

# ORAN PARK DEVELOPMENT TRANCHE 20 STAGE 1

## DRAWING LIST

No. DRAWING TITLE

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- 001 GENERAL LAYOUT SHEET
- 002 GENERAL NOTES & LEGEND

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- 201 ROAD TC01 LONGITUDINAL & TYPICAL CROSS SECTIONS
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- 203 ROADS TC05 & TC07 LONGITUDINAL & TYPICAL CROSS SECTIONS
- 204 SOUTH CIRCUIT LONGITUDINAL & TYPICAL CROSS SECTIONS

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LOCALITY PLAN  
N.T.S.

LGA CAMDEN COUNCIL

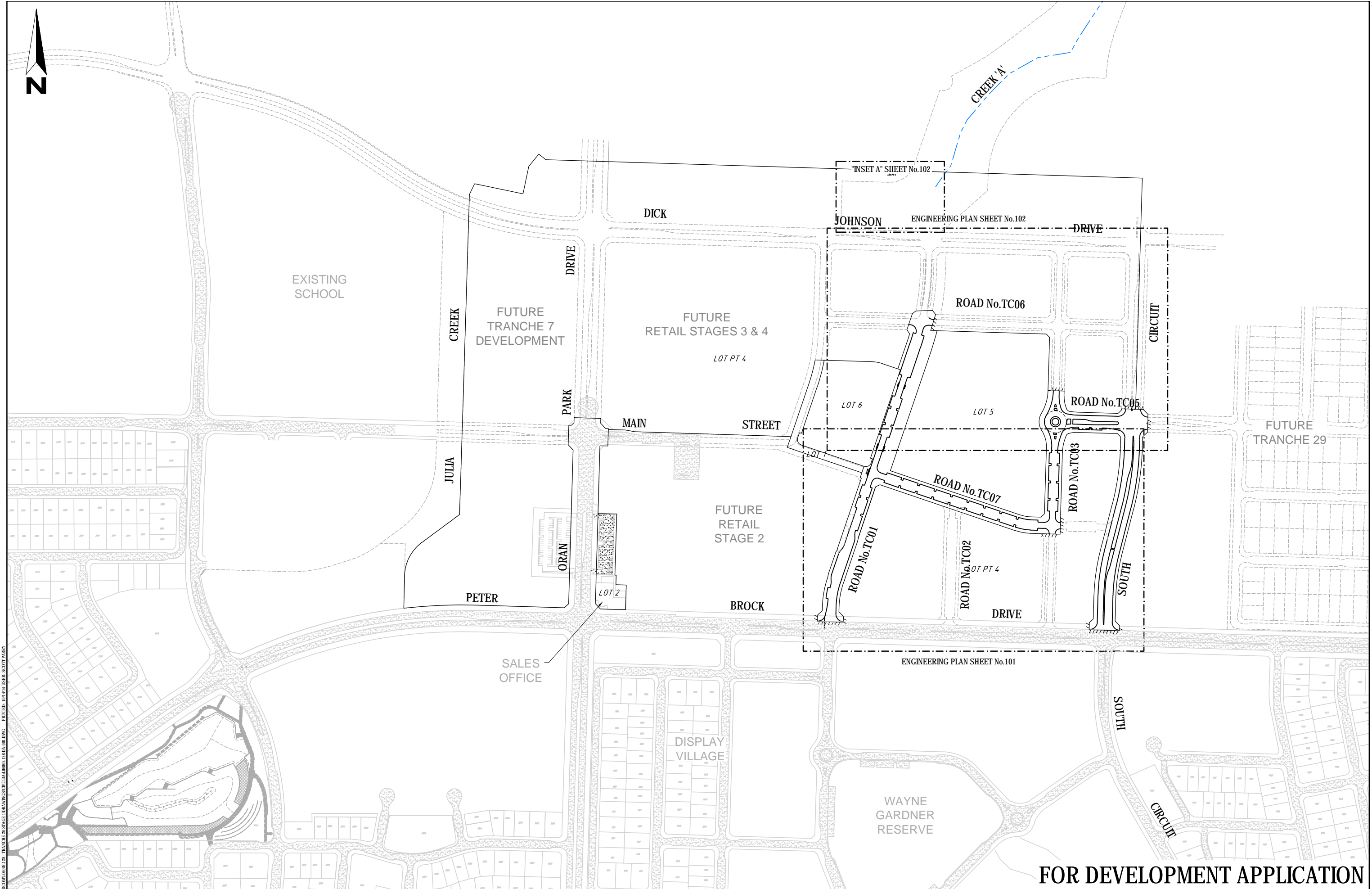


## ORAN PARK DEVELOPMENT TRANCHE 20 STAGE 1



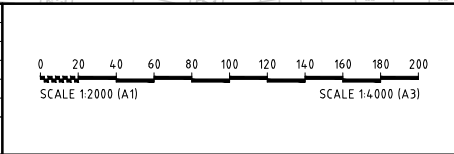
Project No.: L06002.128 Stage: 1 Milestone: DA Drawing No.: 000 Revision: 3





FOR DEVELOPMENT APPLICATION

Revisions		Revision Details	
1	JS/PS CP/RC RS TT	6/06/2014	SOUTH CIRCUIT INCLUDED & CLIENT AMENDMENTS
2	JS SP RS TT	5/09/2014	COUNCIL DEVELOPMENT APPLICATION AMENDMENTS
3	JS SP RS	14/10/2014	ROAD TC01 BUS BAY VERGE WIDTH AMENDED/ COUNCIL AMENDMENTS
First Issue	JS/PS CP/RC RS TT	11/04/2014	
Drawn	Design	Check	Appd.



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SIGN:   
DATE: 14/10/14

Client:  
**GREENFIELDS DEVELOPMENT COMPANY**  
Project:  
**ORAN PARK DEVELOPMENT  
TRANCHE 20 STAGE 1**

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Drawing Title: GENERAL LAYOUT SHEET				
Project No.: 106002.128	Stage: 1	Milestone: DA	Dwg No.: 001	Revision: 3

## GENERAL

G3 NO TREES TO BE REMOVED UNLESS APPROVAL IS GRANTED BY COUNCIL'S LANDSCAPE COMPLIANCE OFFICER.

G4 MAKE SMOOTH JUNCTIONS WITH EXISTING WORKS

G5 NO WORK TO BE CARRIED OUT ON ADJOINING PROPERTIES WITHOUT THE WRITTEN PERMISSION FROM THE OWNER.

G6 VEHICULAR ACCESS AND ALL UTILITIES/SERVICES ARE TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION.

G7 ALL RUBBISH, BUILDINGS, SHEDS, AND FENCES ARE TO BE REMOVED TO THE SATISFACTION OF THE PRINCIPAL CERTIFYING AUTHORITY/ ROADS AUTHORITY.

- E1. EARTHWORKS ARE TO BE CARRIED OUT TO THE SATISFACTION OF THE PRINCIPAL CERTIFYING AUTHORITY/ROADS AUTHORITY. UNSUITABLE MATERIALS ARE TO BE REMOVED FROM ROADS AND LOTS PRIOR TO FILLING. THE CONTRACTOR IS TO ARRANGE AND MAKE AVAILABLE COMPACTION TESTING RESULTS FOR ALL AREAS THAT CONTAIN FILL IN EXCESS OF 200mm.
- E2. COMPACTION OF EARTHWORKS SHALL CONTINUE UNTIL A DRY DENSITY RATIO OF 95% FOR SITE FILLING AND 100% FOR ROAD PAVEMENT SUBGRADES HAS BEEN ACHIEVED IN ACCORDANCE WITH TEST METHOD AS3289.5.3.1 OR AS3289.5.11.
- E3. THE CONTROL TESTING OF EARTHWORKS SHALL BE IN ACCORDANCE WITH THE GUIDELINES IN AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS". WHERE IT IS PROPOSED TO USE TEST METHOD AS3298.5.8.2 TO DETERMINE THE FIELD DENSITY, A SAND REPLACEMENT METHOD SHALL BE USED TO CONFIRM THE RESULTS.
- E4. THE SUBDIVISIONAL GEOTECH ACCREDITED CERTIFIER, SHALL HAVE A LEVEL1 RESPONSIBILITY FOR ALL FILLING AS DEFINED IN APPENDIX B AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" AND AT THE END OF THE WORKS SHALL CONFIRM THE EARTHWORKS COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION AND DRAWINGS BY WRITTEN NOTIFICATION.
- E5. IN AREAS TO BE FILLED WHERE THE SLOPE OF THE NATURAL SURFACE EXCEEDS 1(V):4(H), BENCHES ARE TO BE CUT TO PREVENT SLIPPING OF THE PLACED FILL MATERIAL AS REQUIRED BY THE COUNCIL.
- E6. ALL BATTERS ARE TO BE SCARIFIED TO A DEPTH OF 50mm TO ASSIST THE ADHESION OF TOP SOIL TO BATTER FACE.
- E7. PROVIDE MINIMUM 150mm AND MAXIMUM 300mm TOPSOIL WITHIN FOOTPATHS, FILLED AREAS AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION. TOPSOILED AREAS TO BE STABILISED WITH APPROVED VEGETATION A MAXIMUM OF 2 DAYS AFTER TOPSOILING AND ARE TO BE WATERED TO ENSURE GERMINATION.
- E8. THE CONTRACTOR SHALL CONTROL SEDIMENTATION, EROSION AND POLLUTION DURING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF 'MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION' PROVIDED BY LANDCOM.
- E9. A 1-METRE WIDE, CONTINUOUS STRIP OF COUCH GRASS SHALL BE PLACED BEHIND THE BACK OF ALL KERBS AND OTHER CONCRETE STRUCTURES IMMEDIATELY AFTER THE COMPLETION OF THE FOOTPATH GRADING OR OTHER ELEMENTS AS APPLICABLE, SHALL BE MAINTAINED AND REPLACED AS A REQUIREMENT DURING THE CONSTRUCTION MAINTENANCE PERIOD.

- R1 SUBGRADES AND SUBBASES ARE TO BE COMPACTED IN ACCORDANCE WITH COUNCILS CONSTRUCTION SPECIFICATION.
- R2 SUBSOIL DRAINS TO BE PROVIDED ON BOTH SIDES OF ROADS (EXCEPT WHERE THERE IS STORMWATER DRAINAGE)
- R3 150 x 50 H.D. GALVANISED STEEL KERB OUTLETS TO BE PLACED IN ALL KERB TYPES ON LOW SIDE OF LOTS WITHIN 2m DOWNSTREAM OF THE PROLONGATION OF THE LOT CORNER WITH THE LOWEST REDUCED LEVEL AND TO THE REQUIREMENTS OF THE PRINCIPAL CERTIFYING AUTHORITY. IF THAT LOCATION COINCIDED WITH A STORMWATER PIT A CONNECTION TO THAT PIT SHALL BE PROVIDED IN LIEU OF THE KERB OUTLET PROVIDED SUITABLE ADAPTOR TO ALLOW CONNECTION OF 90mm DIAMETER STORMWATER PIPE.
- R4 LIPLESS PERAMBULATOR CROSSINGS ARE TO BE PROVIDED IN ALL KERB RETURNS WHERE REQUIRED BY COUNCIL.
- R5 SERVICE CONDUITS TO BE PLACED AS DIRECTED BY ALL PUBLIC UTILITY AUTHORITIES INCLUDING ENDEAVOUR ENERGY, OPTICOMM AND SYDNEY WATER.
- R6 PROPOSED UTILITIES AND SERVICES CROSSING EXISTING ROADS SHALL BE PROVIDED FOR USING A TRENCHLESS TECHNIQUE SO AS TO NOT DAMAGE THE EXISTING SURFACE. ALL SERVICE CONDUITS UNDER ROADS MUST BE LAID TO A MINIMUM DEPTH OF 750mm.
- R7 CONCRETE FOOTPATH CONSTRUCTION IS TO BE BONDED WITH COUNCIL PENDING COMPLETION OF UTILITY/SERVICES AND SURROUNDING DWELLINGS.
- R8 ALL TEMPORARY ROADS MUST BE TEMPORARILY SEALED WITH A SINGLE COAT OF FLUSH SEAL.
- R9 ALL PERMANENT ROADS MUST BE SEALED WITH A SINGLE COAT OF FLUSH SEAL AND 50mm OF AC TO BE APPLIED IN TWO 25mm THICK LAYERS. THE FINAL AC IS TO BE BONDED WITH COUNCIL AND PLACED FOLLOWING APPROVAL FROM COUNCIL.
- R10 SIGNPOSTING AND LINE MARKING SHALL CONFORM TO AS 1742.2 'TRAFFIC CONTROL DEVICES FOR GENERAL USE', RAISED RETRO-REFLECTIVE PAVEMENT MARKERS TO CONFORM TO AS1906 'RETRO-REFLECTIVE DEVICES AND MATERIALS FOR ROAD TRAFFIC CONTROL PURPOSES'. ALL APRONS AND KERB FACE ON CENTRAL ISLANDS OF ROUNDABOUTS AND ALL OTHER ISLANDS TO BE DELINEATED BY REFLECTIVE WHITE MARKING.
- R11 ALL LOT NUMBERS AND STREET NAMES TO BE STENCILED ON KERB FACE.

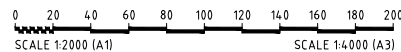
## DRAINAGE

S13 PIT LINTELS ARE TO BE STENCILED WITH APPLICABLE DESTINATION STENCIL AVAILABLE FROM COUNCIL.




SCALE 1:2000

1	JS/PS	CP/RC	RS	TT	6/06/2014	SOUTH CIRCUIT INCLUDED & CLIENT AMENDMENTS
2	JS	SP	RS	TT	5/09/2014	COUNCIL DEVELOPMENT APPLICATION AMENDMENTS
3	JS	SP	RS		14/10/2014	ROAD TC01 BUS BAY VERGE WIDTH AMENDED/ COUNCIL AMENDMENTS



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BE (Hons) GradDipMgt CPEng  
MIEAust NSW Group Manager  
SIGN:   
DATE: 14/10/14

Client:	<b>GREENFIELDS DEVELOPMENT COMPANY</b>
Project:	<b>ORAN PARK DEVELOPMENT TRANCHE 20 STAGE 1</b>

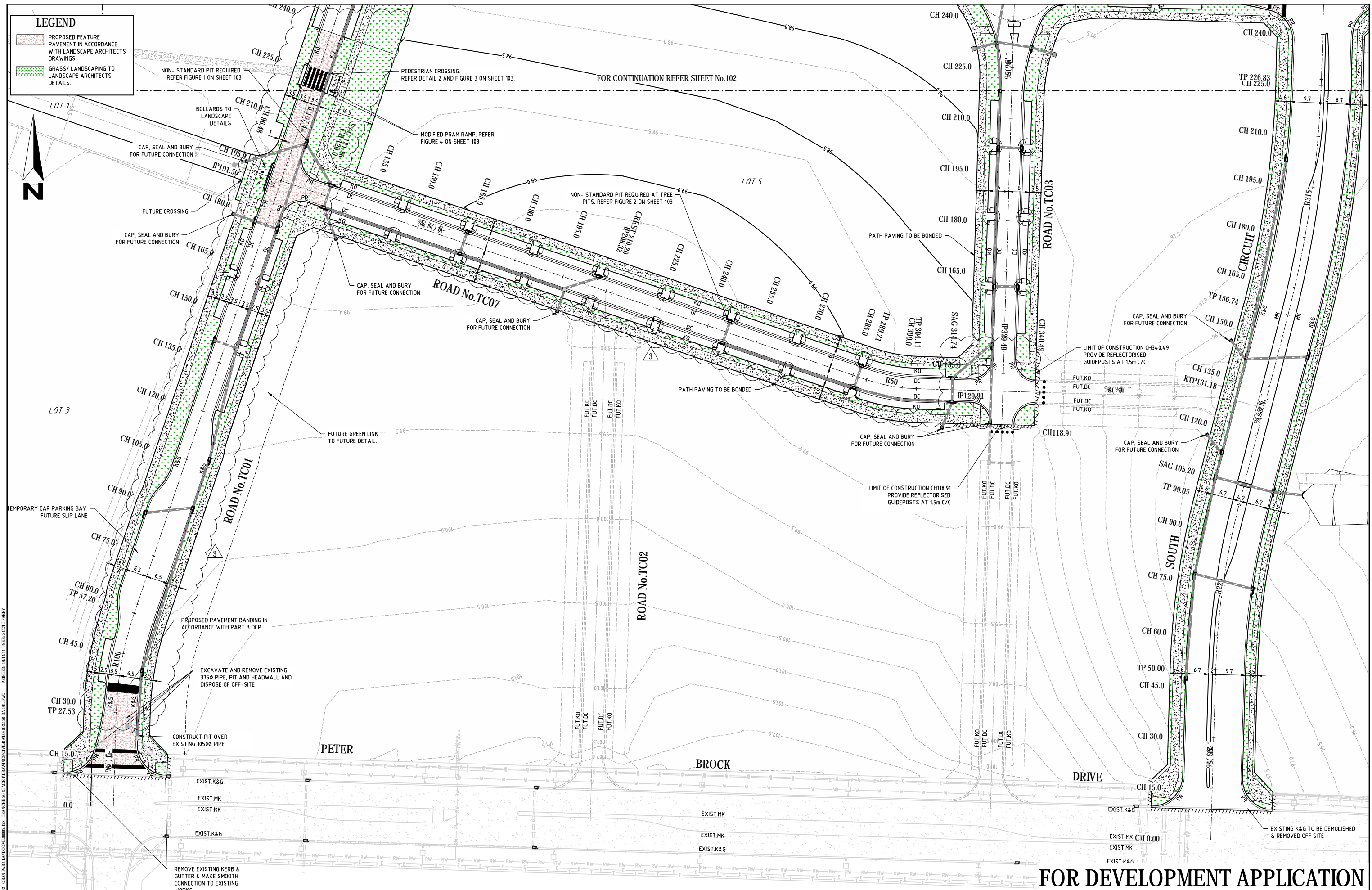
DESCRIPTION	PROPOSED	EXISTING	FUTURE
STORMWATER PIPELINE			
STORMWATER DRAINAGE PITS			
DRAINAGE LINE No. 3 DRAINAGE PIT No. 10			
CONCRETE HEADWALL			
SUBSOIL DRAIN			
STANDARD 150mm KERB AND GUTTER		EXIST. K&G	FUT. K&G
STANDARD ROLL KERB AND GUTTER		EXIST. RK	FUT. RK
STANDARD KERB ONLY		EXIST. KO	FUT. KO
STANDARD EDGE STRIP		EXIST. ES	FUT. ES
STANDARD MOUNTABLE KERB		EXIST. MK	FUT. MK
STANDARD DISH CROSSING		EXIST. DC	FUT. DC
VEHICULAR CROSSING			
PEDESTRIAN RAMP			
EDGE OF BITUMEN			
ROAD PAVEMENT			
BENCHMARK		▲ BM: 115 RL: 165.332	
BATTERS			
CONCRETE PATHWAY			
CONTOURS			
SITE REGRADING AREA			
SERVICE LINES SEWER, GAS, WATER, ELECTRICITY			
COMMUNICATION LINES TELSTRA, FIBRE OPTIC			
OVER HEAD LINES AND POLES			
SERVICE PITS TELECOM PIT, ACCESS CHAMBER, HYDRANT, STOP VALVE, AIR VALVE			
LIMIT OF CONSTRUCTION			
LIMIT OF STAGE			
FENCE POST AND RAIL FENCE SECURITY FENCE			
LOT NUMBERS	D-LOTNO	E-LOTNO	F-LOTNO
TREES TO RETAIN TREES TO REMOVE			
RETAINING WALL			
ROCK WALL			
ROOF WATER OUTLET			

FOR DEVELOPMENT APPLICATION



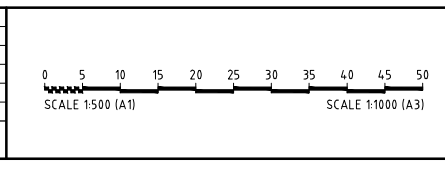
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Project No.:	Stage:	Milestone:	Dwg No.:	Revision:
L06002.128	1	DA	002	3





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Revisions	Issue	Drawn	Design	Check	Appd.	Date	Revision Details
1	JS/PS	CP/RC	RS	TT		6/06/2014	SOUTH CIRCUIT INCLUDED & CLIENT AMENDMENTS
2	JS	SP	RS	TT		5/09/2014	COUNCIL DEVELOPMENT APPLICATION AMENDMENTS
3	JS	SP	RS	TT		14/10/2014	ROAD TC01 BUS BAY VERGE WITH AMENDED COUNCIL AMENDMENTS
1	JS/PS	CP/RC	RS	TT		11/04/2014	



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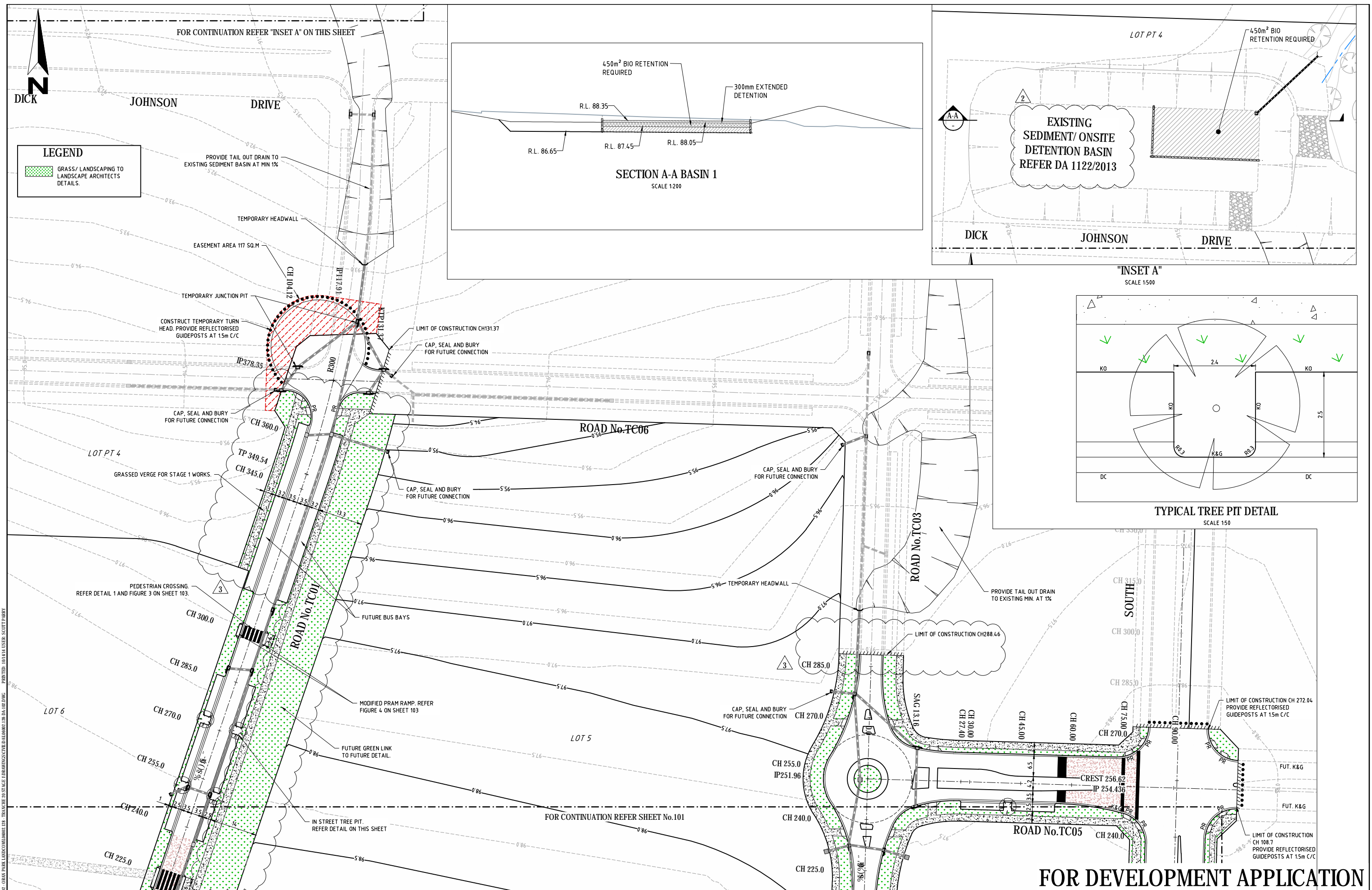
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Project:  
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TRANCHE 20 STAGE 1**



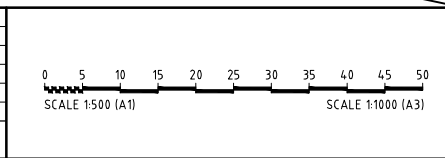
Drawing Title: ENGINEERING PLAN SHEET 01 OF 02				
Project No.: 106002.128	Stage: 1	Milestone: DA	Dwg No.: 101	Revision: 3





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Rev	Issue	Drawn	Design	Check	Appd.	Date
1	JS/PS	CP/RC	RS	TT		6/06/2014
2	JS	SP	RS	TT		5/09/2014
3	JS	SP	RS			14/10/2014
1	JS/PS	CP/RC	RS	TT		11/04/2014



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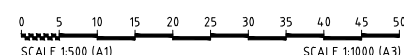
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Drawing Title:  
**ENGINEERING PLAN SHEET 02 OF 02**

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Drawing Title:				
PEDESTRIAN CROSSING DETAILS				
Project No.:	Stage:	Milestone:	Dwg No.:	Revision:
L06002.128	1	DA	103	3





NATURAL SURFACE IS ASSUMED TO BE COMPLETED  
BULK EARTHWORKS LEVELS (DA1122/13)

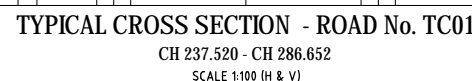
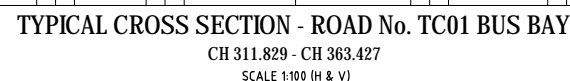
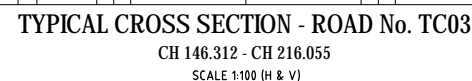
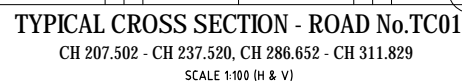
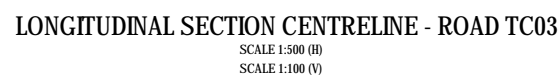


Figure 10.1 displays two examples of graphical scales. The top scale is labeled 'SCALE 1:100 (A1)' and 'SCALE 1:200 (A3)', with markings from 0 to 10. The bottom scale is labeled 'SCALE 1:500 (A1)' and 'SCALE 1:1000 (A3)', with markings from 0 to 50. Both scales show a transition from a hatched pattern to a solid black line at the 5-unit mark.



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Project: **ORAN PARK DEVELOPMENT  
TRANCHE 20 STAGE 1**

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BULK EARTHWORKS LEVELS (DA1122/13)

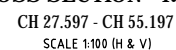
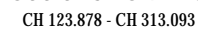


Figure 10.1 displays four graphical scales for drawing, arranged in two rows. The top row shows two scales: SCALE 1:100 (A1) and SCALE 1:200 (A3). The bottom row shows two scales: SCALE 1:500 (A1) and SCALE 1:1000 (A3). Each scale is represented by a horizontal line with tick marks and numerical labels. The scales are designed to be used for drawing at the specified ratios.

¥6fckb7cbet 1Hb Dm9X



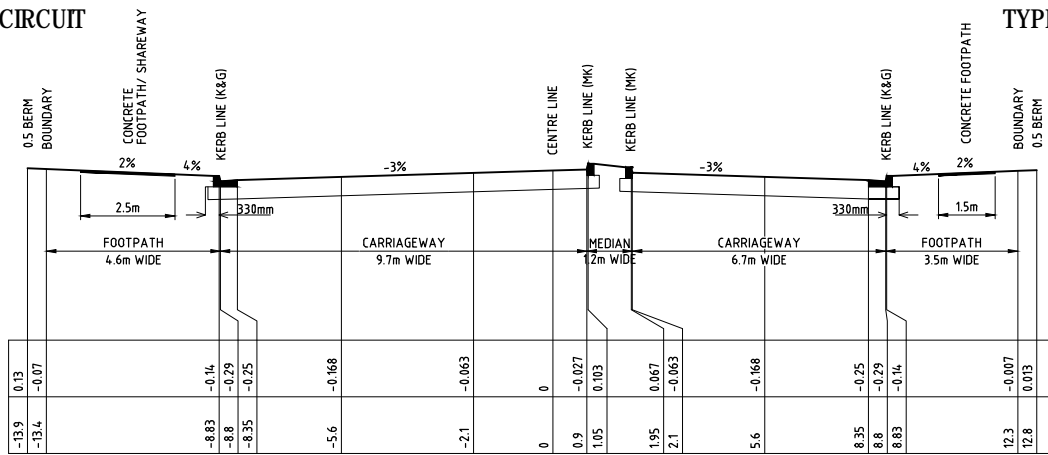
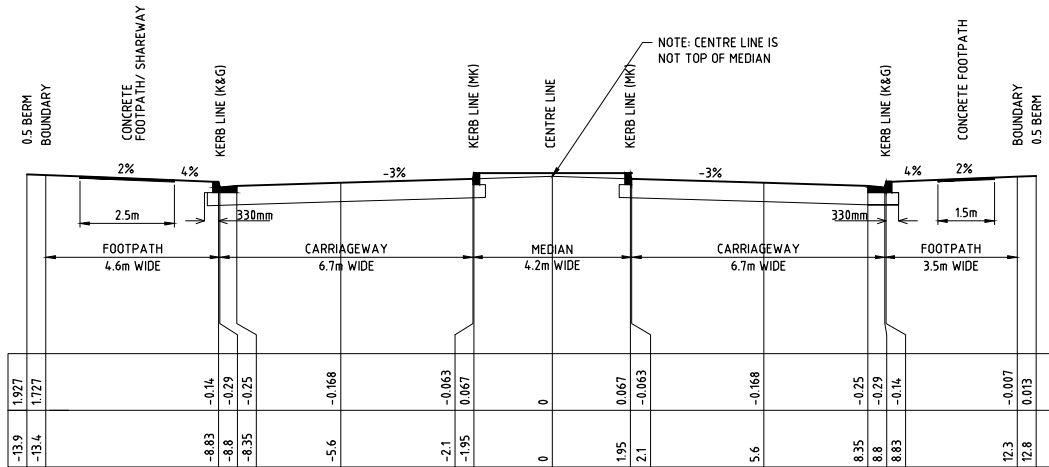
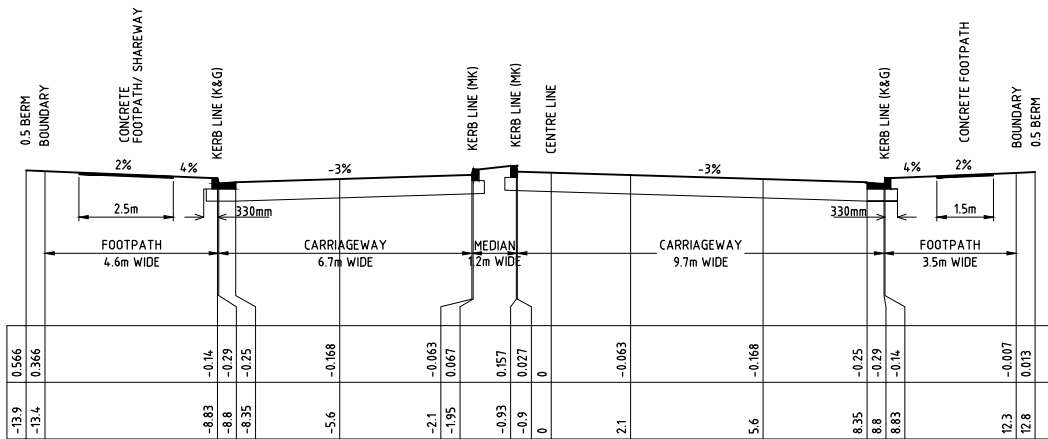
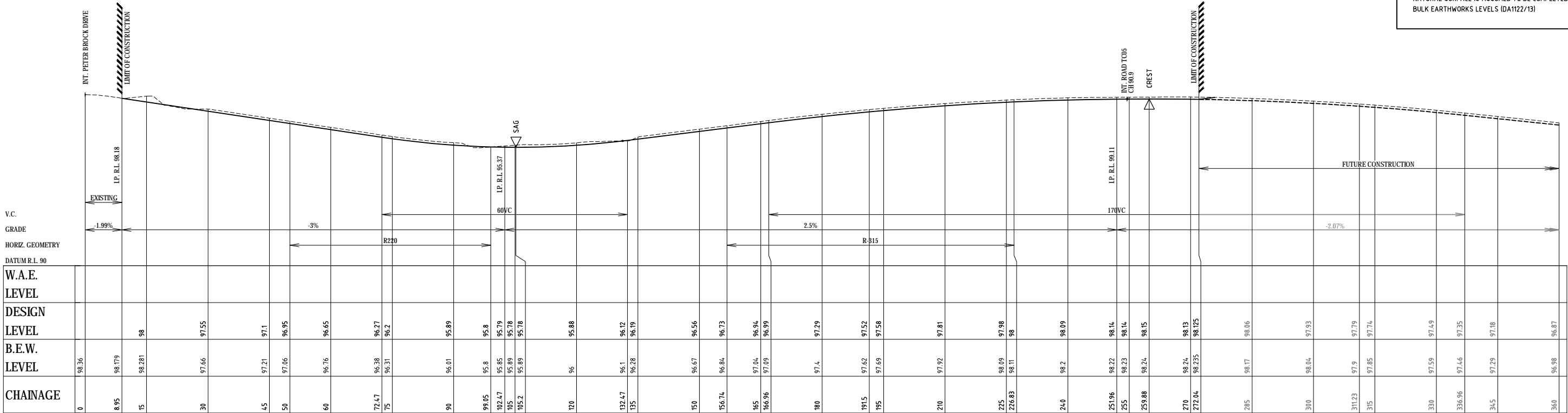
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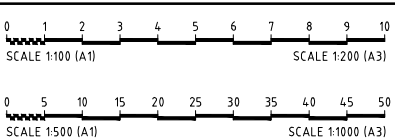
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ROADS TC05 & TC07 LONGITUDINAL & TYPICAL CROSS SECTIONS				
Project No.:	Stage:	Milestone:	Dwg No.:	Revision:
L06002.128	1	DA	203	3

NOTE:

NATURAL SURFACE IS ASSUMED TO BE COMPLETED  
BULK EARTHWORKS LEVELS (DA1122/13)



Revisions	Issue	Drawn	Design	Check	Appd.	Date	Revision Details
1	JS/PS	CP/RC	RS	TT		6/06/2014	SOUTH CIRCUIT INCLUDED & CLIENT AMENDMENTS
2	JS	SP	RS	TT		5/09/2014	COUNCIL DEVELOPMENT APPLICATION AMENDMENTS
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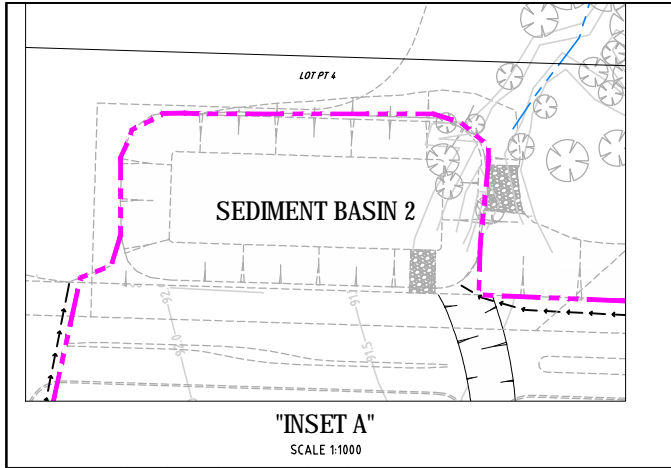
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Project:  
**ORAN PARK DEVELOPMENT  
TRANCHE 20 STAGE 1**



Drawing Title:  
**SOUTH CIRCUIT LONGITUDINAL &  
TYPICAL CROSS SECTIONS**  
Project No.: 106002.128  
Stage: 1  
Milestone: DA  
Dwg No.: 204  
Revision: 3





**STAGING OF SEDIMENT BASIN**

PHASE 1 - EXISTING SEDIMENT BASIN TO REMAIN IN PLACE  
PHASE 2 - PROPOSED SEDIMENT BASIN (REFER TRANCHE 20/29 BULK EARTHWORKS DRAWINGS)  
PHASE 3 - COMPLETION OF BULK EARTHWORKS (REMOVAL OF EXISTING SEDIMENT BASIN)

**NOTE:**  
OSD PROVIDED ONSITE FOR ALL LOTS AND STORMWATER DRAINAGE. SYSTEM CATERES FOR PRE DEVELOPMENT FROM WITHIN TOWN CENTRE

PROPOSED SEDIMENT BASIN VOLUME = 4,450m<sup>3</sup>  
REQUIRED VOLUME FOR CONSTRUCTION OF TRANCHE 20 STAGE 1 ROADS, ADMINISTRATION BUILDING AND LIBRARY = 24,10m<sup>3</sup>  
VOLUME FOR DETENTION =

# 1. Erosion Hazard and Sediment Basins

Site Name: TRANCHE 20 & 29

Site Location: ORAN PARK

Precinct/Stage:

Other Details: BULK EARTHWORKS

Site area	Sub-catchment or Name of Structure	Notes
	1	
Total catchment area (ha)	22.74	
Disturbed catchment area (ha)	4.03	

## Soil analysis (enter sediment type if known, or laboratory particle size data)

Sediment Type (C, F or D) if known	D					From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)						Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)						
% clay (fraction finer than 0.002 mm)						E.g. enter 10 for dispersion of 10%
Dispersion percentage						See Section 6.3.3(e) Auto-calculated
% of whole soil dispersible						Automatic calculation from above
Soil Texture Group	D					

## Rainfall data

Design rainfall depth (no of days)	5					See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25
Design rainfall depth (percentile)	75					
x-day, y-percentile rainfall event (mm)	20.2					
Rainfall R-factor (if known)						Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	9.5					

## RUSLE Factors

Rainfall erosivity (R factor)	2020						Auto-filled from above
Soil erodibility (K factor)	0.042						
Slope length (m)	200						RUSLE LS factor calculated for a high nil/interim ratio.
Slope gradient (%)	5						
Length/gradient (LS factor)	2.01						
Erosion control practice (P factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (C factor)	1	1	1	1	1	1	

## Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)

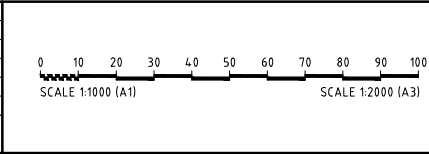
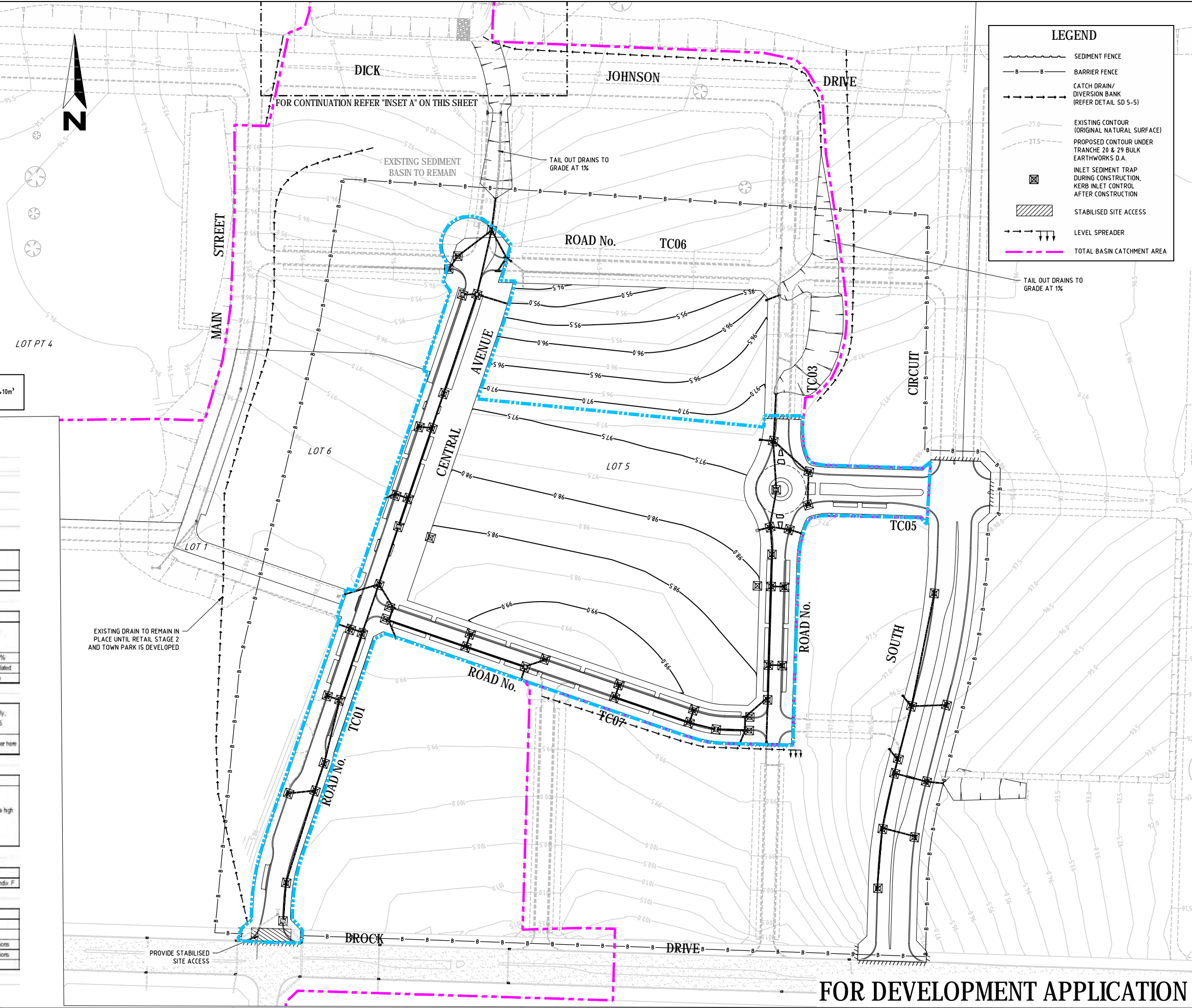
Storage (soil) zone design (no of months)	2					Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.5					See Table F2, page F-4 in Appendix F

## Calculations and Type D/F Sediment Basin Volumes

Soil loss (t/ha/yr)	221					
Soil Loss Class	2					See Table 4.2, page 4-13
Soil loss (m <sup>3</sup> /ha/yr)	170					Conversion to cubic metres
Sediment basin storage (soil) volume (m <sup>3</sup> )	114					See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m <sup>3</sup> )	2297					See Sections 6.3.4(i) for calculations
Sediment basin total volume (m <sup>3</sup> )	2411					

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

Revisions	Drawn	Design	Check	Appd.	Date	Revision Details
1	JS/PS	CP/RC	RS	TT	6/06/2014	SOUTH CIRCUIT INCLUDED & CLIENT AMENDMENTS
2	JS	SP	RS	TT	5/09/2014	COUNCIL DEVELOPMENT APPLICATION AMENDMENTS
3	JS	SP	RS	TT	14/10/2014	ROAD TC01 BUS BAY VERGE WIDTH AMENDED/ COUNCIL AMENDMENTS
First Issue	JS/PS	CP/RC	RS	TT	11/04/2014	



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Project:  
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TRANCHE 20 STAGE 1**

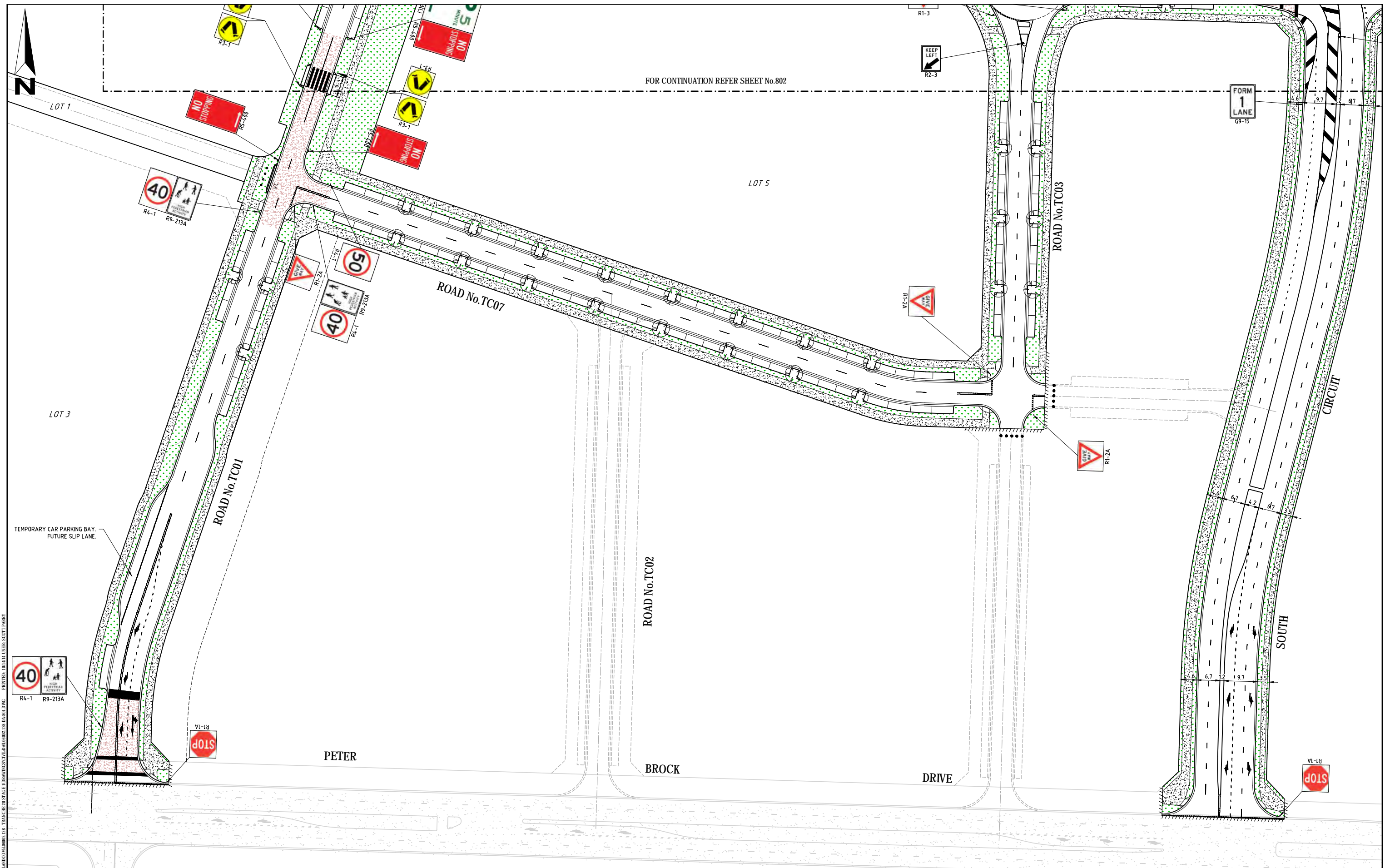
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Stage: 1  
Milestone: DA  
Dwg No.: 701  
Revision: 3





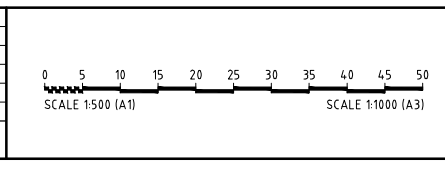




FOR CONTINUATION REFER SHEET No.802

FOR DEVELOPMENT APPLICATION

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3	JS	SP	RS	TT	14/10/2014	ROAD TC01 BUS BAY VERGE WIDTH AMENDED/ COUNCIL AMENDMENTS
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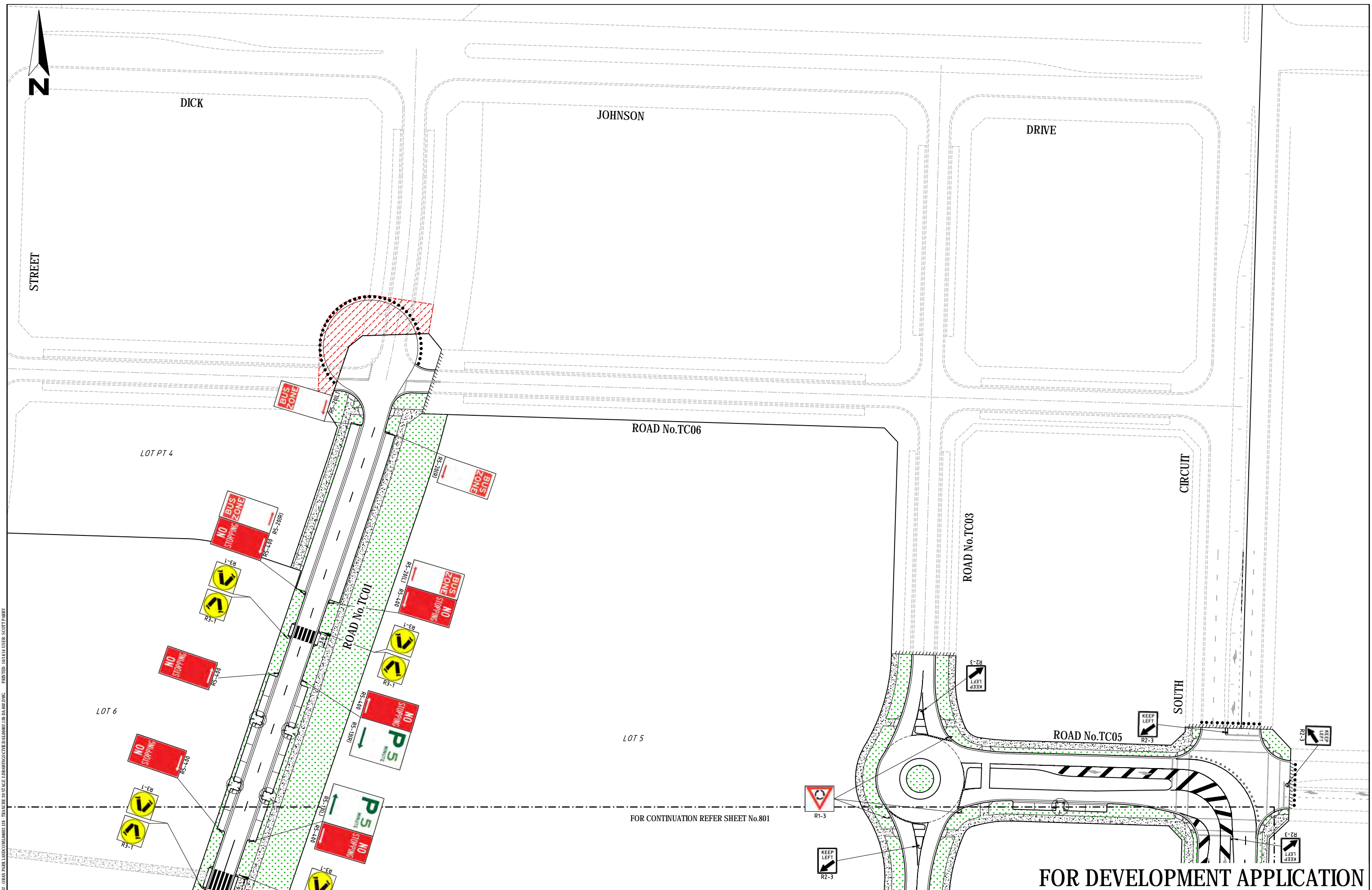
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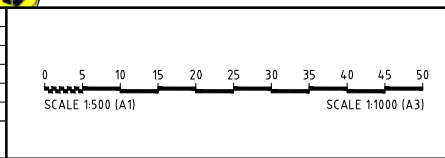
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Milestone: DA  
Dwg No.: 801  
Revision: 3



FOR DEVELOPMENT APPLICATION

Revisions						
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1	JS/PS	CP/RC	RS	TT	6/06/2014	SOUTH CIRCUIT INCLUDED & CLIENT AMENDMENTS
2	JS	SP	RS	TT	5/09/2014	COUNCIL DEVELOPMENT APPLICATION AMENDMENTS
3	JS	SP	RS	TT	14/10/2014	ROAD TC01 BUS BAY VERGE WIDTH AMENDED/ COUNCIL AMENDMENTS
4	JS/PS	CP/RC	RS	TT	11/04/2014	



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Dwg No.: 802  
Revision: 3