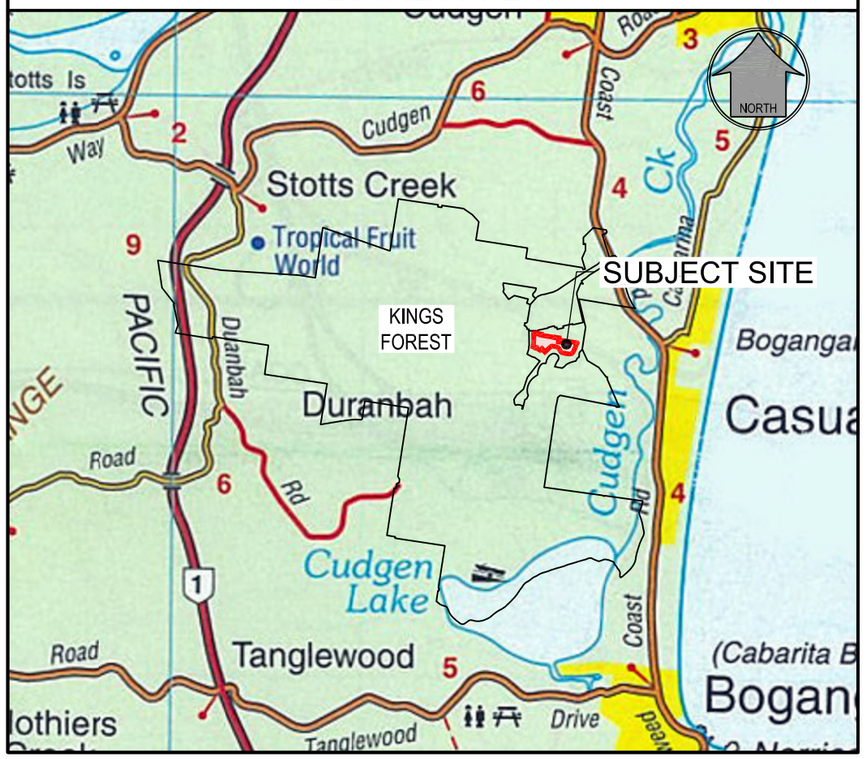
KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE STAGES 6 & 7

No. 12301-P5-6&7

LOCALITY PLAN



MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

COMPASS ASSURANCE ISO 9001 QUALITY

CLIENT:
PROJECT 28 PTY LTD

ASSOCIATED CONSULTANTS:
LANDSURV
GILBERT + SUTHERLAND

REAL PROPERTY DESCRIPTION:
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

DRAWING NUMBER	AMEND.
12301-P5-6&7-000	A

Y:\123 - Leda Developments Pty Ltd\01 - Kings Forest\PREC5\Engineering Drawings\OPW Stages 6 & 7\Current\12301-P5-6&7-000.dwg, 12/10/2021 11:46:58 AM, 1:2

SCHEDULE OF DRAWINGS

NUMBER	REV. NO.	TITLE
GENERAL		
12301-P5-6&7-000	A	COVER SHEET
12301-P5-6&7-001	E	SCHEDULE
12301-P5-6&7-002	C	GENERAL NOTES
12301-P5-6&7-005	C	ROAD HIERARCHY & STAGING PLAN
12301-P5-6&7-007	A	DEEMED COMMENCMENT PEGGED SURVEY SHEET 1
12301-P5-6&7-008	A	DEEMED COMMENCMENT PEGGED SURVEY SHEET 2
FENCES		
12301-P5-6&7-010	B	FENCING PLAN
12301-P5-6&7-011	A	ACOUSTIC FENCE
EARTHWORKS: FINAL SURFACE AND SEDIMENT CONTROL		
12301-P5-6&7-070	B	PLAN SHEET 01
12301-P5-6&7-071	B	PLAN SHEET 02
12301-P5-6&7-075	A	DETAIL SHEET 1
EARTHWORKS: COMBINED SERVICES		
12301-P5-6&7-090	C	PLAN SHEET 01
12301-P5-6&7-091	B	PLAN SHEET 02
12301-P5-6&7-092	A	COMBINED SECTIONS
ROADWORKS: PLAN		
12301-P5-6&7-100	C	SHEET 1 OF 2
12301-P5-6&7-101	B	SHEET 2 OF 2
ROADWORKS: DETAILS		
12301-P5-6&7-120	C	DETAILS
ROADWORKS: KERB SECTIONS		
12301-P5-6&7-122	A	KERB LONGITUDINAL SECTIONS SHEET 1
12301-P5-6&7-123	A	KERB LONGITUDINAL SECTIONS SHEET 2
12301-P5-6&7-124	A	KERB LONGITUDINAL SECTIONS SHEET 3
ROADWORKS: SWEPTH PATHS		
12301-P5-6&7-160	B	INTERSECTION ATURN PASSENGER CAR SHEET 1
12301-P5-6&7-161	B	INTERSECTION ATURN PASSENGER CAR SHEET 2
12301-P5-6&7-162	A	INTERSECTION ATURN 12.5 TRUCK SHEET 1
12301-P5-6&7-163	A	INTERSECTION ATURN 12.5 TRUCK SHEET 2
ROADWORKS: LONGITUDINAL SECTIONS		
12301-P5-6&7-200	A	ROAD 13
12301-P5-6&7-201	A	ROAD 17 SHEET 1
12301-P5-6&7-202	A	ROAD 17 & 18 SHEET 2
12301-P5-6&7-203	A	ROAD 29
12301-P5-6&7-204	A	ROAD 30
12301-P5-6&7-205	A	DRIVEWAY 40 & 45
12301-P5-6&7-206	A	ROAD 46 & 47
ROADWORKS: CROSS SECTIONS		
12301-P5-6&7-300	A	ROAD 13
12301-P5-6&7-301	A	ROAD 17 SHEET 1

NUMBER	REV. NO.	TITLE
12301-P5-6&7-302	A	ROAD 17 SHEET 2
12301-P5-6&7-303	A	ROAD 17 SHEET 3
12301-P5-6&7-304	A	ROAD 18
12301-P5-6&7-305	A	ROAD 29
12301-P5-6&7-306	A	ROAD 30
12301-P5-6&7-307	A	ROAD 40 & 45
12301-P5-6&7-308	A	ROAD 46
12301-P5-6&7-309	A	ROAD 47
ROADWORKS: INTERSECTION GRADING DETAIL		
12301-P5-6&7-400	C	DETAILS SHEET 01
12301-P5-6&7-401	B	DETAILS SHEET 02
ROADWORKS: LINEMARKING AND SIGNAGE		
12301-P5-6&7-420	D	PLAN SHEET 01
12301-P5-6&7-421	B	PLAN SHEET 02
SEWER: RETICULATION PLAN		
12301-P5-6&7-500	D	NOTES AND DETAILS
12301-P5-6&7-501	B	SHEET 1 OF 2
12301-P5-6&7-502	B	SHEET 2 OF 2
SEWER: PROFILES		
12301-P5-6&7-530	B	SHEET 1
12301-P5-6&7-531	C	SHEET 2
12301-P5-6&7-532	B	SHEET 3
SEWER: HOUSE CONNECTION PROFILES		
12301-P5-6&7-570	B	SHEET 1 OF 2
12301-P5-6&7-571	A	SHEET 2 OF 2
STORMWATER: PLANS		
12301-P5-6&7-600	A	PLAN SHEET 01
12301-P5-6&7-601	A	PLAN SHEET 02
STORMWATER: PROFILES		
12301-P5-6&7-620	A	SHEET 1
12301-P5-6&7-621	A	SHEET 2
12301-P5-6&7-622	B	SHEET 3
12301-P5-6&7-623	A	SHEET 4
STORMWATER: STRUCTURE DETAILS		
12301-P5-6&7-640	A	DETAILS SHEET 01
12301-P5-6&7-641	A	DETAILS SHEET 02
STORMWATER: CATCHMENT		
12301-P5-6&7-670	A	PLAN SHEET 1
STORMWATER: CALCULATION TABLES		
12301-P5-6&7-680	A	MINOR & MAJOR STORM EVENT
WATER: RETICULATION PLAN		
12301-P5-6&7-700	C	SHEET 1 OF 2
12301-P5-6&7-701	B	SHEET 2 OF 2

SHEET NO.	REV NO.	SHEET TITLE
TWEED SHIRE COUNCIL STANDARD DRAWINGS		
S.D 007	D	STANDARD KERB DETAILS SHEET 1
S.D 012	H	SUB SOIL DRAINAGE DETAILS
S.D 013	E	FOOTPATH AND CYCLEWAY DETAILS
S.D 014	F	STANDARD KERB RAMP DETAILS
S.D 103	B	STANDARD GULLY PIT - ROLL TOP KERB
S.D 104	C	STANDARD GULLY PIT - BARRIER KERB
S.D 240	C	SLUICE VALVE INSTALLATION DETAILS
S.D 243	C	MANUAL AIR VALVE INSTALLATION DETAILS
S.D 250	C	PROPERTY CONNECTION DETAILS TYPE A & TYPE B
S.D 251	D	PROPERTY CONNECTION DETAILS TYPE C1 & TYPE C2
S.D 261	E	PRESSURE SEWERAGE SYSTEMS TYPICAL DETAILS
S.D 276	C	TRENCH DRAINAGE BULKHEADS & TRENCH STOPS
S.D 278	B	MAINTENANCE HOLES FOR SEWERS
S.D 301	C	WATER RETICULATION LAYOUT CUL-DE-SACS
S.D 302	C	PROPERTY SERVICE LAYOUT DN 50 OR SMALLER SERVICES
S.D 311	A	AUTOMATIC AIR RELEASE VALVE INSTALLATION DETAILS
S.D 312	C	TYPICAL VALVE INSTALLATION DETAILS
S.D 316	C	MARKING FOR LOCATION OF HYDRANTS
S.D 320	C	PROPERTY SERVICES CONNECTION TO MAIN
S.D 341	E	TRENCH DRAINAGE BULKHEADS & TRENCH STOPS
S.D 501	C	EROSION & SILTATION PREVENTION DEVICES SHEET 1
S.D 502	B	EROSION & SILTATION PREVENTION DEVICES SHEET 2
WATER SERVICE OF AUSTRALIA STD DRAWINGS		
SEW 1200	V2.1	SOIL CLASSIFICATION GUIDELINES AND ALLOWABLE BEARING PRESSURES FOR BULKHEADS
WAT 1205	V2.2	THRUST BLOCK DETAILS CONCRETE BLOCKS
WAT 1207	V2.2	THRUST AND ANCHOR BLOCKS GATE VALVES AND VERTICAL BENDS
WAT 1208	V2.1	RESTRAINED JOINT SYSTEM DN100 TO DN375 DI MAINS
SPS 1602	V1.1	SCOUR ARRANGEMENT PUMP AND GRAVITY
SPS 1603	V1.1	SCOUR ARRANGEMENTS PRESSURE MAINS <300 ≤2.2 INVERT

DRAWING NUMBER	AMEND.
12301-P5-6&7-001	E

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GENERAL

1. CONTRACT SPECIFICATIONS
   ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
2. SETOUT
   SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   LEVELS SHOWN ARE TO A.H.D.
4. EXISTING SERVICES - External Works
   THE LOCATIONS OF ALL EXISTING SERVICES HAVE BEEN CONFIRMED BY VACUUM EXCAVATIONS AND SURVEY. THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING SHALL CONFIRM THE LOCATION OF ALL SERVICES AND REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.
   a. ALL MATERIALS ARISING FROM ROADS AND SERVICES ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1 OR IF DIRECTED BY THE SUPERINTENDENT SHALL BE TRUCKED TO A LICENSED TIP.
   b. CONTRACTOR IS RESPONSIBLE TO ENSURE ANY ELECTRONIC DATA FILES MATCH THE DRAWINGS
5. SITE ARRANGEMENTS
   a. HOURS OF WORKS ARE TO BE IN 7:00am TO 6:00pm MONDAY - FRIDAY, 8:00am TO 5:00pm SATURDAY, NO WORK SUNDAYS OR PUBLIC HOLIDAYS.
   b. COMPLAINTS ARE TO BE REGISTERED AND DEALT WITH PROMPTLY IN A PROFESSIONAL MANNER.
   c. COMMUNITY LIAISON – DETAILS OF THE CONTACT PERSON AND TELEPHONE NUMBER SHALL BE CLEARLY DISPLAYED AT THE SITE ENTRY. A SIGN IS TO BE ERECTED AT THE ENTRY OF THE SITE TO CLEARLY ADVISE THE COMMUNITY LIAISON OFFICER'S DETAILS AND CONTACT NUMBER. THESE DETAILS ARE TO BE DOCUMENTED IN THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN.
6. SAFETY MANAGEMENT
   PRIOR TO THE COMMENCEMENT OF WORKS, A SITE-SPECIFIC SAFETY MANAGEMENT PLAN AND SAFE WORK METHODS FOR THE SUBJECT SITE HAVE BEEN PREPARED AND PUT IN PLACE IN ACCORDANCE WITH TWEED SHIRE COUNCIL GUIDELINES.
7. ABORIGINAL HERITAGE
   ABORIGINAL CULTURAL HERITAGE PROGRAM – RECORDS ARE TO BE KEPT OF WHICH STAFF / CONTRACTORS WERE INDUCTED UNDER THE ABORIGINAL CULTURAL HERITAGE PROGRAM FOR THE DURATION OF THE PROJECT.

EARTHWORKS/ROADWORKS

1. PAVEMENT
   a. BEFORE THE COMMENCEMENT OF THE RELEVANT STAGES OF ROAD CONSTRUCTION, PAVEMENT DESIGN DETAIL INCLUDING REPORTS FROM A REGISTERED NATA CONSULTANT SHALL BE SUBMITTED TO THE PRINCIPAL CERTIFIER FOR APPROVAL AND DEMONSTRATING.
   b. UPON RECEIPT OF THE CRB RESULTS THE ENGINEER HAS DESIGNED THE PAVEMENT IN ACCORDANCE WITH COUNCIL'S DEVELOPMENT DESIGN SPECIFICATION, D2.
   c. THE PAVEMENT MATERIALS TO BE USED COMPLY WITH THE SPECIFICATIONS TABLED IN TWEED SHIRE COUNCILS CONSTRUCTION SPECIFICATIONS, C242-C245, C247, C248 AND C255 (AS IN FORCE AT THE DATE OF THIS APPROVAL).
   d. THE SITE FILL AREAS HAVE BEEN COMPACTED TO THE SPECIFIED STANDARD.
   e. THE SUPERVISION OF BULK EARTHWORKS HAS BEEN TO LEVEL 1 AND FREQUENCY OF FIELD DENSITY TESTING HAS BEEN COMPLETED IN ACCORDANCE WITH TABLE 8.1 OF AS 3798-2007. DURING THE RELEVANT STAGES OF ROAD CONSTRUCTION, TESTS SHALL BE UNDERTAKEN BY A REGISTERED NATA GEOTECHNICAL FIRM. A REPORT INCLUDING COPIES OF TEST RESULTS SHALL BE SUBMITTED TO THE PRINCIPAL CERTIFIER PRIOR TO THE PLACEMENT OF THE WEARING SURFACE DEMONSTRATING:
      - THAT THE PAVEMENT LAYERS HAVE BEEN COMPACTED IN ACCORDANCE WITH COUNCIL'S DEVELOPMENT DESIGN AND CONSTRUCTION SPECIFICATIONS (AS IN FORCE AT THE DATE OF THIS APPROVAL).
      - THAT PAVEMENT TESTING HAS BEEN COMPLETED IN ACCORDANCE WITH TABLE 8.1 OF AS 3798 INCLUDING THE PROVISION OF A CORE PROFILE FOR THE FULL DEPTH OF THE PAVEMENT.
   f. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
2. SOILS
   ALL WORKS THAT INVOLVE THE DISTURBANCE OF SOILS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED ACID SULFATE MANAGEMENT PLAN, AS REQUIRED BY CONDITION 17 OF MP08_0194.
3. MAINTAIN WORKS
   a. THE SURROUNDING ROAD CARRIAGEWAYS ARE TO BE KEPT CLEAN OF ANY MATERIAL CARRIED ONTO THE ROADWAY BY CONSTRUCTION VEHICLES. ANY WORK CARRIED OUT BY COUNCIL TO REMOVE MATERIAL FROM THE ROADWAY WILL BE TAKEN OUT OF THE 1% COMPLIANCE BOND.
   b. COMPULSORY INSPECTIONS ARE REQUIRED THROUGHOUT THE WORKS AS PER CONDITION 88 OF MP08_0194.

CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM

1. CONSTRUCTION - NOISE
   CONSTRUCTION NOISE MANAGEMENT SHALL COMPLY WITH THE APPROVED NOISE AND VIBRATION MANAGEMENT PLAN AND CONDITIONS 79 & 80 OF MP08_0194.
2. CONSTRUCTION - SEDIMENT
   EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND CONDITION 78 OF MP08_0194.
3. CONSTRUCTION - MACHINERY
   THE USE OF CRUSHING PLANT MACHINERY, MECHANICAL SCREENING OR MECHANICAL BLENDING OF MATERIALS IS NOT APPROVED. SEPARATE APPROVAL MUST BE OBTAINED FOR ANY SUCH USE OF THE SITE.

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PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	02-09-21	NOTES AMENDED
B	22-03-21	NOTES AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

GENERAL NOTES

CONSTRUCTION ISSUE

MORTONS urbansolutions
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Civil Engineering
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DESIGNED RB	DRAWN JB	
APPROVED	NER 906726	DATE 23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-002	C

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LEGEND

- ACCESS LANE
- ACCESS STREET
- NEIGHBOURHOOD CONNECTOR (MINOR)

REFER 120 SERIES DRAWINGS FOR TYPICAL SECTIONS

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- C ⊕ K7 HERITAGE LOCATION
- ECOLOGICAL BUFFER

GENERAL

1. CONTRACT SPECIFICATIONS
   ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
2. SETOUT
   SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   LEVELS SHOWN ARE TO A.H.D.
4. TRENCH SPOIL
   a. ALL MATERIALS ARISING FROM ROADS AND SERVICES ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1.
   b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
5. CHECK ELECTRONIC SETOUT
   CONTRACTOR IS RESPONSIBLE TO ENSURE ANY ELECTRONIC DATA FILES MATCH THE DRAWINGS.
6. PRE START
   a. ERECT SITE SIGNAGE. CONSTRUCT ENTRY AND EXIT POINT AS INDICATED.
   b. CONSTRUCT VEHICLE WASHDOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.
   c. CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA.
   d. INSTALL EROSION AND SEDIMENT CONTROL CONTROL DEVICES AS PER THE EROSION AND SEDIMENT CONTROL PLAN.
   e. ERECT TEMPORARY TREE PROTECTION FENCING IN ACCORDANCE WITH THE APPROVED VEGETATION MANAGEMENT PLAN AND AUTHORITIES APPROVAL CONDITIONS.
7. WATER
   DRAWING RETICULATED WATER - WHERE WATER IS TO BE DRAWN FROM COUNCILS RETICULATED SYSTEM, AN APPLICATION FOR THE HIRE OF A COUNCIL METERED STANDPIPE INCLUDING COUNCILS NOMINATED POINT OF EXTRACTION IS TO BE SUBMITTED TO COUNCIL AND PAYMENT OF RELEVANT FEES IN ACCORDANCE WITH COUNCILS ADOPTED FEES AND CHARGES.
8. MAINTENANCE
   ALL WARNING SIGNS, LIGHTS, BARRIERS AND FENCES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH AS 1742 (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES). THE CONTRACTOR SHALL BE ADEQUATELY INSURED AGAINST PUBLIC RISK LIABILITY AND BE RESPONSIBLE FOR ANY CLAIMS ARISING FROM THESE WORKS.
9. HEALTH AND SAFETY
   ALL WORKS UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.

PROJECT SPECIFIC REPORTS

THE CONTRACTOR MUST FOLLOW THE RECOMMENDATIONS AND PROCEDURES OUTLINED IN THE FOLLOWING REPORTS AT ALL TIMES

a) GEOTECHNICAL INVESTIGATION REPORTS (INCLUDING ANY ACID SULPHATE OR DISPERSIVE SOIL REPORTING)
b) VEGETATION & FAUNA MANAGEMENT PLANS
c) OTHER MANAGEMENT PLANS NOMINATED IN THE CONTRACT, AUTHORITIES APPROVAL CONDITIONS OR BY THE SUPERINTENDENT.

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	02-09-21	LEGEND AMENDED
B	06-10-20	NOTES AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROAD HIERARCHY AND STAGING PLAN

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED RB | DRAWN JB
APPROVED | NER 906726 | DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-005 | AMEND. C

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NOTE:
PEGS PHYSICALLY INGROUND ON ROAD CONTROL LINE AS DEEMED START OF PROJECT. LEVEL INFORMATION USED FOR DESIGN PURPOSES.

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SHEET LAYOUT

LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- ⊕ XX HERITAGE LOCATION
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- EXISTING PERMANENT KOALA EXCLUSION FENCE
- EXISTING TEMPORARY CONSTRUCTION LIMIT FENCE
- EXISTING TEMPORARY NO-GO FENCE - POWER WEBBING WITH 2 STRANDS WIRE AND STAR PICKETS A7 8m CENTERS.
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- 5.53 × PEGGED CENTERLINE SURVEY FROM LANDSURV

PROJECT SPECIFIC REPORTS

THE CONTRACTOR MUST FOLLOW THE RECOMMENDATIONS AND PROCEDURES OUTLINED IN THE FOLLOWING REPORTS AT ALL TIMES:

a) GEOTECHNICAL INVESTIGATION REPORTS (INCLUDING ANY ACID SULPHATE OR DISPERSIVE SOIL REPORTING)
b) VEGETATION & FAUNA MANAGEMENT PLANS
c) OTHER MANAGEMENT PLANS NOMINATED IN THE CONTRACT, AUTHORITIES APPROVAL CONDITIONS OR BY THE SUPERINTENDENT.

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

DEEMED COMMENCMENT/
PEGGED SURVEY
FROM LANDSURV
SHEET 1

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED RB	DRAWN JB	
APPROVED	NER 906726	DATE 23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-007	A

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NOTE:
PEGS PHYSICALLY INGROUND ON ROAD CONTROL LINE AS DEEMED START OF PROJECT. LEVEL INFORMATION USED FOR DESIGN PURPOSES.

SHEET LAYOUT

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

DEEMED COMMENCMENT/
PEGGED SURVEY
FROM LANDSURV
SHEET 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-008	A

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- EXISTING TEMPORARY NO-GO FENCE
- ACCESS GATE IN ACCORDANCE WITH TSC STD DWG S.D.020
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- K7 HERITAGE LOCATION
- B HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

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PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 20 40 60 80 100m
Scale 1:2000 - A1 (1:4000 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
B	02-09-21	LEGEND AMENDED
A	23-06-20	COUNCIL ISSUE

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DRAWING TITLE

FENCING PLAN

CONSTRUCTION ISSUE

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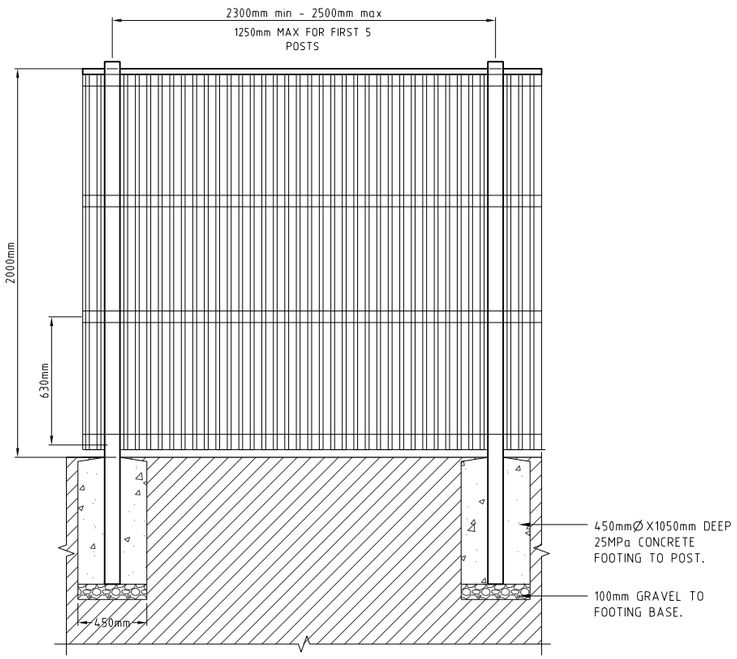

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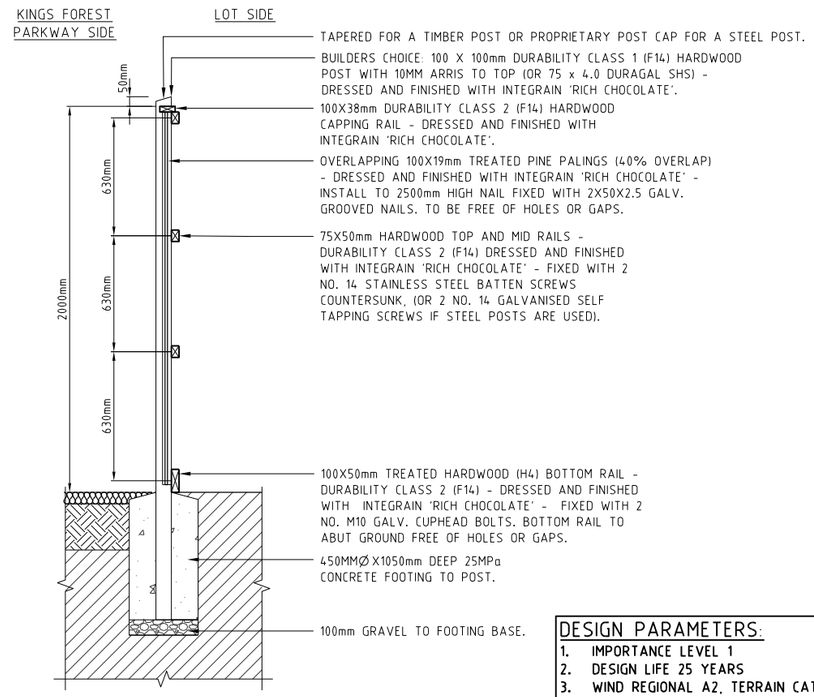

SECTION

DESIGN PARAMETERS:

1. IMPORTANCE LEVEL 1
2. DESIGN LIFE 25 YEARS
3. WIND REGIONAL A2, TERRAIN CATEGORY 2.5 Mz = .87, PARTIAL SHIELDING Ms = 0.9, DESIGN WIND SPEED 30.5m/s
4. SOIL TYPE: DENSE SAND.

ACOUSTIC FENCE

N.T.S

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 20 40 60 80 100m
Scale 1:2000 - A1 (1:4000 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

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GILBERT SUTHERLAND

DRAWING TITLE

ACOUSTIC FENCE DETAILS

CONSTRUCTION ISSUE

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DESIGNED RB | DRAWN JB
APPROVED | NER 906726 | DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-011 | AMEND. A

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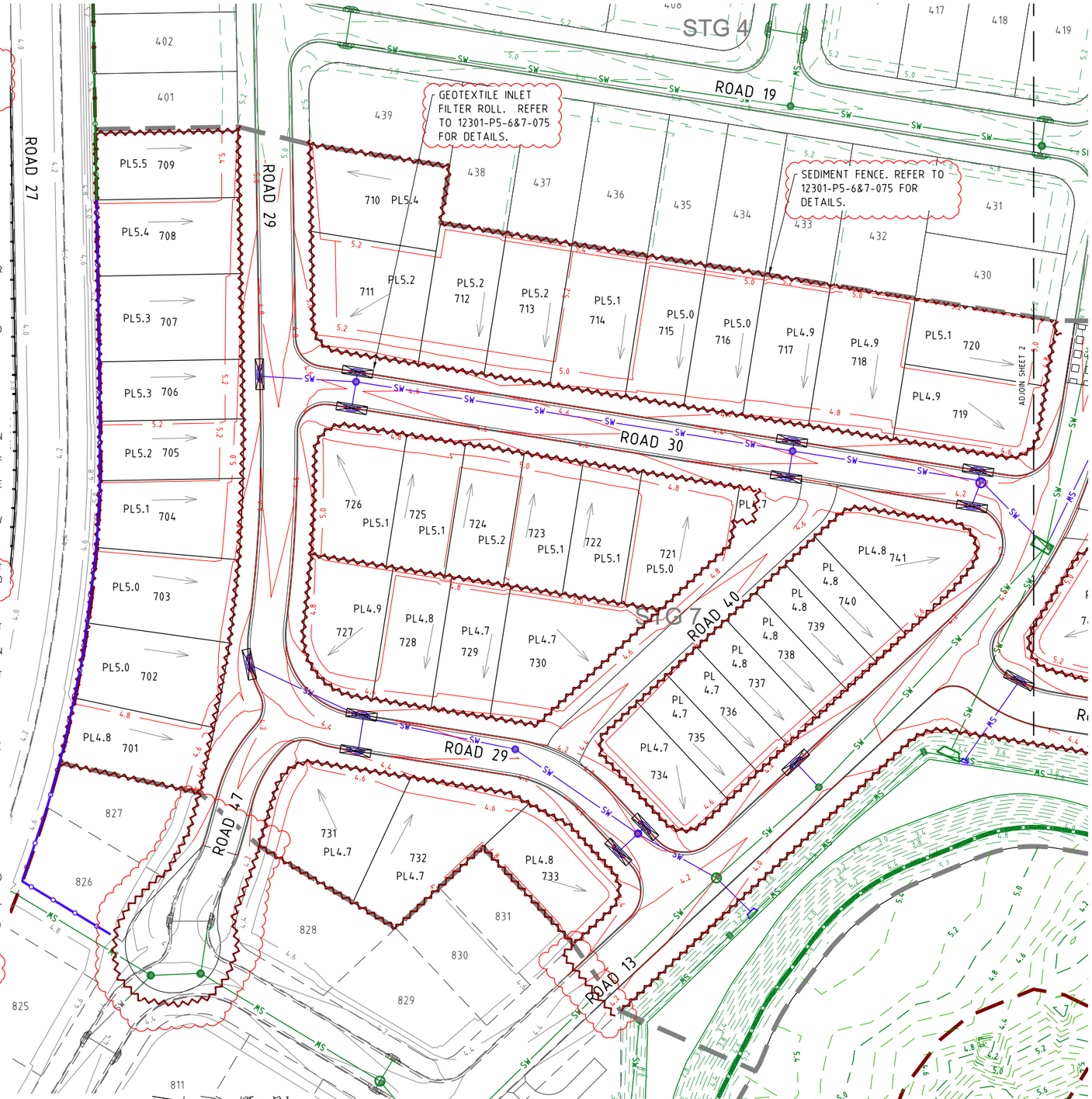
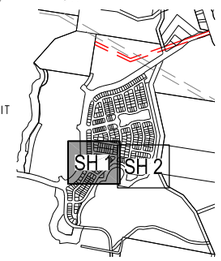
SEDIMENT AND EROSION

1. THE OBJECTIVE OF THE EROSION AND SEDIMENT CONTROL PLAN IS TO ENSURE THAT ALL REASONABLE AND PRACTICABLE MEASURES ARE IMPLEMENTED TO MINIMISE SHORT AND LONG-TERM EROSION AND ADVERSE EFFECTS OF SEDIMENT TRANSPORT.
2. THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN MUST INCLUDE WATER QUALITY MONITORING REQUIREMENTS IN ACCORDANCE WITH THE APPROVED GILBERT & SUTHERLAND STORMWATER MANAGEMENT PLAN (SMP). THE CONTRACTOR MUST CONFIRM THE PROPOSED PROCEDURES FOR THE TESTING, FLOCKING AND TRIGGERS FOR PUMP OUT OF ALL SEDIMENT BASINS IN ACCORDANCE WITH THE APPROVED SMP.
3. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
4. PRIOR TO THE COMMENCEMENT OF WORKS ONSITE THE CONTRACTOR MUST MAKE THEMSELVES AWARE OF ALL PREVIOUS GEOTECHNICAL REPORTS AND DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL (INCLUDING PERFORMING ANY SOIL TESTS IF REQUIRED). A COPY OF ALL TEST RESULTS MUST BE PROVIDED TO THE SUPERINTENDENT.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION (INCLUDING THE MAINTENANCE PERIOD). NOTWITHSTANDING THE CONTROL MEASURES OR FINISHED EARTHWORKS DESIGN SHOWN ON THESE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ADDITIONAL OR ALTERNATIVE EROSION & SEDIMENT CONTROL MEASURES TO MINIMISE SEDIMENT ACROSS OR LEAVING THE SITE.
6. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS (INCLUDING WEEKENDS AND PUBLIC HOLIDAYS) AND AT ALL TIMES REMAINS RESPONSIBLE TO:
   a) CLEAN AND REPAIR CONTROL DEVICES WHENEVER THE ACCUMULATED SEDIMENT REDUCES THEIR CAPACITY BY 50%.
   b) MAINTAIN POSITIVE GRADES OF ALL PERIMETER BANKS AND SWALES TO AN OUTLET.
   c) PROTECT ANY DOWNSTREAM CONSTRUCTION.
   d) CONTROLLING DUST.
   e) MEASURES HAVE BEEN INSTALLED IN ACCORDANCE WITH DETAILS OUTLINED IN THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND AS DIRECTED BY THE SUPERINTENDENT.
7. THE CONTRACTOR'S PLAN SHALL ALLOW FOR SUITABLE ACCESS TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. NO ADDITIONAL VEGETATION CLEARING IS PERMITTED FOR GAINING ACCESS UNLESS APPROVED BY THE SUPERINTENDENT.
8. THE CONTRACTOR MAY REQUEST APPROVAL FROM THE SUPERINTENDENT TO REUSE THE STOCKPILED MULCH FOR STABILISING BATTERS ONLY IN LOCATIONS WHERE THE APPROVED LANDSCAPE OPW DESIGN REQUIRES MULCH ULTIMATELY.
9. CONSTRUCTION STOCKPILING
   a) TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS NOMINATED ON THE CONSTRUCTION DRAWINGS OR IN LOCATIONS AGREED WITH THE SUPERINTENDENT.
   b) ADDITIONAL VEGETATION CLEARING IS NOT PERMITTED TO FACILITATE THE STOCKPILING OF MATERIALS UNLESS SHOWN ON THE APPROVED VEGETATION MANAGEMENT PLAN.
   c) ANY STOCKPILE SITE MUST BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES.
   d) NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE OF VEGETATION.
   e) A TEMPORARY SILT FENCE IS TO BE ERECTED APPROXIMATELY 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING.
10. NOTWITHSTANDING THE DETAILS SHOWN IN THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN, DURING CONSTRUCTION THE CONTRACTOR MUST:
   a) ENSURE ALL SEDIMENT BASINS ARE ADEQUATELY SIZED. THE SEDIMENT BASINS ARE TO ACCOUNT FOR ON-SITE AND UPSTREAM CATCHMENT AREAS. CALCULATIONS ARE TO BE PROVIDED TO DEMONSTRATE THE SEDIMENT BASINS CAN FUNCTION AS DESIGNED.
   b) PLACE A ROCK BOND AROUND ALL HEADWALLS DURING CONSTRUCTION.
   c) PROVIDE KERB INLET PROTECTION TO ALL GULLIES.
   c) PLACE A MINIMUM 1.0m WIDE TURF STRIP BEHIND ALL KERBS AND IN A HERRINGBONE LAYOUT WITHIN THE ROAD VERGE.
   d) MAINTENANCE (INCLUDING FLOCCULATION IF REQUIRED AND PUMP OUT) OF ALL CONSTRUCTION SEDIMENT BASINS (WHETHER EXISTING OR NEW).
   e) CLEAN OUT OF ALL GROSS POLLUTANT TRAPS, SEDIMENT FOREBAYS AND ALL OTHER PERMANENT SEDIMENT CONTROL DEVICES AT BOTH ON AND OFF MAINTENANCE.
11. CONTRACTOR TO CONFIRM THE EXTENTS OF REQUIRED GRASSING TREATMENTS WITH THE SUPERINTENDENT ATLEAST 7 DAYS PRIOR TO FINAL TRIMMING.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT GRASSING STRIKE RATES ARE ACHIEVED AT THE ON AND OFF MAINTENANCE INSPECTIONS IN ACCORDANCE WITH COUNCIL REQUIREMENTS. THIS INCLUDES THE SUPPLY AND INSTALLATION OF ANY REQUIRED CHEMICAL/FERTILIZER AMELIORATION TO ACHIEVE THE SPECIFIED GRASS STRIKE RATES.
13. GEOFABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS.
14. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH APPROVED OPEN SPACE MANAGEMENT PLAN AND LANDSCAPING OPW. CONTRACT DOCUMENTATION WILL SPECIFY WHETHER THIS IS THE CIVIL CONTRACTOR OR THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY AND INSTALL. THE CIVIL CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUITABLE ACCESS FOR THE LANDSCAPE CONTRACTOR TO PERFORM THEIR WORKS.
15. MAINTENANCE PERIOD (PRE TO POST CONSTRUCTION)
   a) ALL PROTECTION MEASURES ARE TO BE INSPECTED AND MAINTAINED REGULARLY
   b) REPAIRS ARE TO BE EFFECTED IMMEDIATELY.
   c) SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE.
   d) AT OFF-MAINTENANCE AND ONLY WHEN DIRECTED BY COUNCIL, REMOVE AND DISPOSE OFFSITE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
16. REFER TO LANDSCAPE ARCHITECT PLANS FOR PLANTING DETAILS OF ALL BATTERED AND NON BATTERED AREAS.
17. REFER TO T.S.C S.D 501 & 502 FOR EROSION AND SILTATION PREVENTION DEVICES.
18. EACH PHASE MUST BE TOPSOILED, DRILL SEEDED AND HYDRO MULCHED BEFORE MOVING TO THE NEXT PHASE OR NO MORE THAN 5ha OF EARTHWORKS SHALL BE EXPOSED AT ANY TIME.



LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING STORMWATER
- EXISTING CONTOURS
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE STORMWATER
- FUTURE CONTOURS
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED STORMWATER
- DESIGN CONTOURS
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- SEDIMENT FENCE
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- EXISTING TEMPORARY NO-GO FENCE
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- SCOUR PROTECTION
- TEMPORARY SEDIMENT BASIN
- STORMWATER INLET FILTER
- VEHICLE SHAKEDOWN
- MANHOLE
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL
- PL50.4 NOMINAL FINISHED SURFACE PAD LEVEL
- FINISHED SURFACE PAD FALL DIRECTION
- ROCK CHECK DAM



SHEET LAYOUT

NOTE:
SEDIMENT AND EROSION CONTROL MEASURES SHOWN RELATES TO THE FINISHED SURFACE ONLY. THE CONTRACTOR IS TO PREPARE PROGRESSIVE CONSTRUCTION PHASE SEDIMENT AND EROSION CONTROL PLANS THROUGHOUT CONSTRUCTION.

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PROJECT NAME
KINGS FOREST
PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	02-09-21	LEGEND, SILT FENCE AND NOTES AMENDED
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE
EARTHWORKS
FINAL SURFACE AND
SEDIMENT AND EROSION
PLAN
SHEET 1 OF 2

CONSTRUCTION ISSUE

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12301-P5-6&7-070	B

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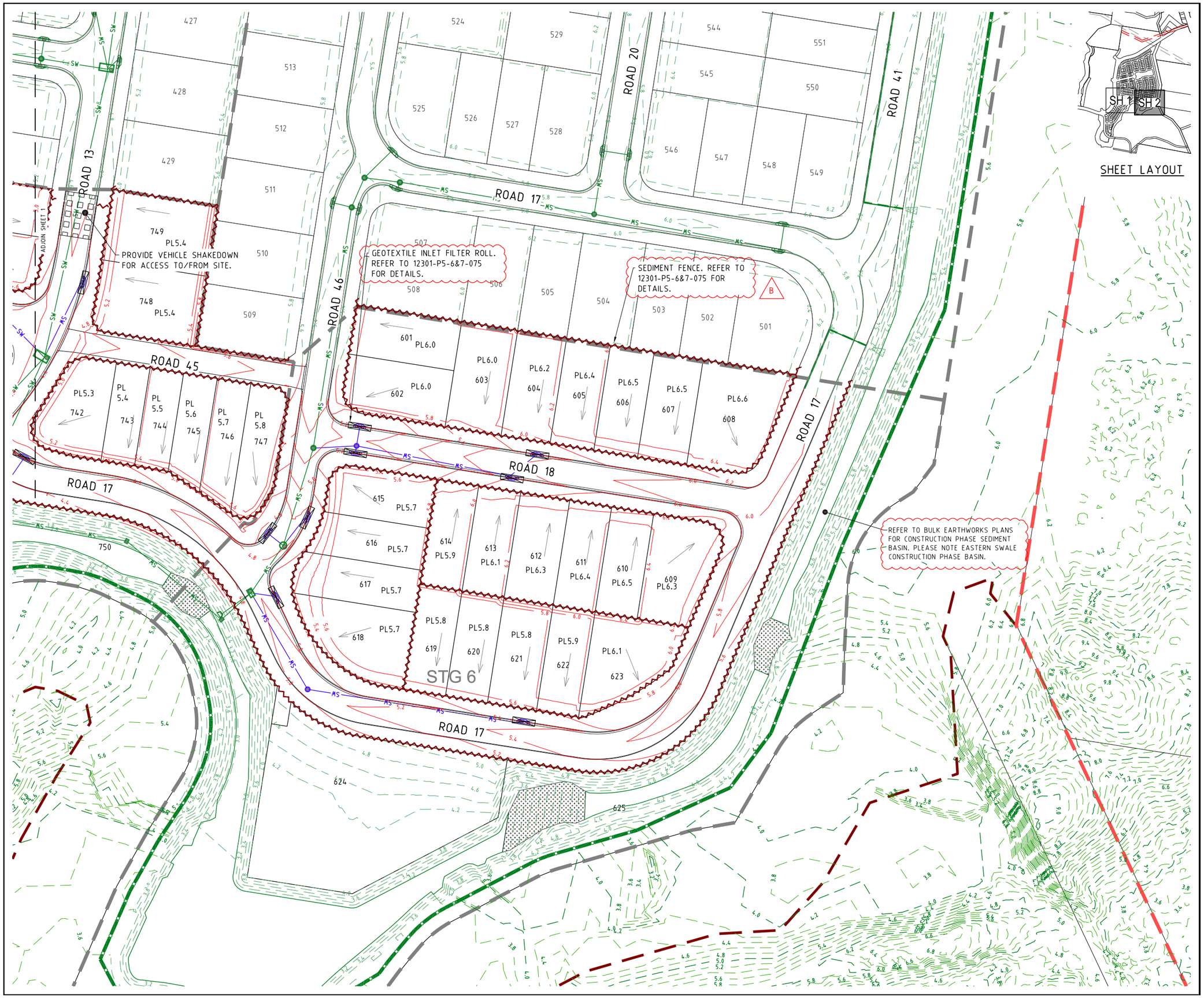

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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GILBERT + SUTHERLAND

DRAWING TITLE

EARTHWORKS
FINAL SURFACE AND
SEDIMENT AND EROSION
PLAN
SHEET 2 OF 2

CONSTRUCTION ISSUE

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Urban & Regional Planning
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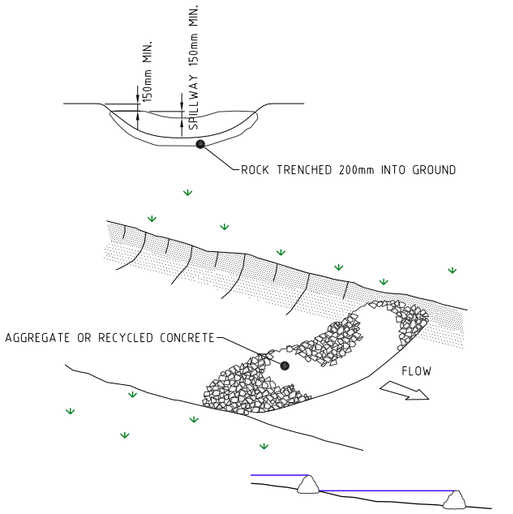


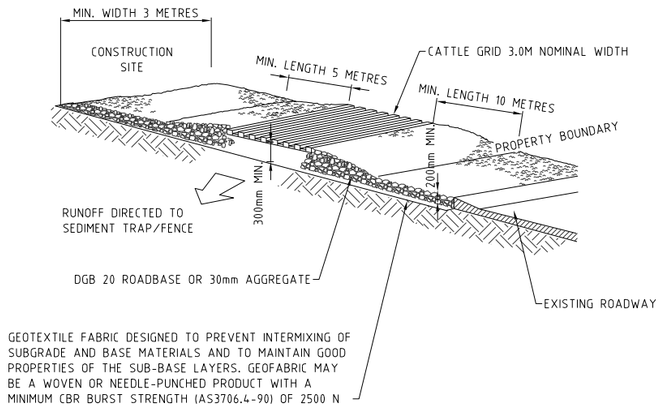
SPACING OF CHECK DAMS ALONG CENTRELINE AND SCOUR PROTECTION BELOW EACH CHECK DAM TO BE SPECIFIED ON ESCP

CONSTRUCTION NOTES:

1. CHECK DAMS CAN BE BUILT WITH VARIOUS MATERIALS, INCLUDING ROCKS, LOGS, SANDBAGS AND STRAW BALES. THE MAINTENANCE PROGRAM SHOULD ENSURE THEIR INTEGRITY IS RETAINED (ESPECIALLY WHERE CONSTRUCTED WITH STRAW BALES) WHERE BALES ARE USED, REPLACEMENT MAY BE REQUIRED EVERY TWO TO FOUR MONTHS
2. TRENCH CHECK DAM 200mm INTO THE GROUND ACROSS WHOLE WIDTH. WHERE ROCK IS USED, FILL TRENCHES TO AT LEAST 100mm ABOVE GROUND SURFACE TO REDUCE RISK OF UNDERCUTTING.
3. TRENCH MAXIMUM HEIGHT SHOULD NOT EXCEED 600mm ABOVE GULLY FLOOR. THE CENTRE SHOULD ACT AS A SPILLWAY, BEING AT LEAST 150mm LOWER THAN OUTER EDGES
4. SPACE DAMS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE FOLLOWING DOWNSTREAM DAM.

ROCK CHECK DAM

NOT TO SCALE

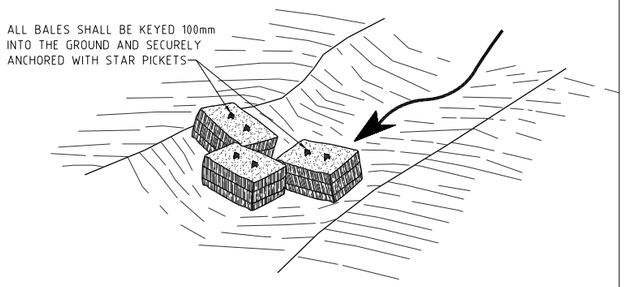


CONSTRUCTION NOTES

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS SHAKER GRID

NOT TO SCALE

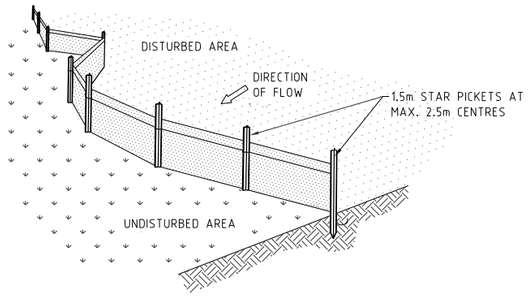


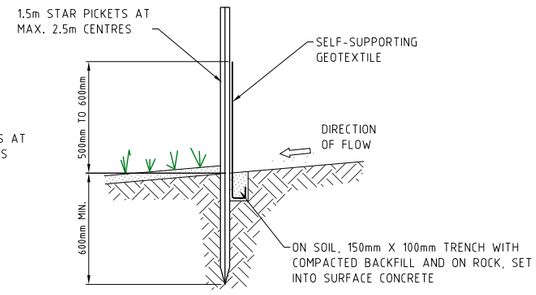
STRAW BALE CHECK DAM

NOT TO SCALE

CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE





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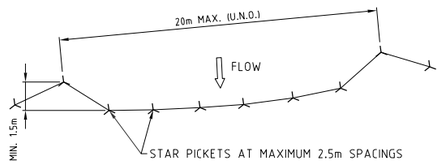
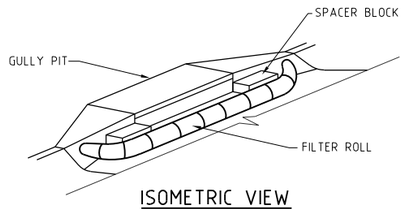


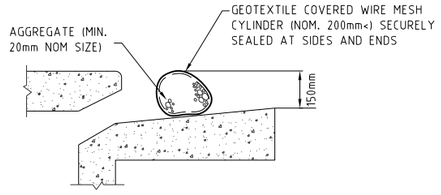
PLAN

SEDIMENT FENCE

NOT TO SCALE



ISOMETRIC VIEW



SECTION

GEOTEXTILE FILTER ROLL

NOT TO SCALE

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	13-11-19	
COUNCIL	xx-xx-xx	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	04-08-21	ISSUE FOR INFORMATION

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DRAWING TITLE

SEDIMENT & EROSION DETAILS

CONSTRUCTION ISSUE

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APPROVED	NER 906726	DATE	07-02-19

DRAWING NUMBER	AMEND.
12301-P5-6&7-075	A

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING FOOTPATH
- SW — EXISTING STORMWATER
- W — EXISTING WATER MAIN
- S — EXISTING SEWER
- FUTURE PROPERTY LINE
- FUTURE FOOTPATH
- FUTURE KERB (INVERT)
- S — FUTURE SEWER
- SW — FUTURE STORMWATER
- W — FUTURE WATER MAIN
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED FOOTPATH
- RM — PROPOSED RISING MAIN
- S — PROPOSED SEWER MAIN
- SW — PROPOSED STORMWATER
- SS — PROPOSED SUBSOIL
- W150 — PROPOSED WATER MAIN
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- X — EXISTING TEMPORARY NO-GO FENCE
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-4&5-011
- K7 — HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- FUTURE DRIVEWAY/GARAGE (BY OTHERS)
- C

- EXISTING PADMOUNT TRANSFORMER
- EXISTING ELECTRICAL POWER LINE POLES
- EXISTING ELECTRICAL SERVICE PILLAR
- EXISTING ELECTRICAL LINE - STREET LIGHT
- EXISTING ELECTRICAL LINE - LOW VOLTAGE
- EXISTING ELECTRICAL LINE - HIGH VOLTAGE
- EXISTING ELECTRICAL OVERHEAD
- PROPOSED PADMOUNT TRANSFORMER
- PROPOSED ELECTRICAL POWER LINE POLES
- PROPOSED ELECTRICAL SERVICE PILLAR
- PROPOSED ELECTRICAL LINE - STREET LIGHT
- PROPOSED ELECTRICAL LINE - LOW VOLTAGE
- PROPOSED ELECTRICAL LINE - HIGH VOLTAGE
- PROPOSED ELECTRICAL OVERHEAD
- PROPOSED STREET LIGHT
- FUTURE PADMOUNT TRANSFORMER
- FUTURE ELECTRICAL POWER LINE POLES
- FUTURE ELECTRICAL SERVICE PILLAR
- FUTURE ELECTRICAL LINE - STREET LIGHT
- FUTURE ELECTRICAL LINE - LOW VOLTAGE
- FUTURE ELECTRICAL LINE - HIGH VOLTAGE
- FUTURE ELECTRICAL OVERHEAD
- FUTURE STREET LIGHT

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CLEARANCE BETWEEN WATER MAINS AND UNDERGROUND SERVICES

UTILITY (EXISTING OR PROPOSED SERVICES)	MINIMUM HORIZONTAL CLEARANCES (mm) NEW MAIN SIZE ≤DN 200	MINIMUM HORIZONTAL CLEARANCES (mm) NEW MAIN SIZE >DN 200	MINIMUM VERTICAL CLEARANCE (mm)
TELECOMMUNICATION CONDUITS AND CABLES	300[2]	600	150
ELECTRICITY CONDUITS AND CABLES	500	1000	225[4]
STORMWATER DRAINS	300[2]	600	150[3]
SEWER - GRAVITY	1000[4]/600	100[4]/600	500[3]
SEWERS - PRESSURE AND VACUUM	600	600	300
KERBS	150	600[5]	150 (WHERE POSSIBLE)

NOTES:

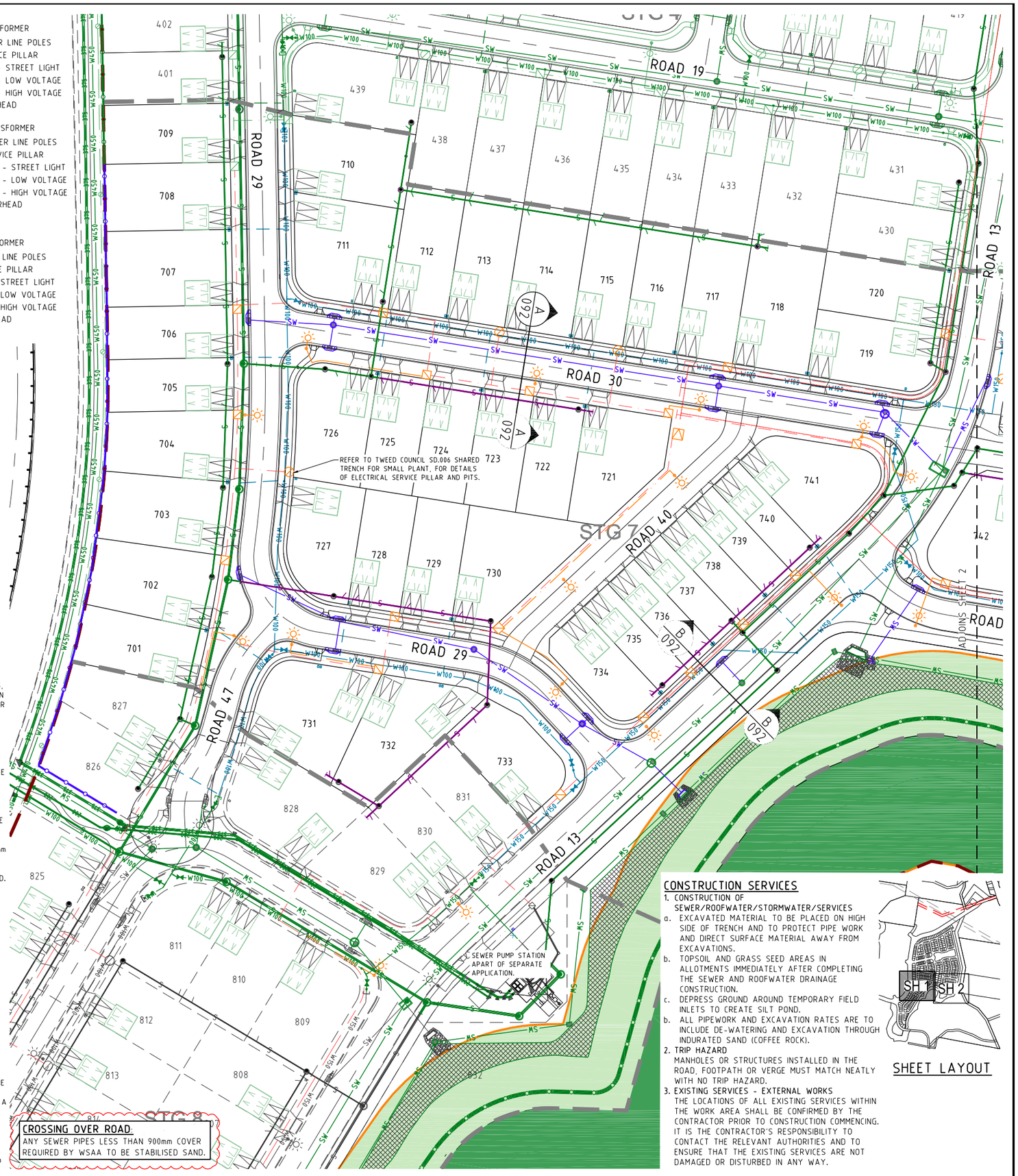
1. VERTICAL CLEARANCES APPLY WHERE WATER MAINS CROSS ONE ANOTHER AND OTHER UTILITY SERVICES, EXCEPT IN THE CASE OF SEWERS WHERE A VERTICAL SEPARATION SHALL ALWAYS BE MAINTAINED, EVEN WHEN THE MAIN AND SEWER ARE PARALLEL. THE MAIN SHOULD ALWAYS BE LOCATED ABOVE THE SEWER TO MINIMISE THE POSSIBILITY OF BACKFLOW CONTAMINATION IN THE EVENT OF A MAIN BREAK.
2. CLEARANCES CAN BE FURTHER REDUCED TO 150mm FOR DISTANCES UP TO 2m WHERE MAINS ARE TO BE LAID PAST INSTALLATIONS SUCH AS CONCRETE BASES FOR POLES, PITS AND SMALL STRUCTURES, PROVIDING THE STRUCTURE WILL NOT BE DESTABILISED IN THE PROCESS. THE CLEARANCE FROM TIMBER POLES SHOULD BE AT LEAST 200mm AND PREFERABLY 300mm.
3. WATER MAINS SHOULD ALWAYS CROSS OVER SEWERS AND STORMWATER DRAINS. FOR CASES WHERE THERE IS NO ALTERNATIVE AND THE MAIN MUST CROSS UNDER THE SEWER, THE DESIGN SHALL NOMINATE AN APPROPRIATE TRENCHLESS CONSTRUCTION TECHNIQUE IN ACCORDANCE WITH CLAUSE 5.5 OR OTHER WATER MAIN CONSTRUCTION AND PROTECTION TREATMENT, EFFECTIVELY JOINT-FREE IN THE VICINITY OF THE SEWER.
4. WHERE A PARALLEL SEWER IS AT THE MINIMUM VERTICAL CLEARANCE LOWER THAN THE WATER MAIN (500mm), MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 1000mm. THIS MINIMUM HORIZONTAL CLEARANCE CAN BE PROGRESSIVELY REDUCED TO 600mm AS THE VERTICAL CLEARANCE IS INCREASED TO 750mm.
5. CLEARANCE FROM KERBS SHALL BE MEASURED FROM THE NEAREST POINT OF THE KERB. FOR WATER MAINS ≤DN 375 CLEARANCES FROM KERBS CAN BE PROGRESSIVELY REDUCED UNTIL THE MINIMUM OF 150mm IS REACHED FOR MAINS ≤DN 200.
6. AN ADDITIONAL CLEARANCE FROM HIGH VOLTAGE ELECTRICAL INSTALLATIONS SHOULD BE MAINTAINED ABOVE THE CONDUITS OR CABLES TO ALLOW FOR A PROTECTIVE BARRIER AND MARKING TO BE PROVIDED.

CLEARANCE BETWEEN PRESSURE MAINS AND UNDERGROUND SERVICES

UTILITY (EXISTING SERVICES)	MINIMUM HORIZONTAL CLEARANCES (mm) PRESSURE MAIN SIZE ≤DN 200	MINIMUM HORIZONTAL CLEARANCES (mm) PRESSURE MAIN SIZE >DN 200	MINIMUM VERTICAL CLEARANCE (mm)
WATER MAINS	1000	1000	500
TELECOMMUNICATION CONDUITS AND CABLES	300[2]	600	150
ELECTRICITY CONDUITS AND CABLES	500	1000	225
SEWERS AND DRAIN	300[2]	600	150[3]
KERBS	150	600[3]	150 (WHERE POSSIBLE)

NOTES:

1. VERTICAL CLEARANCES APPLY WHERE PRESSURE MAINS CROSS OTHER UTILITY SERVICES, EXCEPT IN THE CASE OF WATER MAINS WHEN A VERTICAL SEPARATION SHALL ALWAYS BE MAINTAINED, EVEN WHEN THE PRESSURE MAIN AND WATER MAIN ARE PARALLEL. THE PRESSURE MAIN SHOULD ALWAYS BE LOCATED BELOW THE WATER MAIN TO MINIMISE THE POSSIBILITY OF BACKFLOW CONTAMINATION IN THE EVENT OF A PRESSURE MAIN BREAK.
2. CLEARANCES CAN BE FURTHER REDUCED TO 150mm FOR DISTANCES UP TO 2m WHEN PASSING INSTALLATIONS SUCH AS POLES, PITS AND SMALL STRUCTURES, PROVIDING THE STRUCTURE IS NOT DESTABILISED IN THE PROCESS.
3. CLEARANCE FROM KERBS SHALL BE MEASURED FROM THE NEAREST POINT OF THE KERB. FOR PRESSURE MAINS ≤DN 375 CLEARANCES FROM KERB CAN BE PROGRESSIVELY REDUCED UNTIL THE MINIMUM OF 150mm IS REACHED FOR MAINS ≤DN 200.



CROSSING OVER ROAD:
ANY SEWER PIPES LESS THAN 900mm COVER REQUIRED BY WSAA TO BE STABILISED SAND.

CONSTRUCTION SERVICES

1. CONSTRUCTION OF SEWER/ROOFWATER/STORMWATER/SERVICES
   a. EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS.
   b. TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION.
   c. DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.
   b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
2. TRIP HAZARD
   MANHOLES OR STRUCTURES INSTALLED IN THE ROAD, FOOTPATH OR VERGE MUST MATCH NEATLY WITH NO TRIP HAZARD.
3. EXISTING SERVICES - EXTERNAL WORKS
   THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.

SHEET LAYOUT

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	02-09-21	LEGEND AMENDED
B	06-10-20	LEGEND, SERVICES AND NOTES AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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GILBERT + SUTHERLAND

DRAWING TITLE

COMBINED SERVICES PLAN
SHEET 1 OF 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-090
AMEND. C

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SHEET LAYOUT

B

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m

Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	06-10-20	SERVICES AND NOTES AMENDED
A	23-06-20	COUNCIL ISSUE

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DRAWING TITLE

COMBINED SERVICES PLAN
SHEET 2 OF 2

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 23-06-20

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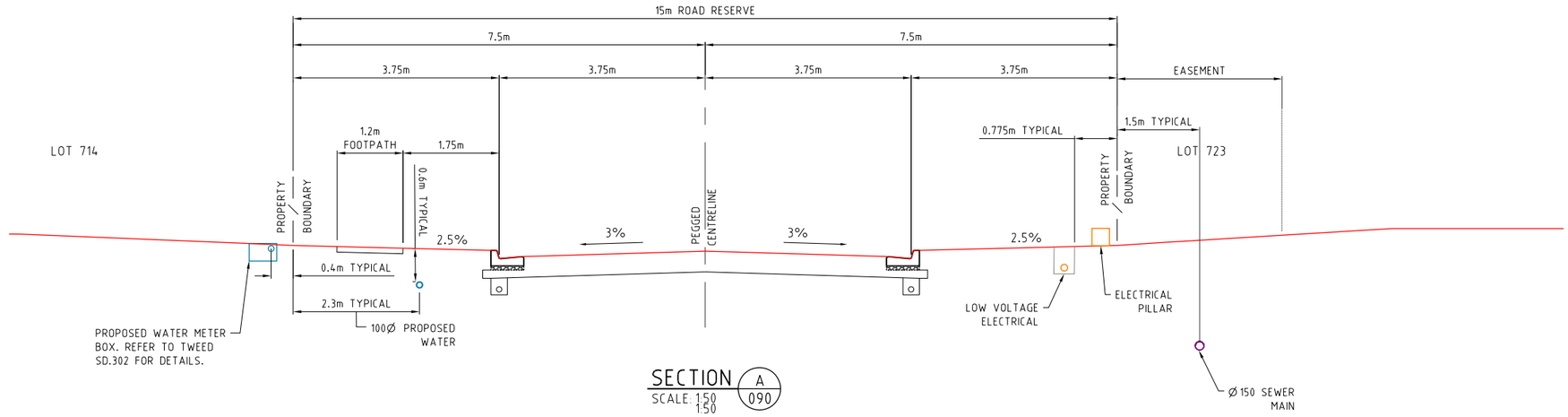

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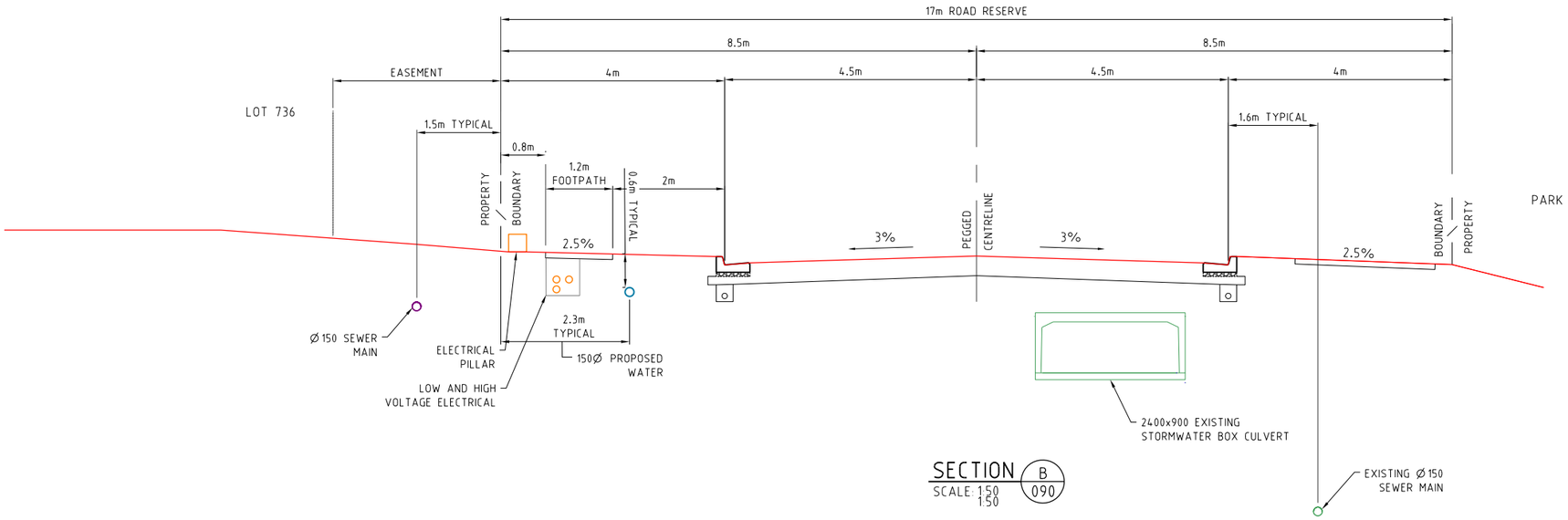

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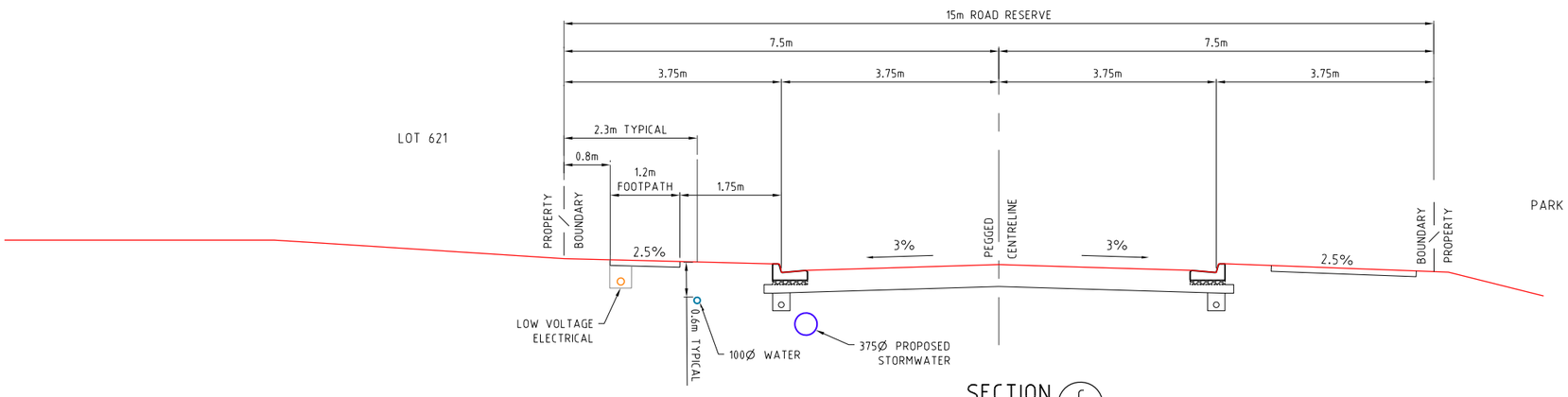

SECTION C 091
SCALE: 1:50
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PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE
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COUNCIL	xx-xx-xx
CONSTRUCTION	..

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COMBINED SERVICES
SECTIONS
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APPROVED		NER 906726	DATE 07-02-19

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ROADWORKS

1. PAVEMENT DEPTHS
   a) THE DESIGN PAVEMENT DEPTHS ALLOWED IN EARTHWORKS CALCULATIONS ARE BASED ON THE DEPTHS SHOWN IN THE SCHEDULE OF PAVEMENT DEPTHS ON DRAWING 120.
   b) THE PAVEMENT DEPTHS GIVEN ARE DESIGN DEPTHS ONLY AND MAY BE VARIED AFTER SUB-GRADE TESTS ARE TAKEN. THE CONTRACTOR IS TO PROVIDE THE SUPERINTENDENT A SUBGRADE C.B.R. REPORT PREPARED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.
   THE SUPERINTENDENT WILL COORDINATE THE AUTHORITIES APPROVAL OF THE PAVEMENT DESIGN.
   c) REFER TO DRG. 120 FOR TYPICAL ROAD SECTIONS.
2. TESTING
   ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY. ALL SITE FILLING SHALL BE TESTED AT LEVEL 1 REQUIREMENTS.
3. SUBSOIL DRAINS
   SUBSOIL DRAINS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL AUTHORITY'S SPECIFICATIONS. SUBSOIL DRAINS SHALL BE PLACED UNDER ALL KERB STRUCTURES AND ARE TO BE CONSTRUCTED TO A DEPTH GREATER THAN THAT OF THE INVERT OF THE DEEPEST SERVICE CROSSING.
4. MITRE DRAINS
   MITRE DRAINS ARE TO BE CONSTRUCTED ALONG THE CUT/FILL INTERFACE AND SAG/LOW POINTS OF ALL ROADS. CONTRACTOR TO REQUEST DIRECTION FROM SUPERINTENDENT WHETHER TO INSTALL MITRE DRAIN AT ROCK ENCOUNTERED IN SUBGRADE. ALL MITRE DRAINS MUST BE FREE DRAINING AND TIE INTO THE ADJACENT SUBSOIL DRAINS.
5. ROCK
   a. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR RATES.
   b. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
6. TURF
   1.0m TURF STRIP TO BE INSTALLED BEHIND THE BACK OF ALL KERBS. A PERPENDICULAR TURF STRIP AT MAXIMUM 10m INCREMENTS MUST BE INSTALLED TO FULL VERGE WIDTH FOR SEDIMENT AND EROSION CONTROL PURPOSES.
7. KERBS
   ALL KERBS TO BE CONSTRUCTED IN ACCORDANCE WITH AUTHORITY STANDARDS
8. PAVEMENT TIE-IN
   PAVEMENT TIE-IN TO BE IN ACCORDANCE WITH DRG. 120
9. FOOTPATHS
   FOOTPATHS AND CYCLEWAYS TO BE CONSTRUCTED IN ACCORDANCE WITH TWEED SHIRE COUNCIL STANDARD DRAWING SD013.

LEGEND

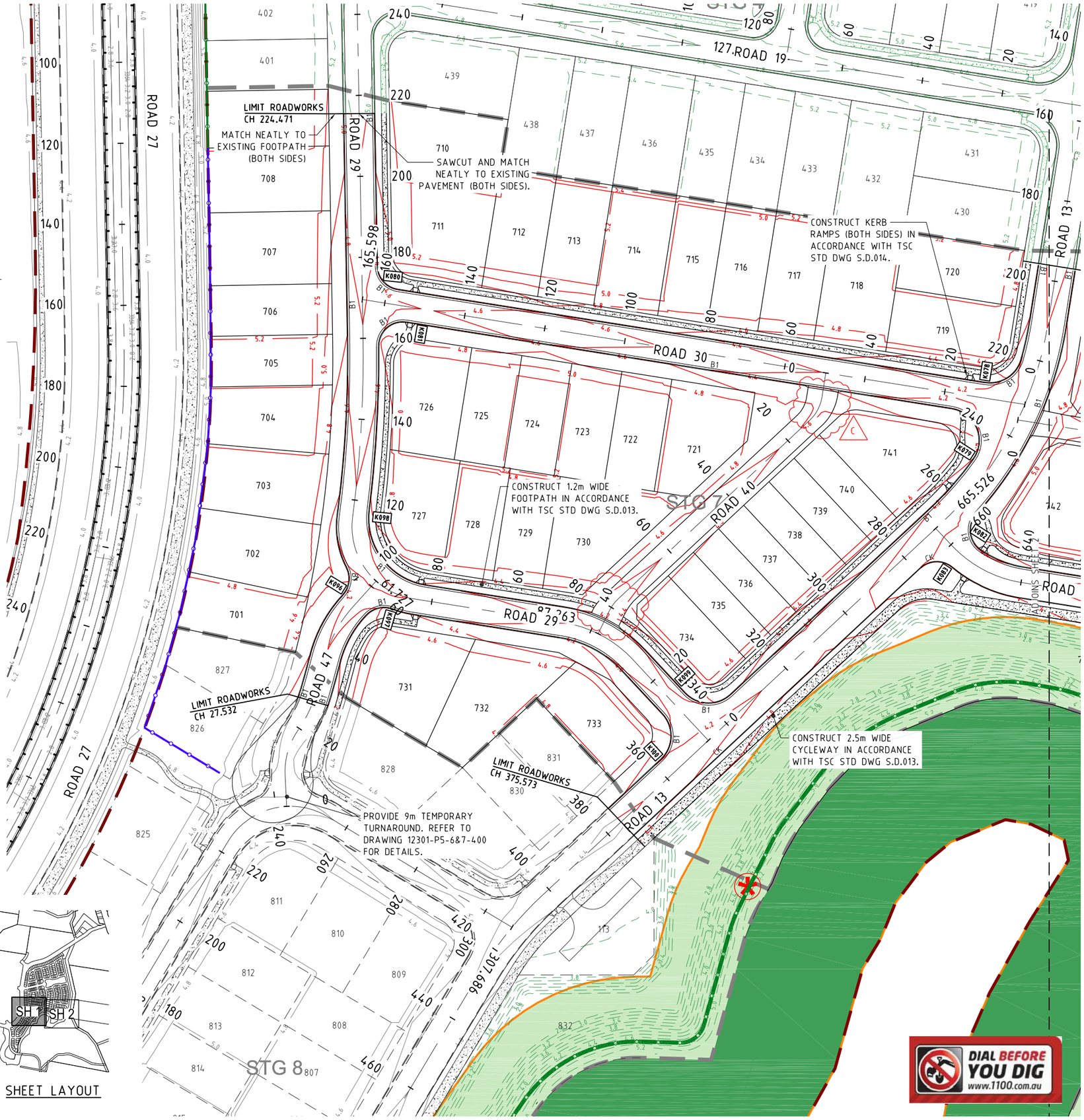
- EXISTING KERB (INVERT)
- EXISTING KERB (LIP & BACK)
- EXISTING FOOTPATH
- EXISTING PROPERTY LINE
- 1.0 EXISTING CONTOURS
- FUTURE KERB
- FUTURE FOOTPATH
- FUTURE PROPERTY LINE
- 1.0 FUTURE CONTOURS
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED FOOTPATH
- PROPOSED PROPERTY LINE
- SITE BOUNDARY
- PRECINCT BOUNDARY
- STAGE BOUNDARY
- 1.0 DESIGN CONTOURS
- PROPOSED CONCRETE
- 41.065 CENTRELINE CHAINAGE
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- EXISTING TEMPORARY NO-GO FENCE
- ACCESS GATE IN ACCORDANCE WITH TSC STD DWG S.D.020
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- ECOLOGICAL BUFFER
- K063 KERB LINE REFER TO DRAWING 12301-P5-6&7-122 TO 124 FOR KERB SECTIONS

KERB TYPE NOTE:

1. FOR KERB TYPES REFER TO DWG. 120

REFER TO DRG. 120 FOR KERB TYPES

B1	BARRIER KERB & CHANNEL
MK	MOUNTABLE KERB
ER2	EDGE RESTRAINT (WITH VEHICLE LOADING)
FES	FLUSH EDGE STRIP
B2	BARRIER KERB
CK	CASTELLATED KERB



PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	11-10-21	DRIVEWAYS AMENDED
B	26-08-21	LEGEND, KERB NUMBERS AND KERBS AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
PLAN
SHEET 1 OF 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
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Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-100	C

Y:\123 - Lesta Developments Pty Ltd\01 - Kings Forest\PREC5\Engineering Drawings\OPW Stages 6 & 7\Current\12301-P5-6&7-100.dwg, 12/10/2021 11:54:54 AM, 1:2

SHEET LAYOUT

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m

Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	26-08-21	KERB NUMBERS AND KERBS AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV

GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
PLAN
SHEET 2 OF 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-101	B

Y:\123 - Leda Developments Pty Ltd\01 - Kings Forest\PREC5\Engineering Drawings\OPW Stages 6 & 7\Current\12301-P5-6&7-100.dwg, 12/10/2021 11:55:08 AM, 1:2

SCHEDULE OF PAVEMENT DEPTHS

ROAD NAME	SURFACING	BASE	SUB-BASE	CBR	CLASSIFICATION	DESA OR VPD	DESIGN GUIDE
ROAD 13	25mm DG10 ON PRIMER SEAL *	150mm TYPE 2.1 (CBR 80)	165mm TYPE 2.3 (CBR 45)	9	NEIGHBOURHOOD CONNECTOR ST	$7.5x10^5$	D2 PAVEMENT DESIGN MANUAL
ROAD 17, ROAD 18, ROAD 29, ROAD 30, ROAD 46 & ROAD 47	25mm FGG7 ON PRIMER SEAL *	150mm TYPE 2.1 (CBR 80)	150mm TYPE 2.4 (CBR 45)	9	LOCAL ACCESS ST	$3.7x10^4$	D2 PAVEMENT DESIGN MANUAL
ROAD 40, ROAD 45	180mm CONCRETE	150mm	-	-	LANEWAY	-	CEMENT & CONCRETE ASSOCIATION OF AUSTRALIA (C&CAAT51)

* 7mm PRIMER SEAL TACK COAT $0.22l/m^2$ RES. BITUMEN PRIOR TO ASPHALT LAYING.

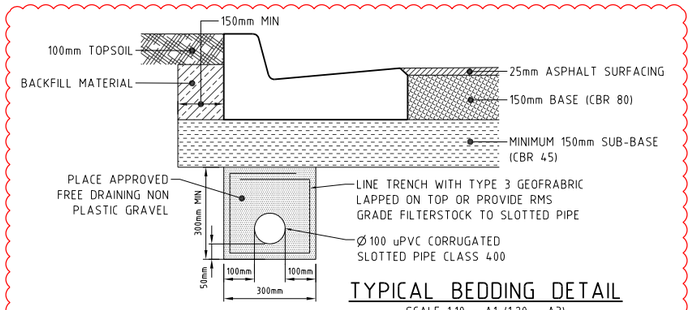
THE PAVEMENT DEPTHS ARE A GUIDE ONLY. FINAL PAVEMENT DESIGN IS SUBJECT TO INSITU SUBGRADE TESTING AND PRIVATE CERTIFIER APPROVAL.

C

SCHEDULE OF KERB TYPES

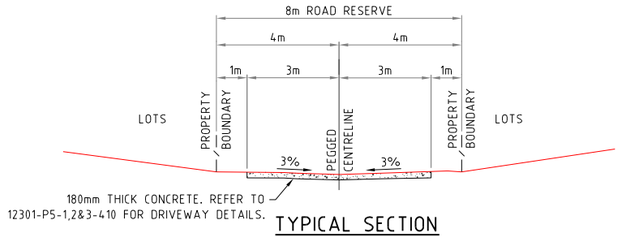
KERB TYPE	IMAGE	REFERENCE
B1 BARRIER KERB AND GUTTER		TSC DRG. SD-007
MK MOUNTABLE KERB		
FES FLUSH EDGING STRIP		
RKG ROLL TOP KERB AND GUTTER		
DD CONCRETE DISH DRAIN		
CK CASTELLATED KERB		TSC DRG. SD-008
B2 BARRIER KERB		IPWEA DRG. RS-080

NOTE: SUBSOIL DRAINS TO BE PLACED UNDER ALL KERBS.



TYPICAL BEDDING DETAIL

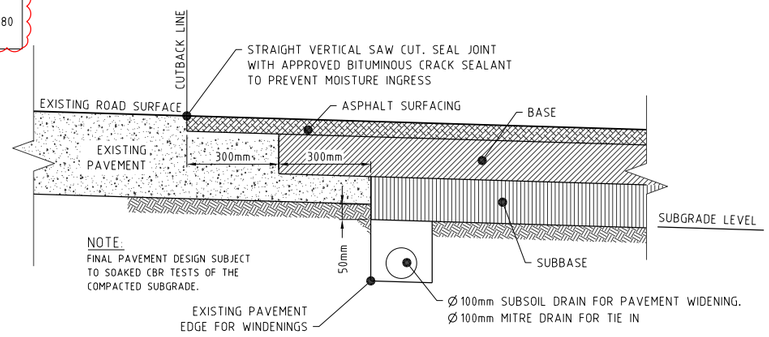
SCALE 1:10 - A1 (1:20 - A3)



TYPICAL SECTION
6m ROAD - 8m ROAD RESERVE
LANEWAY 40 & 45

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

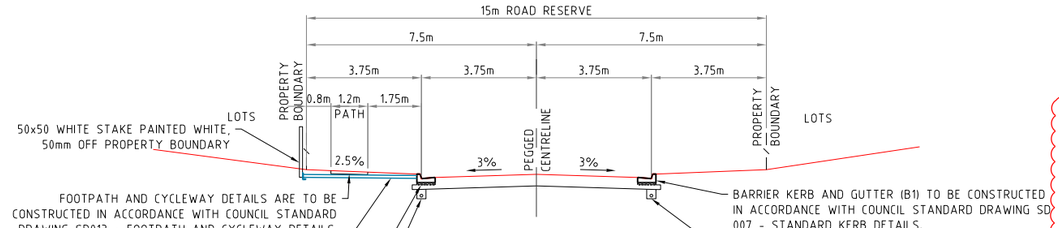
NOTE: FOOTPATH AND CYCLEWAYS TO BE CONSTRUCTED IN ACCORDANCE WITH TWEED SHIRE COUNCIL STANDARD DRAWING SD013.



NOTE:
FINAL PAVEMENT DESIGN SUBJECT TO SOAKED CBR TESTS OF THE COMPACTED SUBGRADE.

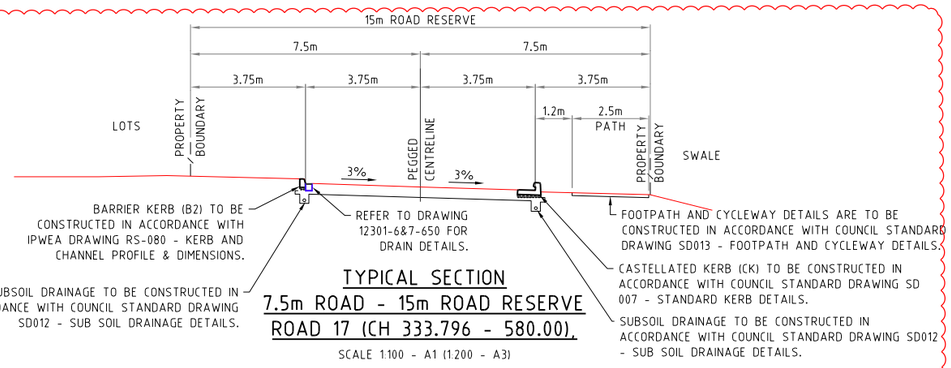
PAVEMENT WIDENING AND TIE-IN DETAIL

NOT TO SCALE



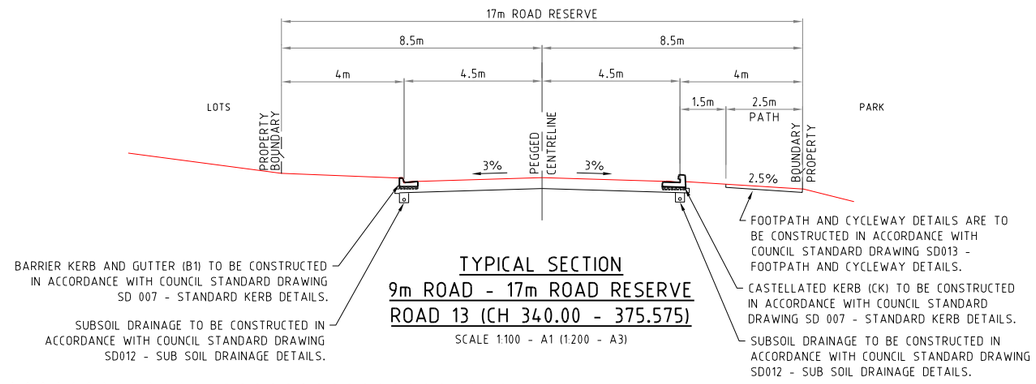
TYPICAL SECTION
7.5m ROAD - 15m ROAD RESERVE
ROAD 18, ROAD 29 (CH 224.471 - END), ROAD 30, ROAD 46 (CH 64.209 - END), ROAD 47 (CH 61.727 - 27.532), ROAD 13 (CH 296.270 - 260.00)

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



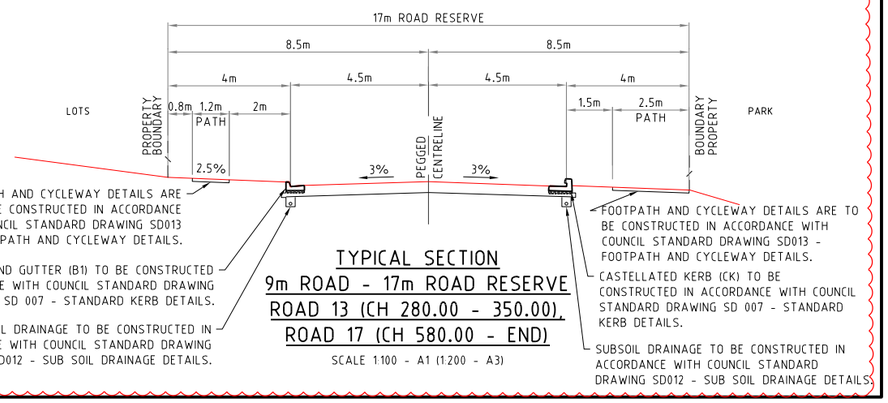
TYPICAL SECTION
7.5m ROAD - 15m ROAD RESERVE
ROAD 17 (CH 333.796 - 580.00),

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



TYPICAL SECTION
9m ROAD - 17m ROAD RESERVE
ROAD 13 (CH 340.00 - 375.575)

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



TYPICAL SECTION
9m ROAD - 17m ROAD RESERVE
ROAD 13 (CH 280.00 - 350.00),
ROAD 17 (CH 580.00 - END)

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

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10 - A1 (1:20 - A3)
0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)
0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)
0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	01-09-21	TABLE, NOTES AND DETAILS AMENDED
B	14-10-20	TABLE AND SECTION AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS DETAILS

CONSTRUCTION ISSUE

MORTONS urbansolutions
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Civil Engineering
Project Coordination
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Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB | DRAWN JB
APPROVED NER 906726 | DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-120 | AMEND. C

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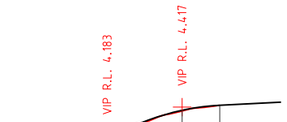
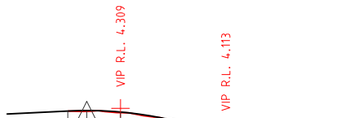


DESIGN GRADELINE 0.500% 3.822% 0.500%
VERTICAL GEOMETRY 6.12m R184.4m 6.12m R184.4m
HORIZONTAL GEOMETRY -8.45
DATUM 2.0

CONTROL LINE LEVELS	4.167	4.208	4.3	4.391	4.432
CHAINAGE	0	3.062	6.125	9.187	12.25

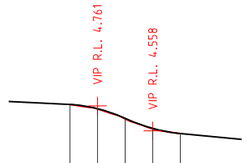
KERB SECTION 078



DESIGN GRADELINE 0.500% -2.280% 0.500%
VERTICAL GEOMETRY 8.58m R308.9m 8.58m R308.9m
HORIZONTAL GEOMETRY -8.45
DATUM 2.0

CONTROL LINE LEVELS	4.288	4.291	4.279	4.211	4.143	4.131	4.135	4.149
CHAINAGE	0	1.544	4.292	8.585	12.877	15.626	17.17	20

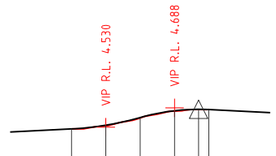
KERB SECTION 079



DESIGN GRADELINE -0.500% -4.523% -0.966%
VERTICAL GEOMETRY 4.50m R111.9m 4.50m R126.6m
HORIZONTAL GEOMETRY -6.45
DATUM 2.0

CONTROL LINE LEVELS	4.773	4.739	4.66	4.578	4.536
CHAINAGE	0	2.251	4.503	6.754	9.006

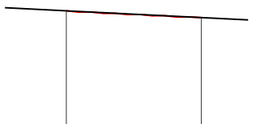
KERB SECTION 080



DESIGN GRADELINE 0.500% 2.818% -0.500%
VERTICAL GEOMETRY 5.60m R244.7m 5.60m R168.8m
HORIZONTAL GEOMETRY -6.45
DATUM 2.0

CONTROL LINE LEVELS	4.516	4.546	4.609	4.665	4.676	4.674
CHAINAGE	0	2.801	5.602	8.402	10.359	11.203

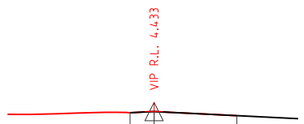
KERB SECTION 081



DESIGN GRADELINE -0.500%
VERTICAL GEOMETRY
HORIZONTAL GEOMETRY -6.45
DATUM 2.0

CONTROL LINE LEVELS	4.48	4.425
CHAINAGE	0	11.009

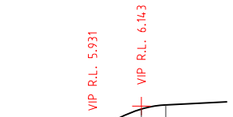
KERB SECTION 082



DESIGN GRADELINE 0.500% -0.500%
VERTICAL GEOMETRY
HORIZONTAL GEOMETRY -6
DATUM 2.0

CONTROL LINE LEVELS	4.423	4.433	4.399
CHAINAGE	0	1.955	8.708

KERB SECTION 083



DESIGN GRADELINE -1.151% 5.324% 0.500%
VERTICAL GEOMETRY 3.98m R61.5m 3.98m R82.5m
HORIZONTAL GEOMETRY -6
DATUM 4.0

CONTROL LINE LEVELS	5.954	5.95	5.963	6.037	6.119	6.153
CHAINAGE	0	0.707	1.99	3.979	5.969	7.959

KERB SECTION 092

DESIGN GRADELINE 0.500% 1.678% 0.470%
VERTICAL GEOMETRY 5.85m R496.8m 5.85m R484.5m
HORIZONTAL GEOMETRY -6.45
DATUM 4.0

CONTROL LINE LEVELS	5.906	5.93	5.97	6.01	6.033
CHAINAGE	0	2.927	5.854	8.781	11.708

KERB SECTION 093

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	14-06-21	PRELIMINARY CLIENT ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
KERB LONGSECTIONS

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
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Fax 07 5571 1088
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Southport QLD 4215

DESIGNED RB		DRAWN CB	
APPROVED	NER 906726	DATE 07-02-19	

DRAWING NUMBER 12301-P5-6&7-122
AMEND. A

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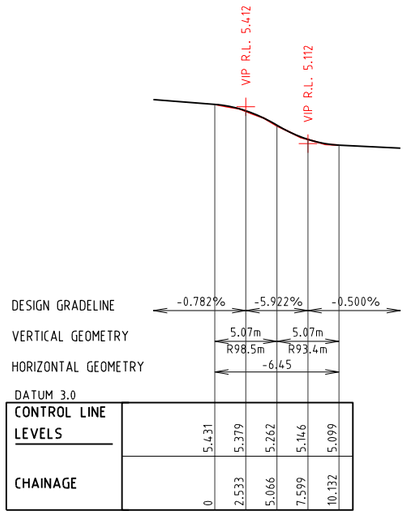
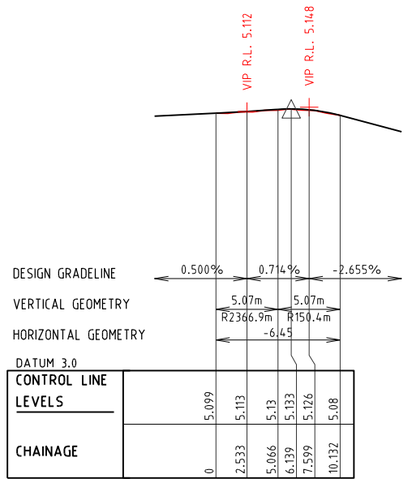
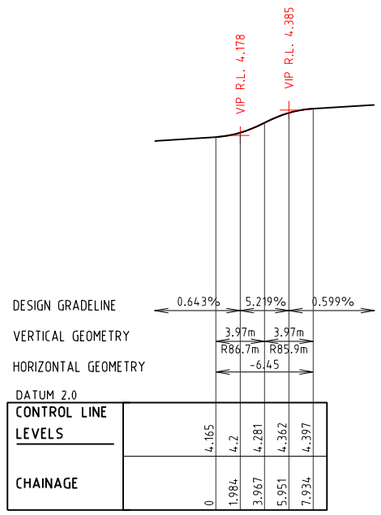


KERB SECTION 094



KERB SECTION 095



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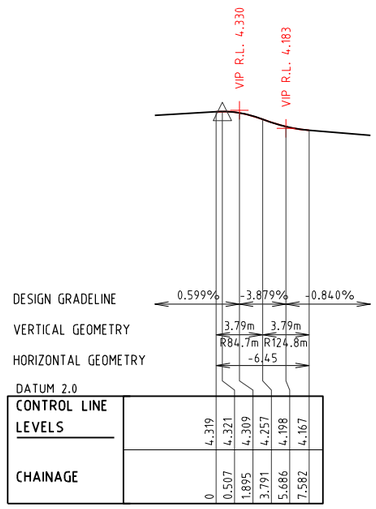

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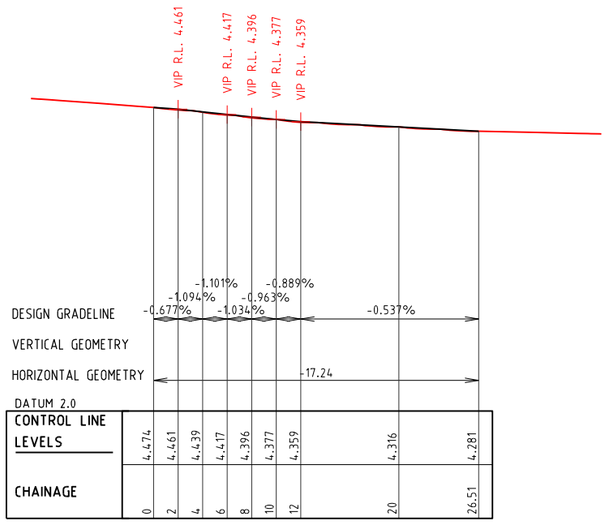

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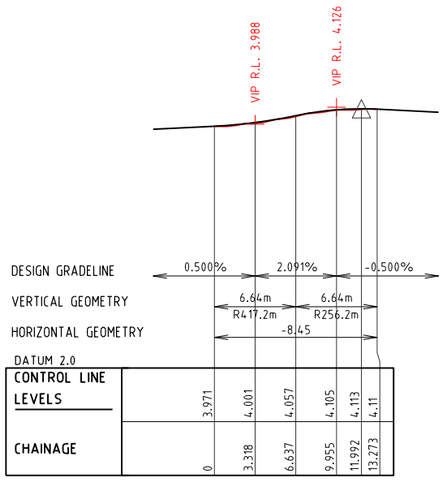
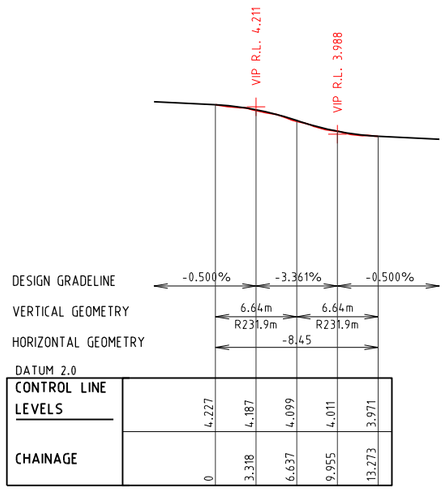


KERB SECTION 099



KERB SECTION 100

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	07-02-19	PRELIMINARY CLIENT ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
KERB LONGSECTIONS

CONSTRUCTION ISSUE

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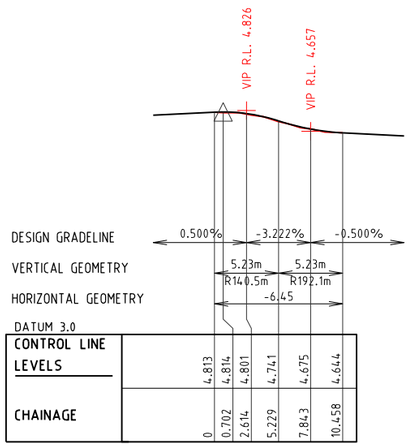
DESIGNED RB	DRAWN CB	
APPROVED	NER 906726	DATE 07-02-19

DRAWING NUMBER 12301-P5-6&7-123
AMEND. A

Y:\123 - Leda Developments Pty Ltd\01 - Kings Forest\PRECC5\Engineering Drawings\OPW Stages 6 & 7\Current\12301-P5-6&7-122.dwg, 12/10/2021 11:55:24 AM, 1:2



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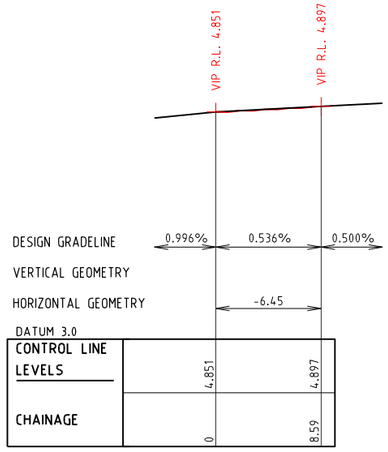

KERB SECTION 197

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	13-11-19
COUNCIL	xx-xx-xx
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	07-02-19	PRELIMINARY CLIENT ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
KERB LONGSECTIONS

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	CB
APPROVED	NER 906726	DATE	07-02-19

DRAWING NUMBER 12301-P5-6&7-124
AMEND. A

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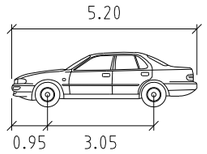
- FRONT TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE



PASSENGER-CAR

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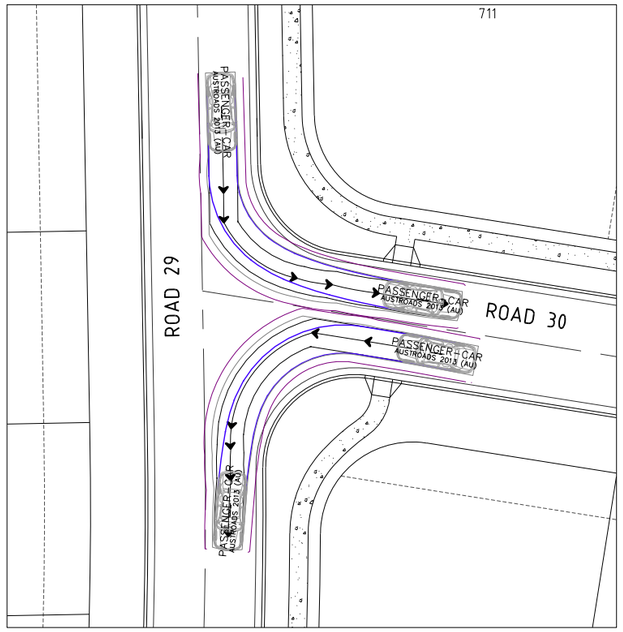

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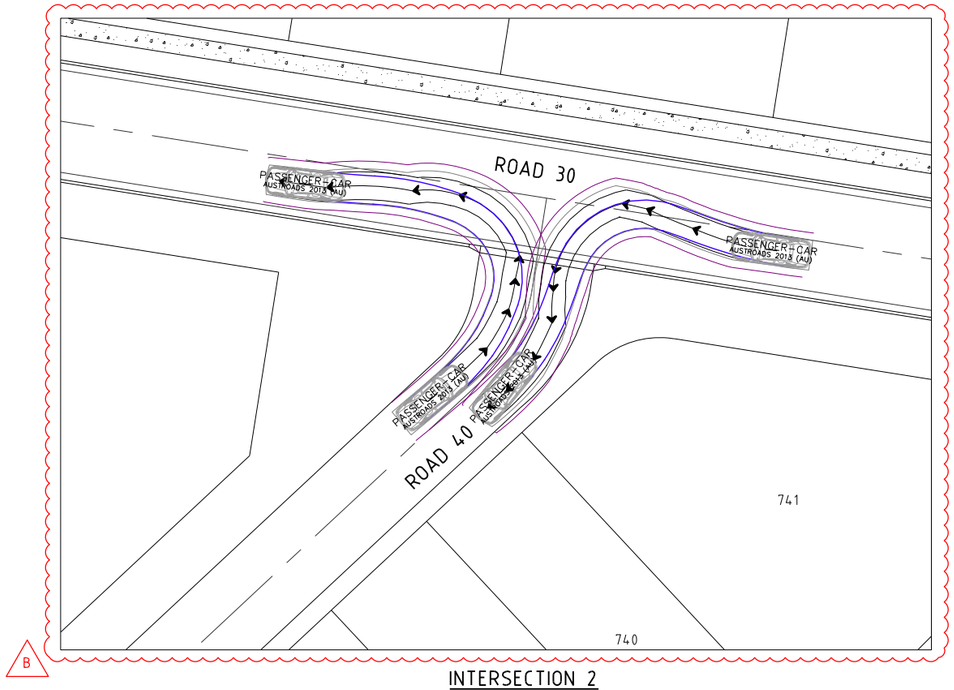

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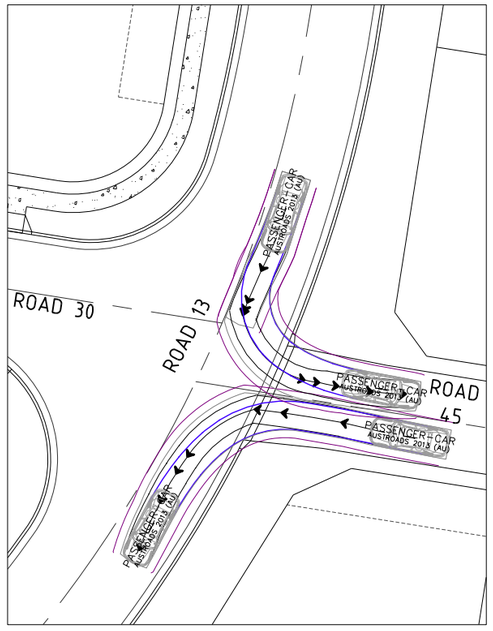

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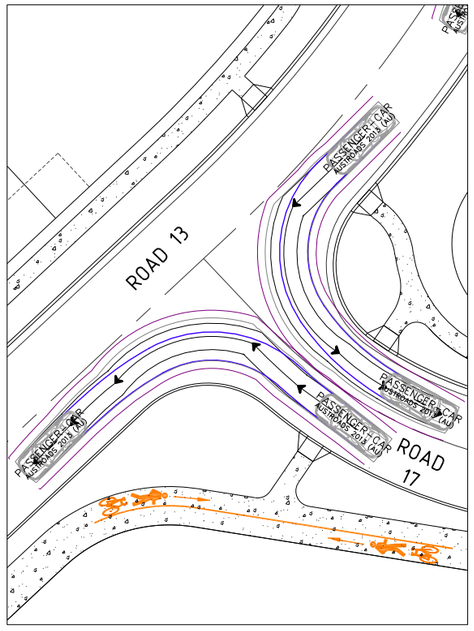

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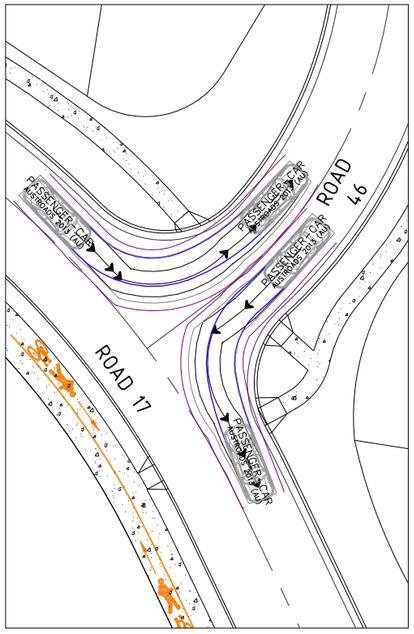

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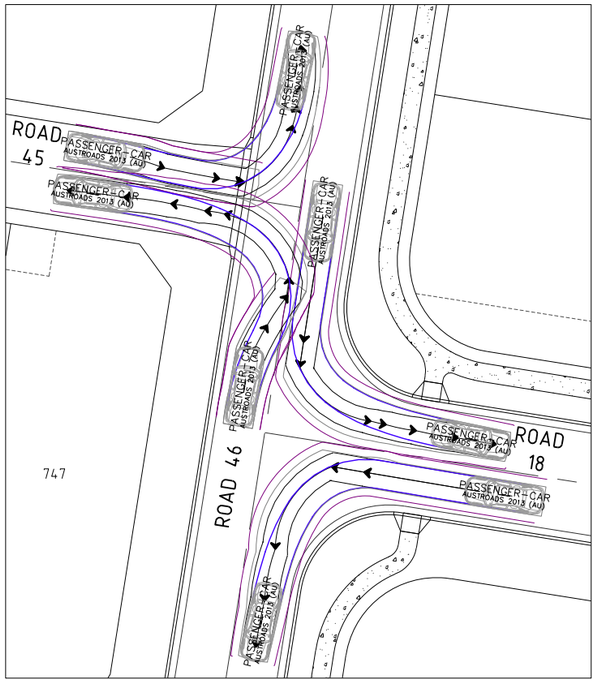

INTERSECTION 6

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS ,

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	
COUNCIL	
CONSTRUCTION	

PRE	DATE	AMENDMENT
B	11-10-21	DRIVEWAY AMENDED
A	15-06-21	ISSUE FOR INFORMATION

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

PRECIINCT 5
STAGES 6 & 7
INTERSECTION ATURN
PASSENGER CAR
SHEET 1

CONSTRUCTION ISSUE

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Urban & Regional Planning
Civil Engineering
Project Coordination

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APPROVED	NER 906726	DATE	10-06-21

DRAWING NUMBER	AMEND.
12301-P5-6&7-160	B

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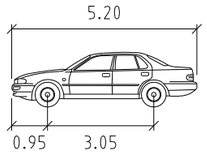
- FRONT TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE



PASSENGER-CAR

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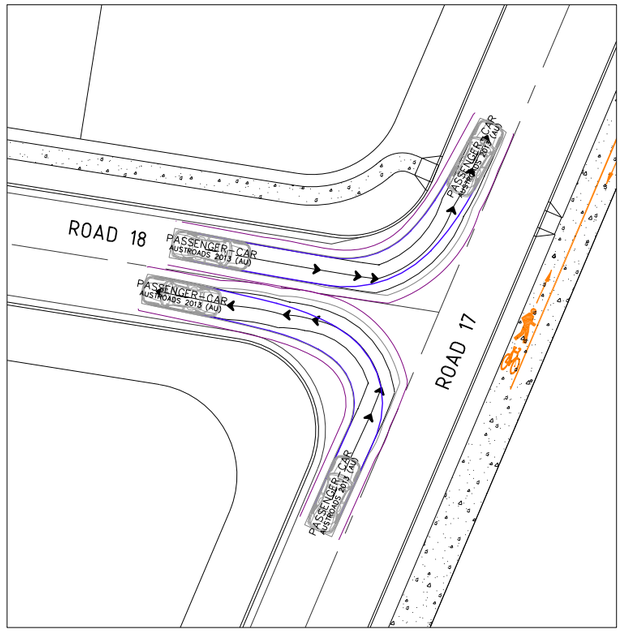

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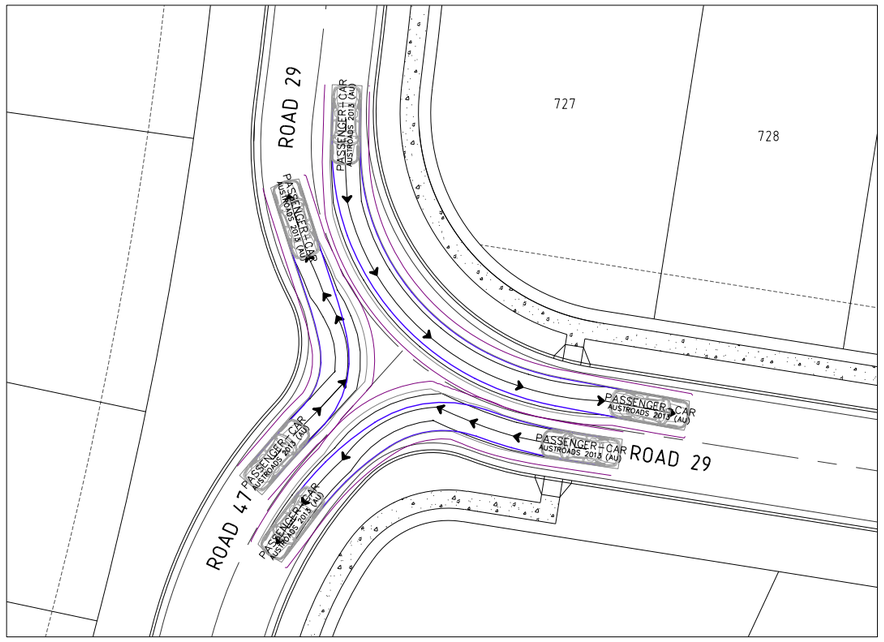

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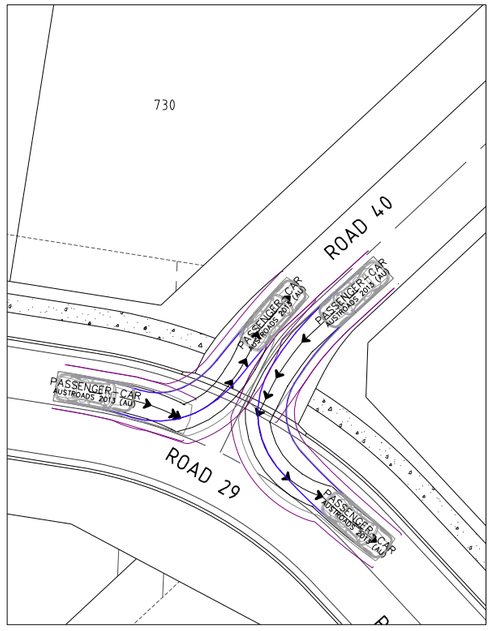

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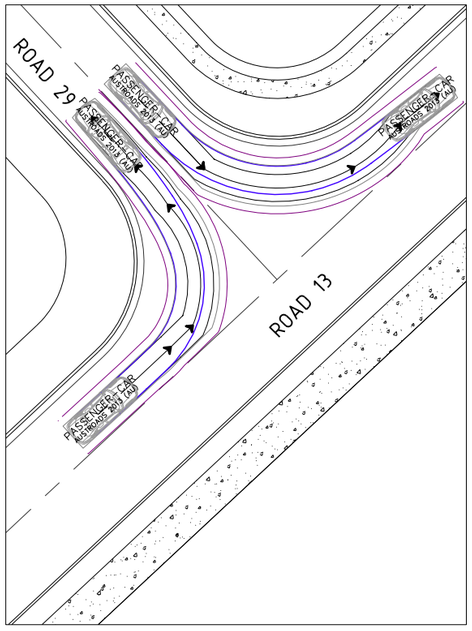

INTERSECTION 10

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	
COUNCIL	
CONSTRUCTION	

PRE	DATE	AMENDMENT
B	11-10-21	DRIVEWAY AMENDED
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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

PRECIINCT 5
STAGES 6 & 7
INTERSECTION ATURN
PASSENGER CAR
SHEET 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	10-06-21

DRAWING NUMBER	AMEND.
12301-P5-6&7-161	B

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LEGEND

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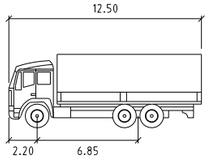
- FRONT TIRES
- REAR TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE



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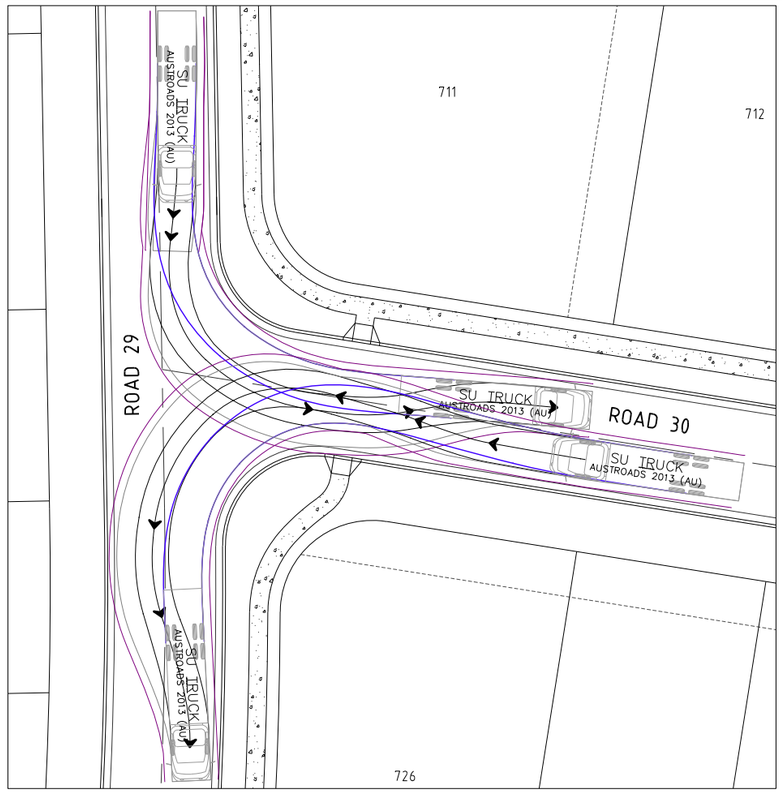

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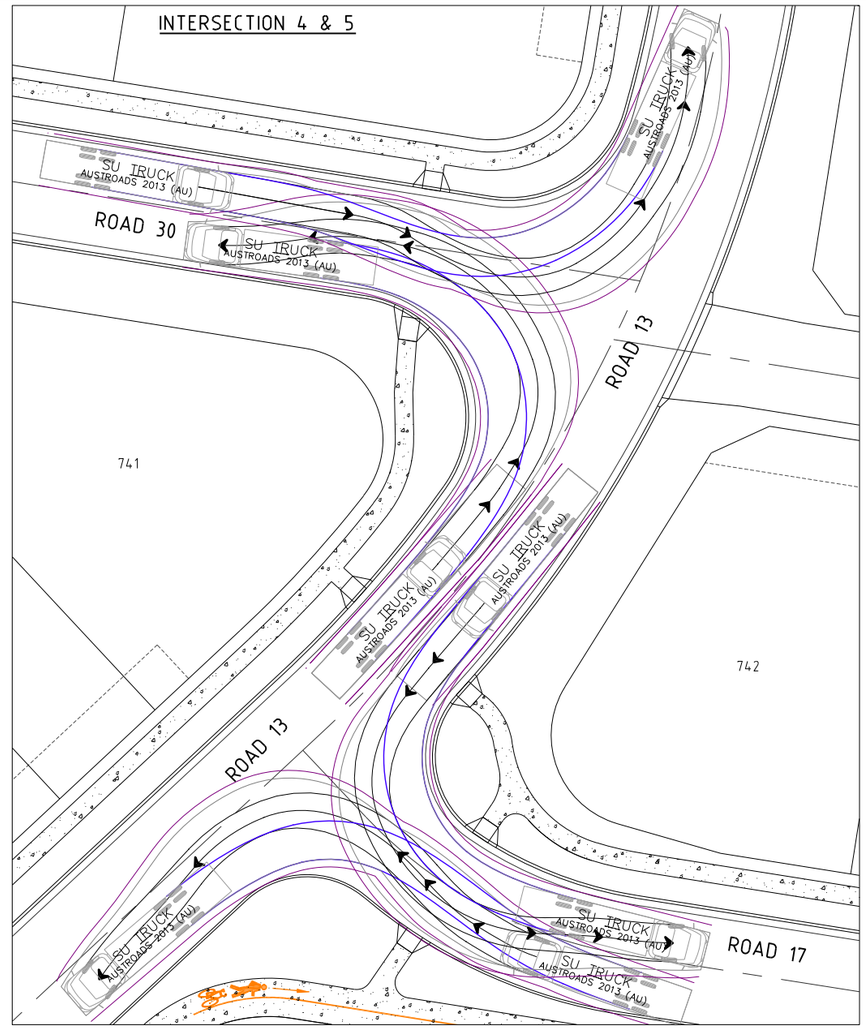
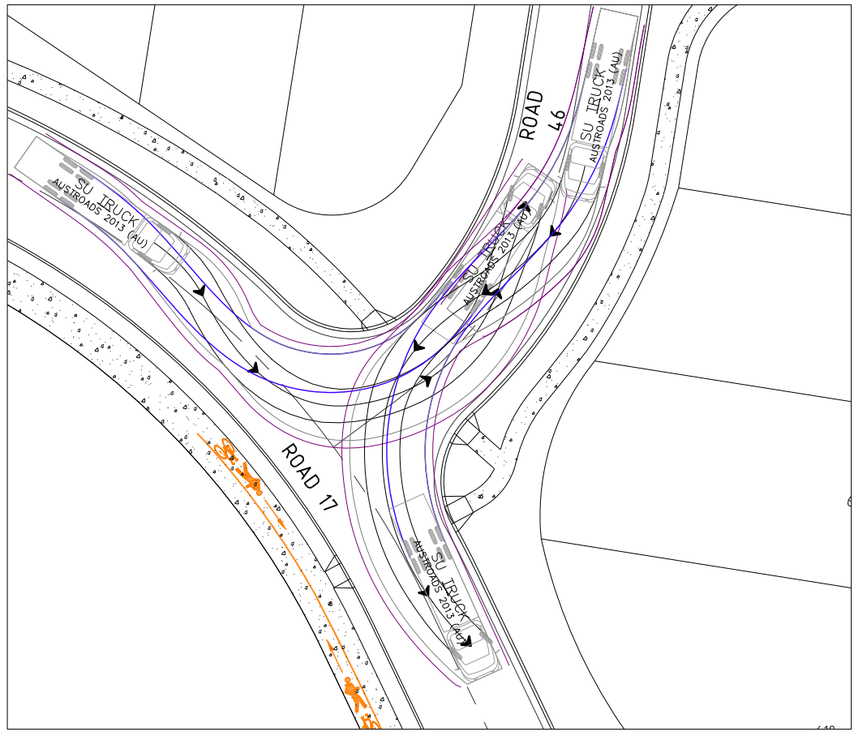
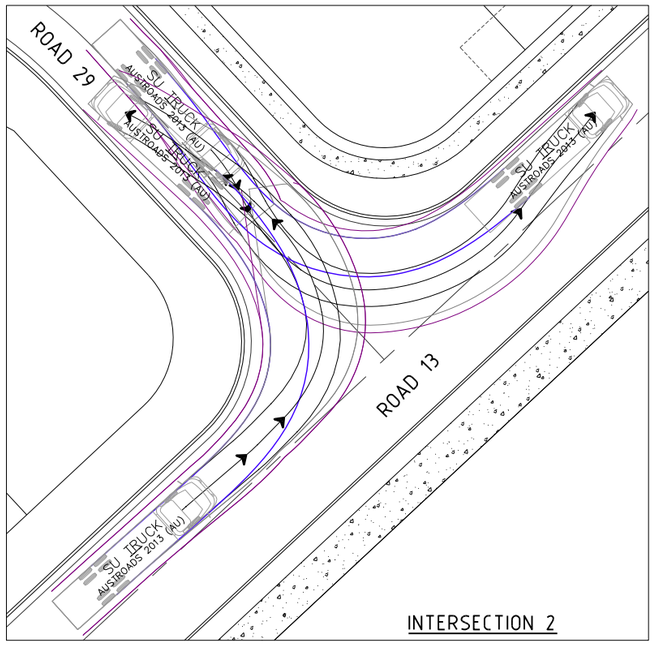




INTERSECTION 1



INTERSECTION 2

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
A	15-06-21	ISSUE FOR INFORMATION

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

PRECIINCT 5
STAGES 6 & 7
INTERSECTION ATURN
12.5m TRUCK
SHEET 1

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	10-06-21

DRAWING NUMBER	AMEND.
12301-P5-6&7-162	A

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LEGEND

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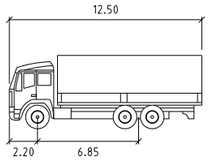
- FRONT TIRES
- REAR TIRES
- 0.5m CLEARANCE FROM BODY OF VEHICLE



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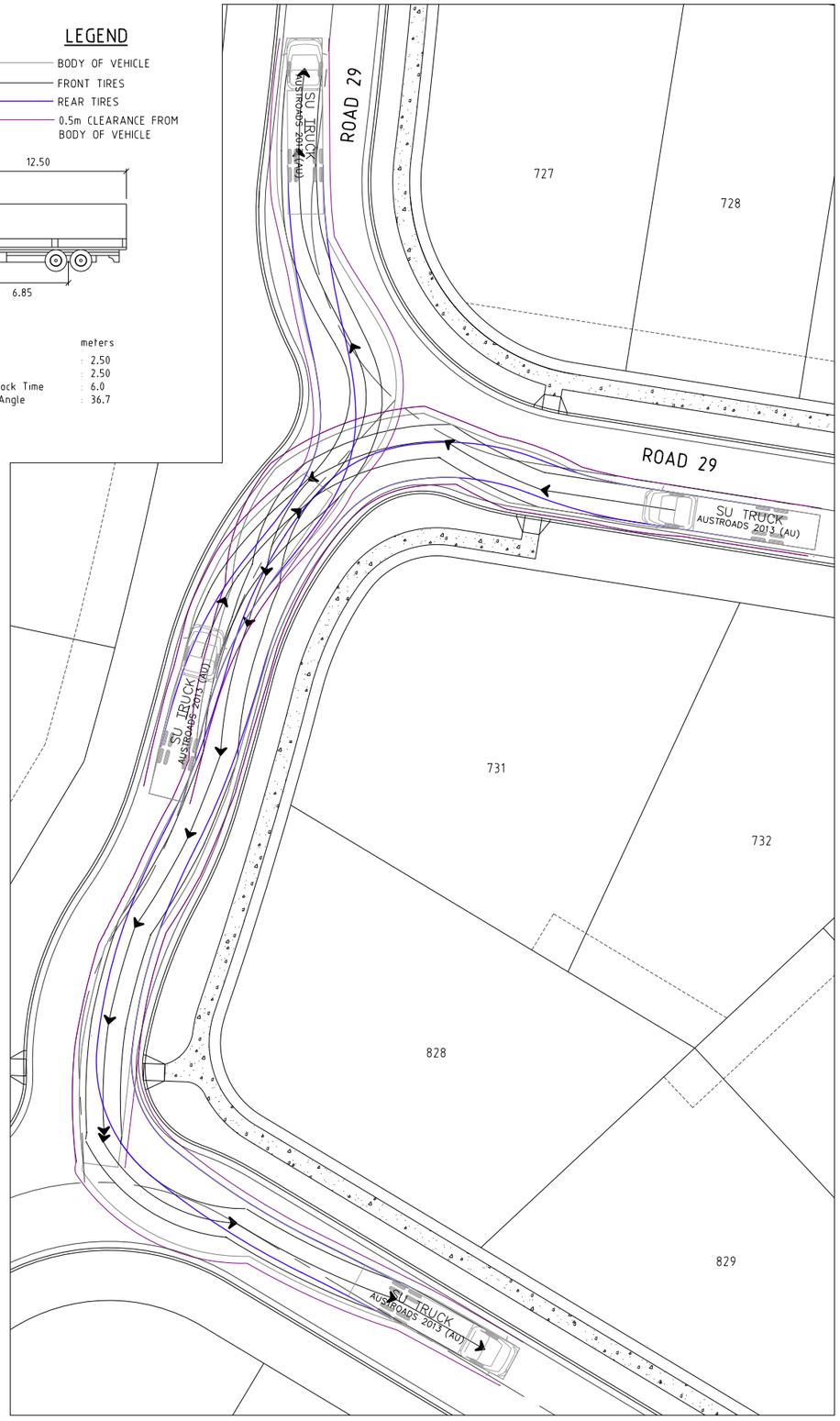

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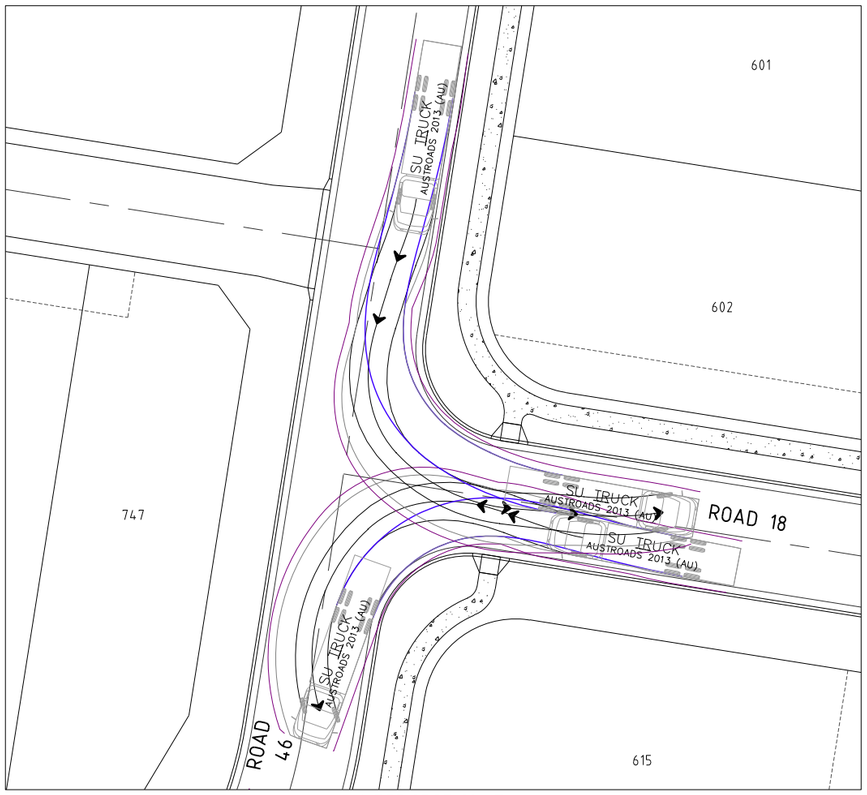

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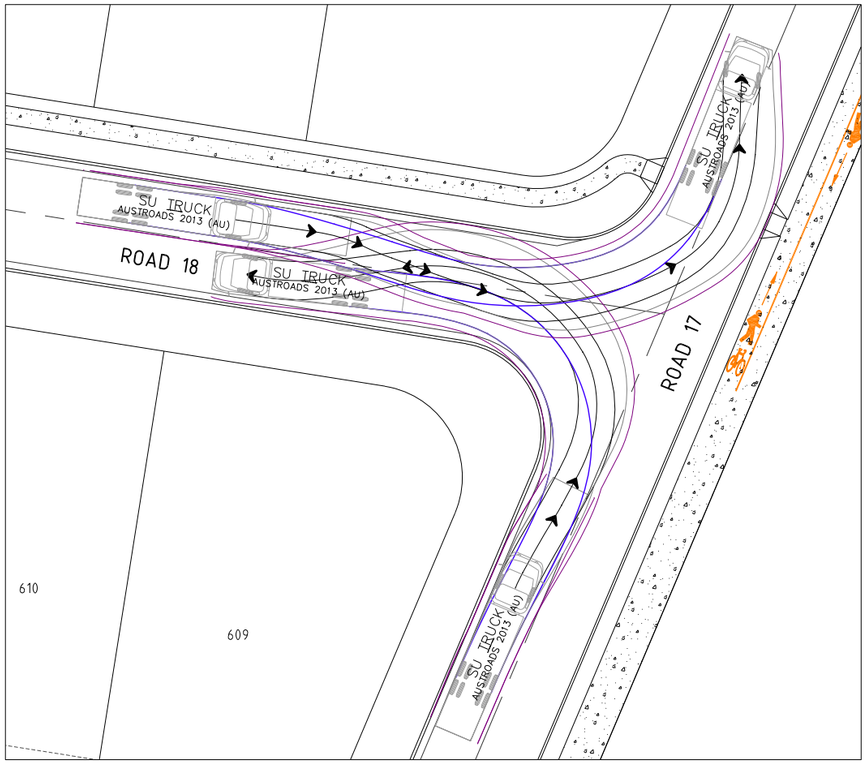

INTERSECTION 8

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
A	15-06-21	ISSUE FOR INFORMATION

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

PRECINCT 5
STAGES 6 & 7
INTERSECTION ATURN
12.5m TRUCK
SHEET 2

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	10-06-21

DRAWING NUMBER	AMEND.
12301-P5-6&7-163	A

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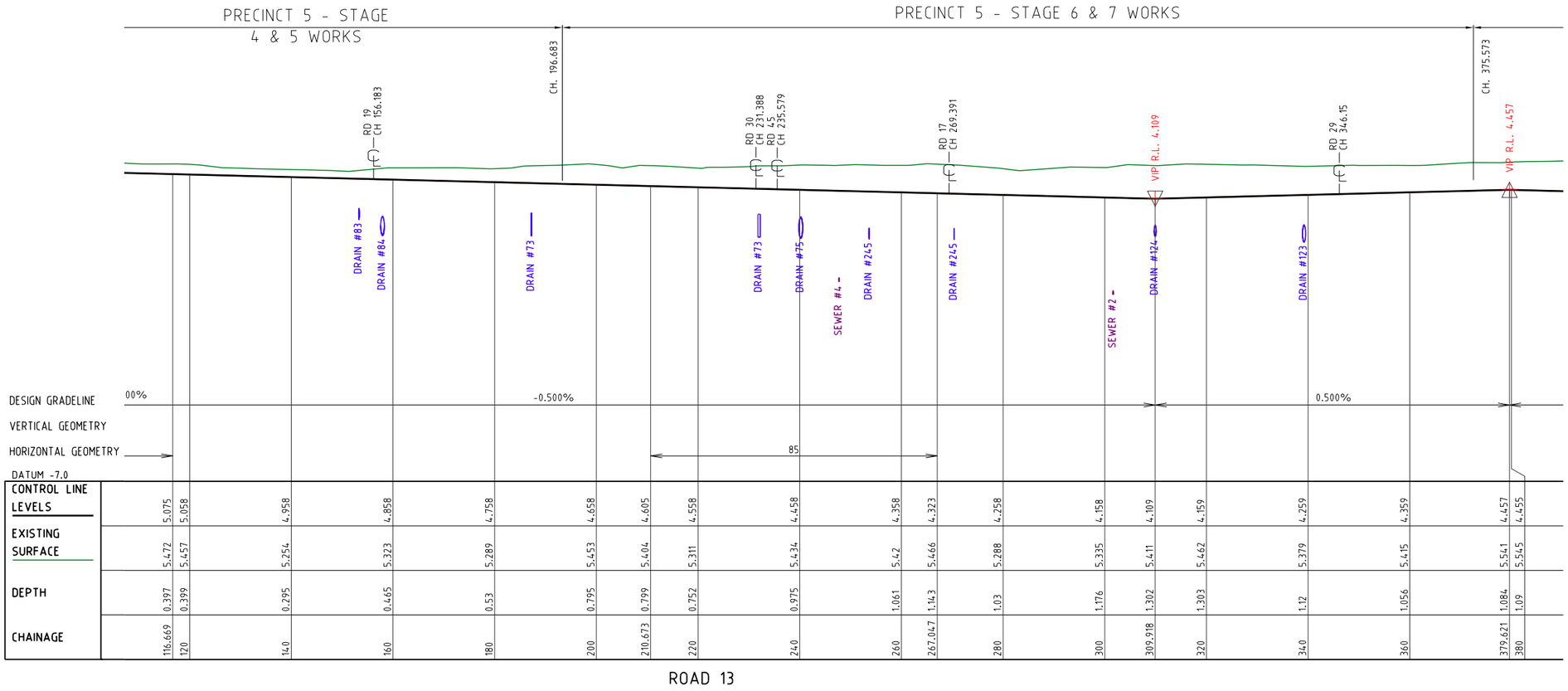

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 13

CONSTRUCTION ISSUE

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Southport QLD 4215

DESIGNED RB | DRAWN JB
APPROVED | NER 906726 | DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-200
AMEND. A

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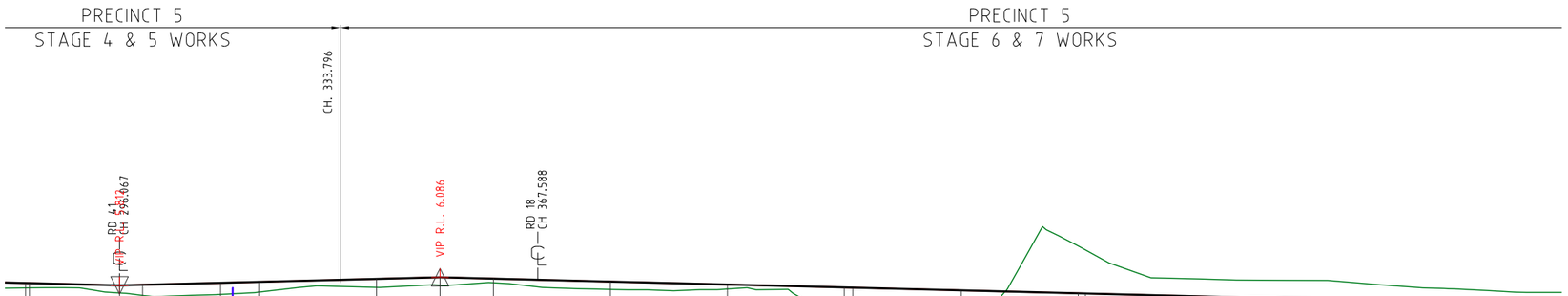

DESIGN GRADELINE -% 0.500% -0.500%

VERTICAL GEOMETRY

HORIZONTAL GEOMETRY 18 30 30

DATUM -6.0

CONTROL LINE LEVELS	5.892	5.889	5.812	5.832	5.898	5.932	6.032	6.086	6.04	5.94	5.84	5.74	5.733	5.64	5.54	5.534	5.44	5.34	5.24	5.228	5.14
EXISTING SURFACE	5.725	5.727	5.552	5.47	5.505	5.582	5.744	5.816	5.9	5.674	5.686	4.465	4.281	4.314	7.156	7.021	6.037	5.984	5.72	5.704	5.571
DEPTH	-0.167	-0.162	-0.26	-0.362	-0.393	-0.35	-0.288	-0.27	-0.14	-0.266	-0.154	-1.275	-1.452	-1.327	1.616	1.487	0.597	0.644	0.479	0.476	0.431
CHAINAGE	280	280.658	296.067	300	313.331	320	340	350.867	360	380	400	420	421.445	440	460	461.239	480	500	520	522.495	540

ROAD 17

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 17
SHEET 1 OF 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED RB	DRAWN JB	
APPROVED	NER 906726	DATE 23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-201	A

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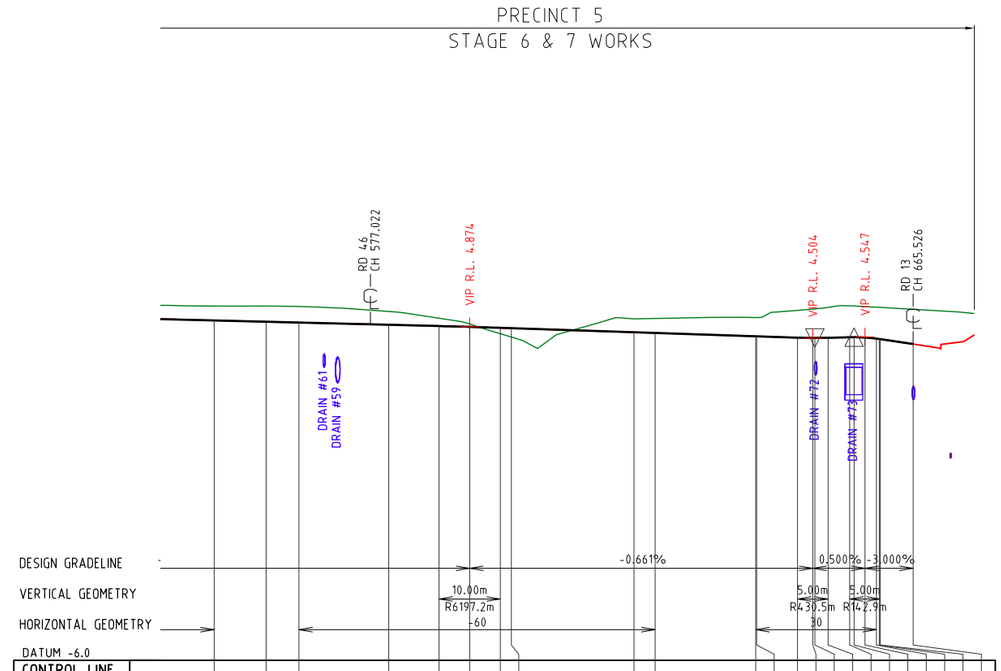
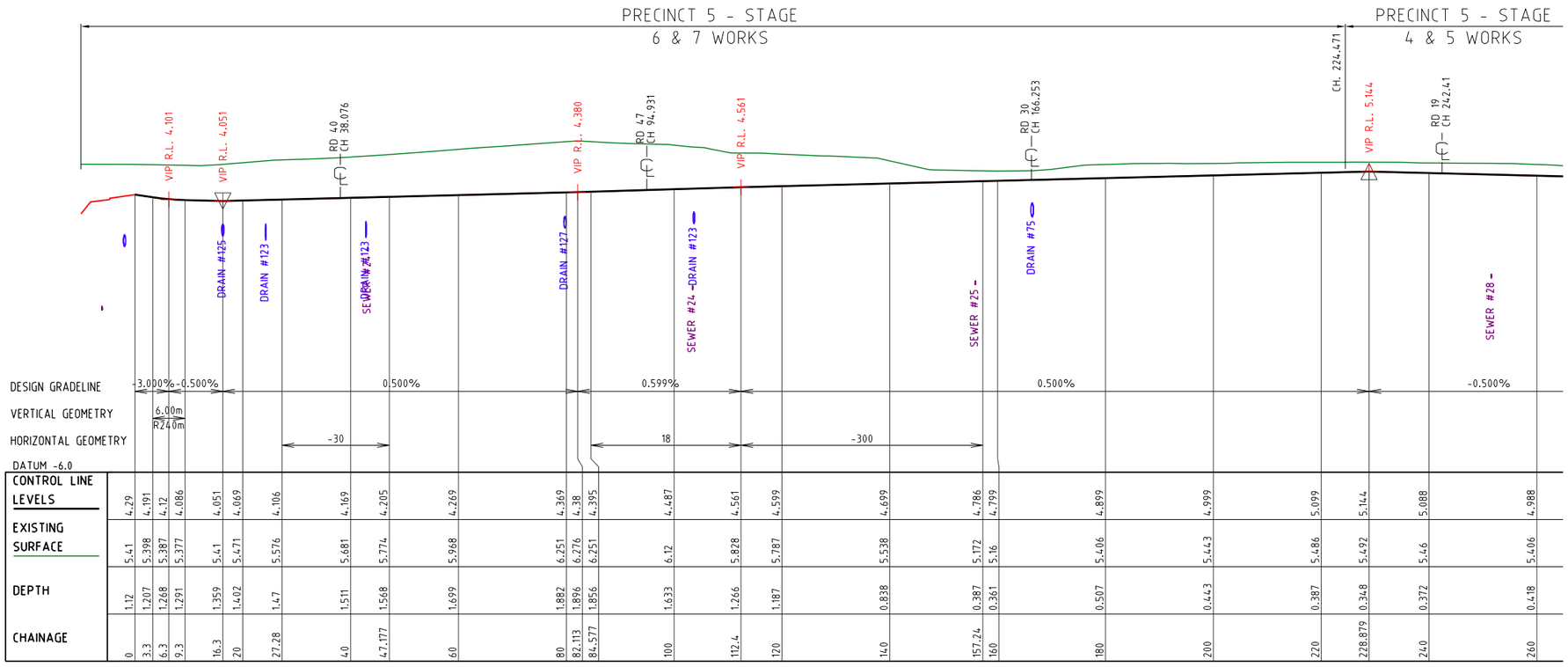

PRECINCT 5
STAGE 6 & 7 WORKS
RD 46
CH 577.022
VIP R.L. 4.874
VIP R.L. 4.504
VIP R.L. 4.547
RD 13
CH 665.526
DRAIN #61
DRAIN #59
DRAIN #72
DRAIN #73
DESIGN GRADELINE
-0.661%
0.500%
-3.000%
VERTICAL GEOMETRY
10.00m
R6197.2m
5.00m
R430.5m
5.00m
R142.9m
HORIZONTAL GEOMETRY
-60
30
DATUM -6.0

| | | |



CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0	4.29	5.41	1.12
3.3	4.191	5.398	1.207
6.3	4.12	5.387	1.268
9.3	4.086	5.377	1.291
16.3	4.051	5.41	1.359
20	4.069	5.471	1.402
27.28	4.106	5.576	1.47
40	4.169	5.681	1.511
47.177	4.205	5.774	1.568
60	4.269	5.968	1.699
80	4.369	6.251	1.882
82.113	4.38	6.276	1.896
84.577	4.395	6.251	1.856
100	4.487	6.12	1.633
112.4	4.561	5.828	1.266
120	4.599	5.787	1.187
140	4.699	5.538	0.838
157.24	4.786	5.172	0.387
160	4.799	5.16	0.361
180	4.899	5.406	0.507
200	4.999	5.443	0.443
220	5.099	5.486	0.387
228.879	5.144	5.492	0.348
240	5.088	5.46	0.372
260	4.988	5.406	0.418

ROAD 29

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
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GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 29

CONSTRUCTION ISSUE

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APPROVED	NER 906726	DATE 23-06-20

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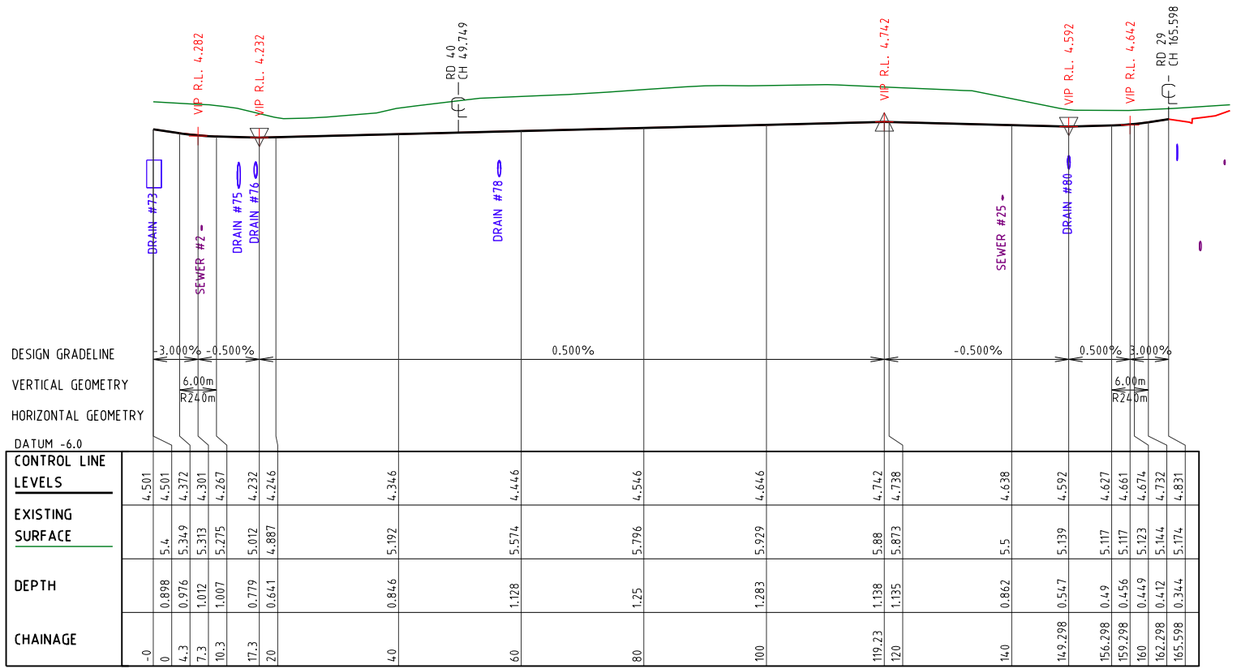

CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
-0	4.501		
0	4.501	5.4	0.898
4.3	4.372	5.349	0.976
7.3	4.301	5.313	1.012
10.3	4.267	5.275	1.007
17.3	4.232	5.012	0.779
20	4.246	4.887	0.641
40	4.346	5.192	0.846
60	4.446	5.574	1.128
80	4.546	5.796	1.25
100	4.646	5.929	1.283
119.23	4.742	5.88	1.138
120	4.738	5.873	1.135
140	4.638	5.5	0.862
149.298	4.592	5.139	0.547
156.298	4.627	5.117	0.49
159.298	4.661	5.117	0.456
160	4.674	5.123	0.449
162.298	4.732	5.144	0.412
165.598	4.831	5.174	0.344

ROAD 30

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

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GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 30

CONSTRUCTION ISSUE

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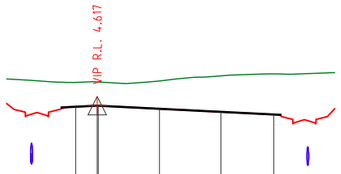
PRECINCT 5
STAGE 6 & 7 WORKS



DESIGN GRADELINE 0.500% -0.500%

VERTICAL GEOMETRY

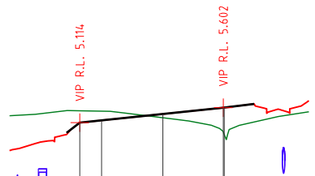
HORIZONTAL GEOMETRY 10 -10

DATUM -4.0

CONTROL LINE LEVELS			4.582	4.617	4.615	4.515	4.415	4.329			
EXISTING SURFACE	5.431	5.389	5.377	5.392	5.39	5.425	5.59	5.653	5.65	5.647	5.66
DEPTH			0.795	0.775	0.775	0.91	1.175	1.324			
CHAINAGE	0	6.016	12.648	19.675	20	40	60	77.286	80	80.917	87.263

DRIVEWAY 40

PRECINCT 5
STAGE 6 & 7 WORKS



DESIGN GRADELINE 7.710% 1.042% 1.228%

VERTICAL GEOMETRY

HORIZONTAL GEOMETRY

DATUM -5.0

CONTROL LINE LEVELS		5.114	5.188	5.397	5.602	5.606		
EXISTING SURFACE	5.404	5.501	5.49	5.275	4.807	4.733	5.313	
DEPTH		0.387	0.301	-0.122	-0.795	-0.872		
CHAINAGE	0	12.9	20	40	59.702	60	77.623	

DRIVEWAY 45

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS ,

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
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CONSTRUCTION	..	

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GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
DRIVEWAY 40 & 45

CONSTRUCTION ISSUE

MORTONS urbansolutions
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APPROVED	NER 906726	DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-205
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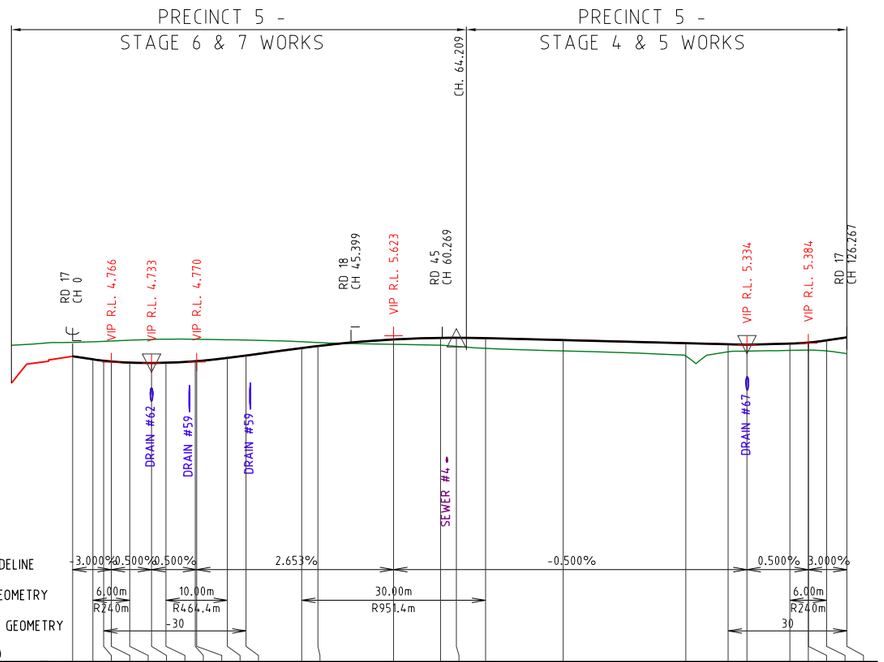
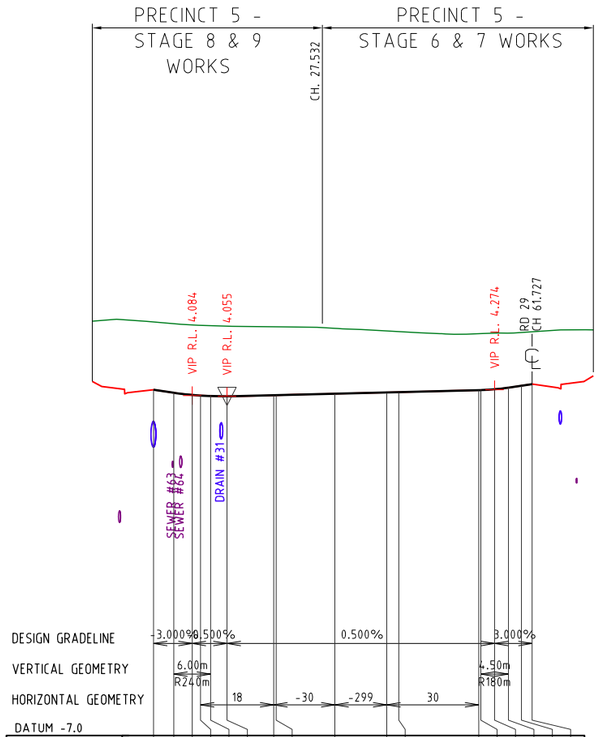


CONTROL LINE LEVELS	4.955		4.856		4.81		4.785		4.751		4.745		4.797		4.903		4.984		5.225		5.291		5.504		5.556		5.559		5.548		5.484		5.384		5.35		5.334		5.369		5.403		5.404		5.474		5.573
EXISTING SURFACE	5.417		5.429		5.443		5.455		5.481		5.507		5.512		5.511		5.493		5.486		5.429		5.403		5.346		5.315		5.278		5.217		5.133		4.964		5.103		5.126		5.149		5.159		5.159		5.125		5.042
DEPTH	0.462		0.572		0.633		0.67		0.729		0.773		0.767		0.718		0.714		0.59		0.502		0.204		0.112		-0.158		-0.241		-0.281		-0.33		-0.351		-0.42		-0.247		-0.208		-0.22		-0.244		-0.245		-0.349		-0.532
CHAINAGE	0	3.3	5.057	6.3	9.3	12.858	15.217	20	20.217	25.217	28.269	37.337	40	52.337	60	62.58	67.337	80	100	106.899	109.967	116.967	119.967	120	122.967	126.267																								

ROAD 46



CONTROL LINE LEVELS	4.273		4.174		4.103		4.083		4.069		4.055		4.094		4.096		4.143		4.186		4.196		4.261		4.262		4.288		4.341		4.405		4.457
EXISTING SURFACE		6.427		6.39		6.378		6.364		6.343		6.324		6.324		6.275		6.192		6.168		6.101		6.104		6.116		6.118		6.138		6.162	
DEPTH		2.253		2.288		2.296		2.295		2.287		2.231		2.228		2.131		2.006		1.972		1.841		1.842		1.828		1.777		1.733		1.705	
CHAINAGE	-0	3.3	6.3	7.65	9.3	11.984	19.604	20	29.572	38.038	40	53.025	53.37	55.62	57.87	60	61.727																

ROAD 47

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
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Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

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GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
LONGITUDINAL SECTION
ROAD 46 & 47

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-206	A

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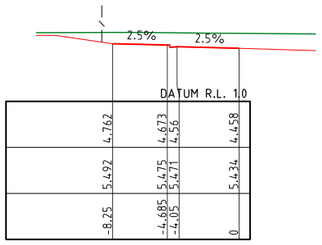
NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.

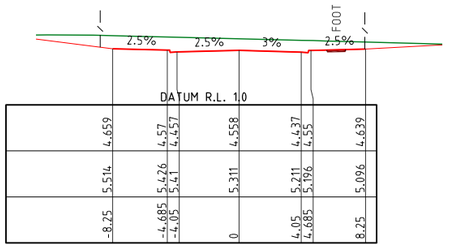
CYCLEWAY

CYCLEWAY ON ROAD

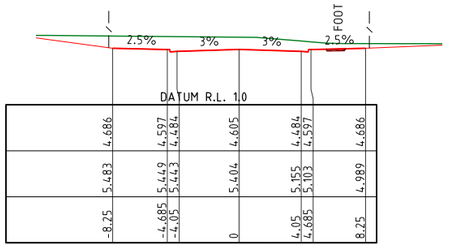
FOOTPATH



CH 240



CH 220



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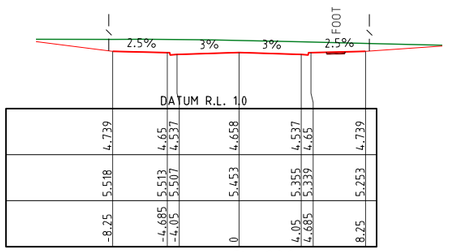

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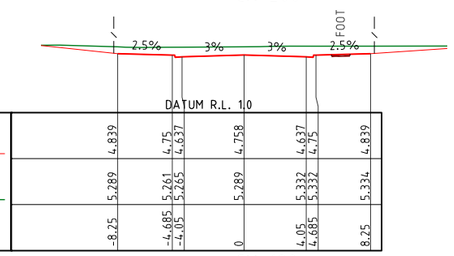

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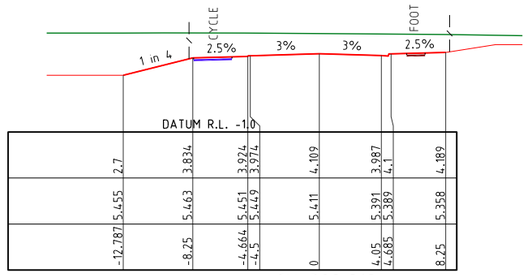

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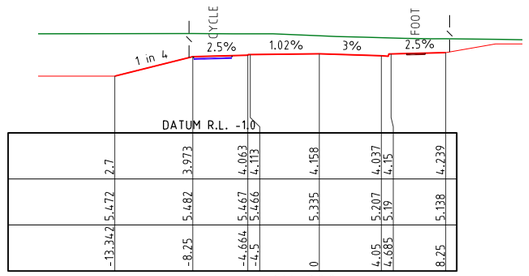

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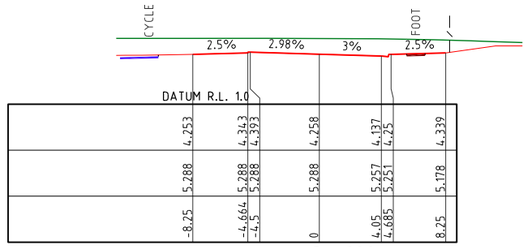

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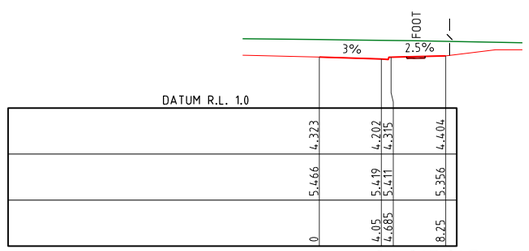

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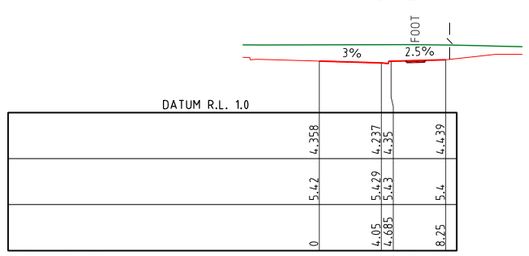

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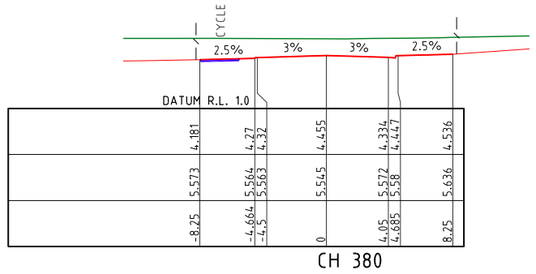

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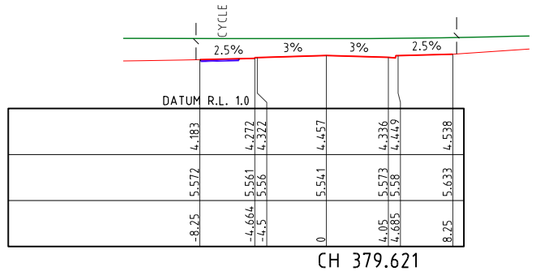

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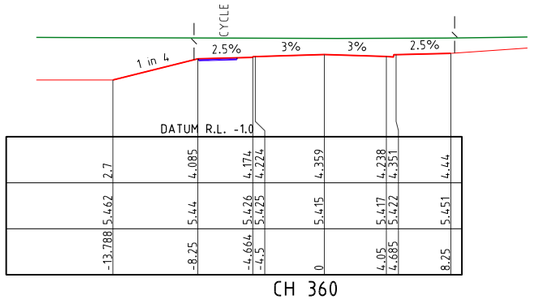

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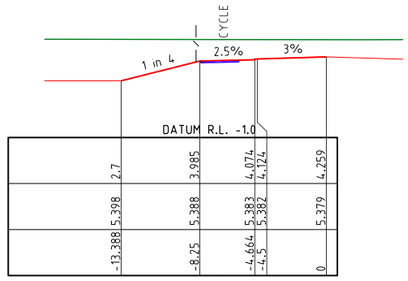

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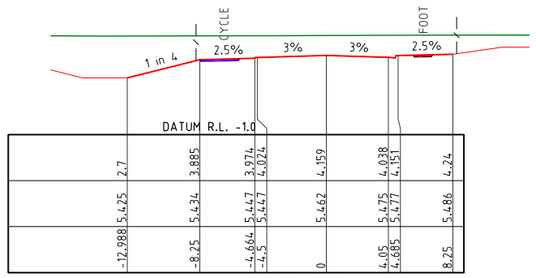

CH 320

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

DESIGN SURFACE LEVEL	
EXISTING SURFACE LEVEL	
OFFSET	

ROAD 13

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 13

CONSTRUCTION ISSUE

MORTONS urbansolutions
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Civil Engineering
Project Coordination
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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-300	A

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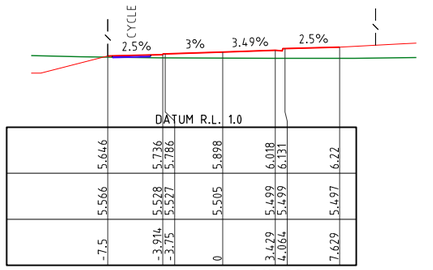
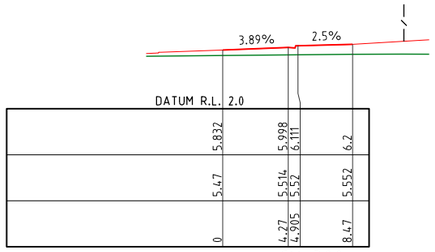
NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



CH 313.331



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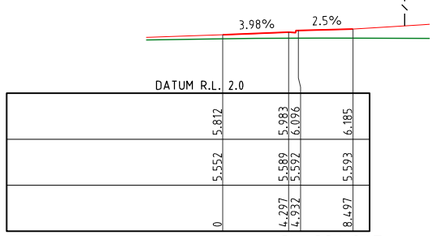

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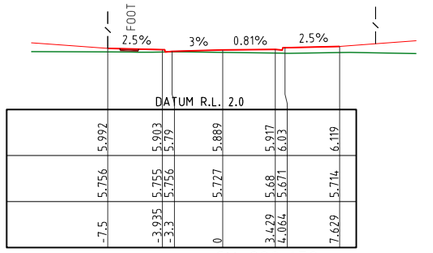

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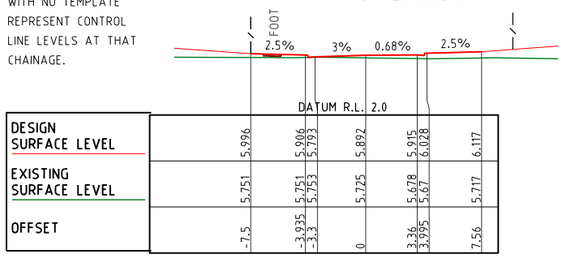
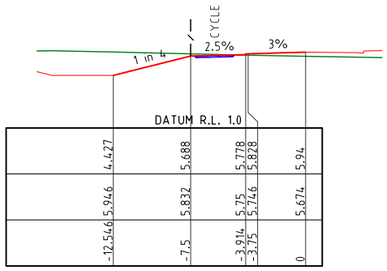


CH 280

DESIGN SURFACE LEVEL
EXISTING SURFACE LEVEL
OFFSET



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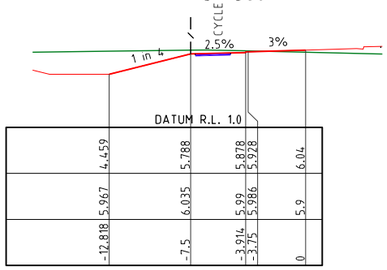

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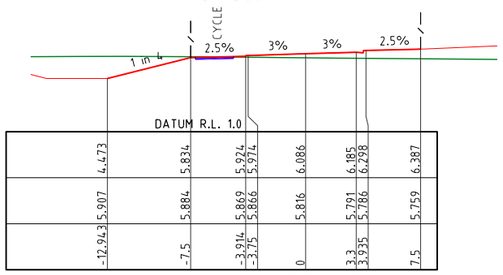

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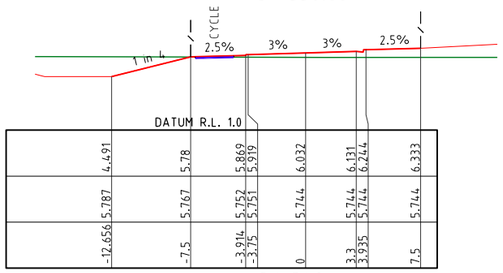

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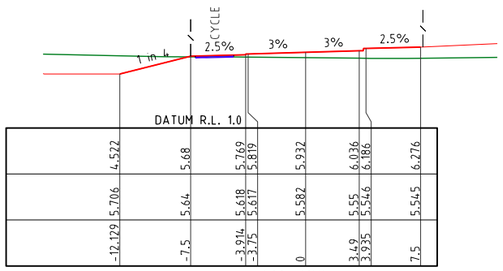

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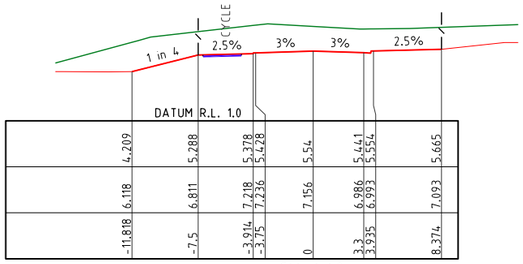

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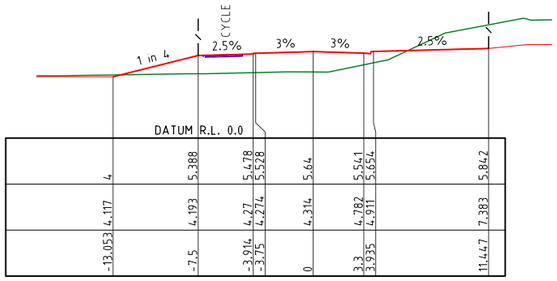

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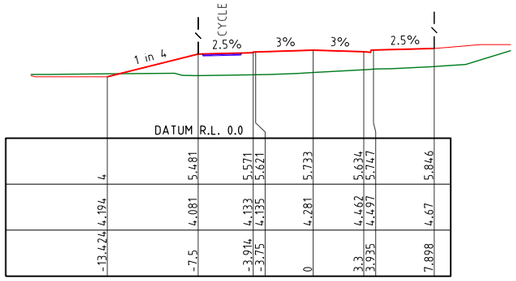

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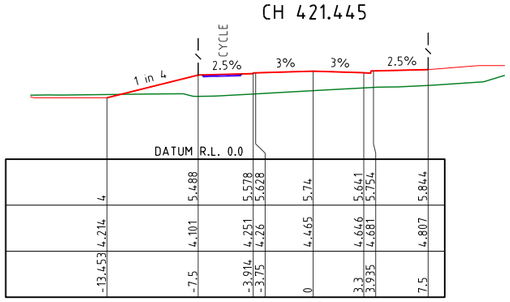

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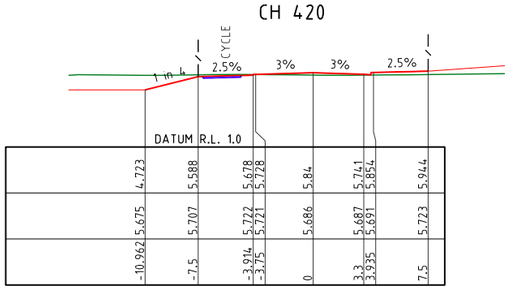

CH 400

ROAD 17

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS ,

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 17
SHEET 1 OF 3

CONSTRUCTION ISSUE

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Civil Engineering
Project Coordination
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DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-301
AMEND. A

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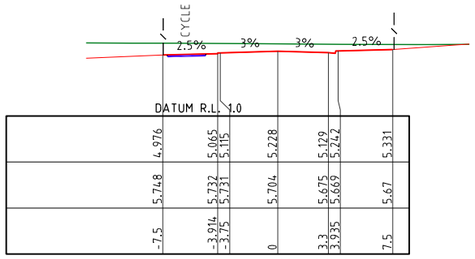
NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



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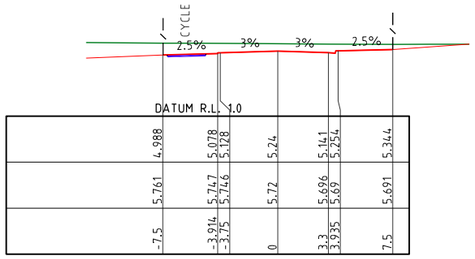

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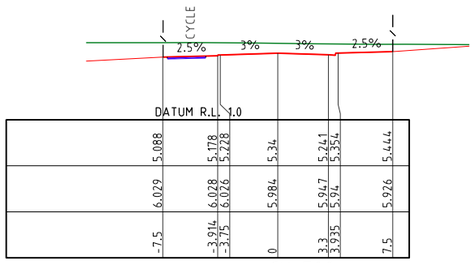

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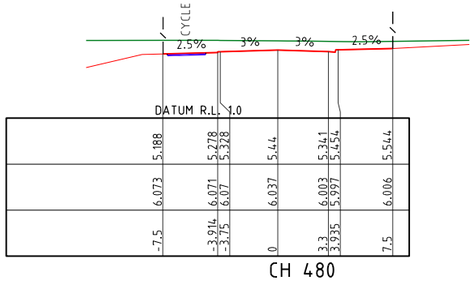

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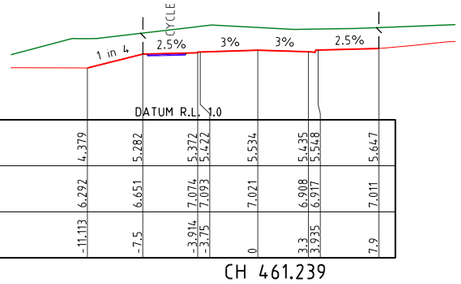

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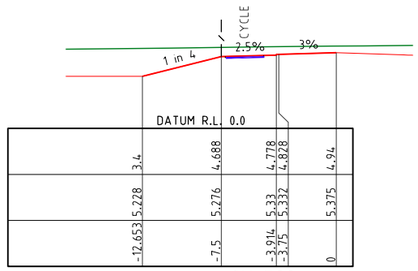
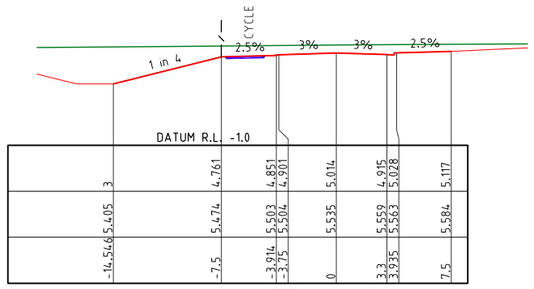


CH 580



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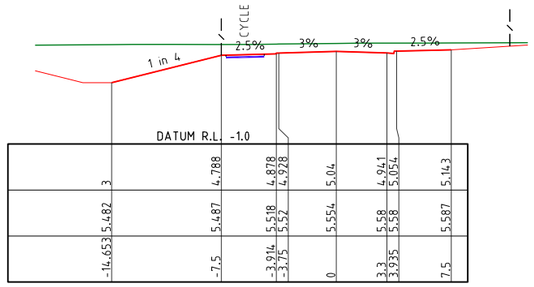

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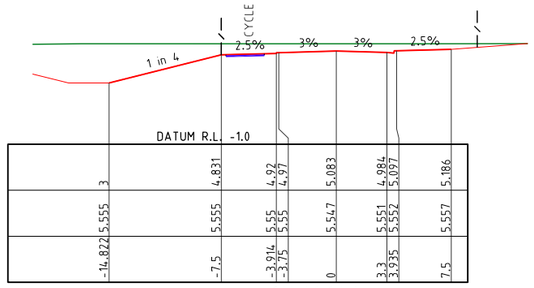

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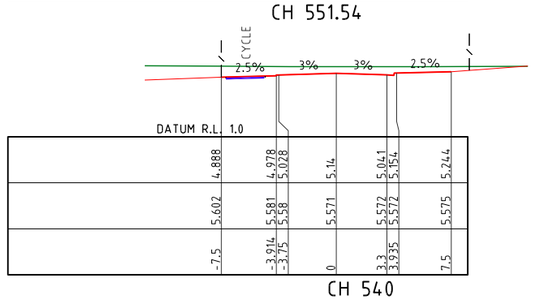

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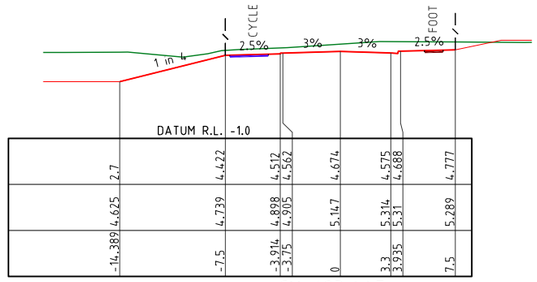
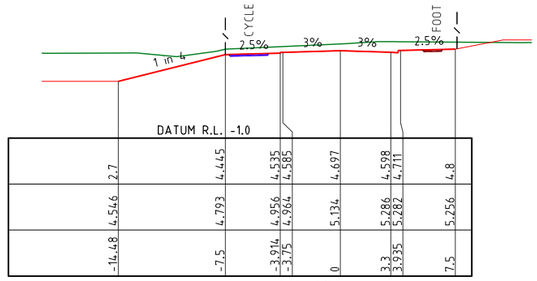


CH 623.445



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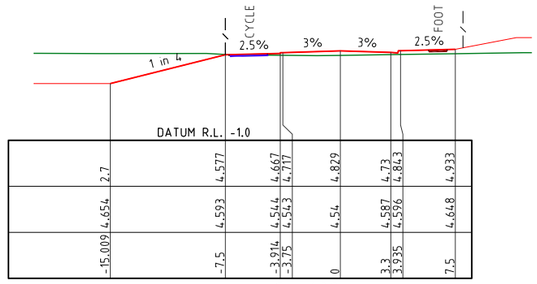

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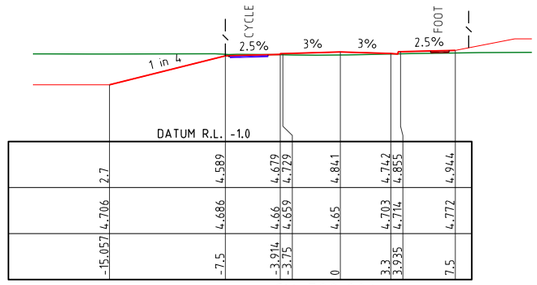
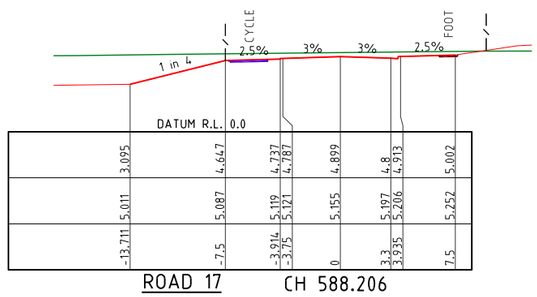


CH 598.206



ROAD 17 CH 588.206

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 17
SHEET 2 OF 3

CONSTRUCTION ISSUE

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Urban & Regional Planning
Civil Engineering
Project Coordination
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DESIGNED RB	DRAWN JB	
APPROVED	NER 906726	DATE 23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-302	A

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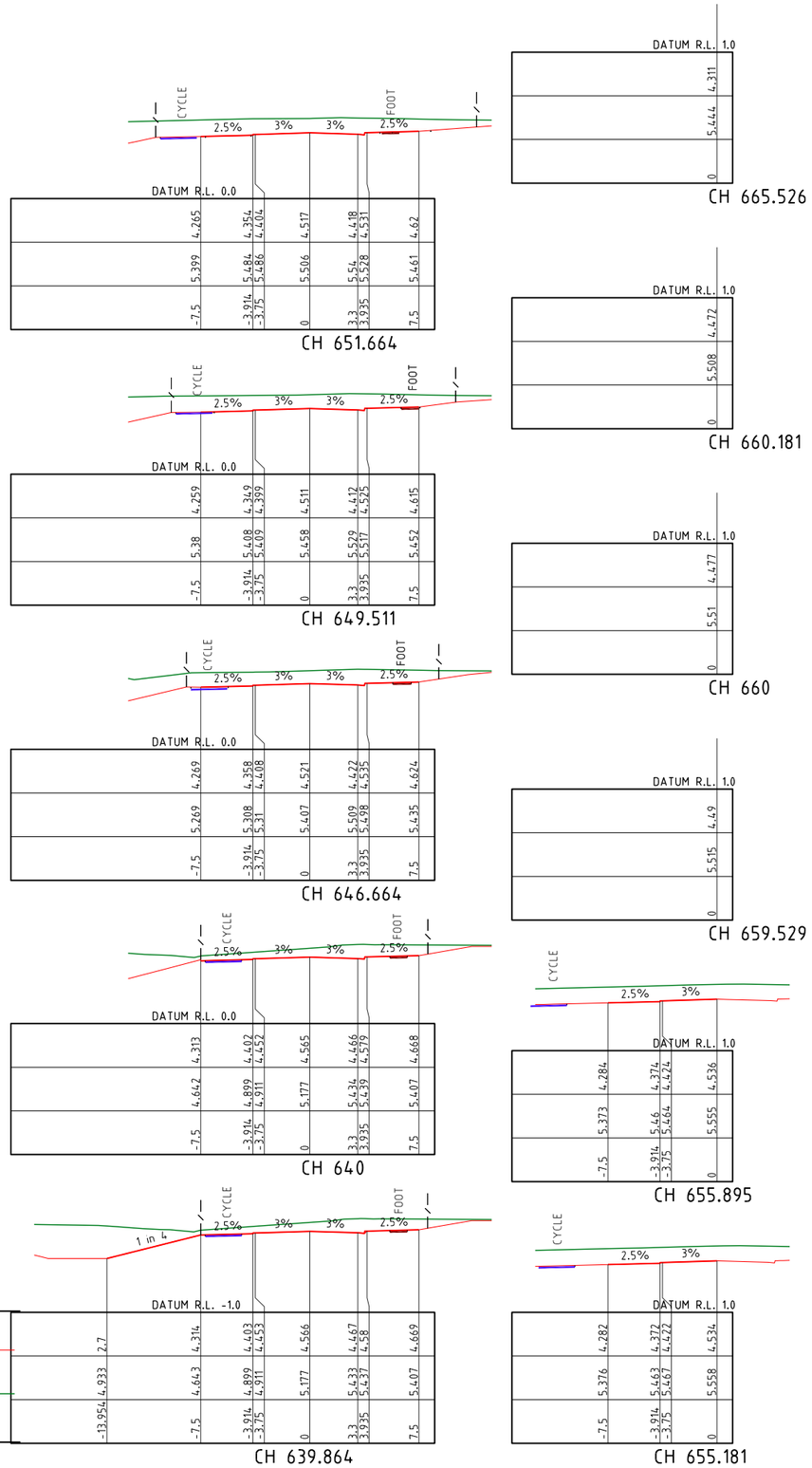
NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

ROAD 17

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS ,

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 17
SHEET 3 OF 3

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-303	A

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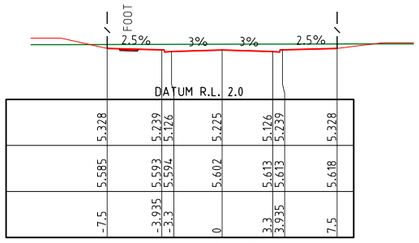

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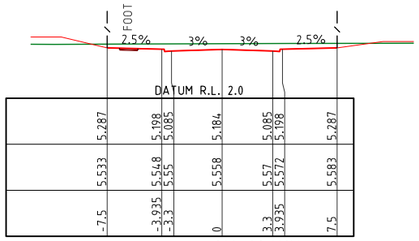

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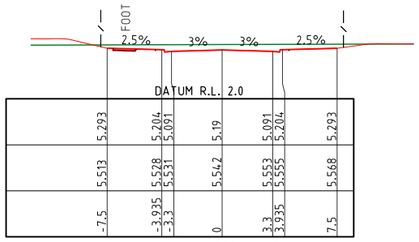

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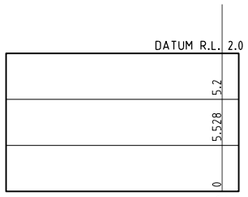

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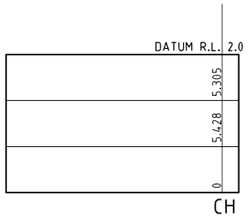

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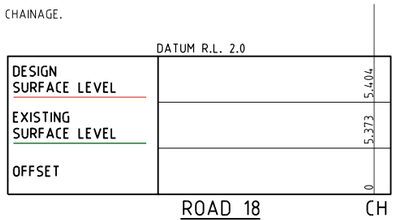

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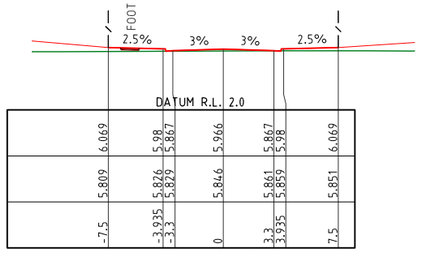

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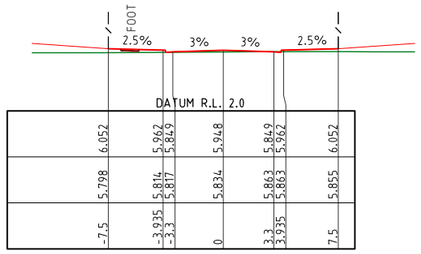

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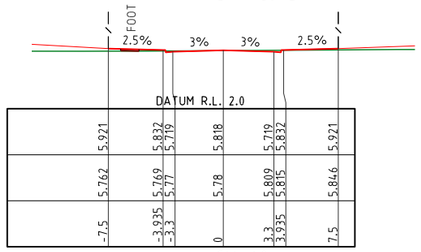

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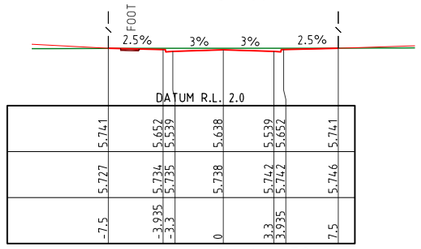

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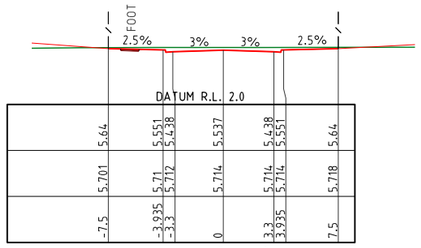

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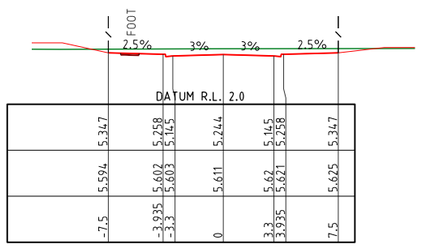

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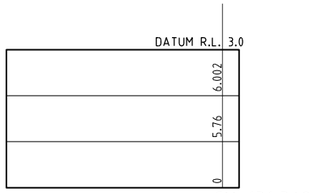

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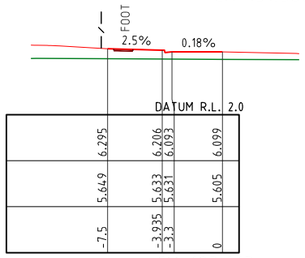

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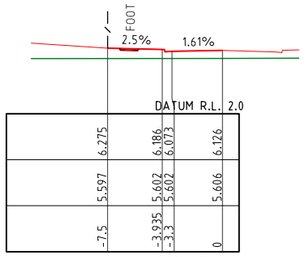

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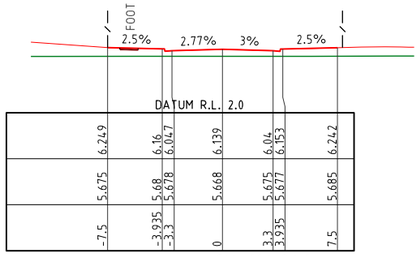

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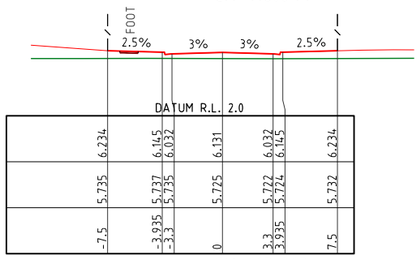

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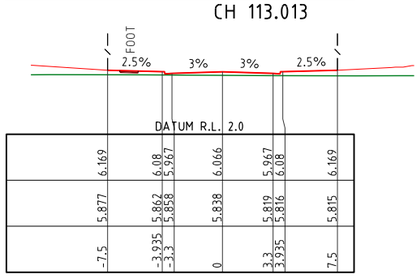

CH 100

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP74682, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 18

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-304	A

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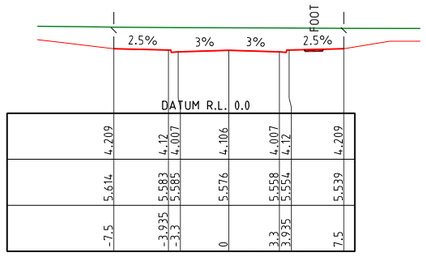
NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



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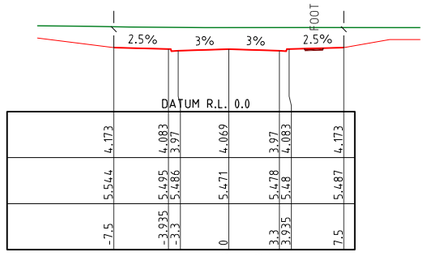

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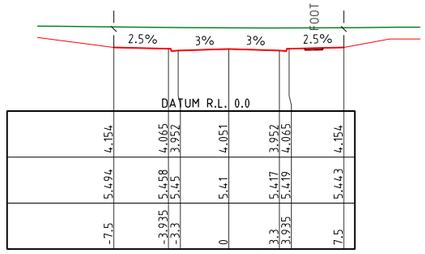

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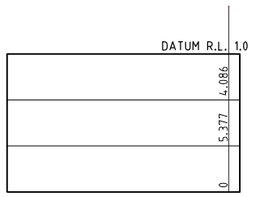

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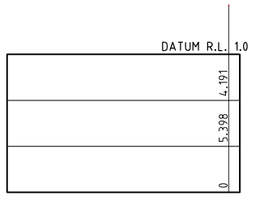
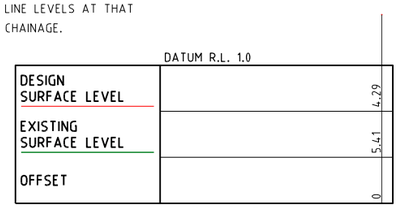


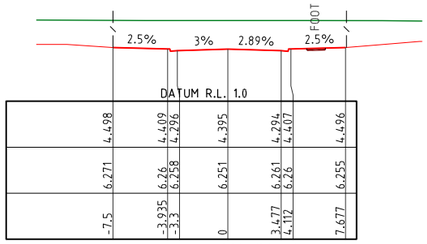
CH 3.3

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.



ROAD 29 CH 0



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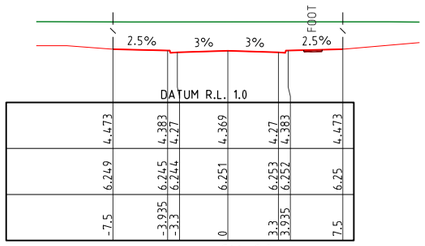
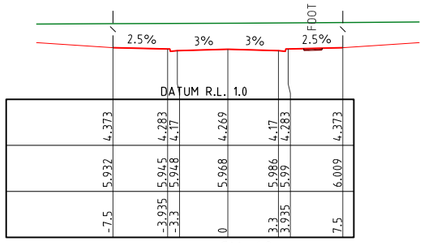


CH 80



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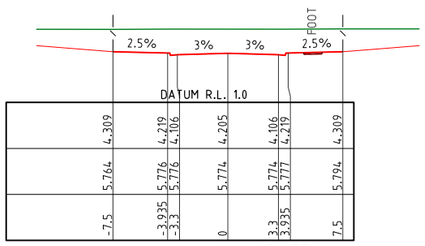

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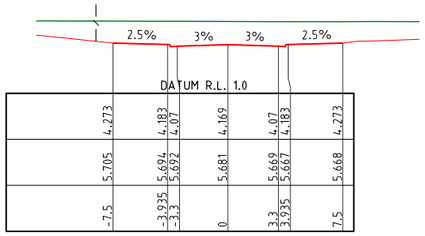

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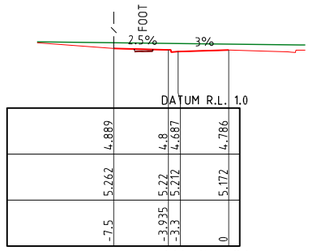

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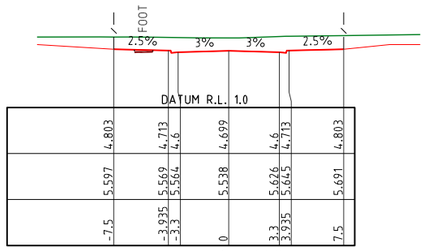

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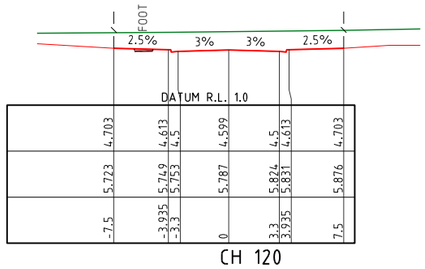

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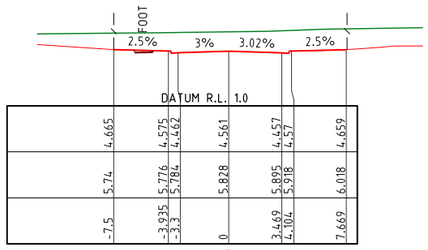

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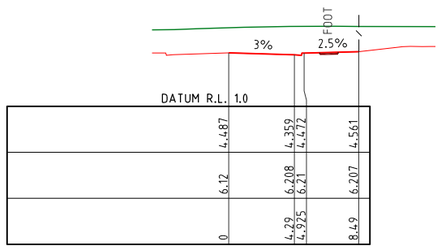

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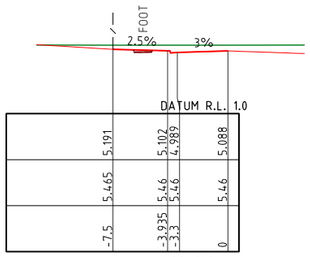

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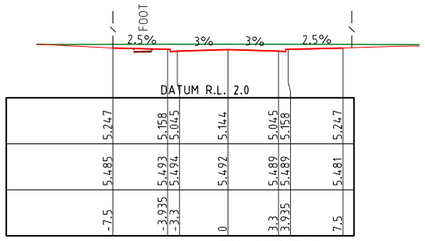

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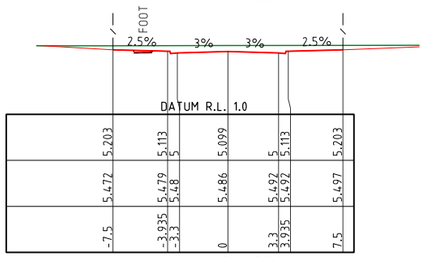

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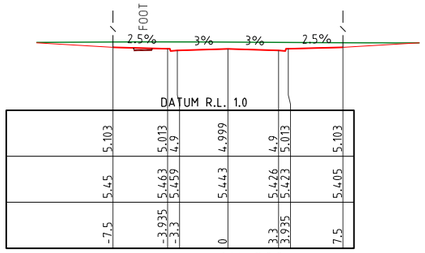

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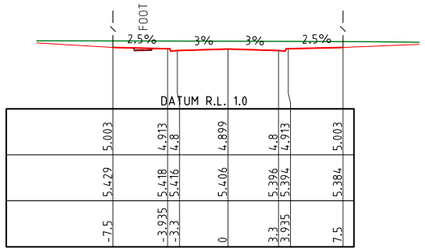
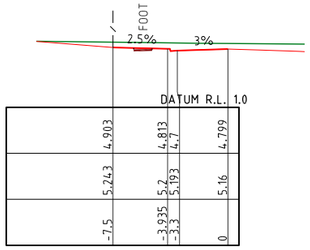


CH 180



CH 160

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 29

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED RB DRAWN JB
APPROVED NER 906726 DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-305
AMEND. A

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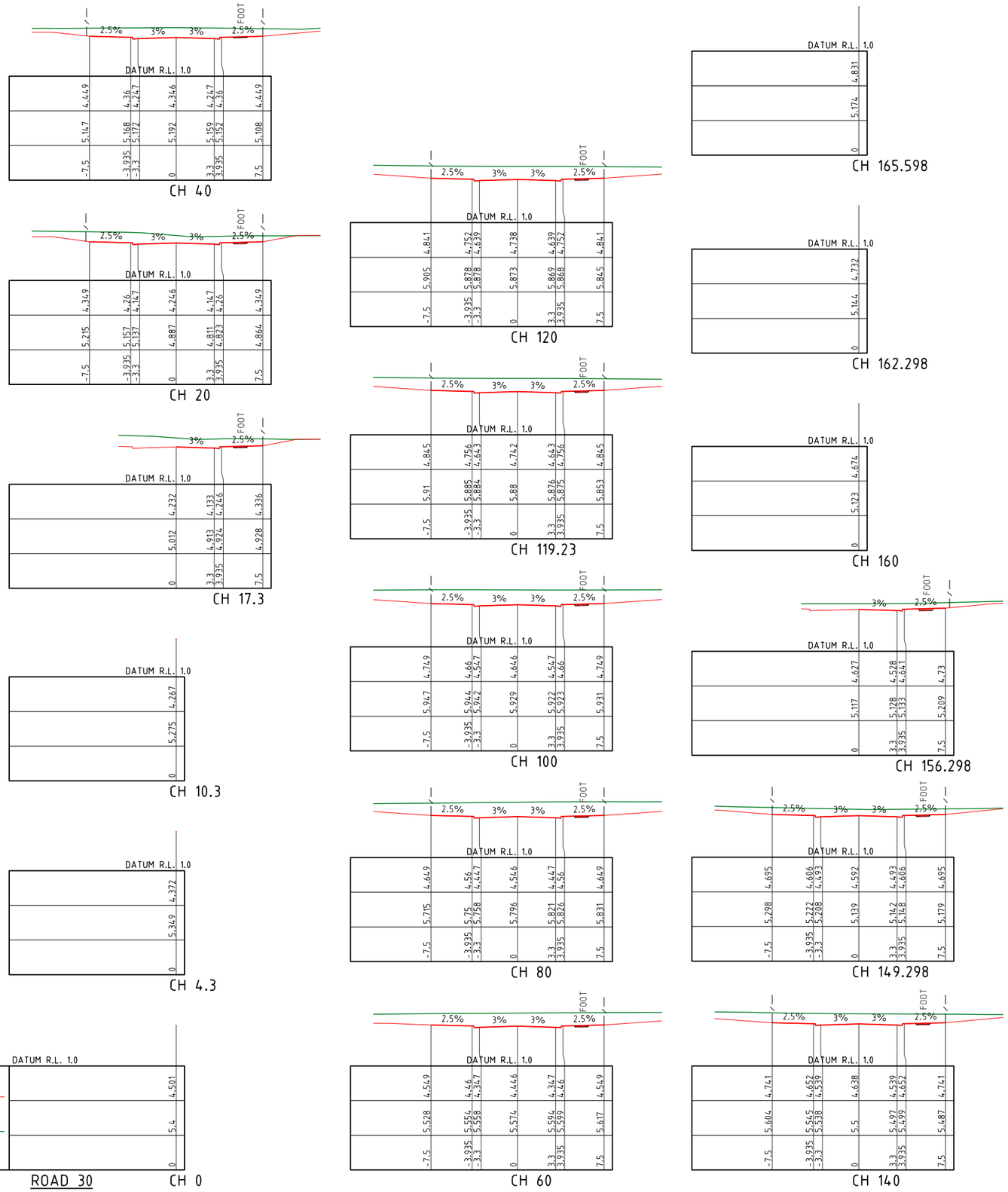

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
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GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 30

CONSTRUCTION ISSUE

MORTONS urbansolutions
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DESIGNED RB DRAWN JB
APPROVED NER 906726 DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-306
AMEND. A

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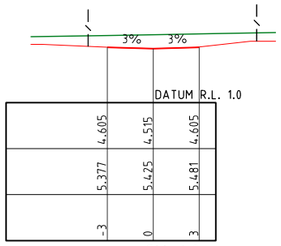
NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



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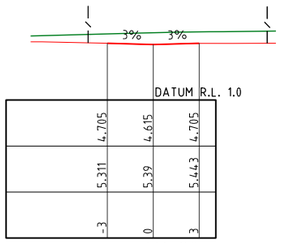

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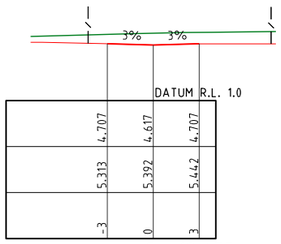

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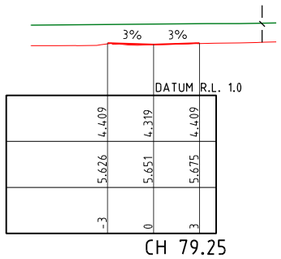

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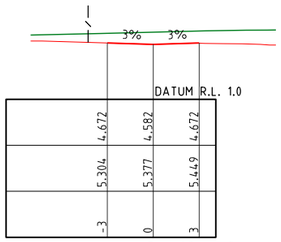

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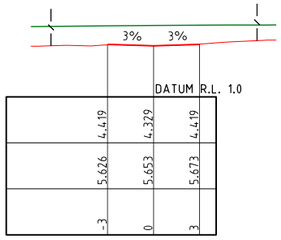

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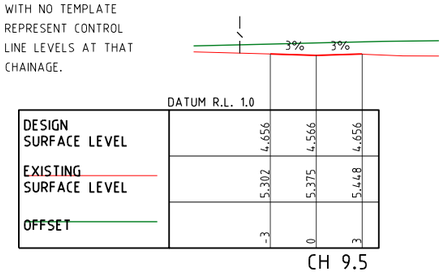
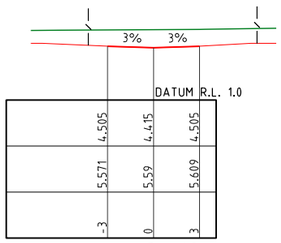
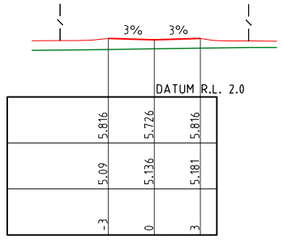


CH 9.5

ROAD 40



CH 60



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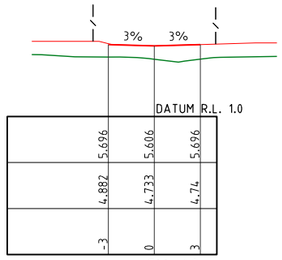

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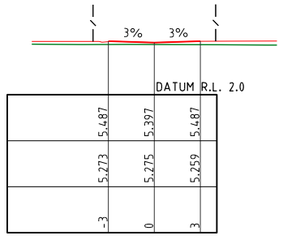

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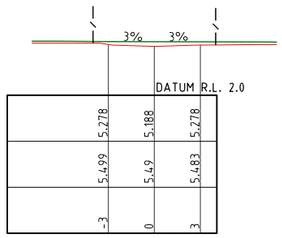

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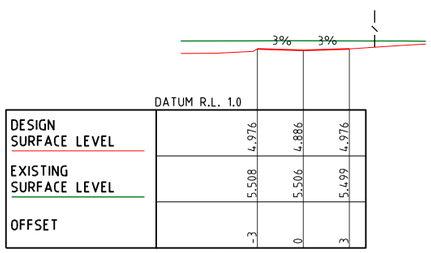

ROAD 45 CH 9.942

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 40 & 45

CONSTRUCTION ISSUE

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APPROVED	NER 906726	DATE 23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-307	A

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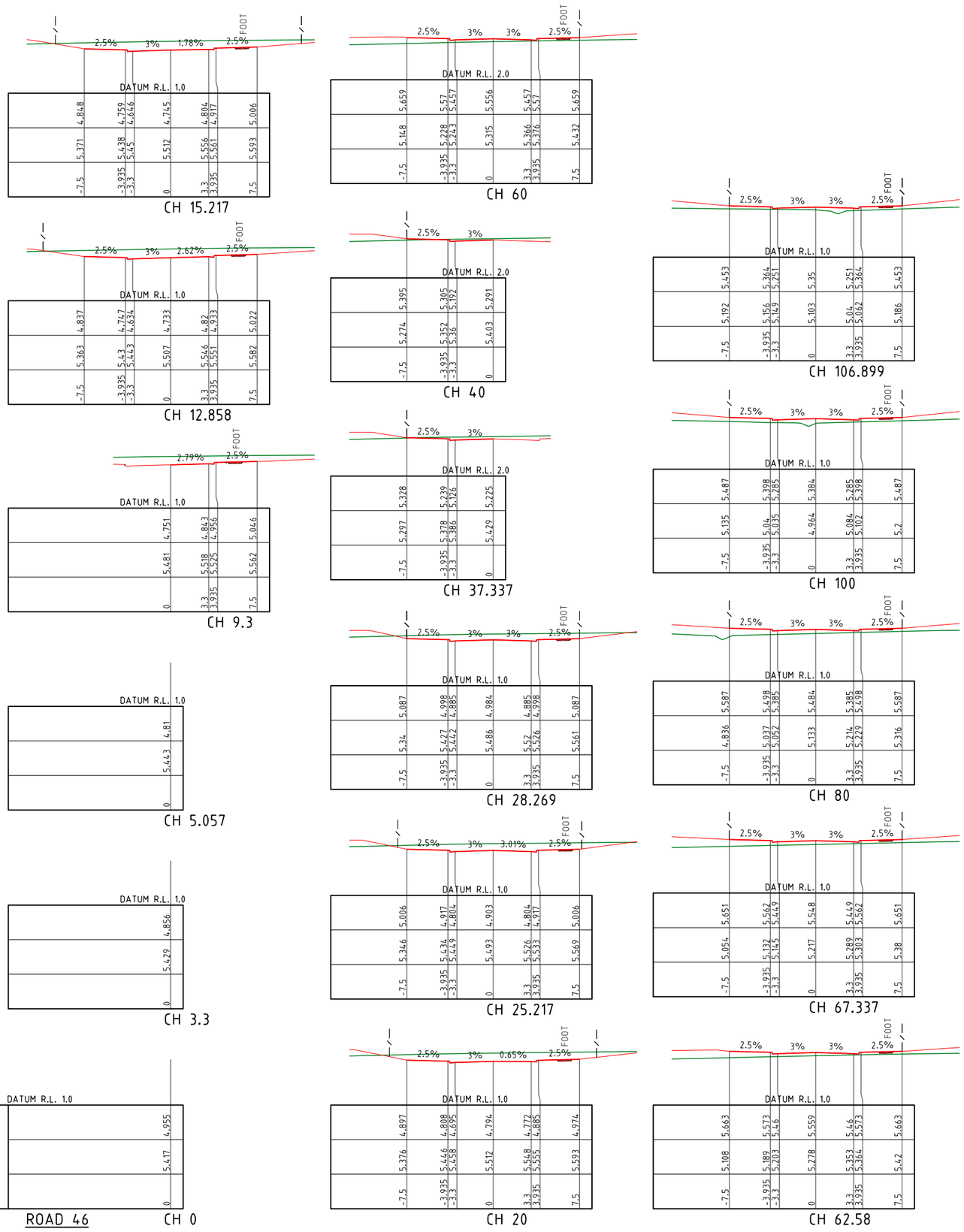

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
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COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
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GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 46

CONSTRUCTION ISSUE

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DESIGNED RB DRAWN JB
APPROVED NER 906726 DATE 23-06-20
DRAWING NUMBER 12301-P5-6&7-308 AMEND. A

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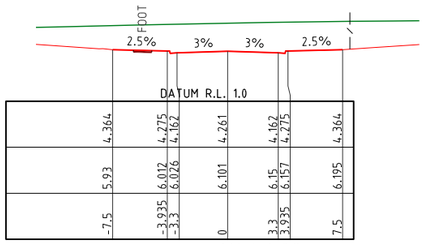
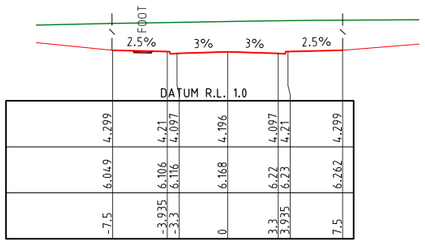
NOTES:

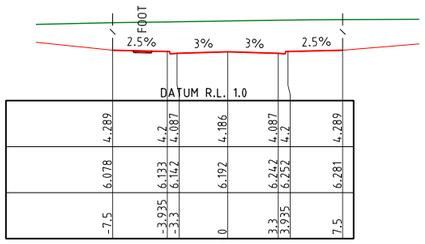
1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS SHOWN INDICATIVELY, INTERFACE TO MATCH EXISTING LEVEL.



CH 53.025



CH 40



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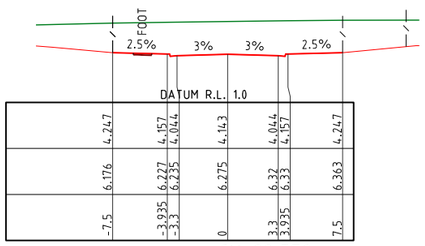
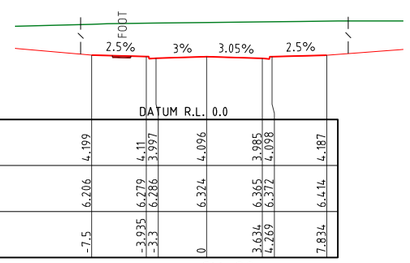
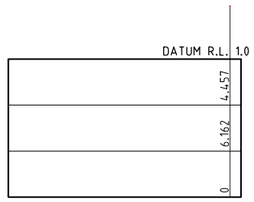


CH 29.572

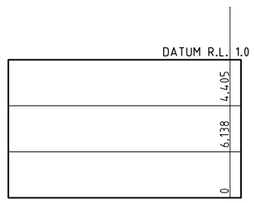


ROAD 47

CH 20



CH 61.727



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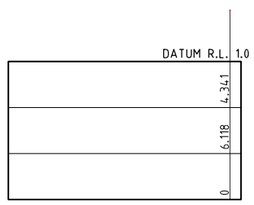

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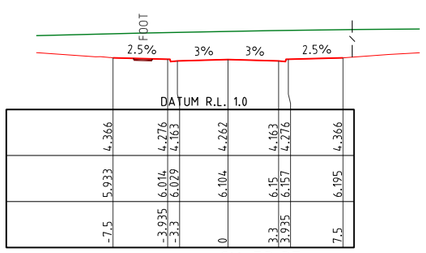

CH 53.37

NOTES:

1. REFER TO 070 SERIES FINAL SURFACE PLAN DWGS FOR EARTHWORKS BEYOND ROAD RESERVE.
2. CROSS SECTIONS WITH NO TEMPLATE REPRESENT CONTROL LINE LEVELS AT THAT CHAINAGE.

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
CROSS SECTIONS
ROAD 47

CONSTRUCTION ISSUE

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Urban & Regional Planning
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DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-309
AMEND. A

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LEGEND

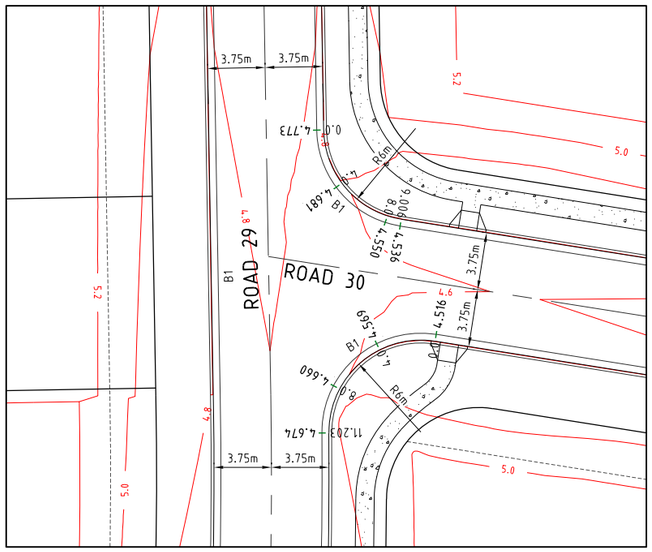
- 1.0 — EXISTING CONTOURS
- EXISTING KERB
- EXISTING FOOTPATH
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED FOOTPATH
- PROPOSED PROPERTY LINE
- PROPOSED CONCRETE
- 24.0 _ 41.065 INTERSECTION CHAINAGE & LEVEL

KERB TYPES

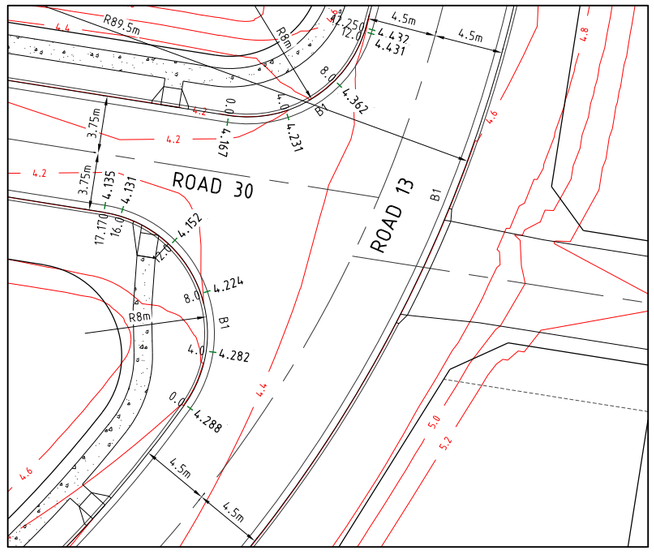
B1	BARRIER KERB & CHANNEL
MK	MOUNTABLE KERB
ER2	EDGE RESTRAINT (WITH VEHICLE LOADING)
FES	FLUSH EDGE STRIP
B2	BARRIER KERB
CK	CASTELLATED KERB

NOTES:

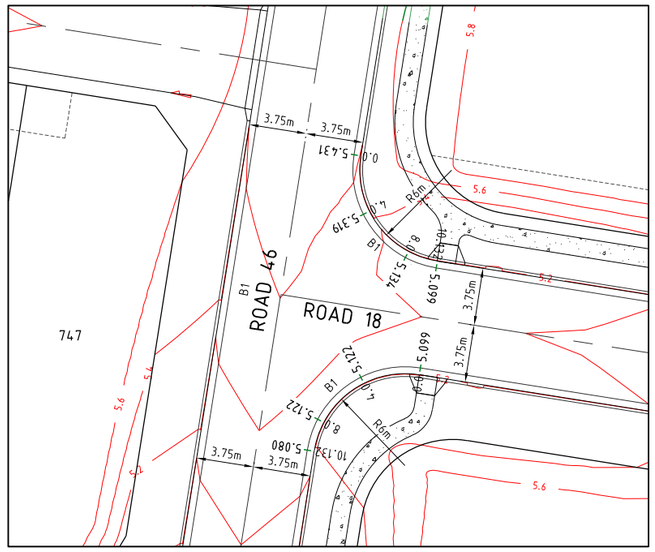
1. SETOUT POINT DENOTES LIP OF KERB WHERE LIP OF KERB, OR FACE OF KERB WHERE NO LIP.
2. FOR KERB TYPES REFER TO DWG. 120
3. FOOTPATH JOINTING TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL STANDARD DRAWING SD013.
4. POLYMER MODIFIED ASPHALTIC CONCRETE IS TO BE USED AT ROUDABOUTS.



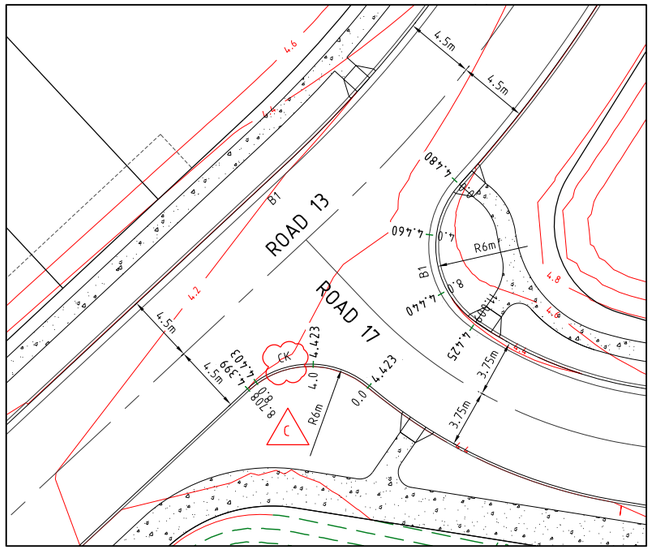
INTERSECTION
ROAD 29 & ROAD 30



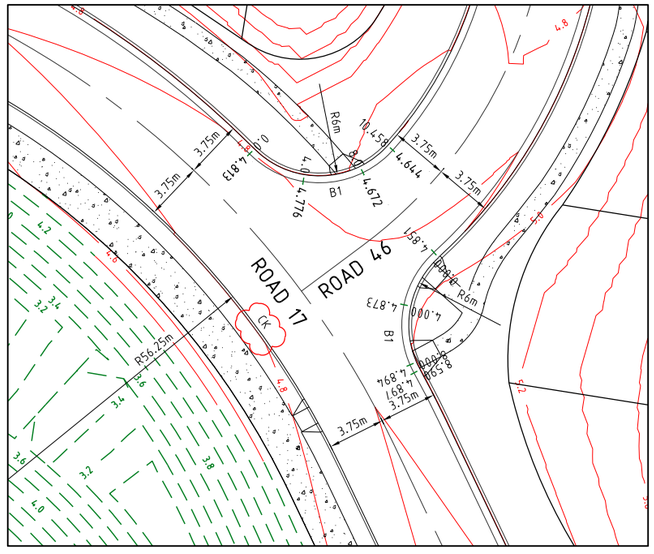
INTERSECTION
ROAD 13 & ROAD 30



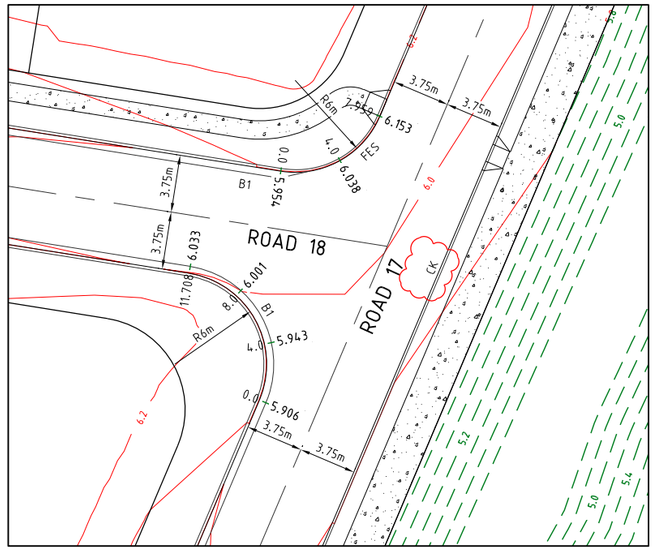
INTERSECTION
ROAD 18 & ROAD 46



INTERSECTION
ROAD 13 & ROAD 17



INTERSECTION
ROAD 17 & ROAD 46



INTERSECTION
ROAD 17 & ROAD 18

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PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	01-09-21	LEGEND AND KERBS AMENDED
B	06-10-20	INTERSECTIONS AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 1 OF 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-400	C

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LEGEND

- EXISTING CONTOURS (1.0)
- EXISTING KERB
- EXISTING FOOTPATH
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED FOOTPATH
- PROPOSED PROPERTY LINE
- PROPOSED CONCRETE
- 24.0 _ 41.065 INTERSECTION CHAINAGE & LEVEL

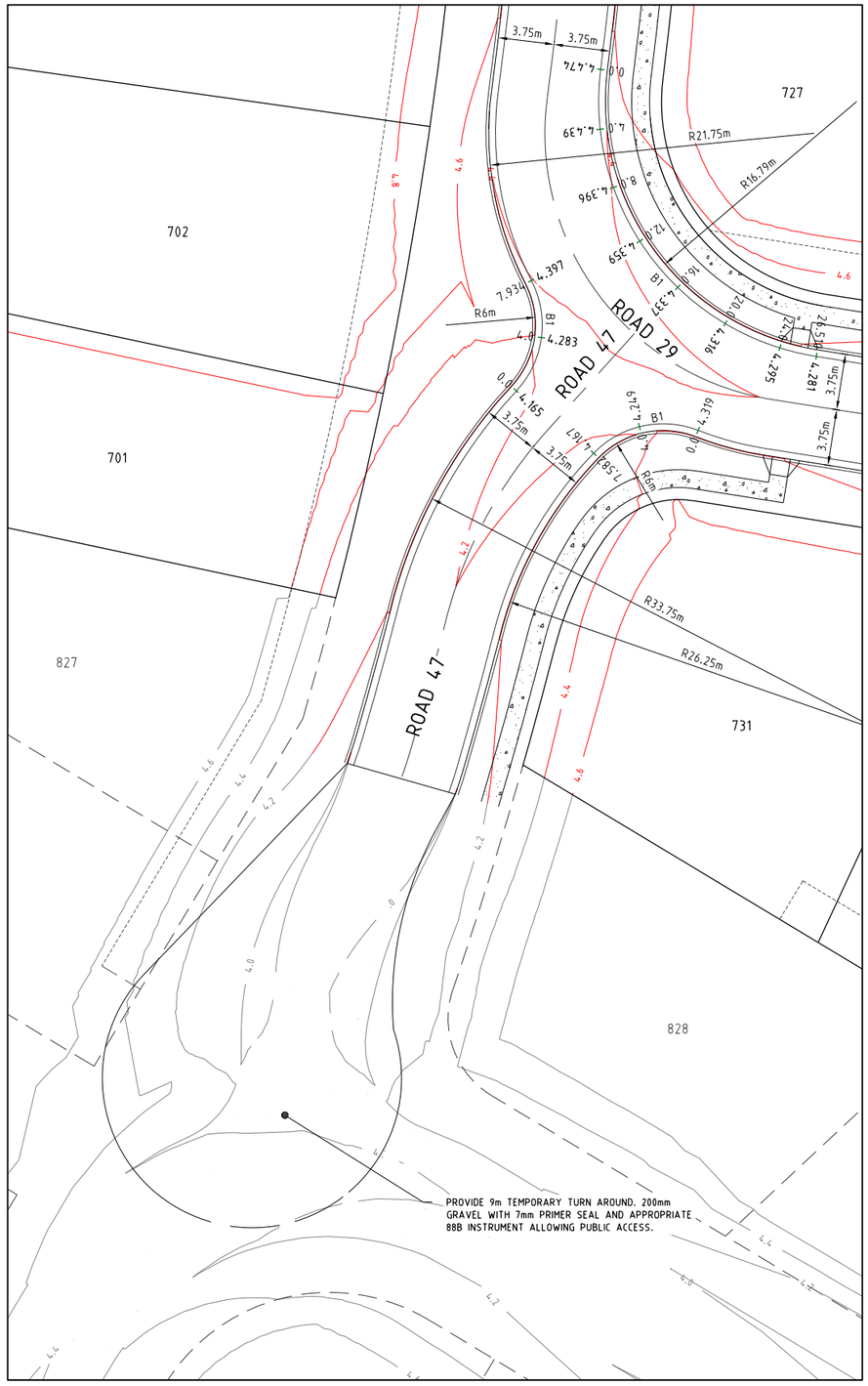
KERB TYPES

B1	BARRIER KERB & CHANNEL
MK	MOUNTABLE KERB
ER2	EDGE RESTRAINT (WITH VEHICLE LOADING)
FES	FLUSH EDGE STRIP

NOTES:

1. SETOUT POINT DENOTES LIP OF KERB WHERE LIP OF KERB, OR FACE OF KERB WHERE NO LIP.
2. FOR KERB TYPES REFER TO DWG. 120
3. FOOTPATH JOINTING TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL STANDARD DRAWING SD013.
4. POLYMER MODIFIED ASPHALTIC CONCRETE IS TO BE USED AT ROUDABOUTS.

B



INTERSECTION
ROAD 29 & ROAD 47

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 2 4 6 8 10m
Scale 1:200 - A1 (1:400 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	10-06-20	INTERSECTION AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
INTERSECTION
GRADING DETAILS
SHEET 2 OF 2

CONSTRUCTION ISSUE

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DRAWING NUMBER	AMEND.
12301-P5-6&7-401	B

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LINEMARKING

1. LINE-MARKING AND SIGNAGE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". ALL SIGNAGE SHOWN IS DIAGRAMMATIC ONLY.
2. ALL SIGN POSTS & SIGN RAILS TO BE GALVANISED UNLESS NOTED OTHERWISE.
3. ALL SHRUBS AND TREES PLACED IN THE ROUNDABOUT AND APPROACHES NEED TO COMPLY WITH THE AUSROADS GUIDE TO ROAD DESIGN PART 4B.
4. ALL WARNING SIGNS, LIGHTS, BARRIERS AND FENCES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH AS 1742 (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES). THE CONTRACTOR SHALL BE ADEQUATELY INSURED AGAINST PUBLIC RISK LIABILITY AND BE RESPONSIBLE FOR ANY CLAIMS ARISING FROM THESE WORKS.

PROPOSED PAVEMENT MARKING LEGEND

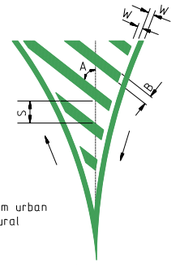
- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS

EXISTING PAVEMENT MARKING LEGEND

- EDGE LINE - EL
- CONTINUITY LINE - CL
- TURN LINE - TL
- BARRIER LINE - BL(B)
- BARRIER LINE - BL
- LANE LINE - LL
- LANE LINE - LL(B)
- GIVE WAY LINE - GWL
- HOLDING LINE - HL
- STOP LINE - SL
- PEDESTRIAN LINE - PL

NOTE: REFER TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ALL LINEMARKING AND SIGN STANDARDS



Angle A = 45° urban
30°rural
B = 1.0m min
S = 1.5m to 5m urban
3m min rural
W = 150mm

Chevrons

LEGEND

- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- SITE BOUNDARY
- STAGE BOUNDARY
- SIGN POST
- SIGN POST
- SIGN POST
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- EXISTING TEMPORARY NO-GO FENCE
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- K7 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER

DIAL BEFORE YOU DIG
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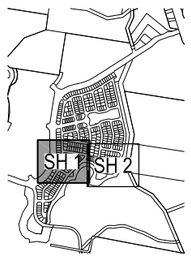
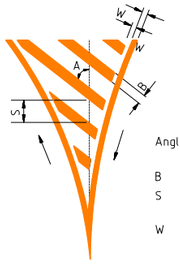


SHEET LAYOUT



Angle A = 45° urban
30°rural
B = 1.0m min
S = 1.5m to 5m urban
3m min rural
W = 150mm

Chevrons

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
D	11-10-21	LINEMARKING AND SIGNS AMENDED
C	02-09-21	LEGEND AMENDED
B	06-10-20	TURN AROUND AND SIGNS AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
LINEMARKING & SIGNAGE
PLAN
SHEET 1 OF 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-420	D

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SHEET LAYOUT

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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Lot 1 on DP781633, Lot 40 on DP7482,
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& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	11-10-21	LINEMARKING AND SIGNS AMENDED
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

ROADWORKS
LINEMARKING & SIGNAGE
PLAN
SHEET 2 OF 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

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APPROVED	NER 906726	DATE 23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-421	B

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SEWER NOTES

VEGETATION PROTECTION

A. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8 m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
B. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
C. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
C. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA. THE CONTRACTOR MUST PREPARE A RISK ASSESSMENT BASED ON THE PROJECT ACID SULPHATE MANAGEMENT PLAN PREPARED BY GILBERT & SUTHERLAND.
D. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).

CREEK CROSSINGS

A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
C. NO SOIL SHALL BE STOCKPILED WITHIN 5 m OF THE CREEK.

REHABILITATION

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SAFETY

A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL NEW SOUTH WALES LEGISLATION.

GENERAL

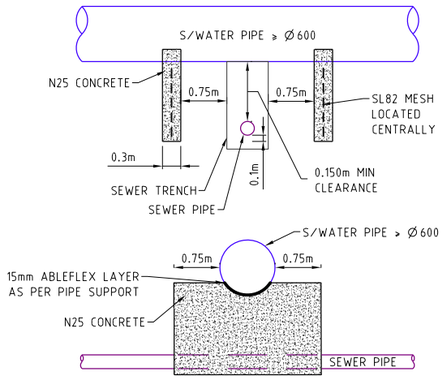
1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH SEWERAGE CODE OF AUSTRALIA WSA 02-2014; WSA 04-2005; WSA 07-2007 UNLESS OTHERWISE SPECIFIED IN TWEED SHIRE COUNCIL DEVELOPMENT DESIGN SPECIFICATION D12, OR CONSTRUCTION SPECIFICATION C402 OR OTHERWISE SPECIFIED IN TSC SUBDIVISION MANUAL.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY A NER, TO THE SATISFACTION OF TWEED SHIRE COUNCIL. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE COUNCIL SEWERAGE SYSTEM.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE DEVELOPER'S APPROVED CONTRACTOR UNDER THE SUPERVISION OF TWEED SHIRE COUNCIL'S AGENT AT THE DEVELOPER'S COST.
5. EACH ALLOTMENT SHALL BE SERVED BY A DN150 PVC PROPERTY CONNECTION, FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL.
6. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
7. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300 mm AND A MAXIMUM OF 750 mm.
8. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE TWEED SHIRE COUNCIL UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
9. WHERE SEWERS HAVE A GRADE OF 15 TO 29% OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TWEED SHIRE COUNCIL DEVELOPMENT CONSTRUCTION SPECIFICATION C402-23.
10. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES ON SITE BEFORE COMMENCING WORKS.
11. BENCH MARK AND LEVELS TO AHD.
12. EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY TWEED SHIRE COUNCIL AT THE DEVELOPERS COST.
13. CLEARANCES BETWEEN SEWERS AND OTHER UNDERGROUND SERVICES SHALL BE PROVIDED IN ACCORDANCE WITH WSA02-2014.3.1.
14. FALL THROUGH MHS SHALL BE IN ACCORDANCE WITH WSA 202-2014.31, INCLUDING:
    a) MIN 30mm WHERE DEFLECTION LESS THAN 90°C
    b) MIN 80mm WHERE DEFLECTION MORE THAN 90°C
    c) FALL SHALL NOT EXCEED GREATER OF 150mm OR DIFFERENCE BETWEEN IN/OUT PIPE DN (UNLESS NOTED OTHERWISE).
    FALL MINIMUM REQUIREMENTS ARE IN ACCORDANCE WITH TSC S.D 278

PROJECT SPECIFIC SEWER NOTES

a. ALL SEWER MAIN TO BE AS PER SEWER PIPE SPECIFICATIONS TABLE.
b. NOTWITHSTANDING THE NOTES ABOVE, ALL MATERIALS AND WORKS MUST BE IN ACCORDANCE WITH THE SERVICE PROVIDER'S APPROVAL CONDITIONS AND THE TWEED SHIRE COUNCIL DEVELOPMENT DESIGN AND CONSTRUCTION SPECIFICATIONS.
c. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR SEWER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
d. CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF WORKS ON-SITE.
e. MINIMUM 25MPA THRUST BLOCKS TO BE CONSTRUCTED AT ALL FLEXIBLE JOINTED BENDS IN ACCORDANCE WITH TWEED SHIRE COUNCIL SPECIFICATIONS C402.30 AND C271.
f. CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH CONNECTIONS.
g. ALL SEWER MAINS CROSSING ROAD AND WITH A COVER <1.5m ARE TO BE BACKFILLED WITH STABILISED SAND UP TO UNDERSIDE OF ROAD SUB-BASE LAYER. D

LEGEND

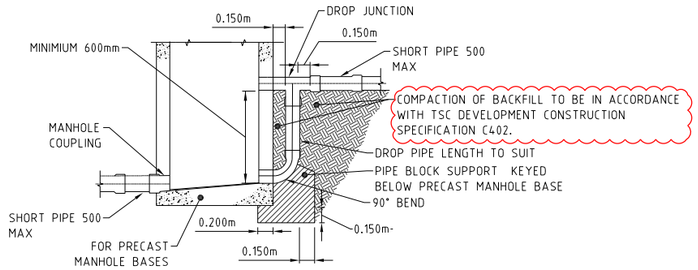
- EXISTING SEWER
- RM — EXISTING RISING MAIN
- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- 1.0 — EXISTING CONTOURS
- 225 — 225 — FUTURE RISING MAIN
- 450 — 450 — FUTURE RISING MAIN
- FUTURE KERB (INVERT)
- 1.0 — FUTURE CONTOURS
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- 1.0 — DESIGN CONTOURS
- 225 — 225 — PROPOSED SEWER MAIN
- S — S — PROPOSED SEWER MAIN
- SITE PRECINCT
- SECTION 68 - LIMIT OF WORKS BOUNDARY
- SEWER SCOUR VALVE (<Ø 300)
- SEWER AIR VALVE (<Ø 300)
- SEWER SCOUR VALVES (Ø 450)
- SEWER AIR VALVE (Ø 450)
- SEWER ISOLATION/SLUICE VALVE (ALL SIZES)
- 01-10 SEWER PIT NO/LINE
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- X EXISTING TEMPORARY NO-GO FENCE
- ACCESS GATE IN ACCORDANCE WITH TSC STD DWG S.D.020
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- K7 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER



BRIDGING DETAILS FOR STORMWATER PIPES ≥ Ø600

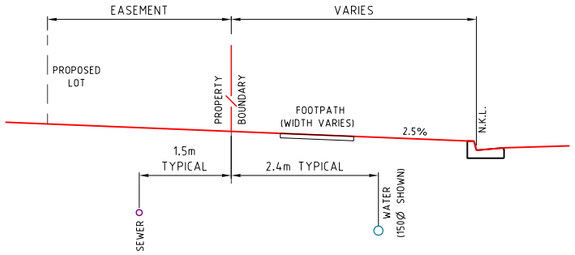
NOT TO SCALE

NOT TO SCALE



EXTERNAL DROP DETAIL FOR NON-TRAFFICABLE AREAS ONLY

NOT TO SCALE



T.S.C. TYPICAL SERVICES SEWER AND WATER RETICULATION (SAME SIDE)

SCALE 150 - A1 (1:100 - A3)

1. PUBLIC UTILITIES ALLOCATIONS ARE MEASURED FROM THE REAL PROPERTY BOUNDARY.
2. LIGHT POLE, TREE ALLOCATIONS AND FOOTPATHS ARE MEASURED FROM THE NOMINAL KERB LINE.
3. REFER TO TSC SD.006 FOR SERVICE LOCATIONS IN ROADWAYS.
4. REFER TO DRAWING 12301-P5-4&5-092 AND 93 FOR COMBINED SERVICES LOCATED IN VERGE.

HORIZONTAL THRUST BLOCKS TO BE IN ACCORDANCE WITH:

Minimum Thrust Area (m^2) for Concrete Blocks given 1200kPa System Test Pressure (Sewer):

Based on Soil Classification: 100kPa					
Pipe Diameter	Bends				Tee & Dead Ends
	11.25	22.5	45	90	
100	0.21	0.21	0.21	0.21	0.21
200	0.21	0.21	0.35	0.65	0.46
375	0.32	0.66	1.28	2.38	1.68

Resultant Thrust (kN) given 120m Head with 1200kPa System Test Pressure (Sewer):

Pipe Diameter	Bends (kN)				Tee & Dead Ends
	11.25	22.5	45	90	
100	2.70	5.37	10.53	19.45	13.75
200	9.75	19.41	38.06	70.33	49.73
375	32.87	65.43	128.34	237.14	167.68

FOR FURTHER DETAIL REFER TO WSA 03-2011-3.1 TABLE 7.3.

NOTES:
a. FINISH THRUST BLOCKS APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY, TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASEMENT TO BE 180°.
b. FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN

NOTE:
LIVE CONNECTION OF SEWER WILL BE PENDING ON REGIONAL PUMP STATION.

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

SEWER RISING MAIN LOCATION	PIPE MATERIAL SPECIFICATION
FOOTPATH VERGE	PVC-M OR GRP PN12 MINIMUM
ROAD CROSSING	PVC-M OR GRP PN16 MINIMUM OR DICL PN20 MINIMUM

SEWER GRAVITY MAIN LOCATION	PIPE MATERIAL SPECIFICATION
FOOTPATH VERGE	UPVC SN8
ROAD CROSSING	UPVC SN12

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PROJECT NAME
KINGS FOREST
PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
D	02-09-21	LEGEND AND NOTES AMENDED
C	22-03-21	DETAIL AMENDED
B	09-10-20	DETAILS, TABLE AMENDED
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE
SEWER RETICULATION NOTES AND DETAILS

CONSTRUCTION ISSUE

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DESIGNED RB | DRAWN JB
APPROVED | NER 906726 | DATE 23-06-20
DRAWING NUMBER 12301-P5-6&7-500 | AMEND. D

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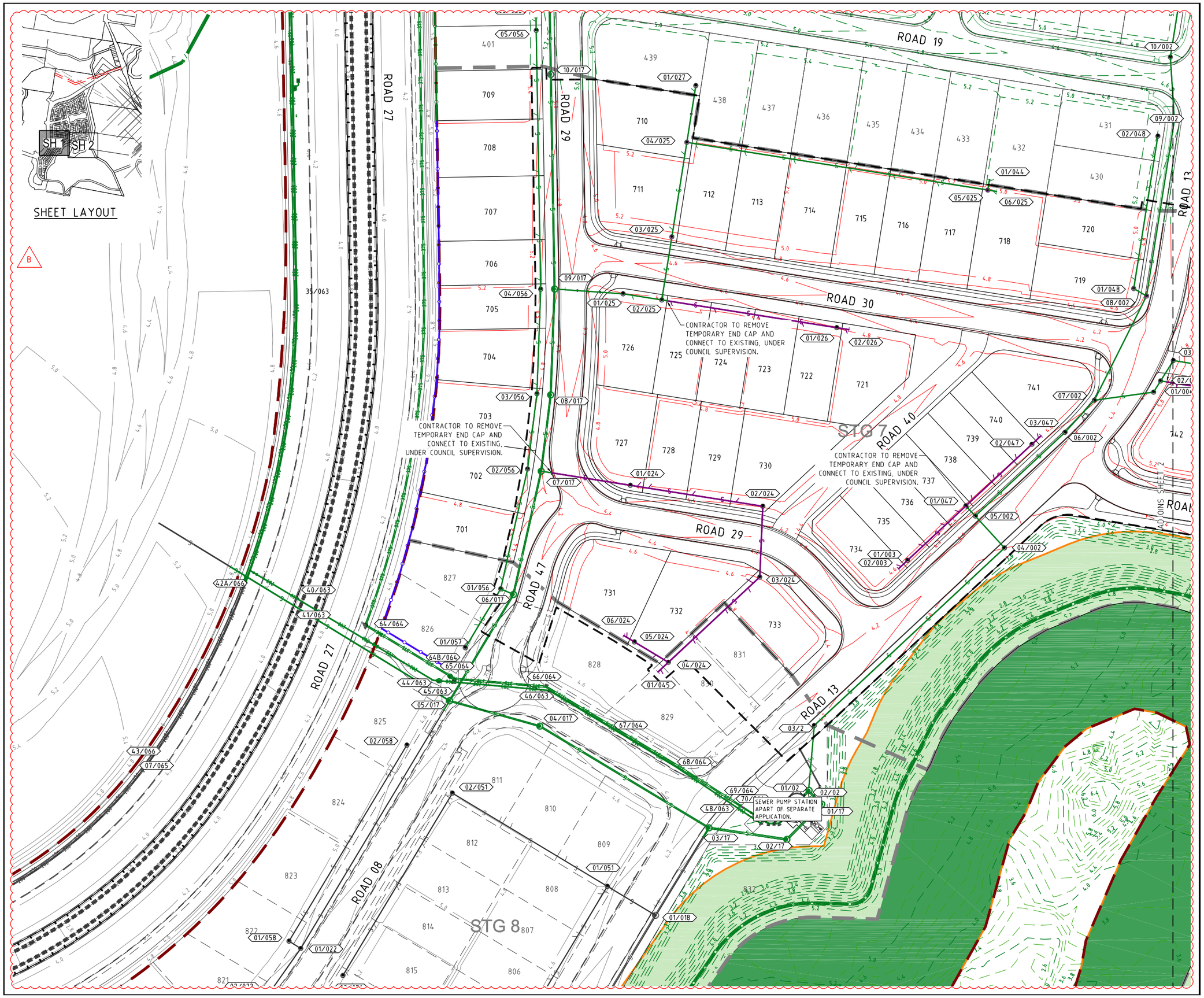

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	06-10-20	SEWER ALIGNMENT AMENDED
A	23-06-20	COUNCIL ISSUE

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SEWER RETICULATION PLAN
SHEET 1 OF 2

CONSTRUCTION ISSUE

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APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-501	B

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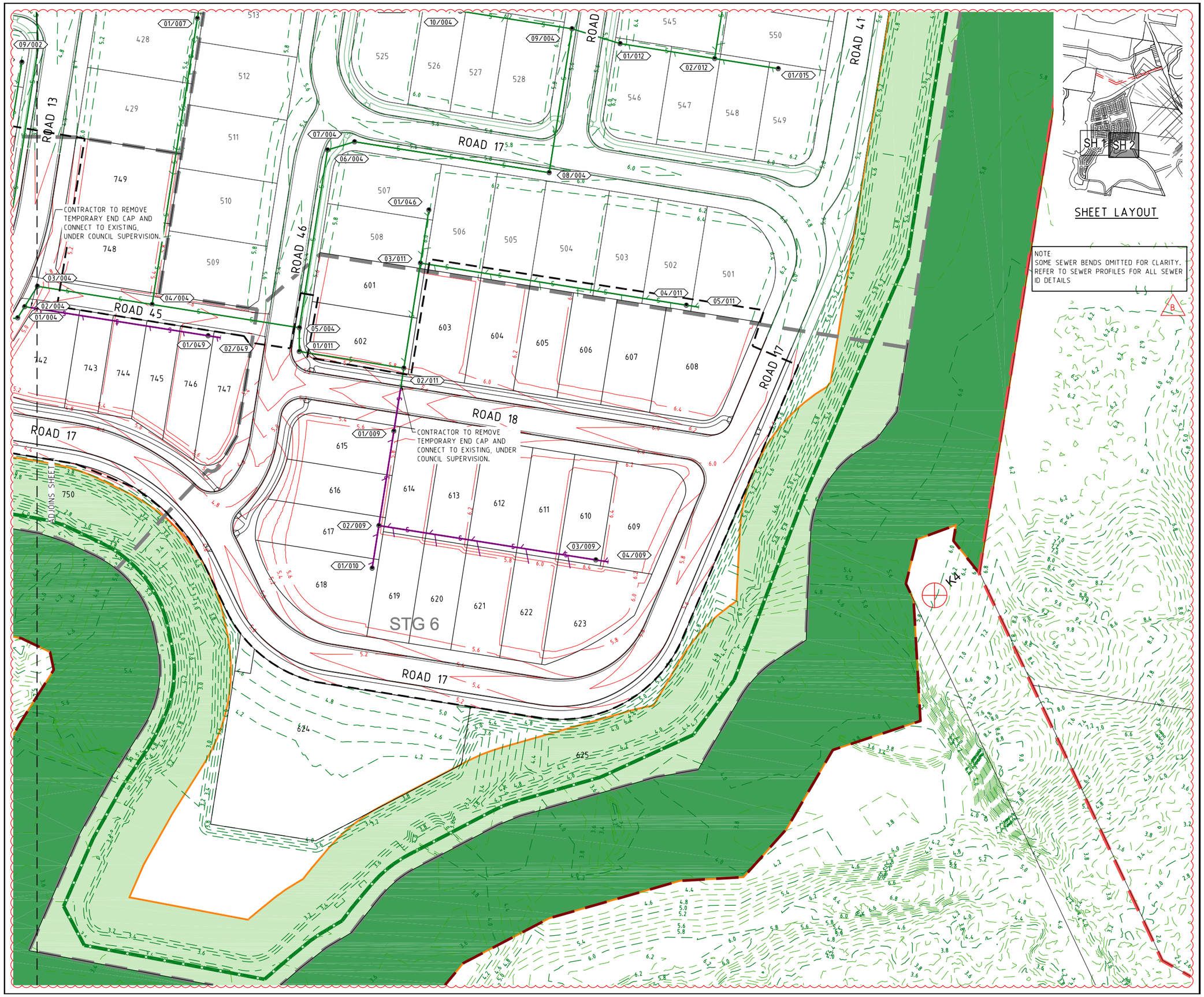

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE
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CONSTRUCTION	..

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A	23-06-20	COUNCIL ISSUE

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SEWER RETICULATION PLAN
SHEET 2 OF 2

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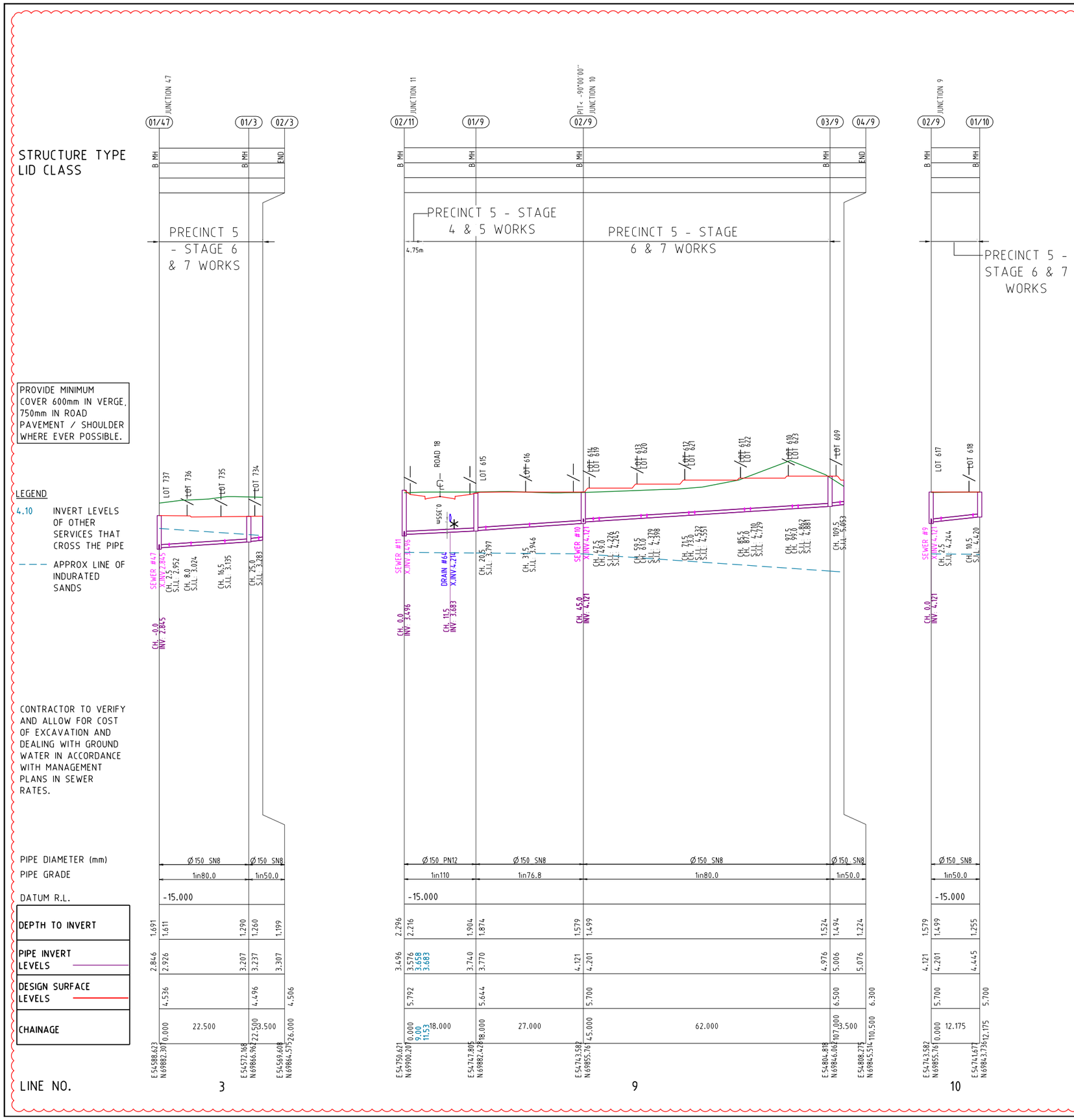

SEWER STRUCTURE LIDS	
D	CLASS D TO AS 3996 - 2006
B	CLASS B TO AS 3996 - 2006
M	'M' PREFIX DESIGNATES BOLT DOWN LID

B

* CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH REFER TYPICAL SECTIONS & DETAILS FOR BRIDGING STRUCTURE DETAILS

| TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 276

NOTES

1. IF SHOWN, WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE CROSSING LOCATIONS.
2. EMBEDMENT TYPES ARE AS SPECIFIED ON THE TWEED SHIRE COUNCIL SD 261 AND IN THE DEVELOPMENT CONSTRUCTION SPECIFICATION C402.23.
   - -TYPE 'A' OUTSIDE OF ROADWORKS.
   - -TYPE 'C' UNDER ROADWAYS.
3. CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
4. ALL DIMENSIONS ARE IN MILLIMETRES.
5. DISCHARGE CHAMBERS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 244.
6. INTERNAL CONCRETE SURFACES OF ALL CHAMBERS IN ACCORDANCE WITH S.D.244.01 SHALL BE COATED WITH SIKA SIKAGARD 62 OR FOSROC NITOMORTAR ELS OR APPROVED EQUIVALENT. APPLICATION TO BE IN ACCORDANCE WITH PRODUCT SUPPLIER'S SPECIFICATIONS.
7. ANY CHAMBER WITHIN 100m DOWNSTREAM OF A RISING MAIN DISCHARGE CHAMBER TO BE PROTECTED IN A SIMILAR MANNER TO THE DISCHARGE CHAMBER (AS NOTED ABOVE).
8. BACKFILL IN VENT PIPE TRENCH SHALL BE COMPACTED TO AT LEAST THE SAME DENSITY AS THE SURROUNDING SOIL.
9. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
10. MASS CONCRETE THRUST BLOCKS ARE TO BE PLACED AT BENDS & PIPE JUNCTIONS ON THE SEWER RISING MAIN. REFER TO DESIGN DRAWINGS FOR LOCATION & SIZES OF THRUST BLOCKS.
11. THE SEWER RISING MAIN IS TO BE GRADED UP HILL AS IT APPROACHES THE DISCHARGE MANHOLE.
12. THE DIAMETER OF THE PIPEWORK FROM THE MAINTENANCE HOLE TO THE VENT PIPE & WITHIN THE VENT PIPE SHOULD BE EQUAL TO OR LARGER THAN THE DIAMETER OF THE LARGEST MAIN IN THE MAINTENANCE HOLE. THE VENT PIPE STRUCTURE SHOULD BE CONSTRUCTED TO MATCH THE SIZE OF THE VENT PIPEWORK.
13. PRECAST MANHOLE SYSTEMS USING REINFORCED OR UNREINFORCED CONCRETE RUBBER RING JOINTED SEGMENTS IN ACCORDANCE WITH AS 4198 (HUMES, AMATEC, EJ OR EQUIVALENT ACCEPTED) MAY BE USED. THE STANDARD MANHOLE DIAMETER SHALL BE 1050mm WITH A STANDARD CLEAR OPENING DIAMETER OF 600mm MINIMUM. FOR MANHOLES DEEPER THAN 4m, THE STANDARD DIAMETER SHALL BE 1200mm, STANDARD CLEAR OPENING 600mm X 900mm MINIMUM.
14. ACCESS COVERS SHALL BE DUCTILE IRON HINGED WITH WATERTIGHT SEAL MANUFACTURED IN ACCORDANCE WITH AS 3996. MH ACCESS OPENINGS SHALL HAVE A MINIMUM CLEAR OPENING DIAMETER OF 600mm. WHERE APPROVED, CONCRETE ACCESS COVERS SHALL COMPLY WITH AS 4198 AND SHALL HAVE A MINIMUM CLEAR OPENING DIAMETER OF 600mm.
15. MAINTENANCE HOLE UNITS CAN BE EITHER PRE-CAST OR CAST-IN-SITU. BENCHING AND INVERT LEVELS SHALL BE DESIGNED TO SUIT THE INFLOW CONDITIONS AND SHALL BE DESIGNED IN ACCORDANCE WITH WSA 02-2014, 1, 7.6. (ALSO REFER TO S.D.278 FOR STANDARD MANHOLES).
16. EXTERNAL BACKDROPS SHALL BE PROVIDED WHERE INTERNAL FALL ACROSS THE BASE OF THE MANHOLE IS NOT ACHIEVABLE PER D12.08.06

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)
0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	06-10-20	LEGEND, NOTES AND PROFILES AMENDED
A	23-06-20	COUNCIL ISSUE

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GILBERT + SUTHERLAND

DRAWING TITLE
SEWER RETICULATION PROFILES SHEET 1

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 23-06-20

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12301-P5-6&7-530	B

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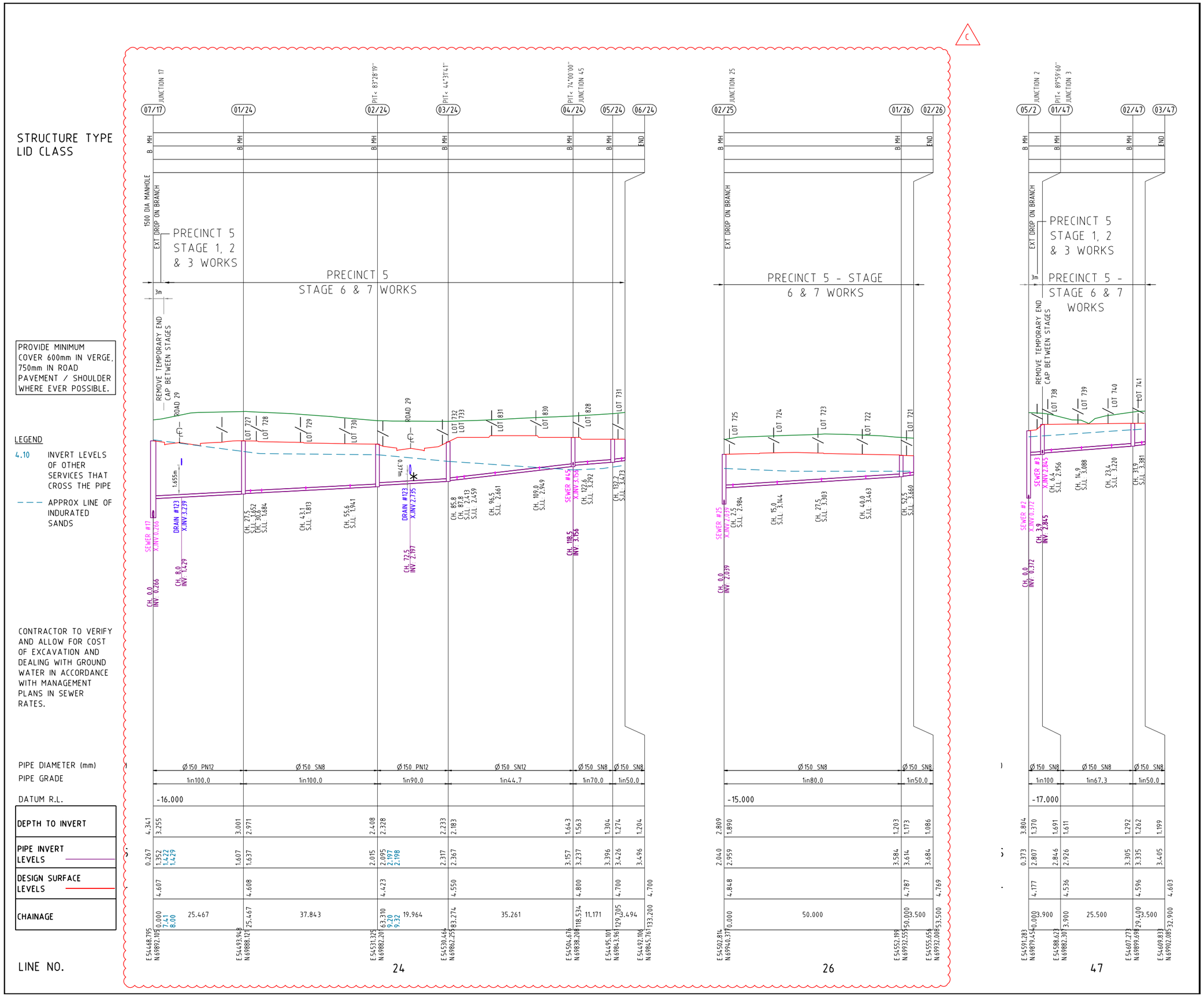

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	13-04-21	PROFILES AMENDED
B	06-10-20	LEGEND AND PROFILES AMENDED
A	23-06-20	COUNCIL ISSUE

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SEWER RETICULATION
PROFILES
SHEET 2

CONSTRUCTION ISSUE

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AMEND. C

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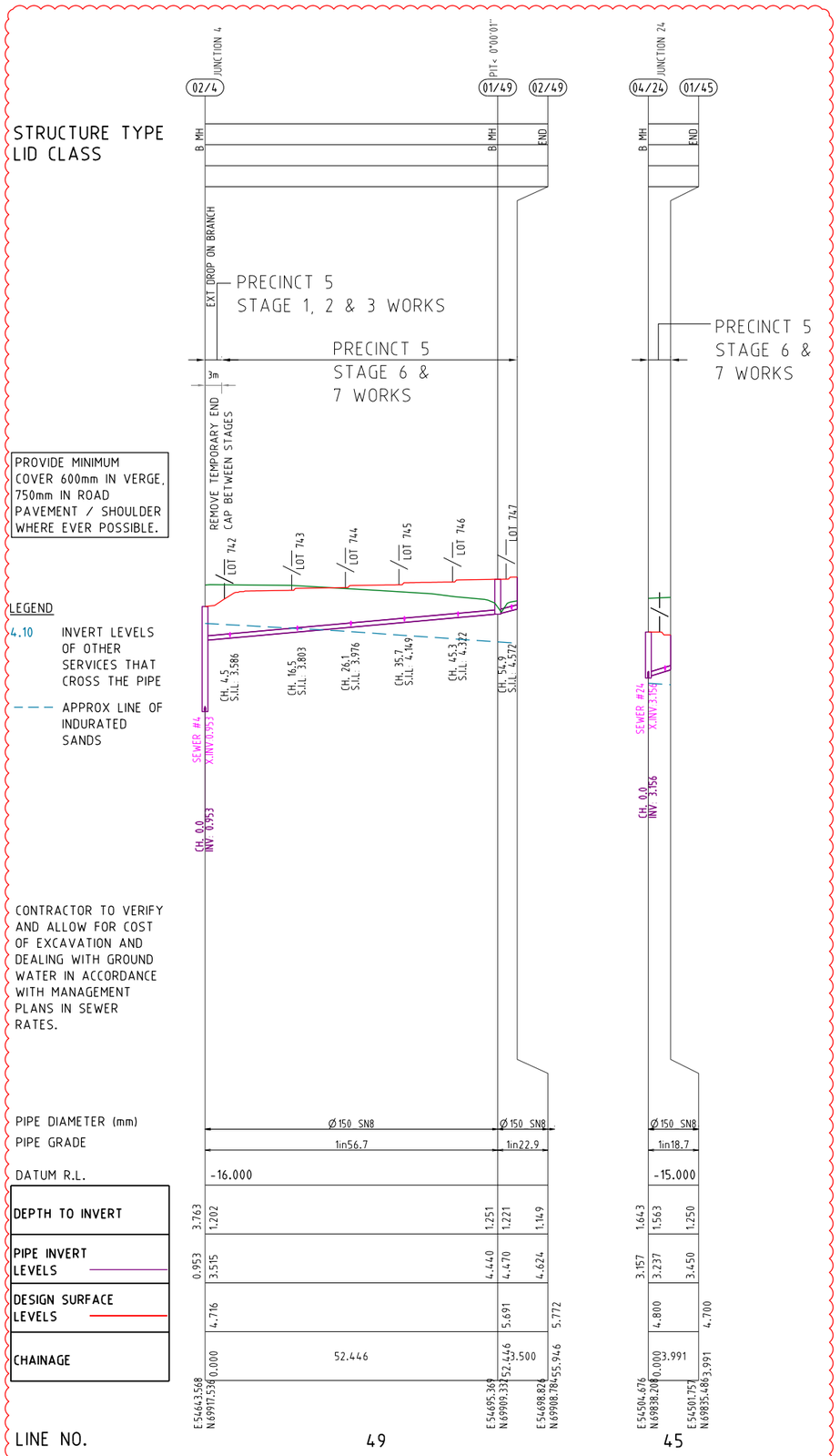

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE -
STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN ,
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PROJECT 28
PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER	...	
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CONSTRUCTION	..	

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SEWER RETICULATION
PROFILES
SHEET 3

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AMEND. B

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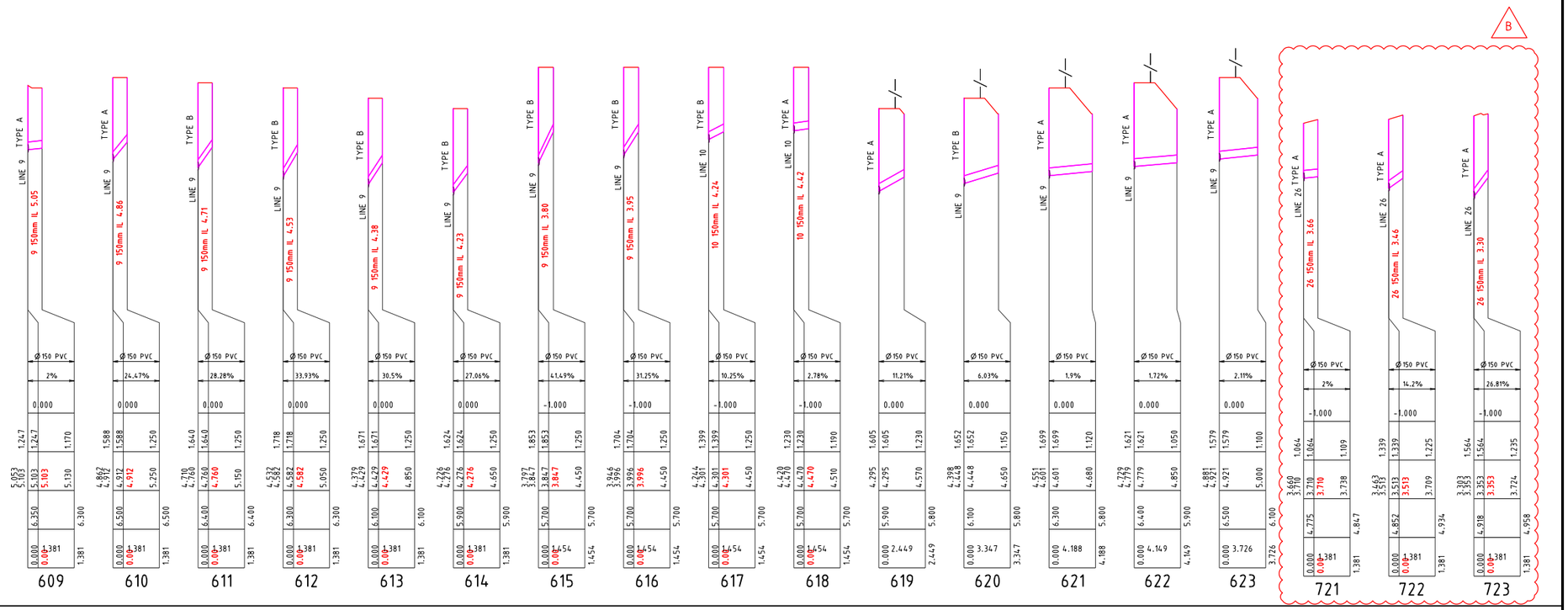
TWEED STRUCTURE DROPS	
A, B	SEWER PROPERTY CONNECTION (STANDARD & 45° BEND) REFER TO TSC STD DWG S.D-250
C1, C2	SEWER PROPERTY CONNECTION (VERTICAL BRANCH) REFER TO TSC STD DWG S.D-251

NOTES

1. WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE PRECISE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER, SEWER TO TAKE PRECEDENCE, SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO SUPERINTENDANTS INSTRUCTION.



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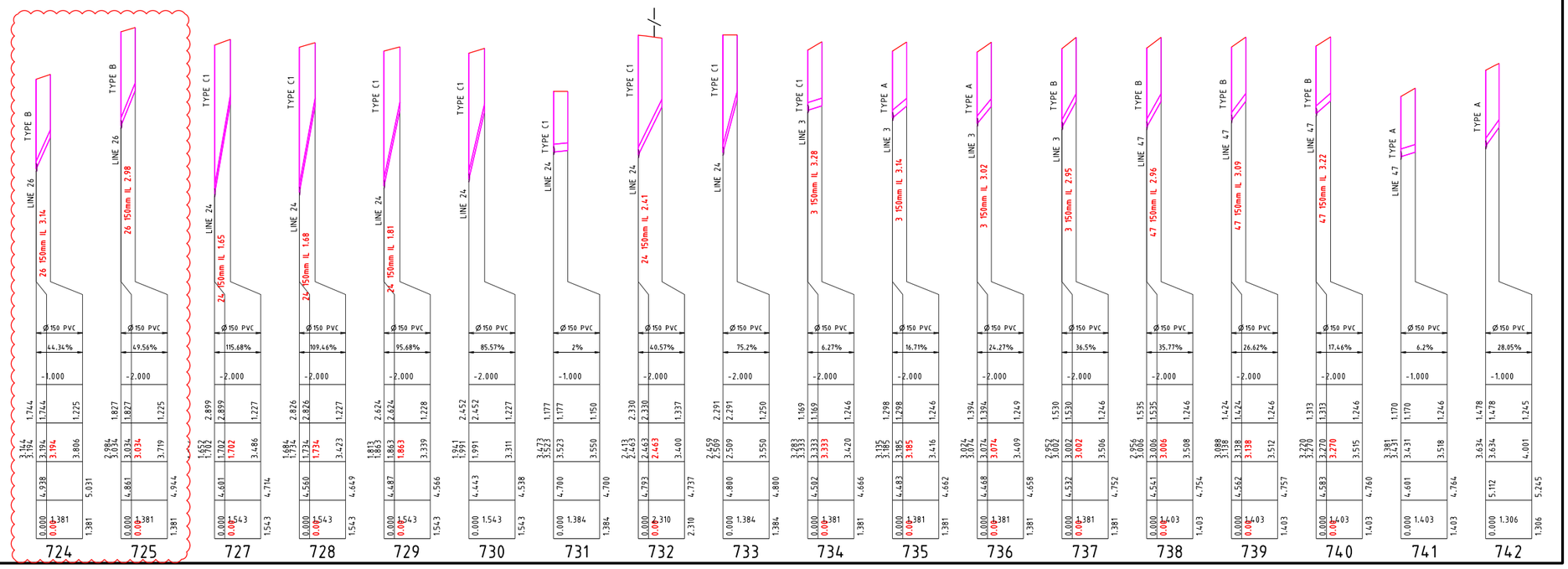

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2.5 5 7.5 10 12.5m
Horiz. Scale 1:250 - A1 (1:500 - A3)

0 0.5 1.0 1.5 2.0 2.5m
Vert. Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
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SEWER RETICULATION
HOUSE CONNECTION
PROFILES
SHEET 1 OF 2

CONSTRUCTION ISSUE

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APPROVED		NER 906726	DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-570 AMEND. B

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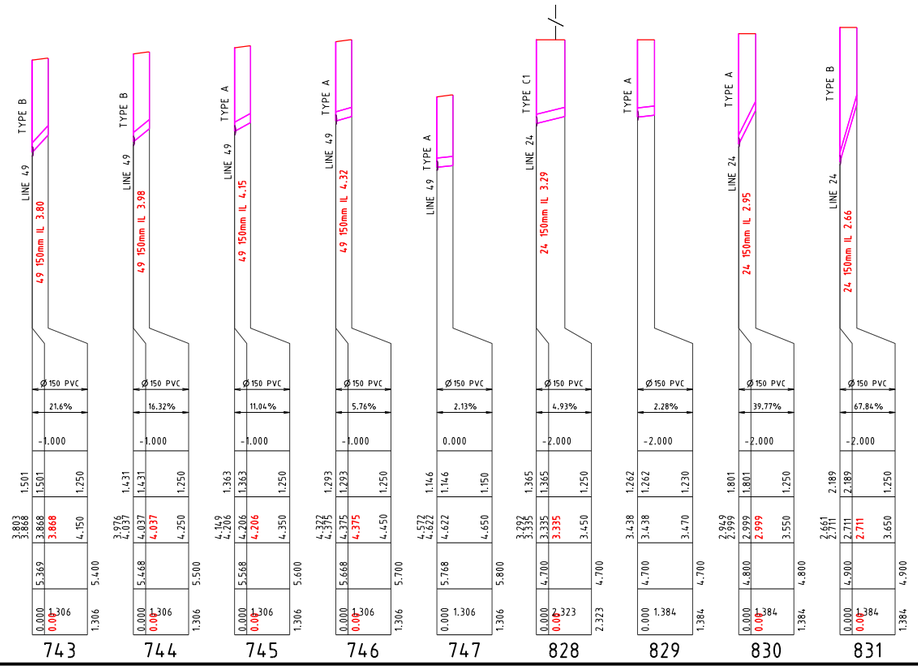
NOTES

1. WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE PRECISE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER, SEWER TO TAKE PRECEDENCE, SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO SUPERINTENDANTS INSTRUCTION.



PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 2.5 5 7.5 10 12.5m
Horiz. Scale 1:250 - A1 (1:500 - A3)

0 0.5 1.0 1.5 2.0 2.5m
Vert. Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT SUTHERLAND

DRAWING TITLE

SEWER RETICULATION
HOUSE CONNECTION
PROFILES
SHEET 2 OF 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
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APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-571	A

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STORMWATER

1. STORMWATER INFRASTRUCTURE TO BE INSTALLED IN ACCORDANCE WITH TWEED SHIRE COUNCIL CONSTRUCTION SPECIFICATIONS AND STANDARD DRAWINGS.
2. ALL FIELD GULLIES SHALL CONTAIN A 150mm DIA STUB 600mm BELOW GRADE LEVEL FOR FUTURE ROOFWATER DRAINAGE.
3. MANHOLES AND FIELD INLETS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 106 OR STRUCTURAL DRAWINGS (STRUCTURAL DRAWINGS TAKE PRECEDENCE).
4. OUTLET HEADWALLS TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARD DRAWINGS.
5. ALL HEADWALLS WITH A HEIGHT GREATER THAN 900mm HIGH REQUIRE INSTALLATION OF PEDESTRIAN SAFETY FENCES.
6. ALL PIPES 600mm DIA OR LESS TO BE SOCKETED CONCRETE PIPES WITH RUBBER RING JOINTS.
7. ALL ALLOTMENTS TO BE GRADED SUCH THAT FUTURE ROOFWATER DRAINAGE DISCHARGES TO KERB OR TO PIPED DRAINAGE SYSTEM.
8. ALL PIPE 375mm DIA AND GREATER SHALL BE CONSTRUCTED USING SRC PIPES.
9. FOR SETOUT DETAILS REFER TO 640 SERIES DRAWINGS (PROFILES AND PIT DETAILS).
10. GULLY PITS TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD 103 AND SD 104
11. LOTS WHICH CAN DRAIN OVERLAND FLOW TO THE STREET SWALE / DRAINAGE WITHOUT FLOWING THROUGH ADJOINING PROPERTIES NEED TO PROVIDE FOR Q100 OVERLAND FLOW TO THE ROAD
12. LOT EARTHWORKS DURING BUILDING CONSTRUCTION MUST NOT CHANGE FLOW PATH DIRECTION UNLESS IT IS REPLACED WITH ANOTHER FLOW PATH DRAINING TO THE ROAD SWALE / DRAINAGE.
13. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR STORMWATER RATE.
14. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
15. PIPE CLASS - PIPE CLASSES/TRENCH BEDDING SHOWN ON THE DRAWINGS ARE SUBJECT TO THE CONTRACTORS PREFERRED INSTALLATION METHOD. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE APPROPRIATE PIPE CLASSES AND BEDDING.
16. KERB ADAPTORS ARE TO BE INSTALLED TO AUTHORITY'S REQUIREMENTS AT ALL LOT FRONTAGES THAT CANNOT CONNECTION DIRECTLY TO GULLY PIT.

LEGEND

- EXISTING KERB (INVERT)
- EXISTING KERB (LIP & BACK)
- EXISTING PROPERTY LINE
- EXISTING RETAINING WALL
- SW — EXISTING STORMWATER
- RW — EXISTING ROOFWATER
- SS — EXISTING SUBSOIL
- 1.0 — EXISTING CONTOURS
- FUTURE KERB
- FUTURE PROPERTY LINE
- FUTURE RETAINING WALL
- SW — FUTURE STORMWATER
- RW — FUTURE ROOFWATER
- SS — FUTURE SUBSOIL
- SITE BOUNDARY
- STAGE BOUNDARY
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED PROPERTY LINE
- PROPOSED RETAINING WALL
- 1.0 — DESIGN CONTOURS
- SW — PROPOSED STORMWATER
- RW — PROPOSED ROOFWATER
- SS — PROPOSED SUBSOIL
- MANHOLE
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL
- SCOUR PROTECTION
- 10/001 — DRAINAGE PIT & LINE NO.
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- EXISTING TEMPORARY NO-GO FENCE
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-6&7-011.
- ECOLOGICAL BUFFER
- FUTURE DRIVEWAY/ GARAGE (BY OTHERS)

B

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REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL (Reference Point Location)	VERTICAL CONTROL (Reference Level)
MANHOLE	CENTRE OF MANHOLE	FINISHED SURFACE LEVEL
GULLY PIT	LIP AT CENTRE OF PIT	FINISHED SURFACE LEVEL (LIP OF CHANNEL)
HEADWALL	INTERSECTION OF HEADWALL FACE & PIPE CENTRELINE	INVERT LEVEL

REFER TO DWG SERIES 640 FOR ALL DRAINAGE STRUCTURE SETOUT AND/OR CUSTOM DETAILS.

SHEET LAYOUT

STORM REFERENCING STANDARDS

PRECAST CULVERT HEADWALLS (DRAWING 3 OF 3)	T.M.R S.D 1243 'HEADWALL CONNECTIONS FOR BOX CULVERTS HEIGHT >1200'
R C BOX CULVERTS AND SLAB LINK BOX CULVERTS (DRAWING 1)	T.M.R S.D 1250 'CULVERTS HEIGHT >600 GENERAL ARRANGEMENT AND NOTES'
R C BOX CULVERTS AND SLAB LINK BOX CULVERTS (DRAWING 2)	T.M.R S.D 1250 'CULVERTS HEIGHT >600 CONSTRUCTION OF SLAB BASES AND APRONS'
R C BOX CULVERTS AND SLAB LINK BOX CULVERTS (DRAWING 3)	T.M.R S.D 1250 'CULVERTS HEIGHT >600 INSTALLATION OF PRECAST UNITS AND CONSTRUCTION OF HEADWALLS & WINGWALLS'

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT
PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	02-09-21	LEGEND AND NOTES AMENDED
A	23-06-20	COUNCIL ISSUE

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LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

STORMWATER DRAINAGE PLAN SHEET 1 OF 2

CONSTRUCTION ISSUE

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APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-600	A

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PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

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TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

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STORMWATER DRAINAGE PLAN
SHEET 2 OF 2

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12301-P5-6&7-601	A

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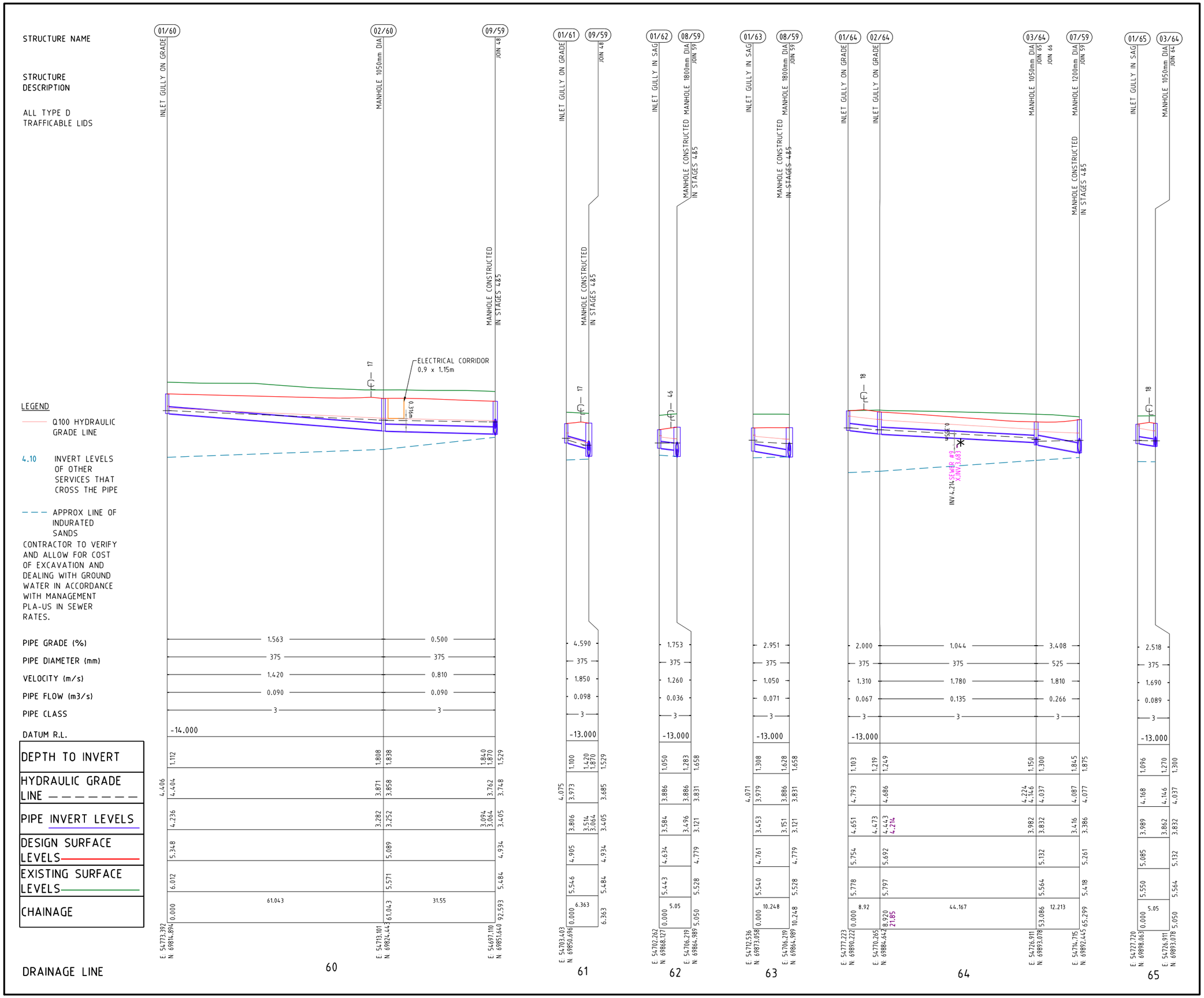

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

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PROJECT 28 PTY LTD

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Vert. Scale 1:100 - A1 (1:200 - A3)

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STORMWATER PROFILES SHEET 1

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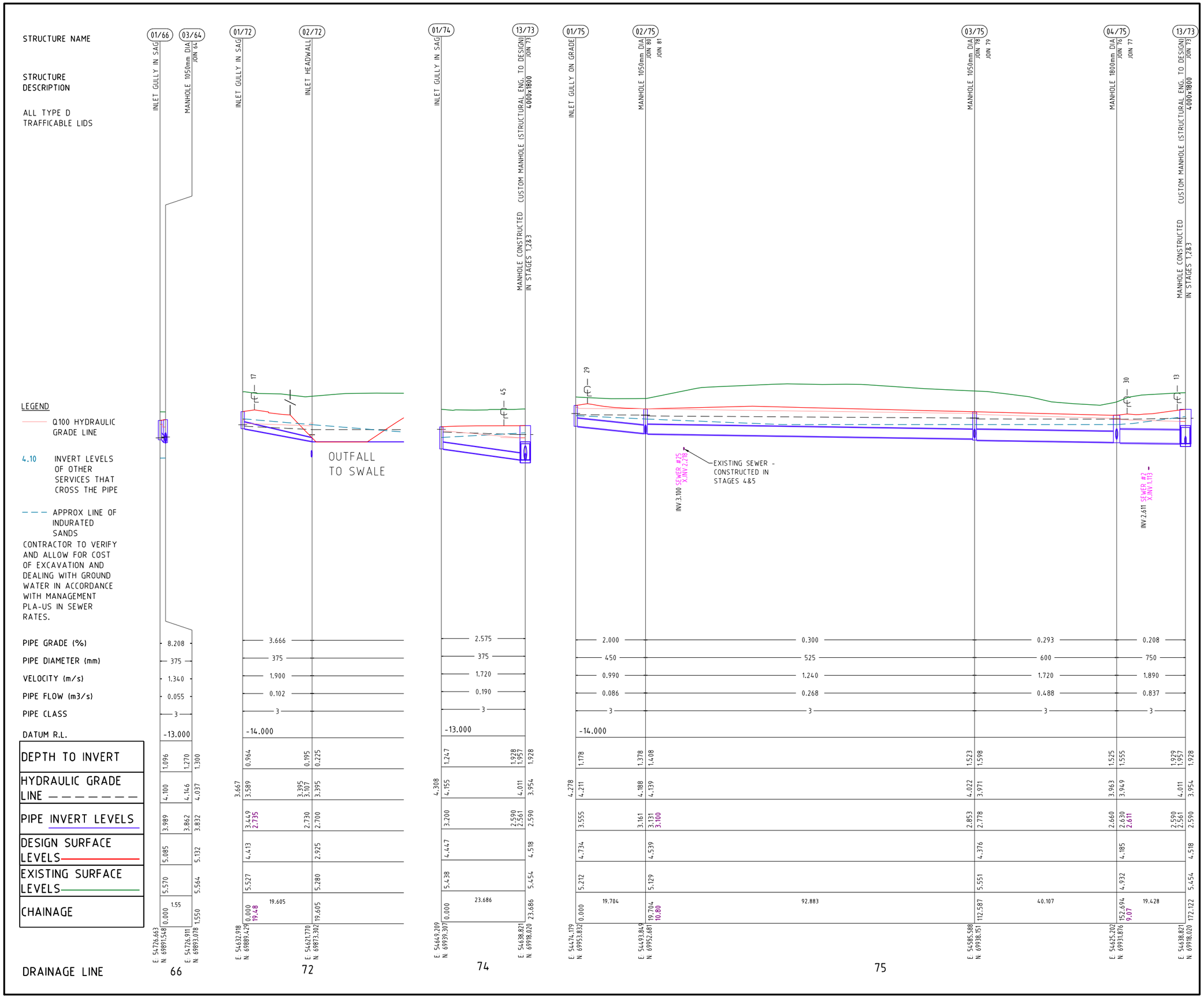

PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

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Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

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STORMWATER PROFILES SHEET 2

CONSTRUCTION ISSUE

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STRUCTURE NAME

STRUCTURE DESCRIPTION

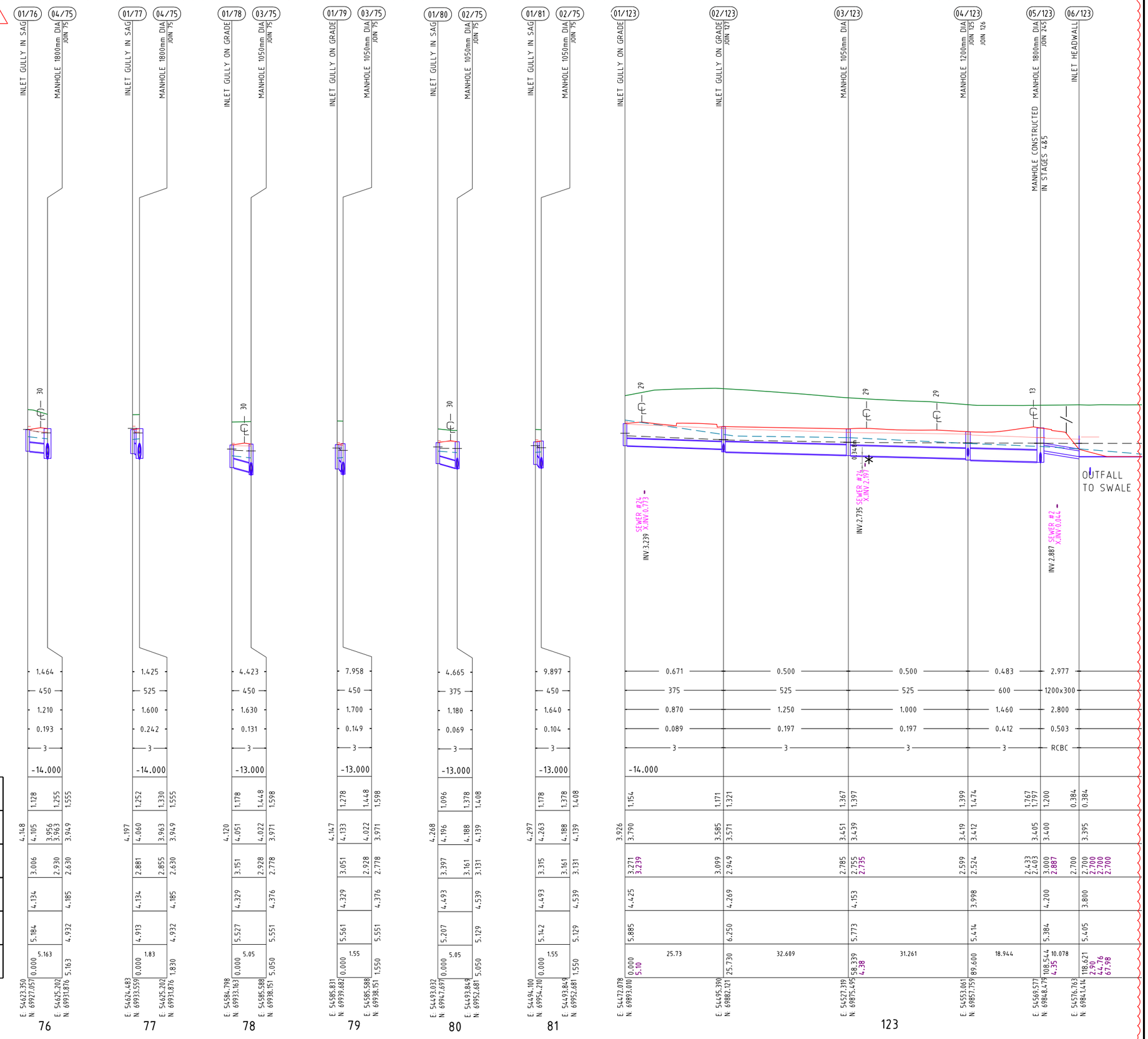
ALL TYPE D TRAFFICABLE LIDS

✳ CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH. REFER TO 12301-P5-6&7-500 FOR DETAILS.

LEGEND

- Q100 HYDRAULIC GRADE LINE
- 4.10 INVERT LEVELS OF OTHER SERVICES THAT CROSS THE PIPE
- APPROX LINE OF INDURATED SANDS

CONTRACTOR TO VERIFY AND ALLOW FOR COST OF EXCAVATION AND DEALING WITH GROUND WATER IN ACCORDANCE WITH MANAGEMENT PLA-US IN SEWER RATES.



PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	06-10-20	NOTES AND PROFILES AMENDED
A	23-06-20	COUNCIL ISSUE

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STORMWATER PROFILES SHEET 3

CONSTRUCTION ISSUE

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DRAWING NUMBER 12301-P5-6&7-622

AMEND. B

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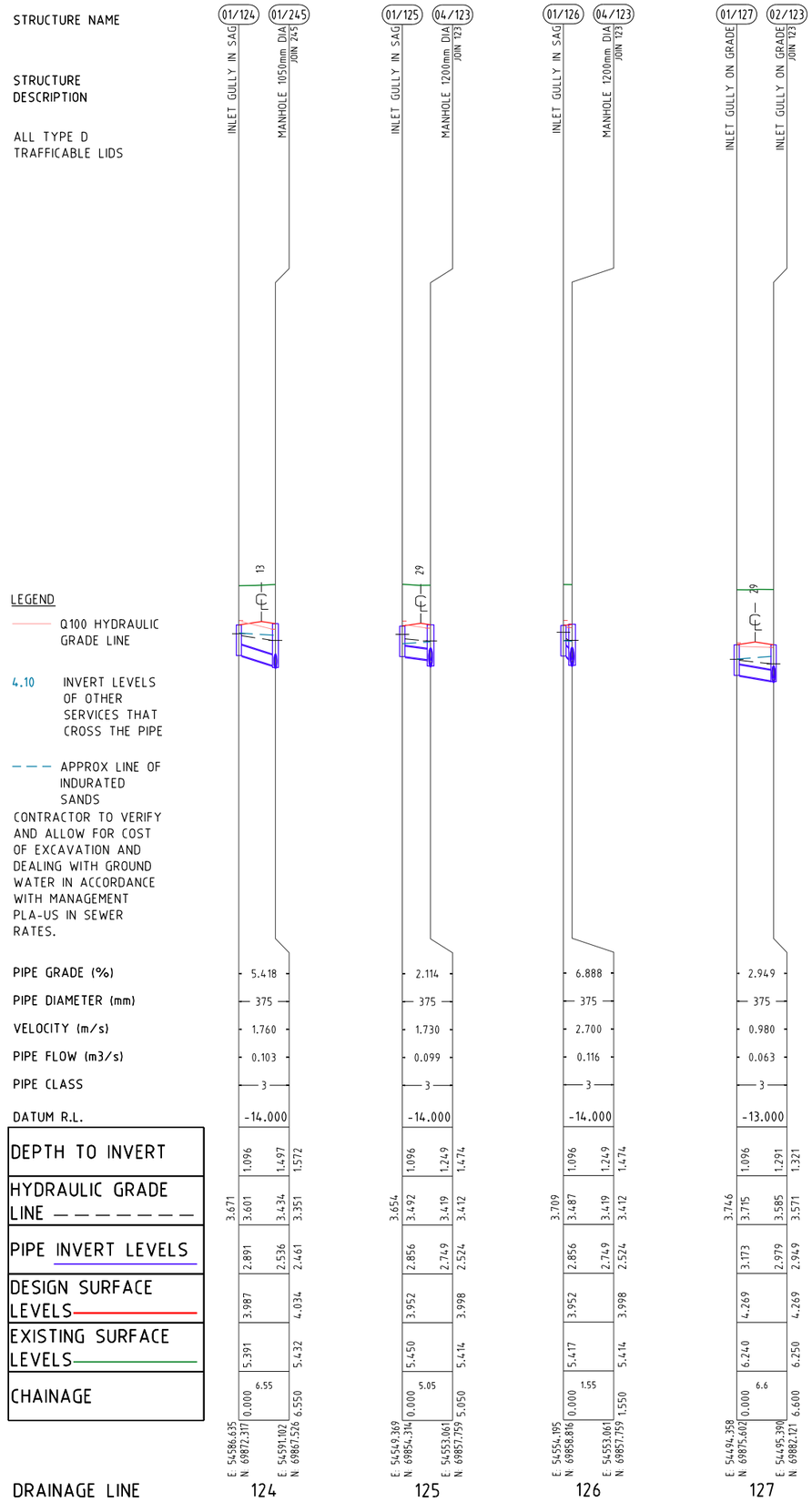

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

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STORMWATER PROFILES SHEET 4

CONSTRUCTION ISSUE

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APPROVED | NER 906726 | DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-623
AMEND. A

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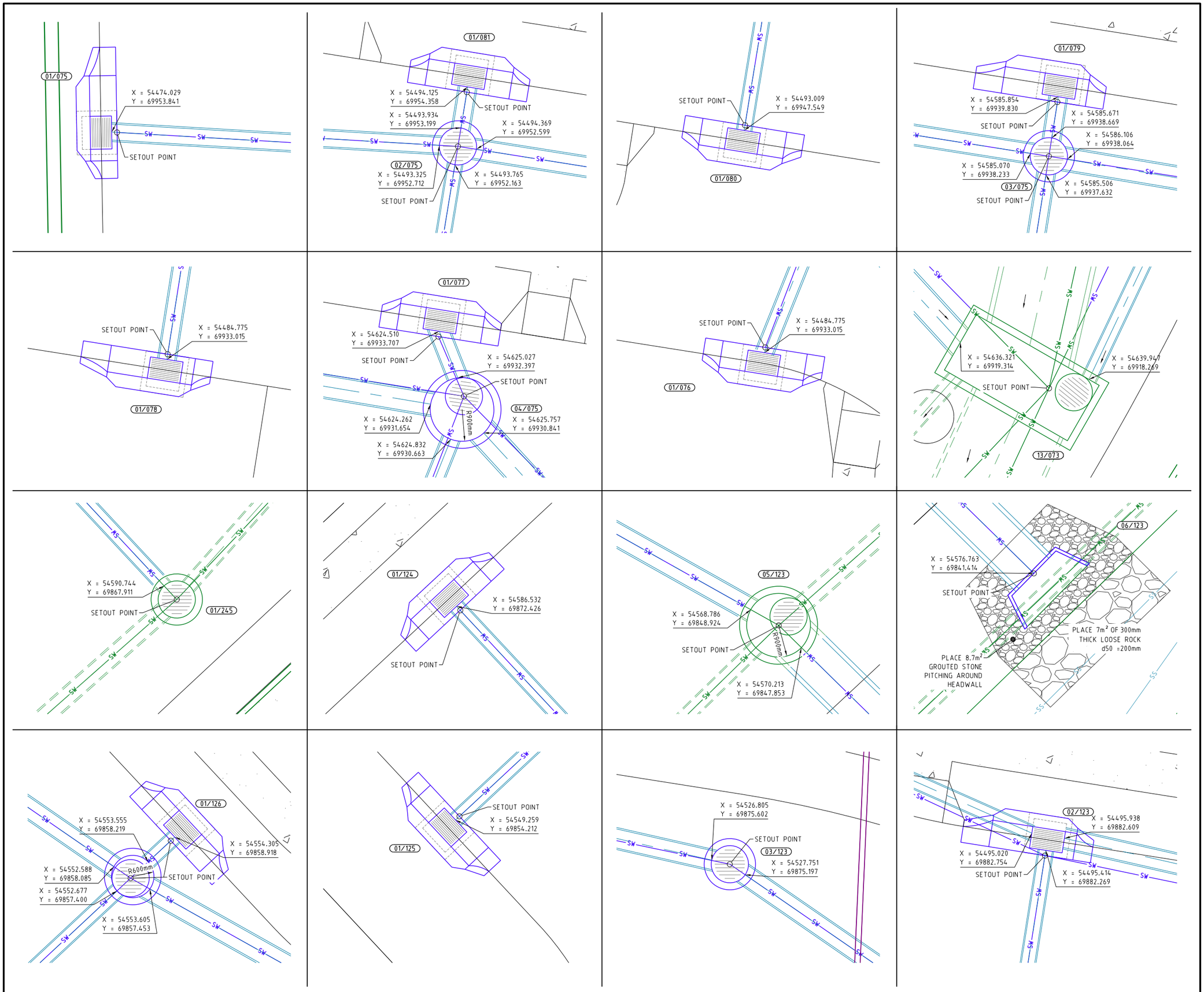

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
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Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

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DRAWING TITLE

STORMWATER
STRUCTURE DETAILS
SHEET 1 OF 2

CONSTRUCTION ISSUE

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Civil Engineering
Project Coordination
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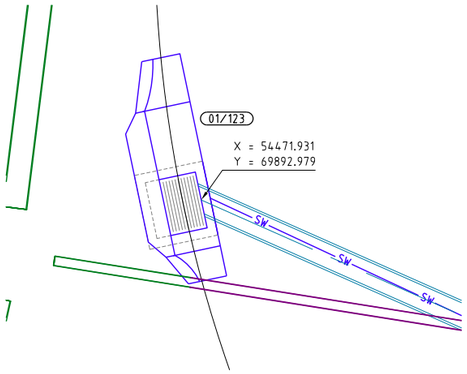
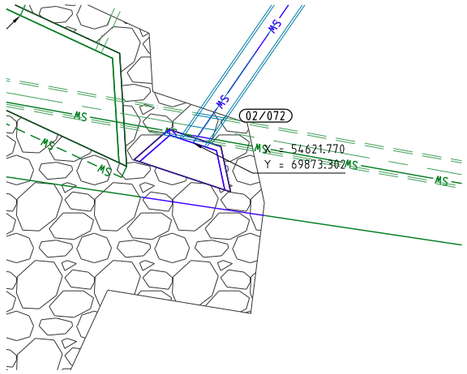
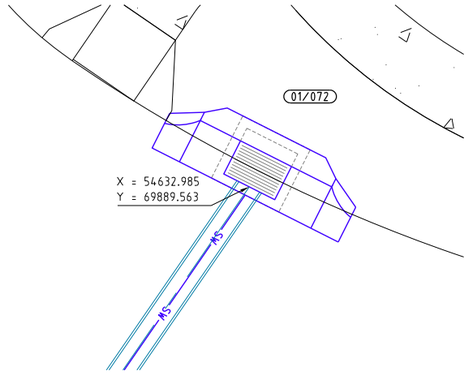
DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

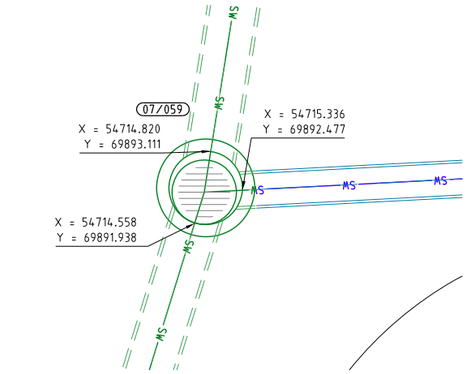
DRAWING NUMBER 12301-P5-6&7-640
AMEND. A

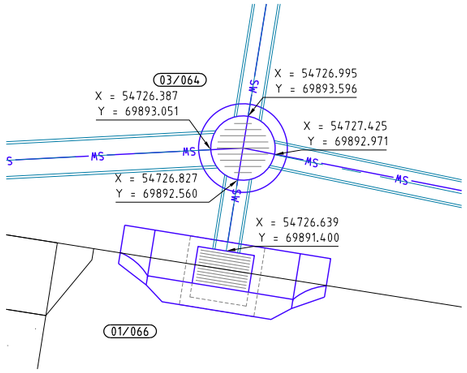
Y:\123 - Leda Developments Pty Ltd\01 - Kings Forest\PRECI5\Engineering Drawings\OPW Stages 6 & 7\Current\12301-P5-6&7-640.dwg, 12/10/2021 12:28:26 PM, 1:2

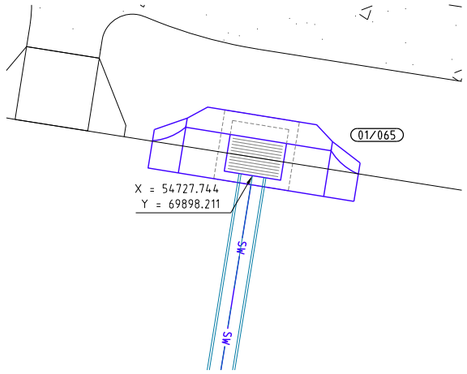


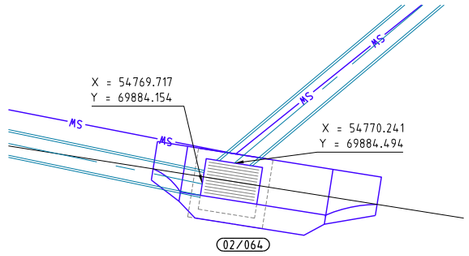


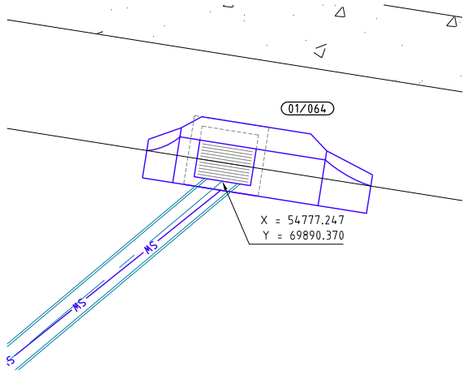


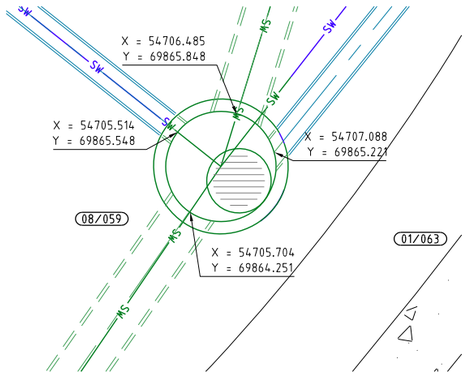


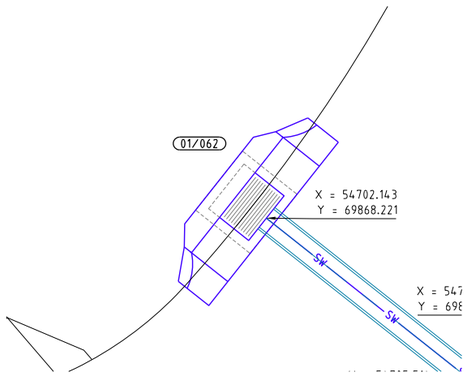


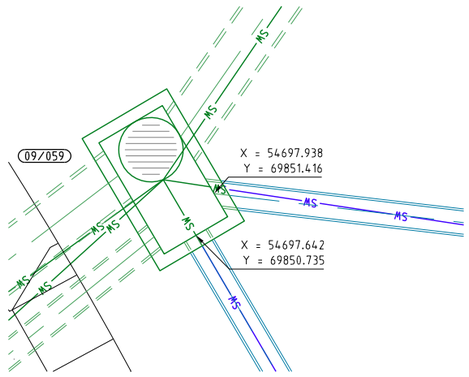


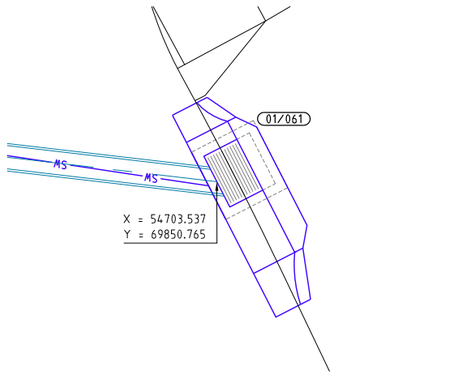


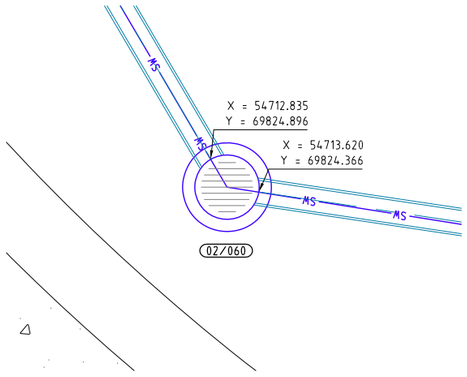


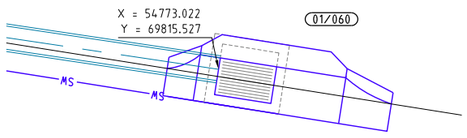












PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50 - A1 (1:100 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
GILBERT + SUTHERLAND

DRAWING TITLE

STORMWATER
STRUCTURE DETAILS
SHEET 2 OF 2

CONSTRUCTION ISSUE

MORTONS urbansolutions
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Civil Engineering
Project Coordination
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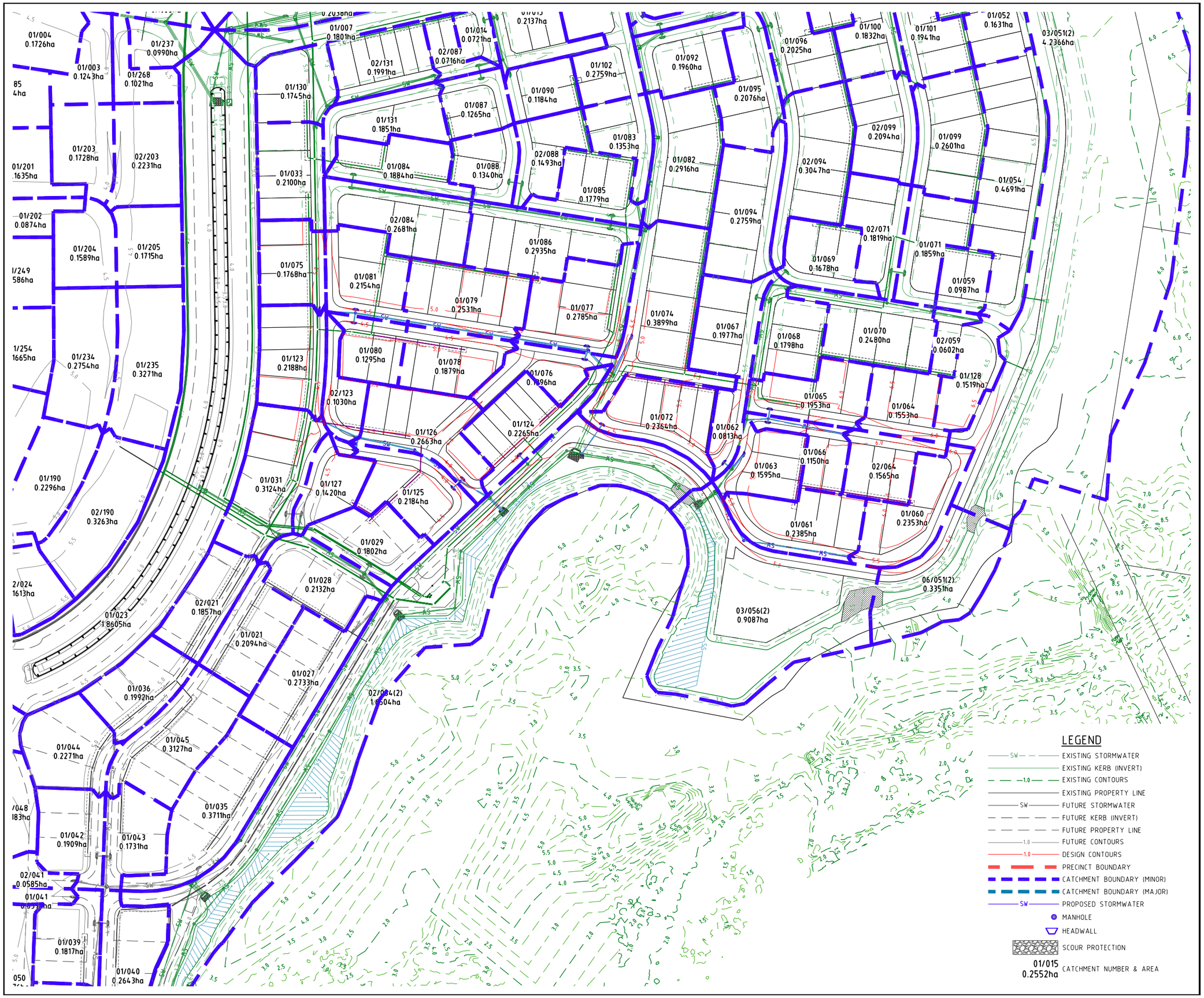
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-641	A

Y:\123 - Leda Developments Pty Ltd\01 - Kings Forest\PRECI5\Engineering Drawings\OPW Stages 6 & 7\Current\12301-P5-6&7-640.dwg, 12/10/2021 12:10:18 PM, 1:2



PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446,
Lot 1 on DP781633, Lot 40 on DP7482,
Lot 2 on DP819015, Lot 1 on DP129737,
Lot 37A on DP13727, Lot 38A on DP13727,
Lot 38B on DP13727, Lot 1 on DP706497,
Lot 76 on DP755701, Lot 323 on DP755701,
Lot 272 on DP755701, Lot 96 on DP755701
& Lot 326 on DP755701
PARISH OF CUDGEN ,
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER
CATCHMENT PLAN
SHEET 1

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-670	A

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0.2 ARI (Q5) MINOR FLOW - 12D DYNAMIC DRAINAGE RESULTS * REFER TO IFD TABLE FOR MAXIMUM INTENSITY DURING STORM

NOTE: NEGATIVE FLOW VALUES INDICATE REVERSE FLOWS

NODE			CATCHMENT AREA			RAINFALL VOLUME*		RAINFALL Coef.		CATCHMENT FLOW				APPROACH FLOW				FLOW AT PIT				PIT		HGL				PIPE	HEADLOSSES				CAPACITY	VELOCITY	NODE
FROM:	TO:	NODE TYPE	A1 HA	A2 HA	A3 HA	CRITICAL STORM	INTENSITY MM/HR	10 YR	CURRENT Storm	A1 HA	A2 HA	A3 HA	CRITICAL ARI MIN.	GRADE %	FLOW L/S	WIDTH	DxV	CAPTURED L/S	BYPASS L/S	DxV	NODE	GRADE %	GRATE RL.	PIT RL	PIPE U/S RL.	D/S RL.	GRADE %	FLOW M3/S	COEFFICIENT Ku	Kw	HEADLOSS Ku	Kw	RATIO	M/S	
01/60	02/60	INLET GULLY ON GRADE	0.235			25	43.0	0.819	0.801	0.107			25		107	1.28	0.02	92	11	0.03	01/61		5.348	4.52	4.47	3.95	0.86	0.09	7.0	0.0	0.0	0.0	0.58	1.24	01/60
02/60	09/59	MANHOLE 1050mm DIA											25		0			0					5.089	3.94	3.94	3.73	0.65	0.09	0.0	0.0	0.0	0.0	0.64	1.35	02/60
01/61	09/59	INLET GULLY ON GRADE	0.239			25	43.0	0.819	0.801	0.108			25		118	1.14	0.04	99	17	0.04	01/63		4.905	4.11	4.02	3.73	4.53	0.10	7.0	0.0	0.1	0.0	0.26	1.85	01/61
01/62	08/59	INLET GULLY IN SAG	0.081			25	43.0	0.819	0.801	0.037			25		37	0.00	0.00	38	0	0.00	O 01/62		4.634	3.94	3.94	3.94	0.02	0.04	0.0	0.0	0.0	0.0	0.16	1.24	01/62
01/63	08/59	INLET GULLY IN SAG	0.160			25	43.0	0.819	0.801	0.073			25		88	0.37	0.00	86	0	0.00	01/62		4.634	4.19	3.98	3.94	2.58	0.09	8.4	0.0	0.2	0.0	0.31	1.05	01/63
01/64	02/64	INLET GULLY ON GRADE	0.155			25	43.0	0.819	0.801	0.071			25		71	0.34	0.01	67	2	0.01	01/65		5.754	4.79	4.79	4.69	1.20	0.07	0.0	0.0	0.0	0.0	0.27	1.31	01/64
02/64	03/64	INLET GULLY ON GRADE	0.157			25	43.0	0.819	0.801	0.071			25		71	0.38	0.01	68	3	0.01	01/66		5.692	4.69	4.69	4.23	1.04	0.14	0.0	0.0	0.0	0.0	0.75	1.78	02/64
03/64	07/59	MANHOLE 1050mm DIA											25		0			0					5.132	4.21	4.12	4.15	-0.22	0.26	0.8	0.0	0.1	0.0	0.32	1.82	03/64
01/65	03/64	INLET GULLY IN SAG	0.195			25	43.0	0.819	0.801	0.089			25		91	0.40	0.00	89	1	0.00	01/66		5.085	4.18	4.18	4.21	-0.57	0.09	0.0	0.0	0.0	0.0	0.32	1.73	01/65
01/66	03/64	INLET GULLY IN SAG	0.115			25	43.0	0.819	0.801	0.052			25		55	0.09	0.00	55	0	0.00	01/63		5.085	4.20	4.20	4.21	-0.97	0.05	0.0	0.0	0.0	0.0	0.11	1.36	01/66
01/72	02/72	INLET GULLY IN SAG	0.236			25	43.0	0.819	0.801	0.107			25		107	0.58	0.02	101	5	0.02	01/124		4.413	3.67	3.59	3.40	0.96	0.10	9.7	0.0	0.1	0.0	0.31	1.9	01/72
02/72	02/34	INLET HEADWALL											25		0			0					2.925	3.11	3.40	3.40	0.00	0.10	0.0	0.0	0.0	0.0			02/72
01/74	13/73	INLET GULLY IN SAG	0.390			25	43.0	0.819	0.801	0.177			25		198	1.74	0.05	160	34	0.05	01/77		4.447	4.32	4.17	4.02	0.64	0.19	5.2	0.0	0.3	0.0	0.67	1.71	01/74
01/75	02/75	INLET GULLY ON GRADE	0.177			25	43.0	0.819	0.801	0.080			25		80	0.63	0.01	74	4	0.01	01/123		4.734	4.29	4.23	4.20	0.15	0.08	4.5	0.0	0.1	0.0	0.2	0.99	01/75
02/75	03/75	MANHOLE 1050mm DIA											25		0			0					4.539	4.20	4.15	4.02	0.14	0.25	1.3	0.0	0.1	0.0	1.07	1.17	02/75
03/75	04/75	MANHOLE 1050mm DIA											25		0			0					4.376	4.02	3.97	3.98	-0.01	0.45	1.0	0.0	0.1	0.0	1.36	1.6	03/75
04/75	13/73	MANHOLE 1800mm DIA											25		0			0					4.185	3.98	3.97	4.02	-0.28	0.81	0.7	0.0	0.1	0.0	1.59	1.82	04/75
01/76	04/75	INLET GULLY IN SAG	0.140			25	43.0	0.819	0.801	0.063			25	0.1	74	0.26	0.00	74	0	0.00	01/124	0.072	4.134	4.15	4.11	3.97	2.85	0.19	6.9	0.0	0.1	0.0	0.54	1.17	01/76
01/77	04/75	INLET GULLY IN SAG	0.279			25	43.0	0.819	0.801	0.127			25		178	1.70	0.01	158	9	0.02	01/76		4.134	4.20	4.10	3.98	6.72	0.24	9.3	0.0	0.2	0.0	0.47	1.59	01/77
01/78	03/75	INLET GULLY ON GRADE	0.188			25	43.0	0.819	0.801	0.085			25		85	0.64	0.01	78	4	0.02	01/76		4.329	4.12	4.05	4.02	0.63	0.13	9.7	0.0	0.1	0.0	0.21	1.63	01/78
01/79	03/75	INLET GULLY ON GRADE	0.253			25	43.0	0.819	0.801	0.115			25		117	1.35	0.03	98	13	0.02	01/77		4.329	4.15	4.14	4.02	7.42	0.14	7.8	0.0	0.1	0.0	0.18	1.7	01/79
01/80	02/75	INLET GULLY IN SAG	0.130			25	43.0	0.819	0.801	0.059			25		59	0.12	0.00	58	0	0.00	01/78		4.493	4.28	4.21	4.20	0.26	0.07	9.7	0.0	0.2	0.0	0.17	1.19	01/80
01/81	02/75	INLET GULLY IN SAG	0.215			25	43.0	0.819	0.801	0.098			25		98	0.46	0.01	95	2	0.00	01/79		4.493	4.31	4.28	4.20	5.10	0.10	9.7	0.0	0.1	0.0	0.11	1.64	01/81
01/123	02/123	INLET GULLY ON GRADE	0.219			25	43.0	0.819	0.801	0.099			25		103	1.04	0.03	90	11	0.03	O 01/123		4.425	3.93	3.80	3.59	0.80	0.09	9.7	0.0	0.2	0.0	0.62	0.87	01/123
02/123	03/123	INLET GULLY ON GRADE	0.103			25	43.0	0.819	0.801	0.047			25		47	0.00	0.00	47	0	0.00	01/126		4.269	3.59	3.58	3.46	0.38	0.20	1.6	0.0	0.0	0.0	0.65	1.25	02/123
03/123	04/123	MANHOLE 1050mm DIA											25		0			0					4.153	3.46	3.45	3.43	0.06	0.20	0.3	0.0	0.0	0.0	0.65	1	03/123
04/123	05/123	MANHOLE 1200mm DIA											25		0			0					3.998	3.43	3.42	3.41	0.04	0.41	0.7	0.0	0.0	0.0	0.97	1.46	04/123
05/123	06/123	MANHOLE 1800mm DIA											25		0			0					4.200	3.41	3.41	3.40	0.06	0.51	0.4	0.0	0.1	0.0	0.44	2.78	05/123
06/123	02/34	INLET HEADWALL											25		0			0					3.800	3.40	3.40	3.40	0.00	0.51	0.0	0.0	0.0	0.0			06/123
01/124	01/245	INLET GULLY IN SAG	0.227			25	43.0	0.819	0.801	0.103			25		108	0.00	0.00	101	0	0.00	02/34		3.987	3.67	3.60	3.44	2.55	0.10	9.7	0.0	0.2	0.0	0.25	1.76	01/124
01/125	04/123	INLET GULLY IN SAG	0.218			25	43.0	0.819	0.801	0.099			25		102	0.51	0.01	100	-3	0.01	01/126		3.952	3.66	3.49	3.43	1.29	0.10	6.8	0.0	0.2	0.0	0.39	1.72	01/125
01/126	04/123	INLET GULLY IN SAG	0.266			25	43.0	0.819	0.801	0.121			25		123	0.95	0.01	117	-1	0.00	01/124		3.952	3.71	3.49	3.43	3.87	0.12	6.2	0.0	0.2	0.0	0.25	2.7	01/126
01/127	02/123	INLET GULLY ON GRADE	0.142			25	43.0	0.819	0.801	0.065			25		65	0.13	0.00	63	0	0.00	01/125		4.269	3.75	3.72	3.59	1.95	0.06	9.3	0.0	0.1	0.0	0.21	0.98	01/127

0.01 ARI (Q100) Major FLOW - 12D DYNAMIC DRAINAGE RESULTS * REFER TO IFD TABLE FOR MAXIMUM INTENSITY DURING STORM

NOTE: NEGATIVE FLOW VALUES INDICATE REVERSE FLOWS

NODE			CATCHMENT AREA			RAINFALL VOLUME*		RAINFALL Coef.		CATCHMENT FLOW				APPROACH FLOW				FLOW AT PIT				PIT		HGL				PIPE	HEADLOSSES				CAPACITY	VELOCITY	NODE
FROM:	TO:	NODE TYPE	A1 HA	A2 HA	A3 HA	CRITICAL STORM	INTENSITY MM/HR	10 YR	CURRENT Storm	A1 HA	A2 HA	A3 HA	CRITICAL ARI MIN.	GRADE %	FLOW L/S	WIDTH	DxV	CAPTURED L/S	BYPASS L/S	DxV	NODE	GRADE %	GRATE RL.	PIT RL	PIPE U/S RL.	D/S RL.	GRADE %	FLOW M3/S	COEFFICIENT Ku	Kw	HEADLOSS Ku	Kw	RATIO	M/S	
01/60	02/60	INLET GULLY ON GRADE	0.235			60	102.9	0.819	0.896	0.156			60		156	2.25	0.04	112	39	0.05	01/61		5.348	4.66	4.54	3.98	0.92	0.11	7.0	0.0	0.1	0.0	0.7	1.24	01/60
02/60	09/59	MANHOLE 1050mm DIA											60		0			0					5.089	3.97	3.97	3.87	0.30	0.11	0.0	0.0	0.0	0.0	0.76	1.32	02/60
01/61	09/59	INLET GULLY ON GRADE	0.239			60	102.9	0.819	0.896	0.158			60		194	2.07	0.08	130	61	0.05	01/63		4.905	4.38	4.15	3.87	4.37	0.13	6.9	0.0	0.2	0.0	0.34	1.82	01/61
01/62	08/59	INLET GULLY IN SAG	0.081			60	102.9	0.819	0.896	0.054			60		102	1.61	0.04	76	26	0.04	O 01/62		4.634	4.41	4.34	4.25	1.82	0.08	9.7	0.0	0.1	0.0	0.33	1.23	01/62
01/63	08/59	INLET GULLY IN SAG	0.160			60	102.9	0.819	0.896	0.106			60		197	3.14	0.04	141	52	0.06	01/62		4.634	4.60	4.30	4.25	3.03	0.14	4.5	0.0	0.3	0.0	0.51	1.28	01/63
01/64	02/64	INLET GULLY ON GRADE	0.155			60	102.9	0.819	0.896	0.103			60		103	1.27	0.04	83	18	0.02	01/65		5.754	5.52	5.52	5.35	1.83	0.10	8.4	0.0	0.1	0.0	0.4	1.32	01/64
02/64	03/64	INLET GULLY ON GRADE	0.157			60	102.9	0.819	0.896	0.104			60		104	1.29	0.04	83	19	0.03	01/66		5.692	5.35	5.33	4.82	1.14	0.16	3.5	0.0	0.1	0.0	0.9	1.78	02/64
03/64	07/59	MANHOLE 1050mm DIA											60		0			0					5.132	4.82	4.70	4.62	0.67	0.36	0.8	0.0	0.1	0.0	0.45	1.72	03/64
01/65	03/64	INLET GULLY IN SAG	0.195			60	102.9	0.819	0.896	0.129			60		147	2.48	0.03	117	26	0.04	01/66		5.085	5.18	4.96	4.82	2.71	0.13	8.0	0.0	0.2	0.0	0.46	1.74	01/65
01/66	03/64	INLET GULLY IN SAG	0.115			60	102.9	0.819	0.896	0.076			60		120	1.78	0.05	81	36	0.03	01/63		5.085	4.95	4.95	4.82	8.19	0.08	9.7	0.0	0.1	0.0	0.16	1.48	01/66
01/72	02/72	INLET GULLY IN SAG	0.236			60	102.9	0.819	0.896	0.157			60		157	2.26	0.06	103	51	0.04	01/124		4.413	3.94	3.71	3.61	0.47	0.12	9.5	0.0	0.3	0.0	0.34	1.9	01/72
02/72	02/34	INLET HEADWALL											60		0			0					2.925	3.11	3.61	3.61	0.00	0.12	0.0	0.0	0.0	0.0			02/72
01/74	13/73	INLET GULLY IN SAG	0.390			60	102.9	0.819	0.896	0.258			60		314	3.31	0.12	145	161	0.07	01/77		4.447	4.31	4.23	3.83	1.66	0.15	9.7	0.0	0.2	0.0	0.51	1.63	01/74
01/75	02/75	INLET GULLY ON GRADE	0.177			60	102.9	0.819	0.896	0.117			60		117	1.78	0.03	91	23	0.03	01/123		4.734	4.63	4.56	4.54	0.11	0.09	5.5	0.0	0.1	0.0	0.23	0.93	01/75
02/75	03/75	MANHOLE 1050mm DIA											60		0			0					4.539	4.54	4.54	4.29	0.27	0.23	1.3	0.0	0.1	0.0	0.97	1.06	02/75
03/75	04/75	MANHOLE 1050mm DIA											60		0			0					4.376	4.29	4.23	4.01	0.56	0.45	0.8	0.0	0.1	0.0	1.34	1.58	03/75
04/75	13/73	MANHOLE 1800mm DIA											60		0			0					4.185	4.01	3.94	3.83	0.54	0.76	0.6	0.0	0.1	0.0	1.5	1.73	04/75
01/76	04/75	INLET GULLY IN SAG	0.140			60	102.9	0.819	0.896	0.092			60	0.1	345	4.99	0.07	163	144	0.08	01/124	0.072	4.134	4.30	4.10	4.01	1.69	0.16	4.3	0.0	0.2	0.0	0.47	1.04	01/76
01/77	04/75	INLET GULLY IN SAG	0.279			60	102.9	0.819	0.896	0.184			60		453	6.16	0.10	170	234	0.12	01/76		4.134	4.32	4.04	4.01	1.53	0.17	9.5	0.0	0.2	0.0	0.34	1.5	01/77
01/78	03/75	INLET GULLY ON GRADE	0.188			60	102.9	0.819	0.896	0.124			60		140	1.99	0.04	103	30	0.02	01/76		4.329	4.41	4.30	4.29	0.12	0.10	9.7	0.0	0.2	0.0	0.17	1.61	01/78
01/79	03/75	INLET GULLY ON GRADE	0.253			60	102.9	0.819	0.896	0.168			60		201	2.63	0.06	133	59	0.02	01/77		4.329	4.43	4.42	4.29	8.00	0.13	6.4	0.0	0.1	0.0	0.17	1.7	01/79
01/80	02/75	INLET GULLY IN SAG	0.130			60	102.9	0.819	0.896	0.086			60		86	2.34	0.02	69	22	0.03	01/78		4.493	4.59	4.55	4.54	0.10	0.07	9.7	0.0	0.2	0.0	0.18	1.08	01/80
01/81	02/75	INLET GULLY IN SAG	0.215			60	102.9	0.819	0.896	0.143			60		143	2.93	0.03	95	41	0.04	01/79		4.493	4.60	4.54	4.54	0.13	0.09	9.7	0.0	0.1	0.0	0.1	1.53	01/81
01/123	02/123	INLET GULLY ON GRADE	0.219			60	102.9	0.819	0.896	0.145			60		167	2.08	0.06	117	47	0.06	O 01/123		4.425	4.51	4.40	4.18	0.87	0.12	9.7	0.0	0.2	0.0	0.81	1.06	01/123
02/123	03/123	INLET GULLY ON GRADE	0.103			60	102.9	0.819	0.896	0.068			60		68	0.79	0.02	61	5	0.00	01/126		4.269	4.18	4.16	3.98	0.57	0.26	1.6	0.0	0.0	0.0	0.84	1.18	02/123
03/123	04/123	MANHOLE 1050mm DIA											60		0			0					4.153	3.98	3.97	3.88	0.29	0.26	0.3	0.0	0.0	0.0	0.84	1.18	03/123
04/123	05/123	MANHOLE 1200mm DIA											60		0			0					3.998	3.88	3.83	3.70	0.69	0.51	0.7	0.0	0.1	0.0	1.19	1.79	04/123
05/123	06/123	MANHOLE 1800mm DIA											60		0			0					4.200	3.70	3.66	3.61	0.49	0.59	0.4	0.0	0.1	0.0	0.51	2.68	05/123
06/123	02/34	INLET HEADWALL											60		0			0					3.800	3.61	3.61	3.61	0.00	0.59	0.0	0.0	0.0	0.0			06/123
01/124	01/245	INLET GULLY IN SAG	0.227			60	102.9	0.819	0.896	0.150			60		300	6.60	0.00	143	6	0.00	02/34		3.987	4.14	4.10	3.84	4.09	0.14	9.7	0.0	0.2	0.0	0.35	1.75	01/124
01/125	04/123	INLET GULLY IN SAG	0.218			60	102.9	0.819	0.896	0.145			60		173	5.98	0.02	135	-40	0.02	01/126		3.952	4.13	4.00	3.88	2.36	0.13	6.9	0.0	0.2	0.0	0.53	1.61	01/125
01/126	04/123	INLET GULLY IN SAG	0.266			60	102.9	0.819	0.896	0.176			60		227	6.03	0.04	138	-66	0.03	01/124		3.952	4.13	3.99	3.88	6.97	0.14	6.5	0.0	0.2	0.0	0.3	2.54	01/126
01/127	02/123	INLET GULLY ON GRADE	0.142			60	102.9	0.819	0.896	0.094			60		94	1.40	0.03	77	14	0.01	01/125		4.269	4.34	4.21	4.18	0.47	0.08	9.7	0.0	0.1	0.0	0.26	0.91	01/127

INTENSITY - FREQUENCY - DURATION (IFD) TABLE

DURATION	ARI INTENSITY (YEAR)							
MINUTES	TREAT	1	2	5	10	20	50	100
5	65.7	131.5	165.5	199.8	218.4	244.7	278.3	303.2
5.5	63.6	127.2	160.0	193.4	211.5	236.9	269.6	293.8
6	61.6	123.2	155.0	187.5	205.1	229.9	261.8	285.3
6.5	59.8	119.6	150.5	182.2	199.4	223.5	254.6	277.6
7	58.1	116.3	146.4	177.3	194.1	217.7	248.0	270.5
7.5	56.6	113.2	142.6	172.8	189.2	212.3	241.9	263.9
8	55.2	110.4	139.0	168.6	184.7	207.3	236.3	257.8
8.5	53.9	107.8	135.8	164.8	180.5	202.7	231.1	252.2
9	52.8	105.3	132.7	161.1	176.6	198.3	226.2	246.9
9.5	51.5	103.0	129.9	157.8	173.0	194.2	221.6	241.9
10	50.4	100.9	127.2	154.6	169.5	190.4	217.3	237.3
12	46.7	93.4	117.8	143.5	157.5	177.1	202.3	221.0
13	45.1	90.2	113.8	138.8	152.4	171.4	195.9	214.0
14	43.6	87.3	110.2	134.4	147.7	166.2	190.0	207.7
15	42.3	84.6	106.9	130.5	143.4	161.4	184.6	201.8
16	41.1	82.2	103.8	126.8	139.4	157.0	179.6	196.5
17	39.9	79.9	101.0	123.5	135.8	153.0	175.0	191.5
18	38.9	77.8	98.4	120.3	132.4	149.2	170.7	186.8
19	37.9	75.8	95.9	117.4	129.2	145.6	166.7	182.5
20	37.0	74.0	93.6	114.6	126.2	142.3	162.9	178.4
21	36.1	72.3	91.4	112.0	123.4	139.2	159.4	174.5
22	35.3	70.6	89.4	109.6	120.7	136.2	156.1	170.9
23	34.5	69.1	87.5	107.3	118.2	133.4	152.9	167.5
24	33.8	67.7	85.7	105.1	115.9	130.8	149.9	164.2
25	33.1	66.3	83.9	103.1	113.6	128.3	147.1	161.1
26	32.5	65.0	82.3	101.1	111.5	125.9	144.4	158.2
27	31.8	63.7	80.7	99.2	109.4	123.6	141.8	155.4
28	31.2	62.5	79.2	97.5	107.5	121.4	139.3	152.7
29	30.7	61.4	77.8	95.7	105.6	119.4	137.0	150.2
30	30.1	60.3	76.5	94.1	103.9	117.4	134.7	147.7
32	29.1	58.3	73.9	91.1	100.5	113.7	130.5	143.2
34	28.2	56.4	71.6	88.2	97.5	110.2	126.6	138.9
36	27.3	54.7	69.4	85.6	94.6	107.0	123.0	135.0
38	26.5	53.1	67.4	83.2	92.0	104.1	119.7	131.3
40	25.8	51.6	65.5	80.9	89.5	101.3	116.5	127.9
45	24.1	48.3	61.3	75.9	84.0	95.1	109.5	120.3
50	22.7	45.5	57.8	71.6	79.3	89.8	103.5	113.7
55	21.5	43.0	54.6	67.8	75.1	85.2	98.2	107.9
60	20.4	40.8	51.9	64.5	71.5	81.1	93.5	102.9
75	19.8	35.6	45.3	56.5	62.7	71.2	82.3	90.6
90	15.8	31.7	40.4	50.5	56.2	63.9	73.9	81.4
105	14.3	28.7	36.6	45.9	51.1	58.1	67.3	74.2
120	13.1	26.3	33.6	42.1	47.0	53.5	62.0	68.4
135	12.1	24.3	31.1	39.1	43.6	49.7	57.6	63.6
150	11.3	22.7	29.0	36.5	40.7	46.5	53.9	59.6
165	10.6	21.3	27.2	34.3	38.3	43.7	50.8	56.1
180	10.0	20.1	25.6	32.4	36.2	41.4	48.1	53.2
195	9.5	19.0	24.3	30.7	34.4	39.3	45.7	50.5
210	9.0	18.1	23.1	29.3	32.8	37.5	43.6	48.2
225	8.6	17.2	22.1	28.0	31.3	35.8	41.7	46.2
240	8.2	16.5	21.1	26.8	30.0	34.4	40.0	44.3
270	7.6	15.2	19.5	24.8	27.8	31.9	37.1	41.1
300	7.1	14.2	18.2	23.1	26.0	29.8	34.7	38.5
360	6.3	12.6	16.1	20.5	23.1	26.5	31.0	34.3
420	5.6	11.3	14.6	18.6	20.9	24.1	28.1	31.2
480	5.2	10.4	13.3	17.1	19.3	22.1	25.9	28.8
540	4.8	9.6	12.4	15.9	17.9	20.6	24.1	26.8
600	4.5	9.0	11.6	14.9	16.8	19.3	22.6	25.2
660	4.2	8.5	10.9	14.0	15.8	18.2	21.4	23.8
720	4.0	8.0	10.3	13.3	15.0	17.3	20.3	22.6
840	3.6	7.3	9.4	12.1	13.7	15.8	18.6	20.7
960	3.3	6.7	8.7	11.2	12.7	14.7	17.2	19.2
1080	3.1	6.3	8.1	10.5	11.9	13.7	16.1	18.0
1200	2.9	5.9	7.6	9.9	11.2	12.9	15.2	17.0
1320	2.8	5.6	7.2	9.3	10.6	12.3	14.4	16.1
1440	2.1	5.3	6.9	8.9	10.1	11.7	13.8	15.4
1800	2.1	4.7	6.0	7.9	8.9	10.3	12.2	13.6
2160	2.1	4.2	5.4	7.1	8.1	9.3	11.0	12.3
2520	1.9	3.8	5.0	6.5	7.4	8.6	10.1	11.3
2880	1.7	3.5	4.6	6.0	6.8	7.9	9.4	10.5
3240	1.6	3.3	4.2	5.6	6.3	7.4	8.7	9.7
3600	1.5	3.1	4.0	5.2	5.9	6.9	8.1	9.1
3960	1.4	2.9	3.7	4.9	5.5	6.5	7.6	8.6
4320	1.3	2.7	3.5	4.6	5.2	6.1	7.2	8.1

DERIVED FROM BUREAU OF METEOROLOGY

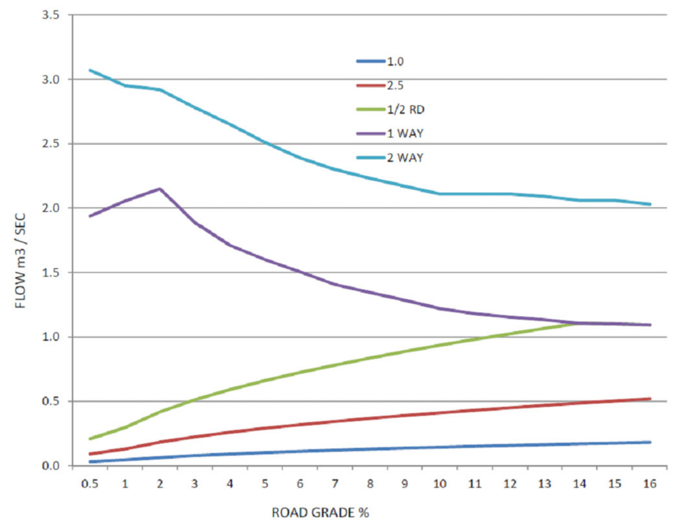
NOTES:

1. THESE CALCULATIONS ARE BASED ON ILSAX2 DYNAMIC DRAINAGE ANALYSIS USING 12D SOFTWARE ANALYSIS.
2. INDIVIDUAL TIMES OF CONCENTRATION ARE GENERATED FOR EACH NODE AND CATCHMENT TYPE USING TEMPORAL PATTERNS DETERMINED FROM THE RELEVANT AUTHORITY.
3. "TREAT" IN THE IFD TABLE REFERS TO 0.5x1 YEAR ARI, USED TO DETERMINE WATER QUALITY TREATMENT FLOWS.
4. CATCHMENT 1 REFERS TO TYPICAL URBANISED CATCHMENTS WITH LOTS <1000m2. THE IMPERVIOUS PORTION OF THE CATCHMENT TIME OF CONCENTRATION (TC) IS TYPICALLY 5 MINUTES AND THE PERVIOUS PORTION OF THE CATCHMENT TYPICALLY HAS AN 8 MINUTE TC.
5. CATCHMENT 2 IS TYPICALLY USED TO MODEL LOTS >1000m2, WITH INDIVIDUAL PERCENTAGES OF IMPERVIOUS SURFACE AND TC'S.
6. CATCHMENT 3 IS TYPICALLY USED TO MODEL OPEN SPACE AND RURAL CATCHMENTS WITH INDIVIDUAL PERCENTAGES OF IMPERVIOUS SURFACE AND TC'S.

FLOW CAPACITY m3/s 7.5m RD (KERB AND CHANNEL)

	KR	LANE	1/2 RD	1 WAY	2 WAY
MAX. WIDTH	1.0	2.5	3.75	11.175	14.8
MAX. AREA m2	0.021	0.101	0.219	1.421	2.104
Rd Grade %					
0.5	0.032	0.092	0.209	1.938	3.070
1	0.046	0.130	0.296	2.054	2.950
2	0.064	0.184	0.418	2.150	2.920
3	0.079	0.225	0.512	1.886	2.780
4	0.091	0.260	0.591	1.711	2.650
5	0.102	0.291	0.661	1.600	2.510
6	0.112	0.318	0.724	1.505	2.390
7	0.120	0.344	0.782	1.407	2.300
8	0.129	0.368	0.836	1.345	2.230
9	0.137	0.390	0.887	1.285	2.170
10	0.144	0.411	0.935	1.220	2.110
11	0.151	0.431	0.981	1.180	2.110
12	0.158	0.450	1.024	1.154	2.110
13	0.164	0.469	1.066	1.133	2.090
14	0.170	0.486	1.106	1.105	2.060
15	0.176	0.503	1.101	1.101	2.060
16	0.182	0.520	1.093	1.093	2.030

NOTES:
FLOW CONSTRAINED TO 0.4 DxV
FLOW CONSTRAINED TO 250mm DEEP MAX.
CAPACITY COMPOUND CROSS SECTION (ARR 1987 , 4.38) (n varies)



PROJECT NAME

KINGS FOREST

PRECINCT 5
CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN .
COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

ISSUES	DATE	
TENDER	...	
COUNCIL	23-06-20	
CONSTRUCTION	..	

PRE	DATE	AMENDMENT
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

LANDSURV
+GILBERT SUTHERLAND

DRAWING TITLE

STORMWATER CALCULATION TABLES MINOR AND MAJOR STORM EVENT

CONSTRUCTION ISSUE

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Civil Engineering
Project Coordination
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DESIGNED RB	DRAWN JB	
APPROVED	NER 906726	DATE 23-06-20
DRAWING NUMBER 12301-P5-6&7-680	AMEND. A	

Y:\123 - Leda Developments Pty Ltd\01 - Kings Forest\PREC5\Engineering Drawings\OPW Stages 6 & 7\Current\12301-P5-6&7-680.dwg, 12/10/2021 12:12:15 PM, 1:2

LEGEND

- EXISTING 100Ø WATER MAIN
- EXISTING 150Ø WATER MAIN
- EXISTING 200Ø WATER MAIN
- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- FUTURE 100Ø WATER MAIN
- FUTURE 150Ø WATER MAIN
- FUTURE 200Ø WATER MAIN
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- PROPOSED 100Ø WATER MAIN
- PROPOSED 150Ø WATER MAIN
- PROPOSED 200Ø WATER MAIN
- HYDRANT
- SCOUR VALVE
- AIR VALVE
- ISOLATION / SLUICE VALVE
- BEND
- VERTICAL BEND
- WATER METER FOR HOUSE CONNECTION
- SECTION 68 - LIMIT OF WORKS BOUNDARY
- SITE PRECINCT
- EXISTING KOALA EXCLUSION FENCE
- EXISTING TEMPORARY FENCE
- EXISTING TEMPORARY NO-GO FENCE
- ACOUSTIC FENCE IN ACCORDANCE WITH DRAWING 12301-P5-4&5-011
- K7 HERITAGE LOCATION
- HERITAGE EXCLUSION ZONE (NO WORKS PERMITTED)
- ECOLOGICAL BUFFER
- FUTURE DRIVEWAY/GARAGE (BY OTHERS)

* WATER METER NOTES.

LOTS 711, 731, 732, 608, 609 AND 623 CONTAIN 2 RESIDENCE WITH THE SERVICE SIZE OF 40 OD. ALL OTHER SINGLE LOTS ARE 32 OD.

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HORIZONTAL THRUST BLOCKS TO BE IN ACCORDANCE WITH:

Resultant Thrust (kN) given 135m Head with 1350kPa System Test Pressure (Water):

Pipe Diameter	Bends				Tee & Dead Ends
	11.25	22.5	45	90	
100	3.03	6.04	11.84	21.88	15.47
150	6.38	12.71	24.93	46.06	32.57

Minimum Thrust Area (m^2) for Concrete Blocks given 1350kPa System Test Pressure (Water):

Based on Soil Classification: 100kPa					
Pipe Diameter	Bends				Tee & Dead Ends
	11.25	22.5	45	90	
100	0.21	0.21	0.21	0.21	0.21
150	0.21	0.21	0.21	0.46	0.32

FOR FURTHER DETAIL REFER TO WSA 03-2011-3.1 TABLE 7.3.

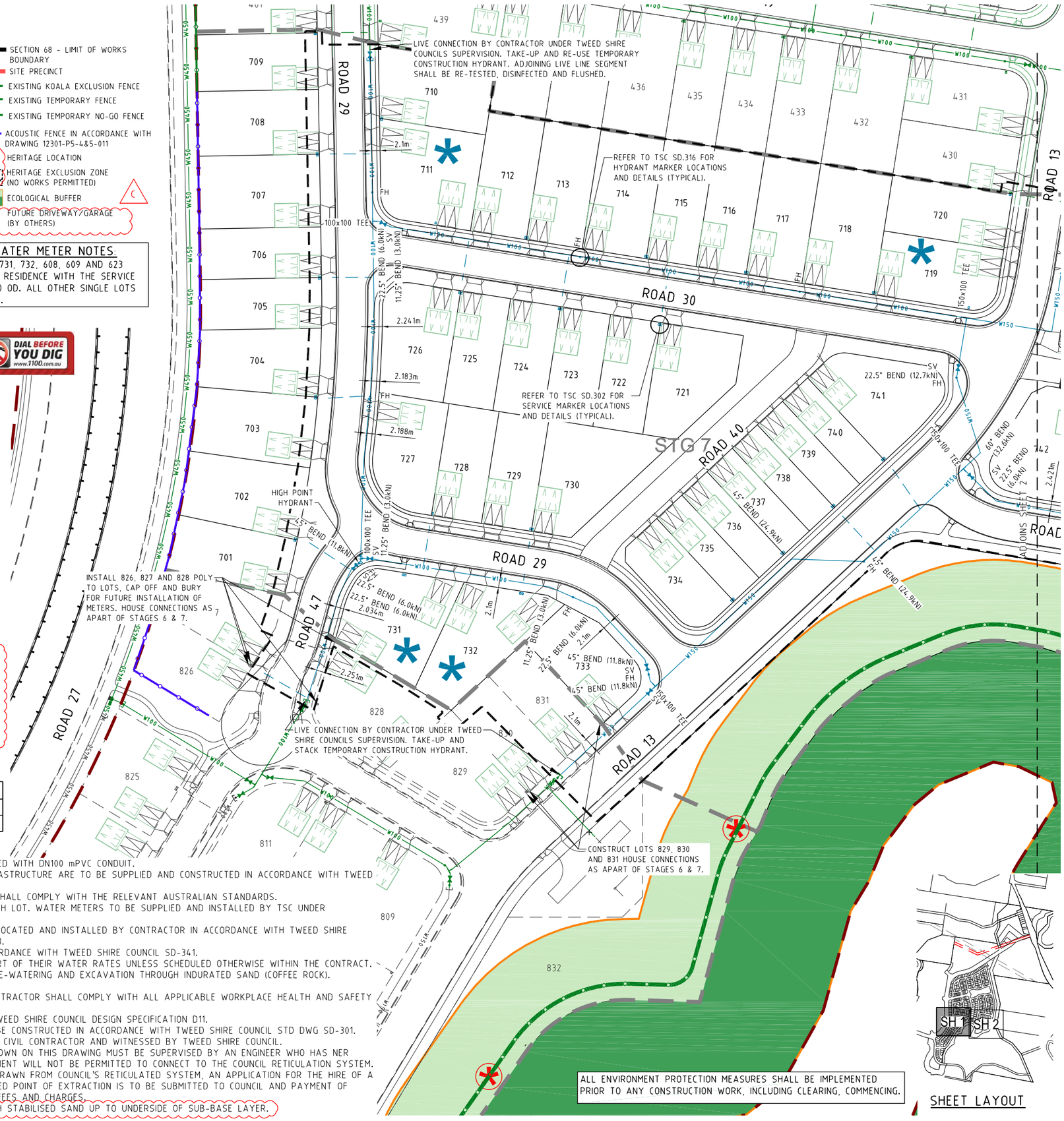
NOTES.

a. FINISH THRUST BLOCKS APPROXIMATELY 100mm ABOVE THE TOP OF THE FITTING OR BEARING PAD AND EXTEND TO THE FLOOR OF THE TRENCH OR DEEPER IF NECESSARY, TO ACHIEVE THE REQUIRED THRUST AREA. MAXIMUM ENCASEMENT TO BE 180°.

b. FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN

WATER PIPE SPECIFICATIONS

WATER MAIN LOCATION	PIPE MATERIAL SPECIFICATION
FOOTPATH VERGE	DICL PN20
ROAD CROSSING	DICL PN20



PROJECT SPECIFIC WATER NOTES

1. ALL PROPERTY CONNECTION ROAD CROSSINGS TO BE SLEEVED WITH DN100 mPVC CONDUIT.
2. ALL WORK AND MATERIALS FOR WATER RETICULATION INFRASTRUCTURE ARE TO BE SUPPLIED AND CONSTRUCTED IN ACCORDANCE WITH TWEED SHIRE COUNCIL DEVELOPMENT SPECIFICATIONS D11 AND C401.
3. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
4. WATER SERVICE CONNECTIONS ARE TO BE PROVIDED TO EACH LOT. WATER METERS TO BE SUPPLIED AND INSTALLED BY TSC UNDER SEPARATE APPLICATION.
5. THRUST BLOCKS, TRENCH STOPS AND BULK HEADS TO BE LOCATED AND INSTALLED BY CONTRACTOR IN ACCORDANCE WITH TWEED SHIRE COUNCIL DEVELOPMENT CONSTRUCTION SPECIFICATION C401.33.
6. TRENCH STOPS & BULKHEADS (IF REQUIRED) TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL SD-341.
7. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR WATER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
8. ALL PIPEWORK AND EXCAVATION RATES ARE TO INCLUDE DE-WATERING AND EXCAVATION THROUGH INDURATED SAND (COFFEE ROCK).
9. FOOTPATHS SHOWN FOR INFORMATION PURPOSES ONLY.
10. ALL WATER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.
11. MINIMUM WATERMAIN COVER TO BE IN ACCORDANCE WITH TWEED SHIRE COUNCIL DESIGN SPECIFICATION D11.
12. END OF LINE ARRANGEMENTS (EG. CUL-DE-SAC HEADS) TO BE CONSTRUCTED IN ACCORDANCE WITH TWEED SHIRE COUNCIL STD DWG SD-301.
13. ALL LIVE WATER CONNECTIONS TO BE UNDERTAKEN BY THE CIVIL CONTRACTOR AND WITNESSED BY TWEED SHIRE COUNCIL.
14. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS NER REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE COUNCIL RETICULATION SYSTEM.
15. DRAWING RETICULATED WATER – WHERE WATER IS TO BE DRAWN FROM COUNCIL'S RETICULATED SYSTEM, AN APPLICATION FOR THE HIRE OF A COUNCIL METERED STANDPIPE INCLUDING COUNCIL'S NOMINATED POINT OF EXTRACTION IS TO BE SUBMITTED TO COUNCIL AND PAYMENT OF RELEVANT FEES IN ACCORDANCE WITH COUNCIL'S ADOPTED FEES AND CHARGES.
17. ALL WATERMAINS CROSSING ROADS TO BE BACKFILLED WITH STABILISED SAND UP TO UNDERSIDE OF SUB-BASE LAYER.

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	...
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
C	02-09-21	LEGEND AND NOTES AMENDED
B	06-10-20	WATER ALIGNMENT AND NOTES AMENDED
A	23-06-20	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

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DRAWING TITLE

WATER RETICULATION PLAN SHEET 1 OF 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED		NER 906726	DATE 23-06-20

DRAWING NUMBER 12301-P5-6&7-700 AMEND. C

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PROJECT NAME

KINGS FOREST

PRECINCT 5

CONSTRUCTION CERTIFICATE - STAGES 6 & 7

REAL PROPERTY DESCRIPTION
Lot 7 on DP875447, Part of Lot 6 on DP875446, Lot 1 on DP781633, Lot 40 on DP7482, Lot 2 on DP819015, Lot 1 on DP129737, Lot 37A on DP13727, Lot 38A on DP13727, Lot 38B on DP13727, Lot 1 on DP706497, Lot 76 on DP755701, Lot 323 on DP755701, Lot 272 on DP755701, Lot 96 on DP755701 & Lot 326 on DP755701
PARISH OF CUDGEN , COUNTY OF ROUS .

CLIENT

PROJECT 28 PTY LTD

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	23-06-20
COUNCIL	23-06-20
CONSTRUCTION	..

PRE	DATE	AMENDMENT
B	06-10-20	WATER ALIGNMENT AMENDED
A	23-06-20	COUNCIL ISSUE

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WATER RETICULATION PLAN SHEET 2 OF 2

CONSTRUCTION ISSUE

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DESIGNED	RB	DRAWN	JB
APPROVED	NER 906726	DATE	23-06-20

DRAWING NUMBER	AMEND.
12301-P5-6&7-701	B

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