RIVER BREEZE
STAGE 4 - CIVIL WORKS
TRASPUNT PROJECTS PTY LTD

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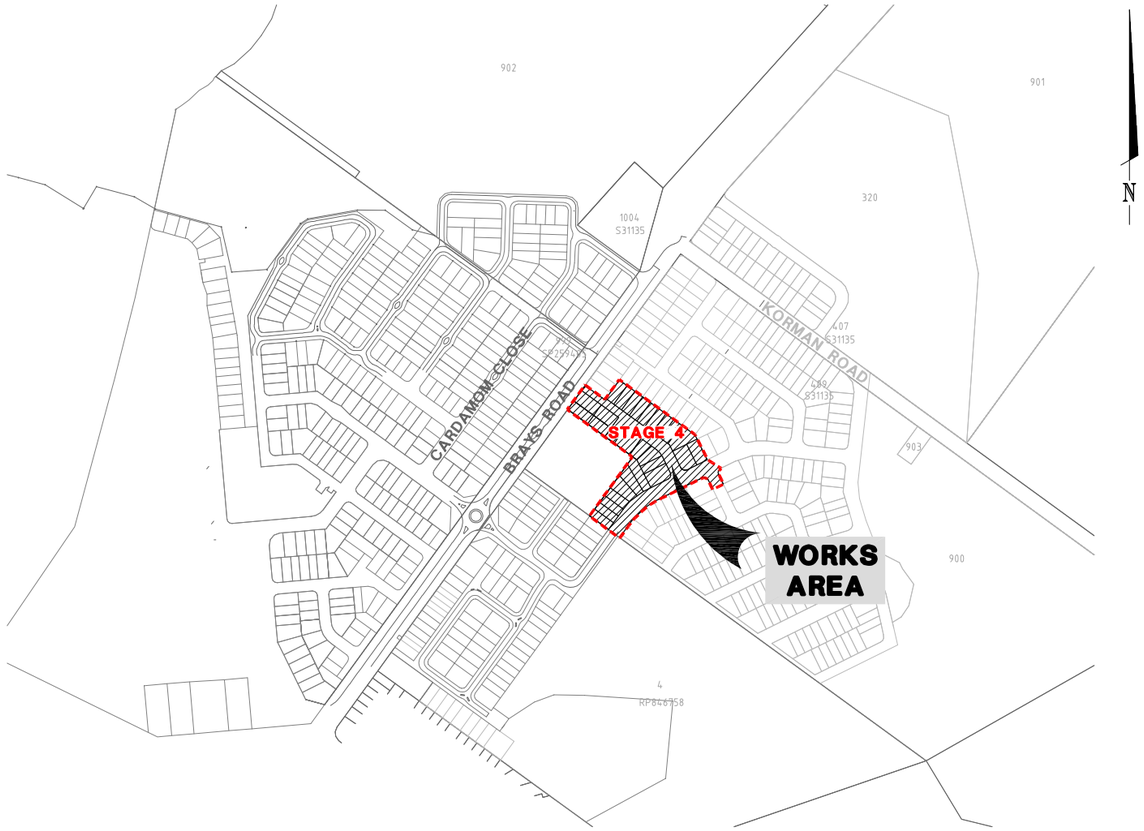

LOCALITY PLAN
SCALE 1:4000

NOTE:
ALL SERVICES SHOWN OUTSIDE OF THIS STAGE ARE INDICATIVE ONLY. CONTRACTOR TO CONFIRM LOCATIONS PRIOR TO CONSTRUCTION

RP DESCRIPTION
LOT 20 ON SP269129
MORETON BAY REGIONAL COUNCIL

COUNCIL REFERENCE:
DA/29754/2014

FILE: N14066.14-100.dwg DATE: 25-05-2017 TIME: 1120
Xref's: X-BASE X-N14066-SURVEY X-TIT X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	A	CB	CB	13.04.17	
	B	CB	CB	23.05.17	DRAWING INDEX UPDATED
	C				
	D				
	E				
	F				

DESIGN CHECK
DRAWN CHECK

SCALE (METRES)
1:4000 4 2 0 4 8 12 16 20 A1
1:8000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

SURVEY DATUM: PM120863 RL 13.031

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD
PROJECT No.: N14066.14
PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

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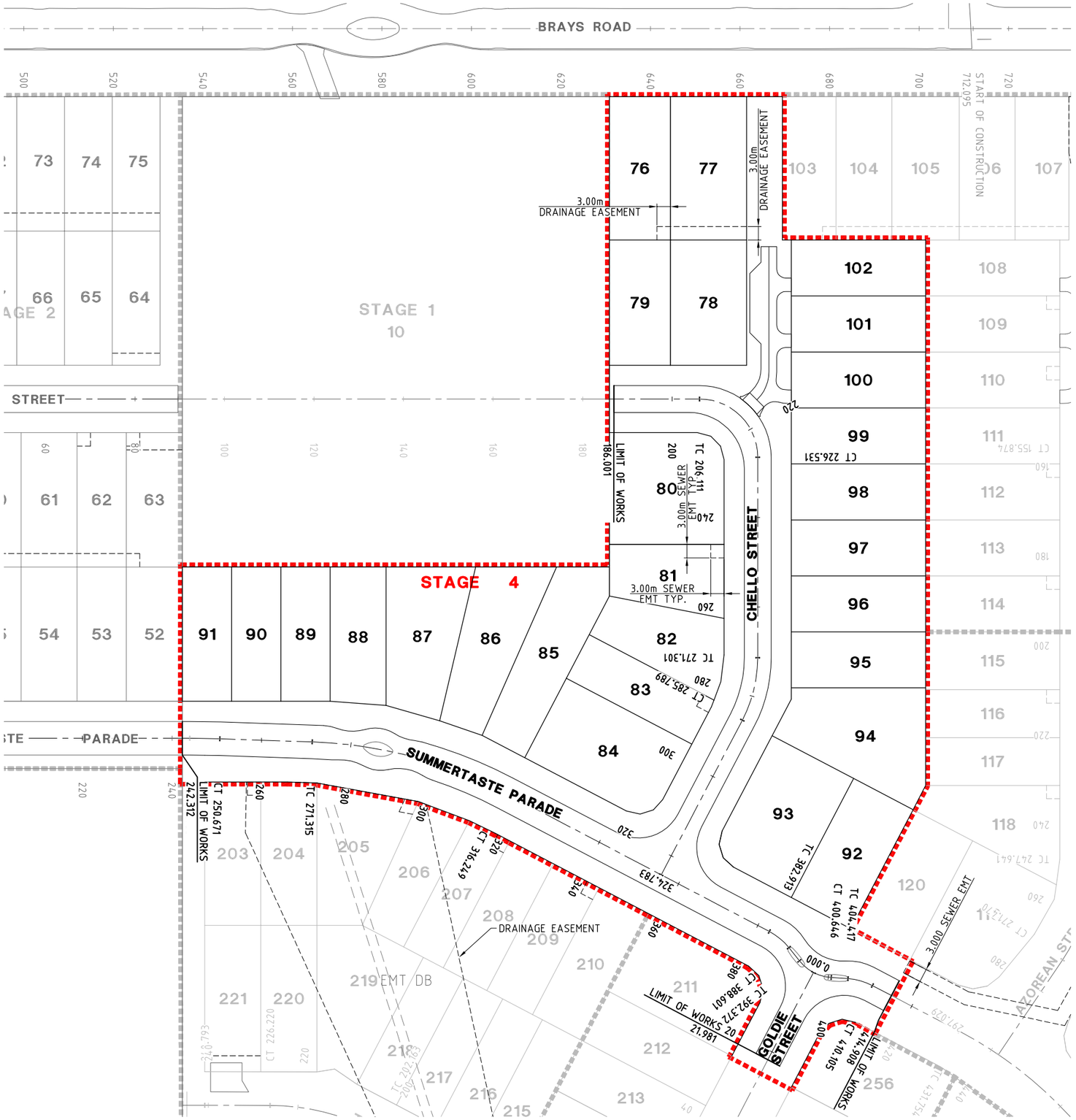
Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: DRAWING INDEX AND SITE LOCALITY PLAN
DRAWING NUMBER: N14066.14-100
ISSUE: A

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2



SUMMERTASTE PARADE CONTROL SETOUT

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 4	155.496	4711.341	6143.840	13.034		R = -15.000	23.562	90°00'00.00"
CT	167.277	4720.160	6155.974	12.939	36°00'40.10"			
TC	243.953	4765.241	6217.997	12.326	36°00'40.10"			
IP 5	247.312	4767.216	6220.714	12.299		R = 200.000	6.718	1°55'28.24"
CT	250.671	4769.281	6223.364	12.272	37°56'08.34"			
TC	271.315	4781.973	6239.646	12.107	37°56'08.34"			
IP 6	293.782	4796.022	6257.670	11.927		R = 100.000	44.934	25°44'42.16"
CT	316.249	4816.505	6267.802	11.748	63°40'50.50"			
TC	382.913	4876.259	6297.359	10.855	63°40'50.50"			
IP 7	385.757	4878.845	6298.638	10.807		R = 13.750	5.688	23°42'02.64"
CT	388.601	4881.727	6298.770	10.759	87°22'53.14"			
TC	392.372	4885.495	6298.942	10.695	87°22'53.14"			
IP 8	396.509	4889.880	6299.143	10.625		R = -10.000	8.273	47°24'05.28"
CT	400.646	4892.701	6302.507	10.554	39°58'47.87"			
TC	404.417	4895.124	6305.397	10.490	39°58'47.87"			
IP 9	407.261	4896.978	6307.608	10.442		R = 13.750	5.688	23°42'02.61"
CT	410.105	4899.564	6308.887	10.394	63°40'50.47"			
TC	432.051	4919.235	6318.617	10.018	63°40'50.47"			
IP 10	457.656	4942.825	6330.286	9.579		R = 90.000	51.210	32°36'05.42"

CHELLO STREET CONTROL SETOUT

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	4650.876	6187.171	15.600	30°16'53.92"			
TC	13.017	4657.440	6198.412	15.376	30°16'53.92"			
IP 2	13.667	4657.768	6198.973	15.373		R = 13.000	1.300	5°43'46.36"
CT	14.317	4658.150	6199.500	15.372	36°00'40.28"			
TC	206.111	4770.914	6354.642	14.272	36°00'40.28"			
IP 3	216.321	4778.558	6365.158	13.933		R = 13.000	20.420	90°00'00.01"
CT	226.531	4789.073	6357.515	13.594	126°00'40.28"			
TC	271.301	4825.287	6331.193	12.108	126°00'40.28"			
IP 4	278.545	4831.264	6326.849	11.868		R = 30.000	14.488	27°40'10.22"
CT	285.789	4834.539	6320.227	11.627	153°40'50.50"			
IP 5	324.783	4851.829	6285.275	11.302	153°40'50.50"			

GOLDIE STREET CONTROL SETOUT

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	4889.472	6299.969	10.625	153°40'50.50"
IP 2	74.798	4922.635	6232.925		153°40'50.50"

LEGEND

- STAGE BOUNDARY
- ROAD CENTRELINE
- — 60 — ROAD CHAINAGES
- PROPOSED KERB
- EXISTING KERB

FILE: N14066.14-101.dwg DATE: 25-05-2017 TIME: 11:19
Xref's: X-TIT X-BASE X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A	CB	CB	13.04.17	
B	CB	CB	23.05.17	SETOUT UPDATED
C				
D				
E				
F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:500 10 5 0 10 20 A1
1:1000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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DRAWING TITLE: SURVEY SETOUT DETAIL PLAN

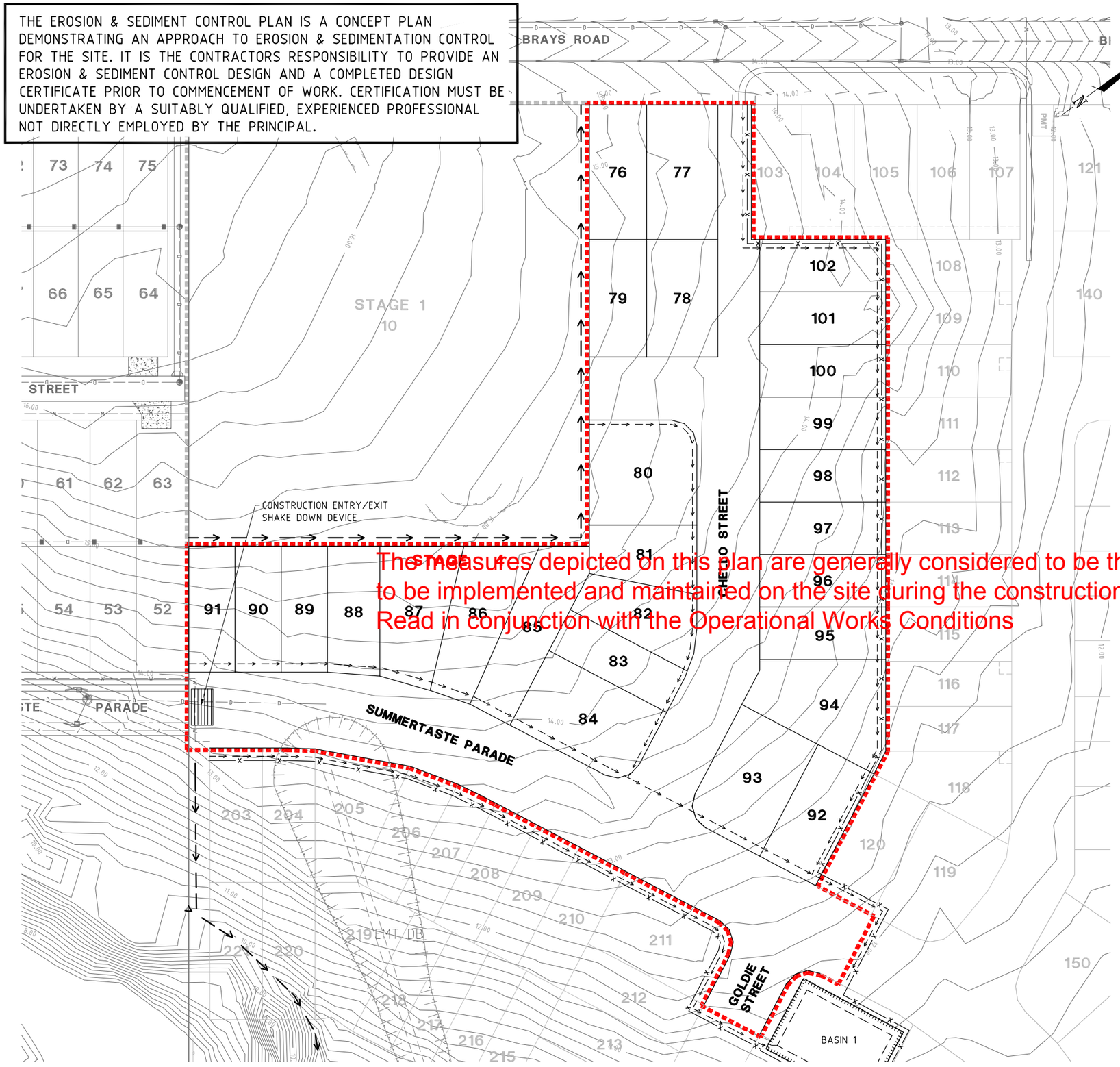
DRAWING NUMBER: N14066.14-101

ISSUE: A

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

THE EROSION & SEDIMENT CONTROL PLAN IS A CONCEPT PLAN DEMONSTRATING AN APPROACH TO EROSION & SEDIMENTATION CONTROL FOR THE SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE AN EROSION & SEDIMENT CONTROL DESIGN AND A COMPLETED DESIGN CERTIFICATE PRIOR TO COMMENCEMENT OF WORK. CERTIFICATION MUST BE UNDERTAKEN BY A SUITABLY QUALIFIED, EXPERIENCED PROFESSIONAL NOT DIRECTLY EMPLOYED BY THE PRINCIPAL.



The measures depicted on this plan are generally considered to be the MINIMUM to be implemented and maintained on the site during the construction phase.
Read in conjunction with the Operational Works Conditions

CONCEPTUAL SEDIMENT MANAGEMENT PROGRAM PHASE 1

DESCRIPTION OF WORKS

PRIOR TO CONSTRUCTION
- SEDIMENT FENCE, SAND BAGS AND EARTH RILLS TO BE ERECTED AS INDICATED OR AS DIRECTED.
- CONTRACTOR TO DISPLAY APPROPRIATE WORKPLACE HEALTH AND SAFETY SIGNAGE DETAILING THE AREA BEYOND IS A CONSTRUCTION SITE AND ONLY AUTHORISED PERSONNEL CAN ENTER.
- CONSTRUCT ENTRY AND EXIT POINT AS INDICATED.
- CONSTRUCT VEHICLE WASHDOWN AREA AND ASSOCIATED SEDIMENT MANAGEMENT DEVICES CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA.
- SEDIMENT BASINS TO BE CONSTRUCTED.
- CUTOFF DRAINS (CLEAN AND DIRTY) TO BE CONSTRUCTED.

CLEARING
- EXISTING GRASSED VEGETATED AREAS TO BE RETAINED WHERE POSSIBLE AND EXPOSED DISTURBED AREA MINIMISED.

EARTHWORKS
- SUPERINTENDENT TO CONFIRM EXTENT OF CLEARING/EARTHWORKS TO CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS.
- EFFECTIVELY STABILISE ALLOTMENTS PROGRESSIVELY, AS REQUIRED.
- SEDIMENT FENCES TO BE RE-ERECTED TO ALLOTMENTS WHEN REQUIRED. ANY STOCKPILES, TEMPORARY STOCKPILES AND EARTHWORKS NOT INTENDED TO BE WORKED FOR MORE THAN 10 DAYS ARE TO BE EFFECTIVELY STABILISED.
- EARTHWORKS & RETAINING WALLS TO BE COMPLETED AND EXPOSED AREAS EFFECTIVELY STABILISED PRIOR TO WORKS PROCEEDING IN OTHER AREAS.

MAINTENANCE
- SEDIMENT FENCES AND EARTH RILLS WITHIN ROADS TO BE ERECTED AS INDICATED OR REQUIRED.
- SEDIMENT FENCES TO BE INSPECTED WEEKLY AND FOLLOWING RAINFALL EVENTS. ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY.
- SEDIMENT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE OF THE FAILURE.
- SEDIMENT BASINS TO BE FLOCCULATED AND PUMPED OUT WITHIN 3 DAYS OF ALL RAIN EVENTS.

SEDIMENT BASIN TABLE

BASIN	LENGTH (m)	WIDTH (m)	DEPTH (m)	BATTER SLOPE	MINIMUM VOLUME (m^3)
1	27.0	19.0	1	1 in 2	429.0

* DIMENSIONS ARE TO TOP OF BATTER.
* BASIN SIZING IS PRELIMINARY ONLY.

NOTES:
REFER N14066.14-106 FOR GENERAL NOTES
REFER N14066.14-107 FOR DETAILS

LEGEND

- STAGE BOUNDARY
- SEDIMENT FENCE (OR AS DIRECTED BY SITE SUPERINTENDENT)
- CLEAN WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- DIRTY WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- 2.75 NATURAL SURFACE CONTOURS

FILE: N14066.14-102.dwg DATE: 08-05-2017 TIME: 15:01
Xref's: X-N14066.14-BASE X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE
	CB	CB	21.10.16

AMENDMENTS: AMENDMENT DETAILS

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:500 10 5 0 10 20 A1
1:1000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 3, KINGS ROW, 40 McDougall Street, MILTON Q 4064
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: CONCEPTUAL EROSION AND SEDIMENT CONTROL PLAN PHASE 1 - SHEET 1 OF 2

DRAWING NUMBER: N14066.14-102

ISSUE: -

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

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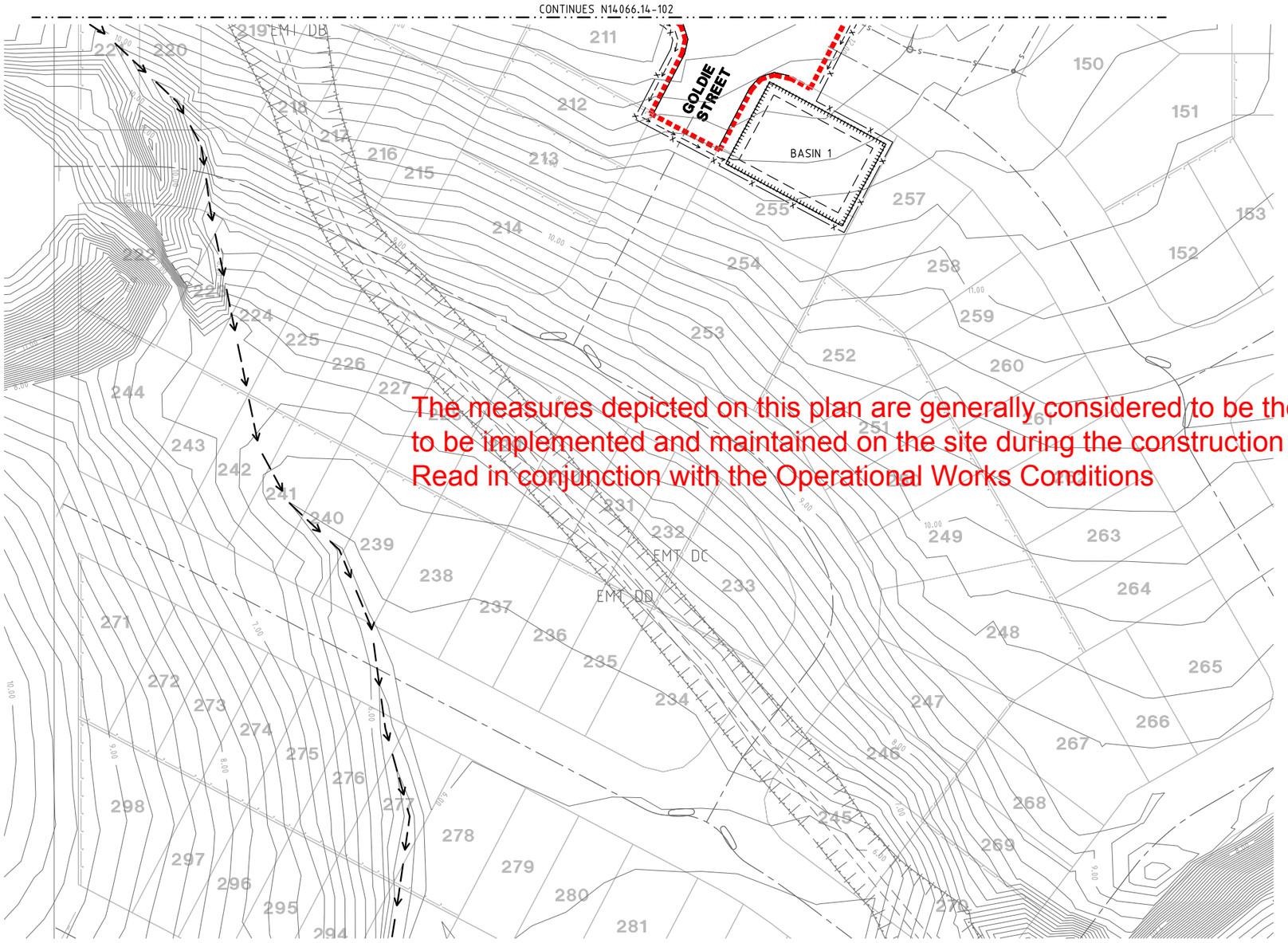

The measures depicted on this plan are generally considered to be the MINIMUM to be implemented and maintained on the site during the construction phase.
Read in conjunction with the Operational Works Conditions

SEDIMENT BASIN TABLE

BASIN	LENGTH (m)	WIDTH (m)	DEPTH (m)	BATTER SLOPE	MINIMUM VOLUME (m^3)
1	27.0	19.0	1	1 in 2	429.0

* DIMENSIONS ARE TO TOP OF BATTER.
* BASIN SIZING IS PRELIMINARY ONLY.

NOTES:
REFER N14066.14-106 FOR GENERAL NOTES
REFER N14066.14-107 FOR DETAILS

LEGEND

- STAGE BOUNDARY
- SEDIMENT FENCE (OR AS DIRECTED BY SITE SUPERINTENDENT)
- CLEAN WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- DIRTY WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- NATURAL SURFACE CONTOURS (2.75)

FILE: N14066.14-103.dwg DATE: 08-05-2017 TIME: 15:05
Xref's: X-N14066.14-BASE X-N14066-SURVEY X-N14066-FRESHWATER-ASCON N14066.14-102 USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE
	CB	CB	21.10.16

AMENDMENTS: AMENDMENT DETAILS

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:500 10 5 0 10 20 A1
1:1000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 3, KINGS ROW, 40 McDougall Street, MILTON Q 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

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Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: CONCEPTUAL EROSION AND SEDIMENT CONTROL PLAN PHASE 1 - SHEET 2 OF 2

DRAWING NUMBER: N14066.14-103

ISSUE: -

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

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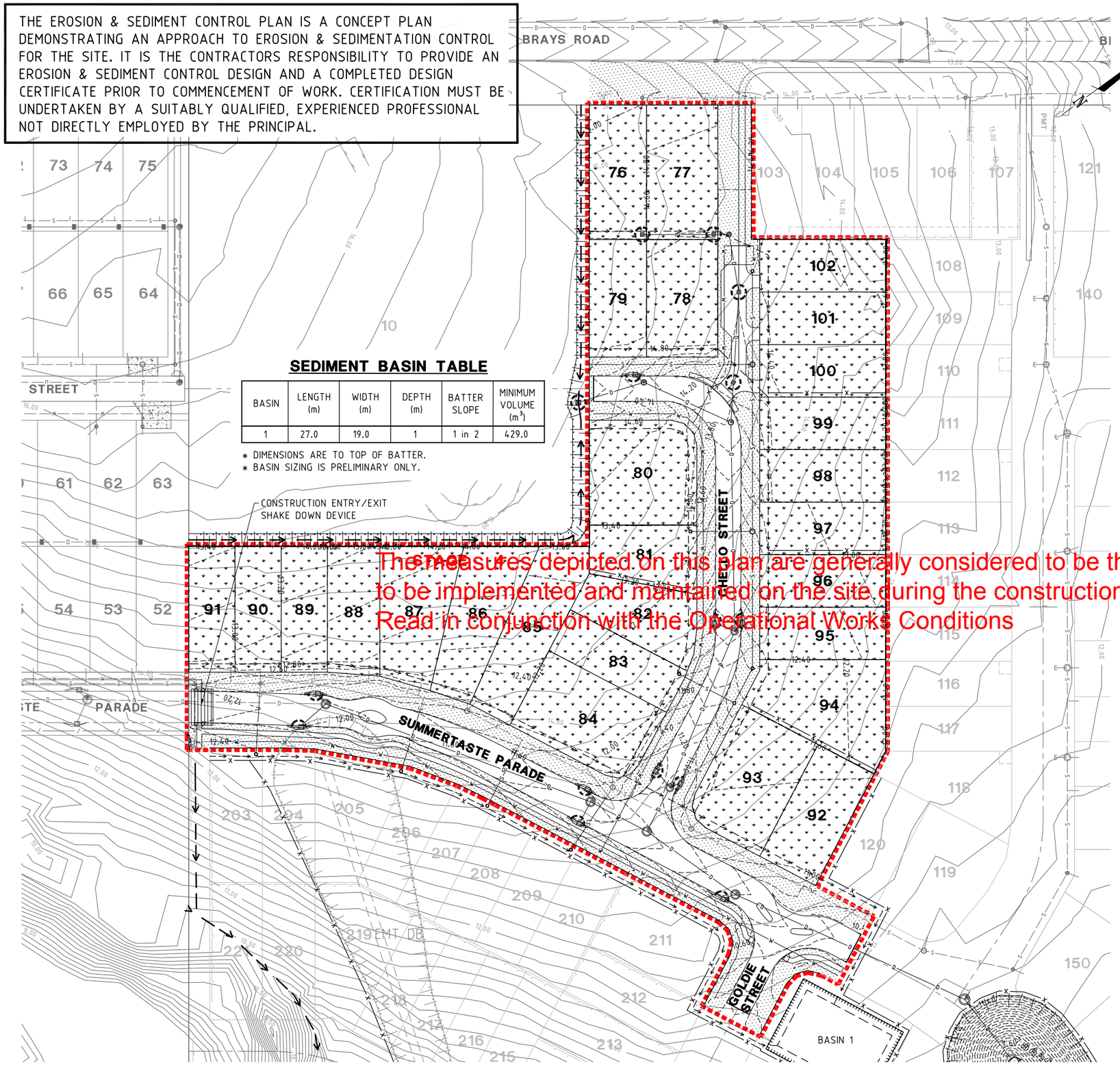

SEDIMENT BASIN TABLE

BASIN	LENGTH (m)	WIDTH (m)	DEPTH (m)	BATTER SLOPE	MINIMUM VOLUME (m^3)
1	27.0	19.0	1	1 in 2	429.0

* DIMENSIONS ARE TO TOP OF BATTER.
* BASIN SIZING IS PRELIMINARY ONLY.

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CONCEPTUAL SEDIMENT MANAGEMENT PROGRAM PHASE 2

DESCRIPTION OF WORKS

SEWER/ROOFWATER /STORMWATER /SERVICES
- EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS.
- EFFECTIVELY STABILISE AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION.
- DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SEDIMENT POND.
- PROVIDE 2.0M TURF STRIPS OVER ROOFWATER AND SEWER TRENCHES.

STOCKPILE
- SEDIMENT FENCE TO BE ERECTED 5M FROM TOE OF BATTER ON LOW SIDE OF STOCKPILE.
- STOCKPILE SITE TO BE CLEAR OF STAGE BOUNDARIES SO AS TO NOT CAUSE A NUISANCE TO ADJOINING PROPERTIES.
- STOCKPILES NOT INTENDED TO BE WORKED FOR MORE THAN 10 DAYS ARE TO BE EFFECTIVELY STABILISED.

ROADWORKS
- SEDIMENT FENCES TO ALLOTMENTS TO BE RE-ERECTED AS REQUIRED.
- KERB INLET PROTECTION TO BE PROVIDED TO ALL GULLIES.
- INSTALL FULL WIDTH VERGE (INCLUDING BATTERS) TURFING FOLLOWING KERB AND CHANNEL INSTALLATION.
- UTILISE UNDERGROUND DRAINAGE SYSTEM AS CONVEYANCE SYSTEM OF DIRTY WATER TO BASINS (WHERE APPROPRIATE) TO AVOID SCOUR OF ROAD BOX PROFILE.

ALLOTMENTS
- EFFECTIVELY STABILISE ALLOTMENTS.
- SEDIMENT FENCES TO ALLOTMENTS TO BE RE-ERECTED.
- PRIOR TO EFFECTIVE STABILISATION, TOP SOIL TO BE TESTED TO ENSURE SATISFACTORY CONDITIONS EXIST TO ACHIEVE THE REQUIRED EFFECTIVE STABILISATION.
- CONTRACTOR TO AMELIORATE SOIL WHERE NECESSARY.
- CUTOFF DRAINS TO LIMIT SLOPE LENGTHS TO LESS THAN 80m TO BE IMPLEMENTED.

MAINTENANCE
- THE SEDIMENT FENCES ARE TO BE INSPECTED WEEKLY AND FOLLOWING RAIN FALL EVENTS. ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY.
- SEDIMENT AFTER RAIN OR CONSTRUCTION TRAFFIC IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN.

NOTES:
REFER N14066.14-106 FOR GENERAL NOTES
REFER N14066.14-107 FOR DETAILS

LEGEND

- STAGE BOUNDARY
- SEDIMENT FENCE (OR AS DIRECTED BY SITE SUPERINTENDENT)
- CLEAN WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- DIRTY WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- STABILISED SURFACE (HYDROMULCH, MULCH OR SEED) TO ALLOTMENTS
- NATURAL SURFACE CONTOURS (2.75)
- PROPOSED DESIGN SURFACE CONTOURS (3.50)
- PROPOSED STORMWATER DRAINAGE
- PROPOSED SEWER RETICULATION
- PROPOSED WATER RETICULATION
- FULL VERGE WIDTH TURF
- INLET PROTECTION

FILE: N14066.14-104.dwg DATE: 25-05-2017 TIME: 10:44
Xref's: X-N14066.14-BASE X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A	CB	CB	21.10.16	
B	CB	CB	23.05.17	SUMMERTASTE PARADE AMENDED

AMENDMENTS

DESIGN CHECK
DRAWN CHECK

SCALE (METRES)
1:500 10 5 0 10 20 A1
1:1000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
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CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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Quality Endorsed Company ISO 9001 Lic-4084

DRAWING TITLE: CONCEPTUAL EROSION AND SEDIMENT CONTROL PLAN PHASE 2 - SHEET 1 OF 2

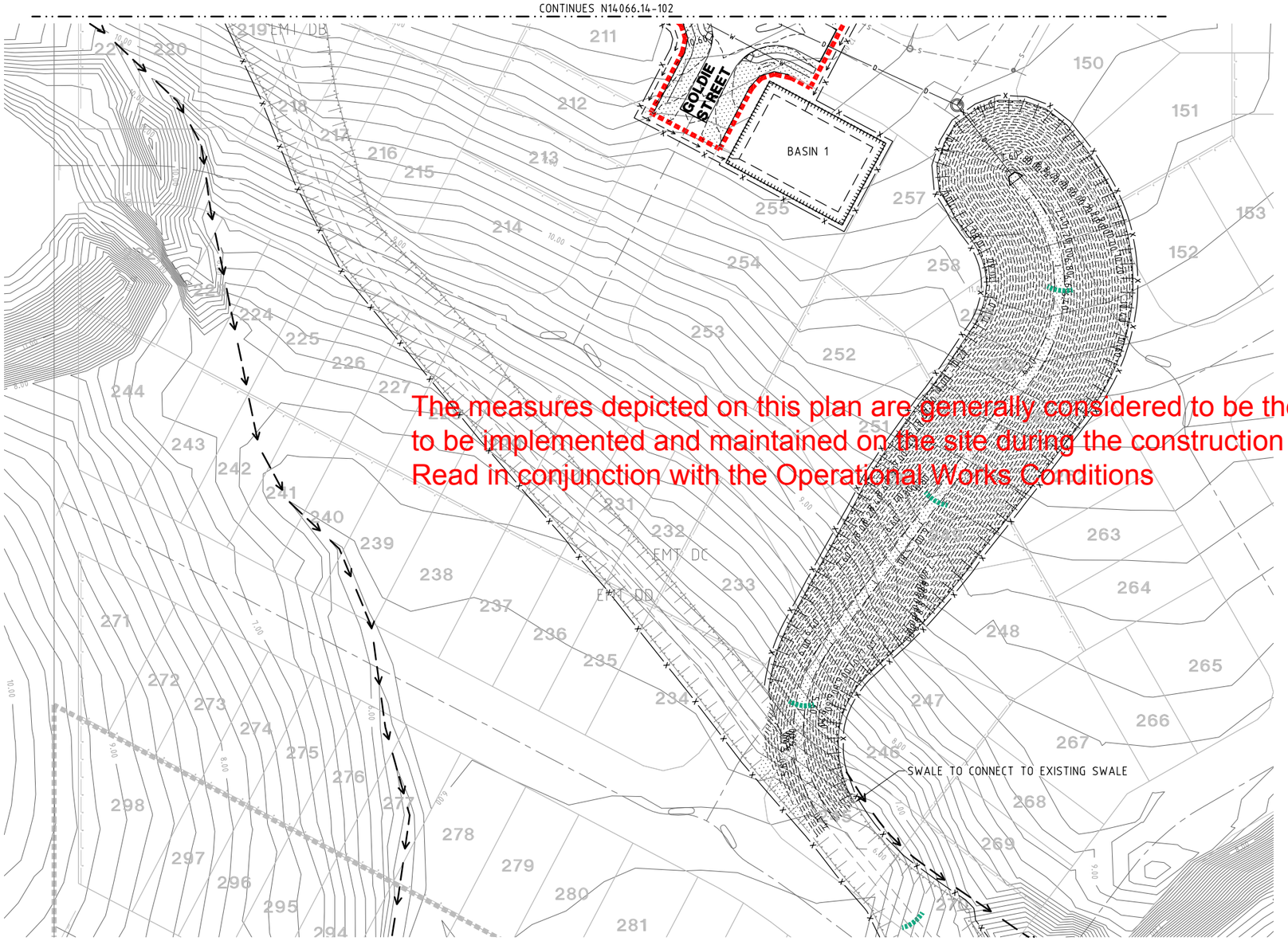
DRAWING NUMBER: N14066.14-104

ISSUE: A

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

THE EROSION & SEDIMENT CONTROL PLAN IS A CONCEPT PLAN DEMONSTRATING AN APPROACH TO EROSION & SEDIMENTATION CONTROL FOR THE SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE AN EROSION & SEDIMENT CONTROL DESIGN AND A COMPLETED DESIGN CERTIFICATE PRIOR TO COMMENCEMENT OF WORK. CERTIFICATION MUST BE UNDERTAKEN BY A SUITABLY QUALIFIED, EXPERIENCED PROFESSIONAL NOT DIRECTLY EMPLOYED BY THE PRINCIPAL.



The measures depicted on this plan are generally considered to be the MINIMUM to be implemented and maintained on the site during the construction phase. Read in conjunction with the Operational Works Conditions

SEDIMENT BASIN TABLE

BASIN	LENGTH (m)	WIDTH (m)	DEPTH (m)	BATTER SLOPE	MINIMUM VOLUME (m^3)
1	27.0	19.0	1	1 in 2	429.0

* DIMENSIONS ARE TO TOP OF BATTER.
* BASIN SIZING IS PRELIMINARY ONLY.

NOTES:
REFER N14066.14-106 FOR GENERAL NOTES
REFER N14066.14-107 FOR DETAILS

LEGEND

- STAGE BOUNDARY
- SEDIMENT FENCE (OR AS DIRECTED BY SITE SUPERINTENDENT)
- CLEAN WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- DIRTY WATER CUTOFF DRAIN (DIRECT FLOW TO SEDIMENT BASIN)
- STABILISED SURFACE (HYDROMULCH, MULCH OR SEED) TO ALLOTMENTS
- 2.75 NATURAL SURFACE CONTOURS
- 3.50 PROPOSED DESIGN SURFACE CONTOURS
- D PROPOSED STORMWATER DRAINAGE
- S PROPOSED SEWER RETICULATION
- W PROPOSED WATER RETICULATION
- FULL VERGE WIDTH TURF
- ROCK CHECK DAMS @ 50m CENTRES OR WHERE SHOWN

FILE: N14066.14-105.dwg DATE: 08-05-2017 TIME: 15:14
Xref's: X-N14066.14-BASE X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	B	CB	CB	21.10.16	
	E				
	D				
	C				
	B				
	E				

DESIGN CHECK
DRAWN CHECK
SCALE (METRES) 1:500 10 5 0 10 20 A1 | 1:1000 A3
COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL
SURVEYOR: LANDPARTNERS LIMITED
Level 3, KINGS ROW, 40 McDougall Street, MILTON Q 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001
SURVEY DATUM: PM120863 RL 13.031
APPROVED BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD
CLIENT: TRASPUNT PROJECTS PTY LTD
PROJECT No.: N14066.14
PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS
calibre CONSULTING
CONSULT AUSTRALIA
Calibre Consulting (QLD) Pty Ltd
Level 3, 16 Innovation Parkway, Birtinya QLD Australia 4575
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DRAWING TITLE: CONCEPTUAL EROSION AND SEDIMENT CONTROL PLAN PHASE 2 - SHEET 2 OF 2
DRAWING NUMBER: N14066.14-105
ISSUE: -

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

GENERAL NOTES

1. THIS DESIGN FOR EROSION AND SEDIMENT CONTROL IS CONCEPTUAL ONLY. THE CONTRACTOR SHALL MODIFY OR INSTALL ADDITIONAL/ ALTERNATIVE MEASURES DURING THE CONSTRUCTION AND MAINTENANCE PERIOD IN ORDER TO COMPLY WITH BEST PRACTICE STANDARDS IN ACCORDANCE WITH BUT NOT LIMITED TO CALIBRE CONSULTING'S SPECIFICATION 17 , THE MANUAL FOR EROSION AND SEDIMENT CONTROL (V1.2) AND ALL STATUTORY REQUIREMENTS .

2. PRESCRIBED WATER CONTAMINANTS (AS DEFINED IN THE ENVIRONMENTAL PROTECTION ACT 1994) MUST NOT BE RELEASED FROM THE SITE, OR BE LIKELY TO BE RELEASED SHOULD RAINFALL OCCUR, UNLESS ALL REASONABLE AND PRACTICABLE MEASURES ARE TAKEN TO PREVENT OR MINIMISE THE RELEASE AND CONCENTRATION OF CONTAMINATION. THESE MEASURES MUST INCLUDE AS A MINIMUM, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   - A. ENSURE NON ESSENTIAL EXPOSURE OF SOIL IS PREVENTED BY: RESTRICTING THE EXTENT OF CLEARING TO THAT NECESSARY FOR ACCESS TO, AND SAFE CONSTRUCTION OF, THE APPROVED WORKS; PROTECTING VEGETATION IN ALL OTHER AREAS OF THE SITE; AND BY MINIMISING THE DURATION OF SOIL EXPOSURE BY:
     - STAGING THE WORKS TO MINIMISE THE AREA OF SOIL EXPOSED AT ANY ONE TIME;
     - EFFECTIVELY STABILISING CLEARED AREAS PRIOR TO RAINFALL IF WORKS ARE DELAYED OR WORKS ARE NOT INTENDED TO OCCUR IMMEDIATELY. SEE E&SC ADVICE NOTE 1;
     - EFFECTIVELY STABILISING AREAS AT FINISHED LEVEL WITHOUT DELAY AND PRIOR TO RAINFALL; AND
     - EFFECTIVELY STABILISING STEEP AREAS, SUCH AS STOCKPILES, BATTERS AND EMBANKMENTS, WHICH ARE NOT BEING ACTIVELY WORKED AND PRIOR TO RAINFALL.
   - B. WHERE IT IS NOT FEASIBLE TO EFFECTIVELY STABILISE CLEARED AREAS OF EXPOSED SOIL, SUCH AS AREAS BEING ACTIVELY WORKED, IMPLEMENT A FULL SUITE OF EROSION AND SEDIMENT CONTROLS TO MAXIMISE SEDIMENT CAPTURE IN THOSE AREAS AND TO MINIMISE EROSION SUCH THAT EROSION BY ALL FORMS OTHER THAN SPLASH (RAINDROP IMPACT) EROSION AND SHEET EROSION DOES NOT OCCUR; AND
   - C. IN AREAS OF EXPOSED SOIL WHERE IT IS NOT FEASIBLE TO EITHER EFFECTIVELY STABILISE THE SURFACE OR IMPLEMENT A FULL SUITE OF EROSION AND SEDIMENT CONTROLS, FOR EXAMPLE IN THE AREAS BEING ACTIVELY WORKED AND WHERE THE IMPLEMENTATION OF SOME EROSION AND SEDIMENT CONTROLS WOULD IMPEDE CONSTRUCTION ACTIVITIES, ENSURE CONTINGENCY MEASURES ARE AVAILABLE ON SITE AND ARE IMPLEMENTED, PRIOR TO RAIN, TO MAXIMISE SEDIMENT CAPTURE AND TO MINIMISE EROSION SUCH THAT EROSION BY ALL FORMS OTHER THAN SPLASH (RAINDROP IMPACT) EROSION AND SHEET EROSION DOES NOT OCCUR
   - D. EFFECTIVELY STABILISE ALL STOCKPILES, BATTERS AND EMBANKMENTS WITHOUT DELAY. WHERE IT IS NOT FEASIBLE TO EFFECTIVELY STABILISE A STOCKPILE, BATTER OR EMBANKMENT, SUCH AS AREAS BEING ACTIVELY WORKED, ENSURE THAT SEDIMENT CONTROLS ARE INSTALLED AND SURFACE STORMWATER FLOWS ARE MANAGED SUCH THAT EROSION OF STOCKPILES, BATTERS OR EMBANKMENTS IS NOT CAUSED BY CONCENTRATED STORMWATER FLOWS.
   - E. ENSURE CLEAN STORMWATER IS DIVERTED OR MANAGED AROUND OR THROUGH THE SITE WITHOUT INCREASING THE CONCENTRATION OF TOTAL SUSPENDED SOLIDS OR OTHER CONTAMINANTS IN THE FLOW AND WITHOUT CAUSING EROSION (ON SITE OR OFF SITE). IF IT IS NOT FEASIBLE TO DIVERT ALL AREAS DISCHARGING CLEAN STORMWATER AROUND OR THROUGH THE SITE, MANAGE THE CLEAN STORMWATER RUNOFF AS FOR CONTAMINATED STORMWATER RUNOFF, AND ENSURE THAT SEDIMENT BASINS ARE SIZED TO ACCOMMODATE THE ADDITIONAL VOLUME OF RUNOFF (SEE E&SC ADVICE NOTE 2).
   - F. ENSURE SHEET FLOWS OF STORMWATER ARE MANAGED SUCH THAT SHEET AND RILL EROSION IS PREVENTED OR MINIMISED.
   - G. ENSURE THAT ALL CONCENTRATED STORMWATER FLOWS INCLUDING DRAINAGE LINES, DIVERSION DRAINS, CHANNELS AND BATTER CHUTES ARE MANAGED ONTO, THROUGH, AND AT RELEASE POINTS FROM THE SITE IN ALL RAIN EVENTS UP TO AND INCLUDING THE AVERAGE RECURRENCE INTERVAL (ARI) EVENT OF 1 IN 2 YEAR ARI WITHOUT CAUSING WATER CONTAMINATION, SHEET, RILL OR GULLY EROSION, SEDIMENTATION, OR DAMAGE TO STRUCTURES OR PROPERTY
   - H. ENSURE MEASURES HAVE BEEN IMPLEMENTED SUCH THAT THE RUNOFF FROM ALL DISTURBED AREAS FLOWS TO A SEDIMENT BASIN OR BASINS. WHERE IT IS NOT FEASIBLE TO DIVERT RUNOFF FROM DISTURBED AREAS OF THE SITE TO A SEDIMENT BASIN, IMPLEMENT COMPENSATORY EROSION AND DRAINAGE CONTROLS PRIOR TO RAINFALL TO ENSURE THAT EROSION OF THOSE AREAS DOES NOT OCCUR, INCLUDING EROSION CAUSED BY EITHER SPLASH (RAINDROP IMPACT), SHEET, RILL OR GULLY EROSION PROCESSES (SEE E&SC ADVICE NOTE 3).
   - I. ENSURE EACH SEDIMENT BASIN HAS THE CAPACITY TO TREAT FLOWS TO CURRENT BEST PRACTICE STANDARDS (SEE E&SC ADVICE NOTE 4) AND AS A MINIMUM TO CONTAIN ALL THE STORMWATER RUNOFF FROM THE 80TH PERCENTILE 5 DAY RAINFALL DEPTH AND STORE 2 MONTHS SEDIMENT FROM THE RECEIVING CATCHMENT, AS DETERMINED USING THE REVISED UNIVERSAL SOIL LOSS EQUATION.
   - J. ENSURE SEDIMENT BASINS ARE MAINTAINED WITH SUFFICIENT STORAGE CAPACITY TO CAPTURE AND TREAT THE RUNOFF FOR THE DESIGN RAINFALL DEPTH OR EVENT. WHERE SEDIMENT BASINS ARE PROPOSED TO BE OVERSIZED FOR STORAGE OF CAPTURED WATER FOR RE-USE, INSTALL SURVEY MARKERS IN EACH SUCH BASIN TO INDICATE THE LEVEL THAT WATER WITHIN THE BASIN MUST BE LOWERED TO, IN ORDER TO MEET THE STORAGE CAPACITY SPECIFIED IN THE ABOVE REQUIREMENT.
   - K. ENSURE SEDIMENT BASINS ARE DEWATERED AS SOON AS PRACTICABLE AFTER EACH RAINFALL EVENT.
   - L. ENSURE THAT DURING DEWATERING, THE CONCENTRATION OF TOTAL SUSPENDED SOLIDS (TSS) DISCHARGED DOES NOT EXCEED 50MG/L AND THAT PH IS WITHIN THE RANGE OF 6.5-8.5. THE CONCENTRATION OF TSS RELEASED BY DEWATERING MAY ONLY EXCEED 50MG/L WHERE IT CAN BE DEMONSTRATED AND SUPPORTED THROUGH DOCUMENTATION THAT:
     - FURTHER SIGNIFICANT RAINFALL IS FORECAST TO OCCUR BEFORE THE TSS CONCENTRATION IS LIKELY TO BE REDUCED TO 50MG/L ; AND
     - RELEASING A HIGHER CONCENTRATION OF TOTAL SUSPENDED SOLID WILL RESULT IN A BETTER ENVIRONMENTAL OUTCOME BY PROVIDING STORAGE FOR THE CAPTURE AND TREATMENT OF RUNOFF FROM THE IMMINENT RAINFALL AND RUNOFF; AND
     - FLOCCULENT HAS BEEN APPLIED AND THE CONCENTRATION OF TSS IN THE CAPTURED WATER HAS ALREADY SIGNIFICANTLY DECREASED.
   - M. ENSURE SEDIMENT BASINS AND ASSOCIATED STRUCTURES SUCH AS INLETS, OUTLETS AND SPILLWAYS ARE STRUCTURALLY SOUND FOR 10 YEAR ARI RAINFALL EVENT.
   - N. ENSURE ACCUMULATED SEDIMENT FROM BASINS AND OTHER CONTROLS IS REMOVED AND DISPOSED OF APPROPRIATELY WITHOUT CAUSING WATER CONTAMINATION.
   - O. ENSURE SEDIMENT DOES NOT LEAVE THE SITE ON THE TYRES OF VEHICLES.

3. THE ENVIRONMENTAL PROTECTION ACT 1994 STATES THAT A PERSON MUST NOT CARRY OUT ANY ACTIVITY THAT CAUSES, OR IS LIKELY TO CAUSE, ENVIRONMENTAL HARM UNLESS THAT PERSON TAKES ALL REASONABLE AND PRACTICAL MEASURES TO PREVENT OR MINIMISE THE HARM. ENVIRONMENTAL HARM INCLUDES ENVIRONMENTAL NUISANCE. IN REGARD PERSONS AND ENTITIES, INVOLVED IN THE CIVIL, EARTHWORKS AND CONSTRUCTION PHASES OF THIS DEVELOPMENT, ARE TO ADHERE TO THEIR 'GENERAL ENVIRONMENTAL DUTY' TO MINIMISE THE RISK OF CAUSING ENVIRONMENTAL HARM.

   ENVIRONMENTAL; HARM IS DEFINED BY THE ACT AS ANY ADVERSE AFFECT, OR POTENTIAL ADVERSE AFFECT WHETHER TEMPORARY OR PERMANENT AND OF WHATEVER MAGNITUDE, DURATION OR FREQUENCY ON AN ENVIRONMENTAL VALUE AND INCLUDES ENVIRONMENTAL NUISANCE. THEREFORE, NO PERSON SHOULD CAUSE ANY INTERFERENCE WITH THE ENVIRONMENT OR AMENITY OF THE AREA BY REASON OF THE EMISSION OF NOISE, VIBRATION, SMELL, FUMES, SMOKE, VAPOR, STEAM, SOOT, ASH, DUST, WASTE WATER, WASTE PRODUCTS, GRIT, SEDIMENT, OIL OR OTHERWISE, OR CAUSE HAZARDS LIKELY IN THE OPINION OF THE ADMINISTERING AUTHORITY TO CAUSE UNDUE DISTURBANCE OR ANNOYANCE TO PERSONS OR AFFECT PROPERTY NOT CONNECTED WITH THE USE.

4. THE CONTRACTOR IS TO TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION INCLUDING THE MAINTENANCE PERIOD.

5. WHERE IT IS REQUIRED TO SLASH EXISTING VEGETATION EITHER PRIOR TO THE COMMENCEMENT OF WORKS, DURING THE CONSTRUCTION WORKS AND / OR DURING THE MAINTENANCE PERIOD, SAID VEGETATION SHALL BE SLASHED TO A MINIMUM HEIGHT OF 75mm TO ASSIST WITH THE RETENTION OF SOILS ON SITE (I.E. ASSIST IN THE PREVENTION OF EROSION).

6. WHERE THE EXISTING VEGETATION WITHIN THE PROPOSED LOTS AND / OR PARKLAND IS DISTURBED AS A RESULT OF THE CONSTRUCTION WORKS, SAID EARTHWORKS ARE TO BE TOPSOILED AND EFFECTIVELY STABILISED WITHIN FIVE (5) DAYS, (EARLIER IF RAIN EXPECTED) OF FINAL ALLOTMENT EARTHWORKS. AN EFFECTIVELY STABILISED SURFACE IS DEFINED AS ONE THAT DOES NOT HAVE
   - VISIBLE EVIDENCE OF SOIL LOSS CAUSED BY SHEET, RILL OR GULLY EROSION OR
   - LEAD TO SEDIMENTATION, OR
   - LEAD TO WATER CONTAMINATION.

7. ALL CONSTRUCTION VEHICLES ARE TO ACCESS THE SITE VIA A SINGLE POINT OF ACCESS; THE POINT OF ACCESS, TOGETHER WITH THE MEASURES TO BE IMPLEMENTED, ARE TO BE AGREED WITH COUNCIL'S DESIGNATED REPRESENTATIVE ON SITE. THE PRINCIPLE AIM OF THE MEASURE(S) TO BE IMPLEMENTED IS / ARE TO LIMIT THE TRACKING OF DELETERIOUS MATERIALS ONTO THE SURROUNDING ROAD NETWORK.

8. THE CONTRACTOR SHALL PROVIDE GULLY INLET PROTECTION TO ALL GULLY INLET STRUCTURES LOCATED, DIRECTLY DOWNSTREAM OF THE PROPOSED DEVELOPMENT WORKS.

9. APPROPRIATE PROVISIONS ARE TO BE PROVIDED TO THE INTERFACE BETWEEN THE EXISTING ROADWAY PAVEMENTS AND THE NEW ROADWORK'S CONSTRUCTION. THE PROVISIONS SHALL ADDRESS WORKPLACE HEALTH AND SAFETY CONCERNS (I.E. RESTRICTING ACCESS BY THE GENERAL PUBLIC TO THE SITE).

10. THE LOCATION OF THE CONSTRUCTION VEHICLE COMPOUND, SITE OFFICE AND THE VEHICLE SERVICING AREA SHALL BE AGREED WITH COUNCIL'S DESIGNATED REPRESENTATIVE ON SITE, PRIOR TO THE COMMENCEMENT OF WORKS.

11. CLEARED VEGETATION IS TO NOT BE BURNED ON SITE, ALL VEGETATIVE WASTE(S) SHALL BE MULCHED AND THEREAFTER RETAINED ON SITE FOR USE AS PART OF THE EROSION AND SEDIMENTATION CONTROL STRATEGY OR THE LANDSCAPING / REVEGETATION WORKS. ALL STUMPS AND / OR OTHER ORGANIC MATTER NOT SUITABLE FOR MULCHING SHALL BE DISPOSED OF AT AN APPROVED WASTE DISPOSAL FACILITY.

12. SEDIMENT FENCE AND TURFING RUNNING DOWNSLOPES SHALL HAVE REGULAR FLOW DISSIPATERS AT 45° TO SLOPE AS DIRECTED CONSISTING OF SAND BAGS OR SIMILAR AS REQUIRED.

13. DURING THE CONSTRUCTION PROCESS INCLUDING THAT PERIOD DURING WHICH THE WORKS ARE "ON MAINTENANCE' SHOULD COUNCIL'S DESIGNATED REPRESENTATIVE REQUEST ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES BE IMPLEMENTED, SAID MEASURES SHALL BE IMPLEMENTED AT THE EARLIEST TIME POSSIBLE. NOTWITHSTANDING THE ABOVE REQUIREMENT ANY MEASURES REQUESTED TO BE IMPLEMENTED BY COUNCIL'S DESIGNATED REPRESENTATIVE SHALL BE IMPLEMENTED WITHIN 24 HOURS OF THE TIME OF THE REQUEST.

14. ALL ROOFWATER / SEWER RETICULATION TRENCHES EITHER ADJACENT TO EXISTING DEVELOPMENT OR PERPENDICULAR TO THE CROSSFALL OF THE LAND ARE TO BE TOPSOILED (75mm MINIMUM) AND TURFED. FOR A MINIMUM 900mm WIDTH.

15. THE CONTRACTOR SHALL CONSTRUCT LINED CUTOFF DRAINS IN WORK AREAS SO AS TO LIMIT SLOPE LENGTHS TO A MAXIMUM OF 80M.

16. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO RELEASE OR FLOW IS PERMITTED FROM THE SITE, THROUGHOUT THE EARTHWORKS AND CONSTRUCTION PERIOD TO ANY WATER WAYS OR STORMWATER DRAINLINES LEADING TO A WATERWAY OR AREA OF NATIVE VEGETATION UNLESS THE LEVELS OF TOTAL SUSPENDED SOLIDS DOES NOT EXCEED A CONCENTRATION OF 50 MGL.

17. ALL SEDIMENT CONTROL DEVICES SHALL BE MONITORED, CLEANED AND/OR REPAIRED WHENEVER THE ACCUMULATED SEDIMENT REDUCES THE CAPACITY BY 50%.

18. ALL PERIMETER BANK/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.

19. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT OR STABILISE ANY DOWNSTREAM CONSTRUCTION AND GULLY INLETS.

20. CLEARING OF SITE AND STOCK PILE AREAS TO BE AS DIRECTED BY THE SUPERINTENDENT.

21. WHERE PRACTICAL THE CONTRACTOR SHALL DIVERT CLEAN WATER ENTERING THE SITE FROM EXTERNAL CATCHMENT(S) AND DIRECTED TO THE STORMWATER SYSTEM. THIS DISCHARGE POINT SHOULD BE ROCK LINED. REGULAR ROCK CHECK DAMS SHOULD BE POSITIONED ALONG THE VEGETATED DRAINAGE LINE LEADING TO THIS DISCHARGE POINT.

22. REGULAR INSPECTIONS AND MAINTENANCE OF VEHICLE WASHDOWN AREA, SITE AND STORAGE COMPOUND TO BE CARRIED OUT BY CONTRACTOR.

23. AREAS USED FOR STORAGE OF CHEMICALS USED FOR CONSTRUCTION PURPOSES SHALL HAVE STORMWATER CONTROL DEVICES ERECTED ADJACENT TO THEM (I.E. EARTH BUND AND SEDIMENT FENCES). UPON COMPLETION OF ROADWORKS WASTE PRODUCTS ARE TO BE DISPOSED OF AS PER LOCAL AUTHORITY GUIDELINES AND TEMPORARY DEVICES ARE TO BE REMOVED AND AREA REHABILITATED.

THE EROSION & SEDIMENT CONTROL PLAN IS A CONCEPT PLAN DEMONSTRATING AN APPROACH TO EROSION & SEDIMENTATION CONTROL FOR THE SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE AN EROSION & SEDIMENT CONTROL DESIGN AND A COMPLETED DESIGN CERTIFICATE PRIOR TO COMMENCEMENT OF WORK. CERTIFICATION MUST BE UNDERTAKEN BY A SUITABLY QUALIFIED, EXPERIENCED PROFESSIONAL NOT DIRECTLY EMPLOYED BY THE PRINCIPAL.

FILE: N14066.14-106.dwg DATE: 03-05-2017 TIME: 17:02
Xref's: X-TIT USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	CB	CB	21.10.16	
A				
B				
C				
D				
E				
F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 3, KINGS ROW, 40 McDougall Street, MILTON Q 4064
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No. N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA

Calibre Consulting (QLD) Pty Ltd
Level 3, 16 Innovation Parkway, Birtinya QLD Australia 4575
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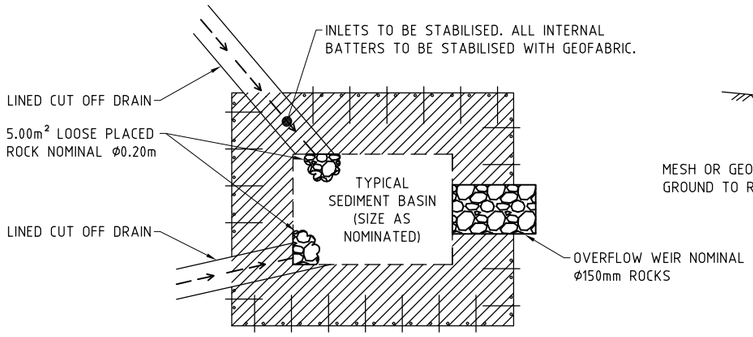
Quality System
Quality Endorsed Company ISO 9001 Lic 4084

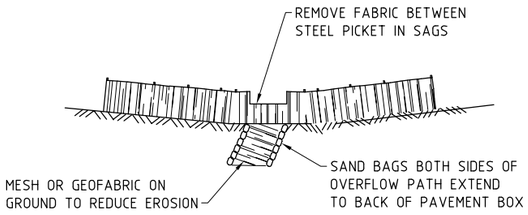
DRAWING TITLE: CONCEPTUAL EROSION AND SEDIMENT CONTROL PLAN NOTES

DRAWING NUMBER: N14066.14-106

ISSUE: -

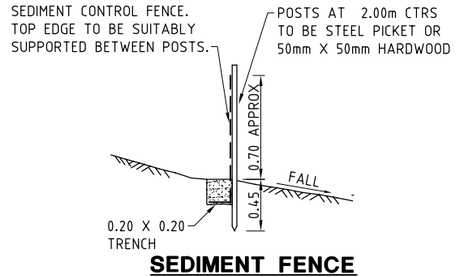


TYPICAL SEDIMENT BASIN

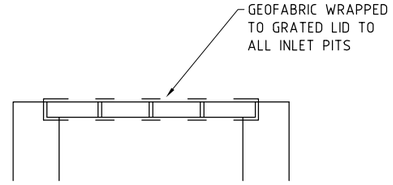


SPILL THROUGH WEIR DETAIL

INSTALL AT ALL SAG POINTS IN SILT FENCES



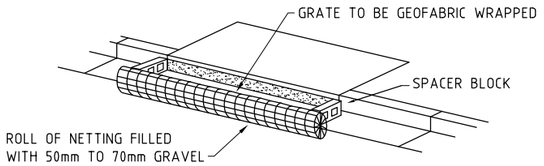
SEDIMENT FENCE DETAIL



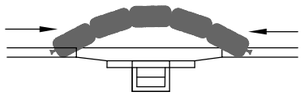
INLET GULLY DETAILS

N.T.S.

THE EROSION & SEDIMENT CONTROL PLAN IS A CONCEPT PLAN DEMONSTRATING AN APPROACH TO EROSION & SEDIMENTATION CONTROL FOR THE SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE AN EROSION & SEDIMENT CONTROL DESIGN AND A COMPLETED DESIGN CERTIFICATE PRIOR TO COMMENCEMENT OF WORK. CERTIFICATION MUST BE UNDERTAKEN BY A SUITABLY QUALIFIED, EXPERIENCED PROFESSIONAL NOT DIRECTLY EMPLOYED BY THE PRINCIPAL.

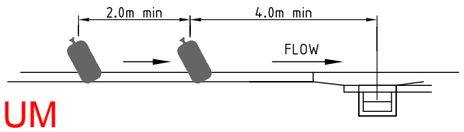


KERB INLET PROTECTOR



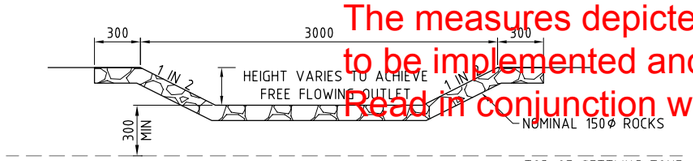
SANDBAGS AT SAG GULLIES

TO BE PROVIDED AT ALL SAG GULLIES

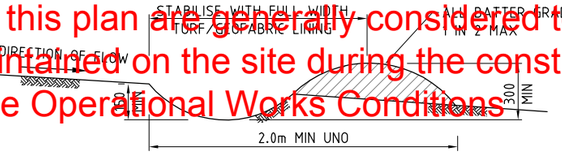


SANDBAGS AT GULLIES ON GRADE

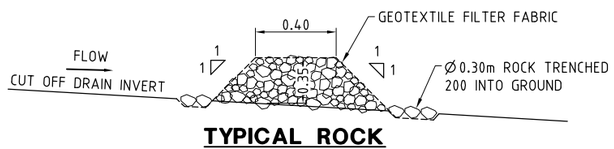
TO BE PROVIDED AT ALL ON-GRADE GULLIES



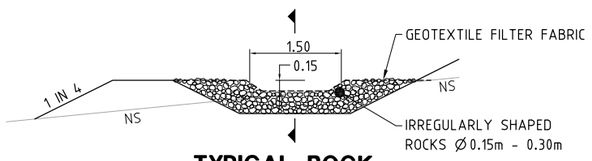
OVERFLOW WEIR DETAIL



CLEAN WATER CUTOFF DRAIN DETAIL

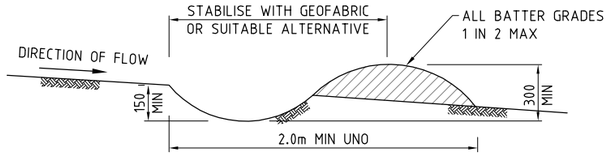


TYPICAL ROCK CHECK DAM SECTION



TYPICAL ROCK CHECK DAM DETAIL

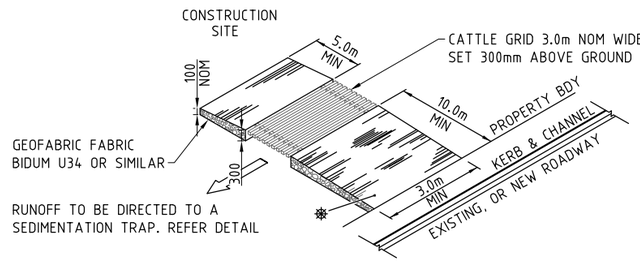
ROCK CHECK DAMS TO BE EVERY 50.00m



DIRTY WATER CUTOFF DRAIN DETAIL

CUTOFF DRAINS - MAINTENANCE PROGRAM
1. INSPECTIONS TO BE CARRIED OUT AFTER EACH RUNOFF EVENT.
2. SEDIMENT BUILD UP TO BE REMOVED DURING CONSTRUCTION AS REQUIRED BY THE SUPERINTENDENT.

NOTE: DRAIN TO BE CIRCULAR PARABOLIC OR TRAPEZOIDAL, V SHAPED IS NOT ACCEPTABLE. GRADIANT BETWEEN 1.0% TO 5.0%



NOTE:-
THE TOP ELEVATION OF THE AGGREGATE AND THE MESH FILTER SHALL BE AT LEAST 150mm BELOW THE SURROUNDING GROUND LEVEL INCLUDING ANY NECESSARY PERIMETER BERMS.

UNBOUND PAVEMENT MATERIAL (GRAVEL) TO GRADING 'B', TABLE 9 OF QT SPECIFICATION MRS11.05, EXCLUDE MATERIAL FINER THAN A.S. SIEVE 2.36mm

TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP

NTS

FILE: N14066.14-107.dwg DATE: 03-05-2017 TIME: 17:02
Xref's: X-TIT USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS	DESIGN CHECK
A	A	CB	CB	21.10.16		
B	B					DRAWN CHECK
C	C					
D	D					
E	E					
F	F					

SCALE (METRES)

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 3, KINGS ROW, 40 McDougall Street, MILTON Q 4064
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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Level 3, 15 Innovation Parkway, Birtinya QLD Australia 4575
Telephone 07 5314 2520 Facsimile 07 5314 2522

Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: CONCEPTUAL EROSION AND SEDIMENT CONTROL PLAN DETAILS

DRAWING NUMBER: N14066.14-107

ISSUE: -

EARTHWORKS NOTES

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING SERVICES WITH THE RELEVANT AUTHORITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. THE CONTRACTOR SHALL REMOVE ALL STRUCTURES, DEBRIS AND FENCES FROM THE SITE TO THE SATISFACTION OF THE SUPERINTENDENT.
3. EXISTING SURFACE IS TO BE CLEAR OF VEGETATION MATTER PRIOR TO THE START OF FILLING.
4. FILL IS TO BE OF GOOD QUALITY AND FREE OF UNSUITABLE MATERIAL.
5. NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION. SIMILARLY, THE FINISHED SURFACE LEVELS MAY BE ADJUSTED BY THE WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION AFTER AMENDED DRAWINGS HAVE BEEN APPROVED BY COUNCIL.
6. ALL EXCAVATION AND FILLING SHALL BE CONSTRUCTED TO THE REQUIREMENTS OF AS3798-2007 AND IN ACCORDANCE WITH THE CURRENT COUNCIL SPECIFICATIONS AND STANDARD DRAWINGS.
7. LEVEL 1 CERTIFICATION IS REQUIRED ON ALL LOTS IN ACCORDANCE WITH AS3798-2007.
8. ALL DRAINAGE STRUCTURES ARE BE PRESERVED FROM THE EFFECTS OF STRUCTURAL LOADING GENERATED BY THE EARTHWORKS.
9. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

ANY AREA DISTURBED OUTSIDE OF THE WORKS AREA SHOWN SHALL BE REHABILITATED TO A MINIMUM OF THE PRE-CONSTRUCTION CONDITIONS, AT THE CONTRACTORS EXPENSE.

NOTES:
REFER N14066.14-400 FOR RETAINING WALL SETOUT
REFER N14066.14-401 FOR RETAINING WALL DETAILS

LEGEND

- CONCRETE SLEEPER RETAINING WALL
- 2.75 NATURAL SURFACE CONTOURS
- 3.50 PROPOSED DESIGN SURFACE CONTOURS
- AREA OF FILL
- AREA OF CUT
- × 2.16 DESIGN FINISHED SURFACE LEVEL
- 6.84 6.66 / 6.86 6.68 DESIGN PAD LEVELS
- STAGE BOUNDARY

FILE: N14066.14-108.dwg DATE: 25-05-2017 TIME: 10:50
Xref's: X-N14066.14-BASE X-N14066-FRESHWATER-ASCON X-N14066-SURVEY X-CUT&FILL HATCH X-N14066.14-TIT X-CONTS-EXIST USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS	DESIGN CHECK
	A	CB	CB	21.10.16		
	B	CB	CB	23.05.17	SUMMERTASTE PARADE AMENDED	
	C					DRAWN CHECK
	D					
	E					
	F					

SCALE (METRES)
1:500 10 5 0 10 20 A1
1:1000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL
SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD
PROJECT No.: N14066.14
PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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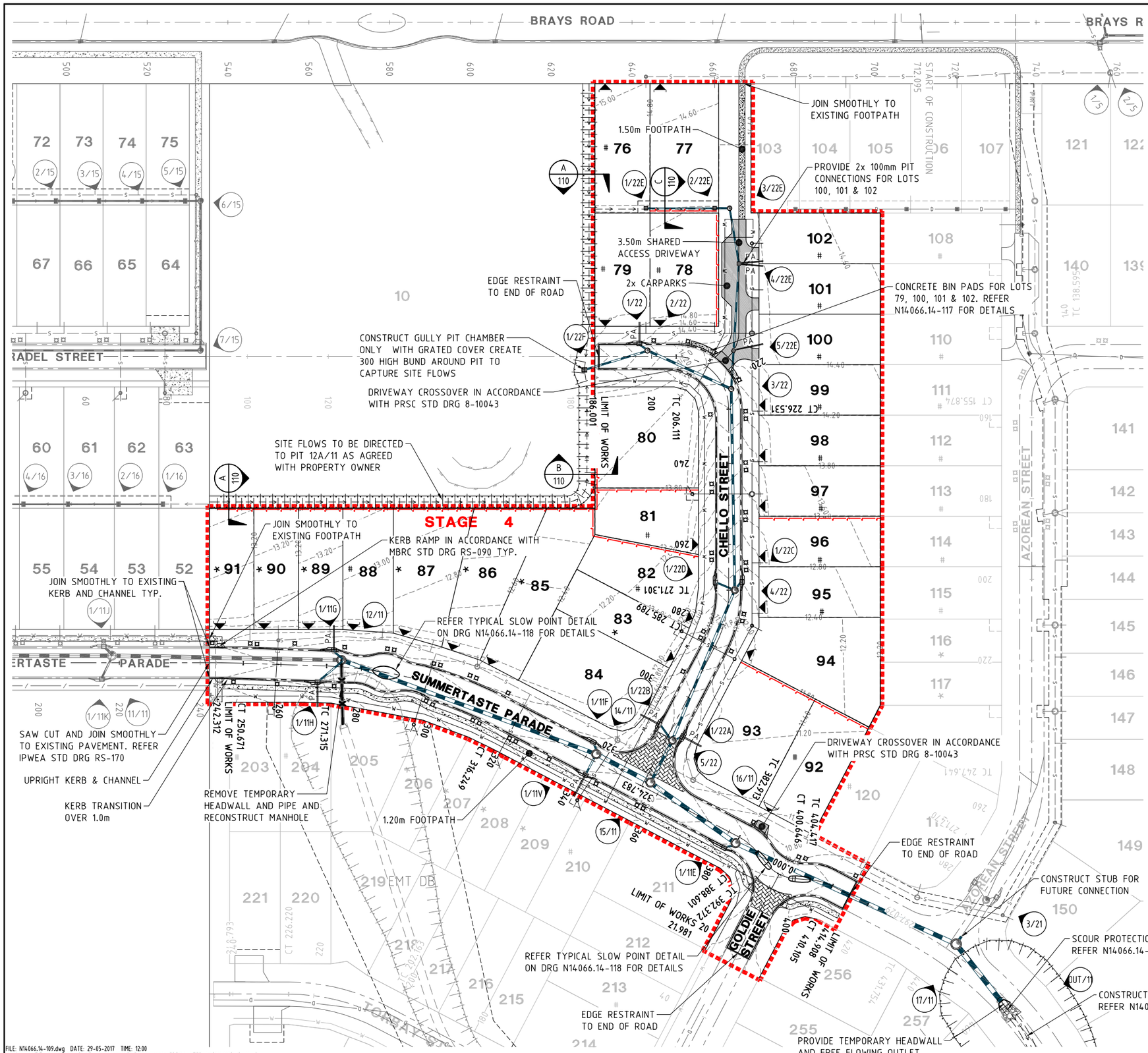
Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: BULK EARTHWORKS LAYOUT PLAN
DRAWING NUMBER: N14066.14-108
ISSUE: A



IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT THEIR OWN INVESTIGATIONS AND VERIFY THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO START OF CONSTRUCTION.

ALL SERVICES SHOWN OUTSIDE OF THIS STAGE ARE INDICATIVE. CONTRACTOR TO CONFIRM LOCATIONS PRIOR TO CONSTRUCTION.

NOTES:
REFER N14066.14-110 FOR NOTES
REFER N14066.14-400 FOR RETAINING WALL SETOUT
REFER N14066.14-401 FOR RETAINING WALL DETAILS

LEGEND

- EXISTING STORMWATER DRAINAGE
- PROPOSED STORMWATER DRAINAGE
- PROPOSED LAYBACK KERB AND CHANNEL, REFER PRSC STD DRG 8-10044
- PROPOSED UPRIGHT KERB AND CHANNEL, REFER PRSC STD DRG 8-10044
- PROPOSED SEMI-MOUNTABLE KERB ONLY. REFER PRSC STD DRG 8-10044
- PROPOSED EDGE-RESTRAINT KERB ONLY. REFER PRSC STD DRG 8-10044
- ROAD CENTRELINE
- DESIGN CONTOURS
- CONCRETE FOOTPATH
- CONCRETE DRIVEWAY
- KERB ADAPTOR (1x 100mm)
- PIT ADAPTOR (2x 100mm)
- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN
- */# MANDATORY/OPTIONAL ZERO LOT LINE
- STAGE BOUNDARY
- STREET PRINT
- PROPOSED DRAINAGE STRUCTURE NUMBER
- EXISTING DRAINAGE STRUCTURE NUMBER
- INDICATIVE DRIVEWAY LOCATION
- PROPOSED DRIVEWAY CROSSOVER LOCATION (BY CONTRACTOR)
- SLEEPER WALL
- HARDWOOD TIMBER BOLLARDS

FILE: N14066.14-109.dwg DATE: 29-05-2017 TIME: 12:00
Xref's: X-TIT X-N14066.14-BASE X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A	CB	CB	21.10.16	
B	CB	CB	23.05.17	SUMMERTASTE PARADE LAYOUT AMENDED
C				
D				
E				
F				

DESIGN CHECK
DRAWN CHECK
SCALE (METRES) 1:500 10 5 0 10 20 A1 1:1000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL
SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD
PROJECT No.: N14066.14
PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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Quality Endorsed Company ISO 9001 Lic 4084

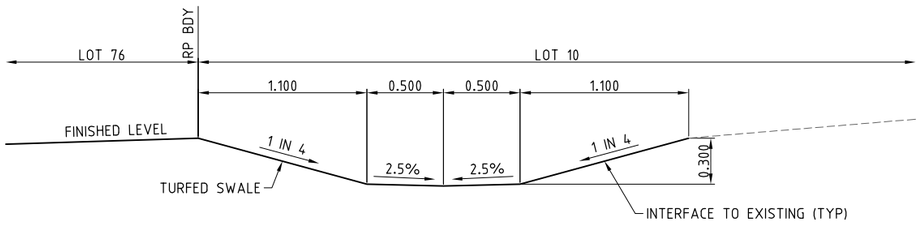
DRAWING TITLE: ROADWORKS AND DRAINAGE DETAIL PLAN
DRAWING NUMBER: N14066.14-109
ISSUE: A

Moreton Bay Regional Council

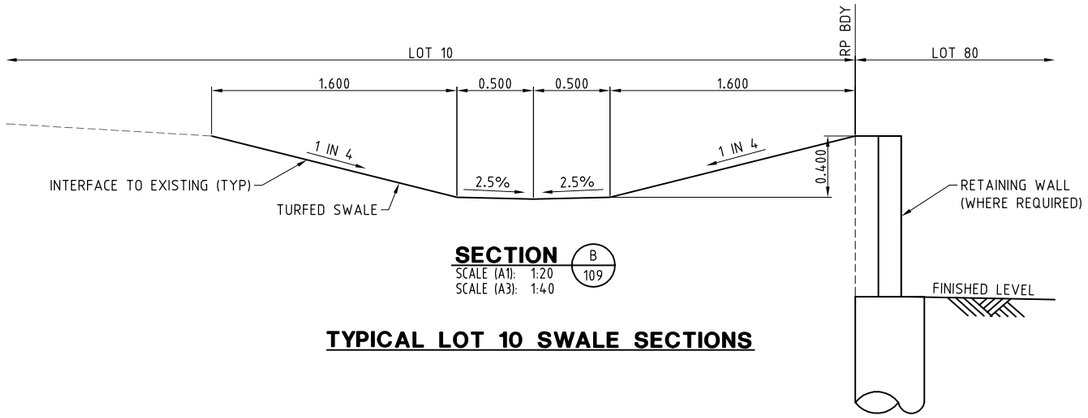
Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

ROADWORKS & DRAINAGE NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO LIAISE WITH ALL THE RELEVANT SERVICE AUTHORITIES TO ASCERTAIN SERVICES PRESENT ON-SITE. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT BY THAT SERVICE AUTHORITY ONLY.
3. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF DEMOLISHING ANY EXISTING STRUCTURES WITHIN THE SITE AREAS.
4. NOT WITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE CROSS SECTIONS, THE ACTUAL LIMITS SHALL BE DETERMINED ON-SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION AFTER AMENDED DRAWINGS HAVE BEEN APPROVED BY COUNCIL.
5. ALL ALLOTMENT FILL IS TO BE COMPACTED TO THE REQUIREMENTS OF AS3798-2007 AND IN ACCORDANCE WITH CURRENT MBRC SPECIFICATIONS.
6. VERGE AND BATTERS TO HAVE A MINIMUM OF 75mm TOPSOIL AND FULL WIDTH TURF IF ORDERED.
7. MATCH TO EXISTING AC PAVEMENT EXTENSION OR WIDENING TO BE IN ACCORDANCE WITH IPWEA STD DRG SEQ R-170.
8. SUBGRADE TEST RESULTS TO BE FORWARDED TO SUPERINTENDENT FOR DETERMINATION OF BOX DEPTHS PRIOR TO EXCAVATION TESTS SHALL INCLUDE SOAKED CBR AND/OR OTHER TESTS AS REQUESTED BY THE SUPERINTENDENT.THE CONTRACTOR SHALL ALLOW ADEQUATE TIME FOR COUNCIL APPROVAL OF PAVEMENT DESIGN.
9. LEVELS FOR KERB AND CHANNELLING/EDGE OF PAVEMENT CONSTRUCTION ARE AT EQUAL INTERVALS AT LIP OF CHANNEL UNLESS SHOWN OTHERWISE.
10. SIDE DRAINS TO BE CONSTRUCTED UNDER ALL KERBS AND ALL KERB AND CHANNEL AS PER MBRC STANDARDS. REFER STANDARD DRAWING IPWEA RS-140 FOR DETAILS.
11. ALL STORMWATER PIPES UNDER ROADWAYS AND FOOTPATHS SHALL BE CLASS '2' R.C.P R.R.J. UNLESS NOTED OTHERWISE.
12. THE STORMWATER PIPE CLASSES HAVE BEEN DESIGNED FOR SERVICE LOADS ONLY, AND THE CONTRACTOR SHALL ASSESS ANTICIPATED CONSTRUCTION LOADS AND UPGRADE THE PIPE CLASSES, IF NECESSARY, IN ACCORDANCE WITH A.S 3725-1989. AT THE CONTRACTORS COST.
13. ALL LOTS NOT DRAINING TO A PROPERTY PIT TO HAVE 2 KERB ADAPTORS . KERB ADAPTORS SHOWN ARE INDICATIVE ONLY AND ARE TO BE INSTALLED IN ACCORDANCE WITH IPWEA STD DRG RS-081.
14. CONCRETE FOOTPATHS TO BE INSTALLED BY THE CIVIL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO IPWEA STD DRG RS-065 FOR CONSTRUCTION DETAILS.
15. KERB ADAPTORS FOR LOT; 79, 84, 89, 93, 100, 101, 102, 204 & 209 TO BE CONNECTED TO ADJACENT STORMWATER PIT.
16. CONSTRUCT CONCRETE DRIVEWAYS IN ACCORDANCE WITH IPWEA STD DRG RS-050.

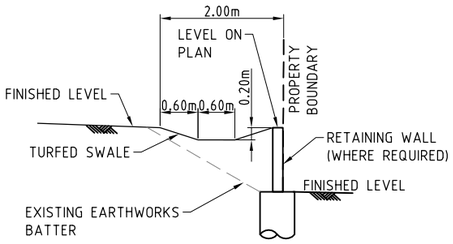


SECTION A 109
SCALE (A1): 1:20
SCALE (A3): 1:40



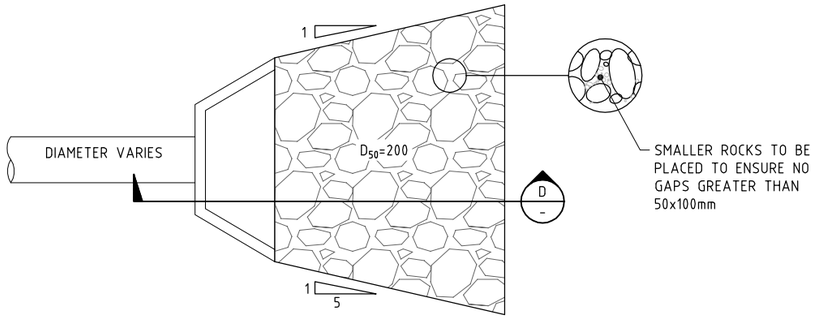
SECTION B 109
SCALE (A1): 1:20
SCALE (A3): 1:40

TYPICAL LOT 10 SWALE SECTIONS



SECTION C 109
SCALE (A1): 1:50
SCALE (A3): 1:100

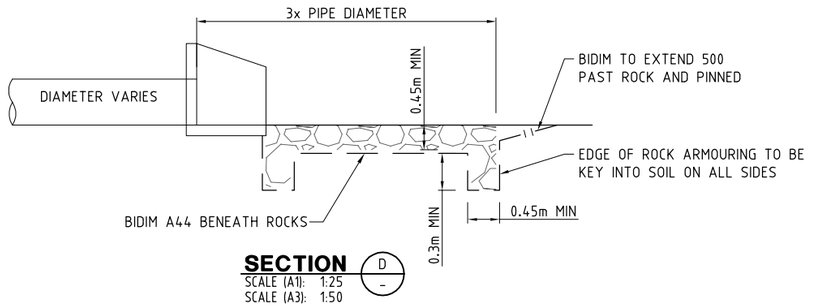
TYPICAL REAR INTER-ALLOTMENT DRAINAGE SWALE



TYPICAL SCOUR PROTECTION DETAIL PLAN

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

	d50					ROCK DISTRIBUTION BY (%)
	200mm	300mm	400mm	500mm	600mm	
ROCK SIZE (mm)	400	600	750	850	900	15-25
	300	400	525	600	750	20
	200	300	400	500	600	50
	75	100	150	150	200	15-25



SECTION D -
SCALE (A1): 1:25
SCALE (A3): 1:50

SCOUR PROTECTION NOTES:

1. IF ROCK SIZE IS SPECIFIED ON THE PLAN AS D_{50} THIS CORRESPONDS TO A ROCK SIZE WITH A MEDIAN ROCK DIAMETER OF D_{50}. A VARIANCE OF ±30% IS ACCEPTABLE. Eg. IF D_{50} = 600 IS SPECIFIED THEN THE EQUIVALENT ROCK DIAMETER RANGES FROM 420mm TO 780mm.
2. NEITHER BREADTH NOR THICKNESS OF A SINGLE ROCK SHALL BE LESS THAN ONE HALF ITS LENGTH (ie THE ROCK SHALL BE CHUNKY RATHER THAN FLAT).
3. ROCK TYPE - BASALT OR OTHER APPROVED MATERIAL. TO BE CONFIRMED WITH SUPERINTENDENT BEFORE COMMENCING ROCK WORK.
4. ROCKS GREATER THAN D_{50}=450 TO BE PLACED AND INTERLOCKED INTO POSITION AND BUILT UP TO FINAL LEVELS SHOWN, ENSURING COVERAGE OF GEOFABRIC. GAPS BETWEEN THE BOULDERS ARE TO BE FILLED BY DROPPING STONES INTO GAPS AND LOCKING INTO POSITION WITH A CROWBAR.
5. ROCKS LESS THAN & EQUAL TO D_{50}=450 TO BE DUMPED & MOVED INTO POSITION. BUILD UP TO FINAL LEVELS & ENSURING COVERAGE OF GEOFABRIC.

FILE: N14066.14-110.dwg DATE: 08-05-2017 TIME: 16:13
Xref's: X-TIT USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS	DESIGN CHECK
	A	CB	CB	21.10.16		
	B					
	C					DRAWN CHECK
	D					
	E					
	F					

SCALE (METRES)
1:20 0.2 0 0.2 0.4 0.6 0.8 1 A1
1:40 A3
1:25 0.25 0 0.25 0.5 0.75 1.0 1.25 A1
1:50 A3
1:50 1 0.5 0 1 2 A1
1:100 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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DRAWING TITLE: ROADWORKS AND DRAINAGE NOTES & DETAILS

DRAWING NUMBER: N14066.14-110

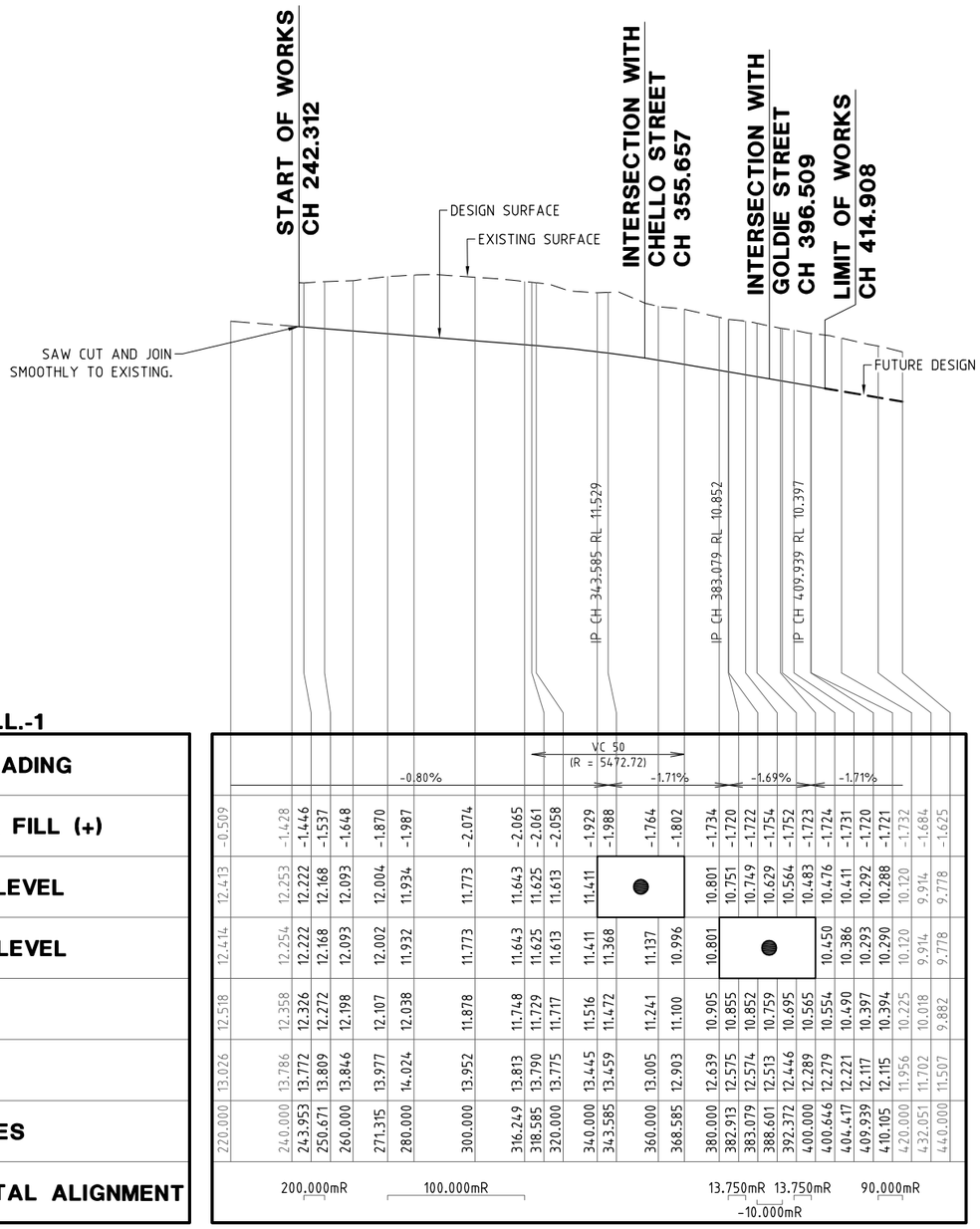
ISSUE: -

PRELIMINARY PAVEMENT DESIGNS

ROAD	TRAFFIC ESA's	PRIMER (mm)	SURFACING (mm)	BASE (mm) (CBR 80) (TYPE 2.1)	SUB BASE (mm) (CBR 45) (TYPE 2.3)	LOWER SUB BASE (mm) (CBR 15) (if required)	TOTAL BOX (mm)	STREET CLASSIFICATION
SUMMERTASTE PARADE	9.2×10^4	10	25	100	100	0	225	ACCESS STREET
CHELLO STREET	9.2×10^4	10	25	100	100	0	225	ACCESS STREET
GOLDIE STREET	9.2×10^4	10	25	100	100	0	225	ACCESS STREET

NOTE:

1. PRELIMINARY PAVEMENT DESIGNS HAVE BEEN BASED ON AN ASSUMED SUBGRADE CBR. ACTUAL PAVEMENT DESIGNS WILL BE BASED ON TEST RESULTS TAKEN AFTER STRIPPING HAS BEEN COMPLETED.
2. WHEN THE TOTAL PAVEMENT DEPTH (AS DETERMINED BY SUBGRADE TESTS) EXCEEDS THE NORMAL DEPTH, THE PAVEMENT GRAVEL SHALL EXTEND UNDER THE KERB AND CHANNEL TO 150mm BEHIND (TYP).
3. BOXING DEPTH SHOWN ON CROSS SECTIONS IS INDICATIVE ONLY. REFER TO PAVEMENT DESIGN TABLE FOR ALL CONSTRUCTION DEPTHS.



CHAINAGES	EXISTING SURFACE	LHS LIP LEVEL	RHS LIP LEVEL	DESIGN	CUT (-) \ FILL (+)
220.000	13.026	12.414	12.414	12.518	-0.509
240.000	13.786	12.253	12.254	12.358	-1.428
243.953	13.772	12.222	12.222	12.326	-1.446
250.671	13.809	12.168	12.168	12.272	-1.537
260.000	13.846	12.093	12.093	12.198	-1.648
271.315	13.977	12.004	12.002	12.107	-1.870
280.000	14.024	11.934	11.932	12.038	-1.987
300.000	13.952	11.773	11.773	11.878	-2.074
316.249	13.813	11.643	11.643	11.748	-2.065
318.585	13.790	11.625	11.625	11.729	-2.061
320.000	13.775	11.613	11.613	11.717	-2.058
340.000	13.445	11.411	11.411	11.516	-1.929
343.585	13.459	●	11.368	11.472	-1.988
360.000	13.005	●	11.137	11.241	-1.764
368.585	12.903	●	10.996	11.100	-1.802
380.000	12.639	10.801	10.801	10.905	-1.734
382.913	12.575	10.751	●	10.855	-1.720
383.079	12.574	10.749	●	10.852	-1.722
388.601	12.513	10.629	●	10.759	-1.754
392.372	12.446	10.564	●	10.695	-1.752
400.000	12.289	10.483	●	10.565	-1.723
400.646	12.279	10.476	10.450	10.554	-1.724
404.417	12.221	10.411	10.386	10.490	-1.731
409.939	12.117	10.292	10.293	10.397	-1.720
410.105	12.115	10.288	10.290	10.394	-1.721
420.000	11.956	10.120	10.120	10.225	-1.732
432.051	11.702	9.914	9.914	10.018	-1.684
440.000	11.507	9.778	9.778	9.882	-1.625

FILE: N14066.14-111.dwg DATE: 25-05-2017 TIME: 10:56
Xref's: X-TIT X-ROADS USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A	A	CB	CB	21.10.16	
B	A	CB	CB	23.05.17	SECTION AMENDED
C					
D					
E					
F					

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1 : 1000 10 5 0 10 20 30 40 50 A1
1 : 2000 HORIZONTAL A3
1 : 100 1 0 1 2 3 4 5 A1
1 : 200 VERTICAL A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
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PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: SUMMERTASTE PARADE LONGITUDINAL SECTION

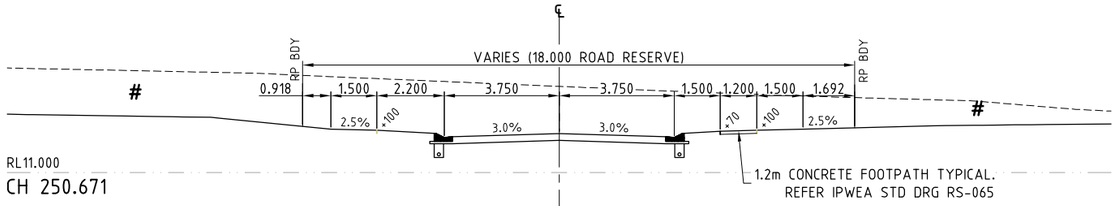
DRAWING NUMBER: N14066.14-111

ISSUE: A

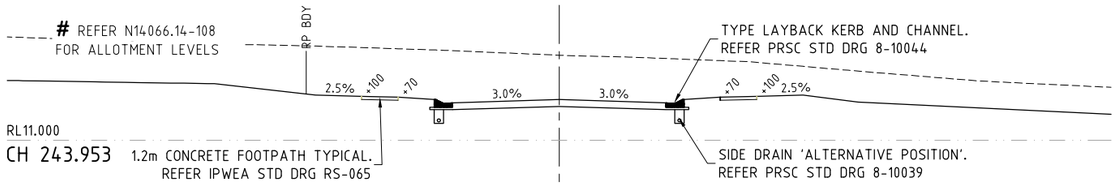
Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

NOTE: REFER DRG N14066.14-111 FOR PAVEMENT SPECIFICATIONS

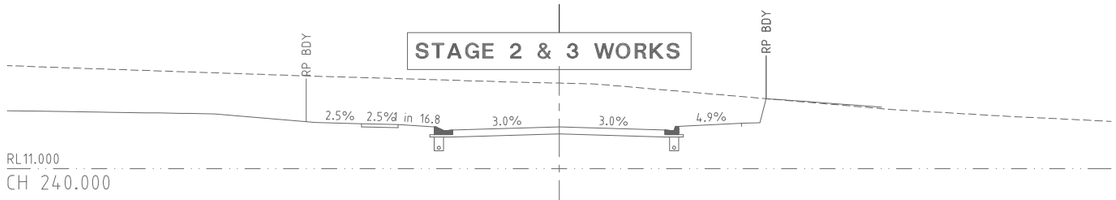


RL11.000
CH 250.671

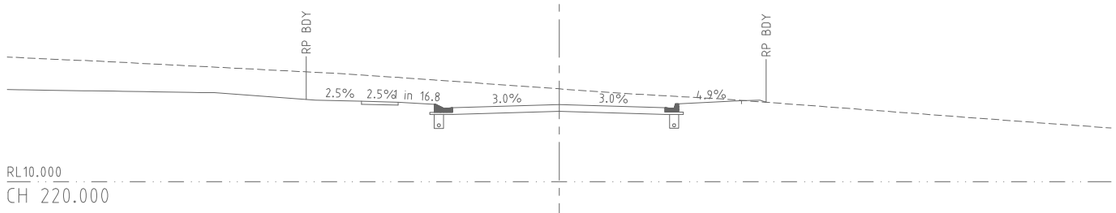


RL11.000
CH 243.953 1.2m CONCRETE FOOTPATH TYPICAL.
REFER IPWEA STD DRG RS-065

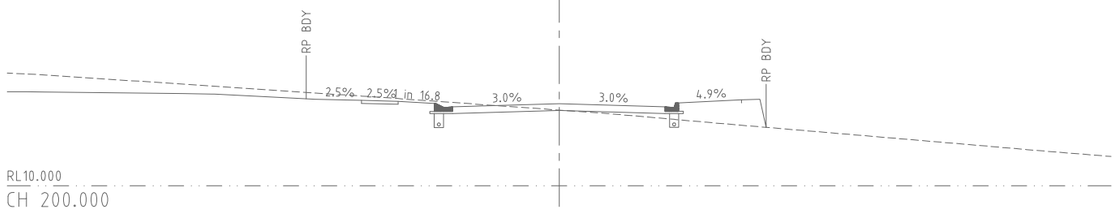
STAGE 2 & 3 WORKS



RL11.000
CH 240.000



RL10.000
CH 220.000



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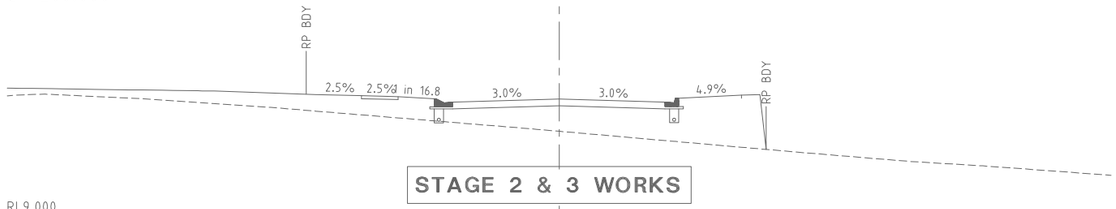
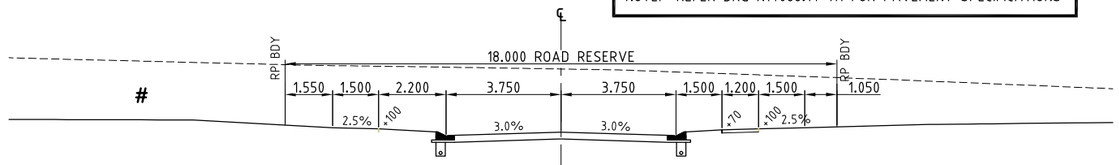
CH 200.000

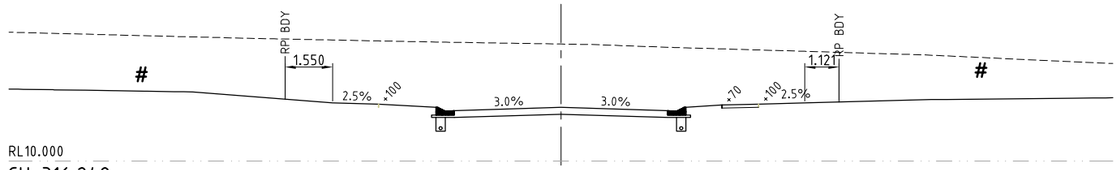


STAGE 2 & 3 WORKS

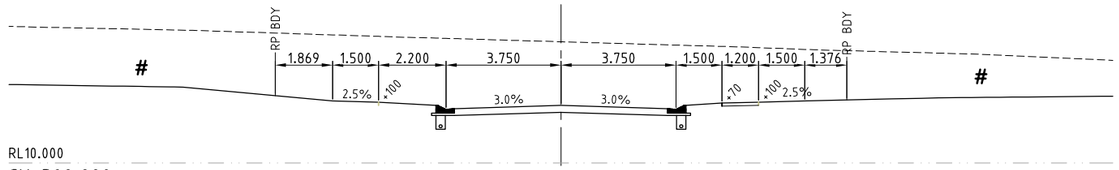
RL9.000
CH 180.000



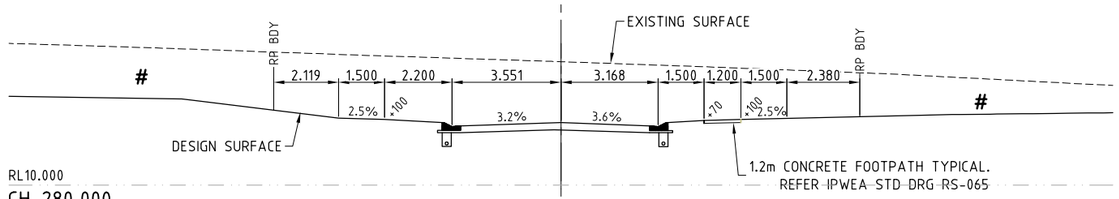
RL10.000
CH 320.000



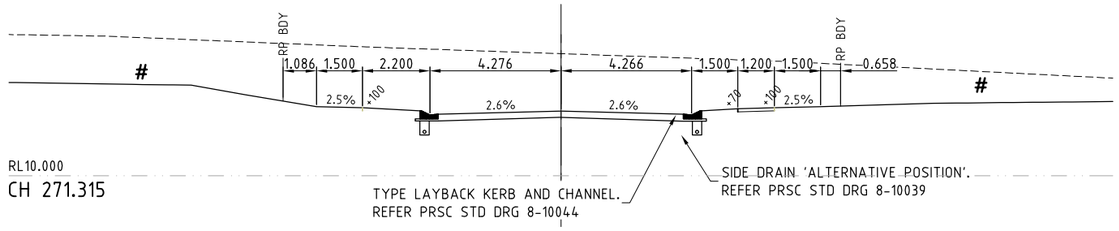
RL10.000
CH 316.249



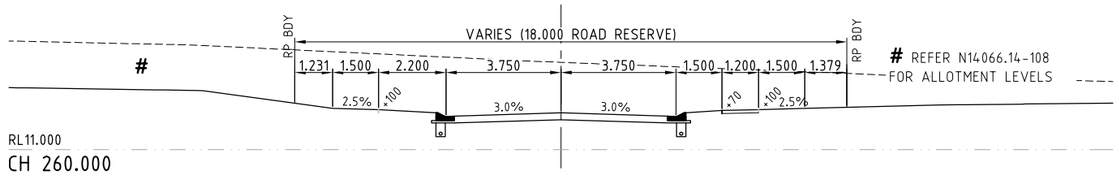
RL10.000
CH 300.000



RL10.000
CH 280.000



RL10.000
CH 271.315



RL11.000
CH 260.000

FILE: N14066.14-112.dwg DATE: 25-05-2017 TIME: 10:57
Xref's: X-TIT X-ROADS USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
		CB	CB	21.10.16	
	A	CB	CB	23.05.17	SECTIONS UPDATED
	B				
	C				
	D				
	E				
	F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:100 1 5 0 1 2 3 4 5 A1
1:200 A3

COUNCIL REFERENCE:
MORETON BAY REGIONAL COUNCIL

SURVEY DATUM:
PM120863
RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT
TRASPUNT PROJECTS PTY LTD

PROJECT No.
N14066.14

PROJECT
RIVER BREEZE
STAGE 4
CIVIL WORKS

calibre CONSULTING
CONSULT AUSTRALIA
Calibre Consulting (QLD) Pty Ltd
Level 3, 16 Innovation Parkway, Birtinya QLD Australia 4575
Telephone 07 5314 2520 Facsimile 07 5314 2522

Quality Endorsed Company ISO 9001 Lic 4084

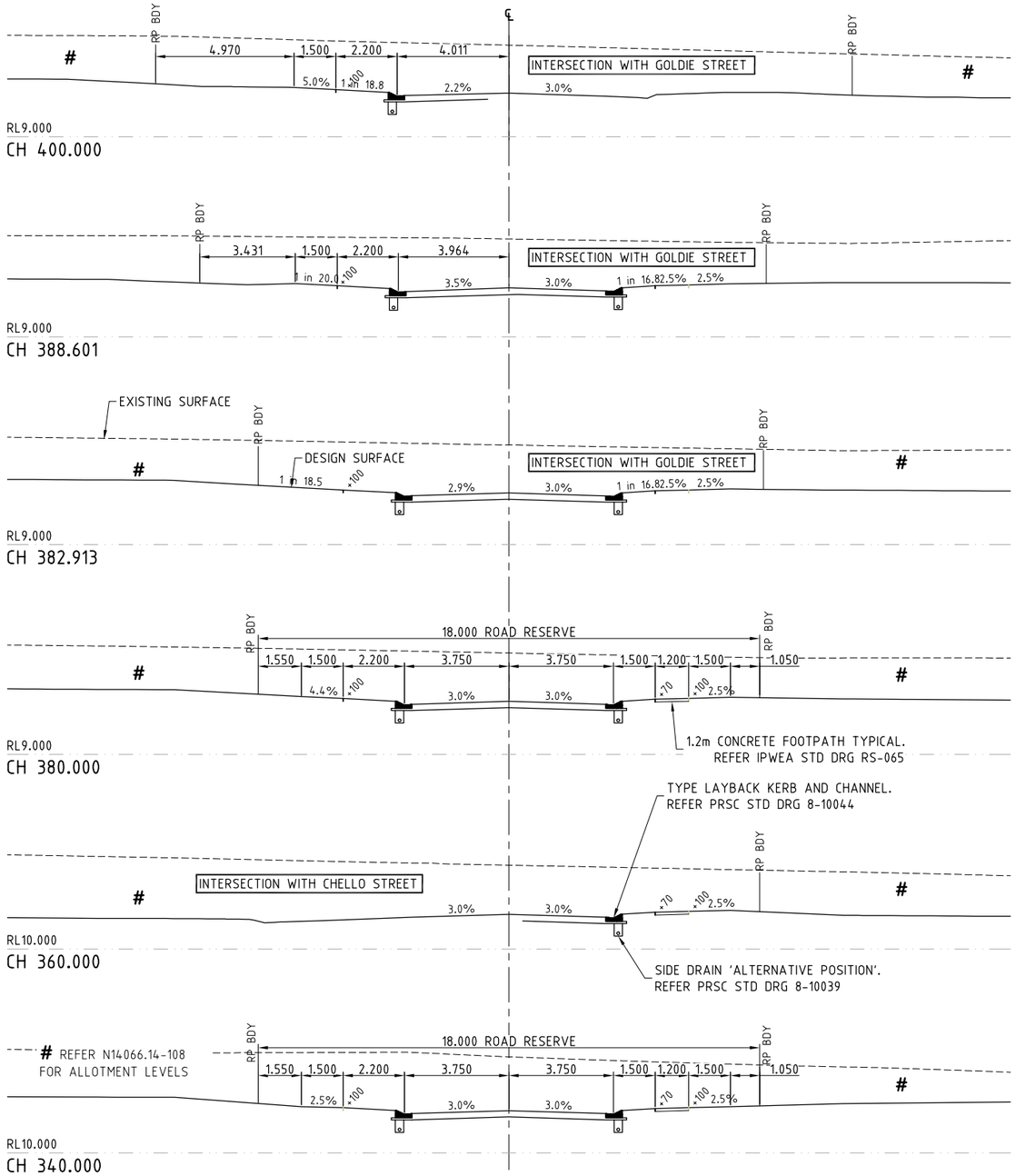
DRAWING TITLE
SUMMERTASTE PARADE
CROSS SECTIONS
SHEET 1 OF 2

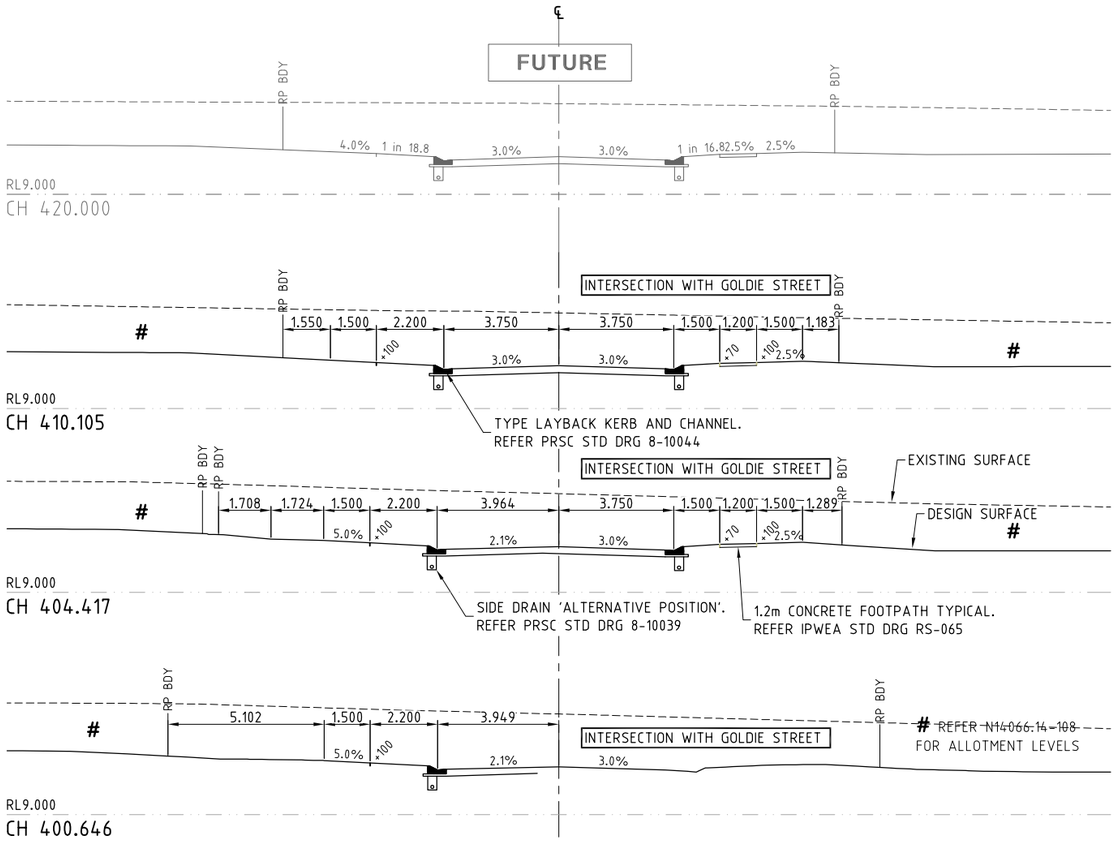
DRAWING NUMBER
N14066.14-112

ISSUE
A

Moreton Bay Regional Council

NOTE: REFER DRG N14066.14-111 FOR PAVEMENT SPECIFICATIONS





FILE: N14066.14-113.dwg DATE: 25-05-2017 TIME: 10:57
Xref's: X-TIT X-ROADS USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	A	CB	CB	21.10.16	
	B	CB	CB	23.0517	SECTIONS UPDATED
	C				
	D				
	E				
	F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:100 1 5 0 1 2 3 4 5 A1
1:200 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

CONSULT AUSTRALIA
Calibre Consulting (QLD) Pty Ltd
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Telephone 07 5314 2520 Facsimile 07 5314 2522

Quality Endorsed Company ISO 9001 Lic 4084

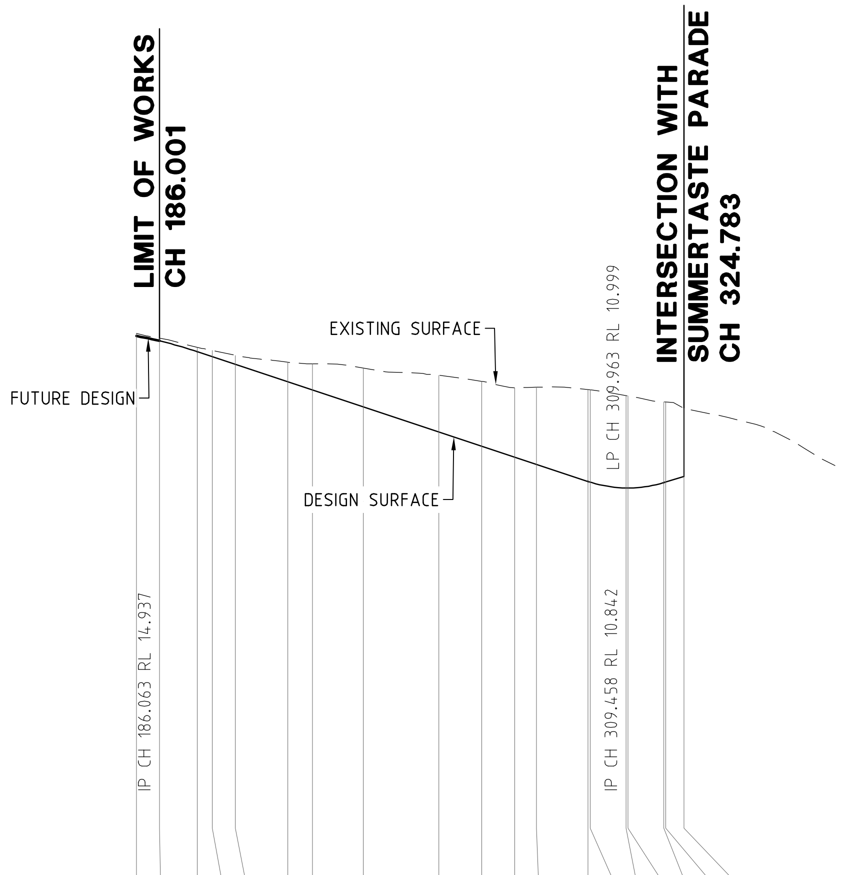
DRAWING TITLE: SUMMERTASTE PARADE CROSS SECTIONS SHEET 2 OF 2

DRAWING NUMBER: N14066.14-113

ISSUE: A

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

NOTE: REFER DRG N14066.14-111 FOR PAVEMENT SPECIFICATIONS



DATUM R.L.0

CHAINAGES	EXISTING SURFACE	DESIGN	RHS LIP LEVEL	LHS LIP LEVEL	CUT (-) \ FILL (+)
180.000	15.091	15.019		11.480	-0.071
186.063	14.961	14.891		11.402	-0.070
196.063	14.718	14.605	14.524	14.524	-0.113
200.000	14.639	14.475	14.393	14.393	-0.164
206.111	14.510	14.272	14.185	14.190	-0.238
220.000	14.327	13.811	13.723	13.729	-0.516
226.531	14.286	13.594	13.518	13.512	-0.692
240.000	14.172	13.147	13.065	13.065	-1.025
260.000	13.984	12.483	12.402	12.402	-1.500
271.301	13.824	12.108	12.027	12.027	-1.715
280.000	13.654	11.820	11.738	11.738	-1.834
285.789	13.664	11.627	11.546	11.546	-2.036
299.458	13.603	11.174	11.092	11.092	-2.429
300.000	13.597	11.156	11.074	11.074	-2.440
309.458	13.446	11.000	10.919	10.919	-2.447
309.963	13.437	10.999	10.918	10.918	-2.438
319.458	13.278	11.142	●	●	-2.137
320.000	13.274	11.158	●	●	-2.116
324.783	13.106	11.302	●	●	-1.804

ROAD GRADING: VC 20 (R = 1081.19) -1.47% ; -3.32% ; VC 20 (R = 316.49) 3.00%

HORIZONTAL ALIGNMENT: 13.000mR ; 30.000mR

● REFER INTERSECTION DRAWING FOR DETAILS

FILE: N14066.14-114.dwg DATE: 25-05-2017 TIME: 10:57
Xref's: X-TIT X-ROADS USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	CB	CB	21.10.16	
A	CB	CB	23.05.17	SECTION UPDATED
B				
C				
D				
E				
F				

DESIGN CHECK
DRAWN CHECK

SCALE (METRES)
1 : 1000 A1, 1 : 2000 A3 — HORIZONTAL (10 5 0 10 20 30 40 50)
1 : 100 A1, 1 : 200 A3 — VERTICAL (1 0 1 2 3 4 5)

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No. N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA

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Level 3, 16 Innovation Parkway, Birtinya QLD Australia 4575
Telephone 07 5314 2520 Facsimile 07 5314 2522

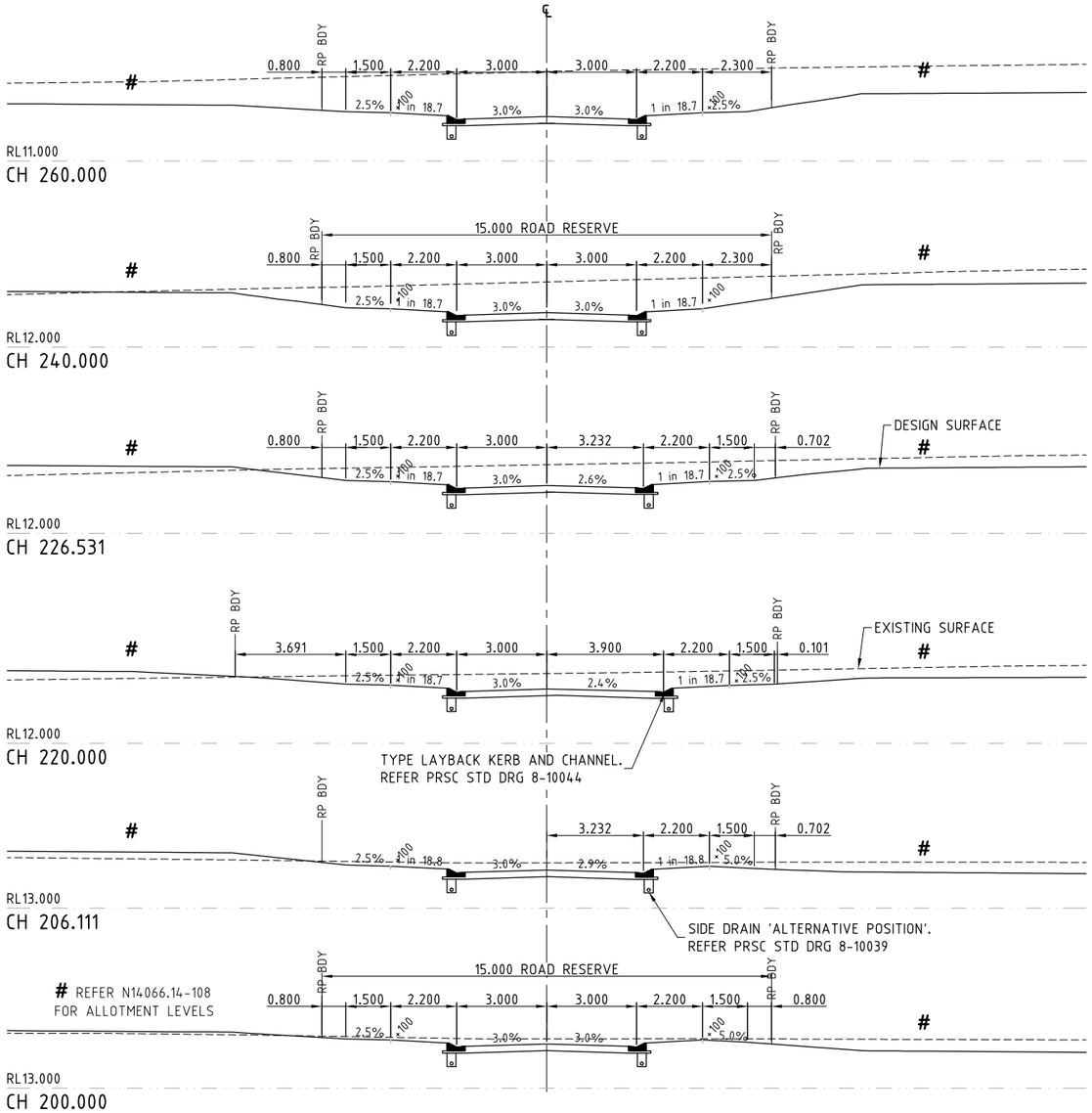
Quality System — Quality Endorsed Company ISO 9001 Lic 4084

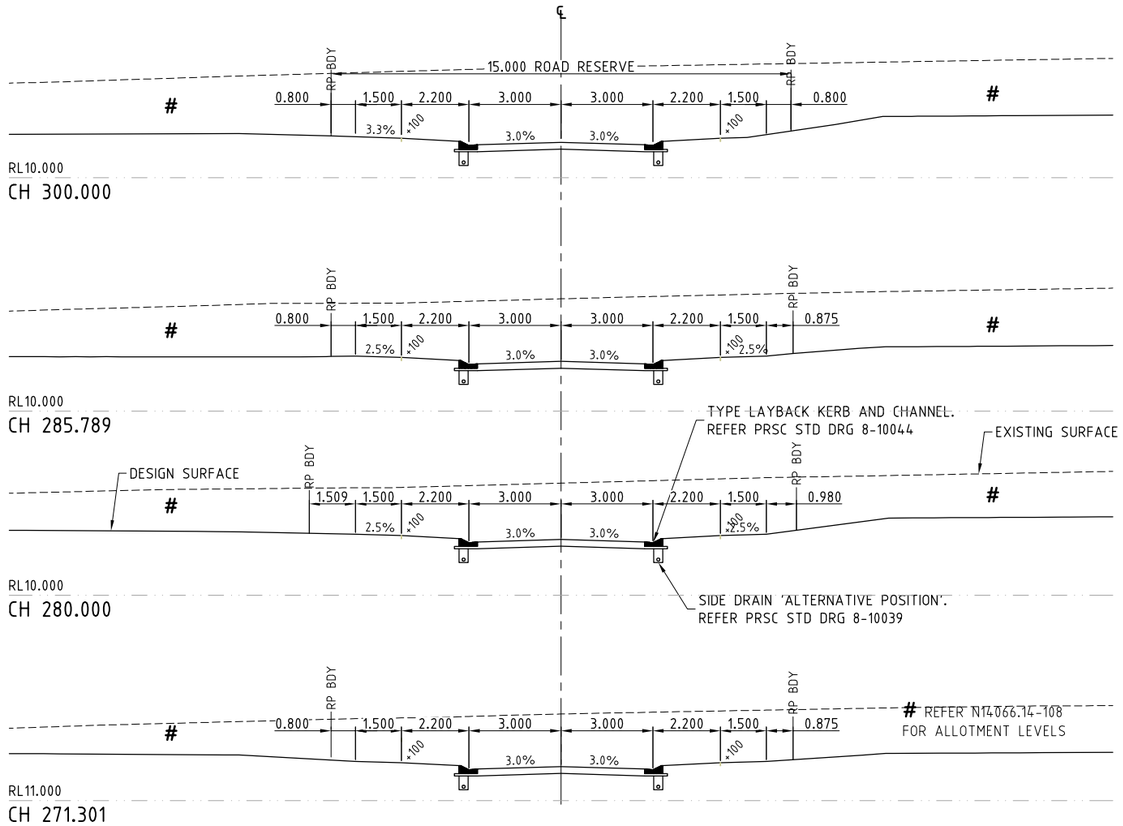
DRAWING TITLE: CHELLO STREET LONGITUDINAL SECTION

DRAWING NUMBER: N14066.14-114

ISSUE: A

NOTE: REFER DRG N14066.14-111 FOR PAVEMENT SPECIFICATIONS





FILE: N14066.14-115.dwg DATE: 25-05-2017 TIME: 10:59
Xref's: X-TIT X-ROADS USR: Curtis Boorman

AMENDMENTS		FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	A	CB	CB	21.10.16		
	B	CB	CB	23.05.17	SECTIONS UPDATED	
	C					
	D					
	E					
	F					

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1 : 1000 10 5 0 10 20 30 40 50 A1
1 : 2000 HORIZONTAL A3
1 : 100 1 0 1 2 3 4 5 A1
1 : 200 VERTICAL A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA
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Telephone 07 5314 2520 Facsimile 07 5314 2522

Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: CHELLO STREET CROSS SECTIONS

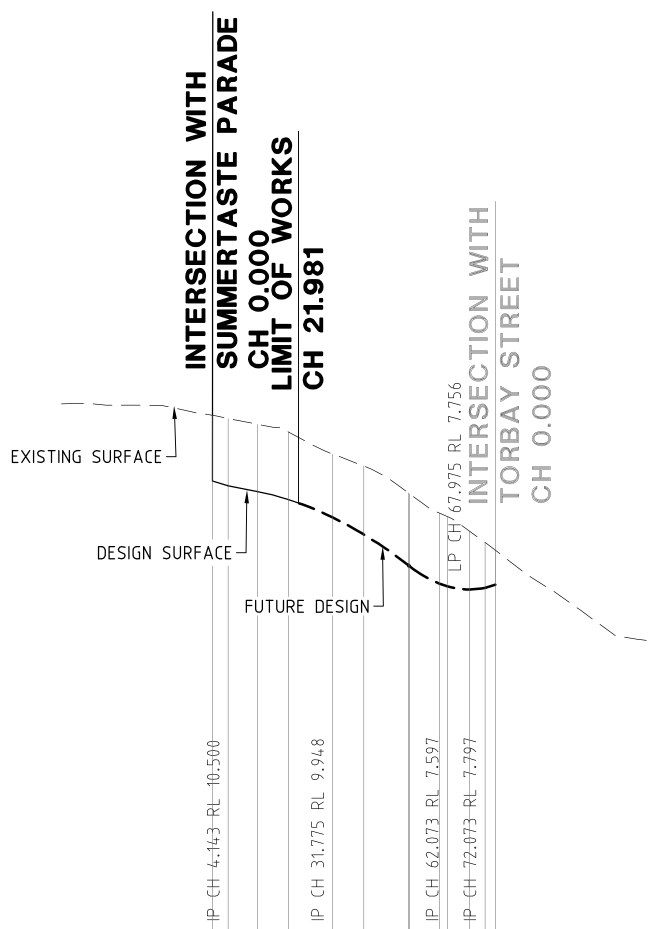
DRAWING NUMBER: N14066.14-115

ISSUE: A

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

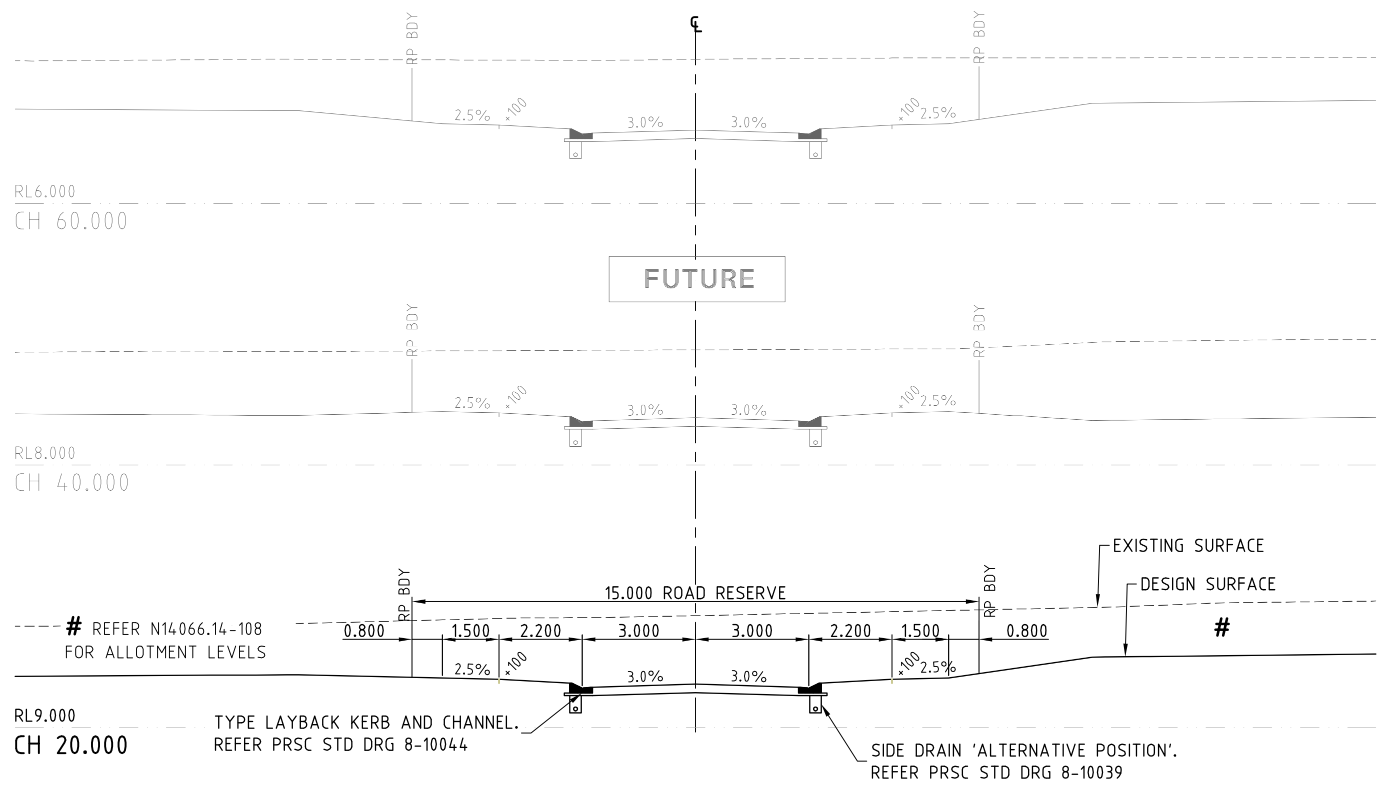
NOTE: REFER DRG N14066.14-111 FOR PAVEMENT SPECIFICATIONS



DATUM R.L.-4

ROAD GRADING	VC 40 (R = 694.77); VC 20 (R = 205); -3.00% -2.00% -7.76% 2.00% 3.00%												
CUT (-) \ FILL (+)	-1.735	-1.773	-1.778	-1.787	-1.679	-1.809	-1.912	-1.913	-1.867	-1.847	-1.538	-1.201	-0.920
LHS LIP LEVEL	●		10.266	10.053	9.578	9.128	8.314	8.291	7.830	7.760	●		
RHS LIP LEVEL			10.266	10.053	9.578	9.128	8.314	8.291	7.830	7.760			
DESIGN	10.625	10.500	10.348	10.134	9.660	9.210	8.396	8.373	7.911	7.841	7.756	7.797	7.879
EXISTING SURFACE	12.359	12.274	12.126	11.921	11.339	11.019	10.308	10.286	9.778	9.688	9.294	8.998	8.799
CHAINAGES	-0.000	4.143	11.775	20.000	31.775	40.000	51.775	52.073	60.000	62.073	67.975	72.073	74.798
HORIZONTAL ALIGNMENT													

● REFER INTERSECTION DRAWING FOR DETAILS



FILE: N14066.14-116.dwg DATE: 25-05-2017 TIME: 10:58
Xref's: X-TIT X-ROADS USR: Curtis Boorman

ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
FIRST ISSUE	CB	CB	21.10.16	
A	CB	CB	23.05.17	SECTIONS UPDATED
B				
C				
D				
E				
F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1 : 1000 A1 / 1 : 2000 A3 — 10 5 0 10 20 30 40 50 — HORIZONTAL
1 : 100 A1 / 1 : 200 A3 — 1 0 1 2 3 4 5 — VERTICAL

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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CONSULT AUSTRALIA

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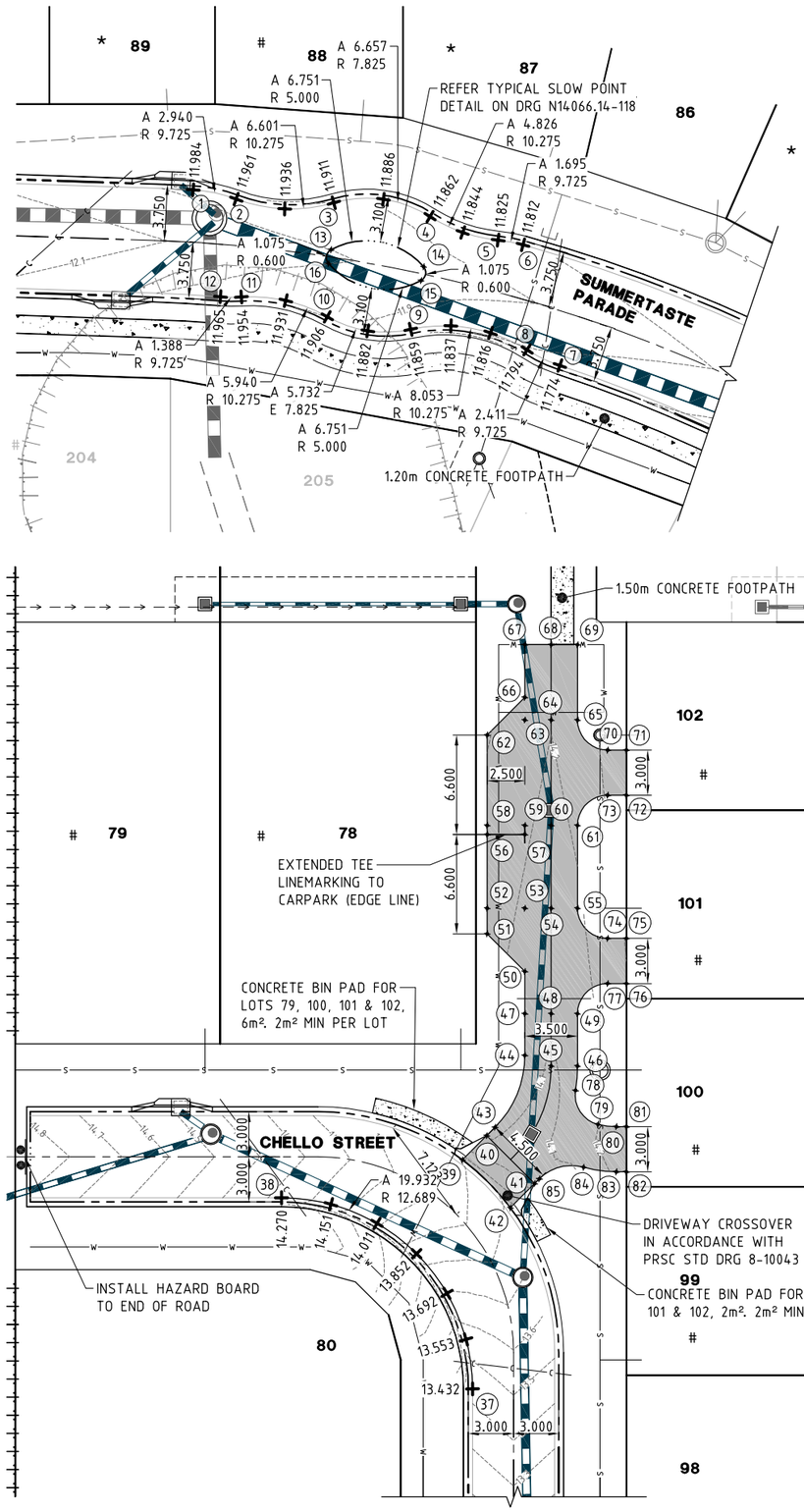
Telephone 07 5314 2520 Facsimile 07 5314 2522

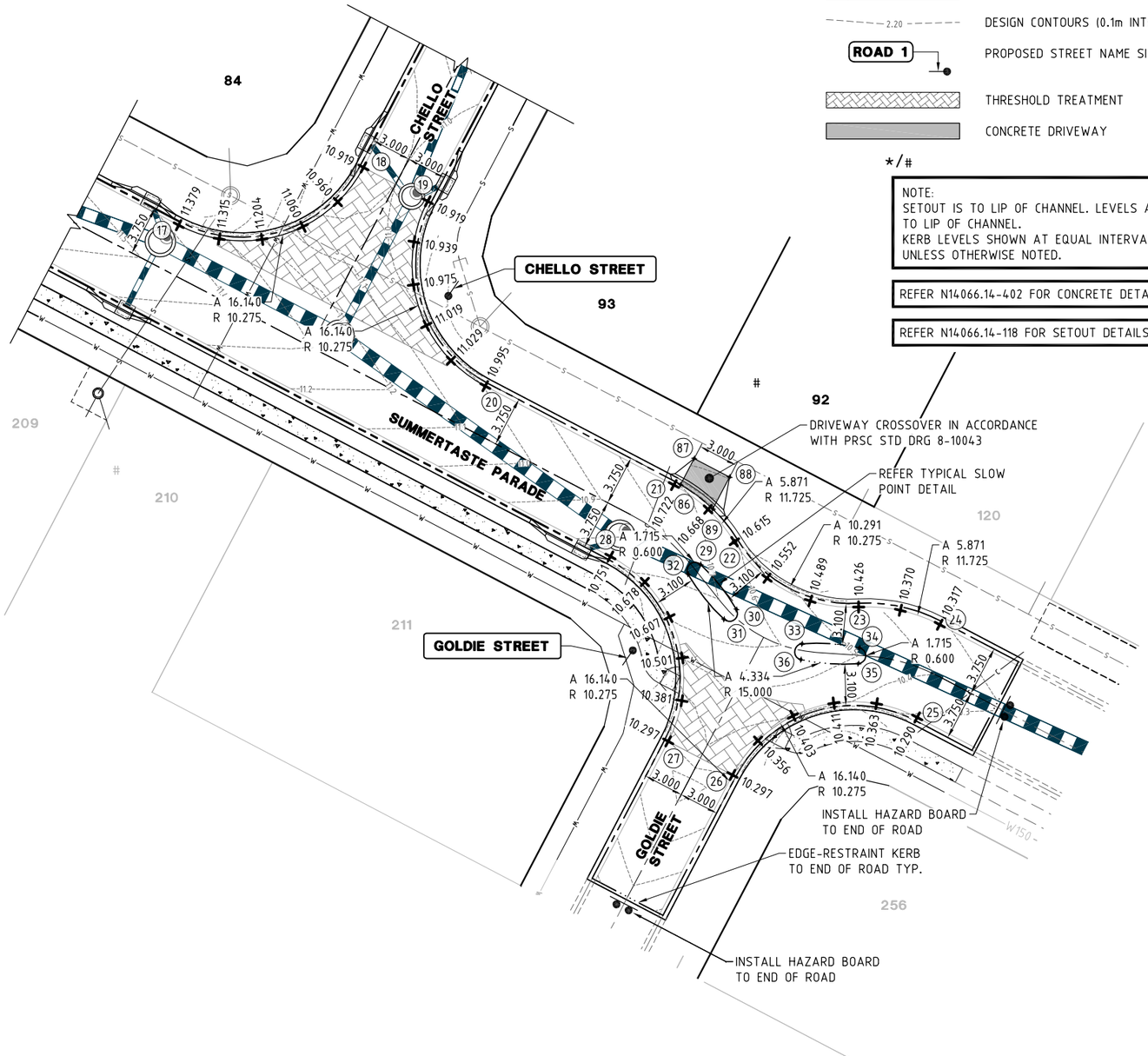
Quality System — Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: GOLDIE STREET LONGITUDINAL & CROSS SECTIONS

DRAWING NUMBER: N14066.14-116

ISSUE: A





LEGEND

- PROPOSED STORMWATER DRAINAGE
- PROPOSED SEWER RETICULATION
- PROPOSED WATER RETICULATION
- LAYBACK KERB AND CHANNEL
- UPRIGHT KERB AND CHANNEL
- SEMI-MOUNTABLE TYPE KERB
- EDGE-RESTRAINT TYPE KERB
- CONCRETE FOOTPATH (TYP)
- DESIGN CONTOURS (0.1m INTERVALS)
- ROAD 1 — PROPOSED STREET NAME SIGN
- THRESHOLD TREATMENT
- CONCRETE DRIVEWAY

*/#

NOTE:
SETOUT IS TO LIP OF CHANNEL. LEVELS ARE TO LIP OF CHANNEL.
KERB LEVELS SHOWN AT EQUAL INTERVALS, UNLESS OTHERWISE NOTED.

REFER N14066.14-402 FOR CONCRETE DETAILS

REFER N14066.14-118 FOR SETOUT DETAILS

FILE: N14066.14-117.dwg DATE: 29-05-2017 TIME: 12:10
Xref's: X-TIT X-N14066.14-BASE X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A	CB	CB	21.10.16	
B	CB	CB	23.05.17	LATMS AMENDED
C				
D				
E				
F				

AMENDMENTS

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:200 2 1 0 2 4 6 8 10 A1
1:400 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA
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Quality Endorsed Company ISO 9001 Lic-1084

DRAWING TITLE: INTERSECTION DETAIL PLAN SHEET 1 OF 2

DRAWING NUMBER: N14066.14-117

ISSUE: A

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

INTERSECTION SETOUT

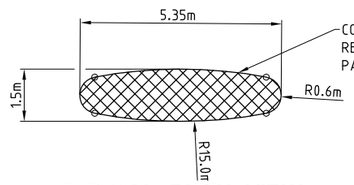
POINT #	NORTHING	EASTING	LEVEL
1	6243.694	4780.759	11.984
2	6245.655	4782.933	11.961
3	6250.753	4786.946	11.911
4	6255.385	4791.447	11.862
5	6258.122	4795.368	11.825
6	6259.284	4796.599	11.812
7	6256.547	4804.506	11.774
8	6255.396	4802.395	11.794
9	6249.948	4796.745	11.859
10	6245.955	4792.811	11.906
11	6242.112	4788.391	11.954
12	6240.998	4787.566	11.965
13	6248.776	4789.354	12.000
14	6253.084	4793.882	11.949
15	6252.405	4794.528	11.950
16	6248.097	4790.000	12.001
17	6282.625	4838.635	11.379
18	6296.391	4843.290	10.919
19	6298.807	4848.175	10.919
20	6294.153	4861.940	10.995
21	6301.240	4876.268	10.722
22	6302.420	4882.386	10.615
23	6307.088	4891.823	10.426
24	6311.235	4896.473	10.317
25	6305.772	4901.105	10.290
26	6292.007	4896.450	10.297
27	6289.590	4891.565	10.297
28	6294.244	4877.800	10.751
29	6299.357	4882.258	10.729
30	6299.554	4886.573	10.659

INTERSECTION SETOUT

POINT #	NORTHING	EASTING	LEVEL
31	6298.368	4886.627	10.657
32	6298.171	4882.313	10.730
33	6302.022	4891.560	10.563
34	6305.331	4894.335	10.488
35	6304.568	4895.245	10.481
36	6301.259	4892.470	10.551
37	6353.891	4789.424	13.432
38	6351.087	4771.699	14.270
39	6362.294	4776.733	13.887
40	6364.541	4776.377	14.106
41	6365.244	4780.822	14.047
42	6362.997	4781.178	13.766
43	6365.315	4776.255	14.116
44	6369.720	4773.556	14.137
45	6370.720	4775.157	14.090
46	6372.136	4776.186	14.134
47	6371.351	4771.314	14.151
48	6372.766	4772.343	14.107
49	6374.182	4773.372	14.151
50	6372.997	4769.049	14.165
51	6372.444	4765.557	14.240
52	6373.444	4764.182	14.249
53	6375.466	4765.652	14.186
54	6376.881	4766.681	14.142
55	6378.297	4767.710	14.186
56	6376.325	4760.218	14.273
57	6378.347	4761.688	14.211
58	6376.677	4759.733	14.276
59	6378.700	4761.203	14.214
60	6380.115	4762.232	14.170

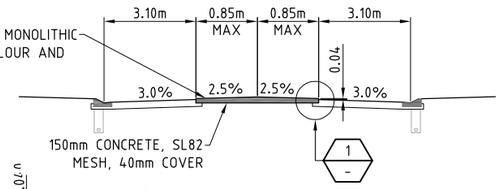
INTERSECTION SETOUT

POINT #	NORTHING	EASTING	LEVEL
61	6381.531	4763.261	14.214
62	6380.205	4754.880	14.306
63	6382.815	4755.540	14.249
64	6384.231	4756.569	14.205
65	6385.646	4757.598	14.249
66	6383.697	4754.327	14.256
67	6385.755	4751.496	14.274
68	6387.170	4752.525	14.230
69	6388.586	4753.554	14.274
70	6386.088	4760.392	14.322
71	6387.099	4761.127	14.374
72	6385.336	4763.554	14.362
73	6384.324	4762.819	14.310
74	6378.739	4770.503	14.256
75	6379.750	4771.238	14.306
76	6377.986	4773.665	14.294
77	6376.975	4772.930	14.244
78	6371.083	4777.417	14.127
79	6370.959	4780.114	14.198
80	6371.860	4780.956	14.247
81	6372.401	4781.349	14.273
82	6370.637	4783.776	14.243
83	6370.096	4783.383	14.218
84	6368.513	4781.860	14.123
85	6365.687	4780.752	14.064
86	6301.668	4876.529	10.699
87	6303.647	4875.551	10.932
88	6304.977	4878.240	10.908
89	6302.558	4879.436	10.641



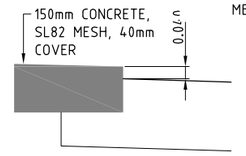
TYPICAL PLAN VIEW

NTS



TYPICAL CROSS SECTION

NTS



DETAIL 1 / -

SCALE 1: 10 (A1)

TYPICAL SLOW POINT DETAIL

FILE: N14066.14-118.dwg DATE: 29-05-2017 TIME: 12:27
Xref's: X-TIT X-N14066.14-BASE X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	CB	CB	21.10.16	
A	CB	CB	23.05.17	SETOUT UPDATED
B				
C				
D				
E				
F				

AMENDMENTS

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)

1:10 0.1 0.5 0 0.1 0.2 0.3 0.4 0.5 A1

1:20 A3

Moreton Bay Regional Council

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA

Calibre Consulting (QLD) Pty Ltd
Level 3, 15 Innovation Parkway, Birtinya QLD Australia 4575
Telephone 07 5314 2520 Facsimile 07 5314 2522

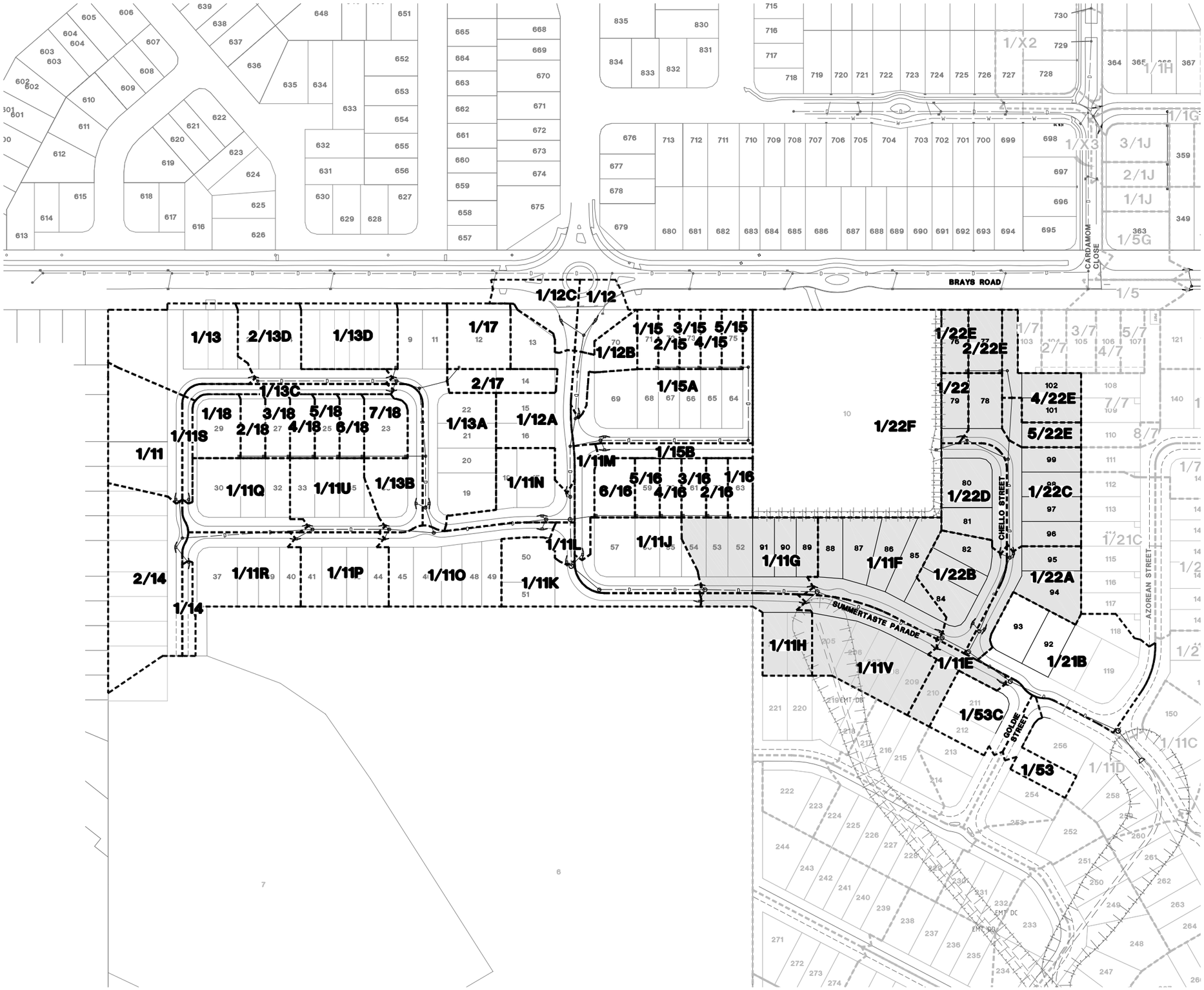
Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: INTERSECTION DETAIL PLAN SHEET 2 OF 2

DRAWING NUMBER: N14066.14-118

ISSUE: A

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2



CATCHMENT TABLE

CATCHMENT NAME	CATCHMENT AREA (ha)
1/11E	0.075
1/11F	0.281
1/11G	0.244
1/11H	0.121
1/11V	0.255
1/22	0.047
1/22A	0.149
1/22B	0.168
1/22C	0.257
1/22D	0.156
1/22E	0.044
1/22F	1.002
2/22E	0.054
4/22E	0.133
5/22E	0.059

LEGEND

- CATCHMENT BOUNDARY
- PROPOSED DRAINAGE LINES
- EXISTING DRAINAGE LINES
- 1/1 CATCHMENT NAME
- TOP OF BATTER
- BOTTOM OF BATTER
- STAGE 4 CATCHMENTS

FILE: N14066.14-119.dwg DATE: 08-05-2017 TIME: 16:35
Xref's: X-TIT X-N14066.14-BASE X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE
A	CB	CB	21.10.16

AMENDMENTS: A, B, C, D, E, F

AMENDMENT DETAILS

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:1000 10 5 0 10 20 30 40 50 A1
1:2000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

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Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: STORMWATER DRAINAGE CATCHMENT PLAN

DRAWING NUMBER: N14066.14-119

ISSUE: -

Moreton Bay Regional Council

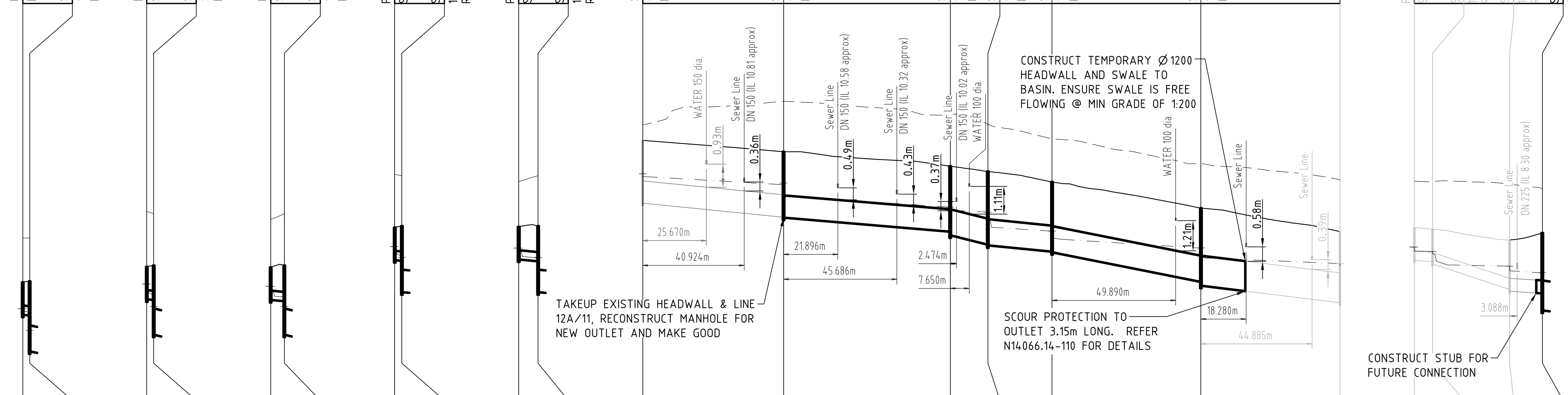
Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

LEGEND

— · — · — Q5 HGL

REFER N14066.14-122 FOR NOTES AND N14066.14-125 FOR STRUCTURE SETOUT DETAILS

STRUCTURE NAME	STRUCTURE DESCRIPTION
1/11E	PRSC TYPE A CATCHPIT M LINTEL; 1:30 CROSSFALL
16/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
1/11F	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL
14/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
1/11V	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL
14/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
1/11G	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL
12/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
1/11H	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL
12/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
11/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
12/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
14/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
15/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
16/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
17/11	STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
19/11	STD PRSC MANHOLE 1800mm DIAMETER
1/21	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL
2/21	STD PRSC MANHOLE 1100mm DIAMETER REFER DETAIL
3/21	STD PRSC MANHOLE 1100mm DIAMETER REFER DETAIL
17/11	STD PRSC MANHOLE 1800mm DIAMETER



LINE 11E (DATUM RL 1.0)

Item	Values (left to right)
PIPE SIZEmm (Class)	375(3)
PIPE GRADE %	1.00%
PIPE SLOPE 1 in X	100.00
FULL PIPE FLOW VELOCITY (m/s)	
PART FULL FLOW VELOCITY (m/s)	1.41 (1.15 1y)
WATER LEVEL IN STRUCTURE	9.698, 8.823
HYDRAULIC GRADE LEVEL	9.698, 9.597, 8.823, 8.543
PIPE FLOW (Cumecs)	0.055
DEPTH TO INVERT	1.310, 1.380
INVERT LEVEL OF DRAIN	9.452, 9.424
DESIGN SURFACE LEVEL	10.762, 10.804
SETOUT CO-ORDS (EAST,NORTH)	E4876.026, N6293.060, E4876.932, N6295.740
RUNNING CHAINAGE	0.000, 2.801, 2.801

LINE 11F

Item	Values (left to right)
PIPE SIZEmm (Class)	375(3)
PIPE GRADE %	1.00%
PIPE SLOPE 1 in X	100.00
FULL PIPE FLOW VELOCITY (m/s)	
PART FULL FLOW VELOCITY (m/s)	1.57 (1.34 1y)
WATER LEVEL IN STRUCTURE	10.693, 9.791
HYDRAULIC GRADE LEVEL	10.693, 10.451, 9.791, 9.708
PIPE FLOW (Cumecs)	0.084
DEPTH TO INVERT	1.310, 1.391
INVERT LEVEL OF DRAIN	10.076, 10.048
DESIGN SURFACE LEVEL	11.386, 11.439
SETOUT CO-ORDS (EAST,NORTH)	E4836.141, N6281.698, E4838.820, N6280.792
RUNNING CHAINAGE	0.000, 2.800, 2.800

LINE 11V

Item	Values (left to right)
PIPE SIZEmm (Class)	375(3)
PIPE GRADE %	1.00%
PIPE SLOPE 1 in X	100.00
FULL PIPE FLOW VELOCITY (m/s)	
PART FULL FLOW VELOCITY (m/s)	1.51 (1.28 1y)
WATER LEVEL IN STRUCTURE	10.598, 9.791
HYDRAULIC GRADE LEVEL	10.598, 10.427, 9.791, 9.708
PIPE FLOW (Cumecs)	0.072
DEPTH TO INVERT	1.310, 1.442
INVERT LEVEL OF DRAIN	10.052, 9.997
DESIGN SURFACE LEVEL	11.362, 11.439
SETOUT CO-ORDS (EAST,NORTH)	E4841.288, N6275.877, E4838.820, N6280.792
RUNNING CHAINAGE	0.000, 5.500, 5.500

LINE 11G (DATUM RL 0.0)

Item	Values (left to right)
PIPE SIZEmm (Class)	375(3)
PIPE GRADE %	1.01%
PIPE SLOPE 1 in X	99.28
FULL PIPE FLOW VELOCITY (m/s)	
PART FULL FLOW VELOCITY (m/s)	1.51(1.27 1y)
WATER LEVEL IN STRUCTURE	11.197, 10.764
HYDRAULIC GRADE LEVEL	11.197, 11.030, 10.695, 10.267
PIPE FLOW (Cumecs)	0.072
DEPTH TO INVERT	1.312, 1.401
INVERT LEVEL OF DRAIN	10.655, 10.626
DESIGN SURFACE LEVEL	11.967, 12.027
SETOUT CO-ORDS (EAST,NORTH)	E4780.025, N6243.227, E4782.917, N6243.467
RUNNING CHAINAGE	0.000, 2.874, 2.874

LINE 11H

Item	Values (left to right)
PIPE SIZEmm (Class)	375(3)
PIPE GRADE %	1.00%
PIPE SLOPE 1 in X	99.90
FULL PIPE FLOW VELOCITY (m/s)	
PART FULL FLOW VELOCITY (m/s)	1.34 (1.12 1y)
WATER LEVEL IN STRUCTURE	11.142, 10.764
HYDRAULIC GRADE LEVEL	11.142, 11.060, 10.695, 10.267
PIPE FLOW (Cumecs)	0.046
DEPTH TO INVERT	1.310, 1.420
INVERT LEVEL OF DRAIN	10.685, 10.607
DESIGN SURFACE LEVEL	11.995, 12.027
SETOUT CO-ORDS (EAST,NORTH)	E4783.630, N6235.672, E4782.917, N6243.467
RUNNING CHAINAGE	0.000, 7.817, 7.817

LINE 11 (DATUM RL -3.0)

Item	Values (left to right)
PIPE SIZEmm (Class)	900(3), 900(3), 1050(3), 1050(3), 1050(3), 1200(3)
PIPE GRADE %	0.99%, 0.83%, 2.51%, 1.00%, 1.99%, 1.23%
PIPE SLOPE 1 in X	100.61, 120.22, 39.77, 100.00, 50.22, 81.42
FULL PIPE FLOW VELOCITY (m/s)	2.19(1.07 1y), 2.32(1.11 1y), 1.82(0.87 1y), 2.53(1.18 1y), 2.16(1.00 1y)
PART FULL FLOW VELOCITY (m/s)	2.94 (2.50 1y), 4.61 (3.75 1y), 3.51 (2.93 1y), 4.60 (3.76 1y), 3.95 (3.22 1y)
WATER LEVEL IN STRUCTURE	11.137, 10.764, 9.791, 9.586, 8.823, 8.147, 7.518
HYDRAULIC GRADE LEVEL	11.137, 11.029, 10.695, 10.267, 9.791, 9.708, 9.586, 9.307, 8.823, 8.543, 8.137, 7.833, 7.518, 7.431
PIPE FLOW (Cumecs)	1.401, 1.484, 1.589, 2.189, 2.206, 2.475
DEPTH TO INVERT	2.511, 2.531, 2.643, 2.663, 2.634, 2.785, 2.959, 2.979, 2.810, 2.830, 2.972, 3.125, 2.873, 2.893
INVERT LEVEL OF DRAIN	9.969, 9.949, 9.384, 9.364, 8.805, 8.654, 8.273, 8.253, 7.994, 7.974, 6.779, 6.626, 5.937, 5.917
DESIGN SURFACE LEVEL	12.480, 12.027, 11.439, 11.232, 10.804, 9.751, 8.810
SETOUT CO-ORDS (EAST,NORTH)	E4748.652, N6198.151, E4782.917, N6243.467, E4838.820, N6280.792, E4852.397, N6287.508, E4876.932, N6295.740, E4929.219, N6325.210, E4985.281, N6327.373
RUNNING CHAINAGE	312.454, 56.812, 369.266, 67.218, 436.484, 15.147, 451.631, 25.879, 477.510, 60.020, 537.530, 56.104, 593.634

LINE 21 (DATUM RL -2.0)

Item	Values (left to right)
PIPE SIZEmm (Class)	375(3), 450(3), 525(3)
PIPE GRADE %	0.82%, 3.33%, 0.70%
PIPE SLOPE 1 in X	122.47, 30.02, 143.53
FULL PIPE FLOW VELOCITY (m/s)	0.59(0.34 1y), 0.84(0.48 1y), 1.63(0.84 1y)
PART FULL FLOW VELOCITY (m/s)	1.36(1.17 1y), 2.74(2.34 1y)
WATER LEVEL IN STRUCTURE	9.184, 9.008, 8.410, 8.147
HYDRAULIC GRADE LEVEL	9.184, 9.026, 9.004, 8.959, 8.410, 8.227, 8.137, 7.833
PIPE FLOW (Cumecs)	0.065, 0.134, 0.343
DEPTH TO INVERT	1.310, 1.310, 1.392, 1.996, 2.064, 2.436
INVERT LEVEL OF DRAIN	8.651, 8.591, 8.509, 7.475, 7.407, 7.315
DESIGN SURFACE LEVEL	9.961, 9.901, 9.471, 9.751
SETOUT CO-ORDS (EAST,NORTH)	E4904.446, N6370.084, E4909.280, N6364.551, E4924.733, N6337.630, E4929.219, N6325.210
RUNNING CHAINAGE	0.000, 7.347, 7.347, 31.041, 38.388, 13.205, 51.593

FILE: N14066.14-120.dwg DATE: 25-05-2017 TIME: 11:01
Xref's: X-TIT X-DRAINAGE USR: Curtis Boorman

AMENDMENTS	CALCS	DRAWN	DATE	AMENDMENT DETAILS
FIRST ISSUE	CB	CB	21.10.16	
A	CB	CB	24.05.17	LINES 11G & 11H AMENDED
B				
C				
D				
E				
F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1 : 1000 A1, 1 : 2000 A3 — HORIZONTAL (10 5 0 10 20 30 40 50)
1 : 100 A1, 1 : 200 A3 — VERTICAL (1 0 1 2 3 4 5)

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA

Calibre Consulting (QLD) Pty Ltd
Level 3, 16 Innovation Parkway, Birtinya QLD Australia 4575
Telephone 07 5314 2520 Facsimile 07 5314 2522

Quality System — Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: STORMWATER DRAINAGE LONGITUDINAL SECTION SHEET 1 OF 2

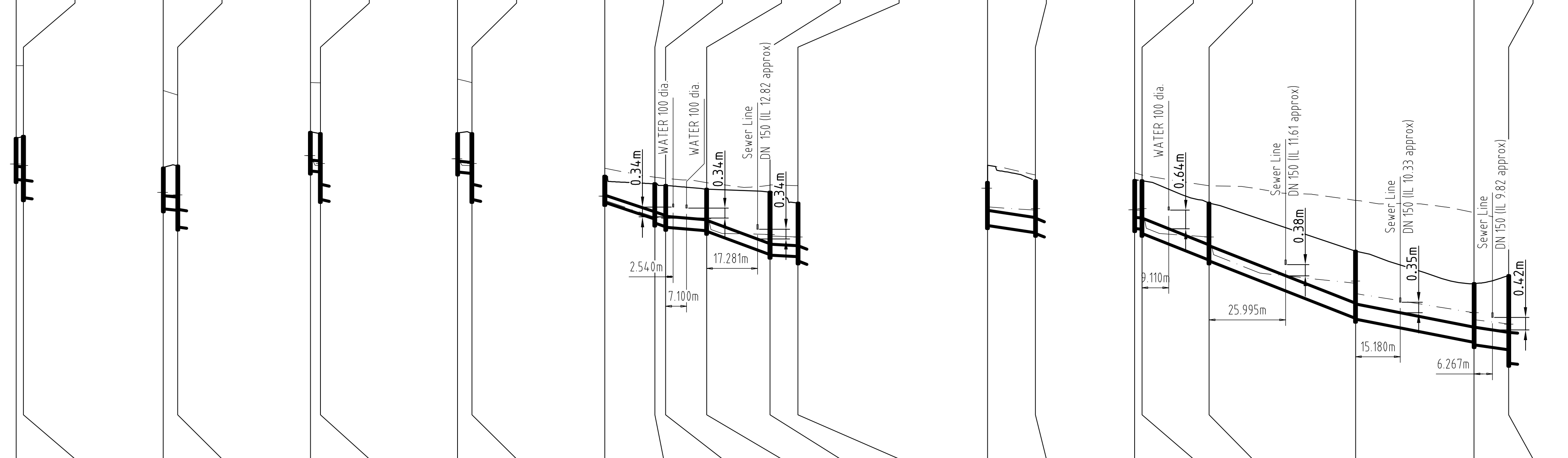
DRAWING NUMBER: N14066.14-120

ISSUE: A

REFER N14066.14-122 FOR NOTES AND N14066.14-125 FOR STRUCTURE SETOUT DETAILS

LEGEND

— · — · — Q5 HGL



LINE 22A (DATUM RL -5.0)

Item	1/22A	Pipe	5/22
STRUCTURE DESCRIPTION	PRSC TYPE A CATCHPIT(sag) S LINTEL		STD PRSC MANHOLE 1500mm DIAMETER REFER DETAIL
PIPE SIZEmm (Class)		375(3)	
PIPE GRADE %		1.00%	
PIPE SLOPE 1 in X		100.00	
FULL PIPE FLOW VELOCITY (m/s)		0.49(0.22 1y)	
PART FULL FLOW VELOCITY (m/s)			
WATER LEVEL IN STRUCTURE	10.095		9.977
HYDRAULIC GRADE LEVEL	10.030 / 9.974		9.972 / 9.738
PIPE FLOW (Cumecs)		0.078	
DEPTH TO INVERT	1.310		1.403
INVERT LEVEL OF DRAIN	9.585		9.560
DESIGN SURFACE LEVEL	10.895		10.963
SETOUT CO-ORDS (EAST,NORTH)	E4847.638 N6300.513		E4847.180 N6298.055
RUNNING CHAINAGE	0.000	2.482	2.482

LINE 22B (DATUM RL -4.0)

Item	1/22B	Pipe	5/22
STRUCTURE DESCRIPTION	PRSC TYPE A CATCHPIT(sag) S LINTEL		STD PRSC MANHOLE 1500mm DIAMETER REFER DETAIL
PIPE SIZEmm (Class)		375(3)	
PIPE GRADE %		1.00%	
PIPE SLOPE 1 in X		100.00	
FULL PIPE FLOW VELOCITY (m/s)		0.65(0.28 1y)	
PART FULL FLOW VELOCITY (m/s)			
WATER LEVEL IN STRUCTURE	10.164		9.989
HYDRAULIC GRADE LEVEL	10.064 / 9.978		9.972 / 9.738
PIPE FLOW (Cumecs)		0.103	
DEPTH TO INVERT	1.310		1.427
INVERT LEVEL OF DRAIN	9.585		9.536
DESIGN SURFACE LEVEL	10.895		10.963
SETOUT CO-ORDS (EAST,NORTH)	E4842.260 N6297.853		E4847.180 N6298.055
RUNNING CHAINAGE	0.000	4.918	4.918

LINE 22C

Item	1/22C	Pipe	4/22
STRUCTURE DESCRIPTION	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL		STD PRSC MANHOLE 1350mm DIAMETER REFER DETAIL
PIPE SIZEmm (Class)		375(3)	
PIPE GRADE %		1.00%	
PIPE SLOPE 1 in X		100.00	
FULL PIPE FLOW VELOCITY (m/s)			
PART FULL FLOW VELOCITY (m/s)		1.51 (1.28 1y)	
WATER LEVEL IN STRUCTURE	11.318		11.047
HYDRAULIC GRADE LEVEL	11.318 / 11.162		10.969 / 10.623
PIPE FLOW (Cumecs)		0.073	
DEPTH TO INVERT	1.315		1.310
INVERT LEVEL OF DRAIN	10.787		10.753
DESIGN SURFACE LEVEL	12.102		12.063
SETOUT CO-ORDS (EAST,NORTH)	E4824.606 N6335.397		E4826.169 N6332.406
RUNNING CHAINAGE	0.000	3.373	3.373

LINE 22D

Item	1/22D	Pipe	4/22
STRUCTURE DESCRIPTION	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL		STD PRSC MANHOLE 1350mm DIAMETER REFER DETAIL
PIPE SIZEmm (Class)		375(3)	
PIPE GRADE %		1.00%	
PIPE SLOPE 1 in X		100.00	
FULL PIPE FLOW VELOCITY (m/s)			
PART FULL FLOW VELOCITY (m/s)		1.34 (1.12 1y)	
WATER LEVEL IN STRUCTURE	11.205		11.047
HYDRAULIC GRADE LEVEL	11.205 / 11.128		10.969 / 10.623
PIPE FLOW (Cumecs)		0.046	
DEPTH TO INVERT	1.310		1.359
INVERT LEVEL OF DRAIN	10.753		10.704
DESIGN SURFACE LEVEL	12.063		12.063
SETOUT CO-ORDS (EAST,NORTH)	E4822.016 N6329.862		E4826.169 N6332.406
RUNNING CHAINAGE	0.000	4.870	4.870

LINE 22E (DATUM RL 0.0)

Item	1/22E	Pipe	2/22E	Pipe	3/22E	Pipe	4/22E	Pipe	5/22E	Pipe	3/22
STRUCTURE DESCRIPTION	IPWEA STD 600x600 FIELD INLET PIT		IPWEA STD 600x900 FIELD INLET PIT		STD PRSC MANHOLE 1100mm DIAMETER		IPWEA STD 600x900 FIELD INLET PIT		IPWEA STD 900x900 FIELD INLET PIT		STD PRSC MANHOLE 1350mm DIAMETER REFER DETAIL
PIPE SIZEmm (Class)		225(U)		375(3)		375(3)		375(3)		375(3)	
PIPE GRADE %		3.35%		3.38%		0.86%		3.68%		0.50%	
PIPE SLOPE 1 in X		29.87		29.63		116.89		27.15		200.00	
FULL PIPE FLOW VELOCITY (m/s)						0.37(0.20 1y)		0.66(0.41 1y)		0.94(0.52 1y)	
PART FULL FLOW VELOCITY (m/s)		1.85(1.55 1y)		1.99(1.66 1y)		1.22 (1.02 1y)		2.43 (2.12 1y)			
WATER LEVEL IN STRUCTURE	13.933		13.223		13.181		13.164		12.634		12.543
HYDRAULIC GRADE LEVEL	13.933 / 13.795		13.223 / 13.183		13.181 / 13.171		13.164 / 13.113		12.634 / 12.576		12.543 / 12.252
PIPE FLOW (Cumecs)		0.018		0.040		0.040		0.073		0.103	
DEPTH TO INVERT	0.883		1.199 / 1.333		1.398 / 1.418		1.417 / 1.437		2.121 / 2.141		1.824
INVERT LEVEL OF DRAIN	13.725		13.156 / 13.022		12.897 / 12.877		12.758 / 12.738		11.945 / 11.925		11.877
DESIGN SURFACE LEVEL	14.608		14.355		14.295		14.175		14.066		13.701
SETOUT CO-ORDS (EAST,NORTH)	E4736.818 N6370.153		E4746.813 N6383.904		E4748.989 N6386.897		E4761.423 N6380.703		E4778.049 N6367.009		E4785.396 N6360.946
RUNNING CHAINAGE	0.000	17.000	17.000	3.700	20.700	13.891	34.591	21.539	56.130	9.524	65.654

LINE 22F

Item	1/22F	Pipe	2/22
STRUCTURE DESCRIPTION	IPWEA STD 900x900 FIELD INLET PIT		STD PRSC MANHOLE 1350mm DIAMETER REFER DETAIL
PIPE SIZEmm (Class)		525(3)	
PIPE GRADE %		1.50%	
PIPE SLOPE 1 in X		66.67	
FULL PIPE FLOW VELOCITY (m/s)		1.59(0.81 1y)	
PART FULL FLOW VELOCITY (m/s)			
WATER LEVEL IN STRUCTURE	14.202		13.507
HYDRAULIC GRADE LEVEL	14.202 / 13.568		13.461 / 13.186
PIPE FLOW (Cumecs)		0.336	
DEPTH TO INVERT	1.467		1.775
INVERT LEVEL OF DRAIN	12.933		12.688
DESIGN SURFACE LEVEL	14.400		14.463
SETOUT CO-ORDS (EAST,NORTH)	E4760.217 N6334.325		E4765.518 N6349.769
RUNNING CHAINAGE	0.000	16.327	16.327

LINE 22

Item	1/22	Pipe	2/22	Pipe	3/22	Pipe	4/22	Pipe	5/22	Pipe	15/11
STRUCTURE DESCRIPTION	PRSC TYPE A CATCHPIT S Lintel; 1:30 CROSSFALL		STD PRSC MANHOLE 1350mm DIAMETER REFER DETAIL		STD PRSC MANHOLE 1350mm DIAMETER REFER DETAIL		STD PRSC MANHOLE 1350mm DIAMETER REFER DETAIL		STD PRSC MANHOLE 1500mm DIAMETER REFER DETAIL		STD PRSC MANHOLE 1800mm DIAMETER REFER DETAIL
PIPE SIZEmm (Class)		375(3)		525(3)		525(3)		525(3)		600(3)	
PIPE GRADE %		1.00%		4.00%		3.94%		1.96%		1.50%	
PIPE SLOPE 1 in X		100.00		24.98		25.37		51.09		66.67	
FULL PIPE FLOW VELOCITY (m/s)		0.16(0.09 1y)		1.65(0.84 1y)		2.04(1.04 1y)		2.50(1.28 1y)		2.47(1.19 1y)	
PART FULL FLOW VELOCITY (m/s)				3.76 (3.13 1y)		3.95 (3.30 1y)					
WATER LEVEL IN STRUCTURE	13.472		13.507		12.544		11.047		9.975		9.586
HYDRAULIC GRADE LEVEL	13.472 / 13.461		13.461 / 13.186		12.544 / 12.253		10.969 / 10.623		9.972 / 9.738		9.586 / 9.307
PIPE FLOW (Cumecs)		0.018		0.348		0.430		0.527		0.697	
DEPTH TO INVERT	1.632		1.652 / 1.795		1.946 / 1.966		2.289 / 2.309		1.997 / 2.079		2.525
INVERT LEVEL OF DRAIN	12.836		12.811 / 12.668		11.755 / 11.735		9.774 / 9.754		8.966 / 8.884		8.707
DESIGN SURFACE LEVEL	14.468		14.463		13.701		12.063		10.963		11.232
SETOUT CO-ORDS (EAST,NORTH)	E4763.129 N6349.033		E4765.518 N6349.769		E4785.396 N6360.946		E4826.169 N6332.406		E4847.180 N6298.055		E4852.397 N6287.508
RUNNING CHAINAGE	0.000	2.492	2.492	22.805	25.297	49.769	75.066	40.267	115.333	11.767	127.100

FILE: N14066.14-121.dwg DATE: 13-04-2017 TIME: 17:13
Xref's: X-TIT X-DRAINAGE USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	CB	CB	21.10.16	
A				
B				
C				
D				
E				
F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES) 1 : 1000 A1, 1 : 2000 A3 HORIZONTAL; 1 : 100 A1, 1 : 200 A3 VERTICAL

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 3, KINGS ROW, 40 McDougall Street, MILTON Q 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No. N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA

Calibre Consulting (QLD) Pty Ltd
Level 3, 16 Innovation Parkway, Birtinya QLD Australia 4575
Telephone 07 5314 2520 Facsimile 07 5314 2522

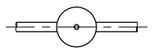
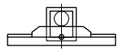
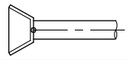
Quality System — Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: STORMWATER DRAINAGE LONGITUDINAL SECTION SHEET 2 OF 2

DRAWING NUMBER: N14066.14-121

ISSUE: -

REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL (REFERENCE POINT LOCATION)	VERTICAL CONTROL (REFERENCE LEVEL)
MANHOLE	CL MAIN SHAFT 	FINISHED SURFACE LEVEL
GULLY PIT	ON NOMINAL KERB LINE (INVERT LINE OF KERB AND CHANNEL) 	INVERT OF KERB AND CHANNEL
HEADWALL	INTERSECTION OF HEADWALL FACE & PIPE CENTRE LINE 	INVERT LEVEL

NOTES:

1. REFER TO IPWEA STD DRG DS-010 TO DS-017 FOR ACCESS CHAMBER DETAILS.
2. REFER TO IPWEA STD DRG DS-030 TO DS-031 FOR BEDDING BACKFILL AND EXCAVATION DETAILS.
3. REFER TO IPWEA STD DRG DS-050 FOR FIELD INLET DETAILS.
4. REFER TO IPWEA STD DRG DS-061 TO DS-063 FOR KERB INLET LIP IN LINE GULLY DETAILS.
5. IPWEA STD LIP IN LINE GULLIES MUST BE PROVIDED WITH GRATED INLETS, MAX Q MANNING OR PRSC APPROVED EQUIVALENT FOR BICYCLE AND PEDESTRIAN SAFETY.
6. REFER TO IPWEA STD DRG DS-082 FOR CULVERT INLET SCREEN DETAILS.
7. REFER TO DEPARTMENT OF TRANSPORT AND MAIN ROADS STD DRGS 1179, 1303, 1304, 1305 AND 1306 FOR APRONS HEADWALLS AND WINGWALL DETAILS.
8. HEADWALLS TO STORMWATER OUTLETS CAN BE PRE-CAST OR CAST INSITU OR PRE-CAST SUBJECT TO PRSC APPROVAL.
9. CONSTRUCTION OF RCBC'S , RCBC HEADWALLS APRONS AND WINGWALLS TO BE IN ACCORDANCE WITH DEPARTMENT OF TRANSPORT AND MAIN ROADS STD DRGS 1316 TO 1320 AND 1359

CONSTRUCTION EQUIPMENT LOADING TYPICAL DETAILS

CONSTRUCTION EQUIPMENT	PIPE CLASS	MINIMUM COMPACTION COVER TO PIPE OBVERT									
		Ø300	Ø375	Ø450	Ø525	Ø600	Ø675	Ø750	Ø825	Ø900	Ø1050
VIBRATORY RAMMER (UP TO 75kg)	2	0.450	0.450	0.400	0.400	0.350	0.350	0.300	0.300	0.250	0.250
	3	0.300	0.300	0.300	0.300	0.250	0.250	0.200	0.200	0.200	0.200
VIBRATORY TRENCH ROLLER (UP TO 2t)	2	0.400	0.400	0.400	0.350	0.250	0.250	0.200	0.200	0.200	0.200
	3	0.250	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
VIBRATORY SMOOTH DRUM ROLLER (7t)	2	0.700	0.700	0.700	0.650	0.650	0.650	0.600	0.600	0.400	0.400
	3	0.450	0.450	0.450	0.450	0.350	0.350	0.200	0.200	0.200	0.200
VIBRATORY SMOOTH DRUM ROLLER (10t)	2	0.850	0.850	0.850	0.800	0.800	0.800	0.750	0.750	0.750	0.750
	3	0.550	0.550	0.550	0.500	0.500	0.500	0.200	0.200	0.200	0.200
EXCAVATOR AND COMPACTION WHEEL (15t)	2	0.650	0.700	0.650	0.650	0.650	0.650	0.600	0.600	0.550	0.550
	3	0.450	0.450	0.450	0.450	0.450	0.450	0.350	0.350	0.250	0.250
EXCAVATOR AND COMPACTION WHEEL (25t)	2	1.000	1.050	1.000	0.950	0.900	0.900	0.850	0.850	0.750	0.750
	3	0.650	0.650	0.650	0.650	0.650	0.650	0.600	0.600	0.500	0.500
GRADER (CAT120H) (14.5t)	2	0.600	0.600	0.600	0.450	0.200	0.200	0.200	0.200	0.200	0.200
	3	0.600	0.600	0.450	0.450	0.200	0.200	0.200	0.200	0.200	0.200
GRADER (CAT140H) (17.0t)	2	0.600	0.600	0.600	0.600	0.200	0.200	0.200	0.200	0.200	0.200
	3	0.600	0.600	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
SCRAPER (CAT613C11) (27.2t)	2	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.200	0.200
	3	0.600	0.600	0.600	0.600	0.600	0.600	0.200	0.200	0.200	0.200
SCRAPER (CAT621F) (53.8t)	2	0.700	0.700	0.700	0.650	0.650	0.600	0.600	0.600	0.600	0.600
	3	0.650	0.650	0.650	0.600	0.600	0.600	0.600	0.600	0.600	0.600
DOZER (CATD7 G)	2	0.600	0.600	0.600	0.600	0.200	0.200	0.200	0.200	0.200	0.200
	3	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
DOZER (CATD9 R)	2	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.200
	3	0.600	0.600	0.600	0.600	0.600	0.600	0.200	0.200	0.200	0.200
EXCAVATOR (CAT 315B) (15.8t)	2	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
	3	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
EXCAVATOR (CAT317) (17.3t)	2	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
	3	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
EXCAVATOR (CAT325B) (25.9t)	2	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
	3	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200

FILE: N14066.14-122.dwg DATE: 13-04-2017 TIME: 17:10
Xref's: X-TIT X-DRAINAGE USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A	CB	CB	21.10.16	
B				
C				
D				
E				
F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

CONSULT AUSTRALIA

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Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: STORMWATER DRAINAGE TYPICAL DETAILS

DRAWING NUMBER: N14066.14-122

ISSUE: -

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

LOCATION						TIME		SUB-CATCHMENT RUNOFF						INLET DESIGN						
						tc	I	C10	C	A	C×A	ΣCA	Q					Qg	Qb	
DESIGN ARI	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	LAND USE	SLOPE OF CATCHMENT	SUB-CATCHMENT TIME OF CONC.	RAINFALL INTENSITY	10yr RUNOFF CO-EFFICIENT	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF (C × A)	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	MINOR FLOW ROAD CAPACITY	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.
yrs					%	min	mm/h			ha	ha	ha	l/s	l/s	%	l/s		l/s	l/s	
5 100	1/22E	1/22E to 2/22E	1/22E			5.00 5.00	189 329	0.85 0.89	0.81 1.00	0.044 0.044	0.035 0.044	0.035 0.044	18 40 FLOW WIDTH/DEPTH 0.052Dp m	18	0.65	34	#D.08L1.8A.36	18	0	2/22E
5 100	2/22E	2/22E to 3/22E	1/22E;2/22E			5.00 5.00	189 329	0.85 0.89	0.81 1.00	0.054 0.054	0.044 0.054	0.044 0.054	23 50 FLOW WIDTH/DEPTH 0.061Dp m	23	0.50	34	#D.08L1.8A.36	23	0	4/22E
5 100	3/22E	3/22E to 4/22E	1/22E;2/22E														40			
5 100	4/22E	4/22E to 5/22E	1/22E;2/22E;4/22E			5.00 5.00	189 329	0.85 0.89	0.81 1.00	0.113 0.113	0.092 0.113	0.092 0.113	48 103 FLOW WIDTH/DEPTH 2.667Wd m	48	2.50	34	#D.08L1.8A.36	34	14	5/22E
5 100	5/22E	5/22E to 3/22	1/22E;2/22E;4/22E;5/22E			5.00 5.00	189 329	0.85 0.89	0.81 1.00	0.059 0.059	0.048 0.059	0.048 0.059	25 54 FLOW WIDTH/DEPTH 2.667Wd m	39	1.30	34	#D.08L1.8A.36	34	5	1/22C
5 100	1/22	1/22 to 2/22	1/22			5.00 5.00	189 329	0.85 0.89	0.81 1.00	0.047 0.047	0.038 0.047	0.038 0.047	20 43 FLOW WIDTH/DEPTH 0.706Wd m	20	3.22	265	6	18	2	1/22C
5 100	1/22F	1/22F to 2/22	1/22F			10.00 10.00	149 254	0.85 0.89	0.81 1.00	1.002 1.002	0.811 1.002	0.811 1.002	336 707 FLOW WIDTH/DEPTH Wd m	336	0.50	104	#D.2L1.8A.36	336	0	1/22D
5 100	2/22	2/22 to 3/22	1/22;1/22F														40			
5 100	3/22	3/22 to 4/22	1/22E;2/22E;4/22E;5/22E;1/22;1/22F														40			
5 100	11/11	11/11 to 12/11	1/16;2/16;3/16;4/16;5/16;6/16;1/11;1/11S;1/14;2/14;1/11Q;1/11R;1/11P;1/11U;1/18;2/18;3/18;4/18;5/18;6/18;7/18;1/13;1/13D;2/13D;1/13C;1/17;2/17;1/13A;1/13B;1/11N;1/11O;1/12;1/12C;1/12B;1/15;2/15;3/15;4/15;5/15;1/15A;1/15B;1/12A;1/11L;1/11M;1/11J;1/11K														40			
5 100	1/11G	1/11G to 12/11	1/11G			10.00 10.00	149 254	0.85 0.89	0.81 1.00	0.244 0.244	0.198 0.244	0.198 0.244	82 172 FLOW WIDTH/DEPTH 2.407Wd m DOWNSTREAM 1.268m	98	0.77	229	6	72	26	1/11F
5 100	1/11H	1/11H to 12/11	1/11H			7.00 7.00	170 289	0.87	0.83 1.00	0.121 0.121	0.100 0.121	0.100 0.121	47 97 FLOW WIDTH/DEPTH 1.891Wd m DOWNSTREAM 0.838m	59	0.80	233	6	46	13	1/11V
5 100	12/11	12/11 to 14/11	1/16 to 1/11K;1/11G;1/11H														40			
5 100	1/22C	1/22C to 4/22	1/22C			8.00 8.00	162 276	0.85 0.89	0.81 1.00	0.257 0.257	0.208 0.257	0.208 0.257	94 197 FLOW WIDTH/DEPTH 1.742Wd m DOWNSTREAM 0.873m	101	3.32	269	6	73	28	1/22A

	DRAIN DESIGN													
	tc	I	ΣCA	Qt	Qm	Qs	Qp	L	S		V	T		
STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C × A)	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE / BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS
	min	mm/h	ha	l/s	l/s	l/s	l/s	m	%	mm	m/s	min		
1/22E	5.00 5.00	189 329	0.035 0.044	40	430	22	18 (Pipe flow= Grate flow)	17.000	3.36	225(U	0.39(0.22 1y) (2.56)	0.28		Part full downstream pipe Upstream HGL 13.933 below outlet pipe obv 13.966 Set Kp to 1
2/22E	5.28 5.28	186 322	0.079 0.098	88	379	47	40 (Pipe flow= Sum upstr atten flows)	3.700	3.29	375(3	0.37(0.20 1y) (2.88)	0.06		Part full downstream pipe Upstream HGL 13.222 below outlet pipe obv 13.395 Set Kp to 1
3/22E	5.34 5.34	185 320	0.079 0.098	87			40 (Pipe flow= Sum upstr atten flows)	13.695	0.89	375(3	0.37(0.20 1y) (1.50)	0.23		Part full downstream pipe Upstream HGL 13.179 below outlet pipe obv 13.253 Set Kp to 1
4/22E	5.57 5.57	183 315	0.171 0.211	185			73 (Pipe flow= Sum upstr atten flows)	21.539	3.67	375(3	0.66(0.41 1y) (3.04)	0.36		
5/22E	5.93 5.93	179 308	0.219 0.270	231			103 (Pipe flow= Sum upstr atten flows)	9.524	0.50	375(3	0.94(0.52 1y) (1.12)	0.16		
1/22	5.00 5.00	189 329	0.038 0.047	43	2388	25	18 (Pipe flow= Grate flow)	2.492	1.00	375(3	0.16(0.09 1y) (1.59)	0.04		
1/22F	10.00 10.00	149 254	0.811 1.002	707	941	371	336 (Pipe flow= Grate flow)	16.327	1.50	525(3	1.59(0.81 1y) (2.41)	0.17		
2/22	10.17 10.17	148 252	0.849 1.049	734			348 (Pipe flow= Sum upstr atten flows)	22.805	4.00	525(3	1.65(0.84 1y) (3.94)	0.23		
3/22	10.40 10.40	147 250	1.068 1.319	916			430 (Pipe flow= Sum upstr atten flows)	49.769	3.80	525(3	2.04(1.04 1y) (3.84)	0.41		
11/11	14.80 14.80	126 217	4.148 5.114	3083			1401 (Pipe flow= Sum upstr atten flows)	56.812	0.99	900(3	2.19(1.07 1y) (2.84)	0.43		
1/11G	10.00 10.00	149 254	0.198 0.244	172	1257	100	72 (Pipe flow= Grate flow)	2.874	1.01	375(3	0.65(0.34 1y) (1.59)	0.05		
1/11H	7.00 7.00	170 289	0.100 0.121	97	1280	51	46 (Pipe flow= Grate flow)	7.817	1.00	375(3	0.42(0.23 1y) (1.59)	0.13		
12/11	15.23 15.23	125 214	4.446 5.479	3257			1484 (Pipe flow= Sum upstr atten flows)	67.218	0.83	900(3	2.32(1.11 1y) (2.60)	0.48		
1/22C	8.00 8.00	162 276	0.208 0.257	197	2424	124	73 (Pipe flow= Grate flow)	3.373	1.00	375(3	0.66(0.36 1y) (1.59)	0.06		

	HEADLOSSES							PART FULL				DESIGN LEVELS						
	V2/2g	Ku	hu	Kl	hl	Kw	hw	Sf	hf		Vp							
STRUCTURE No.	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCT. HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCT. HEADLOSS	W.S.E CO-EFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L × Sf)	DEPTH	VELOCITY	OBVERT LEVELS	DRAIN SECTION H.G.L	UPSTREAM H.G.L	LAT. H.G.L	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.
	m		m		m		m	%	m	m	m/s	m	m	m	m	m	m	
1/22E	0.008	1.00	0.138			1.00	0.138	0.08	0.013	0.064 (0.047 1y)	1.86 (1.55 1y)	13.966 13.395	13.795 13.234	13.933		13.933	14.608	1/22E
2/22E	0.007	1.00	0.041			1.00	0.041	0.05	0.002	0.090 (0.066 1y)	1.97 (1.64 1y)	13.395 13.273	13.181 13.179	13.222		13.222	14.355	2/22E
3/22E	0.007	1.00	0.010			1.00	0.010	0.05	0.007	0.126 (0.091 1y)	1.24 (1.03 1y)	13.253 13.131	13.169 13.162	13.179		13.179	14.294	3/22E
4/22E	0.022	2.28	0.051			2.28	0.051	0.17	0.037	0.119 (0.093 1y)	2.43 (2.12 1y)	13.111 12.321	13.111 12.635	13.162		13.162	14.175	4/22E
5/22E	0.045	1.28	0.058			1.28	0.058	0.35	0.033			12.301 12.253	12.577 12.544	12.635		12.635	14.066	5/22E
1/22	0.001	8.07	0.011			8.07	0.011	0.01	0.000			13.211 13.186	13.461 13.461	13.472		13.472	14.468	1/22
1/22F	0.129	4.92	0.634			4.92	0.634	0.66	0.107			13.451 13.206	13.568 13.461	14.202		14.202	14.400	1/22F
2/22	0.139	1.98	0.275			2.31	0.321	0.70	0.160	0.234 (0.163 1y)	3.76 (3.13 1y)	13.186 12.273	13.186 12.544	13.461		13.507	14.463	2/22
3/22	0.212	1.37	0.291			1.37	0.291	1.08	0.536	0.269 (0.184 1y)	3.90 (3.26 1y)	12.253 10.361	12.253 10.969	12.544		12.544	13.701	3/22
11/11	0.244	0.44	0.108			0.44	0.108	0.59	0.334			10.852 10.287	11.029 10.695	11.137		11.137	12.480	11/11
1/11G	0.022	7.74	0.167			7.74	0.167	0.17	0.005	0.167 (0.119 1y)	1.51 (1.27 1y)	11.030 11.001	11.030 10.793	11.197		11.197	11.967	1/11G
1/11H	0.009	9.16	0.082			9.16	0.082	0.07	0.005	0.132 (0.095 1y)	1.34 (1.12 1y)	11.060 10.982	11.060 10.739	11.142		11.142	11.995	1/11H
12/11	0.274	1.56	0.428			1.81	0.497	0.66	0.444	0.664 (0.412 1y)	2.94 (2.50 1y)	10.267 9.708	10.267 9.791	10.695		10.764	12.027	12/11
1/22C	0.022	7.03	0.156			7.03	0.156	0.17	0.006	0.168 (0.122 1y)	1.51 (1.28 1y)	11.162 11.128	11.162 10.969	11.318		11.318	12.102	1/22C

CALCULATIONS TABLE

FILE: N14066.14-123.dwg DATE: 13-04-2017 TIME: 17:10
Xref's: X-TIT X-DRAINAGE USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	CB	CB	21.10.16	
A				
B				
C				
D				
E				
F				

DESIGN CHECK
DRAWN CHECK
SCALE (METRES)

Moreton Bay Regional Council

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL
SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD
PROJECT No.: N14066.14
PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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Quality System
Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: STORMWATER DRAINAGE CALCULATION TABLES SHEET 1 OF 2
DRAWING NUMBER: N14066.14-123
ISSUE: -

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2

CALCULATIONS TABLE

DESIGN ARI (yrs)	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	LAND USE	SLOPE OF CATCHMENT (%)	TIME: tc SUB-CATCHMENT TIME OF CONC. (min)	TIME: I RAINFALL INTENSITY (mm/h)	SUB-CATCHMENT RUNOFF: C10 10yr RUNOFF CO-EFFICIENT	C CO-EFFICIENT OF RUNOFF	A SUB-CATCHMENT AREA (ha)	C×A EQUIVALENT AREA (ha)	+CA SUM OF (C × A) (ha)	Q SUB-CATCHMENT DISCHARGE (l/s)	INLET DESIGN: FLOW IN K&C (INC. BYPASS) (l/s)	ROAD GRADE AT INLET (%)	MINOR FLOW ROAD CAPACITY (l/s)	INLET TYPE	Qg FLOW INTO INLET (l/s)	Qb BYPASS FLOW (l/s)	BYPASS STRUCTURE No.	DRAIN DESIGN: tc CRITICAL TIME OF CONC. (min)	I RAINFALL INTENSITY (mm/h)	+CA TOTAL (C × A) (ha)	Qt MAJOR TOTAL FLOW (l/s)	Qm MAJOR SURFACE FLOW CAPACITY (l/s)	Qs MAJOR SURFACE FLOW (l/s)	Qp PIPE FLOW (l/s)	L REACH LENGTH (m)	S PIPE GRADE (%)	PIPE / BOX DIMENSIONS (CLASS) (mm)	V FLOW VELOCITY FULL (PIPE GRADE VELOCITY) (m/s)	T TIME OF FLOW IN REACH (min)
5 100	1/22D	1/22D to 4/22	1/22D			8.00 8.00	162 276	0.85 0.89	0.81 1.00	0.156 0.156	0.126 0.156	0.126 0.156	57 120 FLOW WIDTH/DEPTH 1.308Wd m DOWNSTREAM 0.426m	57	3.32	269	6	46	11	1/22B	8.00 8.00	162 276	0.126 0.156	120	2424	74 (Pipe flow= Grate flow)	46	4.870	1.00	375(3)	0.42(0.23 1y) (1.59)	0.08
5 100	4/22	4/22 to 5/22	1/22E;2/22E;4/22E;5/22E;1/22;1/22F;1/22C;1/22D														40				10.81 10.81	144 247	1.402 1.732	1188		(Pipe flow= Sum upstr atten flows)	527	40.267	2.13	525(3)	2.50(1.28 1y) (2.87)	0.27
5 100	1/11F	1/11F to 14/11	1/11F			10.00 10.00	149 254	0.85 0.89	0.81 1.00	0.281 0.281	0.228 0.281	0.228 0.281	94 198 FLOW WIDTH/DEPTH 2.400Wd m DOWNSTREAM 1.348m	120	1.17	282	6	84	36	1/22B	10.00 10.00	149 254	0.228 0.281	198		(Pipe flow= Grate flow)	84	2.800	1.00	375(3)	0.76(0.42 1y) (1.59)	0.05
5 100	1/11V	1/11V to 14/11	1/11V			10.00 10.00	149 254	0.85 0.89	0.81 1.00	0.255 0.255	0.207 0.255	0.207 0.255	86 180 FLOW WIDTH/DEPTH 2.185Wd m DOWNSTREAM 1.148m	99	1.21	286	6	72	27	1/11E	10.00 10.00	149 254	0.207 0.255	180	1574	108 (Pipe flow= Grate flow)	72	5.500	1.00	375(3)	0.65(0.35 1y) (1.59)	0.09
5 100	14/11	14/11 to 15/11	1/16 to 1/11K;1/11G;1/11H;1/11F;1/11V														40				15.71 15.71	123 211	4.881 6.015	3525		(Pipe flow= Sum upstr atten flows)	1589	15.147	2.51	1050(3)	1.82(0.87 1y) (5.01)	0.14
5 100	1/22A	1/22A to 5/22	1/22A			10.00 10.00	149 254	0.85 0.89	0.81 1.00	0.149 0.149	0.121 0.149	0.121 0.149	50 105 FLOW WIDTH/DEPTH 1.026Wd m	78	22.35	179	28S.08	78	0		10.00 10.00	149 254	0.121 0.149	105		(Pipe flow= Grate flow)	78	2.482	1.00	450(3)	0.49(0.22 1y) (1.79)	0.04
5 100	1/22B	1/22B to 5/22	1/22B			10.00 10.00	149 254	0.85 0.89	0.81 1.00	0.168 0.168	0.136 0.168	0.136 0.168	56 119 FLOW WIDTH/DEPTH 1.471Wd m	103	4.61	179	28S.08	103	0		10.00 10.00	149 254	0.136 0.168	119		(Pipe flow= Grate flow)	103	4.918	1.00	450(3)	0.65(0.28 1y) (1.79)	0.08
5 100	5/22	5/22 to 15/11	1/22E;2/22E;4/22E;5/22E;1/22;1/22F;1/22C;1/22D;1/22A;1/22B														40				11.08 11.08	143 244	1.659 2.049	1389		(Pipe flow= Sum upstr atten flows)	697	11.767	1.50	600(3)	2.47(1.19 1y) (2.66)	0.08
5 100	15/11	15/11 to 16/11	1/16 to 1/11K;1/11G;1/11H;1/11F;1/11V;1/22E;2/22E;4/22E;5/22E;1/22;1/22F;1/22C;1/22D;1/22A;1/22B														40				15.85 15.85	123 211	6.540 8.064	4726		(Pipe flow= Sum upstr atten flows)	2189	25.879	1.00	1050(3)	2.51(1.18 1y) (3.16)	0.17
5 100	1/11E	1/11E to 16/11	1/11E			5.00 5.00	189 329	0.85 0.89	0.81 1.00	0.075 0.075	0.060 0.075	0.060 0.075	32 68 FLOW WIDTH/DEPTH 1.574Wd m DOWNSTREAM 0.170m	59	1.71	341	7	55	4		5.00 5.00	189 329	0.060 0.075	69	1873	14 (Pipe flow= Grate flow)	55	2.801	1.00	375(3)	0.50(0.25 1y) (1.59)	0.05
5 100	16/11	16/11 to 17/11	1/16 to 1/11K;1/11G;1/11H;1/11F;1/11V;1/22E;2/22E;4/22E;5/22E;1/22;1/22F;1/22C;1/22D;1/22A;1/22B;1/11E														40				16.02 16.02	122 210	6.600 8.139	4748		(Pipe flow= Sum upstr atten flows)	2206	60.020	1.99	1050(3)	2.53(1.18 1y) (4.46)	0.40
5 100	1/21A	1/21A to 3/21	1/21A			8.00 8.00	162 276	0.85 0.89	0.81 1.00	0.156 0.156	0.127 0.156	0.127 0.156	57 120 FLOW WIDTH/DEPTH 1.044Wd m	79	0.21	179	28S.08	79	0		8.00 8.00	162 276	0.127 0.156	120		(Pipe flow= Grate flow)	79	2.482	1.00	375(3)	0.72(0.34 1y) (1.59)	0.04
5 100	1/21B	1/21B to 3/21	1/21B			10.00 10.00	149 254	0.85 0.89	0.81 1.00	0.355 0.355	0.287 0.355	0.287 0.355	119 250 FLOW WIDTH/DEPTH 2.162Wd m	145	0.44	179	28S.08	145	0		10.00 10.00	149 254	0.287 0.355	250		(Pipe flow= Grate flow)	145	4.923	1.00	450(3)	0.91(0.44 1y) (1.79)	0.08
5 100	3/21	3/21 to 17/11	1/21;1/21C;1/21A;1/21B														40				10.64 10.64	145 248	0.857 1.059	730		(Pipe flow= Sum upstr atten flows)	343	13.205	0.70	525(3)	1.63(0.84 1y) (1.64)	0.14
5 100	17/11	17/11 to 19/11	1/16 to 1/11K;1/11G;1/11H;1/11F;1/11V;1/22E;2/22E;4/22E;5/22E;1/22;1/22F;1/22C;1/22D;1/22A;1/22B;1/11E;1/21;1/21C;1/21A;1/21B														40				16.42 16.42	121 207	7.457 9.198	5289		(Pipe flow= Sum upstr atten flows)	2475	56.104	1.23	1200(3)	2.16(1.00 1y) (3.83)	0.43

STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	HEADLOSSES: V2/2g VELOCITY HEAD (m)	Ku U/S HEADLOSS COEFFICIENT	hu U/S PIPE STRUCT. HEADLOSS (m)	Kl LAT. HEADLOSS CO-EFFICIENT	hl LAT. PIPE STRUCT. HEADLOSS (m)	Kw W.S.E CO-EFFICIENT	hw CHANGE IN W.S.E (m)	Sf PIPE FRICTION SLOPE (%)	hf PIPE FRICTION HEADLOSS (L × Sf) (m)	PART FULL: DEPTH (m)	Vp VELOCITY (m/s)	DESIGN LEVELS: OBVERT LEVELS (m)	DRAIN SECTION H.G.L (m)	UPSTREAM H.G.L (m)	LAT. H.G.L (m)	W.S.E. (m)	SURFACE OR K&C INVERT LEVEL (m)	STRUCTURE No.
		0.009	8.52	0.077			8.52	0.077	0.07	0.003	0.132 (0.095 1y)	1.34 (1.12 1y)	11.128 11.079	11.128 10.969	11.205		11.205	12.063	1/22D
		0.319	1.09	0.346			1.33	0.424	1.62	0.651			10.341 9.484	10.623 9.972	10.969		11.047	12.063	4/22
		0.029	8.22	0.242			8.22	0.242	0.23	0.006	0.183 (0.132 1y)	1.57 (1.34 1y)	10.451 10.423	10.451 10.231	10.693		10.693	11.386	1/11F
		0.022	7.96	0.171			7.96	0.171	0.17	0.009	0.167 (0.120 1y)	1.51 (1.28 1y)	10.427 10.372	10.427 10.164	10.598		10.598	11.362	1/11V
		0.169	0.49	0.083			0.49	0.083	0.33	0.050	0.439 (0.296 1y)	4.61 (3.75 1y)	9.708 9.327	9.708 9.586	9.791		9.791	11.439	14/11
		0.012	4.55	0.056			4.55	0.056	0.07	0.002			9.953 9.928	9.974 9.972	10.030		10.030	10.895	1/22A
		0.022	3.96	0.086			3.96	0.086	0.13	0.006			9.953 9.904	9.978 9.972	10.064		10.064	10.895	1/22B
		0.311	0.75	0.234			0.76	0.237	1.29	0.152			9.484 9.307	9.738 9.586	9.972		9.975	10.963	5/22
		0.321	0.87	0.279			0.87	0.279	0.63	0.163	0.709 (0.446 1y)	3.51 (2.93 1y)	9.307 9.048	9.307 8.823	9.586		9.586	11.232	15/11
	Part full downstream pipe Upstream HGL 9.698 below outlet pipe obv 9.827 Set Kp to 1	0.013	1.00	0.101			1.00	0.101	0.10	0.003	0.145 (0.100 1y)	1.41 (1.15 1y)	9.827 9.799	9.597 9.569	9.698		9.698	10.762	1/11E
	Part full downstream pipe Upstream HGL 8.823 below outlet pipe obv 9.028 Set Kp to 0.26	0.326	0.26	0.280			0.26	0.280	0.64	0.384	0.568 (0.370 1y)	4.60 (3.76 1y)	9.028 7.833	8.543 8.137	8.823		8.823	10.804	16/11
		0.026	4.71	0.124			4.71	0.124	0.20	0.005	0.177 (0.117 1y)	1.55 (1.26 1y)	8.469 8.444	8.469 8.410	8.593		8.593	9.404	1/21A
		0.042	4.78	0.202			4.78	0.202	0.26	0.013	0.228 (0.152 1y)	1.80 (1.48 1y)	8.462 8.413	8.462 8.410	8.664		8.664	9.404	1/21B
		0.135	1.35	0.183			1.35	0.183	0.69	0.090			7.925 7.833	8.227 8.137	8.410		8.410	9.471	3/21
		0.238	1.28	0.304			1.32	0.314	0.39	0.219	0.649 (0.421 1y)	3.95 (3.22 1y)	7.833 7.144	7.833 7.518	8.137		8.147	9.751	17/11

FILE: N14066.14-124.dwg DATE: 13-04-2017 TIME: 17:13
Xref's: X-TIT X-DRAINAGE USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
	CB	CB	21.10.16	
A				
B				
C				
D				
E				
F				

AMENDMENTS

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEYOR: LANDPARTNERS LIMITED
Level 3, KINGS ROW, 40 McDougall Street, MILTON Q 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

SURVEY DATUM: PM120863 RL 13.031

APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No. N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

Calibre CONSULTING

CONSULT AUSTRALIA

Calibre Consulting (QLD) Pty Ltd
Level 3, 16 Innovation Parkway, Birtinya QLD Australia 4575
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Quality System
Quality Endorsed Company ISO 9001 Lic 4084

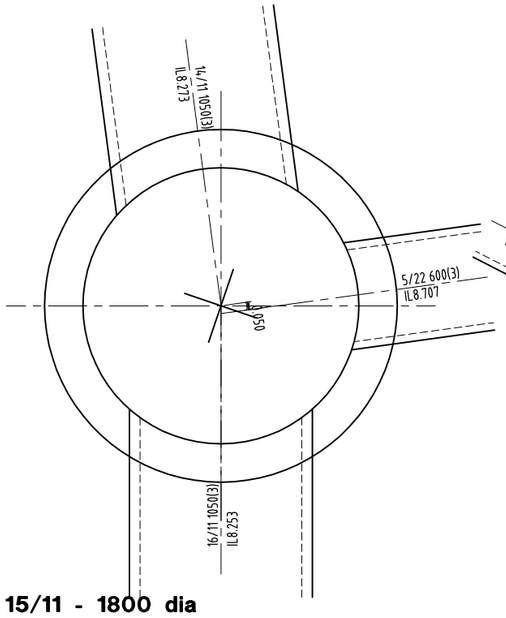
DRAWING TITLE: STORMWATER DRAINAGE CALCULATION TABLES SHEET 2 OF 2

DRAWING NUMBER: N14066.14-124

ISSUE: -

Moreton Bay Regional Council

Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2



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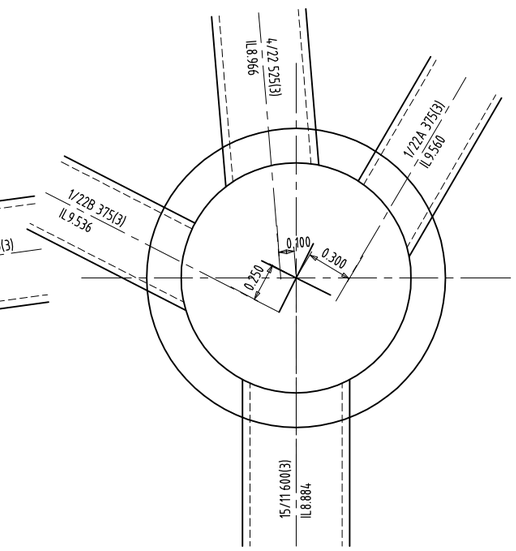

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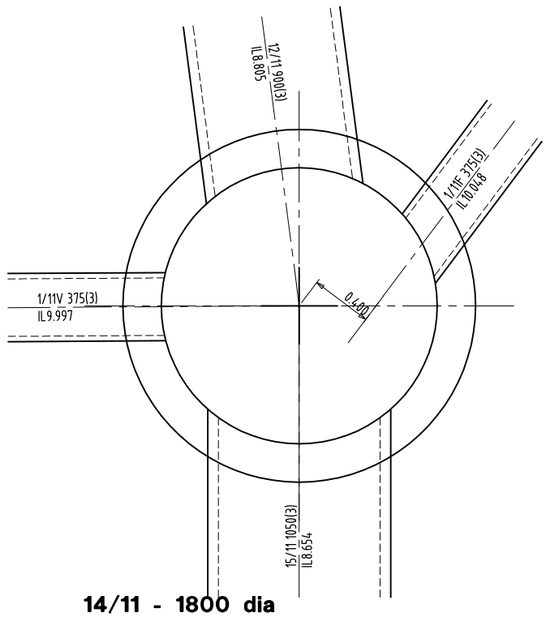

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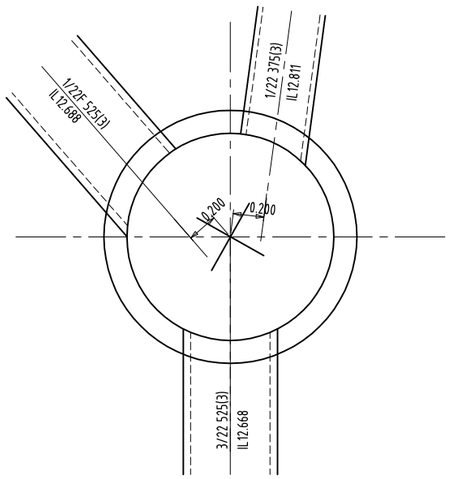

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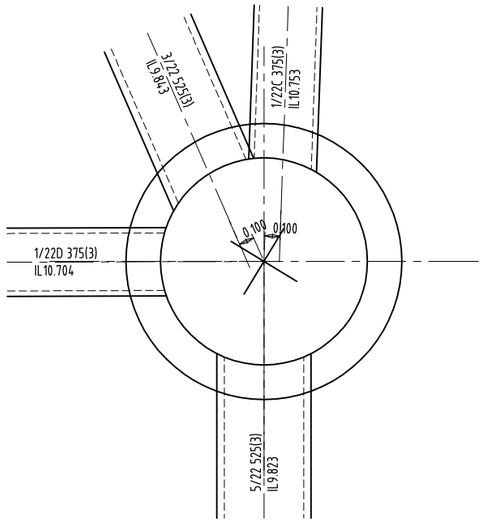

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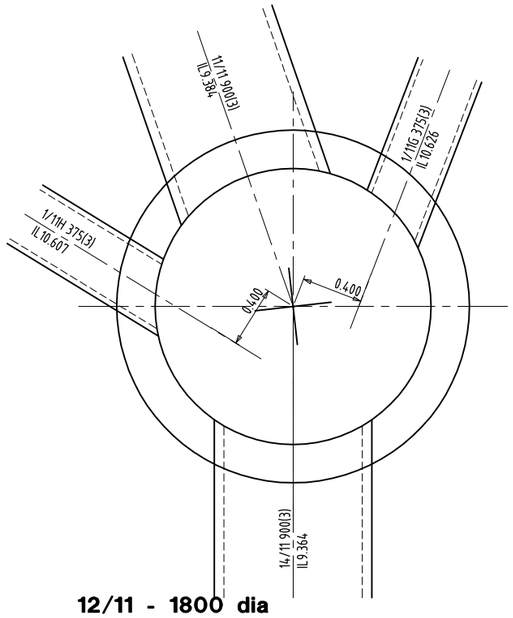

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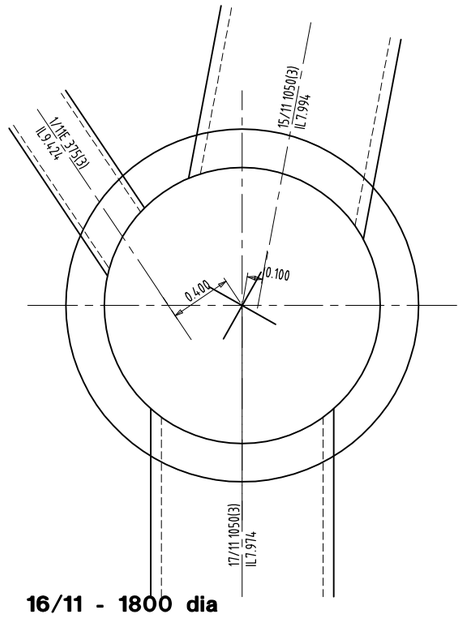
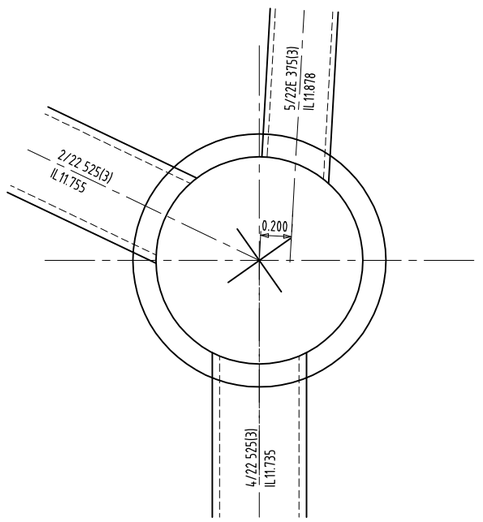


16/11 - 1800 dia
SL 10.804



3/22 - 1350 dia
SL 13.701

FILE: N14066.14-125.dwg DATE: 25-05-2017 TIME: 11:02
Xref's: X-TIT X-DRAINAGE USR: Curtis Boorman

	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
AMENDMENTS	A	CB	CB	23.05.17	DETAIL 12/11 AMENDED
	B				
	C				
	D				
	E				
	F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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APPROVED
BRAD THOMPSON RPEQ 07818
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

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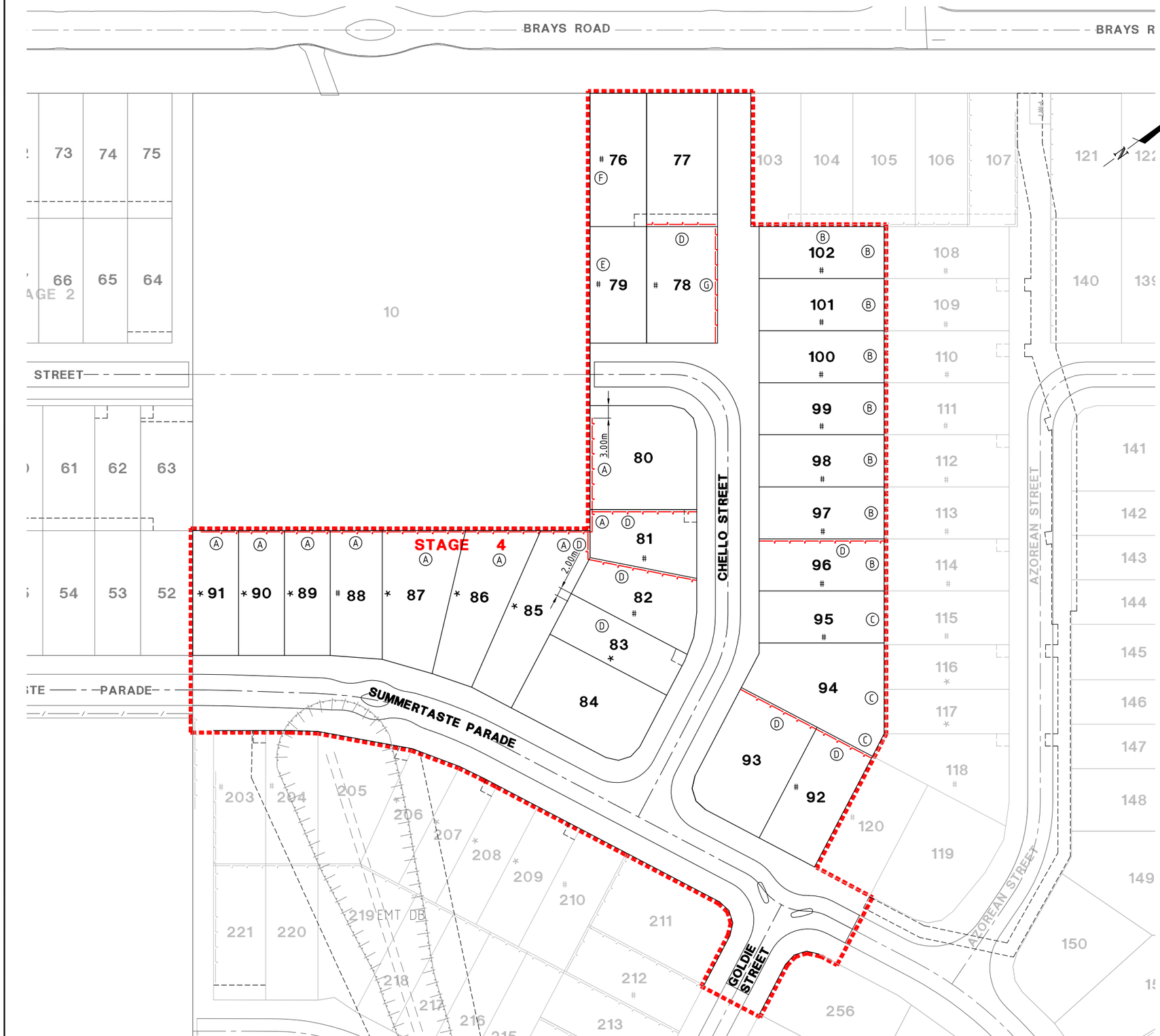
Quality Endorsed Company ISO 9001 Lic 4084

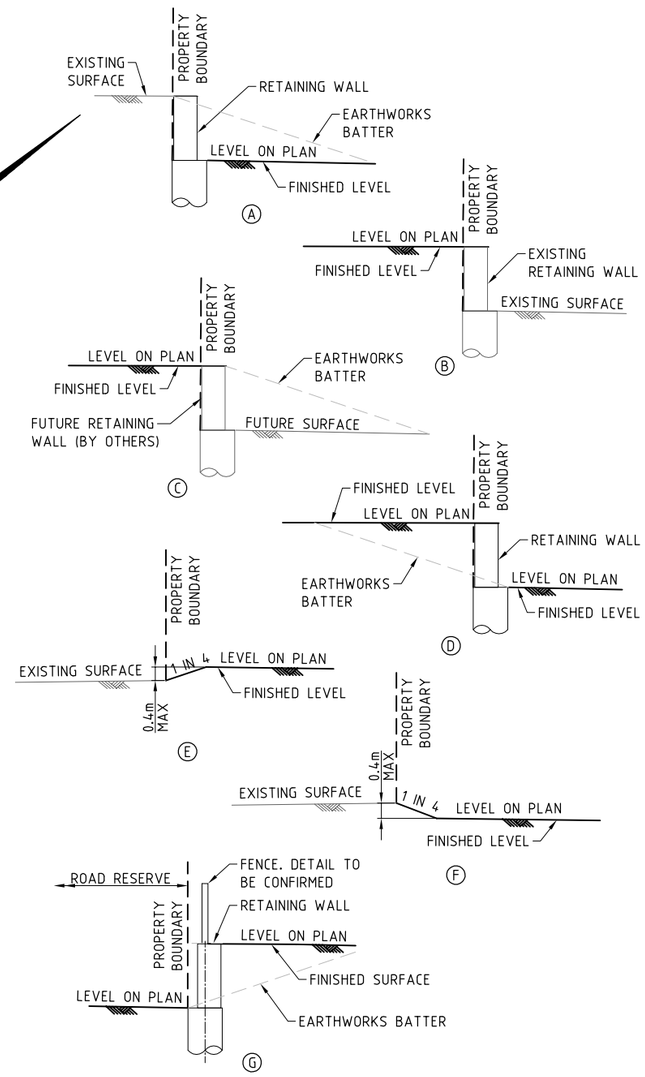
DRAWING TITLE: STORMWATER DRAINAGE STRUCTURE DETAILS

DRAWING NUMBER: N14066.14-125

ISSUE: A

Moreton Bay Regional Council





TYPICAL BOUNDARY TREATMENTS

NTS

NOTES:
1. SETOUT IS TO PROPERTY BOUNDARIES UNLESS INDICATED OTHERWISE.
2. REFER N14066.14-401 FOR TYPICAL RETAINING WALL ARRANGEMENTS

LEGEND

CONCRETE SLEEPER RETAINING WALL

STAGE BOUNDARY

FILE: N14066.14-400.dwg DATE: 08-05-2017 TIME: 17.05
Xref's: X-N14066.14-TIT X-N14066.14-BASE X-N14066-FRESHWATER-BASE-EXISTING X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A		CB	CB	21.10.16	
B					
C					
D					
E					
F					

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:200 2 1 0 2 4 6 8 10 A1
1:400 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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Quality Endorsed Company ISO 9001 Lic 4084

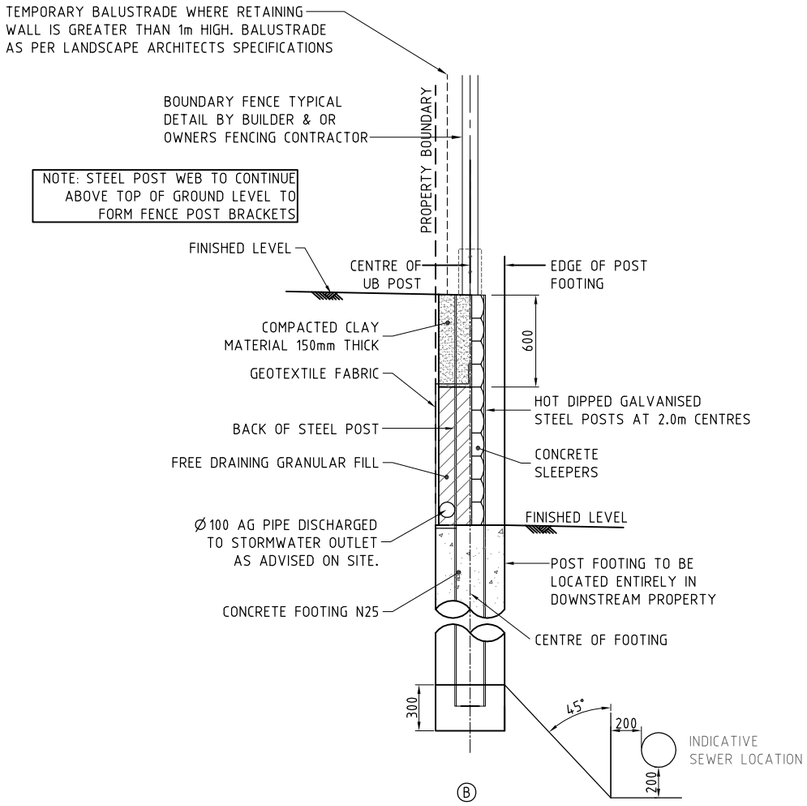
DRAWING TITLE: RETAINING WALL SETOUT PLAN

DRAWING NUMBER: N14066.14-400

ISSUE: -

Moreton Bay Regional Council

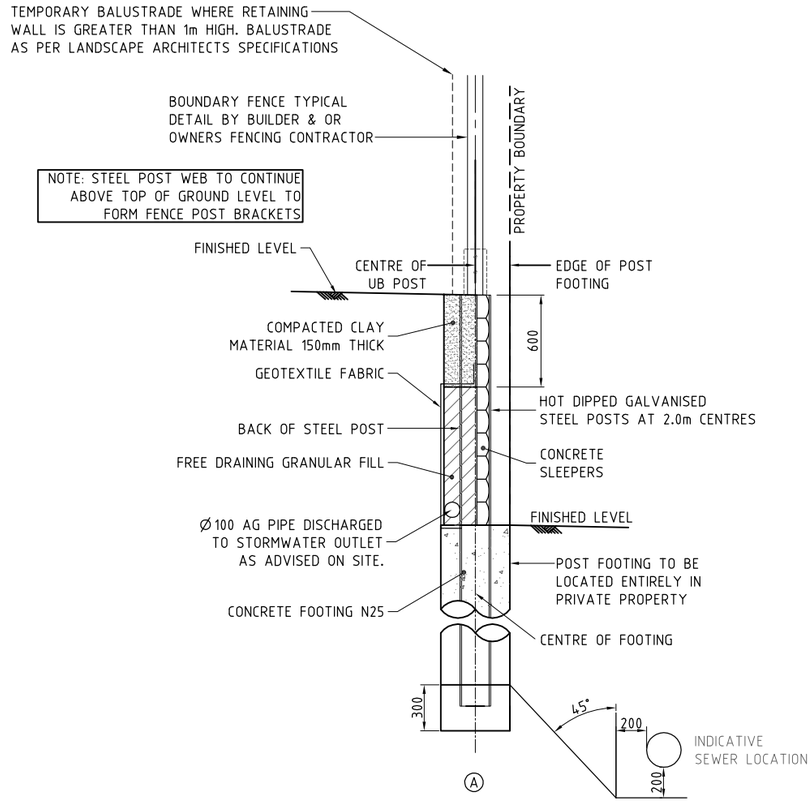
Approved Subject to Conditions of Decision Notice DA/29754/2014/V4D/2



TYPICAL SECTION
CONCRETE SLEEPER RETAINING WALL
AT FENCED BOUNDARIES

SCALE 1:20

NOTE: RETAINING WALL DESIGN AND CONSTRUCTION TO INCORPORATE LOADING FROM ACOUSTIC FENCE WHERE APPLICABLE



TYPICAL SECTION
CONCRETE SLEEPER RETAINING WALL
AT PROPERTY FRONTAGE

SCALE 1:20

NOTE: RETAINING WALL DESIGN AND CONSTRUCTION TO INCORPORATE LOADING FROM ACOUSTIC FENCE WHERE APPLICABLE

MINIMUM DESIGN REQUIREMENTS

- SURCHARGE LOADING ON BACKFILL : 5KPa
- POST AND FOOTING DESIGN TO ALLOW FOR 1.8m HIGH FENCE
- MAX 1V:4H SLOPE BEHIND WALL

NOTES:

1. RETAINING WALLS TO BE CONSTRUCTED TO MANUFACTURERS SPECIFICATIONS.
2. CONTRACTOR TO PROVIDE STRUCTURAL CERTIFICATION FOR RETAINING WALLS DESIGN AND CONSTRUCTION.
3. POST AND FOOTING DESIGN TO ACCOMODATE APPROVED 1.80m SAFETY FENCE TO ALL WALLS HIGHER THAN 1.0m.
4. FOOTINGS ADJACENT SERVICES ARE TO EXTEND BELOW THE ZONE OF INFLUENCE.
5. POST AND FOOTING TO BE CONSTRUCTED 1.0m EITHER SIDE OF THE SEWER MAIN WHERE APPLICABLE.

FILE: N14066.14-401.dwg DATE: 08-05-2017 TIME: 17:33
Xref's: X-TIT USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE
	CB	CB	21.10.16

AMENDMENTS

	AMENDMENT DETAILS
A	
B	
C	
D	
E	
F	

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)

1:20 0.2 0 0.2 0.4 0.6 0.8 1 A1

1:40 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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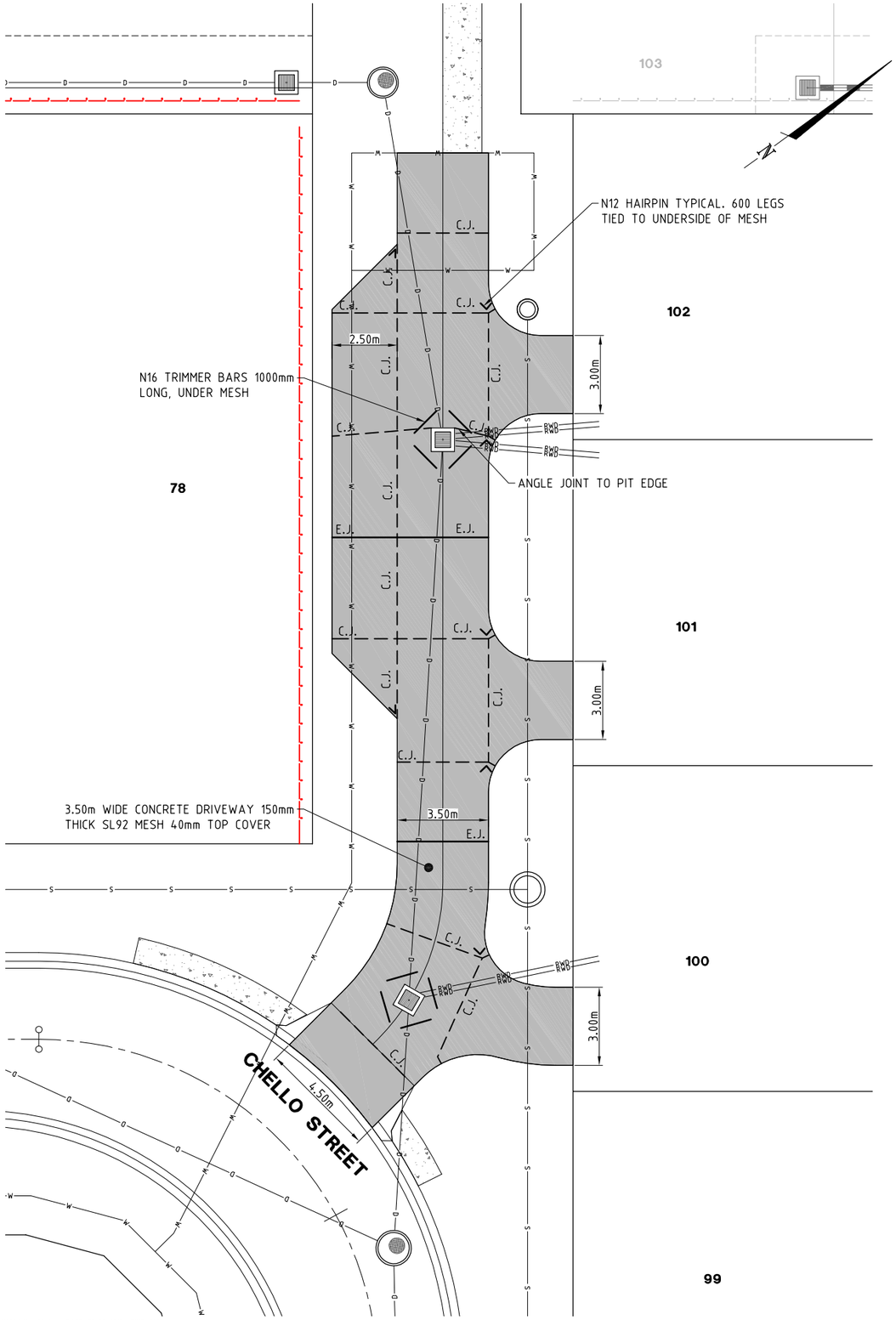
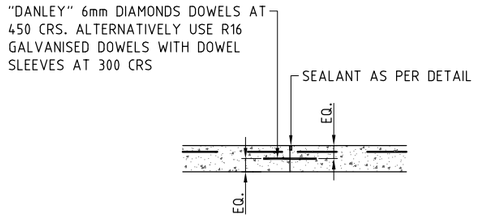
DRAWING TITLE: RETAINING WALL DETAIL PLAN

DRAWING NUMBER: N14066.14-401

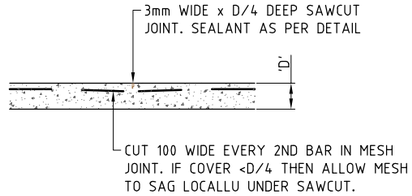
ISSUE: -





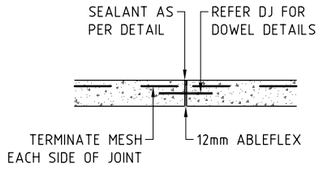
DOWELLED JOINT (DJ) OPTION

NTS



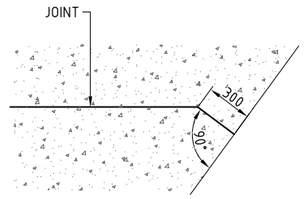
SAWN JOINT (SJ) OPTION

NTS



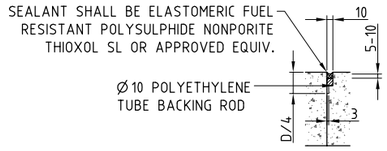
EXPANSION JOINT DETAIL (EJ)

NTS



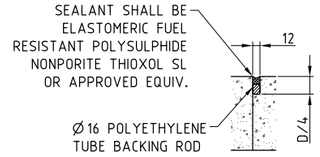
TYP. JOINT TERMINATION AT OBLIQUE SLAB EDGE

NTS



SJ SEALANT DETAIL

NTS



EJ & DJ SEALANT DETAIL

NTS

LEGEND

E.J. EXPANSION JOINT

C.J. CONTRACTION JOINT (EITHER SJ OR DJ)

CONCRETE NOTES

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS.3600 S.A.A. CONCRETE STRUCTURES.

C2 NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

C3 THE FACE OF ALL CONCRETE AGAINST WHICH NEW CONCRETE IS TO BE CAST IS TO BE THOROUGHLY MECHANICALLY SCABBLED, FULLY EXPOSING THE AGGREGATE MATRIX, UNLESS OTHERWISE NOTED.

C4 CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE ENGINEER. THE INTERFACE OF THE HARDENED CONCRETE SHALL BE THOROUGHLY SCABBLED TO REMOVE LAITANCE AT ALL CONSTRUCTION JOINTS.

C5 FORMWORK SHALL BE DESIGNED AND CONSTRUCTED BY THE BUILDER IN ACCORDANCE WITH AS.3610 S.A.A. FORMWORK CODE.

C6 CONCRETE TESTING SHALL BE 'PROJECT ASSESSMENT' IN ACCORDANCE WITH SECTION 20.7 OF AS.3600.

C7 CONCRETE SIZES AS DRAWN DO NOT INCLUDE APPLIED FINISHES AND MUST NOT BE REDUCED OR HOLED IN ANY WAY WITHOUT APPROVAL OF THE ENGINEER.

C8 SAW CUTTING OF JOINTS IN SLABS ON GROUND SHALL COMMENCE AS EARLY AS POSSIBLE WITHOUT CAUSING UNACCEPTABLE RAVELLING OF JOINT EDGES. SAW CUTTING SHALL BE COMPLETED WITHIN 12 HOURS OF SLAB CASTING.

C9 CONCRETE SLUMP SHALL BE 80 mm UNLESS STATED OTHERWISE.

C10 THE APPROVED METHOD OF CURING SHALL BE IN PLACE FOR A MINIMUM PERIOD OF 7 DAYS.

C11 CONCRETE CHARACTERISTIC STRENGTH (f'c) SHALL BE AS FOLLOWS UNLESS STATED OTHERWISE:

ELEMENT	EXPOSURE CLASSIFICATION	COVER (mm)	GRADE (MPa)
SLAB ON GROUND	B1	40	32

C12 MAXIMUM CONCRETE AGGREGATE SIZE TO BE 20mm UNO.

REINFORCING STEEL

S1 ABBREVIATIONS FOR STEEL GRADE AND TYPE: -
- "R" - STRUCTURAL GRADE 230 PLAIN ROUND BAR TO AS1302
- "Y" - GRADE 410 Y HOT ROLLED DEFORMED BAR TO AS1302
- "N" - GRADE D500N TO AS/NZS4671
- "F" - HARD DRAWN STEEL WIRE REINFORCING FABRIC TO AS1304
- "W" - STEEL WIRE TO AS1303

S2 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.

S3 WELDING SHALL NOT BE PERMITTED WITHOUT APPROVAL OF THE ENGINEER.

S4 ENSURE THE CORRECT SPACING OF BARS IS MAINTAINED AND ALL REINFORCEMENT IS SUPPORTED IN ITS CORRECT POSITION BY APPROVED BAR CHAIRS, SPACERS OR SUPPORT BARS @ 1000 MAX CRS.

S5 ALL INTERSECTIONS OF BARS SHALL BE TIED WITH 1.25mm Ø MIN ANNEALED WIRE.

S6 LAPS TO FABRIC REINFORCEMENT SHALL BE AT LEAST 225mm OR 2 CROSS WIRES ON EACH SHEET. LAPS TO TRENCH MESH SHALL BE 500mm MINIMUM AT SPLICES AND FULL WIDTH AT INTERSECTIONS.

S7 IF BARS OF DIFFERENT DIAMETERS ARE LAPPED, THE LAP LENGTH SHALL BE CALCULATED USING THE LESSER DIAMETER.

FILE: N14066.14-402.dwg DATE: 25-05-2017 TIME: 11:18
Xref's: X-TIT X-BASE X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

AMENDMENTS	FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A		CB	CB	21.10.16	
B	A	CB	CB	23.05.17	DRIVEWAY AMENDED
C					
D					
E					
F					

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:100 1 5 0 1 2 3 4 5 A1
1:200 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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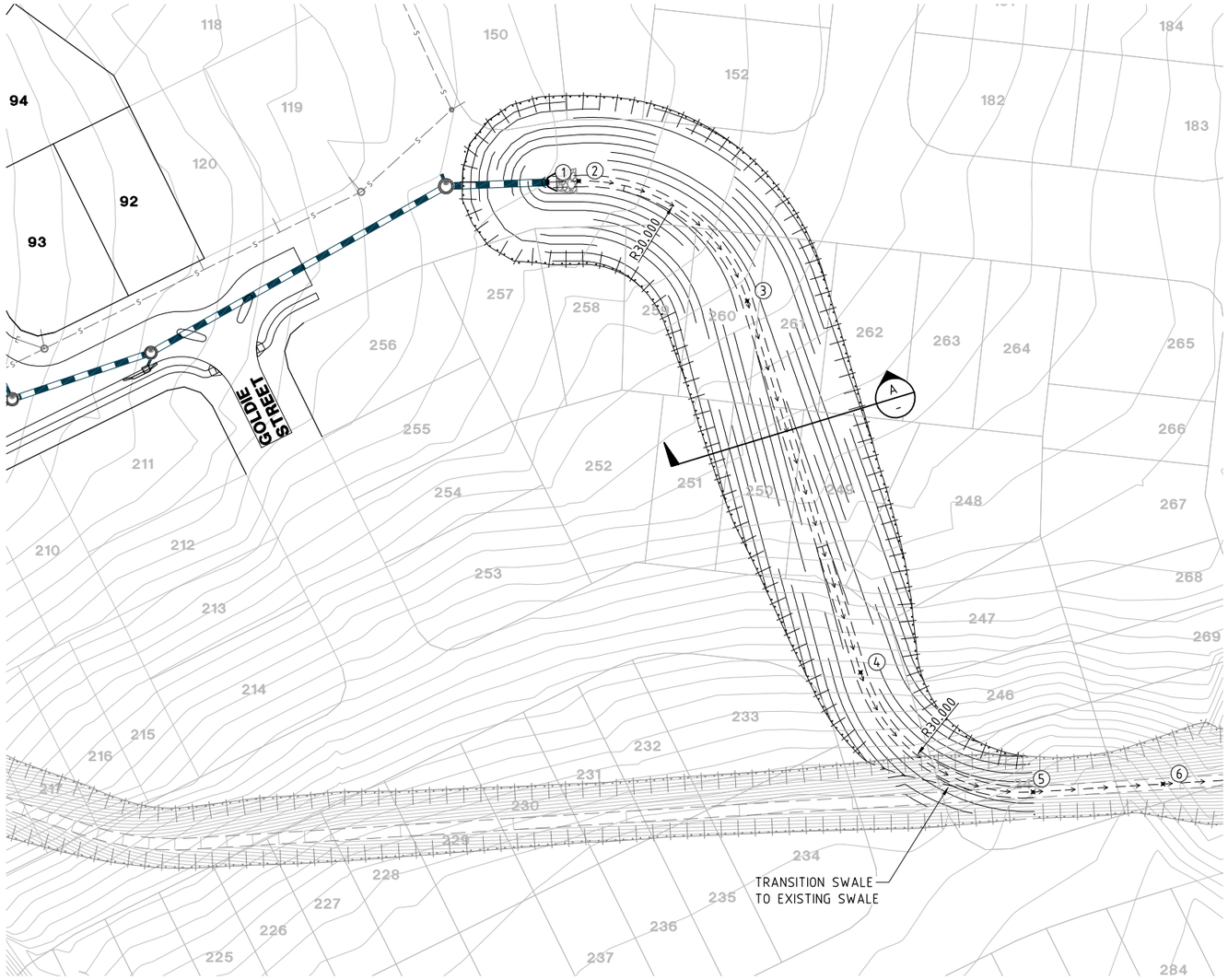
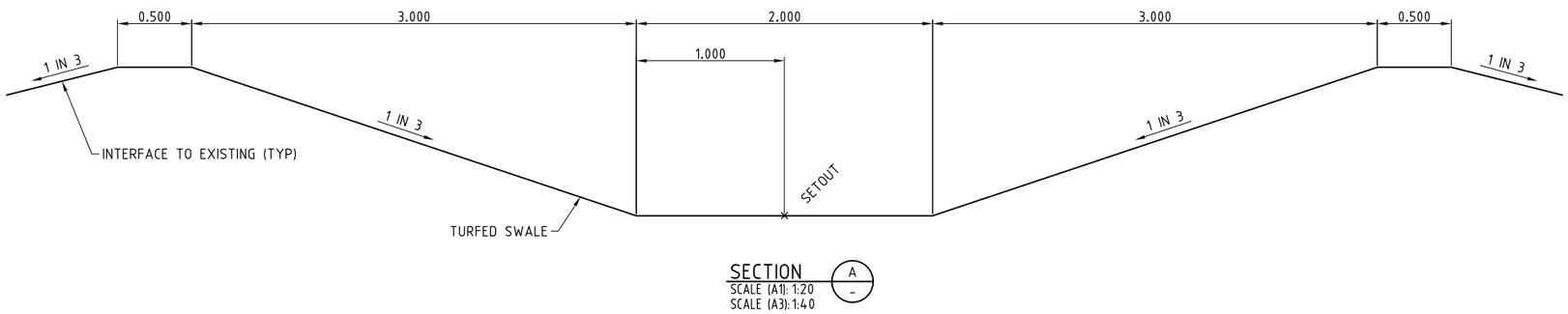
Quality Endorsed Company ISO 9001 Lic-4084

DRAWING TITLE: CONCRETE JOINTING, NOTES AND DETAILS PLAN

DRAWING NUMBER: N14066.14-402

ISSUE: A





SECTION A -
SCALE (A1): 1:20
SCALE (A3): 1:40

N

SWALE SETOUT

POINT #	NORTHING	EASTING	LEVEL
1	6325.9029	4947.1803	6.679
2	6326.1164	4952.7131	6.607
3	6304.9038	4982.5608	6.093
4	6239.1774	5002.6400	5.196
5	6217.9988	5033.1697	4.680
6	6219.4124	5056.1893	4.450

LEGEND

- PROPOSED TOP OF BATTER
- PROPOSED CHANGE OF GRADE LINE
- 2.2 FINISHED SURFACE CONTOURS
- 2.2 EXISTING SURFACE CONTOURS

FILE: N14066.14-403.dwg DATE: 08-05-2017 TIME: 17:10
Xref's: X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE
	CB	CB	04.10.16

AMENDMENTS: A, B, C, D, E, F

AMENDMENT DETAILS

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:500 10 5 0 10 20 A1
1:1000 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
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CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

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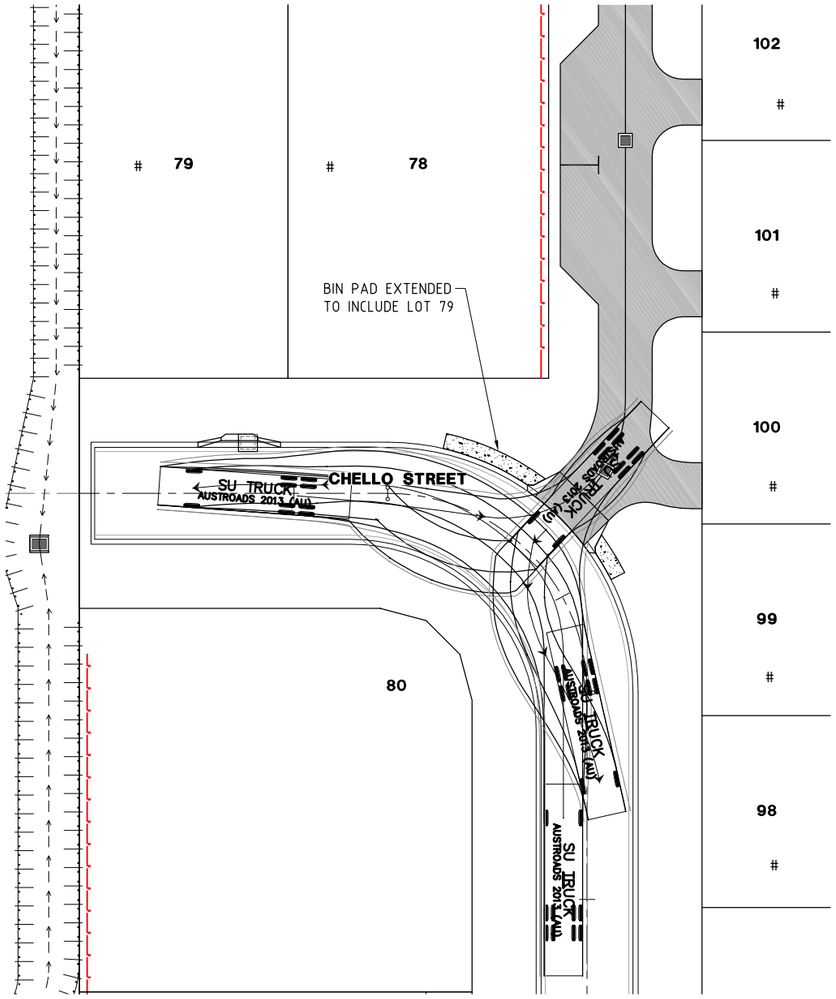
Quality Endorsed Company ISO 9001 Lic 4084

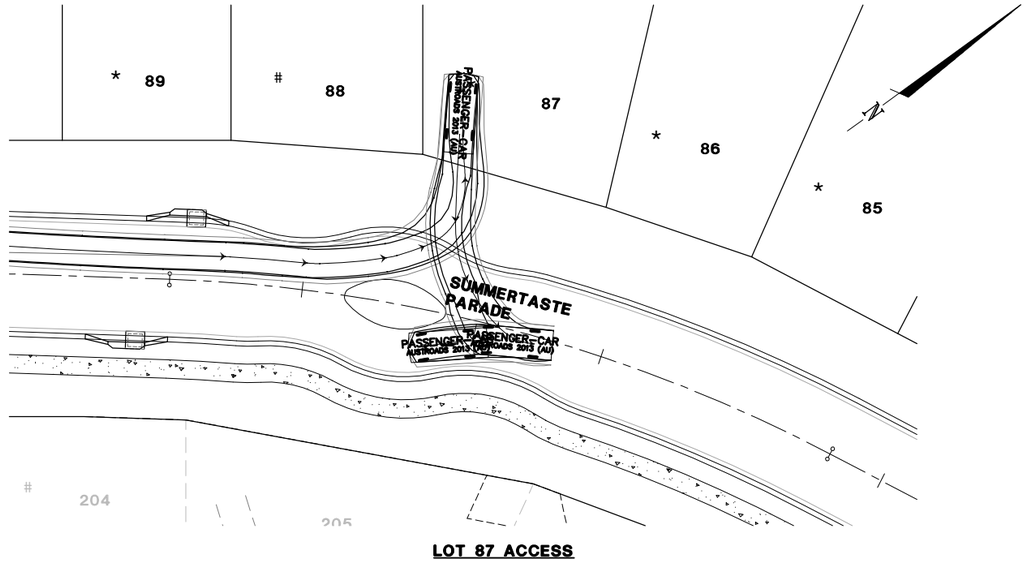
DRAWING TITLE: BIO BASIN SWALE SETOUT PLAN

DRAWING NUMBER: N14066.14-403

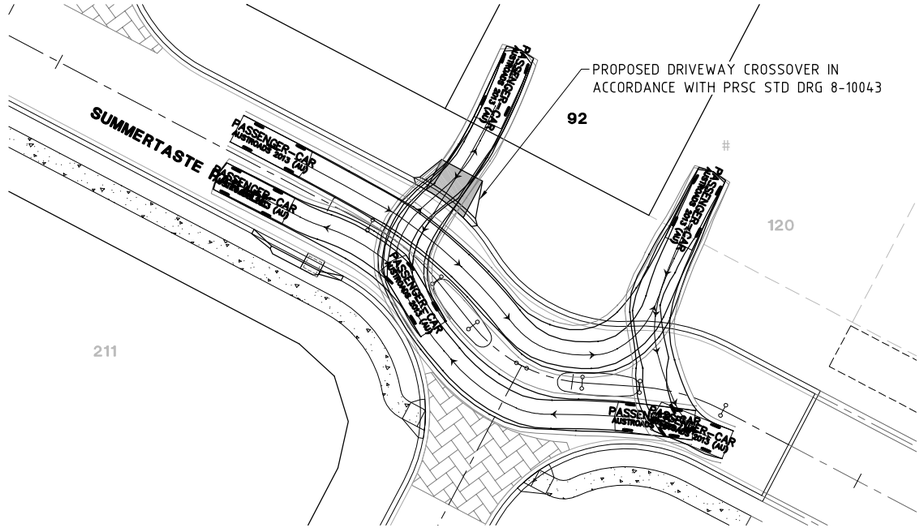
ISSUE: -

Moreton Bay Regional Council

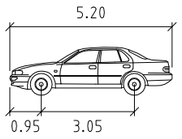




LOT 87 ACCESS



LOTS 92 & 120 ACCESS



PASSENGER-CAR

		meters
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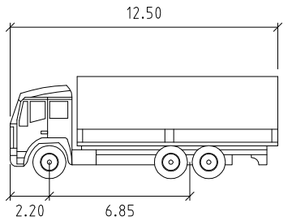
Track	:	1.84
Lock to Lock Time	:	6.0
Steering Angle	:	33.6



SU TRUCK

		meters
Width	:	2.50
Track	:	2.50
Lock to Lock Time	:	6.0
Steering Angle	:	36.6

FILE: N14066.14-SK01.dwg DATE: 29-05-2017 TIME: 11:59
Xref's: X-N14066-SURVEY X-N14066-FRESHWATER-ASCON USR: Curtis Boorman

FIRST ISSUE	CALCS	DRAWN	DATE	AMENDMENT DETAILS
A	CB	CB	23.05.17	
B				
C				
D				
E				
F				

DESIGN CHECK

DRAWN CHECK

SCALE (METRES)
1:200 1:400 2 1 0 2 4 6 8 10 A1 A3

COUNCIL REFERENCE: MORETON BAY REGIONAL COUNCIL

SURVEY DATUM: PM120863 RL 13.031

SURVEYOR: LANDPARTNERS LIMITED
Level 1, CDOP 6, 18 Little Crib Street, Milton, QLD, 4064
Ph: (07) 3842 1000 Fax: (07) 3842 1001

APPROVED
FOR & ON BEHALF OF CALIBRE CONSULTING (QLD) PTY LTD

CLIENT: TRASPUNT PROJECTS PTY LTD

PROJECT No.: N14066.14

PROJECT: RIVER BREEZE STAGE 4 CIVIL WORKS

calibre CONSULTING

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Quality Endorsed Company ISO 9001 Lic 4084

DRAWING TITLE: VEHICLE TURNING PATHS

DRAWING NUMBER: N14066.14-SK01

ISSUE:

Moreton Bay Regional Council