGE & LINEMARKING LEGEND

VER.	DATE	REMARKS
C	05.04.19	SHARED PATH SIGNS UPDATED ALONG NORTH STREET
B	05.12.18	SHARED PATH SIGNS UPDATED ALONG NORTH STREET
A	19.12.17	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-C10

SURVEY BPD

DESIGN SS

DRAWN SS

CHECKED

RATHDOWNE ESTATE STAGE 2

SIGNAGE AND LINE MARKING PLAN SHEET 1 OF 2

MUNICIPALITY WHITTLESEA

REFERENCE 9365 E/2

SCALE AS SHOWN DATUM AHD DATE JUL'17

SHEET 20 OF 21 C

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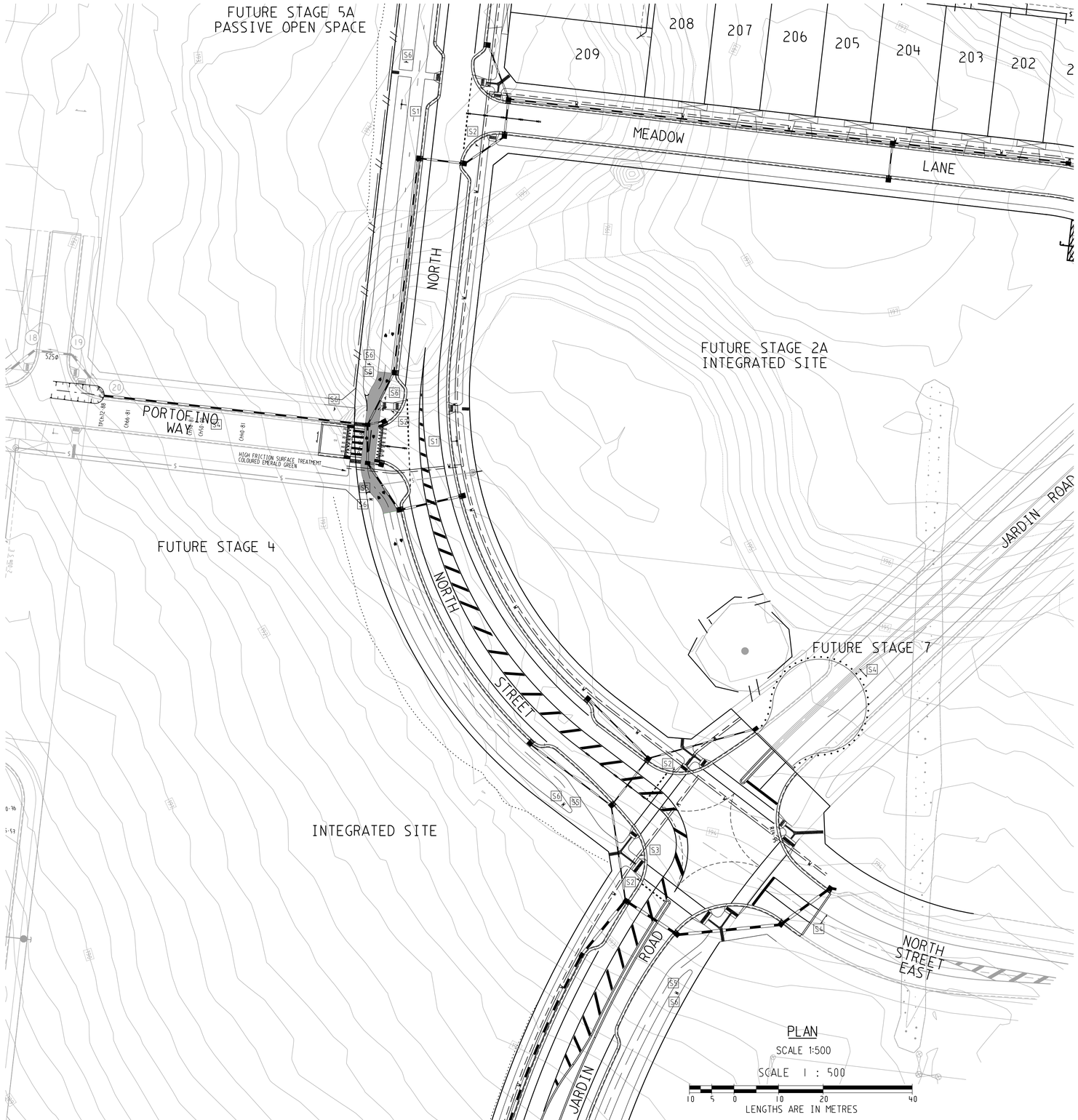
Plotted:29/04/2019



PLAN

SCALE 1:500

SCALE 1 : 500

10 5 0 10 20 40

LENGTHS ARE IN METRES

North

WARNING

CONTRACTOR TO TAKE EXTRA CAUTION OF OPTIC FIBER CABLE IN DAVIS ROAD

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

SIGNAGE & LINEMARKING LEGEND

S1	"STREET" SIGN	
S2	"GIVE WAY" SIGN (R1-2A)	GIVE WAY
S3	"KEEP LEFT" SIGN (R2-3L)	KEEP LEFT
S4	"NO ROAD" SIGN & "HAZARD" SIGN (G9-18)	NO THROUGH ROAD
S5	SEGREGATED FOOTWAY (R8-3)	ONLY ONLY R8-3(R)
S6	BICYCLE / PEDESTRIAN WARNING (W6-9) & W8-23	W6-9 W8-23

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

Ex/Natural/FS Level	28·57 NE28·57 E28·57
FS @ Building Line	NE28·57
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
G	24·05·19	PORTO/NORTH INTERSECTION UPDATED
F	18·04·19	COUNCIL COMMENTS
E	18·04·19	SHARED PATH SIGNS UPDATED ALONG NORTH STREET
D	05·12·18	SHARED PATH SIGNS UPDATED ALONG NORTH STREET
C	05·12·18	SHARED PATH SIGNS UPDATED ALONG NORTH STREET
B	23·11·18	NORTH / RATHDOWNE INTERSECTION UPDATED
A	19.12.17	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-C10
SURVEY	BPD
DESIGN	SS
DRAWN	SS
CHECKED	

RATHDOWNE ESTATE STAGE 2

SIGNAGE AND LINE MARKING PLAN SHEET 2 OF 2

SCALE	AS SHOWN	DATUM AHD	DATE JUL'17

MUNICIPALITY: WHITTLESEA

REFERENCE: 9365 E/2

SHEET 21 OF 21 F

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Plotted:29/08/2019