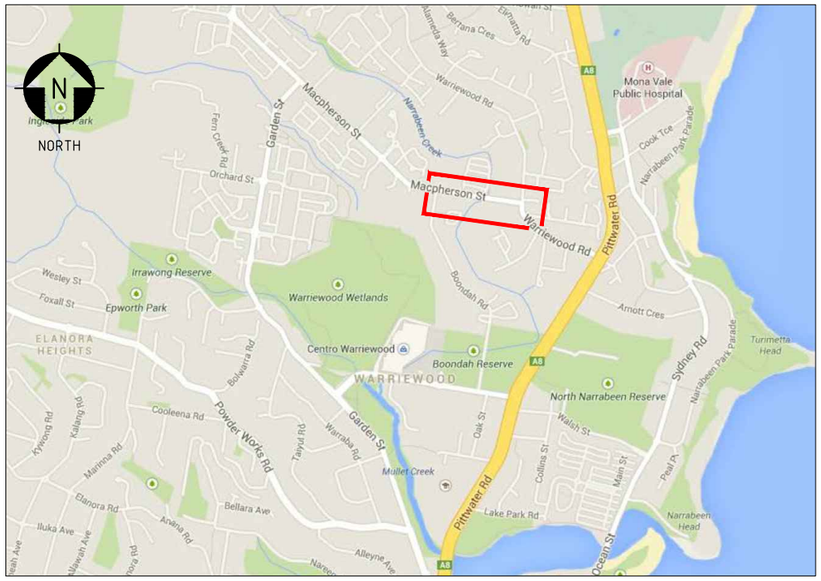
MACPHERSON STREET AND WARRIEWOOD ROAD UPGRADES

FOR

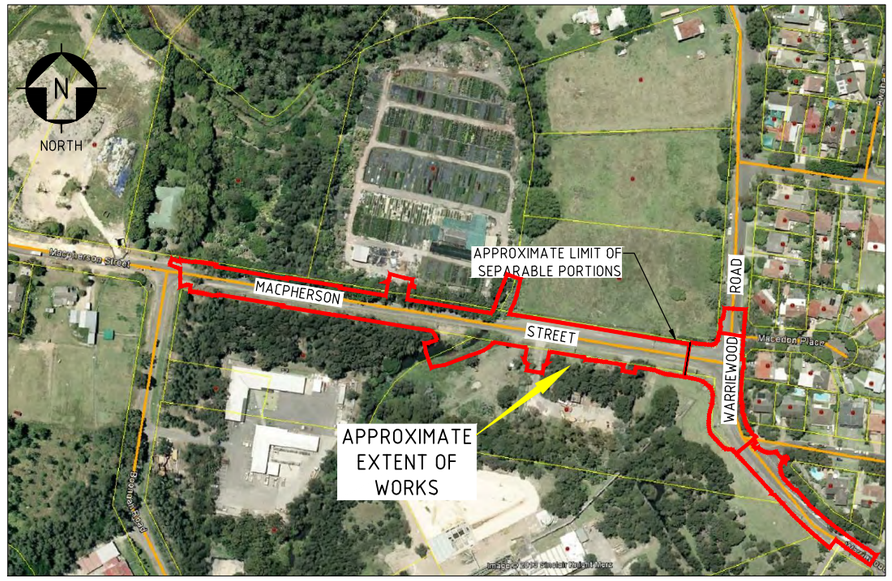
PITTWATER COUNCIL



SOURCE: GOOGLE

LOCALITY MAP

NTS



SOURCE: GOOGLE

SITE LOCATION

NTS

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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WorleyParsons resources & energy

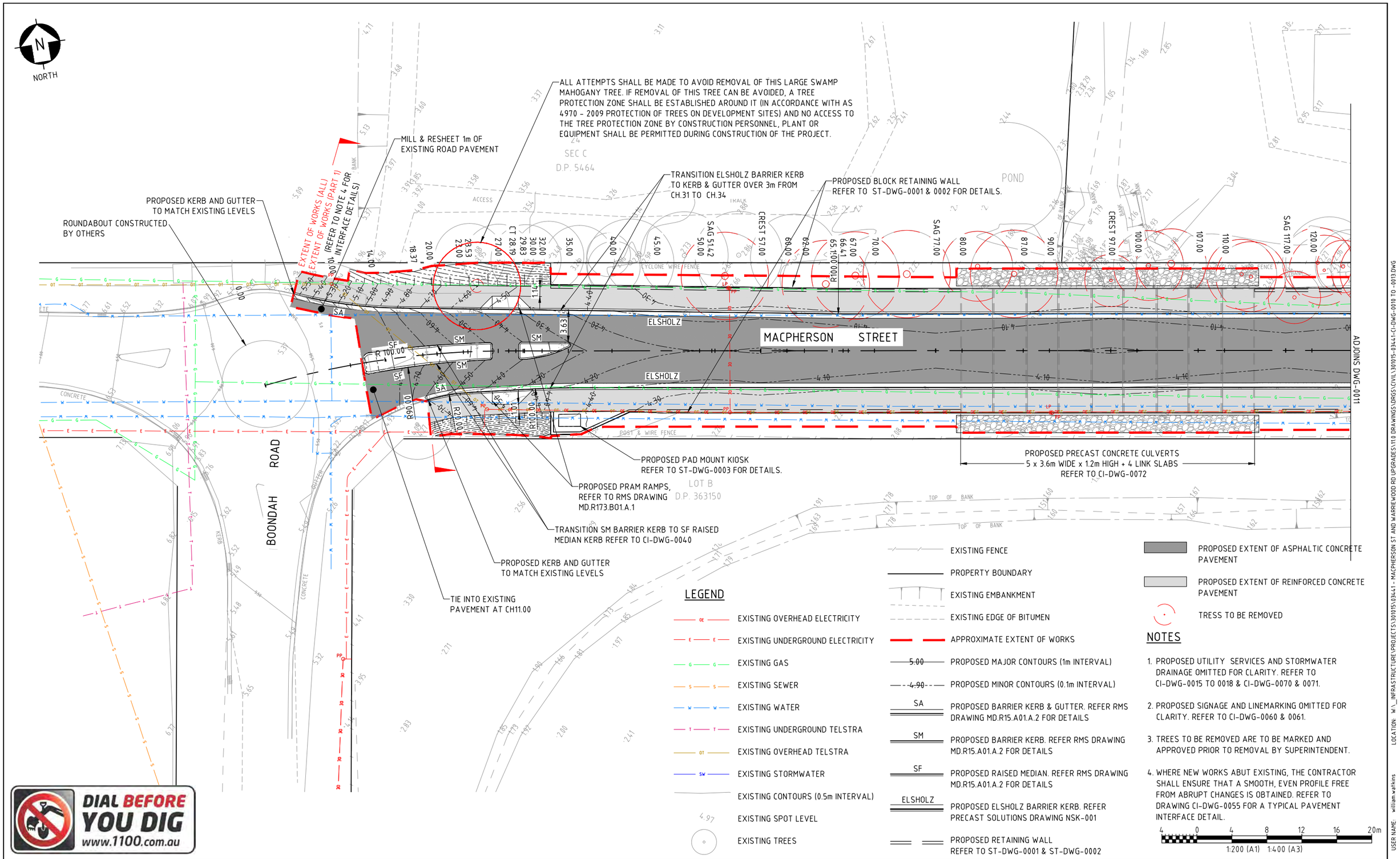
MACPHERSON ST & WARRIEWOOD RD UPGRADES
TITLE SHEET, LOCALITY MAP AND SITE LOCATION

DRG No 301015-03441-CI-DWG-0000

REV 1

WORLEYPARSONS_A1_REV2

PLOT DATE & TIME: 18/3/2016 2:25:10 PM
SAVE DATE & TIME: 18/3/2016 2:22:04 PM
USER NAME: emosh.newar
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\110 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0000.DWG



REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	EN	WJH	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
GENERAL ARRANGEMENT PLAN
SHEET 1

DRG No. 301015-03441-CI-DWG-0010

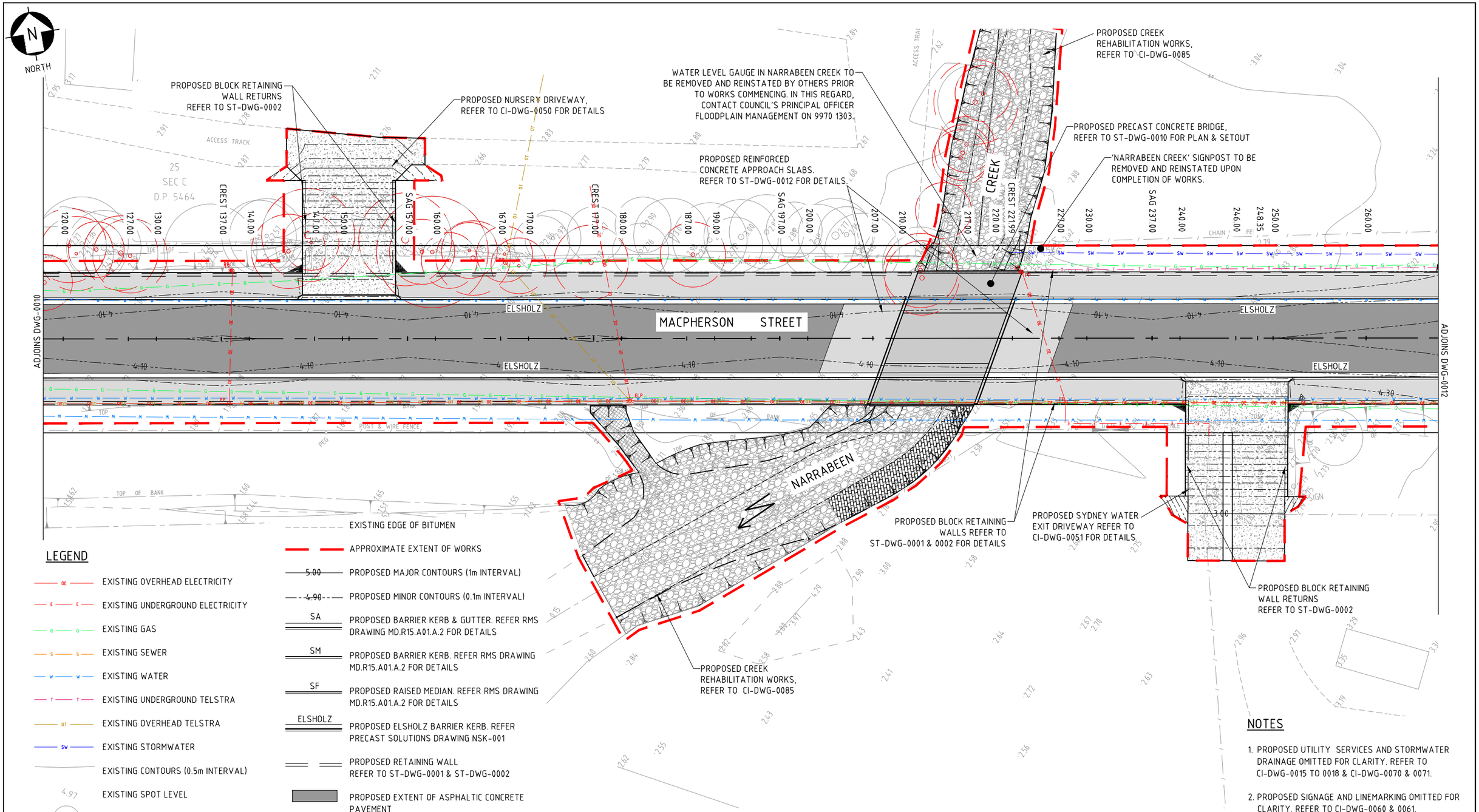
REV 2

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11 0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0010 TO -0013.DWG

USER NAME: william.watkins

PLOT DATE & TIME: 24/3/2016 4:26:06 PM
SAVE DATE & TIME: 24/3/2016 14:3:09 PM



LEGEND

- EXISTING OVERHEAD ELECTRICITY
- EXISTING UNDERGROUND ELECTRICITY
- EXISTING GAS
- EXISTING SEWER
- EXISTING WATER
- EXISTING UNDERGROUND TELSTRA
- EXISTING OVERHEAD TELSTRA
- EXISTING STORMWATER
- EXISTING CONTOURS (0.5m INTERVAL)
- EXISTING SPOT LEVEL
- EXISTING TREES
- EXISTING FENCE
- PROPERTY BOUNDARY
- EXISTING EMBANKMENT
- EXISTING EDGE OF BITUMEN
- APPROXIMATE EXTENT OF WORKS
- PROPOSED MAJOR CONTOURS (1m INTERVAL)
- PROPOSED MINOR CONTOURS (0.1m INTERVAL)
- SA — PROPOSED BARRIER KERB & GUTTER. REFER RMS DRAWING MD.R15.A01.A.2 FOR DETAILS
- SM — PROPOSED BARRIER KERB. REFER RMS DRAWING MD.R15.A01.A.2 FOR DETAILS
- SF — PROPOSED RAISED MEDIAN. REFER RMS DRAWING MD.R15.A01.A.2 FOR DETAILS
- ELSHOLZ — PROPOSED ELSHOLZ BARRIER KERB. REFER PRECAST SOLUTIONS DRAWING NSK-001
- PROPOSED RETAINING WALL REFER TO ST-DWG-0001 & ST-DWG-0002
- PROPOSED EXTENT OF ASPHALTIC CONCRETE PAVEMENT
- PROPOSED EXTENT OF REINFORCED CONCRETE PAVEMENT
- TRESS TO BE REMOVED

DIAL BEFORE YOU DIG
www.1100.com.au

NOTES

1. PROPOSED UTILITY SERVICES AND STORMWATER DRAINAGE OMITTED FOR CLARITY. REFER TO CI-DWG-0015 TO 0018 & CI-DWG-0070 & 0071.
2. PROPOSED SIGNAGE AND LINEMARKING OMITTED FOR CLARITY. REFER TO CI-DWG-0060 & 0061.
3. TREES TO BE REMOVED ARE TO BE MARKED AND APPROVED PRIOR TO REMOVAL BY SUPERINTENDENT.

4 0 4 8 12 16 20m
1:200 (A1) 1:400 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			

A1 SHEET SCALE

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ENGINEERING AND PERMIT STAMPS (As Required)

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
GENERAL ARRANGEMENT PLAN
SHEET 2

DRG No 301015-03441-CI-DWG-0011 REV 1

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\110 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0010 TO -0013.DWG

USER NAME: enosh.newar

PLOT DATE & TIME: 18/3/2016 2:49:56 PM
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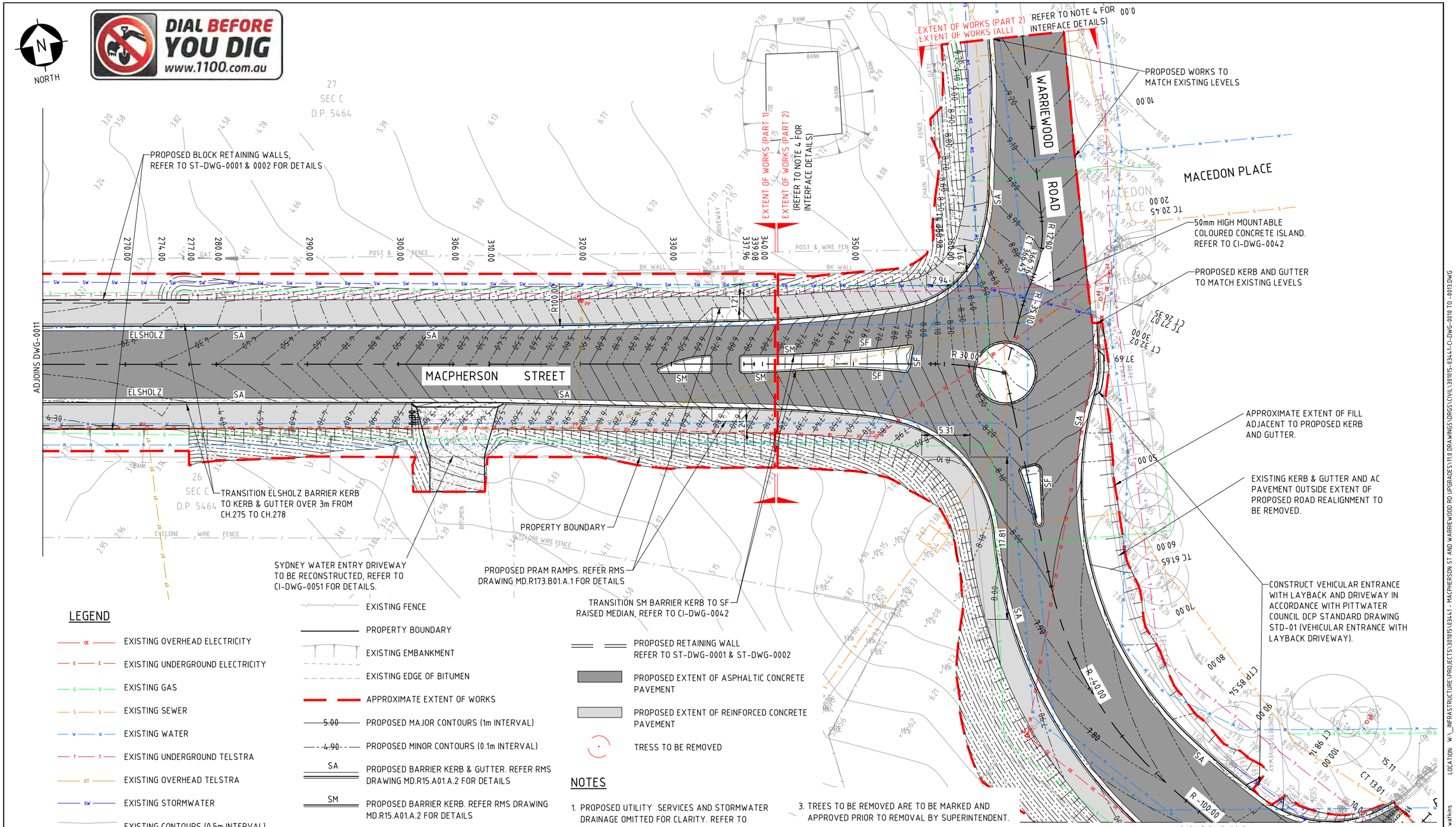

LEGEND

- EXISTING OVERHEAD ELECTRICITY
- EXISTING UNDERGROUND ELECTRICITY
- EXISTING GAS
- EXISTING SEWER
- EXISTING WATER
- EXISTING UNDERGROUND TELSTRA
- EXISTING OVERHEAD TELSTRA
- EXISTING STORMWATER
- EXISTING CONTOURS (0.5m INTERVAL)
- EXISTING SPOT LEVEL
- EXISTING TREES
- EXISTING FENCE
- PROPERTY BOUNDARY
- EXISTING EMBANKMENT
- EXISTING EDGE OF BITUMEN
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- PROPOSED EXTENT OF REINFORCED CONCRETE PAVEMENT
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1. PROPOSED UTILITY SERVICES AND STORMWATER DRAINAGE OMITTED FOR CLARITY. REFER TO CI-DWG-0015 TO 0018 & CI-DWG-0070 & 0071.
2. PROPOSED SIGNAGE AND LINEMARKING OMITTED FOR CLARITY. REFER TO CI-DWG-0060 & 0061.
3. TREES TO BE REMOVED ARE TO BE MARKED AND APPROVED PRIOR TO REMOVAL BY SUPERINTENDENT.
4. WHERE NEW WORKS ABUT EXISTING, THE CONTRACTOR SHALL ENSURE THAT A SMOOTH, EVEN PROFILE FREE FROM ABRUPT CHANGES IS OBTAINED. REFER TO DRAWING CI-DWG-0055 FOR A TYPICAL PAVEMENT INTERFACE DETAIL.

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	EN	WJH	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	WJH	CRT			

A1 SHEET SCALE

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
GENERAL ARRANGEMENT PLAN
SHEET 3

DRG No 301015-03441-CI-DWG-0012 REV 2

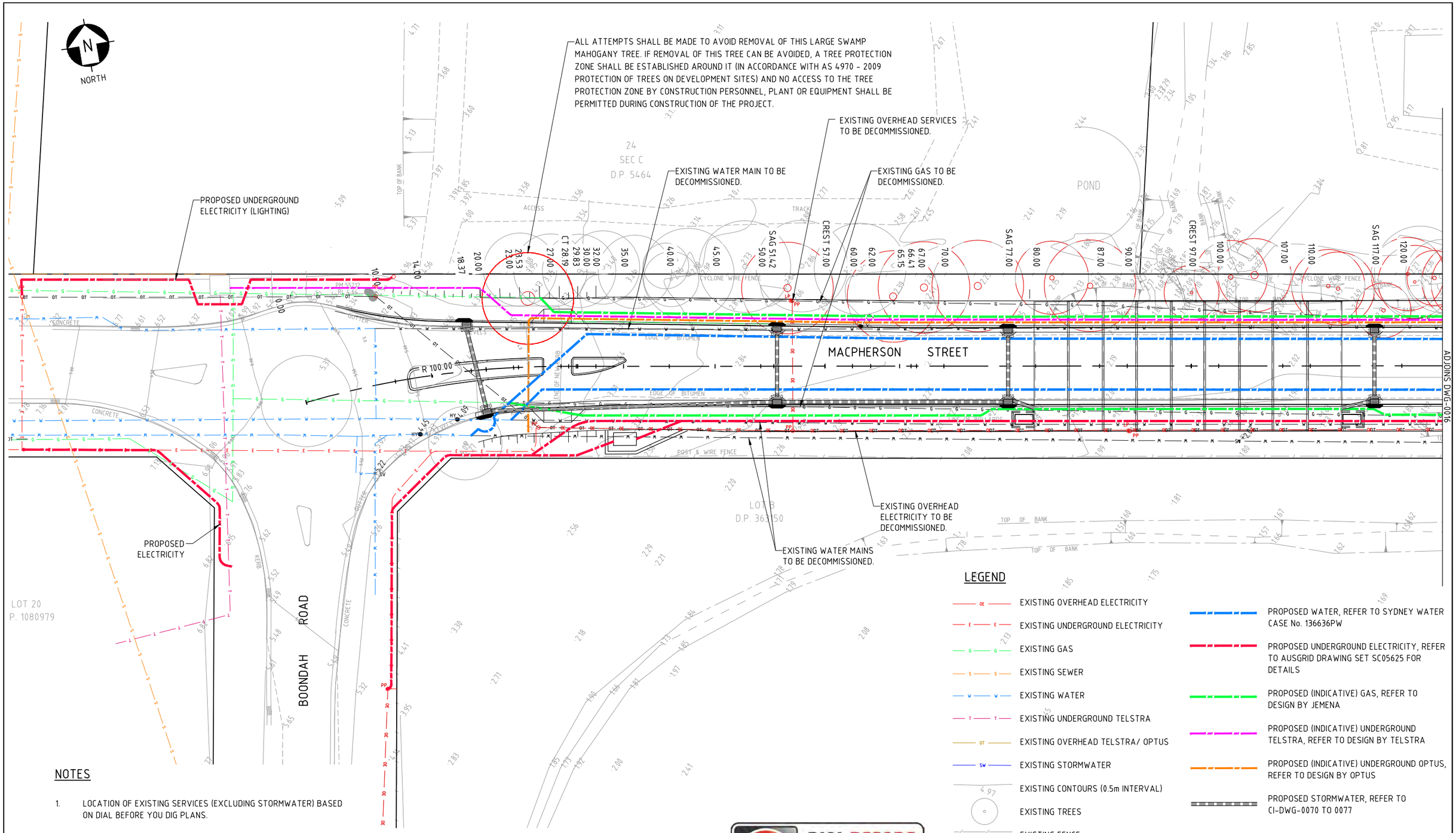
WORLEYPARSONS_A1_REV2

ADJOINS DWG-0011

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0010 TO -0013.DWG

USER NAME: william.wilkins

PLOT DATE & TIME: 24/3/2016 4:28:02 PM
SAVE DATE & TIME: 24/3/2016 1:43:09 PM



NOTES

1. LOCATION OF EXISTING SERVICES (EXCLUDING STORMWATER) BASED ON DIAL BEFORE YOU DIG PLANS.
2. LOCATION OF PROPOSED SERVICES ARE SHOWN INDICATIVELY REFER TO DESIGN BY RELEVANT SERVICES AUTHORITY.
3. REFER TO AUSGRID DRAWING SET SC05625 FOR LOCATION OF LIGHTING COLUMNS.

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REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	08.04.16	ISSUED FOR CONSTRUCTION	EN	AJD	AJD	WJH	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	JE	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	JE	WJH	CRT			

A1 SHEET SCALE B

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

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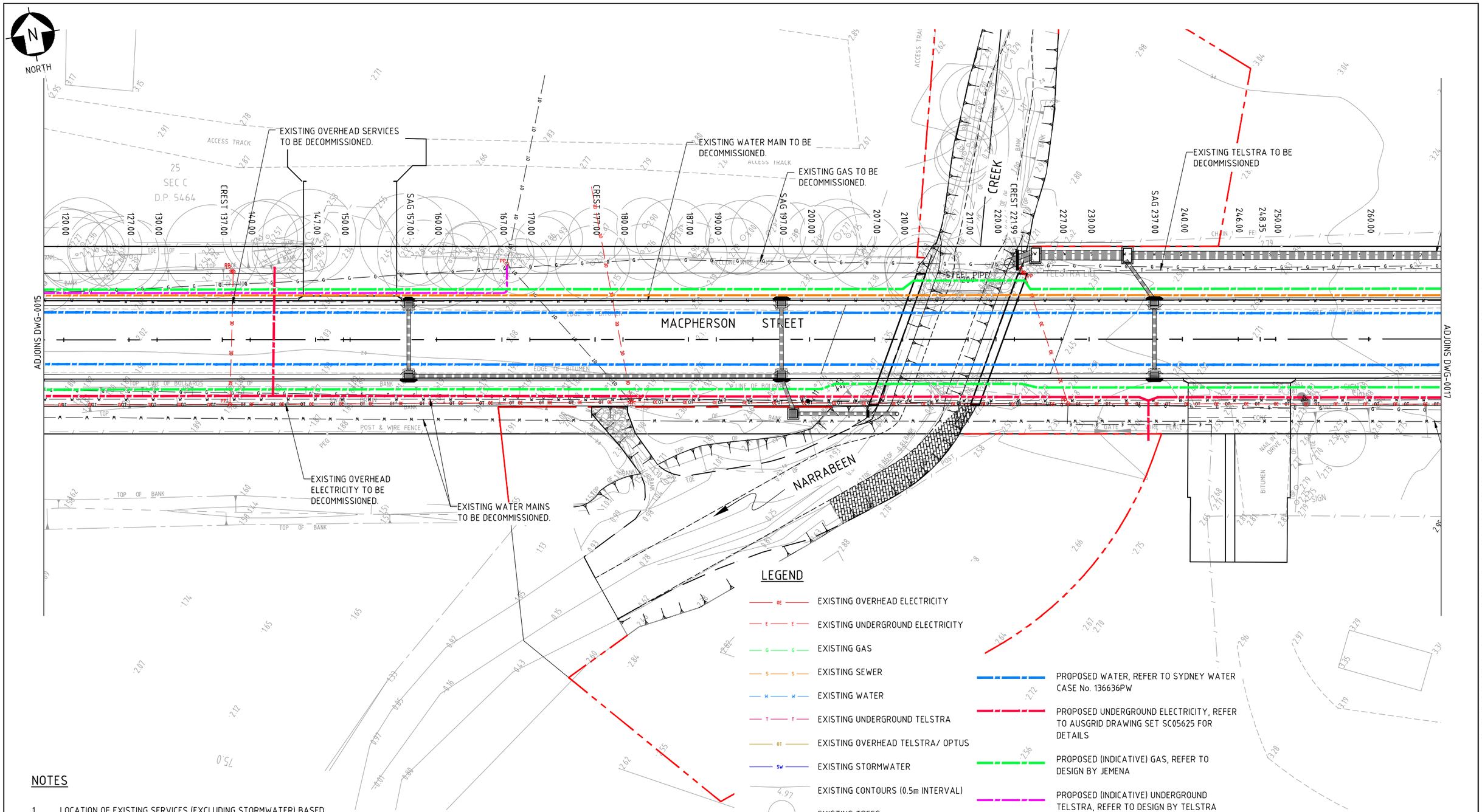
MACPHERSON ST & WARRIEWOOD RD UPGRADES
COMBINED SERVICES PLAN
SHEET 1

DRG No 301015-03441-CI-DWG-0015 REV 2

WORLEYPARSONS_A1_REV2

PLOT DATE & TIME: 8/4/2016 6:21:40 PM
SAVE DATE & TIME: 8/4/2016 6:20:55 PM
USER NAME: enoshinewar
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0015 TO -0018.DWG



LEGEND

- EXISTING OVERHEAD ELECTRICITY
- EXISTING UNDERGROUND ELECTRICITY
- EXISTING GAS
- EXISTING SEWER
- EXISTING WATER
- EXISTING UNDERGROUND TELSTRA
- EXISTING OVERHEAD TELSTRA/ OPTUS
- EXISTING STORMWATER
- EXISTING CONTOURS (0.5m INTERVAL)
- EXISTING TREES
- EXISTING FENCE
- EXISTING EMBANKMENT
- EXISTING EDGE OF BITUMEN
- PROPOSED WATER, REFER TO SYDNEY WATER CASE No. 136636PW
- PROPOSED UNDERGROUND ELECTRICITY, REFER TO AUSGRID DRAWING SET SC05625 FOR DETAILS
- PROPOSED (INDICATIVE) GAS, REFER TO DESIGN BY JEMENA
- PROPOSED (INDICATIVE) UNDERGROUND TELSTRA, REFER TO DESIGN BY TELSTRA
- PROPOSED (INDICATIVE) UNDERGROUND OPTUS, REFER TO DESIGN BY OPTUS
- PROPOSED STORMWATER, REFER TO CI-DWG-0070 TO 0077

NOTES

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2. LOCATION OF PROPOSED SERVICES ARE SHOWN INDICATIVELY REFER TO DESIGN BY RELEVANT SERVICES AUTHORITY.
3. REFER TO AUSGRID DRAWING SET SC05625 FOR LOCATION OF LIGHTING COLUMNS.

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4 0 4 8 12 16 20m
1:200 (A1) 1:400 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	08.04.16	ISSUED FOR CONSTRUCTION	EN	AJD	AJD	WJH	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	JE	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PBC	JE	WJH	CRT			

A1 SHEET SCALE

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
COMBINED SERVICES PLAN
SHEET 2

DRG No 301015-03441-CI-DWG-0016

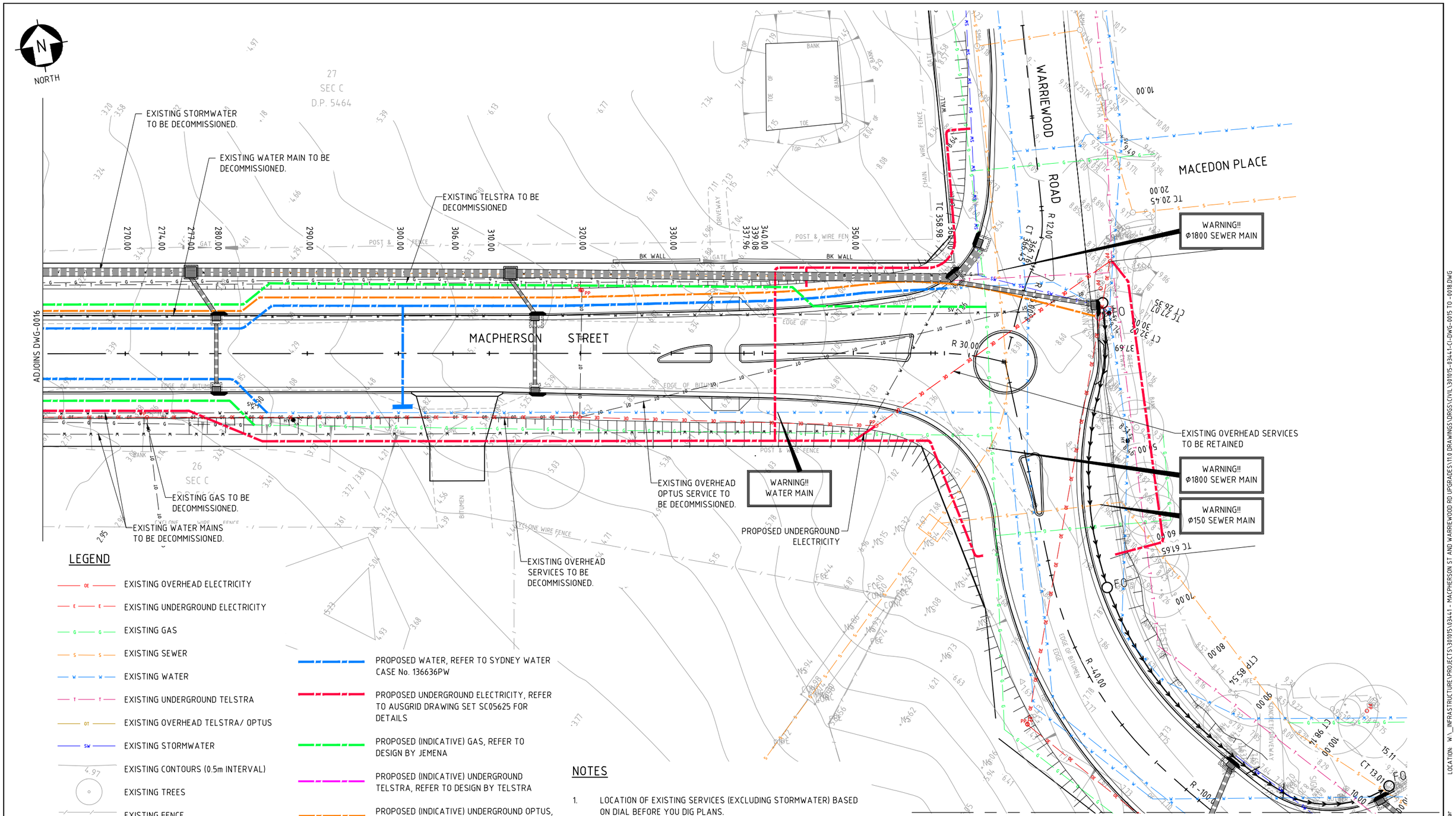
REV 2

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0015 TO -0018.DWG

USER NAME: enosh.newair

PLOT DATE & TIME: 8/4/2016 6:22:00 PM
SAVE DATE & TIME: 8/4/2016 6:20:55 PM



LEGEND

- EXISTING OVERHEAD ELECTRICITY
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- PROPOSED STORMWATER, REFER TO CI-DWG-0070 TO 0077

NOTES

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DIAL BEFORE YOU DIG www.1100.com.au

1:200 (A1) 1:400 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	08.04.16	ISSUED FOR CONSTRUCTION	EN	AJD	AJD	WJH	CRT			
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0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PBC	JE	WJH	CRT			

A1 SHEET SCALE

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
COMBINED SERVICES PLAN
SHEET 3

DRG No 301015-03441-CI-DWG-0017

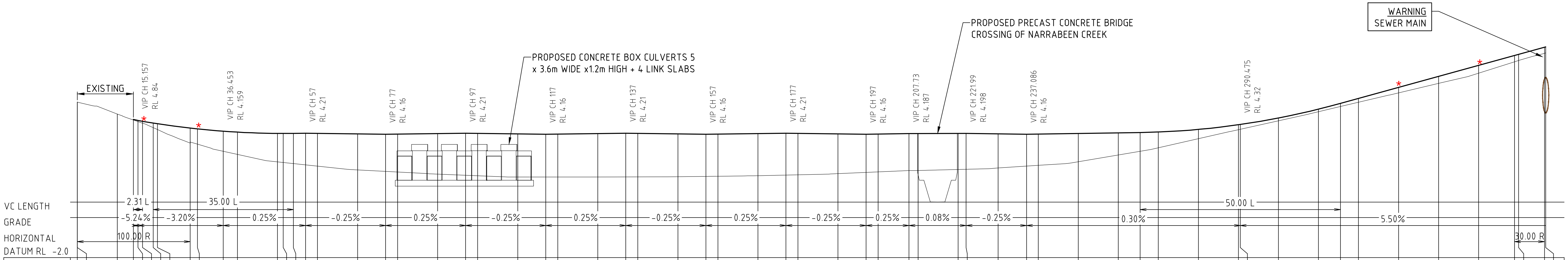
REV 2

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0015 TO -0018.DWG

USER NAME: enoshnewar

PLOT DATE & TIME: 8/4/2016 6:22:19 PM
SAVE DATE & TIME: 8/4/2016 6:20:55 PM



CHAINAGE	DESIGN CL	EXISTING SURFACE	DEPTH
0.000		5.766	
0.004		5.766	
10.000		5.167	
14.000	4.901	4.870	-0.031
15.157	4.846	4.788	-0.058
16.313	4.803	4.708	-0.095
18.953	4.719	4.487	-0.232
20.000	4.686	4.392	-0.293
28.190	4.465	3.719	-0.746
30.000	4.425	3.665	-0.760
36.453	4.310	3.304	-1.006
40.000	4.263	3.150	-1.113
50.000	4.200	2.778	-1.422
51.416	4.199	2.748	-1.451
53.953	4.202	2.694	-1.509
57.000	4.210	2.628	-1.582
60.000	4.202	2.564	-1.638
70.000	4.178	2.377	-1.801
77.000	4.160	2.303	-1.857
80.000	4.168	2.271	-1.897
90.000	4.192	2.170	-2.022
97.000	4.210	2.111	-2.099
100.000	4.202	2.085	-2.117
110.000	4.178	2.021	-2.156
117.000	4.160	2.021	-2.139
120.000	4.168	2.021	-2.146
130.000	4.192	2.022	-2.170
137.000	4.210	2.025	-2.185
140.000	4.202	2.027	-2.176
150.000	4.178	2.037	-2.141
157.000	4.160	2.053	-2.107
160.000	4.168	2.060	-2.107
170.000	4.192	2.091	-2.101
177.000	4.210	2.122	-2.088
180.000	4.202	2.136	-2.067
190.000	4.178	2.190	-1.988
197.000	4.160	2.253	-1.907
200.000	4.168	2.280	-1.888
207.730	4.187	2.348	-1.839
210.000	4.189	2.352	-1.837
220.000	4.196	2.401	-1.795
221.990	4.198	2.411	-1.787
230.000	4.178	2.472	-1.706
237.086	4.160	2.569	-1.591
240.000	4.169	2.609	-1.560
250.000	4.199	2.783	-1.416
260.000	4.229	3.121	-1.108
265.475	4.245	3.306	-0.940
270.000	4.270	3.483	-0.786
280.000	4.399	3.935	-0.464
290.000	4.632	4.385	-0.247
290.475	4.645	4.406	-0.239
300.000	4.969	4.830	-0.139
310.000	5.410	5.281	-0.129
315.475	5.695	5.541	-0.155
320.000	5.944	5.753	-0.191
330.000	6.494	6.222	-0.272
340.000	7.044	6.693	-0.351
350.000	7.594	7.201	-0.393
358.980	8.088	7.773	-0.315
360.000	8.144	7.837	-0.307
366.452	8.499	8.196	-0.303
366.759	8.516	8.217	-0.299

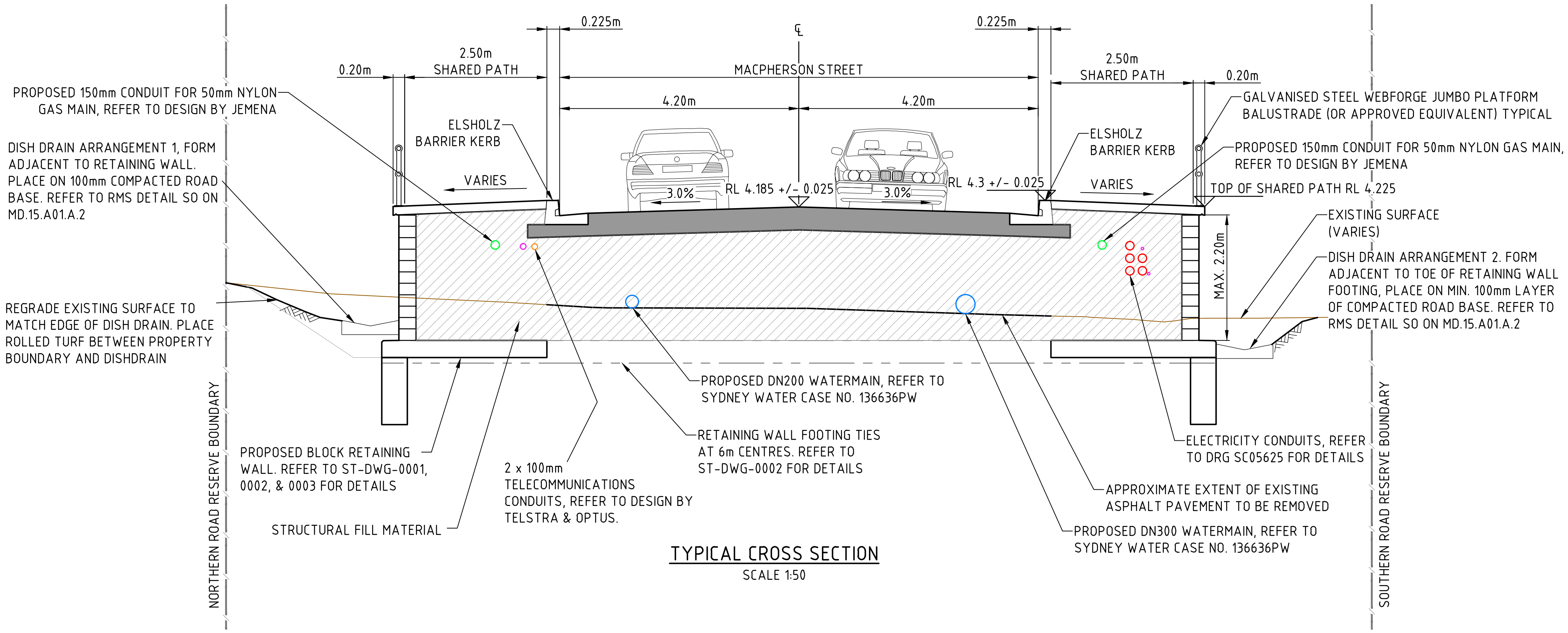
* REFER TO CI-DWG-0040 & 0041 FOR DESIGN LEVELS OF ISLANDS

PROPOSED MACPHERSON STREET CENTRELINE LONGITUDINAL SECTION

SCALE HORIZONTAL 1:500
SCALE VERTICAL 1:100

MACPHERSON STREET CENTRELINE SETOUT TABLE

Pt	Chainage	Easting	Northing	Level	Bearing	Radius
IP1	0	327434.876	1270746.308	5.766	83°18'49.47"	
TC	0.004	327434.879	1270746.309	5.766		
IP2	14.097	327448.97	1270747.96	4.896		100
CT	28.19	327462.964	1270745.628	4.465	99°27'48.26"	
IP3	29.835	327464.587	1270745.357	4.429		
TC	358.98	327789.306	1270691.563	8.088	99°24'22.95"	
IP4	362.716	327793.011	1270690.95	8.294		30
CT	366.452	327796.45	1270689.442	8.499	113°40'33.41"	
IP5	366.759	327796.732	1270689.318	8.516	113°40'33.41"	



TYPICAL CROSS SECTION

SCALE 1:50

NOTES

1. REFER TO CI-DWG-0055 FOR PAVEMENT DETAILS.
2. SUBGRADE BELOW FILL MATERIAL SHALL BE STRIPPED TO A DEPTH OF AT LEAST 100mm TO REMOVE ALL EXISTING ASPHALT PAVEMENT AND ORGANIC MATERIAL, THEN PROOF ROLLED WITH AT LEAST 8 PASSES OF A STATIC SMOOTH DRUM ROLLER (AT LEAST 12t). FINAL 2 PASSES SHALL BE UNDERTAKEN UNDER THE SUPERVISION OF AN EXPERIENCED GEOTECHNICAL ENGINEER.
3. STRUCTURAL FILL MATERIAL SHALL BE COMPACTED TO 100% DENSITY RATIO RELATIVE TO STANDARD COMPACTION WITH MOISTURE CONTENT WITHIN 2% OF OPTIMUM. REFER TO DRAWING 301015-03441-CI-DWG-0003 FOR FURTHER STRUCTURAL FILL RELATED DETAILS.

1000 0 1000 2000 3000 4000 5000mm
1:50 (A1) 1:100 (A3)

2 0 2 4 6 8 10m
1:100 (A1) 1:200 (A3)

10 0 10 20 30 40 50m
1:500 (A1) 1:1000 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER: PITTWATER COUNCIL

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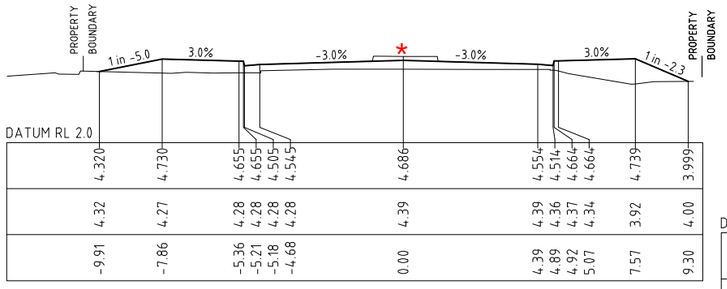
WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET LONG SECTION
TYPICAL CROSS SECTION
& SETOUT

DRG No 301015-03441-CI-DWG-0020 REV 1

WORLEYPARSONS_A1_REV2

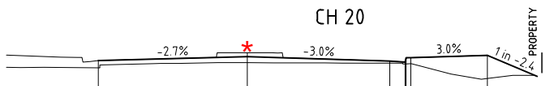
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0020.DWG
USER NAME: enosh.newar
PLOT DATE & TIME: 21/3/2016 5:29:05 PM
SAVE DATE & TIME: 21/3/2016 10:02:44 AM



DATUM RL 2.0

4.320	4.730	4.655	4.655	4.505	4.545	4.686	4.554	4.514	4.664	4.664	4.739	3.999
4.32	4.27	4.28	4.28	4.28	4.28	4.39	4.39	4.36	4.37	4.34	3.92	4.00
-9.91	-7.86	-5.36	-5.21	-5.18	-4.68	0.00	4.39	4.89	4.92	5.07	7.57	9.30

CH 20



DATUM RL 3.0

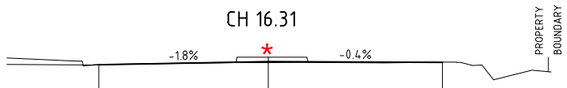
4.608	4.737	4.598	4.558	4.708	4.708	4.783
4.37	4.54	4.53	4.50	4.50	4.51	4.02
-4.86	0.00	4.65	5.15	5.18	5.33	7.83

CH 18.37

DATUM RL 3.0

4.689	4.803	4.713
4.61	4.71	4.70
-5.12	0.00	5.09

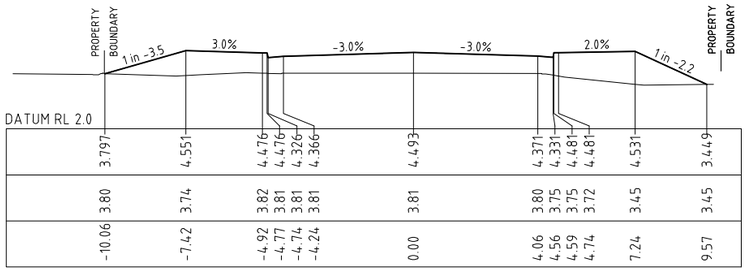
CH 16.31



DATUM RL 3.0

DESIGN	4.804	4.901	4.878
EXISTING SURFACE	4.81	4.87	4.88
CL OFFSET	-5.53	0.00	5.68

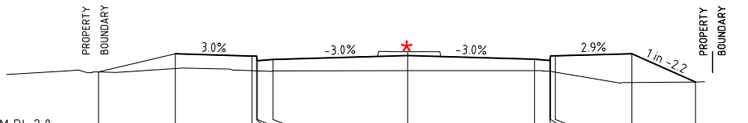
CH 14



DATUM RL 2.0

3.797	4.551	4.476	4.476	4.326	4.366	4.493	4.371	4.331	4.481	4.481	4.531	3.449
3.80	3.74	3.82	3.81	3.81	3.81	3.81	3.80	3.75	3.75	3.72	3.45	3.45
-10.06	-7.42	-4.92	-4.77	-4.74	-4.24	0.00	4.06	4.56	4.59	4.74	7.24	9.57

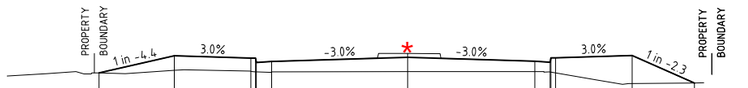
CH 27



DATUM RL 2.0

4.045	4.636	4.561	4.561	4.411	4.451	4.582	4.458	4.418	4.568	4.568	4.640	3.720
4.05	4.16	4.09	4.08	4.08	4.08	4.09	4.09	4.07	4.06	4.04	3.70	3.72
-10.08	-7.57	-5.07	-4.92	-4.89	-4.39	0.00	4.14	4.64	4.67	4.82	7.32	9.39

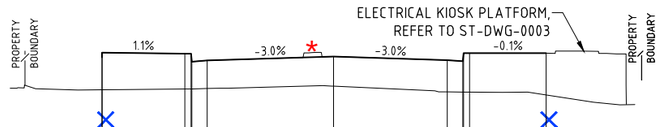
CH 23.53



DATUM RL 2.0

4.087	4.649	4.574	4.574	4.424	4.464	4.597	4.473	4.433	4.583	4.583	4.658	3.762
4.09	4.17	4.14	4.12	4.12	4.12	4.13	4.13	4.12	4.11	4.09	3.75	3.76
-10.06	-7.61	-5.11	-4.96	-4.93	-4.43	0.00	4.15	4.65	4.68	4.83	7.33	9.36

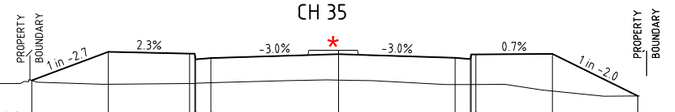
CH 23



DATUM RL 1.0

4.313	4.463	4.432	4.432	4.168	4.208	4.332	4.221	4.181	4.445	4.445	4.442
3.25	3.25	3.28	3.28	3.28	3.29	3.37	3.18	3.18	3.18	3.18	3.08
-7.55	-7.55	-4.85	-4.65	-4.63	-4.13	0.00	3.71	4.21	4.24	4.44	6.94

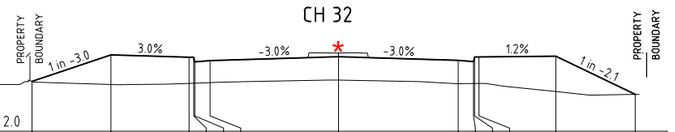
CH 35



DATUM RL 2.0

3.530	4.467	4.407	4.407	4.220	4.260	4.385	4.271	4.231	4.381	4.381	4.398	3.027
3.53	3.41	3.43	3.44	3.44	3.45	3.54	3.40	3.40	3.40	3.40	3.18	3.03
-10.01	-7.51	-4.86	-4.70	-4.67	-4.17	0.00	3.80	4.30	4.33	4.48	6.98	9.76

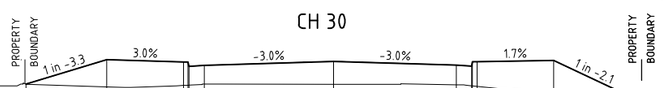
CH 32



DATUM RL 2.0

3.626	4.486	4.409	4.409	4.259	4.299	4.425	4.308	4.268	4.418	4.418	4.448	3.199
3.63	3.52	3.56	3.56	3.57	3.58	3.66	3.55	3.55	3.55	3.56	3.29	3.20
-10.00	-7.43	-4.88	-4.73	-4.70	-4.20	0.00	3.90	4.40	4.43	4.58	7.08	9.68

CH 30



DATUM RL 2.0

3.725	4.524	4.449	4.449	4.299	4.339	4.465	4.345	4.305	4.455	4.455	4.497	3.356
3.73	3.63	3.68	3.69	3.69	3.72	3.72	3.70	3.67	3.66	3.65	3.39	3.36
-10.03	-7.40	-4.90	-4.75	-4.72	-4.22	0.00	4.00	4.50	4.53	4.68	7.18	9.61

CH 28.19

* REFER TO CI-DWG-0040 & 0041 FOR DESIGN LEVELS OF ISLANDS

× RETAINING WALL CONTROL LINE, REFER TO ST-DWG-001 & 002

2 0 2 4 6 8 10m

1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
DESIGN CROSS SECTIONS
SHEET 1

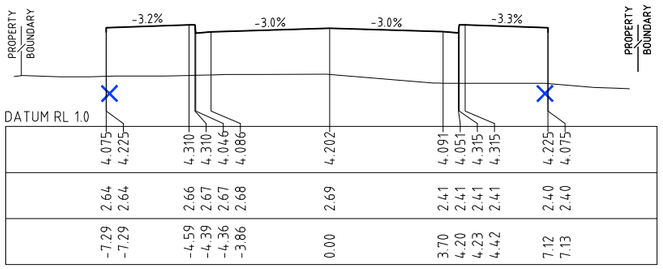
DRG No 301015-03441-CI-DWG-0021 REV 1

WORLEYPARSONS_A1_REV2

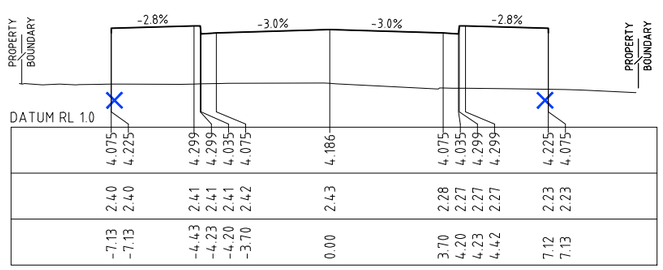
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\110 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0020.DWG

USER NAME: enosh.newar

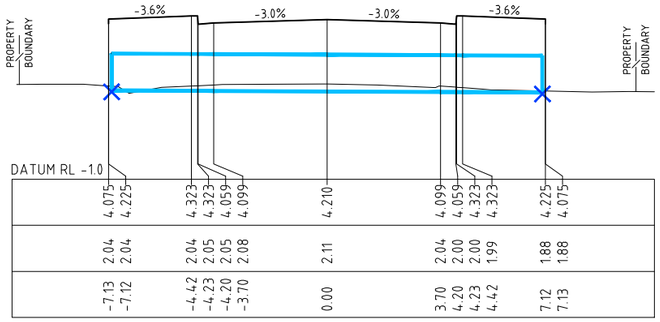
PLOT DATE & TIME: 18/3/2016 8:56:33 AM
SAVE DATE & TIME: 18/3/2016 8:55:51 AM



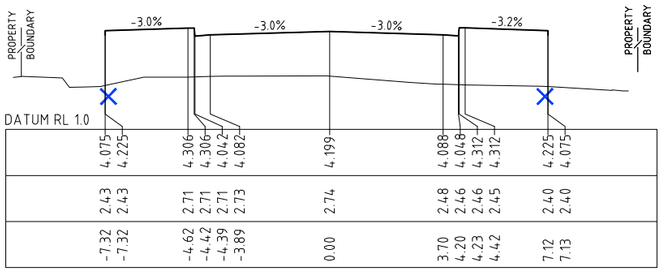
CH 53.95



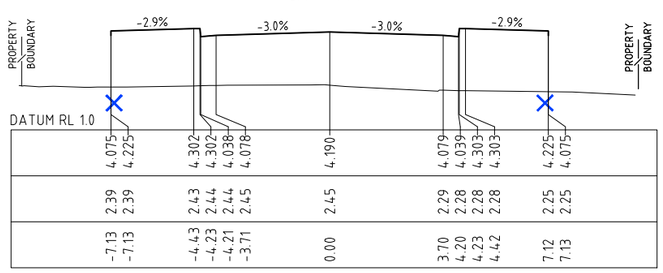
CH 66.41



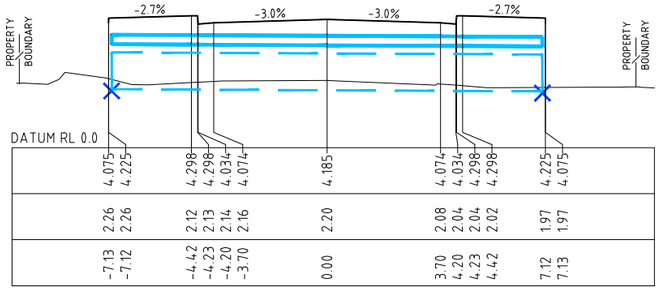
CH 97



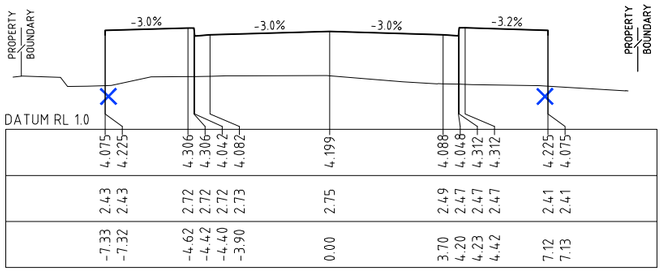
CH 51.77



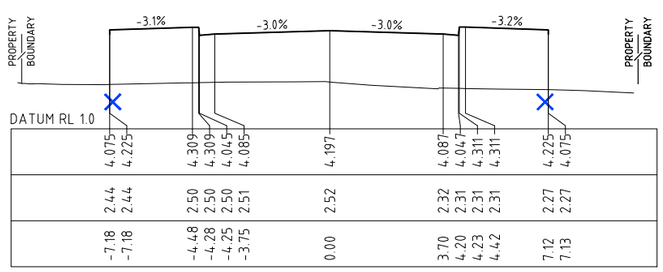
CH 65.15



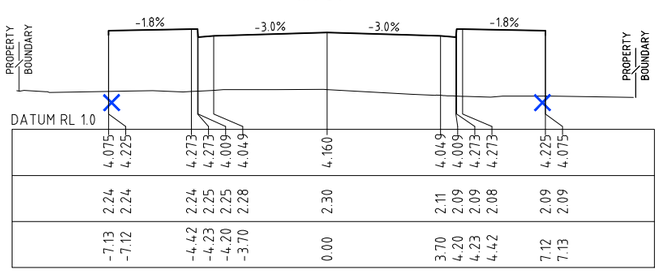
CH 87



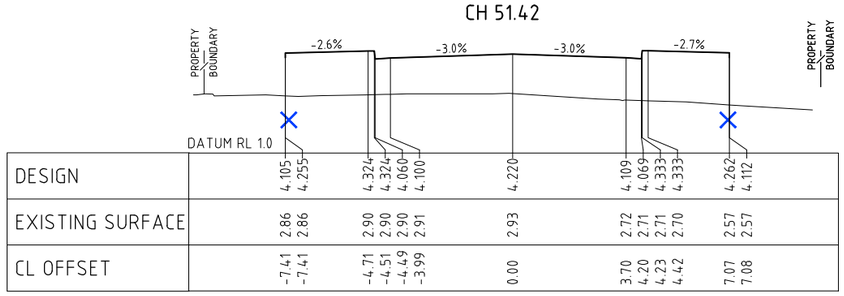
CH 51.42



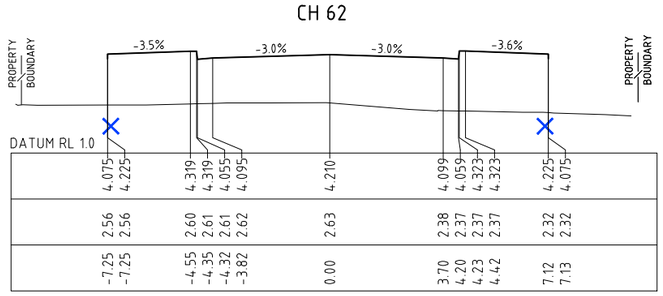
CH 62



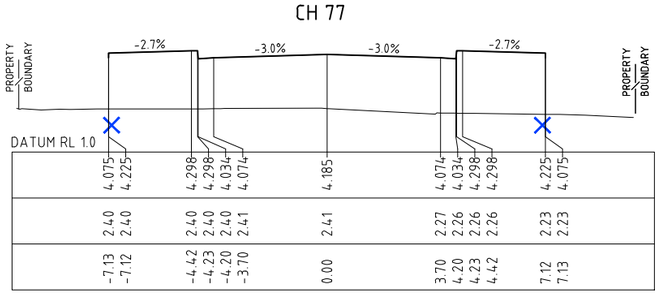
CH 77



CH 45



CH 57



CH 67

× RETAINING WALL CONTROL LINE, REFER TO ST-DWG-001 & 002

PROPOSED CULVERTS. REFER TO CI-DWG-0072 & ST-DWG-0020 FOR DETAILS

2 0 2 4 6 8 10m

1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
DESIGN CROSS SECTIONS
SHEET 2

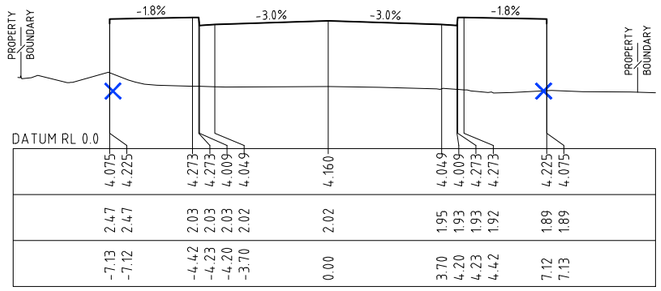
DRG No 301015-03441-CI-DWG-0022 REV 1

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\10 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0020.DWG

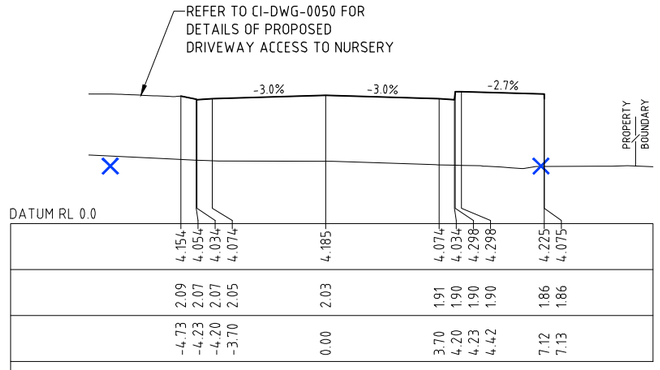
USER NAME: enosh.newar

PLOT DATE & TIME: 18/3/2016 4:00:57 PM
SAVE DATE & TIME: 18/3/2016 3:55:59 PM



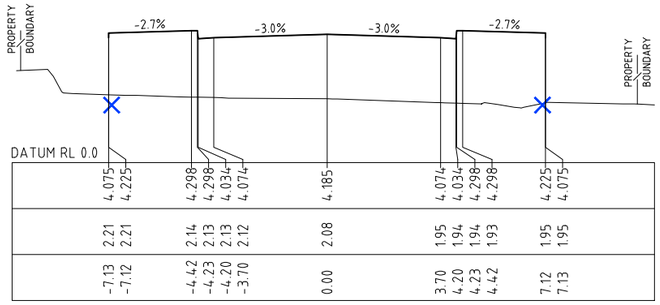
	4.075	4.225	4.273	4.273	4.009	4.049	4.160	4.049	4.009	4.273	4.273	4.225	4.075
	2.47	2.47	2.03	2.03	2.03	2.02	2.02	1.95	1.93	1.93	1.92	1.89	1.89
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 117



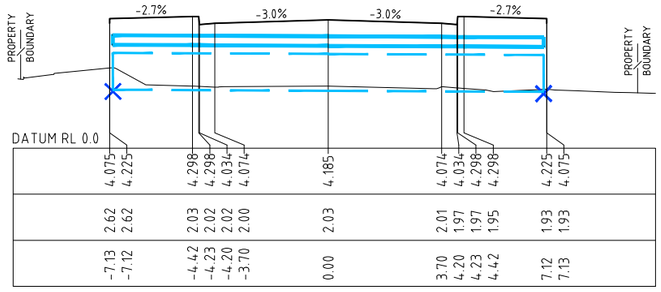
	4.154	4.054	4.034	4.074	4.185	4.074	4.034	4.298	4.298	4.225	4.075
	2.09	2.07	2.07	2.05	2.03	1.91	1.90	1.90	1.90	1.86	1.86
	-4.73	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 147



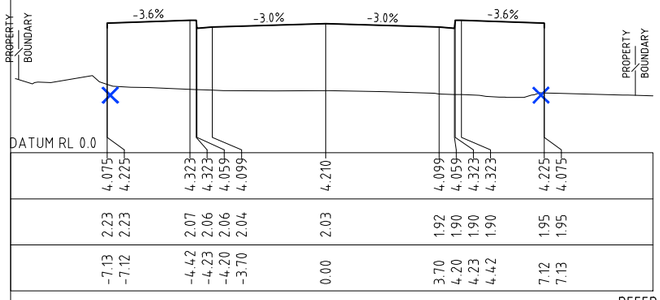
	4.075	4.225	4.298	4.298	4.034	4.074	4.185	4.074	4.034	4.298	4.298	4.225	4.075
	2.21	2.21	2.14	2.13	2.13	2.12	2.08	1.95	1.94	1.94	1.93	1.95	1.95
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 167



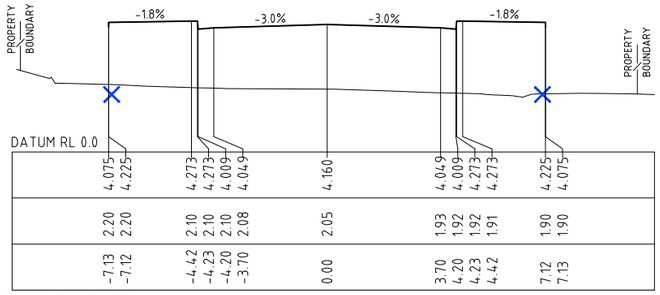
	4.075	4.225	4.298	4.298	4.034	4.074	4.185	4.074	4.034	4.298	4.298	4.225	4.075
	2.62	2.62	2.03	2.02	2.02	2.00	2.03	2.01	1.97	1.97	1.95	1.93	1.93
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 107



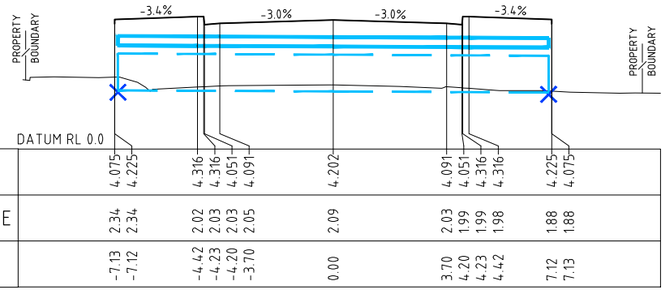
	4.075	4.225	4.323	4.323	4.059	4.099	4.210	4.099	4.059	4.323	4.323	4.225	4.075
	2.23	2.23	2.07	2.06	2.06	2.04	2.03	1.92	1.90	1.90	1.90	1.95	1.95
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 137



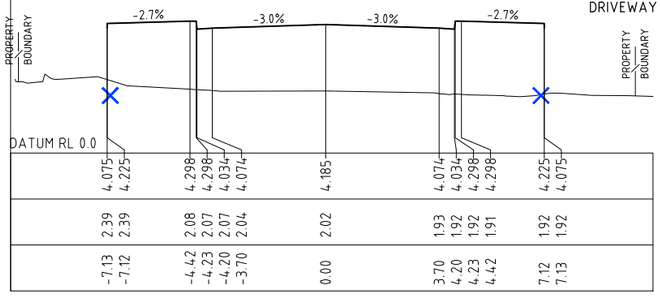
	4.075	4.225	4.273	4.273	4.009	4.049	4.160	4.049	4.009	4.273	4.273	4.225	4.075
	2.20	2.20	2.10	2.10	2.10	2.08	2.05	1.93	1.92	1.92	1.91	1.90	1.90
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 157



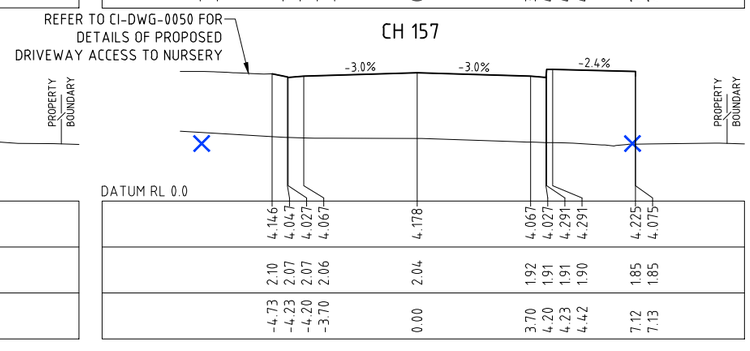
DESIGN	4.075	4.225	4.316	4.316	4.051	4.091	4.202	4.091	4.051	4.316	4.316	4.225	4.075
EXISTING SURFACE	2.34	2.34	2.02	2.03	2.03	2.05	2.09	2.03	1.99	1.99	1.98	1.88	1.88
CL OFFSET	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 100



	4.075	4.225	4.298	4.298	4.034	4.074	4.185	4.074	4.034	4.298	4.298	4.225	4.075
	2.39	2.39	2.08	2.07	2.07	2.04	2.02	1.93	1.92	1.92	1.91	1.92	1.92
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 127



	4.146	4.047	4.027	4.067	4.178	4.067	4.027	4.291	4.291	4.225	4.075
	2.10	2.07	2.07	2.06	2.04	1.92	1.91	1.91	1.90	1.85	1.85
	-4.73	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 150

× RETAINING WALL CONTROL LINE, REFER TO ST-DWG-001 & 002

PROPOSED CULVERTS. REFER TO CI-DWG-0072 & ST-DWG-0020 FOR DETAILS

2 0 2 4 6 8 10m
1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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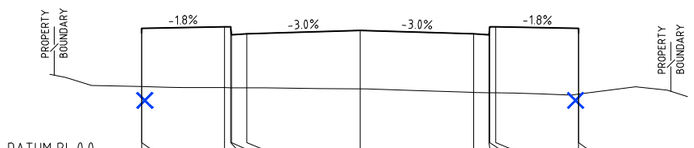
WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
DESIGN CROSS SECTIONS
SHEET 3

DRG No 301015-03441-CI-DWG-0023 REV 1

WORLEYPARSONS_A1_REV2

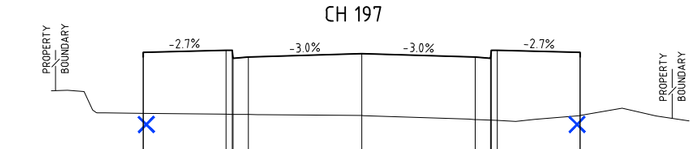
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\10 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0020.DWG
USER NAME: enosh.newar
PLOT DATE & TIME: 18/3/2016 4:01:26 PM
SAVE DATE & TIME: 18/3/2016 3:55:59 PM



DATUM RL 0.0

	4.075	4.225	4.273	4.273	4.009	4.049	4.160	4.049	4.009	4.273	4.273	4.225	4.075
	2.33	2.33	2.29	2.29	2.29	2.29	2.25	2.14	2.13	2.13	2.12	2.08	2.08
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

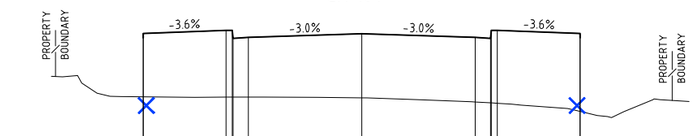
CH 197



DATUM RL 0.0

	4.075	4.225	4.298	4.298	4.034	4.074	4.185	4.074	4.034	4.298	4.298	4.225	4.075
	2.24	2.24	2.21	2.21	2.21	2.20	2.17	2.04	2.02	2.02	2.01	2.17	2.17
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

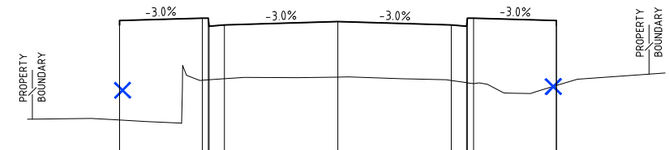
CH 187



DATUM RL 0.0

DESIGN	4.075	4.225	4.323	4.323	4.059	4.099	4.210	4.099	4.059	4.323	4.323	4.225	4.075
EXISTING SURFACE	2.16	2.16	2.15	2.15	2.15	2.15	2.12	1.99	1.96	1.96	1.95	1.68	1.68
CL OFFSET	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

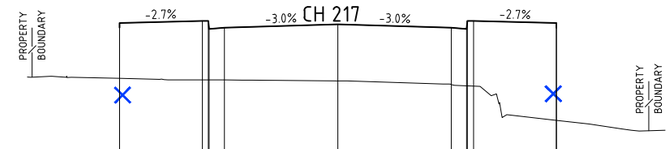
CH 177



DATUM RL -4.0

	4.075	4.225	4.307	4.307	4.043	4.083	4.194	4.083	4.043	4.307	4.307	4.225	4.075
	0.98	0.98	2.28	2.30	2.30	2.33	2.39	2.28	2.20	2.20	2.17	2.11	2.11
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

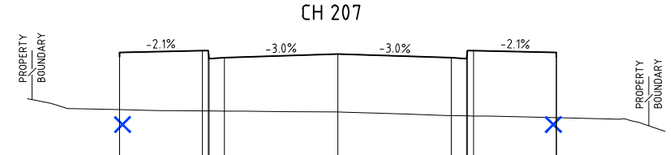
CH 217



DATUM RL -1.0

	4.075	4.225	4.298	4.298	4.034	4.074	4.185	4.074	4.034	4.298	4.298	4.225	4.075
	2.42	2.42	2.38	2.38	2.38	2.37	2.34	2.22	2.18	2.18	2.17	1.06	1.06
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

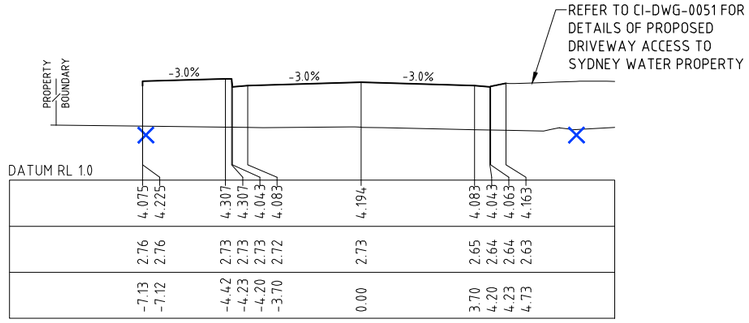
CH 207



DATUM RL 0.0

	4.075	4.225	4.281	4.281	4.017	4.057	4.168	4.057	4.017	4.281	4.281	4.225	4.075
	2.36	2.36	2.32	2.31	2.31	2.31	2.28	2.16	2.16	2.16	2.15	2.10	2.10
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

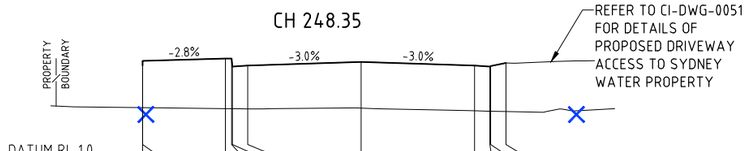
CH 200



DATUM RL 1.0

	4.075	4.225	4.307	4.307	4.043	4.083	4.194	4.083	4.043	4.063	4.163		
	2.76	2.76	2.73	2.73	2.73	2.72	2.73	2.65	2.64	2.64	2.63		
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.73		

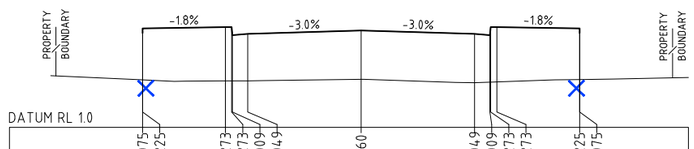
CH 248.35



DATUM RL 1.0

	4.075	4.225	4.300	4.300	4.036	4.076	4.187	4.076	4.036	4.056	4.156		
	2.70	2.70	2.67	2.66	2.66	2.66	2.68	2.60	2.59	2.59	2.58		
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.73		

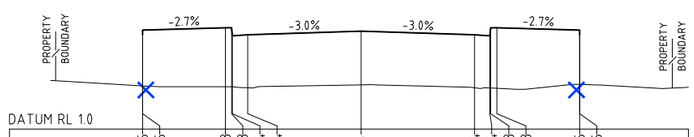
CH 246



DATUM RL 1.0

	4.075	4.225	4.273	4.273	4.009	4.049	4.160	4.049	4.009	4.273	4.273	4.225	4.075
	2.55	2.55	2.52	2.52	2.52	2.52	2.57	2.46	2.48	2.48	2.48	2.56	2.56
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 237



DATUM RL 1.0

	4.075	4.225	4.298	4.298	4.034	4.074	4.185	4.074	4.034	4.298	4.298	4.225	4.075
	2.41	2.41	2.38	2.38	2.38	2.34	2.44	2.34	2.34	2.34	2.33	2.45	2.45
	-7.13	-7.12	-4.42	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.42	7.12	7.13

CH 227

NOTES

1. PROPOSED BRIDGE AT SECTIONS CH.207 AND CH.217 OMITTED FOR CLARITY

× RETAINING WALL CONTROL LINE, REFER TO ST-DWG-001 & 002

2 0 2 4 6 8 10m

1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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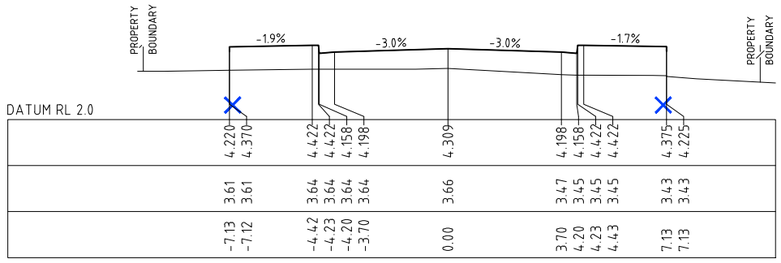
WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
DESIGN CROSS SECTIONS
SHEET 4

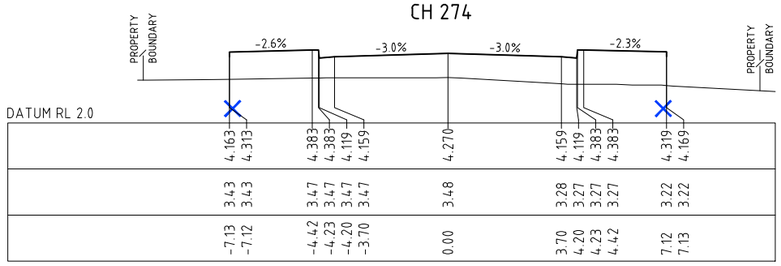
DRG No 301015-03441-CI-DWG-0024 REV 1

WORLEYPARSONS_A1_REV2

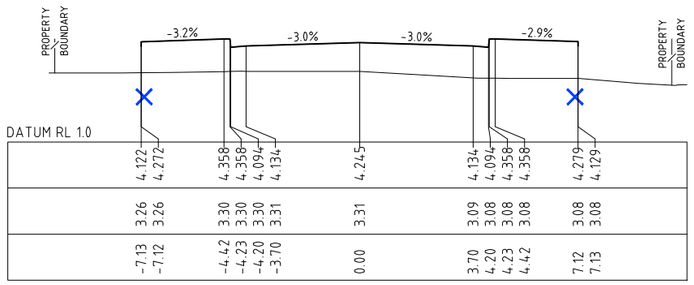
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\10 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0020.DWG
USER NAME: enosh.newar
PLOT DATE & TIME: 18/3/2016 4:02:17 PM
SAVE DATE & TIME: 18/3/2016 3:55:59 PM



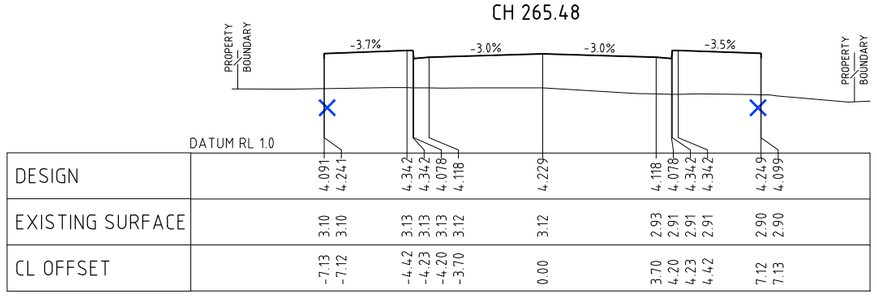
CH 274



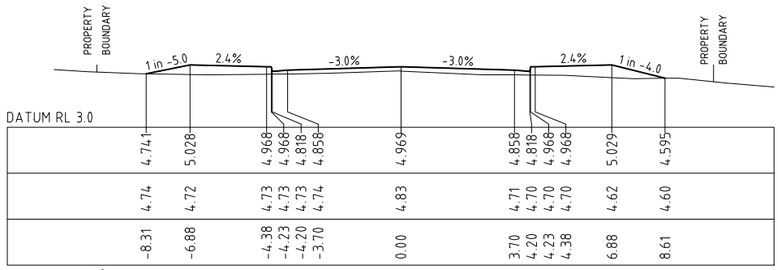
CH 270



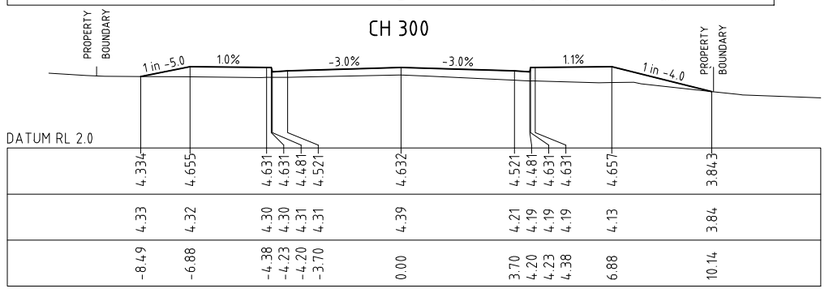
CH 265.48



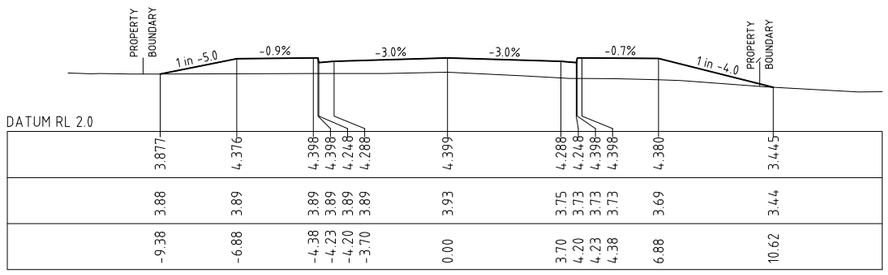
CH 260



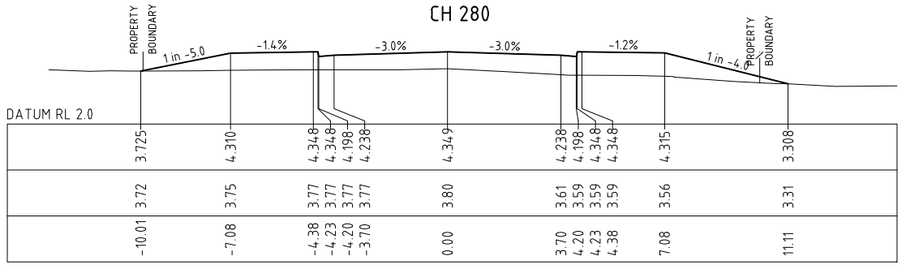
CH 300



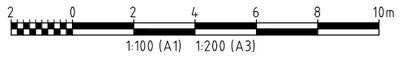
CH 290



CH 280



CH 277



× RETAINING WALL CONTROL LINE, REFER TO ST-DWG-001 & 002

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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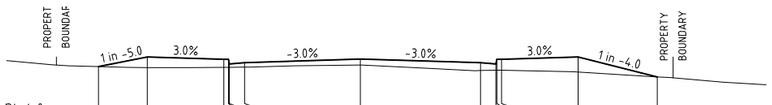
WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
DESIGN CROSS SECTIONS
SHEET 5

DRG No 301015-03441-CI-DWG-0025 REV 1

WORLEYPARSONS_A1_REV2

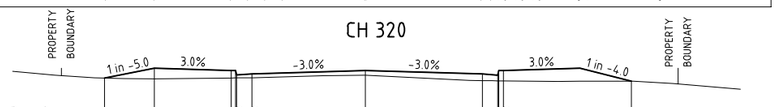
PLOT DATE & TIME: 18/3/2016 8:57:24 AM
SAVE DATE & TIME: 18/3/2016 8:55:51 AM
USER NAME: enosh.newar
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0020.DWG



DATUM RL 4.0

5.699	6.016	5.941	5.941	5.791	5.831	5.944	5.826	5.786	5.936	5.936	6.011	5.367
5.70	5.67	5.68	5.68	5.68	5.68	5.75	5.57	5.58	5.58	5.58	5.52	5.37
-8.53	-6.95	-4.45	-4.30	-4.27	-3.77	0.00	3.93	4.43	4.46	4.61	7.11	9.69

CH 320



DATUM RL 4.0

5.444	5.770	5.695	5.695	5.545	5.585	5.695	5.581	5.541	5.691	5.691	5.766	5.346
5.44	5.42	5.45	5.45	5.45	5.46	5.54	5.36	5.36	5.36	5.36	5.34	5.35
-8.50	-6.88	-4.38	-4.23	-4.20	-3.70	0.00	3.82	4.32	4.35	4.50	7.00	8.68

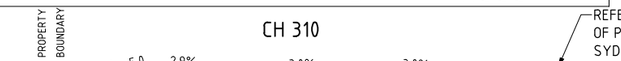
CH 315.48

REFER TO CI-DWG-0051 FOR DETAILS OF PROPOSED DRIVEWAY ACCESS TO SYDNEY WATER PROPERTY

DATUM RL 4.0

5.164	5.484	5.409	5.409	5.259	5.299	5.410	5.299	5.259	5.279	5.379
5.16	5.15	5.17	5.18	5.18	5.18	5.28	5.15	5.14	5.14	5.12
-8.48	-6.88	-4.38	-4.23	-4.20	-3.70	0.00	3.71	4.21	4.24	4.74

CH 310



REFER TO CI-DWG-0051 FOR DETAILS OF PROPOSED DRIVEWAY ACCESS TO SYDNEY WATER PROPERTY

DATUM RL 3.0

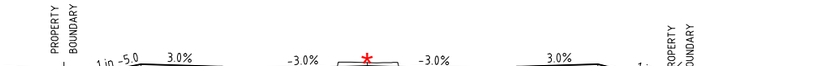
DESIGN	5.040	5.292	5.220	5.220	5.070	5.110	5.221	5.110	5.070	5.090	5.190
EXISTING SURFACE	5.04	5.02	4.99	4.99	4.99	4.99	5.10	5.01	5.00	5.00	4.99
CL OFFSET	-8.14	-6.88	-4.38	-4.23	-4.20	-3.70	0.00	3.70	4.20	4.23	4.73

CH 306

DATUM RL 4.0

6.994	6.863	6.823	6.973	6.973	7.048	6.108
6.65	6.48	6.48	6.48	6.48	6.33	6.11
0.00	4.36	4.86	4.89	5.04	7.54	11.30

CH 339.08



DATUM RL 4.0

6.704	6.991	6.916	6.916	6.766	6.806	6.932	6.802	6.762	6.912	6.912	6.987	6.033
6.70	6.58	6.58	6.58	6.58	6.54	6.60	6.43	6.42	6.42	6.42	6.27	6.03
-8.82	-7.38	-4.88	-4.73	-4.70	-4.20	0.00	4.34	4.84	4.87	5.02	7.52	11.33

CH 337.96

DATUM RL 4.0

6.413	6.559	6.484	6.484	6.334	6.374	6.494	6.370	6.330	6.480	6.480	6.555	5.515
6.41	6.39	6.25	6.24	6.24	6.21	6.22	6.04	6.03	6.02	6.01	5.82	5.52
-7.92	-7.19	-4.69	-4.54	-4.51	-4.01	0.00	4.15	4.65	4.68	4.83	7.33	11.49

CH 330

* REFER TO CI-DWG-0040 & 0041 FOR DESIGN LEVELS OF ISLANDS

2 0 2 4 6 8 10m

1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PBC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
DESIGN CROSS SECTIONS
SHEET 6

DRG No 301015-03441-CI-DWG-0026 REV 1

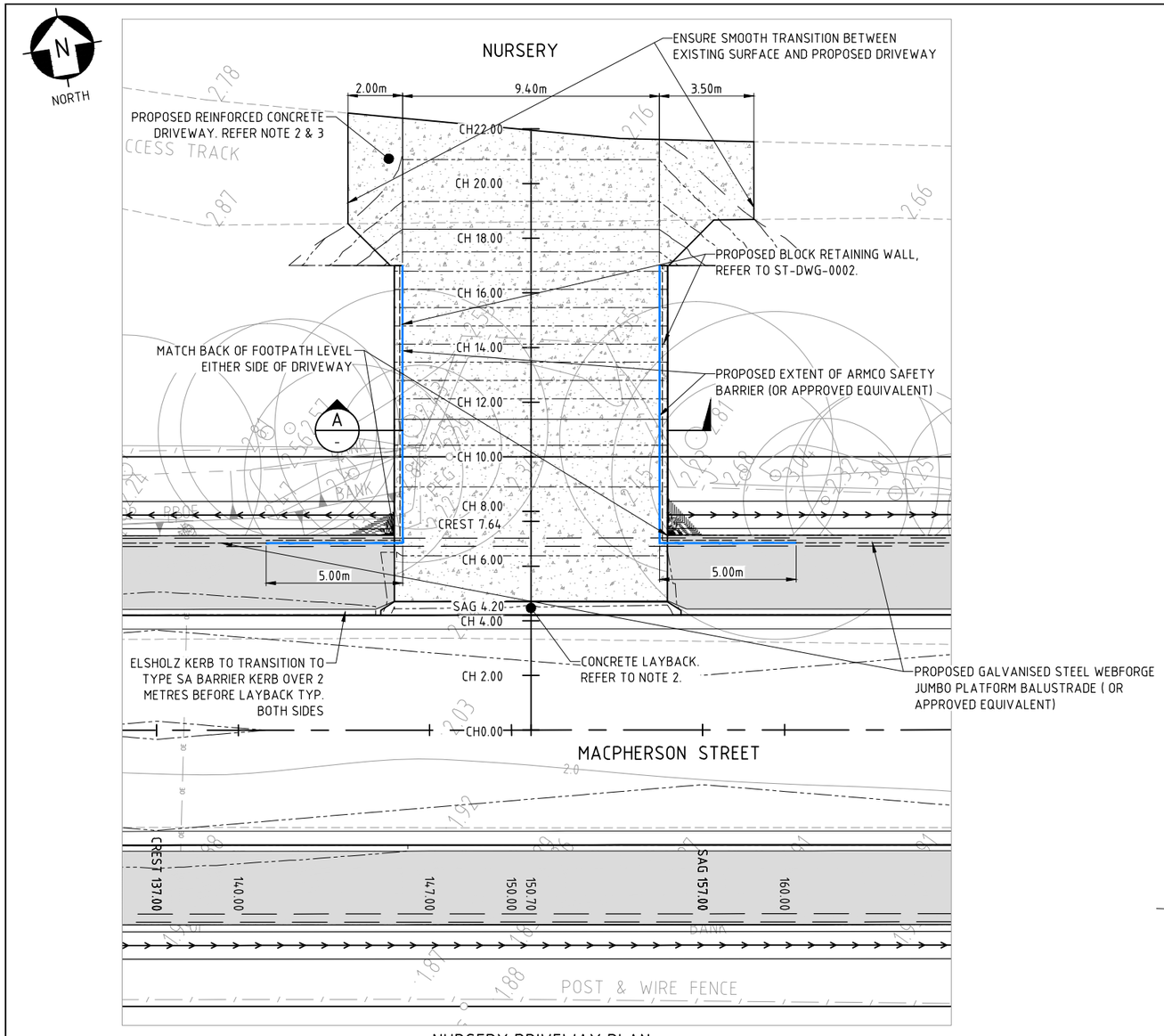
WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\110 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0020.DWG

USER NAME: enosh.newar

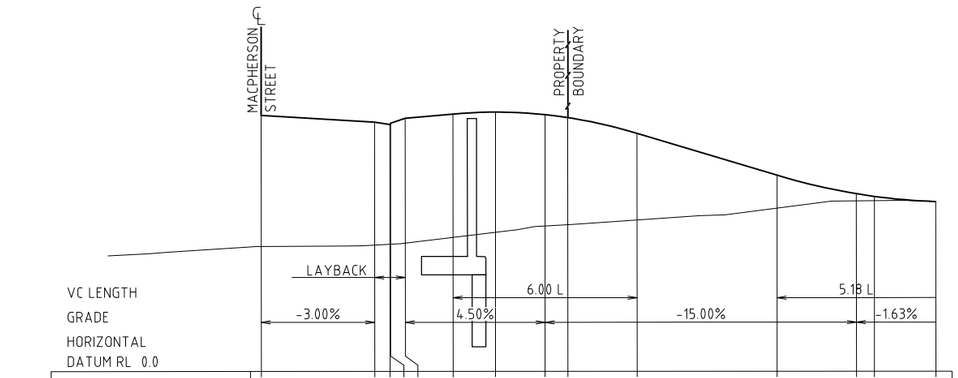
PLOT DATE & TIME: 18/3/2016 9:07:05 AM

SAVE DATE & TIME: 18/3/2016 9:06:52 AM



NURSERY DRIVEWAY PLAN

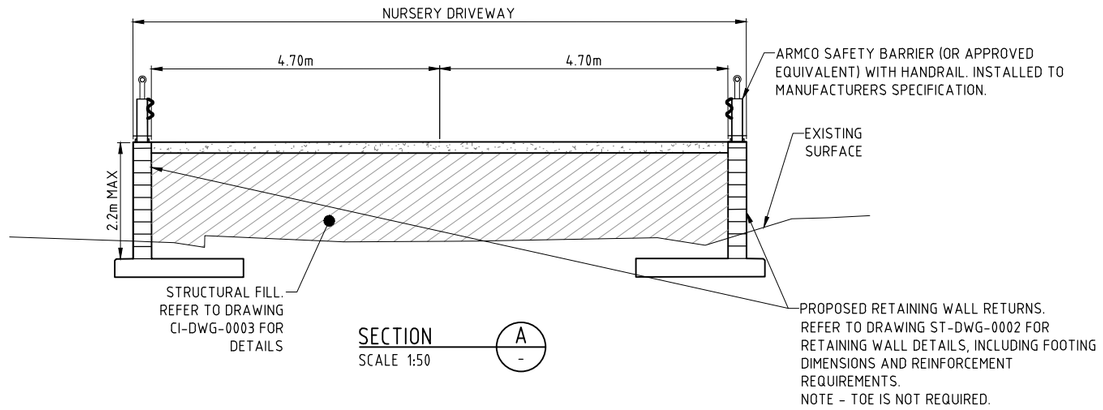
1:100



DESIGN CL	4.176		4.065	4.025	4.045	4.125	4.195	4.226	4.184	4.136	3.880	3.195	2.894	2.849	2.765
EXISTING SURFACE	2.039		2.058	2.073	2.073	2.092	2.185	2.267	2.371	2.390	2.467	2.658	2.778	2.781	
DEPTH	-2.138		-2.007	-1.952	-1.972	-2.033	-2.010	-1.959	-1.813	-1.746	-1.413	-0.537	-0.116	-0.068	
CHAINAGE	0.000		3.700	4.200	4.220	4.700	6.258	7.643	9.258	10.000	12.258	16.824	19.412	20.000	22.000

PROPOSED NURSERY DRIVEWAY LONGITUDINAL SECTION

SCALE HORIZONTAL 1:100
SCALE VERTICAL 1:50



SECTION A

SCALE 1:50

NURSERY DRIVEWAY SETOUT

Pt	Chainage	Easting	Northing	Level	Bearing
IP1	0	327583.838	1270725.602	4.176	9°26'38.93"
IP2	22	327587.448	1270747.304	2.765	9°26'38.93"

NOTES

1. REFER TO CI-DWG-0042 FOR LEGEND
2. DRIVEWAY TO BE CONSTRUCTED IN ACCORDANCE WITH PITTWATER COUNCIL'S DCP STANDARD DRAWING STD-01 (VEHICULAR ENTRANCE WITH LAYBACK & DRIVEWAY). PAVEMENT THICKNESS AND REINFORCEMENT AS PER INDUSTRIAL TYPE.
3. DRIVEWAY RAMP GRADING IS BASED ON AS 2890.2
4. INSTALL 2 LAYERS OF WATERPROOF MEMBRANE BETWEEN TOP OF RETAINING WALL AND UNDERSIDE OF DRIVEWAY / SHARED PATH, TOP COARSE OF BLOCKS TO BE GROUND FLUSH

1000 0 1000 2000 3000 4000 5000mm
1:50 (A1) 1:100 (A3)

2 0 2 4 6 8 10m
1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	EN	ARG	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
PROPERTY ACCESS DETAILS
SHEET 1

DRG No 301015-03441-CI-DWG-0050 REV 2

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0050.DWG

USER NAME: william.watkins

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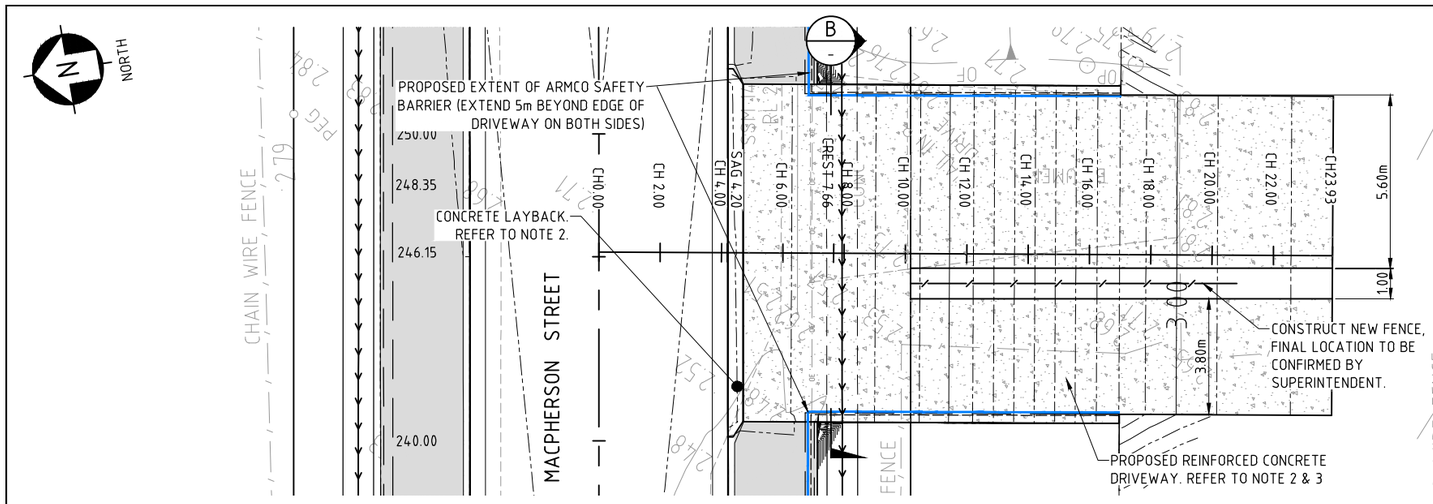
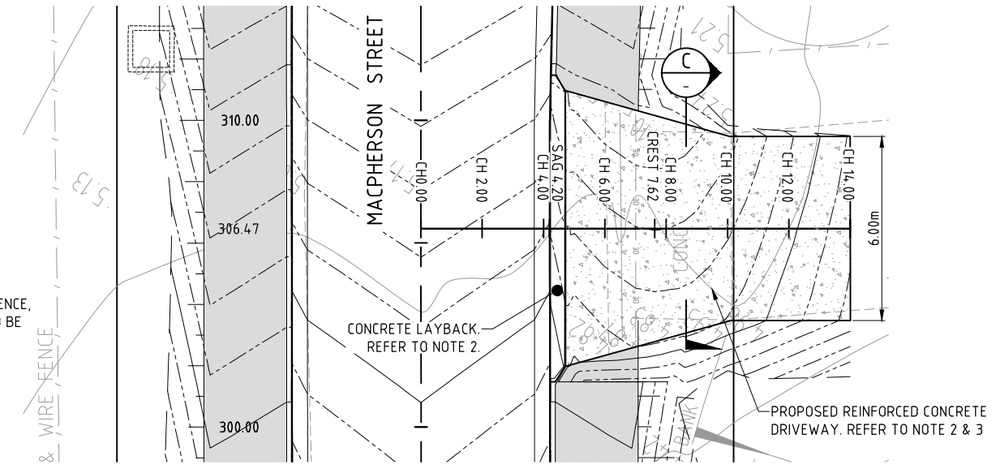
SAVE DATE & TIME: 24/3/2016 2:05:12 PM



SYDNEY WATER EXIT DRIVEWAY PLAN

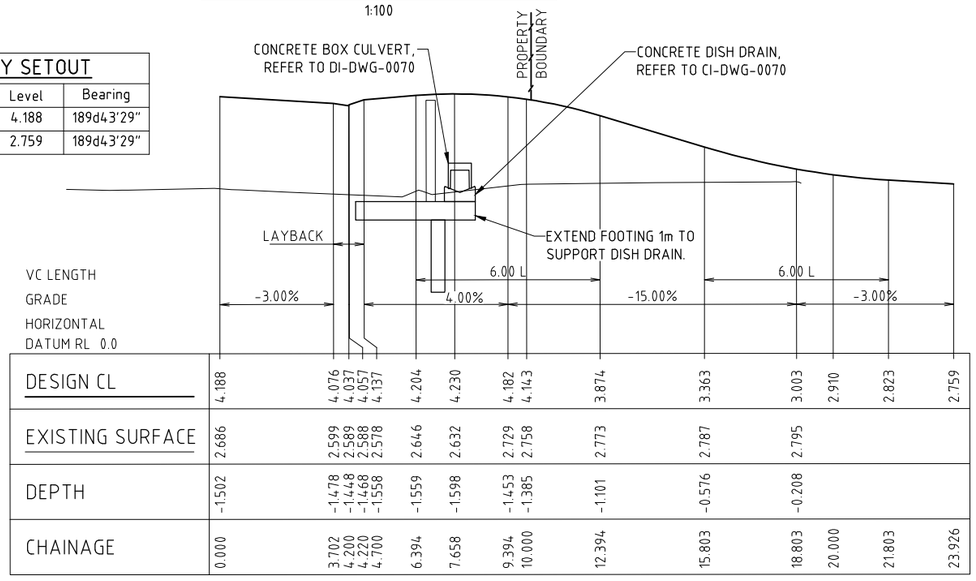
1:100

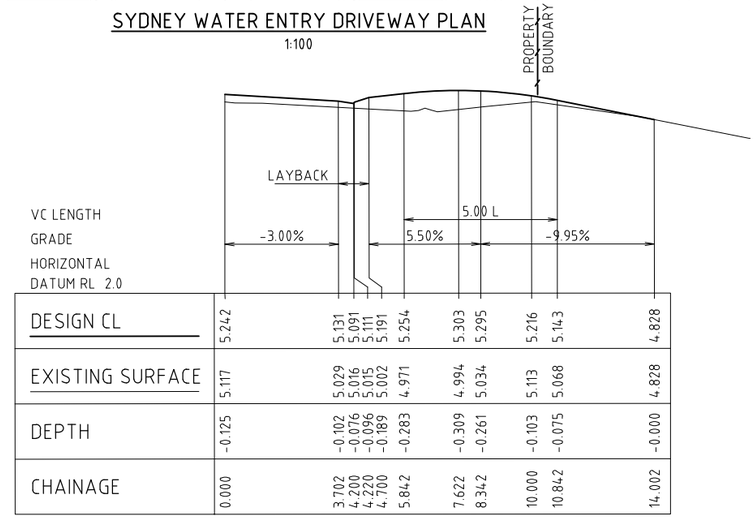


SYDNEY WATER ENTRY DRIVEWAY PLAN

1:100

SYDNEY WATER EXIT DRIVEWAY SETOUT					
Pt	Chainage	Easting	Northing	Level	Bearing
IP1	0	327677.991	1270710.004	4.188	189d43'29"
IP2	23.926	327673.949	1270686.422	2.759	189d43'29"





SYDNEY WATER EXIT DRIVEWAY LONGITUDINAL SECTION

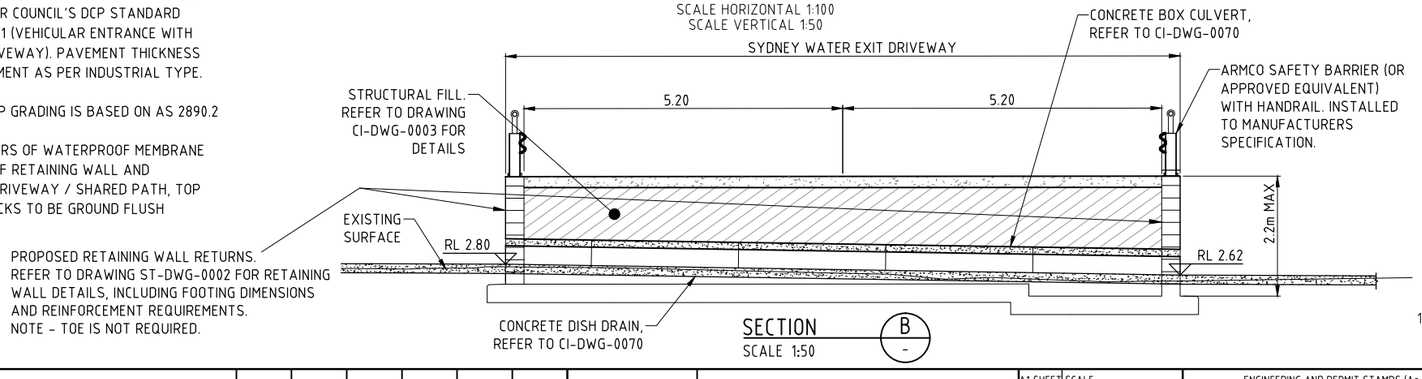
SCALE HORIZONTAL 1:100
SCALE VERTICAL 1:50

SYDNEY WATER ENTRY DRIVEWAY LONGITUDINAL SECTION

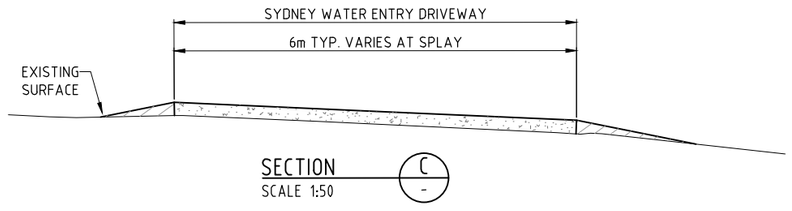
SCALE HORIZONTAL 1:100
SCALE VERTICAL 1:50

NOTES

1. REFER TO CI-DWG-0042 FOR LEGEND
2. DRIVEWAY TO BE CONSTRUCTED IN ACCORDANCE WITH PITTWATER COUNCIL'S DCP STANDARD DRAWING STD-01 (VEHICULAR ENTRANCE WITH LAYBACK & DRIVEWAY). PAVEMENT THICKNESS AND REINFORCEMENT AS PER INDUSTRIAL TYPE.
3. DRIVEWAY RAMP GRADING IS BASED ON AS 2890.2
4. INSTALL 2 LAYERS OF WATERPROOF MEMBRANE BETWEEN TOP OF RETAINING WALL AND UNDERSIDE OF DRIVEWAY / SHARED PATH, TOP COARSE OF BLOCKS TO BE GROUND FLUSH



SECTION B
SCALE 1:50



SECTION C
SCALE 1:50

SYDNEY WATER ENTRY DRIVEWAY SETOUT					
Pt	Chainage	Easting	Northing	Level	Bearing
IP1	0	327737.5	1270700.146	5.242	189d26'26"
IP2	14.002	327735.204	1270686.334	4.828	189d26'26"

1000 0 1000 2000 3000 4000 5000mm
1:50 (A1) 1:100 (A3)

2 0 2 4 6 8 10m
1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	EN	ARG	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	EN	ARG	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
PROPERTY ACCESS DETAILS
SHEET 2

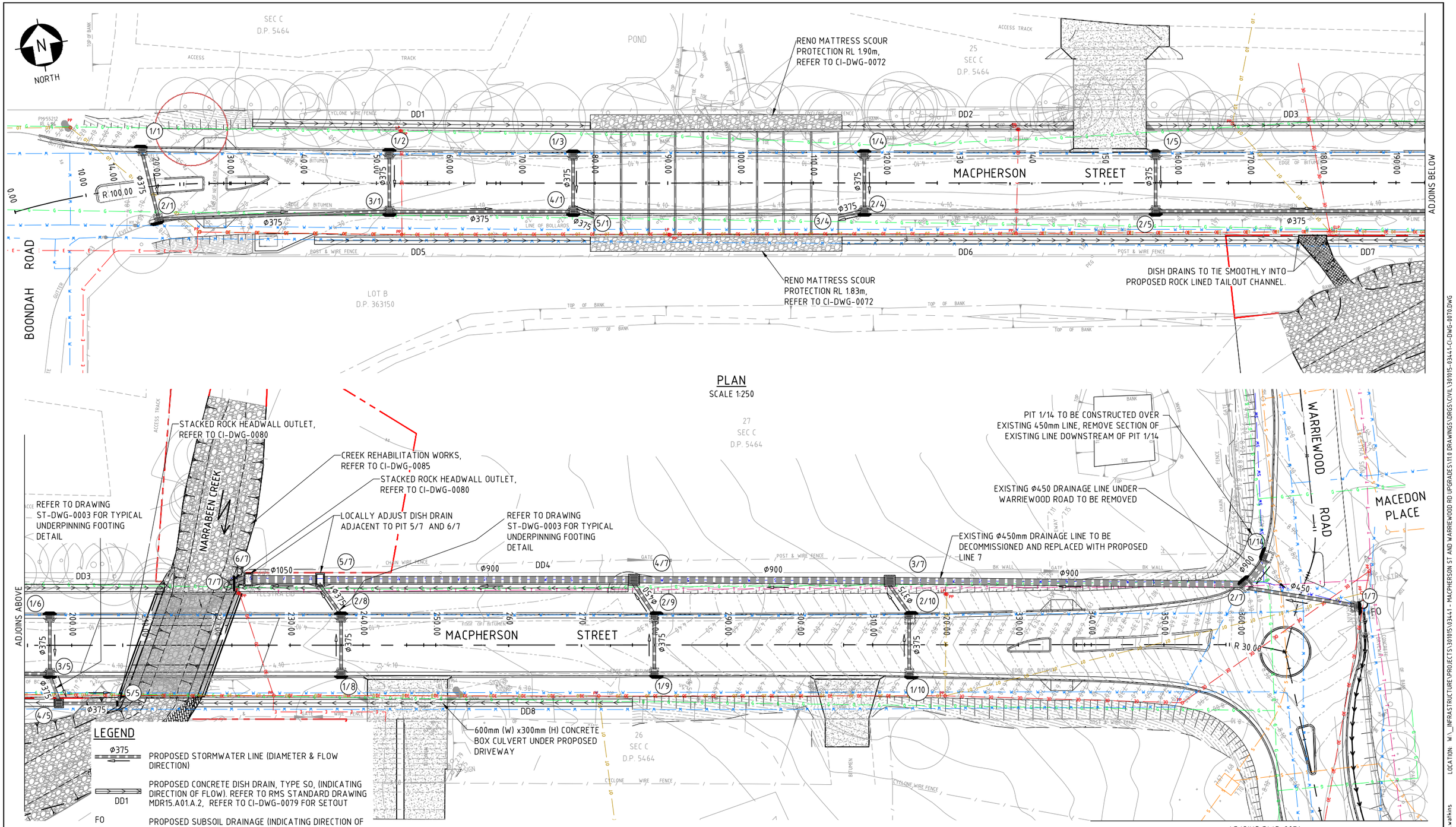
DRG No 301015-03441-CI-DWG-0051 REV 2

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11 0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0050.DWG

USER NAME: william.watkins

PLOT DATE & TIME: 24/3/2016 4:36:09 PM
SAVE DATE & TIME: 24/3/2016 2:05:12 PM



PLAN
SCALE 1:250

PLAN
SCALE 1:250

LEGEND

- Ø375 — PROPOSED STORMWATER LINE (DIAMETER & FLOW DIRECTION)
- DD1 — PROPOSED CONCRETE DISH DRAIN, TYPE SO, (INDICATING DIRECTION OF FLOW). REFER TO RMS STANDARD DRAWING MDR15.A01.A.2, REFER TO CI-DWG-0079 FOR SETOUT
- FO — PROPOSED SUBSOIL DRAINAGE (INDICATING DIRECTION OF FLOW) AND FLUSH OUT POINT. REFER TO COUNCIL STANDARD DRAWING SHEET 5 FOR TYPICAL DETAIL
- PROPOSED STORMWATER PIT
- (2/4) — PROPOSED STORMWATER PIT NUMBER

5 0 5 10 15 20 25m
1:250 (A1) 1:500 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	PC	WJH	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	PC	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	PC	WJH	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

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CUSTOMER

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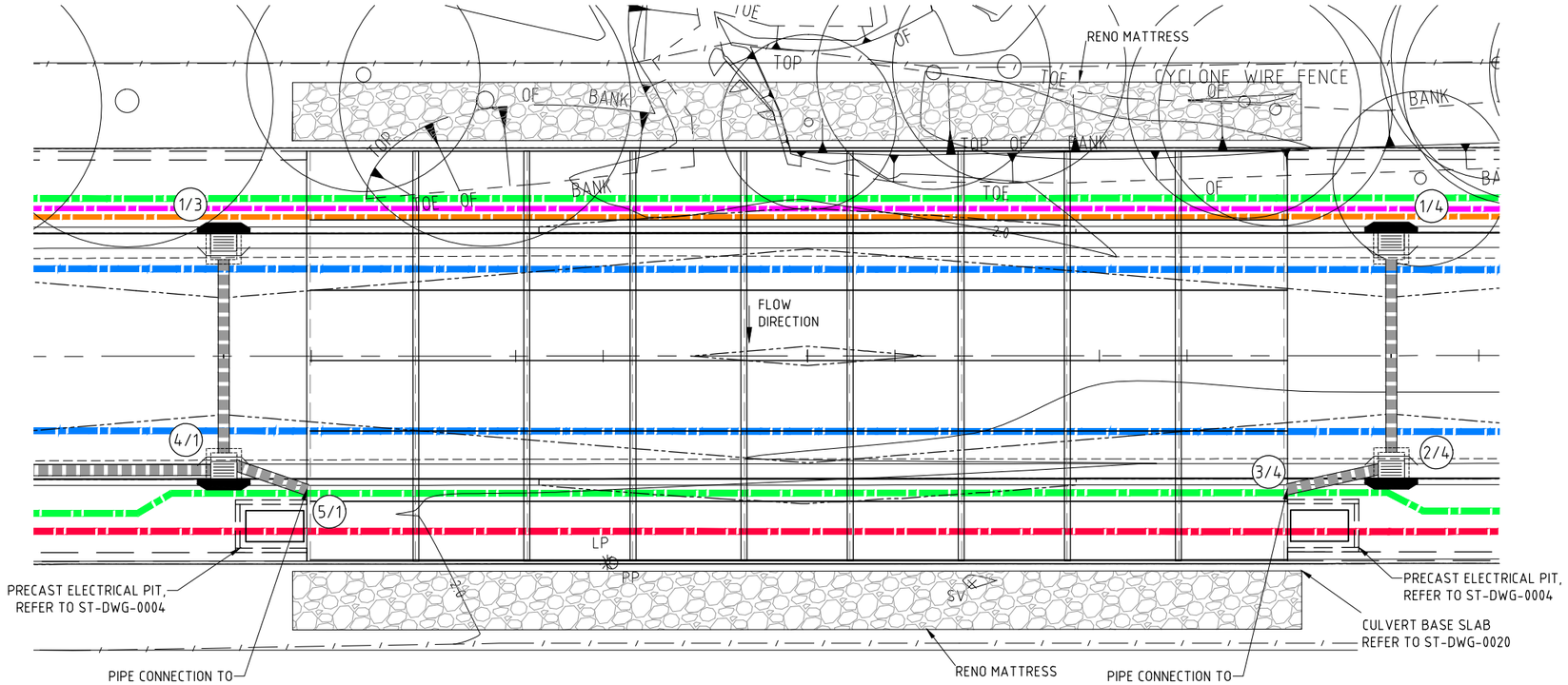
WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
DRAINAGE PLAN
SHEET 1

DRG No 301015-03441-CI-DWG-0070 REV 2

WORLEYPARSONS_A1_REV2

PLOT DATE & TIME: 24/3/2016 4:47:17 PM
SAVE DATE & TIME: 24/3/2016 2:12:23 PM
USER NAME: william.watkins
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\CIVIL\301015-03441-CI-DWG-0070.DWG



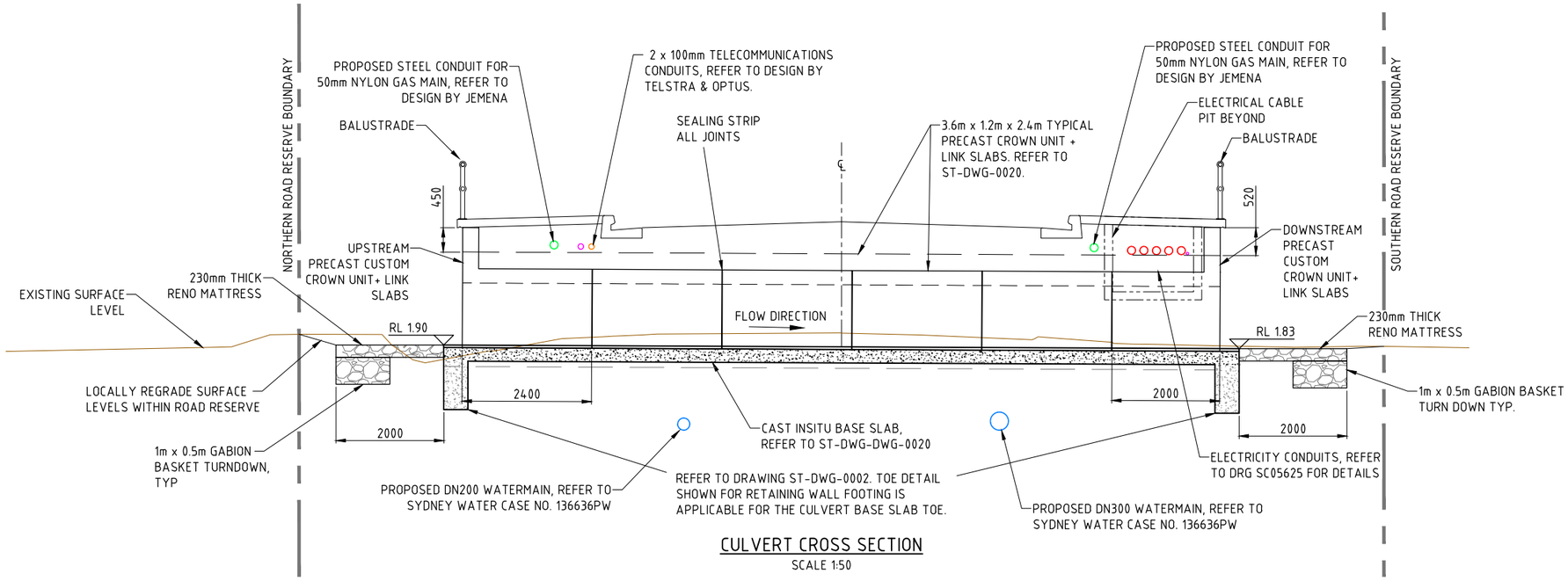
CULVERT PLAN

SCALE 1:100

PRECAST UNITS	
CROWN UNIT SIZE	**QTY**
3.6m x 1.2m x 2.4m	20
3.6m x 1.2m x 2.4m HEADWALL UPSTREAM 760mm	5
3.6m x 1.2m x 2.0m HEADWALL DOWNSTREAM 830mm	5
LINK SLAB UNITS	**QTY**
4m x 0.31m x 2.4m	16
4m x 0.31m x 2.4m SPECIAL HEADWALL UPSTREAM LINK SLABS 450mm	4
4m x 0.31m x 2.4m SPECIAL HEADWALL DOWNSTREAM LINK SLABS 520mm	4

NOTES:

1. ALLOWANCE FOR 10mm GAP BETWEEN EACH CROWN UNIT END TO END.
2. ALL GAPS BETWEEN CROWN UNITS TO BE COVERED WITH SEALING STRIP.
3. REFER TO ST-DWG-0020 FOR CULVERT BASE SLAB DETAILS
4. INSTALL 2 LAYERS OF WATERPROOF MEMBRANE BETWEEN TOP OF WALL AND UNDERSIDE OF SHARED PATH, TOP CULVERT HEADWALL TO BE GROUND FLUSH
5. REFER TO COMBINED SERVICES PLAN CI-DWG-0015 FOR DETAILS OF PROPOSED SERVICES.



CULVERT CROSS SECTION

SCALE 1:50

1000 0 1000 2000 3000 4000 5000mm
1:50 (A1) 1:100 (A3)

2000 0 2000 4000 6000 8000 10000mm
1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
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2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	AJD	WJH	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	AJD	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	WJH	CRT	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

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WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
CULVERT ARRANGEMENT & SECTION

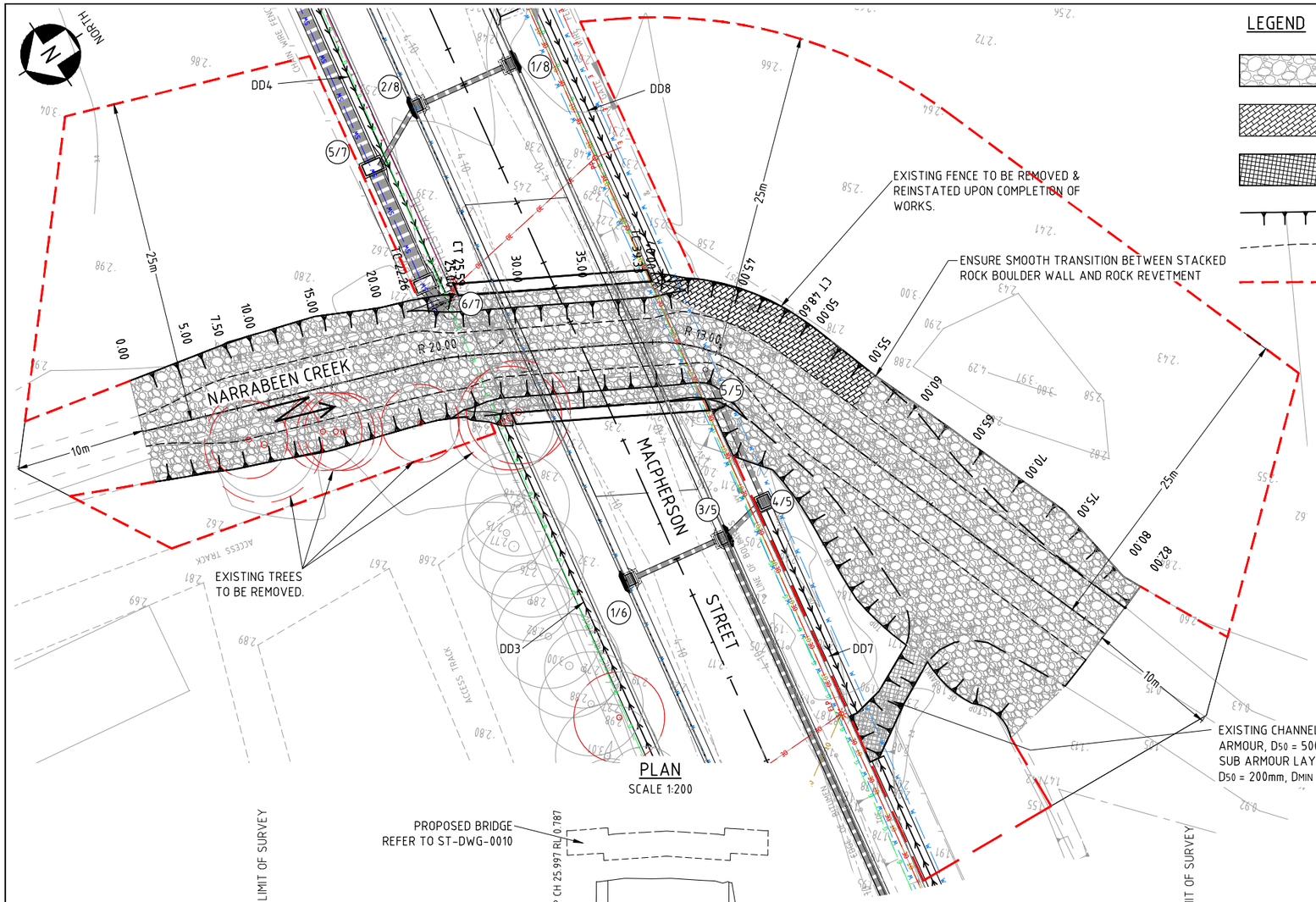
DRG No 301015-03441-CI-DWG-0072 REV 3

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0072.DWG

USER NAME: enosh.newar

PLOT DATE & TIME: 6/4/2016 1:16:50 PM
SAVE DATE & TIME: 6/4/2016 12:46:43 PM



PLAN

SCALE 1:200

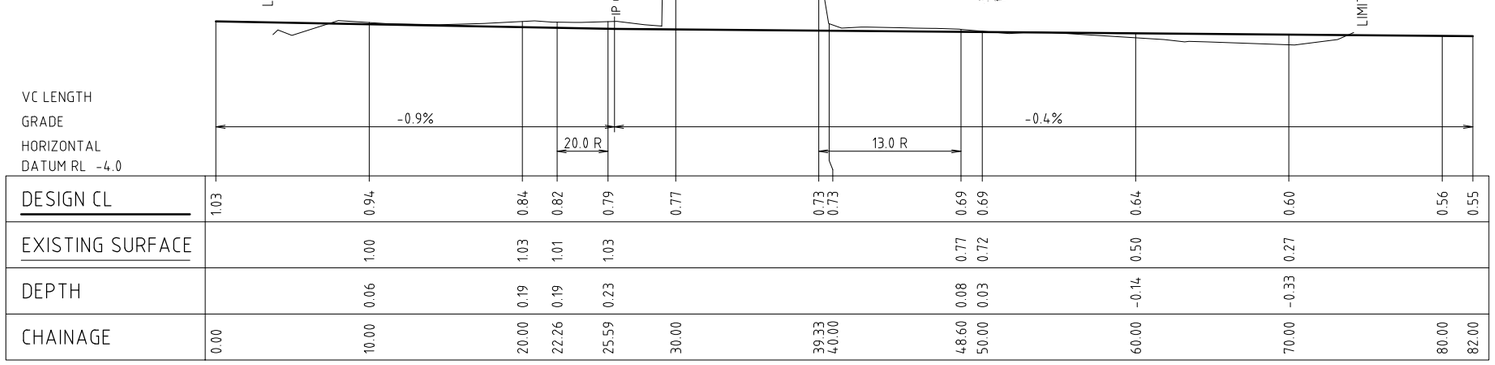
LEGEND

- PROPOSED ROCK REVETMENT, REFER TO CI-DWG-0086
- PROPOSED STACKED ROCK RETAINING WALL, REFER TO CI-DWG-0086
- CHANNEL ARMOURING (1 LAYER). REFER NOTE ON THIS SHEET FOR DETAILS
- TOP OF BATTER
- TOE OF BATTER
- EXTENT OF RIPARIAN CREEK CORRIDOR

PLANTING LIST (PLANTING DENSITY)	
SPECIES	**COMMON NAME**
TREES (1 PLANT / 10 m2)	
SWAMP MAHOGANY	EUCALYPTUS ROBUSTA
SWAMP SHE-OAK	CASUARINA GLAUCA
SWAMP PAPERBARK	MELALEUCA ERICIFOLIA
CABBAGE TREE PALM	LIVISTONIA AUSTRALIS
COAST BANKSIA	BANKSIA INTEGRIFLORA
SCRIBBLY GUM	EUCALYPTUS PUNCTATA
ROUGH TREE FERN	CYATHEA AUSTRALIS
UNDERSTOREY / SHRUBS (1 PLANT / 2 m2)	
ROUGH TREE FERN	CYATHEA AUSTRALIS
SWEET WATTLE	ACACIA SUAVEOLENS
HONEYSUCKLE BANKSIA	BANKSIA SPINULOSA
COAST BANKSIA	BANKSIA INTEGRIFOLIA
NSW CHRISTMAS BUSH	CERATOPETALUM GUMMIFERUM
PINK SPIDER FLOWER	GREVILLEA SERICEA
CYCAD	MACROZAMIA COMMUNIS
RED FLOWERING PAPERBARK	MELALEUCA HYPERICIFOLIA
GOLDEN GUINEA FLOWER	HIBBERTIA SCANDENS
NATIVE GRASSES AND AQUATICS (4 PLANTS / m2)	
GRASS TREE	XANTHORRHOEA SPP
WATER VINE	CISSUS HYPOGLAUCA
RUSH	JUNCUS SPP
WATER SEDGE	GAHNIA SIEBERANA
MAT RUSH	LOMANDRA LONGIFOLIA
WEEPING GRASS	MICROLAENA STIPOIDES

NARRABEEN CREEK CENTRELINE SETOUT TABLE

Pt	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING	RADIUS	ARC LENGTH	D.ANGLE
IP1	0	327660.38	1270746.885	1.034	199°44'05.95"			
TC	22.262	327652.862	1270725.931	0.822	199°44'05.95"			
IP2	23.925	327652.3	1270724.362	0.807		20	3.326	9°31'42.37"
CT	25.588	327651.485	1270722.908	0.791	209°15'48.32"			
TC	39.328	327644.768	1270710.922	0.731	209°15'48.32"			
IP3	43.965	327642.4	1270706.695	0.711		13	9.275	40°52'35.66"
CT	48.602	327637.844	1270705.05	0.691	250°08'23.98"			
IP4	81.996	327606.436	1270693.705	0.55	250°08'23.98"			



PROPOSED NARRABEEN CREEK CENTRE LINE LONGITUDINAL SECTION

SCALE HORIZONTAL 1:200
SCALE VERTICAL 1:100

NOTES

1. PROPOSED BRIDGE DECKS OMITTED ON PLAN FOR CLARITY
2. VEGETATION WITHIN THE RIPARIAN CORRIDOR THAT IS DISTURBED DURING THE CARRYING OUT OF THE CONSTRUCTION WORKS IS TO BE REPLACED IN ACCORDANCE WITH THE PLANTING LIST.
3. CHANNEL FINISHED SURFACE LEVEL (TOP OF ROCK ARMOUR) TO MATCH EXISTING SURFACE LEVEL. GEOTEXTILE AND SUBGRADE COMPACTION AS PER TYPICAL ROCK REVETMENT ON CI-DWG-0086.

4 0 4 8 12 16 20m
1:200 (A1) 1:400 (A3)

2 0 2 4 6 8 10m
1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
3	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	AJD	WJH	CRT			
2	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	AJD	WJH	CRT			
1	08.12.15	ISSUED FOR FINAL CLIENT REVIEW	EN	PC	AC	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	WJH	CRT	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
NARRABEEN CREEK REHABILITATION WORKS
PLAN

DRG No 301015-03441-CI-DWG-0085 REV 3

WORLEYPARSONS_A1_REV2

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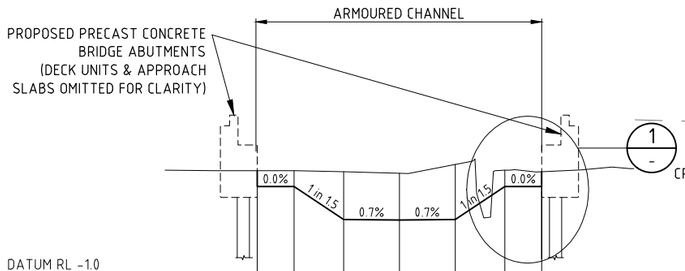
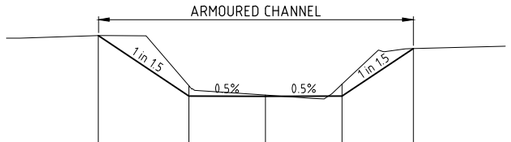
SAVE DATE & TIME: 23/3/2016 4:31:12 PM
USER NAME: william.walkins
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0085.DWG



DATUM RL -1.0

DESIGN	1.86	1.86	0.78	0.77	0.78	1.86	1.86
EXISTING SURFACE	2.38	2.38	2.34	2.29	2.58	2.39	2.34
CL OFFSET	-4.64	-3.44	-1.82	0.00	1.82	3.44	4.64

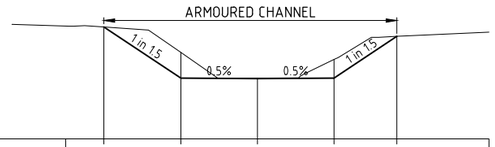
CH 30



DATUM RL -1.0

DESIGN	2.87	0.90	0.89	0.90	2.45
EXISTING SURFACE	2.87	1.24	0.93	1.29	2.45
CL OFFSET	-5.45	-2.50	0.00	2.50	4.82

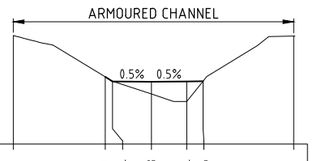
CH 15



DATUM RL -1.0

DESIGN	2.65	0.98	0.96	0.98	2.34
EXISTING SURFACE	2.65	1.82	0.98	1.59	2.34
CL OFFSET	-5.01	-2.50	0.00	2.50	4.55

CH 7.5



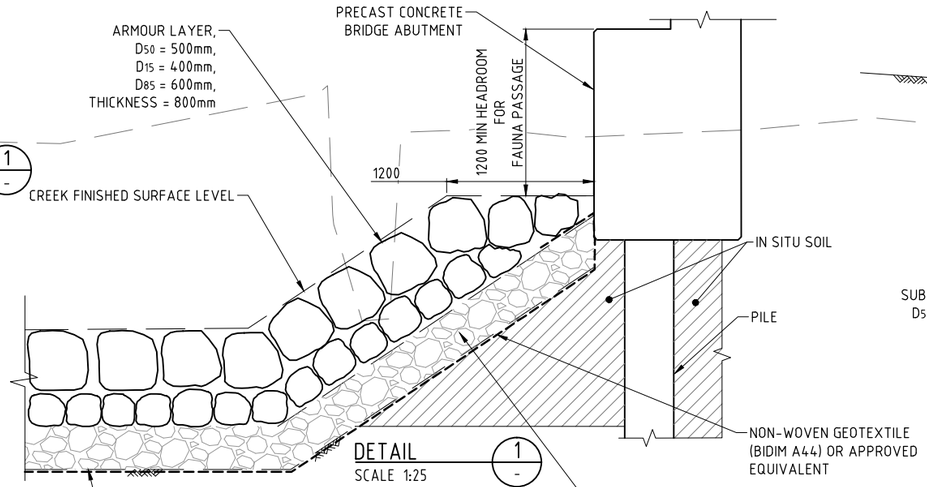
DATUM RL -1.0

DESIGN		1.19	1.04	1.03	1.04	1.05
EXISTING SURFACE	2.54	1.19	1.05	0.63	0.39	1.05	2.52
CL OFFSET	-4.50	-1.50	-1.27	0.00	1.15	1.68	4.64

CH 0

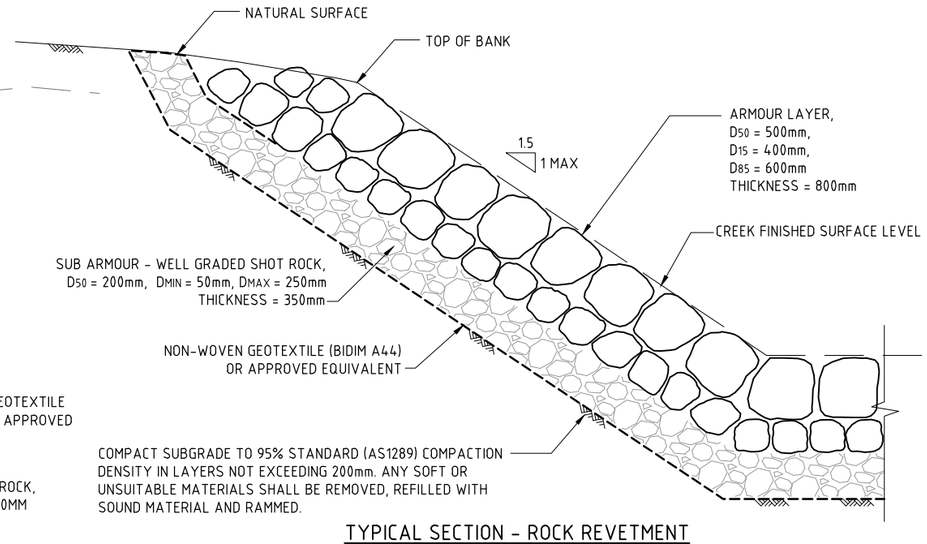
CREEK CROSS SECTIONS

SCALE 1:100



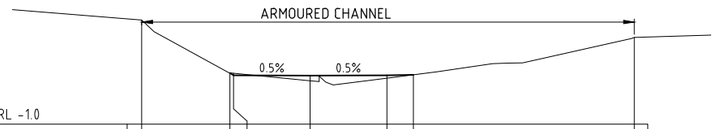
DETAIL 1 -

SCALE 1:25



TYPICAL SECTION - ROCK REVETMENT

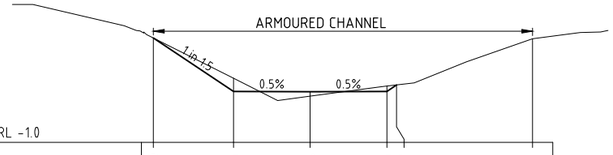
SCALE 1:25



DATUM RL -1.0

DESIGN		0.67	0.59	0.58	0.59	0.61	
EXISTING SURFACE	2.39	0.67	0.66	0.42	0.50	0.61	1.82
CL OFFSET	-5.49	-2.62	-2.50	0.00	2.50	3.37	10.57

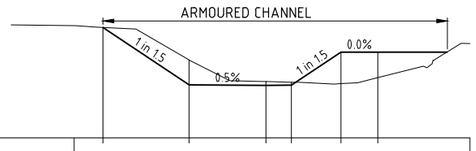
CH 75



DATUM RL -1.0

DESIGN	2.40	0.66	0.64	0.66	0.87	
EXISTING SURFACE	2.40	1.08	0.50	0.83	0.87	2.37
CL OFFSET	-5.11	-2.50	0.00	2.50	2.81	7.25

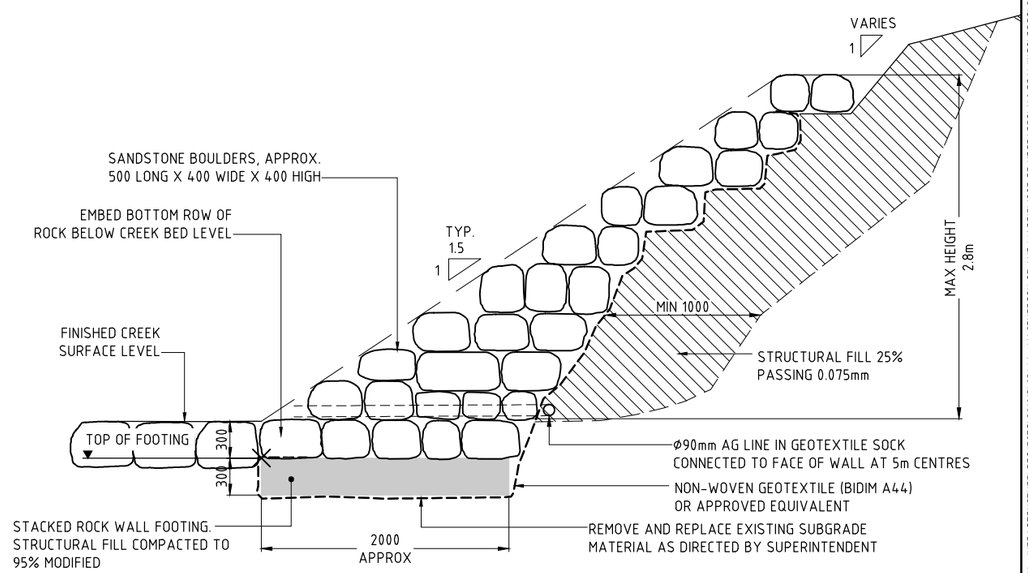
CH 60



DATUM RL -1.0

DESIGN	2.59	0.72	0.71	0.71	1.79	1.79
EXISTING SURFACE	2.59	1.53	0.83	0.81	0.76	0.95
CL OFFSET	-5.31	-2.50	0.00	0.83	2.45	3.65

CH 45



TYPICAL STACKED ROCK RETAINING WALL

SCALE 1:25

500 0 500 1000 1500 2000 2500mm

1:25 (A1) 1:50 (A3)

2 0 2 4 6 8 10m

1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	AJD	WJH	CRT			
1	08.12.15	ISSUED FOR FINAL CLIENT REVIEW	EN	PC	AC	WJH	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	EN	PC	WJH	CRT	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
NARRABEEN CREEK REHABILITATION WORKS
SECTIONS & DETAILS

DRG No 301015-03441-CI-DWG-0086

REV 2

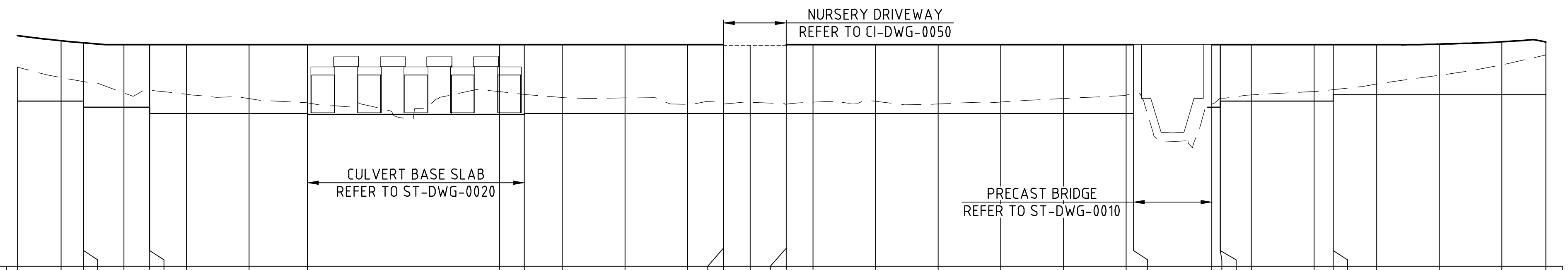
WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\CIVIL\301015-03441-CI-DWG-0085.DWG

USER NAME: enosh.newar

PLOT DATE & TIME: 21/3/2016 5:39:53 PM

SAVE DATE & TIME: 21/3/2016 5:39:00 PM



DATUM RL -3.0

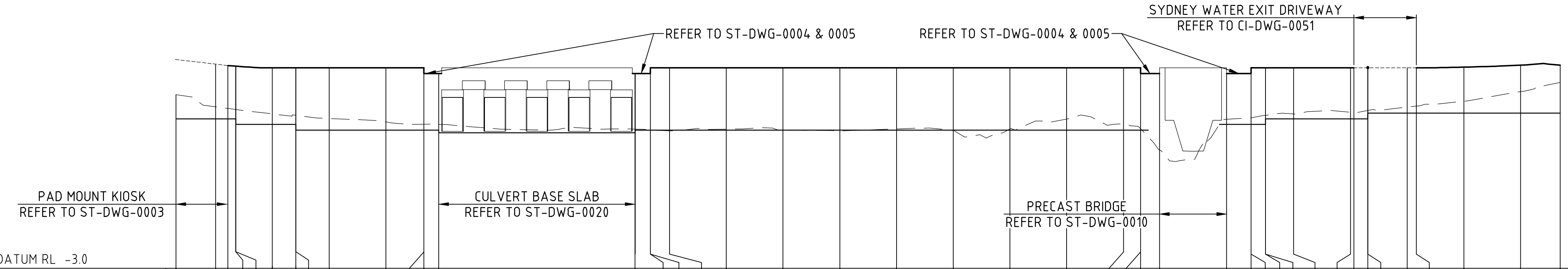
CHAINAGE	HEIGHT OF WALL	TOP OF WALL	TOP OF FOOTING	EXISTING SURFACE
33.000	2.091	4.366	2.275	3.355
40.000	1.922	4.197	2.275	3.024
43.560	1.854	4.129	2.275	2.891
43.570	2.054	4.129	2.075	2.891
50.000	2.000	4.075	2.075	2.531
54.120	2.000	4.075	2.075	2.632
54.130	2.200	4.075	1.875	2.632
60.000	2.200	4.075	1.875	2.487
70.000	2.200	4.075	1.875	2.350
79.313	2.200	4.075	1.875	2.217
80.000				
90.000				
100.000				
110.000				
113.943	2.200	4.075	1.875	2.483
120.000	2.200	4.075	1.875	2.385
130.000	2.200	4.075	1.875	2.372
140.000	2.200	4.075	1.875	2.168
145.730	2.200	4.075	1.875	2.180
145.730	2.170	4.045	1.875	2.180
150.000	2.170	4.045	1.875	2.236
155.730	2.170	4.045	1.875	2.176
155.730	2.200	4.075	1.875	2.176
160.000	2.200	4.075	1.875	2.235
170.000	2.200	4.075	1.875	2.267
180.000	2.200	4.075	1.875	2.179
190.000	2.200	4.075	1.875	2.241
200.000	2.200	4.075	1.875	2.354
210.000	2.200	4.075	1.875	2.462
211.180	2.200	4.075	1.875	2.020
223.700	2.000	4.075	2.075	2.148
225.020	2.000	4.075	2.075	2.361
225.030	1.800	4.075	2.275	2.363
230.000	1.800	4.075	2.275	2.467
240.000	1.800	4.075	2.275	2.575
243.070	1.800	4.075	2.275	2.634
243.080	1.600	4.075	2.475	2.634
250.000	1.600	4.075	2.475	2.815
260.000	1.616	4.091	2.475	3.098
270.000	1.688	4.163	2.475	3.428
277.005	1.685	4.160	2.475	3.747

NORTHERN RETAINING WALL FOOTING CONTROL LINE SETOUT

Pt	Chainage	Easting	Northing	Level	Bearing
IP1	33	327468.926	1270752.2	2.275	100d9'43"
IP2	66.004	327501.412	1270746.377	1.875	
IP3	277	327709.576	1270711.892	2.475	99d24'23"

NORTHERN RETAINING WALL FOOTING CONTROL LINE LONG SECTION

SCALE HORIZONTAL 1:500
SCALE VERTICAL 1:100



DATUM RL -3.0

CHAINAGE	HEIGHT OF WALL	TOP OF WALL	TOP OF FOOTING	EXISTING SURFACE
33.000			2.275	3.129
40.000	1.922	4.197	2.275	2.697
42.13	1.505	3.780	2.275	2.646
43.560	1.858	4.133	2.275	2.606
43.570	2.058	4.133	2.075	2.605
50.000	2.000	4.075	2.075	2.448
54.120	2.000	4.075	2.075	2.403
54.130	2.200	4.075	1.875	2.403
60.000	2.200	4.075	1.875	2.289
70.000	2.200	4.075	1.875	2.168
76.68	2.200	4.075	1.875	2.082
76.68	2.000	3.875	1.875	2.082
79.313	2.000	3.875	1.875	2.080
80.000				
90.000				
100.000				
110.000				
113.933	2.000	3.875	1.875	1.913
116.600	2.000	3.875	1.875	1.889
116.600	2.200	4.075	1.875	1.889
120.000	2.200	4.075	1.875	1.852
130.000	2.200	4.075	1.875	1.910
140.000	2.200	4.075	1.875	1.883
150.000	2.200	4.075	1.875	1.851
160.000	2.200	4.075	1.875	1.919
170.000	2.200	4.075	1.875	1.869
180.000	2.200	4.075	1.875	1.922
190.000	2.200	4.075	1.875	2.270
200.000	2.200	4.075	1.875	2.101
203.100	2.200	4.075	1.875	1.928
203.100	2.000	3.875	1.875	1.928
206.350	2.000	3.875	1.875	1.642
218.190	1.800	3.875	2.075	2.057
222.500	1.800	3.875	2.075	2.312
222.500	2.000	3.875	2.075	2.312
225.020	2.000	4.075	2.075	2.397
225.030	1.800	4.075	2.275	2.397
230.000	1.800	4.075	2.275	2.443
240.000	1.800	4.075	2.275	2.510
240.610	1.770	4.045	2.275	2.510
243.070	1.770	4.045	2.275	2.570
243.080	1.570	4.045	2.475	2.571
250.000	1.570	4.045	2.475	2.689
251.620	1.570	4.045	2.475	2.689
260.000	1.624	4.099	2.475	2.898
270.000	1.694	4.169	2.475	3.233
276.996	1.691	4.166	2.475	3.557

SOUTHERN RETAINING WALL FOOTING CONTROL LINE SETOUT

Pt	Chainage	Easting	Northing	Level	Bearing
IP1	33	327466.565	1270737.909	2.275	99d24'23"
IP2	277	327707.28	1270698.031	2.475	99d24'23"

NOTE

1. CONTROL LINE CHAINAGES ALIGN WITH MACPHERSON STREET ROAD CHAINAGES.
2. REFER TO ST-DWG-0002 FOR LOCATION OF RETAINING WALL CONTROL LINE SETOUT POINT.

SOUTHERN RETAINING WALL FOOTING CONTROL LINE LONG SECTION

SCALE HORIZONTAL 1:500
SCALE VERTICAL 1:100

10 0 10 20 30 40 50m
1:500 (A1) 1:1000 (A3)

2 0 2 4 6 8 10m
1:100 (A1) 1:200 (A3)

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1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	GW	SA	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	BW	PC	PD	SA	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER
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MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON STREET
RETAINING WALLS
FOOTING LONG SECTION & SETOUT

DRG No 301015-03441-ST-DWG-0001 REV 1

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\STRUCTURAL\301015-03441-ST-DWG-0001 & 0005.DWG
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PLOT DATE & TIME: 18/3/2016 4:40:59 PM
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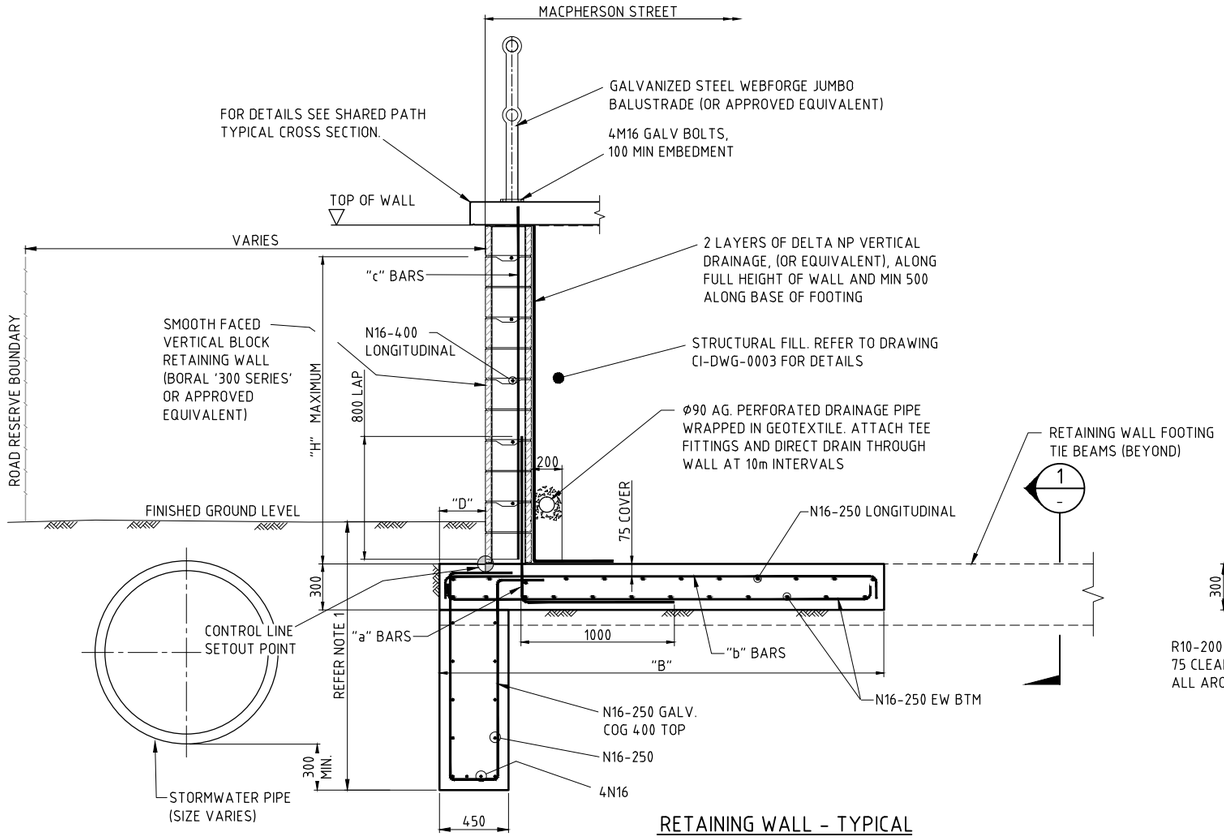
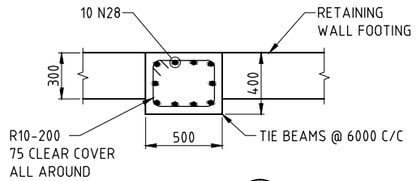


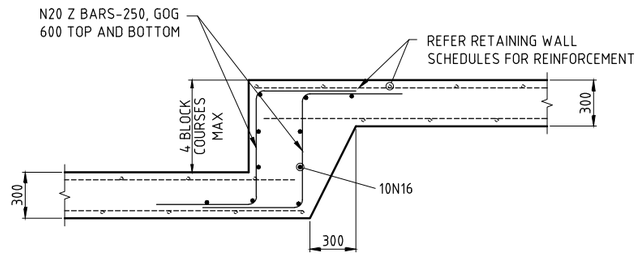
RETAINING WALL - TYPICAL

SCALE 1:20



SECTION 1 -

SCALE 1:20

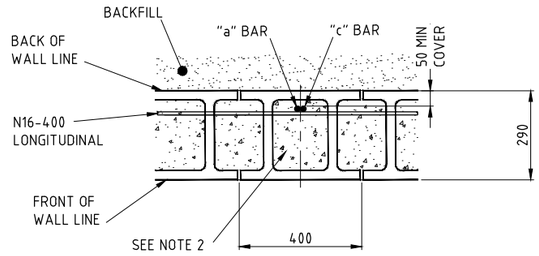


TYPICAL FOOTING STEP DETAIL

SCALE 1:20

BLOCK RETAINING WALL REINFORCEMENT SCHEDULE

DIMENSIONS			REINFORCEMENT		
H. MAX	B.	D.	a.	b.	c.
2200	3100	300	N24 AT 400	N24 AT 400	N20 AT 400
2000	2900	300	N24 AT 400	N24 AT 400	N20 AT 400
1400	2900	300	N24 AT 400	N24 AT 400	N20 AT 400
1000	1600	300	N20 AT 400	N20 AT 400	N16 AT 400
600	1000	300	N20 AT 400	N20 AT 400	N16 AT 400



TYPICAL BLOCK WALL REINFORCEMENT CONFIGURATION

SCALE 1:10

NOTES

1. TOE OF RETAINING WALL TO BE CONSTRUCTED TO A MINIMUM DEPTH OF 1.2m BELOW PROPOSED FINISHED GROUND LEVEL OR A MINIMUM OF 300mm BELOW THE PROPOSED STORMWATER PIPE INVERT WHERE STORMWATER PIPES RUNS ADJACENT TO THE RETAINING WALL, WHICH EVER IS GREATER

2. BLOCKS TO BE FILLED WITH CORE FILL CONCRETE GRADE N40 10mm MAXIMUM AGGREGATE.

200 0 200 400 600 800 1000mm
1:10 (A1) 1:20 (A3)

400 0 400 800 1200 1600 2000mm
1:20 (A1) 1:40 (A3)

1000 0 1000 2000 3000 4000 5000mm
1:50 (A1) 1:100 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	GW	SA	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	GW	SA	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	BW	PC	PD	GW	CRT			

A1 SHEET SCALE

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

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CUSTOMER

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WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
MACPHERSON ST RETAINING WALL
AND SHARED PATH
SECTIONS & DETAILS

DRG No 301015-03441-ST-DWG-0002

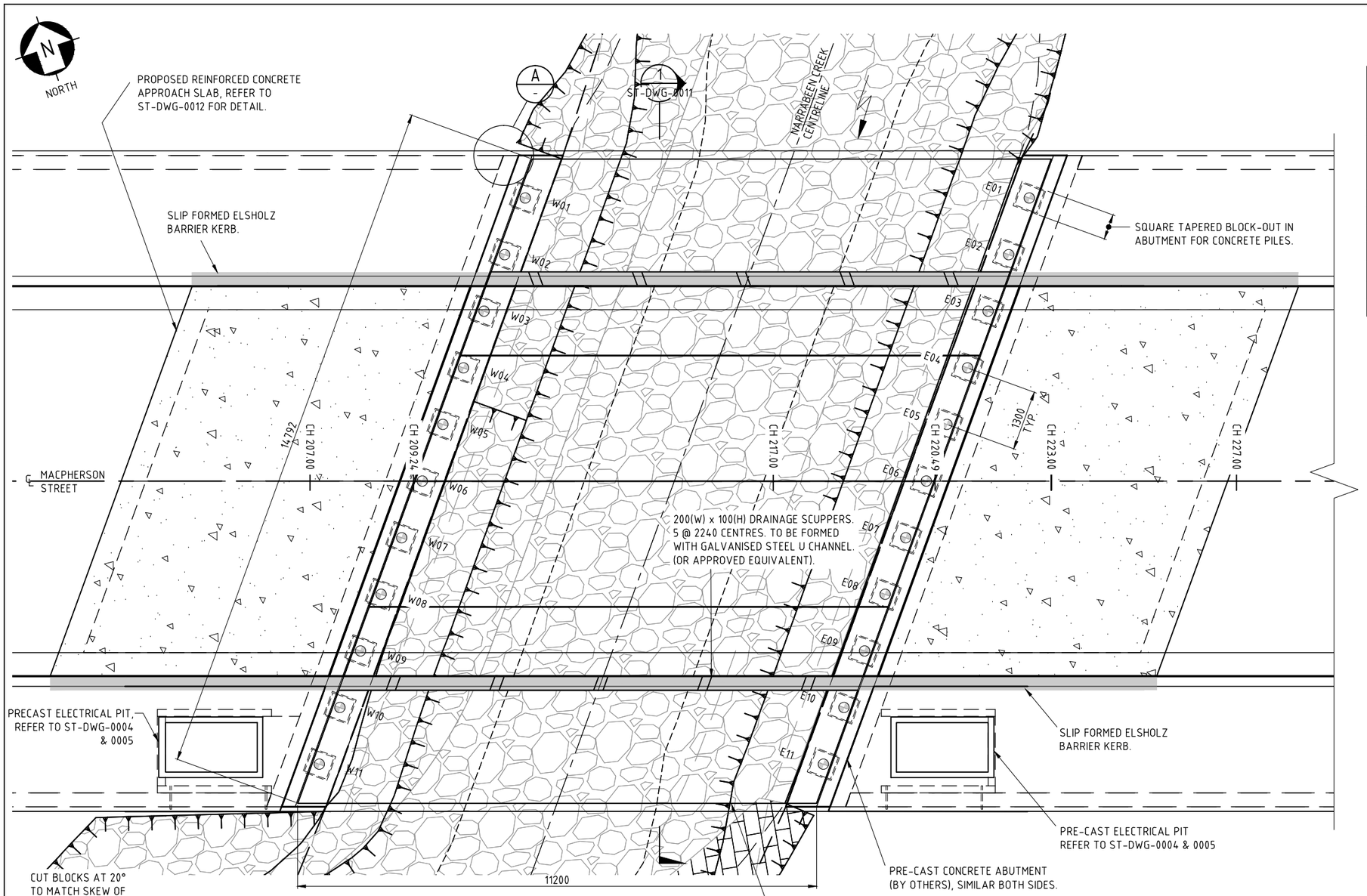
REV 2

WORLEYPARSONS_A1_REV2

PLOT DATE & TIME: 24/3/2016 5:00:18 PM
SAVE DATE & TIME: 24/3/2016 2:22:52 PM

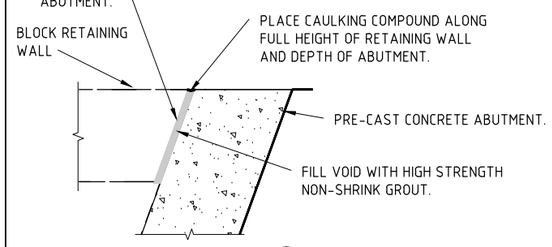
USER NAME: william.watkins

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\STRUCTURAL\301015-03441-ST-DWG-0001 & 0005.DWG



NARRABEEN CREEK BRIDGE - PLAN

SCALE 1:50



DETAIL A

SCALE 1:10

PILE SETOUT TABLE					
SETOUT POINT	EASTING	NORTHING	SETOUT POINT	EASTING	NORTHING
W01	327644.954	1270721.669	E01	327655.689	1270719.890
W02	327644.316	1270720.536	E02	327655.050	1270718.758
W03	327643.678	1270719.404	E03	327654.412	1270717.625
W04	327643.039	1270718.271	E04	327653.744	1270716.493
W05	327642.401	1270717.139	E05	327653.136	1270715.360
W06	327641.763	1270716.006	E06	327652.497	1270714.228
W07	327641.125	1270714.874	E07	327651.859	1270713.095
W08	327640.486	1270713.741	E08	327651.221	1270711.963
W09	327639.848	1270712.609	E09	327650.582	1270710.830
W10	327639.210	1270711.476	E10	327649.944	1270709.698
W11	327638.571	1270710.344	E11	327649.306	1270708.565

NOTES

1. STRUCTURAL DESIGN AND DETAILS OF BRIDGE DECKS, ABUTMENTS, AND PILES SHALL BE CONFIRMED BY PRECAST SUPPLIER.
2. REFER TO ST-DWG-0011 FOR DETAILS OF PILES
3. PROPOSED SURFACE CONTOURS OMITTED FOR CLARITY

1000 0 1000 2000 3000 4000 5000mm

1:50 (A1) 1:100 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	GW	SA	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	BW	PC	PD	SA	CRT			

A1 SHEET | SCALE 1:20

OneWay to zero harm

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WORLEYPARSONS PROJECT No. 301015-03441

ENGINEERING AND PERMIT STAMPS (As Required)

APPROVED FOR CONSTRUCTION

CUSTOMER

PITTWATER COUNCIL

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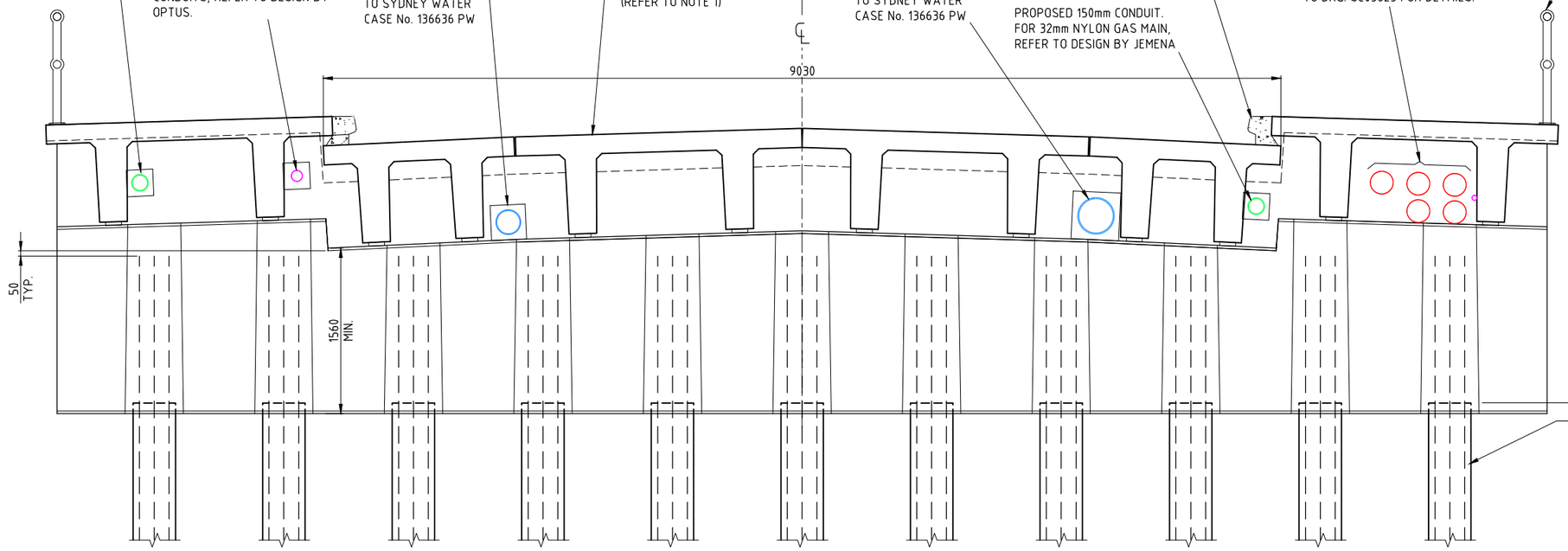
WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
NARRABEEN CREEK BRIDGE CROSSING
PLAN & SETOUT

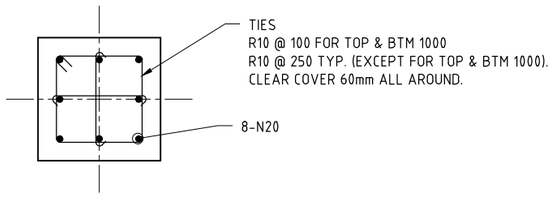
DRG No 301015-03441-ST-DWG-0010 REV 1

WORLEYPARSONS_A1_REV2

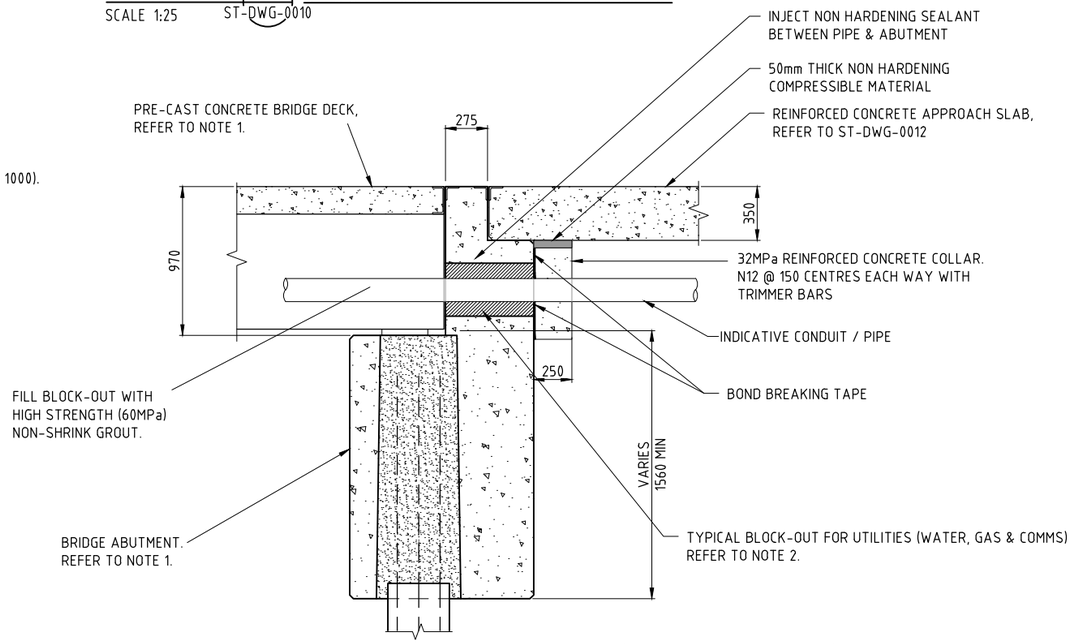
PLOT DATE & TIME: 18/3/2016 12:57:25 PM
SAVE DATE & TIME: 18/3/2016 11:56:14 AM
USER NAME: enosh.newar
LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\STRUCTURAL\301015-03441-ST-DWG-0010 & 0011.DWG



SECTION 1 ST-DWG-0010 BRIDGE CROSSING OF NARRABEEN CREEK
SCALE 1:25



TYPICAL SECTION THROUGH PILE
SCALE 1:10



TYPICAL SECTION THROUGH BRIDGE ABUTMENT (WATER, GAS & COMMS)
SCALE 1:20
REFER TO ST-DWG-0004 & 0005 FOR SECTION THROUGH ELECTRICAL CONDUIT

NOTES

1. THE BRIDGE ARRANGEMENT SHOWN IN THE DRAWINGS IS BASED ON A DESIGN FOR THE HUME DECK™ SYSTEM PROVIDED BY HUMES. AN APPROVED EQUIVALENT PRECAST CONCRETE DECK BRIDGE CAN BE SELECTED. THE STRUCTURAL DESIGN DIMENSIONS AND REINFORCEMENT DETAILS FOR THE BRIDGE DECK UNITS, ABUTMENTS AND PILES SHALL BE CONFIRMED BY THE PRECAST BRIDGE SUPPLIER. THE BRIDGE SELECTED MUST ADHERE TO AUSTRALIAN STANDARD AS5100 - BRIDGE DESIGN.
2. SIZE AND LOCATION OF BLOCK OUTS FOR SERVICES TO BE CONFIRMED BY PRE-CAST SUPPLIER.
3. ULTIMATE LOAD PER PILE N* = 770 kN

200 0 200 400 600 800 1000mm
1:10 (A1) 1:20 (A3)
400 0 400 800 1200 1600 2000mm
1:20 (A1) 1:40 (A3)
500 0 500 1000 1500 2000 2500mm
1:25 (A1) 1:50 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
3	06.04.16	ISSUED FOR CONSTRUCTION	EN	PC	GW	SA	CRT			
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	GW	SA	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	GW	SA	CRT			
0	10.09.15	ISSUED FOR CLIENT REVIEW	EN	PC	PD	SA	CRT			

A1 SHEET SCALE 1:20

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WORLEYPARSONS PROJECT No. 301015-03441

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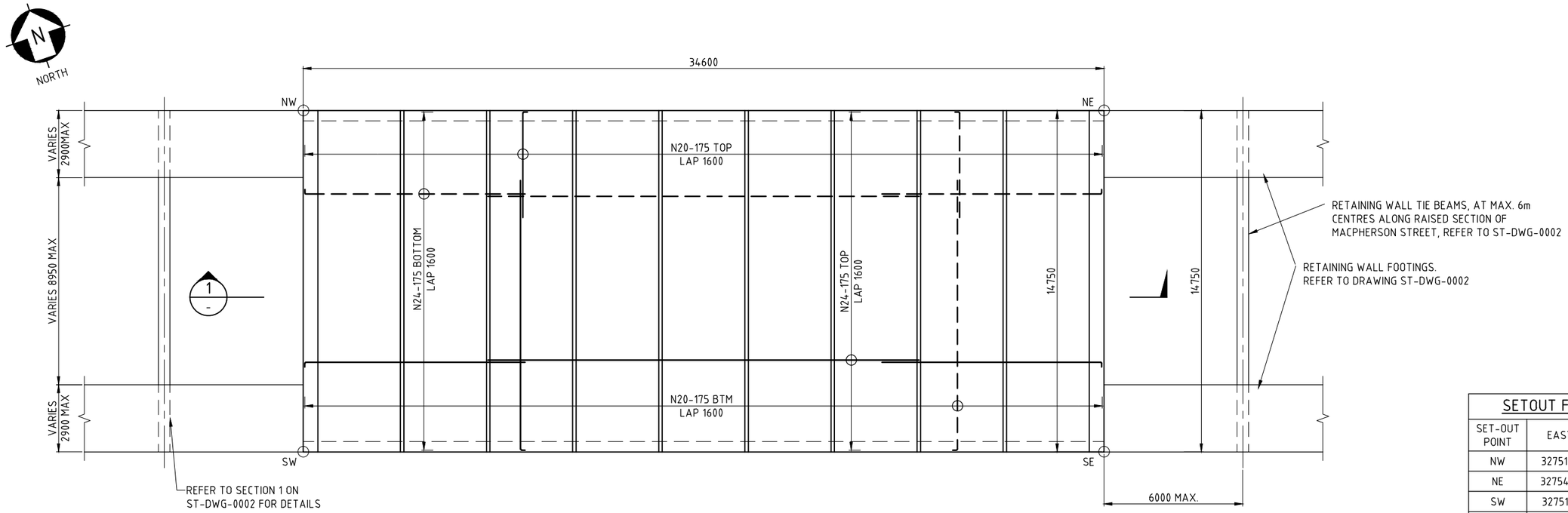
WorleyParsons resources & energy

MACPHERSON ST & WARRIEWOOD RD UPGRADES
NARRABEEN CREEK BRIDGE CROSSING
SECTIONS & DETAILS

DRG No 301015-03441-ST-DWG-0011 REV 3

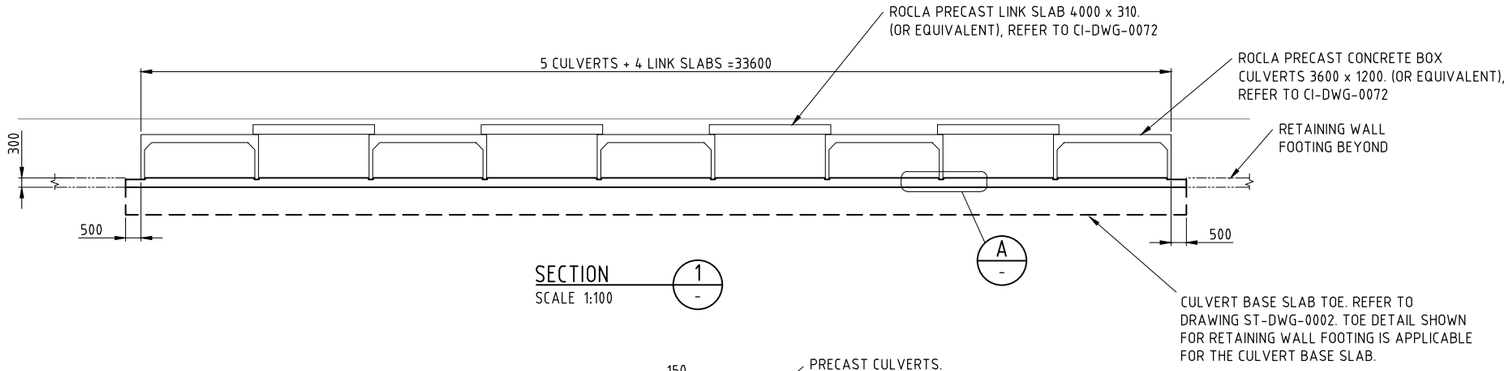
WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\STRUCTURAL\301015-03441-ST-DWG-0010 & 0011.DWG
USER NAME: phil.cornish
PLOT DATE & TIME: 7/4/2016 12:42:41 PM
SAVE DATE & TIME: 7/4/2016 12:41:43 PM

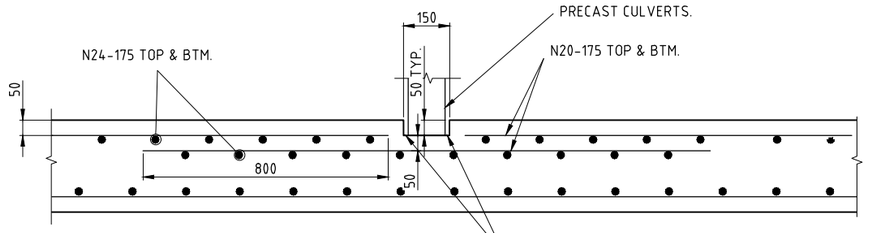


CULVERT BASE SLAB PLAN
SCALE 1:100

SETOUT FOR CULVERT BASE SLAB			
SET-OUT POINT	EASTING	NORTHING	LEVEL
NW	327514.648	1270744.539	1.90
NE	327548.754	1270738.890	1.90
SW	327512.238	1270729.988	1.83
SE	327546.343	1270724.338	1.83



SECTION 1
SCALE 1:100



DETAIL A
SCALE 1:10

NOTES

1. PROPOSED BOUNDARY AND SERVICES OMITTED FOR CLARITY.
2. PRE-CAST CULVERT CROWN UNITS AT UPSTREAM AND DOWNSTREAM END SHALL BE PRE-CAST WITH REINFORCED CONCRETE HEADWALL, TOP OF HEADWALL TO MATCH TOP OF ADJACENT BLOCK WALL.
3. STORMWATER PIPES TO CONNECT INTO BOX CULVERTS ON SOUTHERN SIDE OF ROAD. REFER TO DRAWING CI-DWG-0070 & 0072 FOR DRAINAGE ARRANGEMENT.

200 0 200 400 600 800 1000mm
1:10 (A1) 1:20 (A3)
2000 0 2000 4000 6000 8000 10000mm
1:100 (A1) 1:200 (A3)

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	CUSTOMER	REF DRAWING No	REFERENCE DRAWING TITLE
3	06.04.16	ISSUED FOR CONSTRUCTION	EN	PC	GW	SA	CRT			
2	24.03.16	ISSUED FOR CONSTRUCTION	BW	PC	GW	SA	CRT			
1	18.03.16	ISSUED FOR CONSTRUCTION	EN	PC	GW	SA	CRT			
0	10.09.15	ISSUED FOR CONSTRUCTION	BW	PC	PD	SA	CRT			

A1 SHEET SCALE NOTED

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MACPHERSON ST & WARRIEWOOD RD UPGRADES
WESTERN FLOWPATH CULVERTS
BASE SLAB PLAN & SECTIONS

DRG No 301015-03441-ST-DWG-0020 REV 3

WORLEYPARSONS_A1_REV2

LOCATION: W:_INFRASTRUCTURE\PROJECTS\301015\03441 - MACPHERSON ST AND WARRIEWOOD RD UPGRADES\11.0 DRAWINGS\DRGS\STRUCTURAL\301015-03441-ST-DWG-0020.DWG
USER NAME: enosh.newar
PLOT DATE & TIME: 6/4/2016 1:15:43 PM
SAVE DATE & TIME: 24/3/2016 3:55:53 PM