

STAGE 1 CIVIL OPERATIONAL WORKS

VANTAGE YATALA



planning | environment | landscape | engineering | survey

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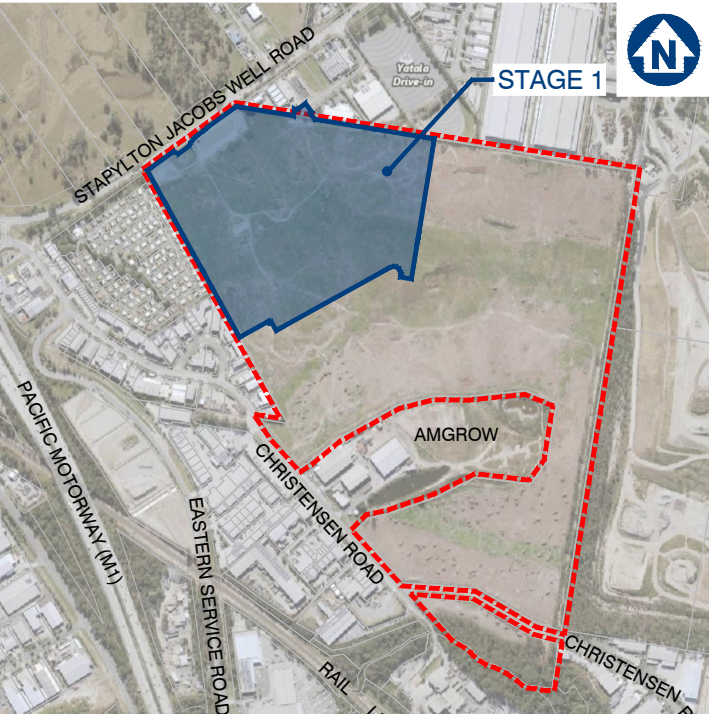
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DRAWING INDEX		
DRAWING No.	REV No.	DRAWING TITLE
594I ENG OPWI 001	A	DRAWING INDEX AND LOCALITY PLAN
594I ENG OPWI 002	A	GENERAL NOTES SHEET 1 OF 3
594I ENG OPWI 003	A	GENERAL NOTES SHEET 2 OF 3
594I ENG OPWI 004	A	GENERAL NOTES SHEET 3 OF 3
594I ENG OPWI 005	A	LEGEND
594I ENG OPWI 006	A	KEY PLAN LAYOUT
594I ENG OPWI 010	A	EXISTING SURFACE AND FEATURE PLAN
594I ENG OPWI 020	A	EMERI STREET DEMOLITION AND PROTECTION LAYOUT PLAN
594I ENG OPWI 050	A	SEDIMENT AND EROSION CONTROL PLAN SHEET 1 OF 6
594I ENG OPWI 051	A	SEDIMENT AND EROSION CONTROL PLAN SHEET 2 OF 6
594I ENG OPWI 052	A	SEDIMENT AND EROSION CONTROL PLAN SHEET 3 OF 6
594I ENG OPWI 053	A	SEDIMENT AND EROSION CONTROL PLAN SHEET 4 OF 6
594I ENG OPWI 054	A	SEDIMENT AND EROSION CONTROL PLAN SHEET 5 OF 6
594I ENG OPWI 055	A	SEDIMENT AND EROSION CONTROL PLAN SHEET 6 OF 6
594I ENG OPWI 056	A	CONSTRUCTION PHASE SEDIMENT BASIN 1 LAYOUT
594I ENG OPWI 057	A	CONSTRUCTION PHASE SEDIMENT BASIN 1 SECTIONS
594I ENG OPWI 058	A	CONSTRUCTION PHASE SEDIMENT BASIN 2 LAYOUT
594I ENG OPWI 059	A	CONSTRUCTION PHASE SEDIMENT BASIN 2 SECTIONS
594I ENG OPWI 060	A	SEDIMENT AND EROSION TYPICAL DETAILS
594I ENG OPWI 300	A	OVERALL SERVICES LAYOUT PLAN SHEET 1 OF 4
594I ENG OPWI 301	A	OVERALL SERVICES LAYOUT PLAN SHEET 2 OF 4
594I ENG OPWI 302	A	OVERALL SERVICES LAYOUT PLAN SHEET 3 OF 4
594I ENG OPWI 303	A	OVERALL SERVICES LAYOUT PLAN SHEET 4 OF 4
594I ENG OPWI 400	A	ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 1 OF 4
594I ENG OPWI 401	A	ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 2 OF 4
594I ENG OPWI 402	A	ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 3 OF 4
594I ENG OPWI 403	A	ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 4 OF 4
594I ENG OPWI 410	A	TYPICAL SECTIONS AND DETAILS SHEET 1 OF 3
594I ENG OPWI 411	A	TYPICAL SECTIONS AND DETAILS SHEET 2 OF 3
594I ENG OPWI 412	A	TYPICAL SECTIONS AND DETAILS SHEET 3 OF 3
594I ENG OPWI 420	A	CONTROL LINE LAYOUT PLAN
594I ENG OPWI 421	A	ROAD CONTROL LINE SETOUT TABLES SHEET 1 OF 2
594I ENG OPWI 422	A	ROAD CONTROL LINE SETOUT TABLES SHEET 2 OF 2
594I ENG OPWI 430	A	ROAD LONGITUDINAL SECTION – PANORAMA DRIVE SHEET 1 OF 3
594I ENG OPWI 431	A	ROAD LONGITUDINAL SECTION – PANORAMA DRIVE SHEET 2 OF 3
594I ENG OPWI 432	A	ROAD LONGITUDINAL SECTION – PANORAMA DRIVE SHEET 3 OF 3
594I ENG OPWI 433	A	ROAD LONGITUDINAL SECTION – EASTRIDGE STREET SHEET 1 OF 2
594I ENG OPWI 434	A	ROAD LONGITUDINAL SECTION – EASTRIDGE STREET SHEET 2 OF 2
594I ENG OPWI 435	A	ROAD LONGITUDINAL SECTION – FAIRWAY DRIVE SHEET 1 OF 2
594I ENG OPWI 436	A	ROAD LONGITUDINAL SECTION – FAIRWAY DRIVE SHEET 2 OF 2
594I ENG OPWI 437	A	ROAD LONGITUDINAL SECTION – EMERI STREET EXTENSION
594I ENG OPWI 450	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 1 OF 14
594I ENG OPWI 451	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 2 OF 14
594I ENG OPWI 452	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 3 OF 14
594I ENG OPWI 453	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 4 OF 14
594I ENG OPWI 454	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 5 OF 14
594I ENG OPWI 455	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 6 OF 14
594I ENG OPWI 456	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 7 OF 14
594I ENG OPWI 457	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 8 OF 14
594I ENG OPWI 458	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 9 OF 14
594I ENG OPWI 459	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 10 OF 14
594I ENG OPWI 460	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 11 OF 14
594I ENG OPWI 461	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 12 OF 14
594I ENG OPWI 462	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 13 OF 14
594I ENG OPWI 463	A	ROAD CROSS SECTIONS – PANORAMA DRIVE SHEET 14 OF 14
594I ENG OPWI 464	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 1 OF 8
594I ENG OPWI 465	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 2 OF 8
594I ENG OPWI 466	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 3 OF 8
594I ENG OPWI 467	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 4 OF 8
594I ENG OPWI 468	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 5 OF 8
594I ENG OPWI 469	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 6 OF 8
594I ENG OPWI 470	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 7 OF 8
594I ENG OPWI 471	A	ROAD CROSS SECTIONS – EASTRIDGE STREET SHEET 8 OF 8

DRAWING INDEX		
DRAWING No.	REV No.	DRAWING TITLE
594I ENG OPWI 472	A	ROAD CROSS SECTIONS – FAIRWAY DRIVE SHEET 1 OF 6
594I ENG OPWI 473	A	ROAD CROSS SECTIONS – FAIRWAY DRIVE SHEET 2 OF 6
594I ENG OPWI 474	A	ROAD CROSS SECTIONS – FAIRWAY DRIVE SHEET 3 OF 6
594I ENG OPWI 475	A	ROAD CROSS SECTIONS – FAIRWAY DRIVE SHEET 4 OF 6
594I ENG OPWI 476	A	ROAD CROSS SECTIONS – FAIRWAY DRIVE SHEET 5 OF 6
594I ENG OPWI 477	A	ROAD CROSS SECTIONS – FAIRWAY DRIVE SHEET 6 OF 6
594I ENG OPWI 478	A	ROAD CROSS SECTIONS – EMERI STREET EXTENSION SHEET 1 OF 2
594I ENG OPWI 479	A	ROAD CROSS SECTIONS – EMERI STREET EXTENSION SHEET 2 OF 2
594I ENG OPWI 480	A	KERB ISLAND SETOUT DETAILS SHEET 1 OF 2
594I ENG OPWI 481	A	KERB ISLAND SETOUT DETAILS SHEET 2 OF 2
594I ENG OPWI 490	A	ROAD INTERSECTION DETAILS SHEET 1 OF 8
594I ENG OPWI 491	A	ROAD INTERSECTION DETAILS SHEET 2 OF 8
594I ENG OPWI 492	A	ROAD INTERSECTION DETAILS SHEET 3 OF 8
594I ENG OPWI 493	A	ROAD INTERSECTION DETAILS SHEET 4 OF 8
594I ENG OPWI 494	A	ROAD INTERSECTION DETAILS SHEET 5 OF 8
594I ENG OPWI 495	A	ROAD INTERSECTION DETAILS SHEET 6 OF 8
594I ENG OPWI 496	A	ROAD INTERSECTION DETAILS SHEET 7 OF 8
594I ENG OPWI 497	A	ROAD INTERSECTION DETAILS SHEET 8 OF 8
594I ENG OPWI 500	A	STORMWATER DRAINAGE CATCHMENT PLAN
594I ENG OPWI 510	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 1 OF 18
594I ENG OPWI 511	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 18
594I ENG OPWI 512	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 3 OF 18
594I ENG OPWI 513	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 4 OF 18
594I ENG OPWI 514	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 5 OF 18
594I ENG OPWI 515	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 6 OF 18
594I ENG OPWI 516	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 7 OF 18
594I ENG OPWI 517	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 8 OF 18
594I ENG OPWI 518	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 9 OF 18
594I ENG OPWI 519	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 10 OF 18
594I ENG OPWI 520	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 11 OF 18
594I ENG OPWI 521	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 12 OF 18
594I ENG OPWI 522	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 13 OF 18
594I ENG OPWI 523	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 14 OF 18
594I ENG OPWI 524	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 15 OF 18
594I ENG OPWI 525	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 16 OF 18
594I ENG OPWI 526	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 17 OF 18
594I ENG OPWI 527	A	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 18 OF 18
594I ENG OPWI 550	A	39% AEP STORMWATER DRAINAGE CALCULATIONS TABLES SHEET 1 OF 2
594I ENG OPWI 551	A	39% AEP STORMWATER DRAINAGE CALCULATIONS TABLES SHEET 2 OF 2
594I ENG OPWI 552	A	1% AEP STORMWATER DRAINAGE CALCULATIONS TABLES SHEET 1 OF 2
594I ENG OPWI 553	A	1% AEP STORMWATER DRAINAGE CALCULATIONS TABLES SHEET 2 OF 2
594I ENG OPWI 570	A	OPERATIONAL PHASE BIORETENTION BASIN SHEET 1 OF 2
594I ENG OPWI 571	A	OPERATIONAL PHASE BIORETENTION BASIN SHEET 2 OF 2
594I ENG OPWI 572	A	OPERATIONAL PHASE BIORETENTION BASIN SETOUT DETAILS
594I ENG OPWI 600	A	SEWER RETICULATION LAYOUT PLAN SHEET 1 OF 4
594I ENG OPWI 601	A	SEWER RETICULATION LAYOUT PLAN SHEET 2 OF 4
594I ENG OPWI 602	A	SEWER RETICULATION LAYOUT PLAN SHEET 3 OF 4
594I ENG OPWI 603	A	SEWER RETICULATION LAYOUT PLAN SHEET 4 OF 4
594I ENG OPWI 610	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 1 OF 11
594I ENG OPWI 611	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 2 OF 11
594I ENG OPWI 612	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 3 OF 11
594I ENG OPWI 613	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 4 OF 11
594I ENG OPWI 614	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 5 OF 11
594I ENG OPWI 615	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 6 OF 11
594I ENG OPWI 616	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 7 OF 11
594I ENG OPWI 617	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 8 OF 11
594I ENG OPWI 618	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 9 OF 11
594I ENG OPWI 619	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 10 OF 11
594I ENG OPWI 620	A	SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 11 OF 11
594I ENG OPWI 700	A	WATER RETICULATION LAYOUT PLAN SHEET 1 OF 4
594I ENG OPWI 701	A	WATER RETICULATION LAYOUT PLAN SHEET 2 OF 4
594I ENG OPWI 702	A	WATER RETICULATION LAYOUT PLAN SHEET 3 OF 4
594I ENG OPWI 703	A	WATER RETICULATION LAYOUT PLAN SHEET 4 OF 4

DRAWING INDEX		
DRAWING No.	REV No.	DRAWING TITLE
594I ENG OPWI 704	A	WATER RETICULATION TYPICAL DETAILS
594I ENG OPWI 800	A	LINEMARKING AND SIGNAGE PLAN SHEET 1 OF 5
594I ENG OPWI 801	A	LINEMARKING AND SIGNAGE PLAN SHEET 2 OF 5
594I ENG OPWI 802	A	LINEMARKING AND SIGNAGE PLAN SHEET 3 OF 5
594I ENG OPWI 803	A	LINEMARKING AND SIGNAGE PLAN SHEET 4 OF 5
594I ENG OPWI 804	A	LINEMARKING AND SIGNAGE PLAN SHEET 5 OF 5

STANDARD DRAWINGS			
DRAWING No.	REV	ASSOCIATION	DRAWING TITLE
DS–010	F	IPWEA	ACCESS CHAMBER – STORMWATER ACCESS CHAMBER DETAILS – 1050 TO 2100 DIA
DS–015	C	IPWEA	ACCESS CHAMBER – MANHOLE FRAME – ROADWAY AND NON ROADWAY – 1050 TO 2100 DIA
DS–018	C	IPWEA	ACCESS CHAMBER – MANHOLE RISER DETAILS
DS–019	C	IPWEA	ACCESS CHAMBER – MANHOLE ROVER (ROADWAY)
DS–020	C	IPWEA	ACCESS CHAMBER – MANHOLE ROVER (NON ROADWAY)
DS–021	C	IPWEA	ACCESS CHAMBER – MANHOLE COVER CONCRETE INFILL (PEDESTRIAN TRAFFIC) 1050 TO 2100 DIA
DS–030	F	IPWEA	EXCAVATION, BEDDING & BACKFILL – RIGID & FLEXIBLE DRAINAGE PIPES
DS–031	D	IPWEA	EXCAVATION, BEDDING & BACKFILL PRECAST – BOX CULVERTS
DS–040	E	IPWEA	SEDIMENT CONTROL – SEDIMENT CONTROL DEVICES – SEDIMENT FENCE – ENTRY/EXIT SEDIMENT TRAP
DS–041	E	IPWEA	SEDIMENT CONTROL – SEDIMENT CONTROL DEVICES – SEDIMENT FENCE – ENTRY/EXIT SEDIMENT TRAP
DS–050	E	IPWEA	DRAINAGE PITS – FIELD INLET TYPE 1 AND TYPE 2
DS–061	B	IPWEA	DRAINAGE PITS – KERB INLET – PRECAST LINTEL DETAILS
DS–062	D	IPWEA	DRAINAGE PITS – KERB INLET – GRATE AND FRAME
DS–063	C	IPWEA	DRAINAGE PITS – KERB INLET – LIP IN LINE – GENERAL ARRANGEMENT
DS–073	A	IPWEA	BIORETENTION DRAINAGE PROFILE – TYPE 3 – CONVENTIONAL
DS–075	A	IPWEA	LARGE BIORETENTION SEDIMENT FOREBAY
DS–076	A	IPWEA	BIORETENTION WEIR
DS–078	A	IPWEA	BIORETENTION STANDARD NOTES
GS–041	D	IPWEA	FENCING – CHAIN WIRE SECURITY FENCING
RS–049	E	IPWEA	VEHICLE CROSSING – RESIDENTIAL DRIVEWAYS – PLAN 1 OF 2
RS–050	G	IPWEA	VEHICLE CROSSING – RESIDENTIAL DRIVEWAYS – PLAN 2 OF 2
RS–080	F	IPWEA	KERB AND CHANNEL – PROFILES AND DIMENSIONS – INCLUDING EDGE RESTRAINTS, MEDIAN & CHANNEL
RS–090	J	IPWEA	KERB RAMPS – RAMPED PEDESTRIAN
RS–091	F	IPWEA	KERB RAMPS – RAMPED AND CUT THROUGH TREATMENTS – FOR PEDESTRIAN CROSSINGS, SLIP LANES AND MEDIANS
RS–094	F	IPWEA	KERB RAMPS – LOCATIONS AND CONFIGURATIONS
RS–130	F	IPWEA	ROAD FURNITURE – STREET NAME SIGN AND LOCATION (FINGERBOARD)
RS–131	G	IPWEA	ROAD FURNITURE – TRAFFIC SIGN INSTALLATION DETAILS
RS–140	F	IPWEA	SUBSOIL DRAINS – DETAILS AND LOCATION
RS–142	F	IPWEA	SUBSOIL DRAINS – ACCESS POINTS
SD1033	K	DTMR	KERB AND CHANNEL
SD1304	N	DTMR	PIPE CULVERTS – WINGWALLS, HEADWALLS AND APRON FOR PIPE DIA 750 TO 2400
02–003	2	CoGC	TYPICAL CROSS SECTIONS – COLLECTOR STREETS – PLAN 2 OF 2
02–005	I	CoGC	PUBLIC UTILITY PLANT CORRIDOR ALLOCATIONS IN PUBLIC ROAD VERGES
02–601	I	CoGC	NEW ROADS – SERVICE CONDUIT CROSSINGS
02–602	I	CoGC	ROAD CROSSING – TRENCH RESTORATION – FLEXIBLE PAVEMENTS
03–008	I	CoGC	FIELD INLET AND INTER–ALLOTMENT DRAINAGE PIT
03–101	I	CoGC	STORMWATER ACCESS CHAMBER 1050 DIA TO 1500 DIA
03–102	I	CoGC	STORMWATER ACCESS CHAMBER 1050 DIA TO 1500 DIA ROOF SLABS
03–201	I	CoGC	EXCAVATION AND BEDDING OF CONCRETE STORMWATER PIPES
05–014	I	CoGC	CHAIN WIRE FENCING – 1.8m HIGH



LOCALITY PLAN

SCALE 1: 8000 (A1)

CLIENT



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

SITE ADDRESS

60 STAPYLTON JACOBS WELL ROAD
STAPYLTON QLD 4207

DWG No. 594I ENG OPWI 001 – REV A

MAY 2020

HES BASIN GENERAL NOTES

AUTO DOSER

1. PROVIDED AS EITHER 'FLOC BOX' OR 'FOD-RAIN' DOSING UNIT OR APPROVED EQUIVALENT TO MANUFACTURERS SPECIFICATION.
2. DOSER AND SUPPLY OF FLOCCULANT TO BE PROVIDED ON LEVEL PAD 4mX4m WITHIN 10m OF DOSING POINT.
3. ALL-WEATHER ACCESS TRACK TO BE PROVIDED TO DOSER.
4. FLOCCULANT PROVIDED AS TURBICLEAR (ACH) OR APPROVED EQUIVALENT. IF ALTERNATIVE FLOCCULANT USED THEN THE BASIN SIZE IS TO BE INCREASED ACCORDING TO JAR SETTLEMENT TEST (REFER TO TABLE BELOW).

JAR SETTLEMENT AFTER 15 MINS	MULTIPLICATION FACTOR TO SETTLING ZONE
(mm)	VOLUME
50	x3.0
75	x2.0
100	x1.5
150	x1.0

BASIN CONSTRUCTION

MATERIALS

5. EARTH FILL: CLEAN SOIL WITH EMERSION CLASS 2(1), 3, 4 OR 5 AND FREE OF ROOTS, WOODY VEGETATION, ROCKS AND OTHER UNSUITABLE MATERIAL. SOIL WITH EMERSION CLASS 4 AND 5 MAY NOT BE SUITABLE DEPENDING ON PARTICLE SIZE DISTRIBUTION AND DEGREE OF DISPERSION. CLASS 2 (1) SHOULD ONLY BE USED UPON RECOMMENDATION FROM GEOTECHNICAL SPECIALIST.
6. SPILLWOCK ROCK: HARD, ANGULAR, DURABLE, WEATHER RESISTANT AND EVENLY GRADED ROCK WITH 50% BY WEIGHT LARGER THAN THE SPECIFIED NOMINAL (D50) ROCK SIZE. LARGE ROCK SHOULD DOMINATE, WITH SUFFICIENT SMALL ROCK TO FILL THE VOIDS BETWEEN LARGER ROCK. THE DIAMETER OF THE LARGEST ROCK SHOULD BE NO LARGER THAN 1.5 TIMES THE NOMINAL ROCK SIZE. THE SPECIFIC GRAVITY SHOULD BE AT LEAST 2.5.
7. GEOTEXTILE FABRIC: HEAVY DUTY, NEEDLE-PUNCHED, NON-WOVEN FLOCK, MINIMUM 'BIDIM' A24 OR EQUIVALENT.

CONSTRUCTION

3. NOTWITHSTANDING ANY DESCRIPTION CONTAINED WITH APPROVED PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING THEMSELVES AS TO THE NATURE AND EXTENT OF THE SPECIFIED WORKS AND THE PHYSICAL AND LEGAL CONDITIONS UNDER WHICH THE WORKS WILL BE CARRIED OUT. THIS SHALL INCLUDE MEANS OF ACCESS, EXTENT OF CLEARING, NATURE OF THE MATERIALS TO BE EXCAVATED, TYPE AND SIZE OF MECHANICAL PLANT REQUIRED, LOCATION AND SUITABILITY OF WATER SUPPLY FOR CONSTRUCTION AND TESTING PURPOSES, AND ANY OTHER LIKELY MATTERS AFFECTING THE CONSTRUCTION OF THE WORKS.
9. REFER TO APPROVED PLANS FOR LOCATION, DIMENSIONS, AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
10. BEFORE STARTING ANY CLEARING OR CONSTRUCTION, ENSURE ALL THE NECESSARY MATERIALS AND COMPONENTS ARE ON THE SITE TO AVOID DELAYS IN COMPLETING THE SEDIMENT BASIN ONCE WORKS BEGIN.
11. INSTALL REQUIRED SHORT TERM SEDIMENT CONTROL MEASURES DOWNSTREAM OF THE PROPOSED EARTHWORKS TO CONTROL SEDIMENT RUNOFF DURING CONSTRUCTION OF THE BASIN.
12. THE AREA TO BE COVERED BY THE EMBANKMENT, BORROW PITS AND INCIDENTAL WORKS, TOGETHER WITH AN AREA EXTENDING BEYOND THE LIMITS OF EACH FOR A DISTANCE NOT EXCEEDING FIVE (5) METRES ALL AROUND MUST BE CLEARED OF ALL TREES, SCRUB, STUMPS, ROOTS, DEAD TIMBER AND RUBBISH AND DISPOSED OF IN A SUITABLE MANNER. DELAY CLEARING THE MAIN BASIN AREA UNTIL THE EMBANKMENT IS COMPLETE.
13. ENSURE ALL HOLES MADE BY GRUBBING WITHIN THE EMBANKMENT FOOTPRINT ARE FILLED WITH SOUND MATERIAL, ADEQUATELY COMPACTED, AND FINISHED FLUSH WITH THE NATURAL SURFACE.

CUT-OFF TRENCH

14. BEFORE CONSTRUCTION OF THE CUT-OFF TRENCH OR ANY ANCILLARY WORKS WITHIN THE EMBANKMENT FOOTPRINT, ALL GRASS GROWTH AND TOPSOIL MUST BE REMOVED FROM THE AREA TO BE OCCUPIED BY THE EMBANKMENT AND MUST BE DEPOSITED CLEAR OF THIS AREA AND RESERVED FOR TOPDRESSING THE COMPLETED EMBANKMENT.

15. EXCAVATE A CUT-OFF TRENCH ALONG THE CENTRE LINE OF THE EARTH FILL EMBANKMENT. CUT THE TRENCH TO STABLE SOIL MATERIAL, BUT IN NO CASE MAKE IT LESS THAN 600mm DEEP. THE CUT-OFF TRENCH MUST EXTEND INTO BOTH ABUTMENTS TO AT LEAST THE ELEVATION OF THE OUTLET SPILLWAY CREST. MAKE THE MINIMUM BOTTOM WIDTH WIDE ENOUGH TO PERMIT OPERATION OF THE EXCAVATION AND COMPACTION EQUIPMENT, BUT IN NO CASE LESS THAN 600mm. MAKE THE SIDE SLOPES OF THE TRENCH NO STEEPER THAN 1:2 (H: V).
16. ENSURE ALL WATER, LOOSE SOIL, AND ROCK ARE REMOVED FROM THE TRENCH BEFORE BACKFILLING COMMENCES. THE CUT-OFF TRENCH MUST BE BACKFILLED WITH SELECT EARTH—FILL OF THE TYPE SPECIFIED FOR THE EMBANKMENT, AND THIS SOIL MUST HAVE A MOISTURE CONTENT AND DEGREE OF COMPACTION THE SAME AS SPECIFIED FOR THE CORE ZONE.
17. MATERIAL EXCAVATED FROM THE CUT-OFF TRENCH MAY BE USED IN THE CONSTRUCTION OF THE EMBANKMENT PROVIDED IT IS SUITABLE AND IT IS PLACED IN THE CORRECT ZONE ACCORDING TO ITS CLASSIFICATION.

EMBANKMENT

18. SCARIFY AREAS ON WHICH FILL IS TO BE PLACED BEFORE PLACING THE FILL.
19. ENSURE ALL FILL MATERIAL USED TO FORM THE EMBANKMENT MEETS THE SPECIFICATIONS CERTIFIED BY A SOIL SCIENTIST OF GEOTECHNICAL SPECIALIST.
20. THE FILL MATERIAL MUST CONTAIN SUFFICIENT MOISTURE SO IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. PLACE FILL MATERIAL IN 150 to 200mm CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL AREA AND THEN COMPACT BEFORE PLACEMENT OF FURTHER FILL.
21. UNLESS SPECIFIED ON THE APPROVED PLANS, COMPACT THE SOIL AT ABOUT 1% TO 2% WET OPTIMUM AND TO 95% MODIFIED OR 100% STANDARD COMPACTION.
22. WHERE BOTH DISPERSIVE AND NON-DISPERSIVE CLASSIFIED EARTH-FILL MATERIALS ARE AVAILABLE, NON-DISPERSIVE EARTH-FILL MUST BE USED IN THE CORE ZONE. THE REMAINING CLASSIFIED EARTH-FILL MATERIALS MUST ONLY BE USED AS DIRECTED BY THE SITE SUPERINTENDENT.
23. WHERE SPECIFIED, CONSTRUCT THE EMBANKMENT TO AN ELEVATION 10% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLING; OTHERWISE FINISHED DIMENSIONS OF THE EMBANKMENT AFTER SPREADING OF TOPSOIL MUST CONFORM TO THE DRAWING WITH A TOLERANCE OF 75mm FROM SPECIFIED DIMENSIONS.
24. ENSURE DEBRIS AND OTHER UNSUITABLE BUILDING WASTE IS NOT PLACED WITHIN THE EARTH EMBANKMENT.
25. AFTER COMPLETION OF THE EMBANKMENT ALL LOOSE UNCOMPACTED EARTH-FILL MATERIAL ON THE UPSTREAM AND DOWNSTREAM BATTER MUST BE REMOVED PRIOR TO SPREADING TOPSOIL.
26. TOPSOIL AND RE-VEGETATE/STABILISE ALL EXPOSED EARTH AS DIRECTED WITHIN THE APPROVED PLANS.

ESTABLISHING THE SETTLING POND

27. THE AREA TO BE COVERED BY THE STORED WATER OUTSIDE OF THE LIMITS OF THE BORROW PITS MUST BE CLEARED OF RUBBISH. TREES MUST BE CUT DOWN STUMP HIGH AND REMOVED FROM THE IMMEDIATE VICINITY OF THE WORK.
28. ESTABLISH ALL REQUIRED INFLOW CHUTES AND INLET BAFFLES IF SPECIFIED TO ENABLE WATER TO DISCHARGE INTO THE BASIN IN A MANNER THAT WILL NOT CAUSE SOIL EROSION OR THE RE-SUSPENSION OF SETTLED SEDIMENT.
29. INSTALL A SEDIMENT STORAGE LEVEL MARKER POST WITH A CROSS MEMBER SET JUST BELOW THE TOP OF THE SEDIMENT STORAGE ZONE (AS SPECIFIED ON THE APPROVED PLANS). USE AT LEAST A 75mm WIDE POST FIRMLY SET INTO THE BASIN FLOOR.
30. IF SPECIFIED, INSTALL INTERNAL SETTLING POND BAFFLES. ENSURE THE CREST OF THESE BAFFLES IS SET LEVEL WITH, OR JUST BELOW, THE ELEVATION OF THE EMERGENCY SPILLWAY.
31. INSTALL ALL APPROPRIATE MEASURES TO MINIMISE SAFETY RISK TO ON-SITE PERSONNEL AND THE PUBLIC CAUSED BY THE PRESENCE OF THE SETTLING POND. AVOID STEEP, SMOOTH INTERNAL SLOPES. APPROPRIATELY FENCE THE SETTLING POND AND POST WARNING SIGNS IF UNSUPERVISED PUBLIC ACCESS IS LIKELY OR THERE IS CONSIDERED TO BE AN UNACCEPTABLE RISK TO THE PUBLIC.

SPILLWAY CONSTRUCTION

32. THE SPILLWAY MUST BE EXCAVATED AS SHOWN ON THE PLANS, AND THE EXCAVATED MATERIAL IF CLASSIFIED AS SUITABLE, MUST BE USED IN THE EMBANKMENT, AND IF NOT SUITABLE IT MUST BE DISPOSED OF INTO SPOIL HEAPS.
33. ENSURE EXCAVATED DIMENSIONS ALLOW ADEQUATE BOXING--OUT SUCH THAT THE SPECIFIED ELEVATIONS, GRADES, CHUTE WIDTH, AND ENTRANCE AND EXIT SLOPES FOR THE EMERGENCY SPILLWAY WILL BE ACHIEVED AFTER PLACEMENT OF THE ROCK OR OTHER SCOUR PROTECTION MEASURES AS SPECIFIED IN THE PLANS.
34. PLACE SPECIFIED SCOUR PROTECTION MEASURES ON THE EMERGENCY SPILLWAY. ENSURE THE FINISHED GRADE BLENDS WITH THE SURROUNDING AREA TO ALLOW A SMOOTH FLOW TRANSITION FROM SPILLWAY TO DOWNSTREAM CHANNEL.
35. IF A SYNTHETIC FILTER FABRIC UNDERLAY IS SPECIFIED, PLACE THE FABRIC DIRECTLY ON THE PREPARED FOUNDATION. IF MORE THAN A SHEET OF FILTER FABRIC IS REQUIRED, OVERLAP THE EDGES BY AT LEAST 300mm AND PLACE ANCHOR PINS AT MINIMUM 1m SPACING ALONG THE OVERLAP. BURY THE UPSTREAM END OF THE FILTER FABRIC A MINIMUM 300mm BELOW GROUND AND WHERE NECESSARY, BURY THE LOWER END OF THE FABRIC OR OVERLAP A MINIMUM 300mm OVER THE NEXT DOWNSTREAM SECTION AS REQUIRED. ENSURE THE FILTER FABRIC EXTENDS AT LEAST 1000mm UPSTREAM OF THE SPILLWAY CREST.
36. TAKE CARE NOT TO DAMAGE THE FABRIC DURING OR AFTER PLACEMENT. IF DAMAGE OCCURS, REMOVE THE ROCK AND REPAIR THE SHEET BY ADDING ANOTHER LAYER OF FABRIC WITH A MINIMUM OVERLAP OF 300mm AROUND THE DAMAGED AREA. IF EXTENSIVE DAMAGE IS SUSPECTED, REMOVE AND REPLACE THE ENTIRE SHEET.
37. WHERE LARGE ROCK IS USED, OR MACHINE PLACEMENT IS DIFFICULT, A MINIMUM 100mm LAYER OF FINE GRAVEL, AGGREGATE, OR SAND MAY BE NEEDED TO PROTECT THE FABRIC.
38. PLACEMENT OF ROCK SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER FABRIC. PLACE ROCK SO THAT IT FORMS A DENSE, WELL GRADED MASS OF ROCK WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF ROCK THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY AND CONTROLLED DUMPING DURING FINAL PLACEMENT.
39. THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL ROCK OR CLUSTERS OF LARGE ROCKS. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF ROCK SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE ROCK SHOULD BLEND WITH THE SURROUNDING AREA. NO OVER FALL OR PROTRUSION OF ROCK SHOULD BE APPARENT.
40. ENSURE THAT THE FINAL ARRANGEMENT OF THE SPILLWAY CREST WILL NOT PROMOTE EXCESSIVE FLOW THROUGH THE ROCK SUCH THAT THE WATER CAN BE RETAINED WITHIN THE SETTLING BASIN AT THE ELEVATION NO LESS THAN 50mm ABOVE OF BELOW THE NOMINATED SPILLWAY CREST ELEVATION.

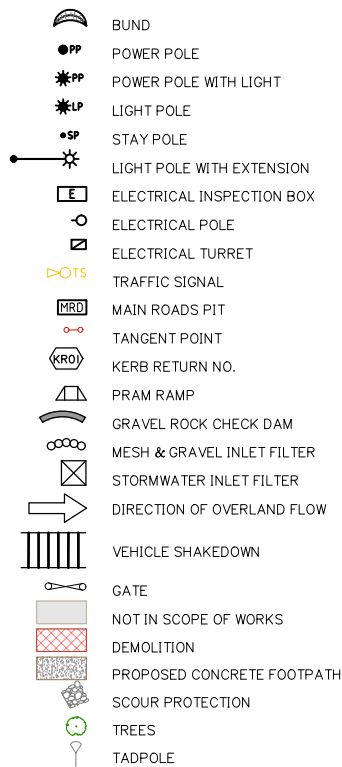
	OVERLAND FLOW PATH/SWALE
	CATCH DRAIN (NOT LINED)
	DIVERSION CHANNEL
	TABLE DRAIN
	STREAM INVERT
	CATCH DRAIN (CONCRETE LINED)
	SUBSOIL DRAINAGE
	SAWCUT
	SEDIMENT FENCE
	CHAINWIRE FENCE
	WOODEN FENCE
	BRIFEN WIRE SAFETY BARRIER
	GUARDRAIL (STANDARD)
	RETAINING WALL (PILED)
	RETAINING WALL (WITH FOOTINGS)
	RETAINING WALL
	ROCKBLOCK RETAINING WALL
	TOP OF BATTER / BERM
	NOISE WALL
	EDGE OF VEGETATION
	PROPERTY LINE
	PROPERTY LINE WITH FENCE
	PROPOSED KERB, FOOTPATH
	CONTROL LINE / CENTER OF ROAD
	RAILWAY (MAJOR)
	RAILWAY (MINOR)
	EXISTING PROPERTY LINE
	EXISTING PROPERTY LINE WITH FENCE
	EXISTING KERB, FOOTPATH
	EXISTING EDGE OF BITUMEN
	EXISTING RAILWAY (MAJOR)
	EXISTING RAILWAY (MINOR)
	LIMIT OF WORKS
	LIMIT OF SITE
	CATCHMENT BOUNDARY
	EXISTING CONTOURS
	DESIGN CONTOURS

RM	RM	RM	PROPOSED RISING MAIN
S	S	S	PROPOSED SEWER
			PROPOSED STORMWATER
SW	SW	SW	PROPOSED EXTERNAL STORMWATER
RW	RW	RW	PROPOSED ROOFWATER
SS	SS	SS	PROPOSED SUBSOIL
W	W	W	PROPOSED WATER
FW	FW	FW	PROPOSED RECYCLED WATER
OIL	OIL	OIL	PROPOSED OIL
F	F	F	PROPOSED FUEL
G	G	G	PROPOSED GAS
P	P	P	PROPOSED PIPELINE
HV	HV	HV	PROPOSED HIGH VOLTAGE ELECTRICITY
E	E	E	PROPOSED UNDERGROUND ELECTRICITY
X	X	X	PROPOSED OVERHEAD ELECTRICITY
L	L	L	PROPOSED LIGHTING
T	T	T	PROPOSED TELSTRA
C	C	C	PROPOSED COMMUNICATIONS
GE	GE	GE	PROPOSED GAS, ELECT
GT	GT	GT	PROPOSED GAS, TELSTRA
ET	ET	ET	PROPOSED ELECT, TELSTRA
GET	GET	GET	PROPOSED GAS, ELECTRICITY, TELSTRA
RM	RM	RM	EXISTING RISING MAIN
S	S	S	EXISTING SEWER
			EXISTING STORMWATER
SW	SW	SW	EXISTING ROOFWATER
RW	RW	RW	EXISTING SUBSOIL
SS	SS	SS	EXISTING WATER
W	W	W	EXISTING RECYCLED WATER
FW	FW	FW	EXISTING OIL
OIL	OIL	OIL	EXISTING FUEL
F	F	F	EXISTING GAS
G	G	G	EXISTING PIPELINE
P	P	P	EXISTING HIGH VOLTAGE ELECTRICITY
HV	HV	HV	EXISTING UNDERGROUND ELECTRICITY
E	E	E	EXISTING OVERHEAD ELECTRICITY
X	X	X	EXISTING LIGHTING
L	L	L	EXISTING TELSTRA
T	T	T	EXISTING COMMUNICATIONS
C	C	C	EXISTING GAS, ELECT
GE	GE	GE	EXISTING GAS, TELSTRA
GT	GT	GT	EXISTING ELECT, TELSTRA
ET	ET	ET	EXISTING GAS, ELECTRICITY, TELSTRA
GET	GET	GET	

— RM — X — RM — X — RM — X — RM — X —	DEMOLISH RISING MAIN
— S — X — S — X — S — X — S — X —	DEMOLISH SEWER
— SW — X — SW — X — SW — X — SW — X —	DEMOLISH STORMWATER
— SS — X — SS — X — SS — X — SS — X —	DEMOLISH SUBSOIL
— W — X — W — X — W — X — W — X —	DEMOLISH WATER
— OIL — X — OIL — X — OIL — X — OIL — X —	DEMOLISH OIL
— F — X — F — X — F — X — F — X —	DEMOLISH FUEL
— HV — X — HV — X — HV — X — HV — X —	DEMOLISH HIGH VOLTAGE ELECTRICITY
— E — X — E — X — E — X — E — X —	DEMOLISH UNDERGROUND ELECTRICITY
— E — X — E — X — E — X — E — X —	DEMOLISH OVERHEAD ELECTRICITY
— L — X — L — X — L — X — L — X —	DEMOLISH LIGHTING
— G — X — G — X — G — X — G — X —	DEMOLISH GAS
— P — X — P — X — P — X — P — X —	DEMOLISH PIPELINE
— T — X — T — X — T — X — T — X —	DEMOLISH TELSTRA
— C — X — C — X — C — X — C — X —	DEMOLISH COMMUNICATIONS

BK(A)	BARRIER KERB (A)
BK(B)	BARRIER KERB (B)
BK(G)	BARRIER KERB (G)
MK(D)	MOUNTABLE KERB (D)
SMK(C)	SEMI MOUNTABLE KERB (C)
ER(E)	EDGE RESTRAINT (E)
KER(F)	KERB EDGE RESTRAINT (F)
RK&C(H)	ROLL TOP KERB & CHANNEL (H)
BK&C(J)	BARRIER KERB & CHANNEL (J)
ERH	KERB EDGE RESTRAINT (HIGH)
ERL	KERB EDGE RESTRAINT (LOW)
CS(K/L)	CHANNEL SECTION (K/L)
PMB	PRECAST MOTOR BED
DD	DISH DRAIN
K&G	KERB AND GUTTER
K&T	KERB AND TOE
KO	KERB ONLY
MK	MOUNTABLE KERB
RK	ROLL KERB
	EXISTING SIGN
	PROPOSED SIGN
	PROPOSED ROAD EDGE GUIDE POST
	EXISTING BIN
	POST BOX
	TELEPHONE BOX
	TELSTRA PIT
	TELSTRA MARKER POST
	WATER METER
	WATER VALVE
	FIRE HYDRANT
	WATER TAP
	WATER HYDRANT
	WATER TEE
	WATER REDUCER
	WATER ENDCAP
	WATER CONNECTION
	WATER CROSSING
	WATER DIEL
	SEWER MANHOLE
	SEWER RODDING END
	SEWER BEND
	SEWER MAINTENANCE SHAFT
	SEWER 'T' END
	SEWER SLUICE VALVE
	SEWER PIT
	SEWER PUMP STATION
	TEMPORARY SEWER PUMP STATION
	SEWER / STORMWATER PIT NO/LINE
	SETOUT POINT
	OFFSET PIT WITH GRATE
	IN LINE PIT WITH GRATE
	JUNCTION PIT
	LETTERBOX PIT
	GRATED INLET PIT
	MANHOLE
	GULLY PIT (LIP INLINE) BARRIER KERB
	GULLY PIT (LIP INLINE) BARRIER KERB
	GULLY PIT (LIP INLINE) ROLL TOP KERB
	GULLY PIT (LIP INLINE) ROLL TOP KERB
	GULLY PIT (KERB INLINE) – GRADE
	GULLY PIT (KERB INLINE) – SAG
	INFILTRATION TRENCH
	HEADWALL
	GROSS POLLUTANT TRAP
	STORMWATER CHAMBER

LEGEND



Project:

VANTAGE YATALA

Site Address:

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LEGEND

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

NOT APPLICABLE

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NTS

Designed:

IC

Drafted:

DA

Approved:

MC

RPEQ:

16030

Signed:

Michael K...

Date:

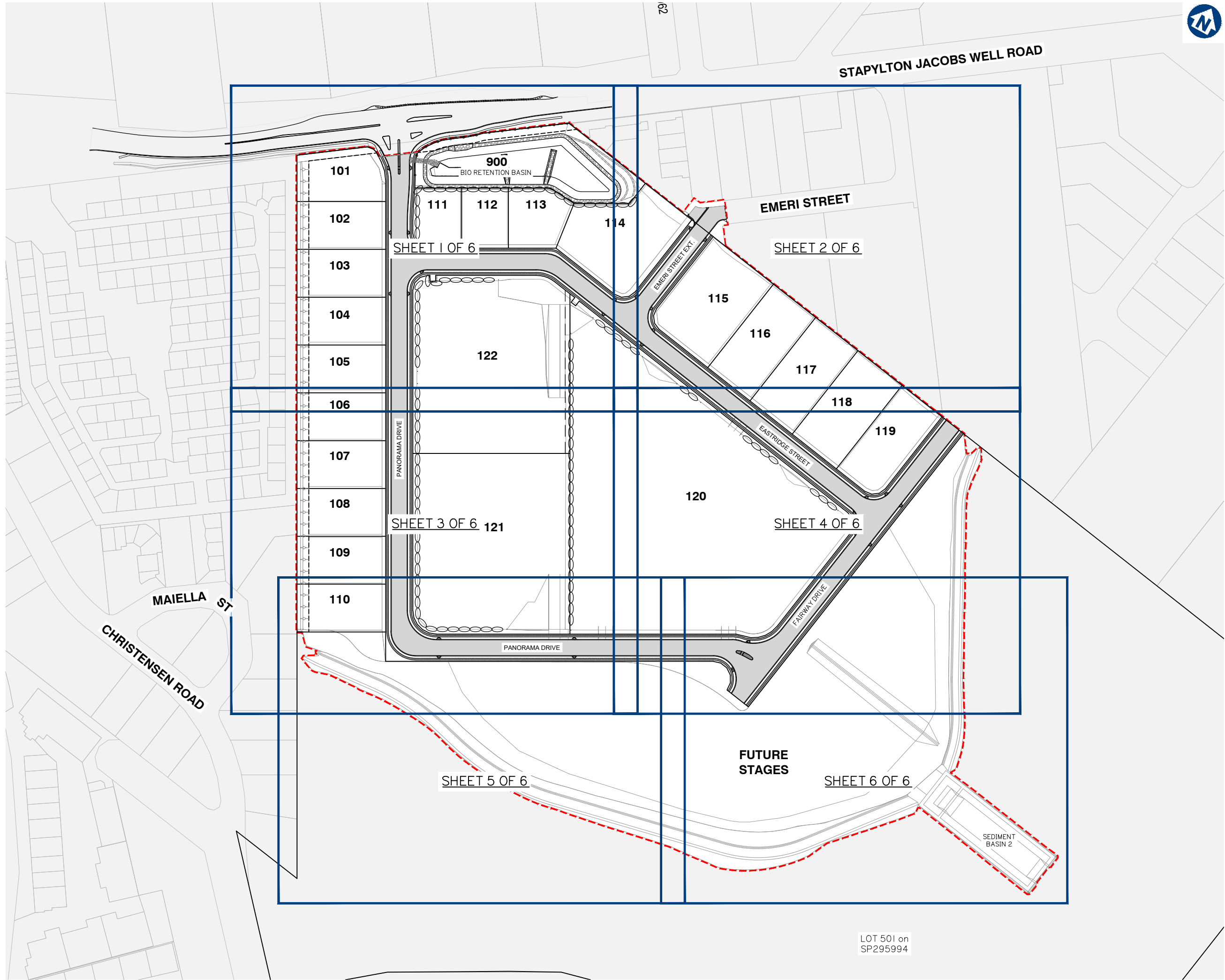
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KEY PLAN LAYOUT

Issue	Date	Original Issue Description	BA	MG	CHK
A	01-05-2020	ORIGINAL ISSUE	BA	MG	CHK

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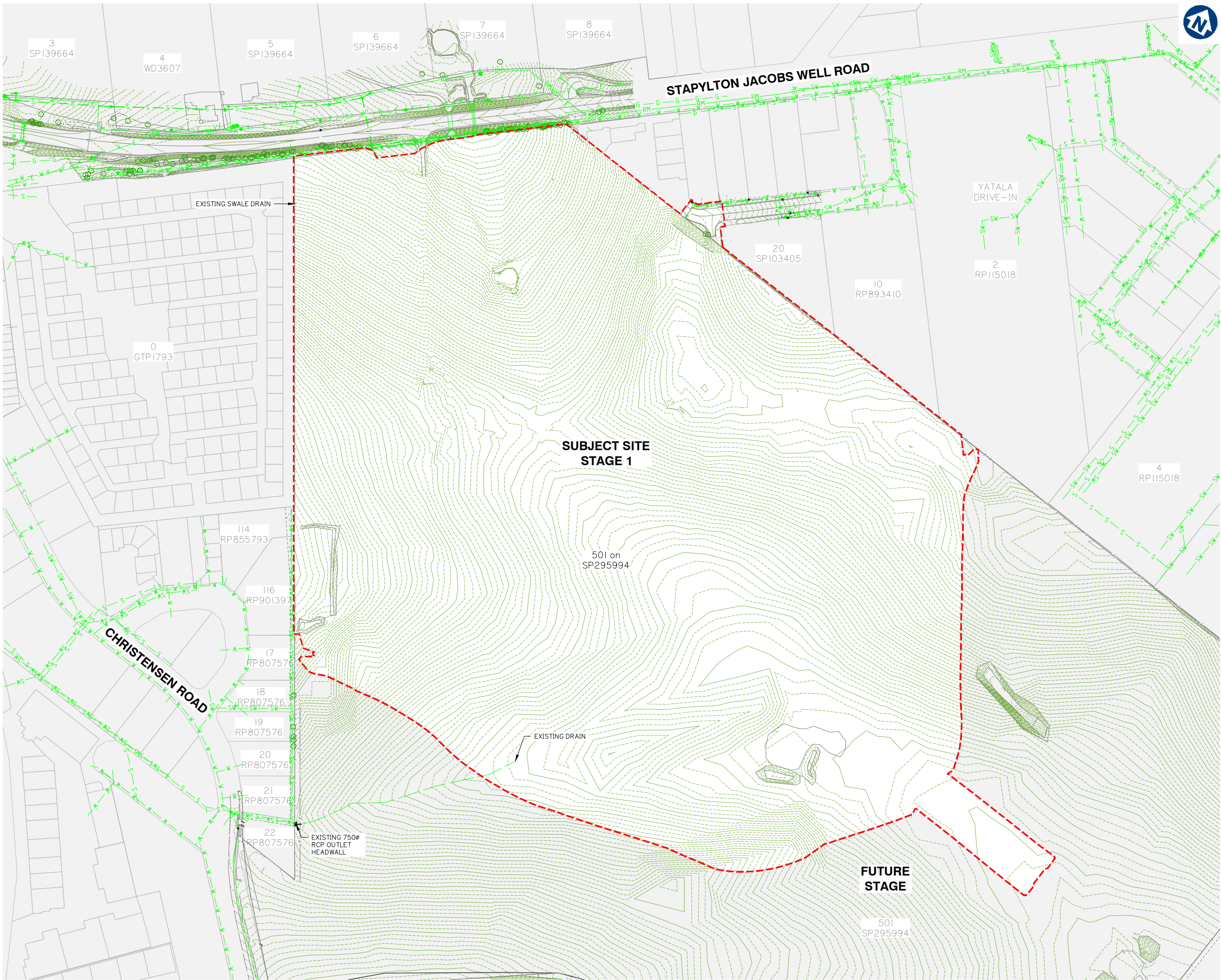
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
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Rev. No:
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EXISTING SURFACE AND FEATURE PLAN

Client:



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EXISTING SURFACE AND
FEATURE PLAN

Issue	Date	Original Issue Description	BA DRN	MG CHK
A	01-05-2020	ORIGINAL ISSUE	BA	MG

SCALE IN METRES



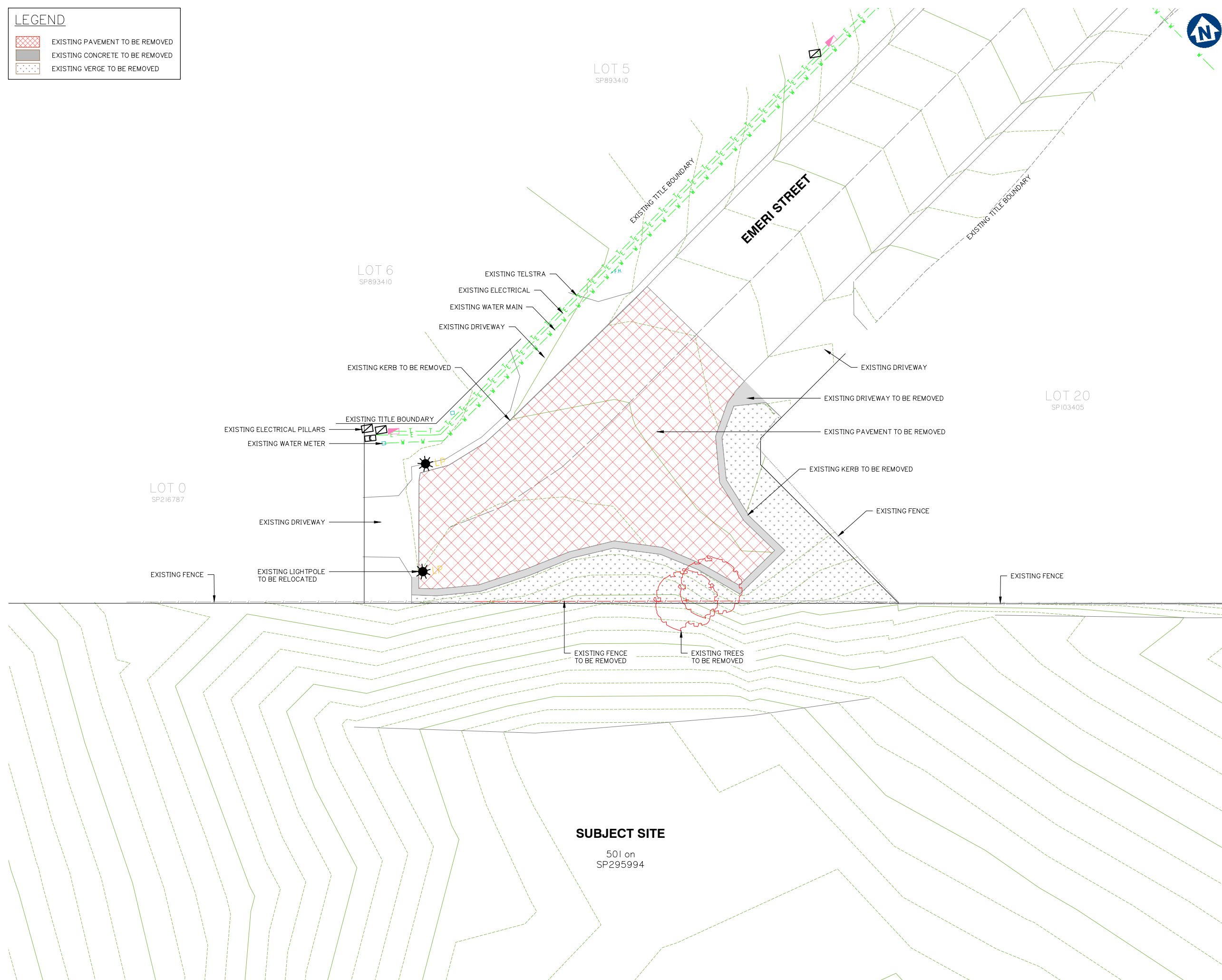
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	EXISTING PAVEMENT TO BE REMOVED
	EXISTING CONCRETE TO BE REMOVED
	EXISTING VERGE TO BE REMOVED



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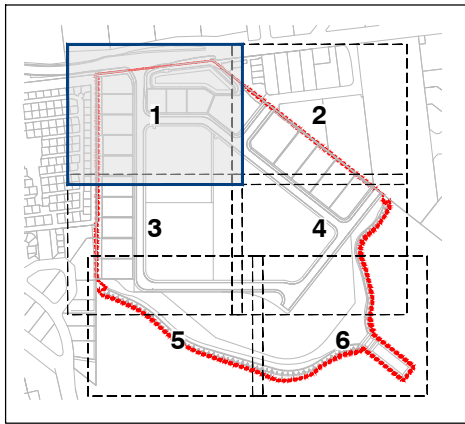


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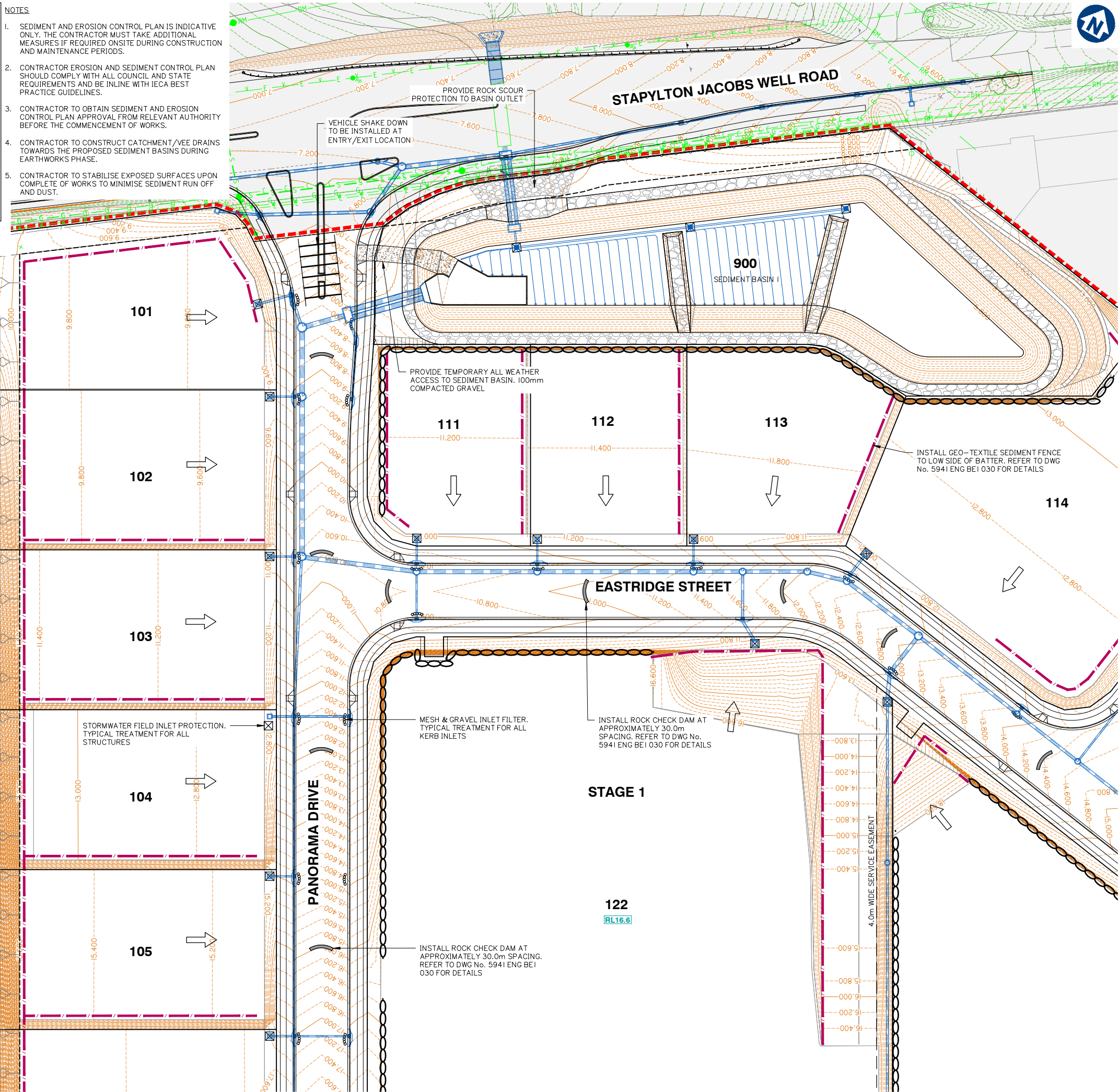
Drawing No:	Rev. N
5941 ENG OPW1 020	A



KEY PLAN
SCALE 1:7500

NOTES

1. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY. THE CONTRACTOR MUST TAKE ADDITIONAL MEASURES IF REQUIRED ONSITE DURING CONSTRUCTION AND MAINTENANCE PERIODS.
2. CONTRACTOR EROSION AND SEDIMENT CONTROL PLAN SHOULD COMPLY WITH ALL COUNCIL AND STATE REQUIREMENTS AND BE IN LINE WITH IECA BEST PRACTICE GUIDELINES.
3. CONTRACTOR TO OBTAIN SEDIMENT AND EROSION CONTROL PLAN APPROVAL FROM RELEVANT AUTHORITY BEFORE THE COMMENCEMENT OF WORKS.
4. CONTRACTOR TO CONSTRUCT CATCHMENT/VEE DRAINS TOWARDS THE PROPOSED SEDIMENT BASINS DURING EARTHWORKS PHASE.
5. CONTRACTOR TO STABILISE EXPOSED SURFACES UPON COMPLETE OF WORKS TO MINIMISE SEDIMENT RUN OFF AND DUST.



SEDIMENT AND EROSION CONTROL PLAN SHEET 1 OF 6

Client:



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Project:

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DRAWING TITLE
SEDIMENT AND
EROSION CONTROL
PLAN SHEET 1 OF 6

Issue	Date	Original Issue Description	BA	MG
A	01-05-2020		DRN	CHK

SCALE IN METRES

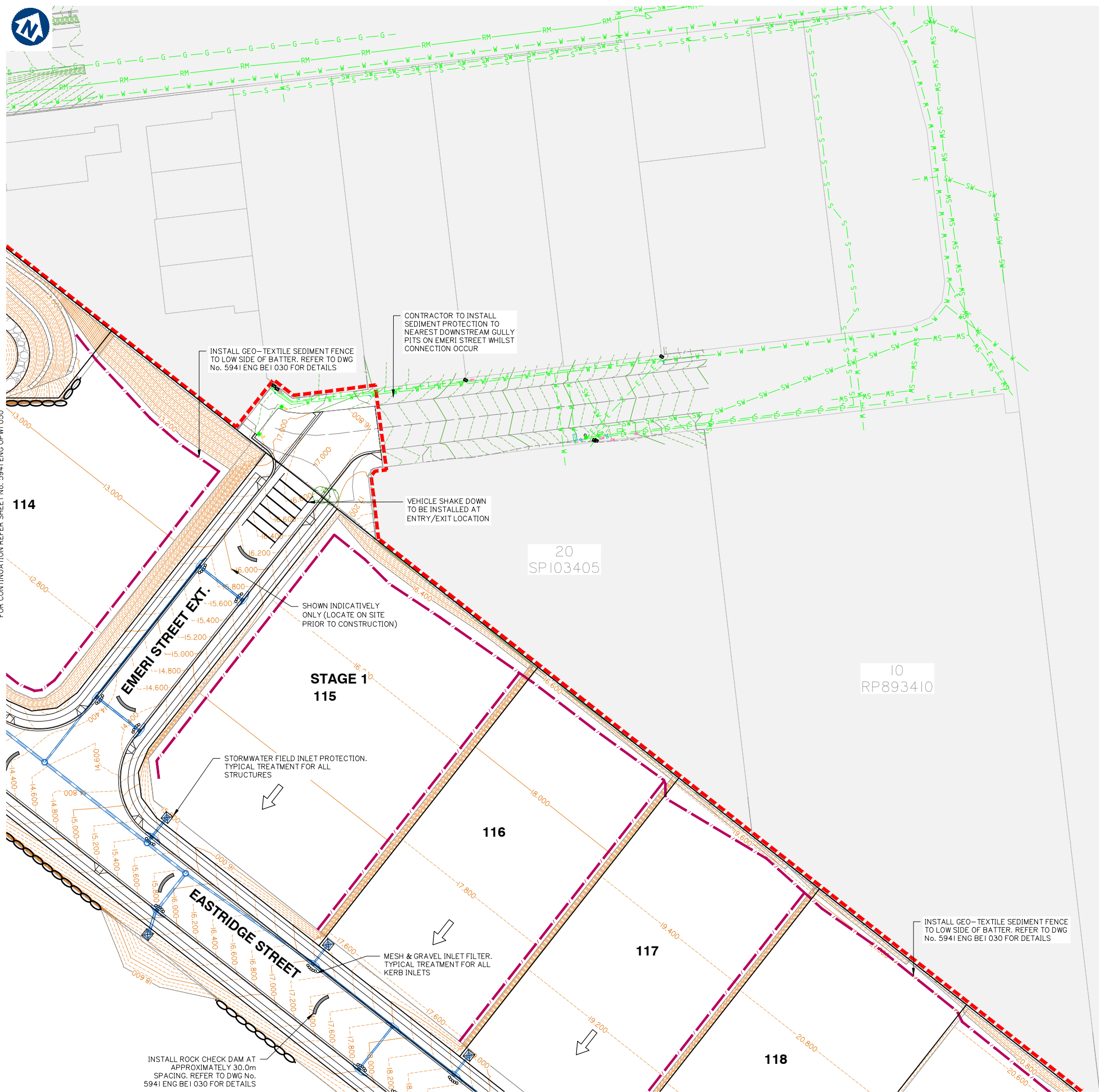


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5. CONTRACTOR TO STABILISE EXPOSED SURFACES UPON COMPLETE OF WORKS TO MINIMISE SEDIMENT RUN OFF AND DUST.

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DRAWING TITLE
SEDIMENT AND
EROSION CONTROL
PLAN SHEET 2 OF 6

A	01-05-2020				ORIGINAL ISSUE		BA	MG	
Issue Date					Description		TEN	(2x)	

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5941 ENG OPW1 051	A



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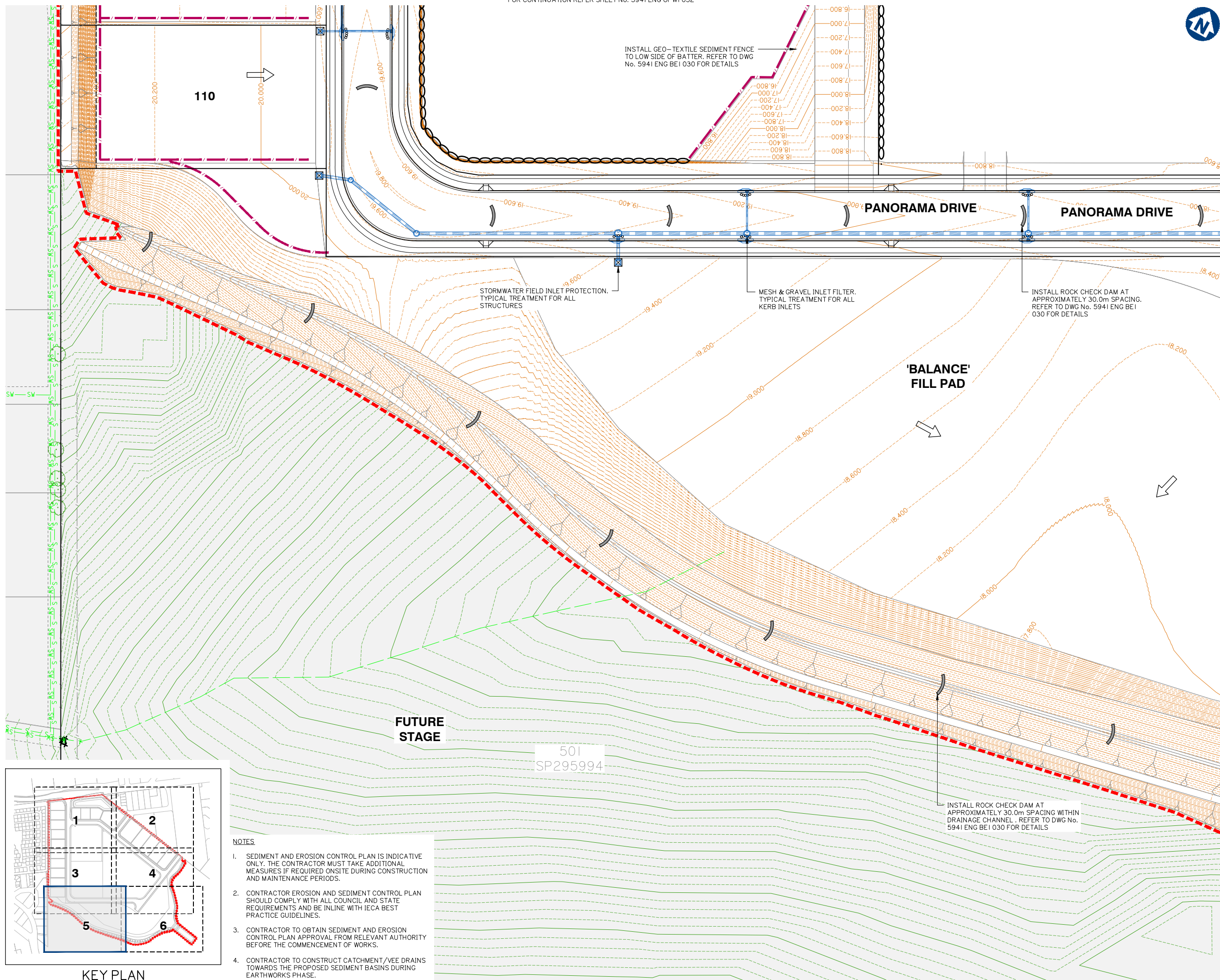


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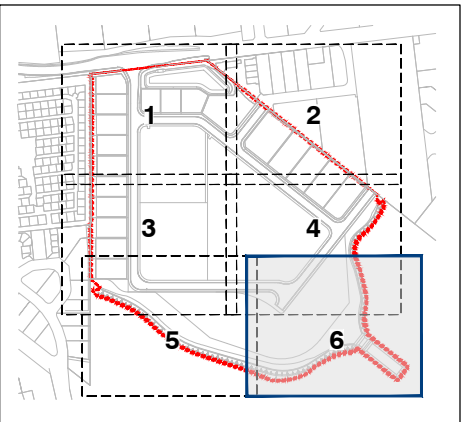
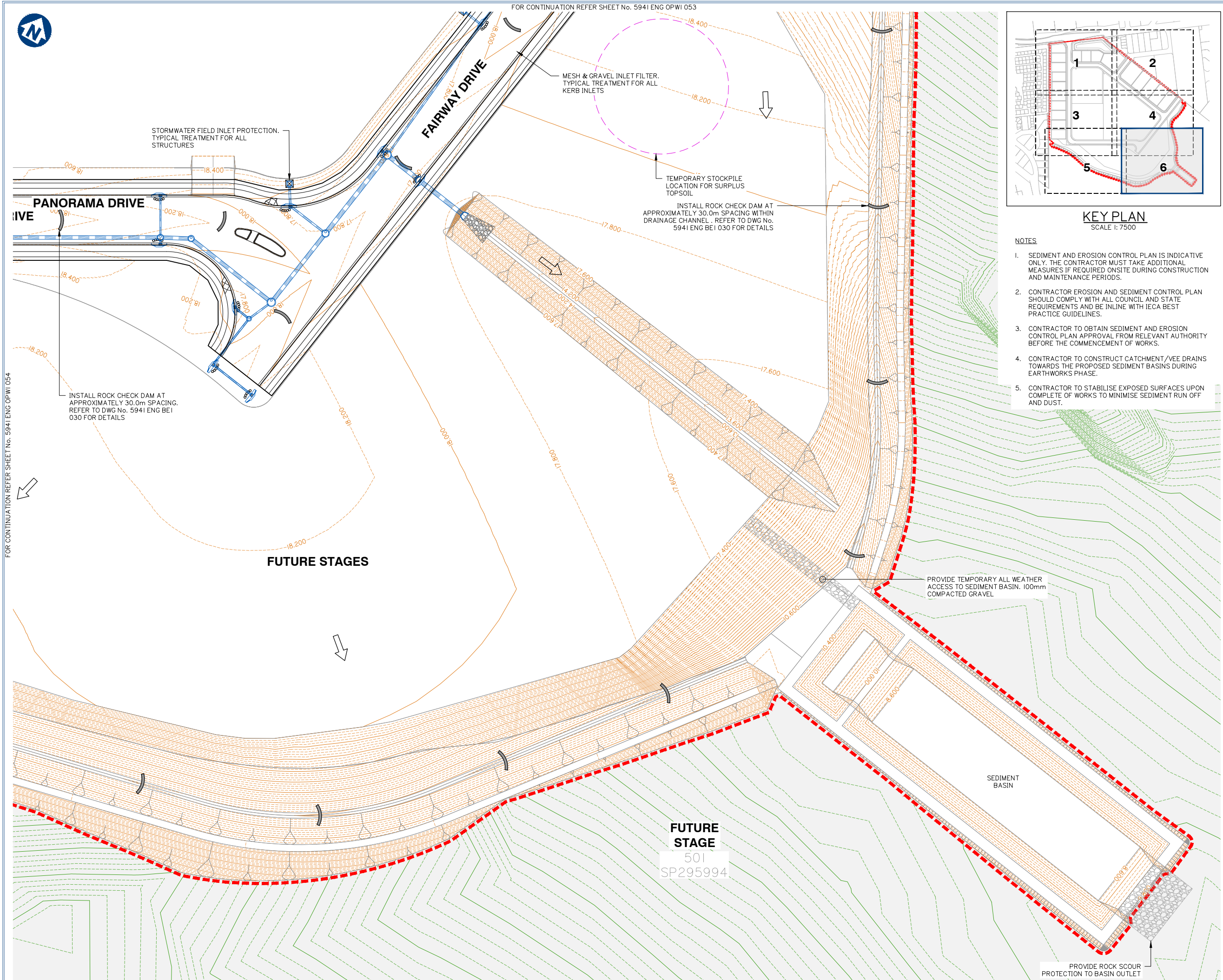
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KEY PLAN
SCALE 1: 7500

NOTES

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SEDIMENT AND EROSION CONTROL PLAN SHEET 4 OF 6



NOTES

1. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY. THE CONTRACTOR MUST TAKE ADDITIONAL MEASURES IF REQUIRED ONSITE DURING CONSTRUCTION AND MAINTENANCE PERIODS.
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Project:

VANTAGE YATALA

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SEDIMENT AND
EROSION CONTROL
PLAN SHEET 6 OF 6

Issue	Date	Description	BA	MG	CHK
A	01-05-2020	ORIGINAL ISSUE			

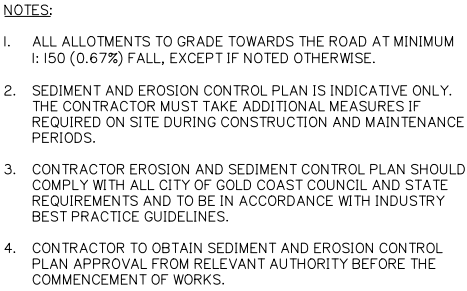
SCALE IN METRES

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Client:

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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:
60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:	
Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

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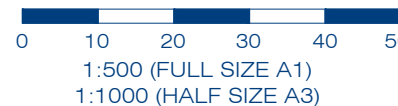
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DRAWING TITLE
CONSTRUCTION PHASE
SEDIMENT BASIN 1
LAYOUT

[illegible]

A	01-05-2020	ORIGINAL ISSUE	BA
Issue	Date	Description	DRN

SCALE IN METRES



Scale at A1: 1:500

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 056	A

CONSTRUCTION PHASE SEDIMENT BASIN LAYOUT

SCALE 1:500 (AI)

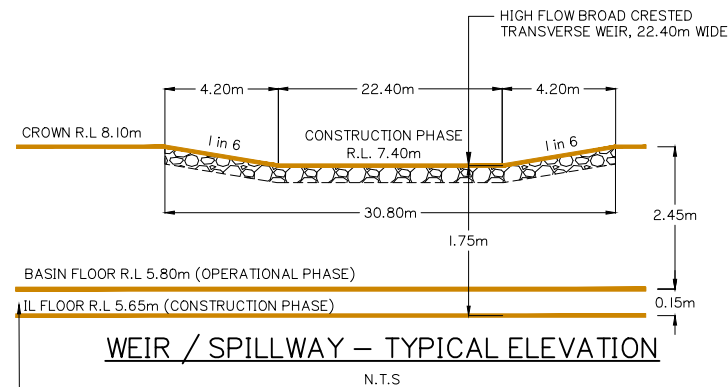
SEDIMENT BASIN DESIGN							
BASIN ID	SELECT DURATION OF CATCHMENT DISTURBANCE	IS DEWATERING OF TRENCHES REQUIRED?	EQUIPMENT LEASE OR PURCHASE?	SELECT CATCHMENT SCALE	DO ALL FLOWS ENTER BASIN AT SINGLE POINT?	BASIN TYPE	DOSING EQUIPMENT
No. 1	> 12 MONTHS	NO	LEASE	> 5Ha	NO	TYPE A	IFOD–RAIN

BASIN ID	CATCHMENT AREA	DESIGN EVENT	$I_{x,yr}$, 24 hr	WATER TEMPERATURE	K_s	SETTLING ZONE DEPTH (D_s)	W: L	OPTIMUM LOW-FLOW DECAT RATE	SELECTED LOW-FLOW DECAT RATE (Q_A)	MIN SETTLING ZONE VOLUME (Min V_s)	MIN SETTLING ZONE SURFACE AREA (Min A_s)	LIMITING CRITERIA
	(Ha)	(1: X YEARS)	(mm/hr)	(°C)	(s/m)	(m)	(1: X)	(L/s/Ha)	(L/s/Ha)	(m³)	(m²)	
No. 1	15.071	I	4.53	20	11150	1.3	4.8	9	9	3704	1512	VOLUME

	SETTLING ZONE				FREE WATER ZONE		SEDIMENT STORAGE ZONE		OVERALL DIMENSIONS RELATIVE TO SPILLWAY CREST (EXCL. FOREBAY)			
BASIN ID	ACTUAL SETTLING ZONE VOLUME (V _s)	ACTUAL SETTLING ZONE AREA (A _s)	SCOUR VELOCITY	DEPTH OF FREE WATER ZONE	VOLUME OF FREE WATER ZONE	SEDIMENT STORAGE VOLUME	SEDIMENT STORAGE DEPTH (APPROX.)	BATTER	WIDTH	LENGTH	DEPTH	
	(m ³)	(m ²)	(m/s)	(m)	(m ³)	(m ³)	(m)	(1:X)	(m)	(m)	(m)	
No. 1	3704	2827	0.009	0.22	370	1111	0.47	3	28.2	135.4	2.00	

		SPILLWAY									
BASIN ID	BASIN DESIGN LIFE	DESIGN ARI	C ₁₀	C	t _c	I	Q	HEAD OVER SPILLWAY	SPILLWAY CREST LENGTH	SPILLWAY CREST RL	MIN EMBANKMENT RL
		yr				(mm/hr)	(m ³ /s)	(m)	(m)	(m)	(m)
No. 1	> 12 MONTHS	1: 50	0.85	0.98	20.00	160.00	6.55	0.25	30.80	7.40	8.10

BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS			
	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	LEVEL SPREADER CREST (RL)
No.1	5185.2	135.4	28.2	2.00	763.40	13.5	28.2	2.00	30.8	7.40	8.10	7.60

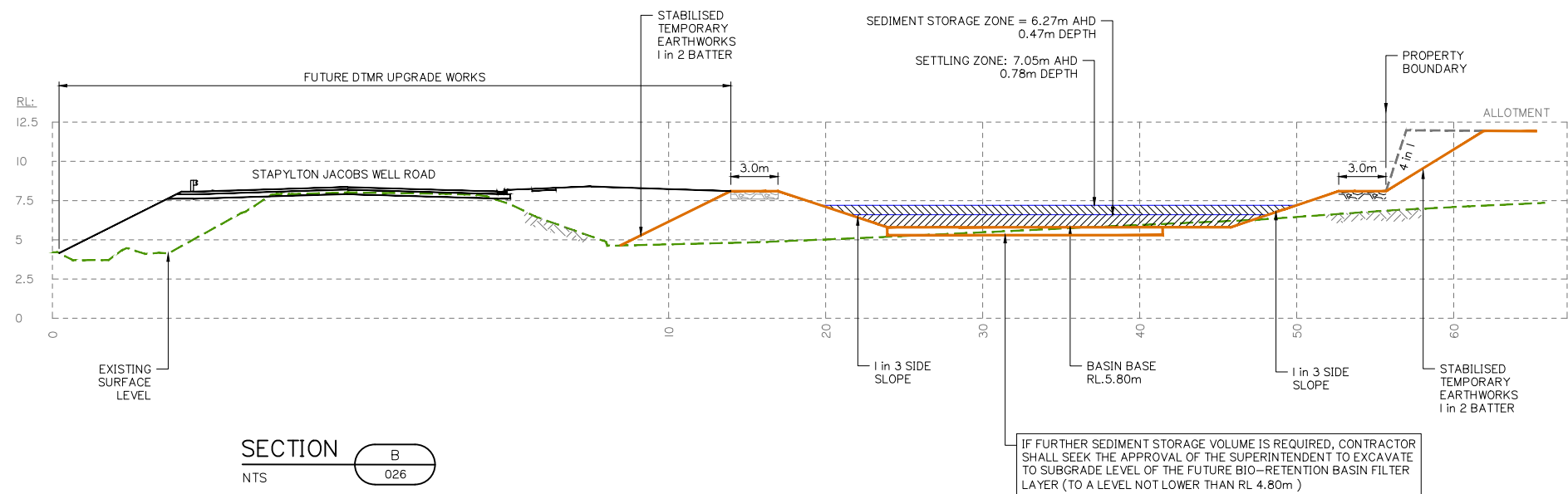


MAINTENANCE ACCESS TRACK – TYPICAL SECTION

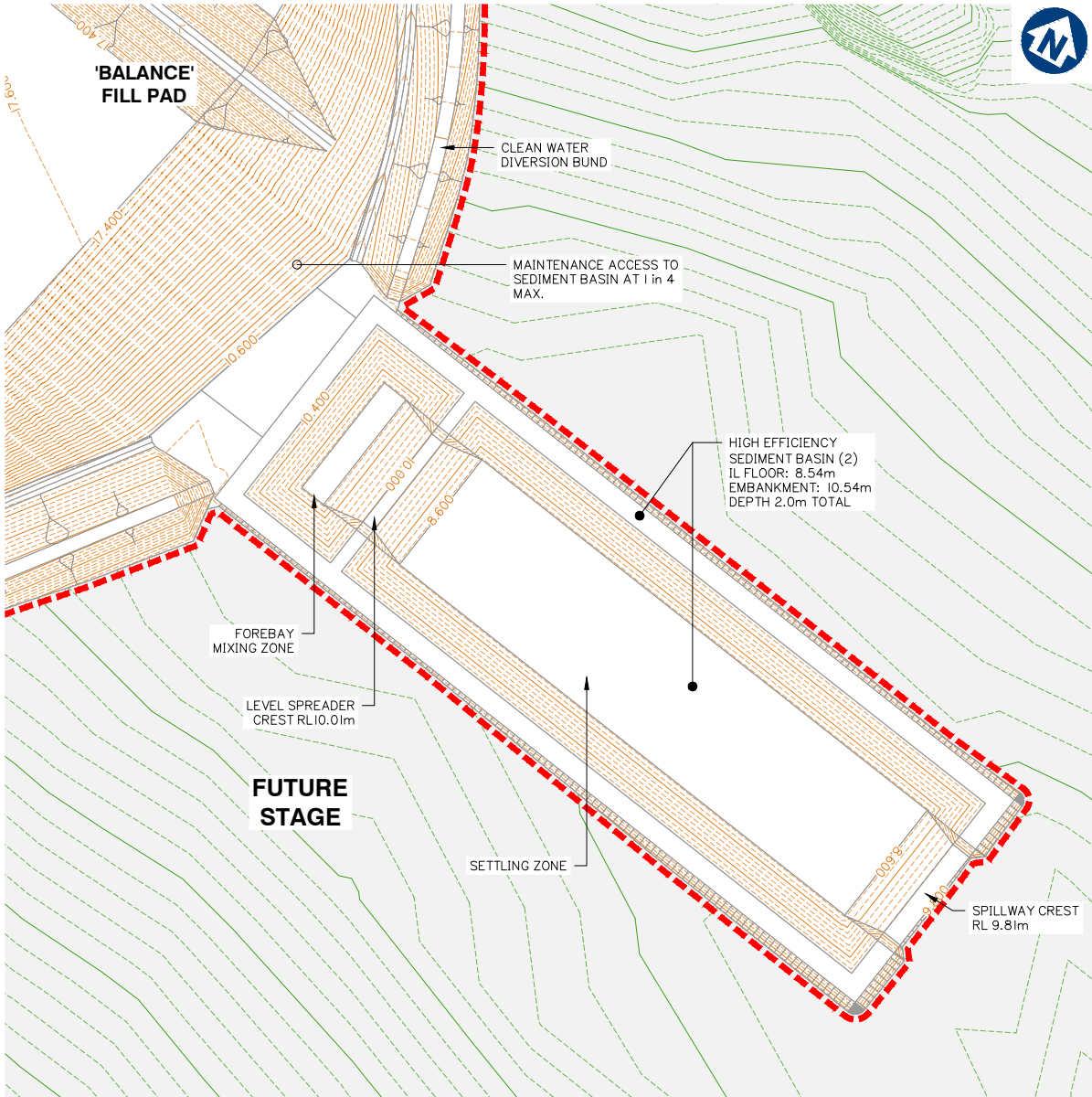
N.T.S

IF FURTHER SEDIMENT STORAGE VOLUME IS REQUIRED, CONTRACTOR SHALL SEEK THE APPROVAL OF THE SUPERINTENDENT TO EXCAVATE TO SUBGRADE LEVEL OF THE FUTURE BIO-RETENTION BASIN FILTER LAYER (TO A LEVEL NOT LOWER THAN RL 4.80m)

CONSTRUCTION PHASE SEDIMENT BASIN LAYOUT



Drawing No:	Rev. No:
5941 ENG OPW1 057	A



CONSTRUCTION PHASE SEDIMENT BASIN 2 LAYOUT
SCALE 1: 500 (A1)

DESIGN SEDIMENT BASIN PARAMETERS												
BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS			
	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	LEVEL SPREADER CREST (RL)
No.2	4113.1	94.0	31.3	2.00	589.57	9.4	31.3	2.00	19.1	9.81	10.54	10.01

BASIN ID	SELECT DURATION OF CATCHMENT DISTURBANCE	IS DEWATERING OF TRENCHES REQUIRED?	EQUIPMENT LEASE OR PURCHASE?	SELECT CATCHMENT SCALE	DO ALL FLOWS ENTER BASIN AT SINGLE POINT?	BASIN TYPE	DOSING EQUIPMENT	DEWATERING EQUIPMENT
No. 2	> 12 MONTHS	NO	LEASE	> 5Ha	NO	TYPE A	IFOD-RAIN	2.00

BASIN ID	CATCHMENT AREA	DESIGN EVENT	I_x yr. 24 hr	WATER TEMPERATURE	K_s	SETTLING ZONE DEPTH (D_s)	W: L	OPTIMUM LOW-FLOW DECAN T RATE	SELECTED LOW-FLOW DECAN T RATE (Q_d)	MIN SETT LING ZONE VOLUME (Min V_s)	MIN SETT LING ZONE SURFACE AREA (Min A_s)	LIMITING CRITERIA
	(Ha)	(1: X YEARS)	(mm/hr)	(°C)	(s/m)	(m)	(1: X)	(L/s/Ha)	(L/s/Ha)	(m³)	(m²)	
No. 2	11.955	1	4.53	20	11150	1.3	3	13	9	2938	1200	VOLUME

BASIN ID	SETTLING ZONE			FREE WATER ZONE		SEDIMENT STORAGE ZONE		OVERALL DIMENSIONS RELATIVE TO SPILLWAY CREST (EXCL. FOREBAY)			
	ACTUAL SETT LING ZONE VOLUME (V_s)	ACTUAL SETT LING ZONE AREA (A_s)	SCOUR VELOCITY	DEPTH OF FREE WATER ZONE	VOLUME OF FREE WATER ZONE	SEDIMENT STORAGE VOLUME	SEDIMENT STORAGE DEPTH (APPROX.)	BATTER	WIDTH	LENGTH	DEPTH
	(m³)	(m²)	(m/s)	(m)	(m³)	(m³)	(m)	(1: X)	(m)	(m)	(m)
No. 2	2938	2260	0.007	0.22	294	881	0.48	3	31.3	94.0	2.00

BASIN ID	BASIN DESIGN LIFE	SPILLWAY									
		DESIGN ARI	C ₁₀	C	t _c	I	Q	HEAD OVER SPILLWAY	SPILLWAY CREST LENGTH	SPILLWAY CREST RL	MIN EMBANKMENT RL
		yr				(mm/hr)	(m ³ /s)	(m)	(m)	(m)	(m)
No. 2	> 12 MONTHS	1: 50	0.88	1.01	25.00	143.00	4.81	0.28	19.10	9.81	10.54

Client:



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Project:

VANTAGE YATALA

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DRAWING TITLE

CONSTRUCTION PHASE
SEDIMENT BASIN 2 LAYOUT

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

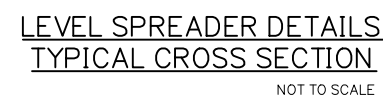


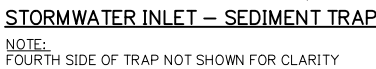
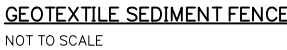
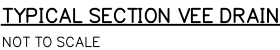
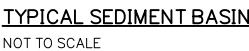
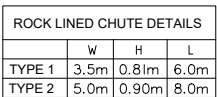
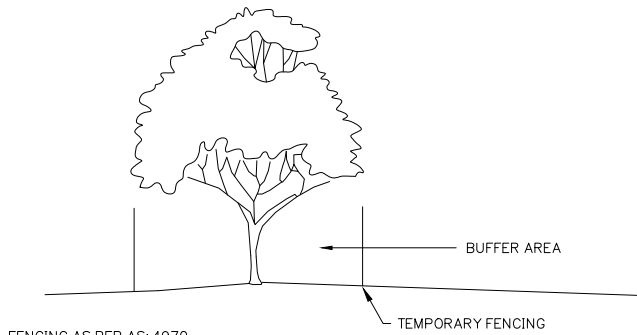
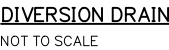
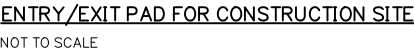
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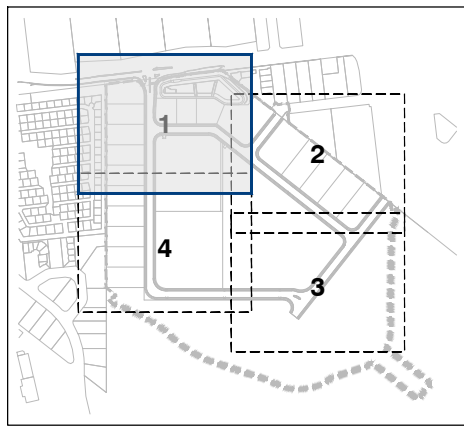
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

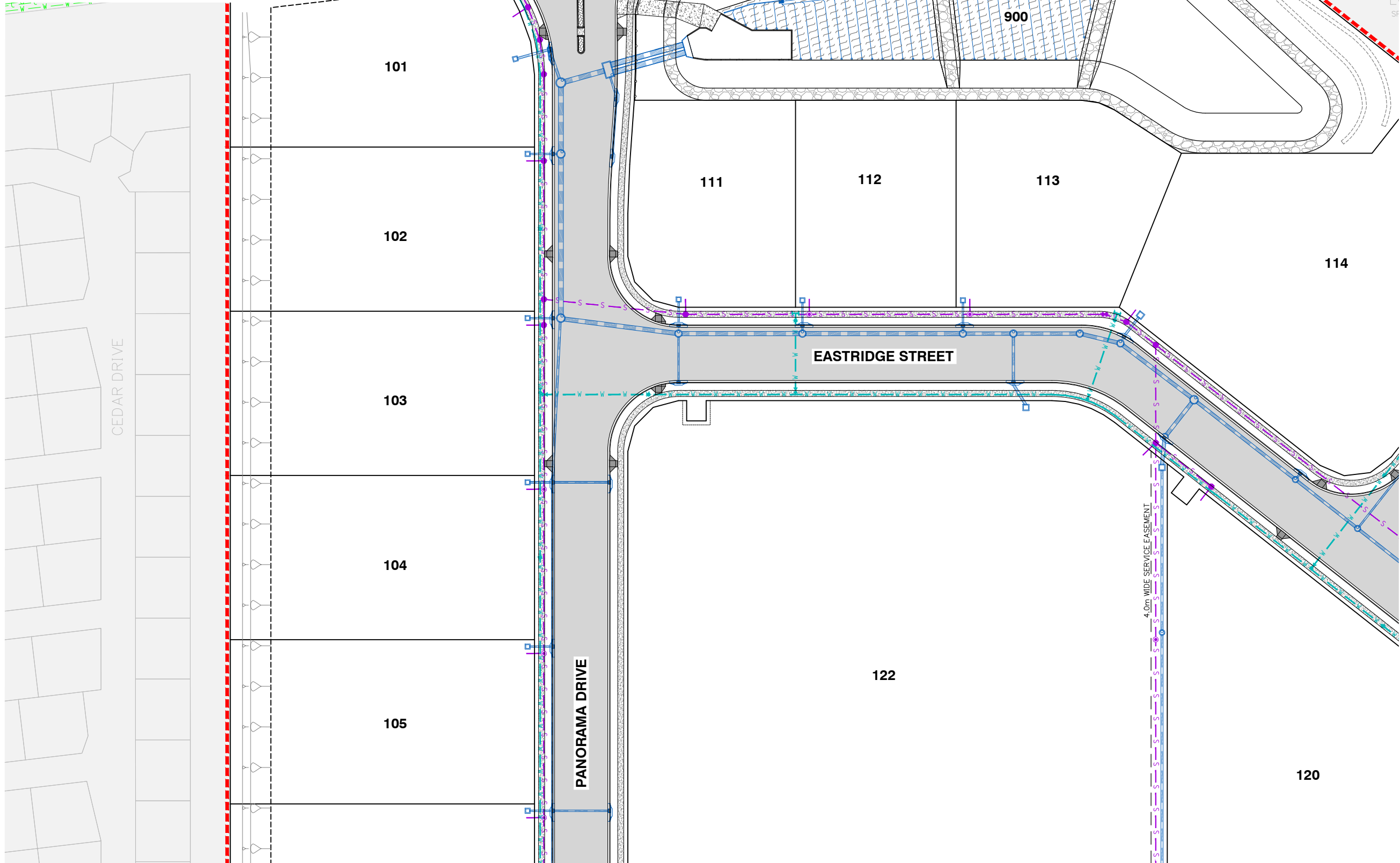
Drawing No: 5941 ENG OPW1 058
Rev. No: A







KEY PLAN
SCALE 1:7500



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NOTE:
STORMWATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW1 400 TO 5941 ENG OPW1 403
SEWER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW1 600 TO 5941 ENG OPW1 603
WATER INFORMATION AND DETAILS REFER TO SHEET 5941 ENG OPW1 700 TO 5941 ENG OPW1 703

Client:

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FRASERS PROPERTY (AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR

RPD:

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Plan: SP295994
Local Authority: CITY OF GOLD COAST COUNCIL
Level Datum: AHD
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DRAWING TITLE
OVERALL SERVICES LAYOUT
PLAN SHEET 1 OF 4

Issue	Date	Description	BA	MG	CHK
A	01-05-2020	ORIGINAL ISSUE			

SCALE IN METRES

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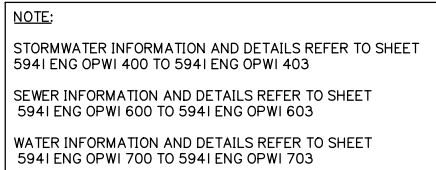
Scale at A1: 1:500

Designed:	IG
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RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 300
Rev. No: A



OVERALL SERVICES LAYOUT PLAN SHEET 2 OF 4

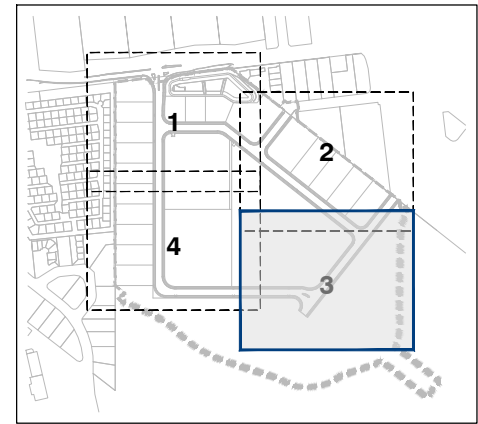


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120



KEY PLAN

SCALE 1: 7500



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RPD:

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DRAWING TITLE

OVERALL SERVICES LAYOUT
PLAN SHEET 3 OF 4

A Issue	01-05-2020 Date	ORIGINAL ISSUE Description	BA DRN	MCH

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
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RPEQ:	16939
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Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 302	A

FOR CONTINUATION REFER SHEET No.594I ENG OPWI 403

FUTURE STAGES

OVERALL SERVICES LAYOUT PLAN SHEET 3 OF 4



WARNING

NOTE:

WATER INFORMATION AND DETAILS REFER TO SHEET
594I ENG OPWI 700 TO 594I ENG OPWI 703



VANTAGE YATALA

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Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
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DRAWING TITLE

OVERALL SERVICES LAYOUT
PLAN SHEET 4 OF 4

A	01-05-2020	ORIGINAL ISSUE	BA	M3	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES



Scale at A1:	1:500
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 303	A

FOR CONTINUATION REFER SHEET No.594| ENG OPW| 401

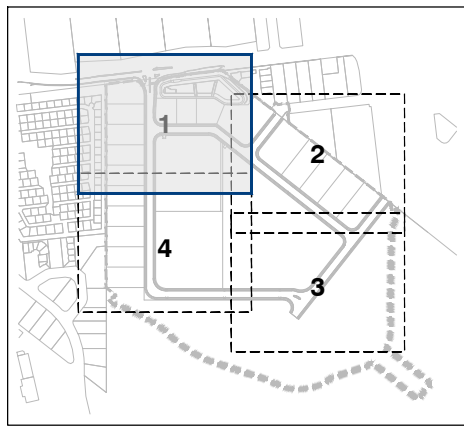
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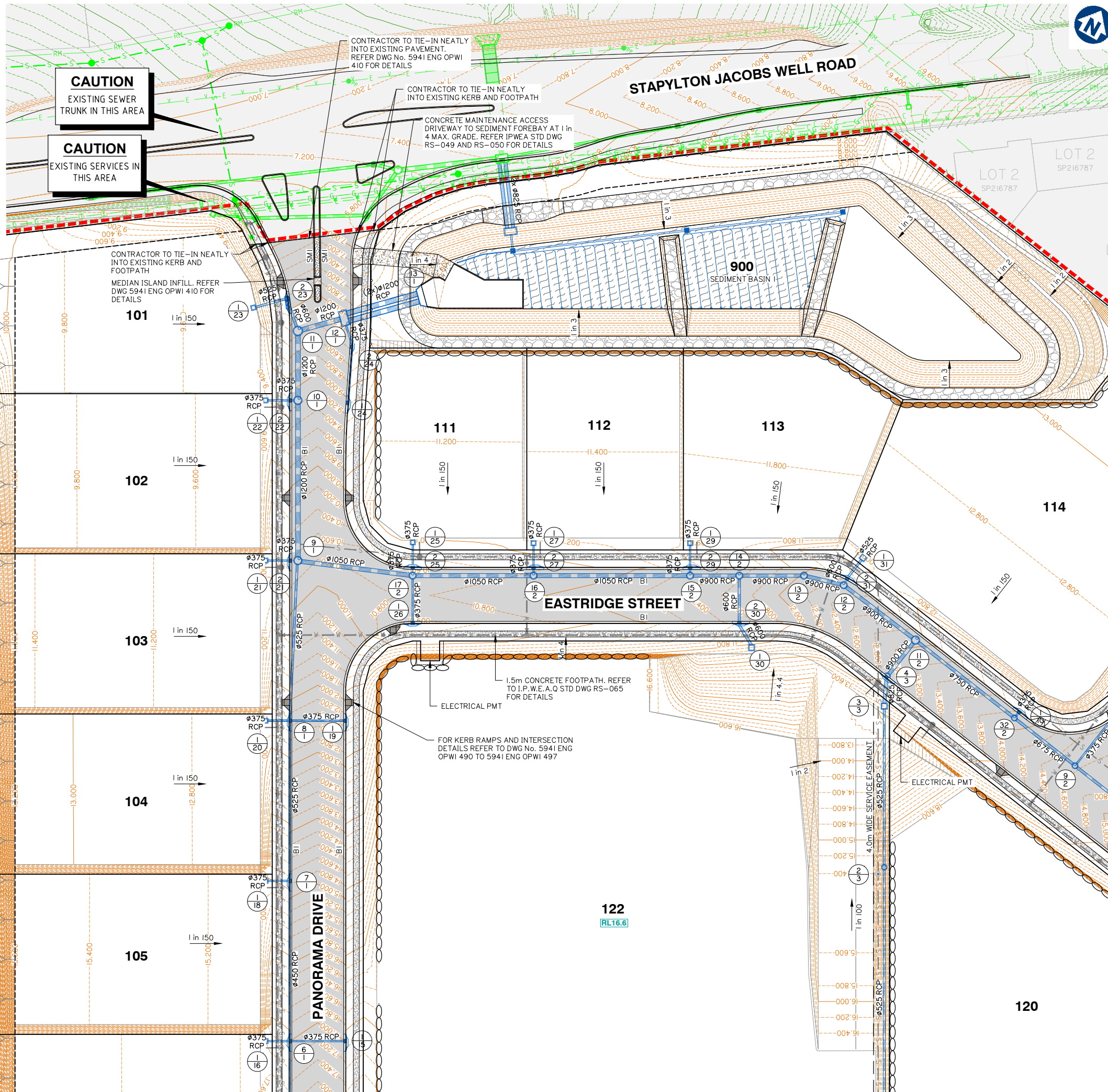
PANORAMA DRIVE

PANORAMA DRIVE

OVERALL SERVICES LAYOUT PLAN SHEET 4 OF 4



KEY PLAN
SCALE 1: 7500



ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 1 OF 4

Client:



Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL ROAD, STAPYLTON QLD 4207

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Lot: 501
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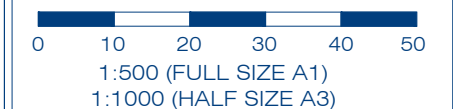
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DRAWING TITLE
ROADWORKS AND DRAINAGE LAYOUT PLAN
SHEET 1 OF 4

Issue	Date	Original Issue Description	BA	MG
A	01-05-2020	ORIGINAL ISSUE	BA	MG

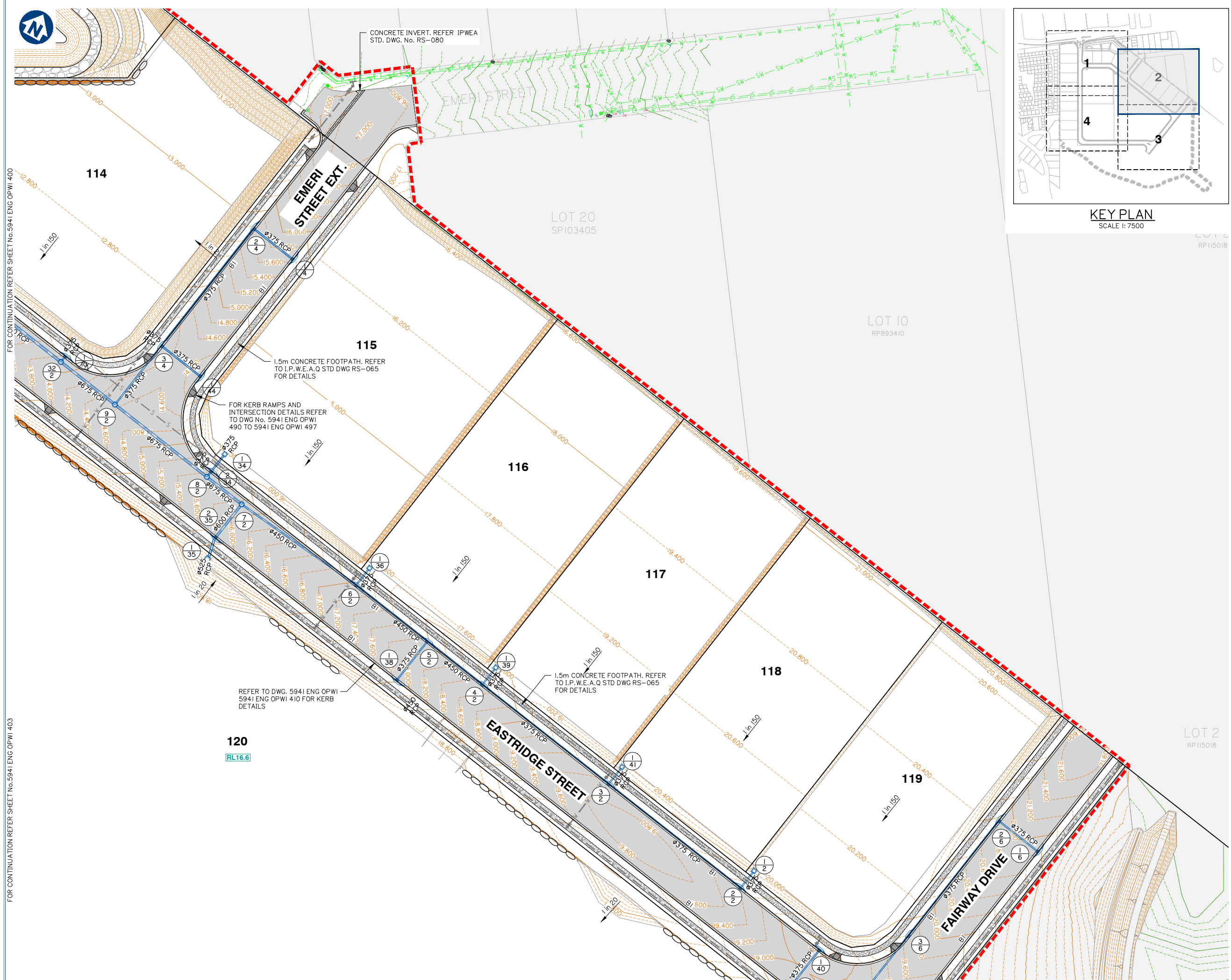
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Designed:	IG
Drafted:	BA
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RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 400
Rev. No: A



KEY PLAN

SCALE 1:7500



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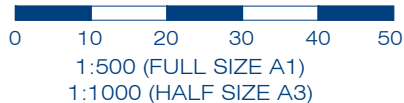
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DRAWING TITLE
ROADWORKS AND
DRAINAGE LAYOUT PLAN
SHEET 2 OF 4

A	01-05-2020	ORIGINAL ISSUE	BA	M
ISUE	Date	Description	DRN	CHI

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Drawing No:	Rev. No:
5941 ENG OPW1 401	A



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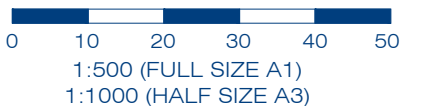
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DRAWING TITLE
ROADWORKS AND
DRAINAGE LAYOUT PLAN
SHEET 3 OF 4

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

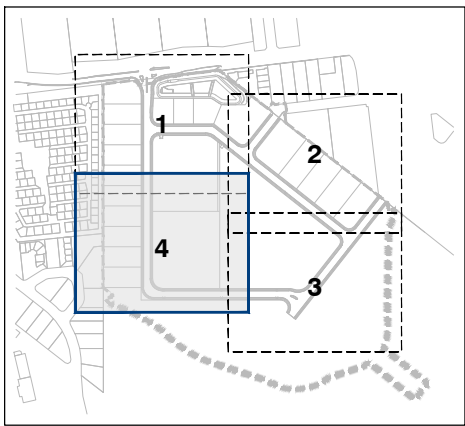
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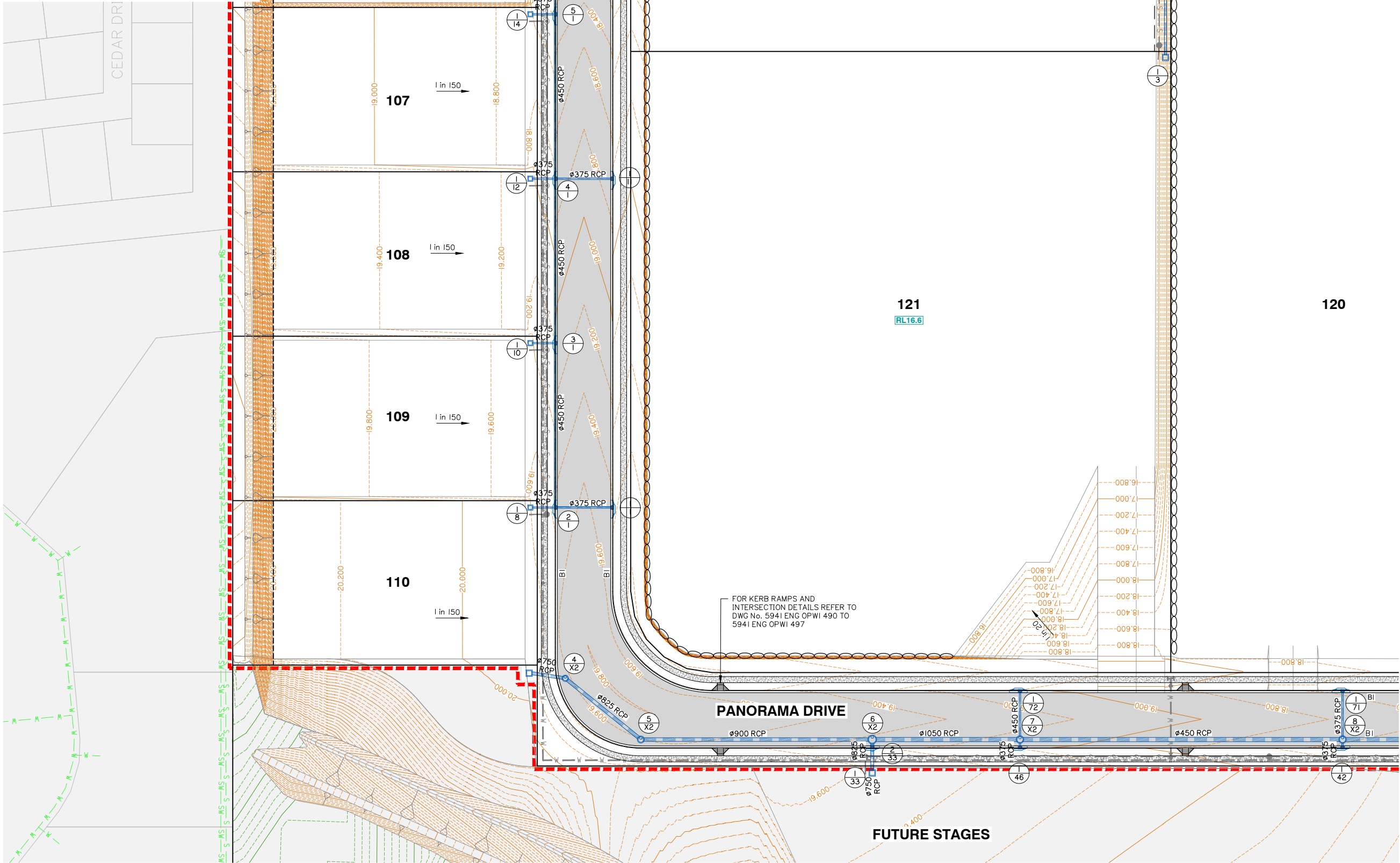
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Date:	01-05-2020

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5941 ENG OPW1 402	A



KEY PLAN
SCALE 1: 7500



ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 4 OF 4

FOR CONTINUATION REFER SHEET No.5941 ENG OPW1 400



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Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beerleigh 4207

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour interval: -
PSM: -
RL: -

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DRAWING TITLE
ROADWORKS AND
DRAINAGE LAYOUT PLAN
SHEET 4 OF 4

Issue	Date	Original Issue Description	BA	MG
A	01-05-2020	ORIGINAL ISSUE	BA	MG

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: BA

Approved: MG

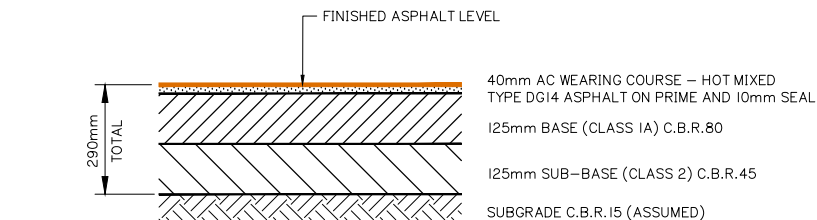
RPEQ: 16939

Signed:

Date: 01-05-2020

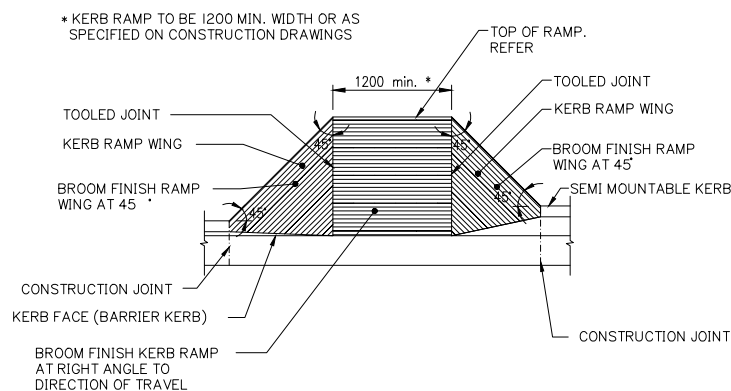
Drawing No: 5941 ENG OPW1 403
Rev. No: A

FOR CONTINUATION REFER SHEET No.5941 ENG OPW1 401



NOMINAL ROAD PAVEMENT DETAIL INDUSTRIAL COLLECTOR & ACCESS STREET

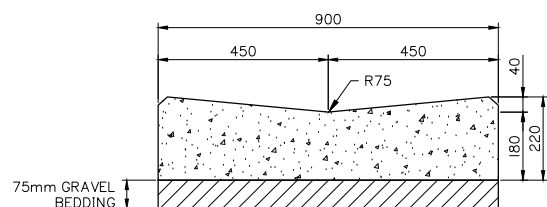
PAVEMENT DESIGN SUBJECT TO IN-SITU CBR TESTING AND
FURTHER COUNCIL APPROVAL.
N.T.S



TYPICAL COMPLIANT KERB RAMP DETAIL

NOT TO SCALE

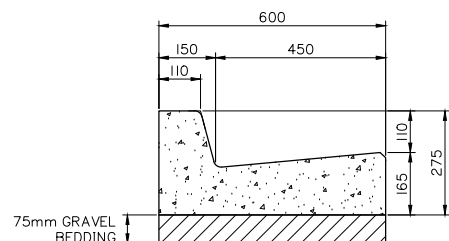
NOTE: REFER IPWEAQ STANDARD DWGS No. RS-090 & RS-091



CHANNEL

REFER TO IPWEA STD. DWG. No. RS-080

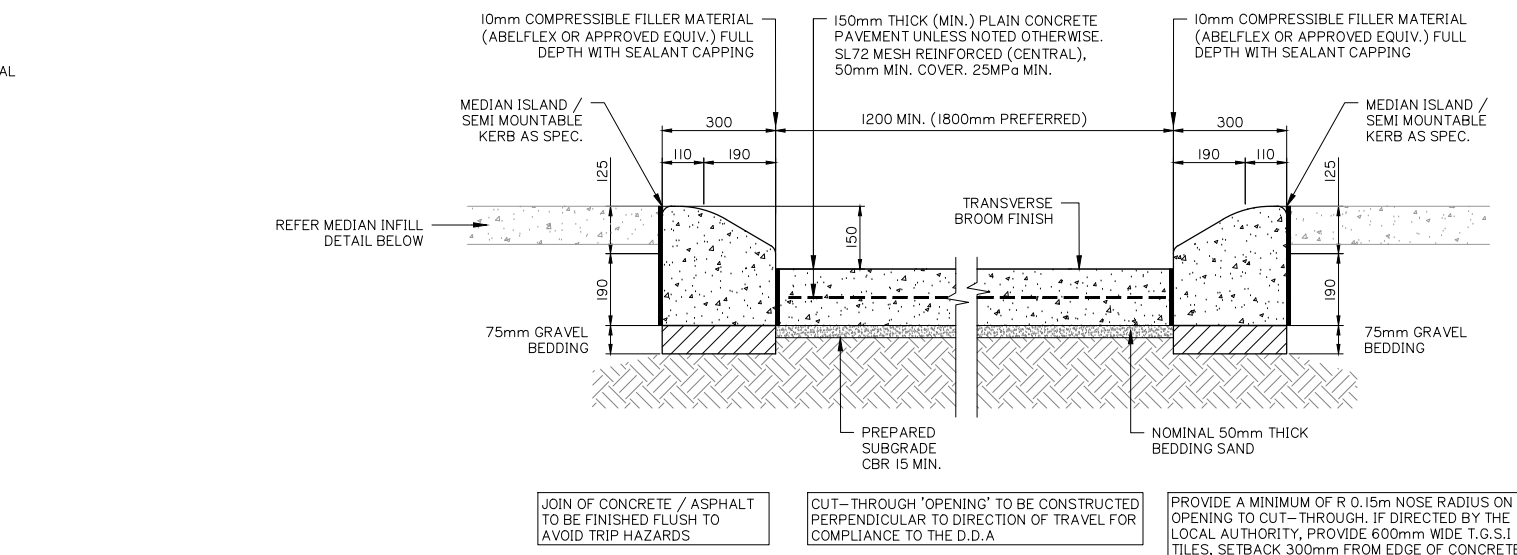
NOT TO SCALE



BI KERB AND CHANNEL

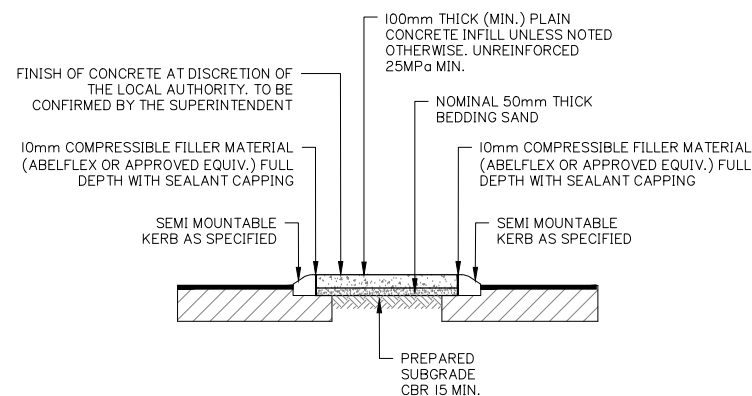
REFER TO IPWEA STD. DWG. No. RS-080

NOT TO SCALE



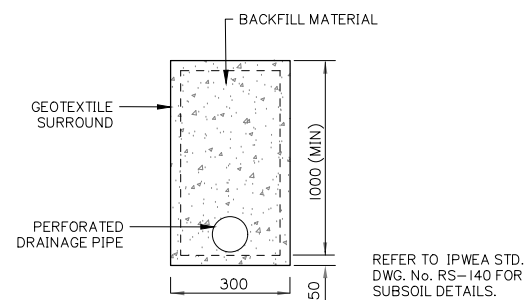
TYPICAL CUT-THROUGH TREATMENT FOR MEDIAN ISLAND

NOT TO SCALE



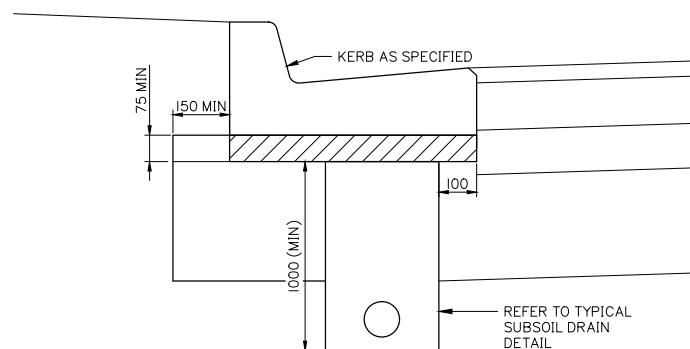
MEDIAN ISLAND INFILL

N.T.S
AS PER STANDARD DRAWING
IPWEA STD DWG No. RS-065.



TYPICAL SUBSOIL DRAIN

NOTE: SUBSOIL ACCESS POINTS TO BE INSTALLED
IN ACCORDANCE WITH IPWEA RS-142
NOT TO SCALE



TYPICAL SUBSOIL ARRANGEMENT DETAILS

IN ACCORDANCE TO IPWEA STD. DWG. No. RS-140
NOT TO SCALE

Client:



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DRAWING TITLE

TYPICAL SECTIONS AND
DETAILS SHEET 1 OF 3

Issue	Date	Description	BA	MG
A	01-05-2020	ORIGINAL ISSUE	BA	MG

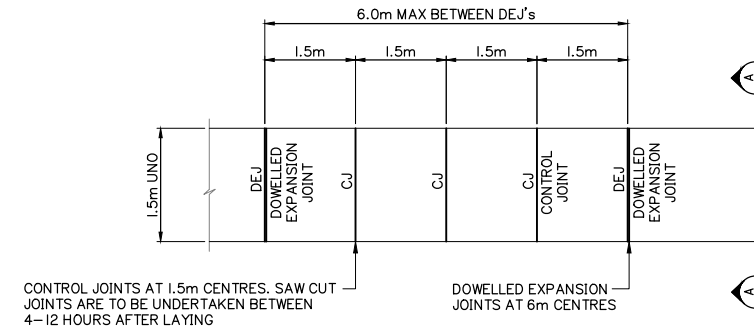
SCALE IN METRES

NOT APPLICABLE

Scale at A1: NTS

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 410
Rev. No: A



PROPERTY BOUNDARY

4.5m VERGE MEASURED FROM PROP. BDY. TO NKL

1 in 40 (2.5%) MAX. CROSSFALL ON ALL CONCRETE FOOTPATHS

*100 MIN

4%

2.5%

2.0m FROM N.K.L. (UNO)

4%

1.0m

1.5m

BLINDING LAYER
30mm SAND

NOMINAL KERB LINE

BARRIER KERB & CHANNEL (UNO)

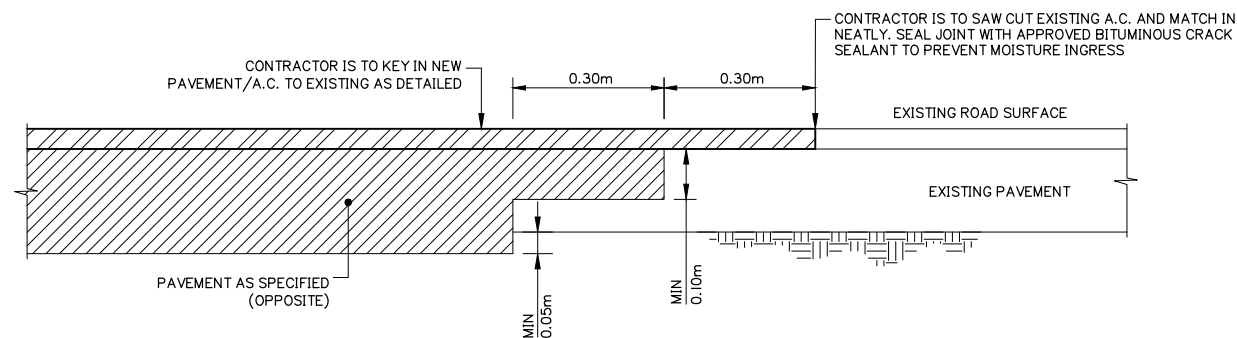
*100mm MIN. REINFORCED CONCRETE 25MPa (Min.), SL72 MESH CENTRAL, 50mm BOTTOM COVER, TRANSVERSE BROOM FINISHED FOR SLIP RESISTANCE. REFER IPWEA RS-065 PATHWAYS CONCRETE PATHWAY CONSTRUCTION DETAILS. REFER IPWEA STD DWG RS-049 AND RS-050 FOR TREATMENT AT DRIVEWAYS

FIGURE 6-10 Typical Sewerage Profile

[illegible]

NOTE:

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.

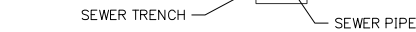


TYPICAL SECTIONS AND DETAILS SHEET 2 OF 3

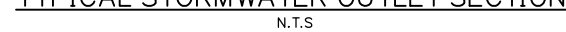
SCALE 1 : 50

CIRCULAR PRECAST DRAINWAY CONVERTOR SLABS ARE AVAILABLE IN SIZES LISTED BELOW:

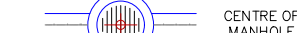
2000 ID (2450 OD) x 250mm THICK – 1000mm HOLE



NOT TO SCALE



N.T.S

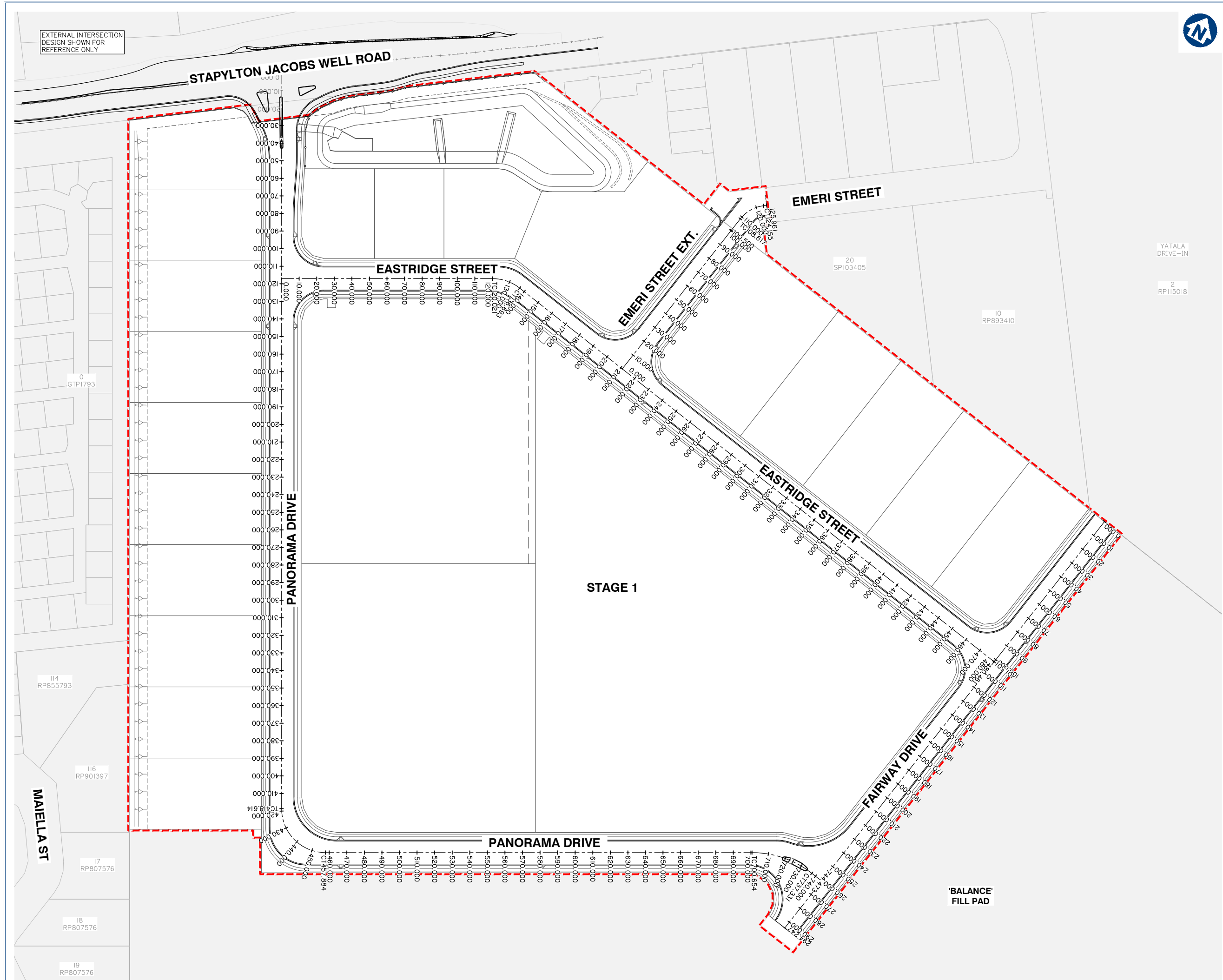


	SIZE	OUTLET	LENGTH OF	UPSTREAM	DOWNSTREAM	NOMINAL	THICKNESS	PROTECTION	PROTECTION
--	------	--------	-----------	----------	------------	---------	-----------	------------	------------

ROCK GRADATION TABLE	
CHALK TEST DIMENSION IN (mm)	

ROCK SIZE (M)	ROCK MASS (KG)	MIN. PERCENTAGE OF ROCKS LARGER THAN
------------------	-------------------	---

- MINIMUM THICKNESS ROCK PROTECTION: 800mm MIN – UNDERLAY ROCK PROTECTION WITH 'TERRAFIX' XP310 GEOFABRIC OR EQUIVALENT.
- ROCKS SHALL BE DENSE, HARD & DURABLE.
- ANGULAR ROCK TO BE LAYED WITH LARGEST FACE VISIBLE.
- ROCK SIZE TO BE GRADED AS PER TABLE SHOWN.



EXTERNAL INTERSECTION
DESIGN SHOWN FOR
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DRAWING TITLE

CONTROL LINE LAYOUT
PLAN

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES



1:1000 (FULL SIZE A1)
1:2000 (HALF SIZE A3)

Scale at A1: 1:1000

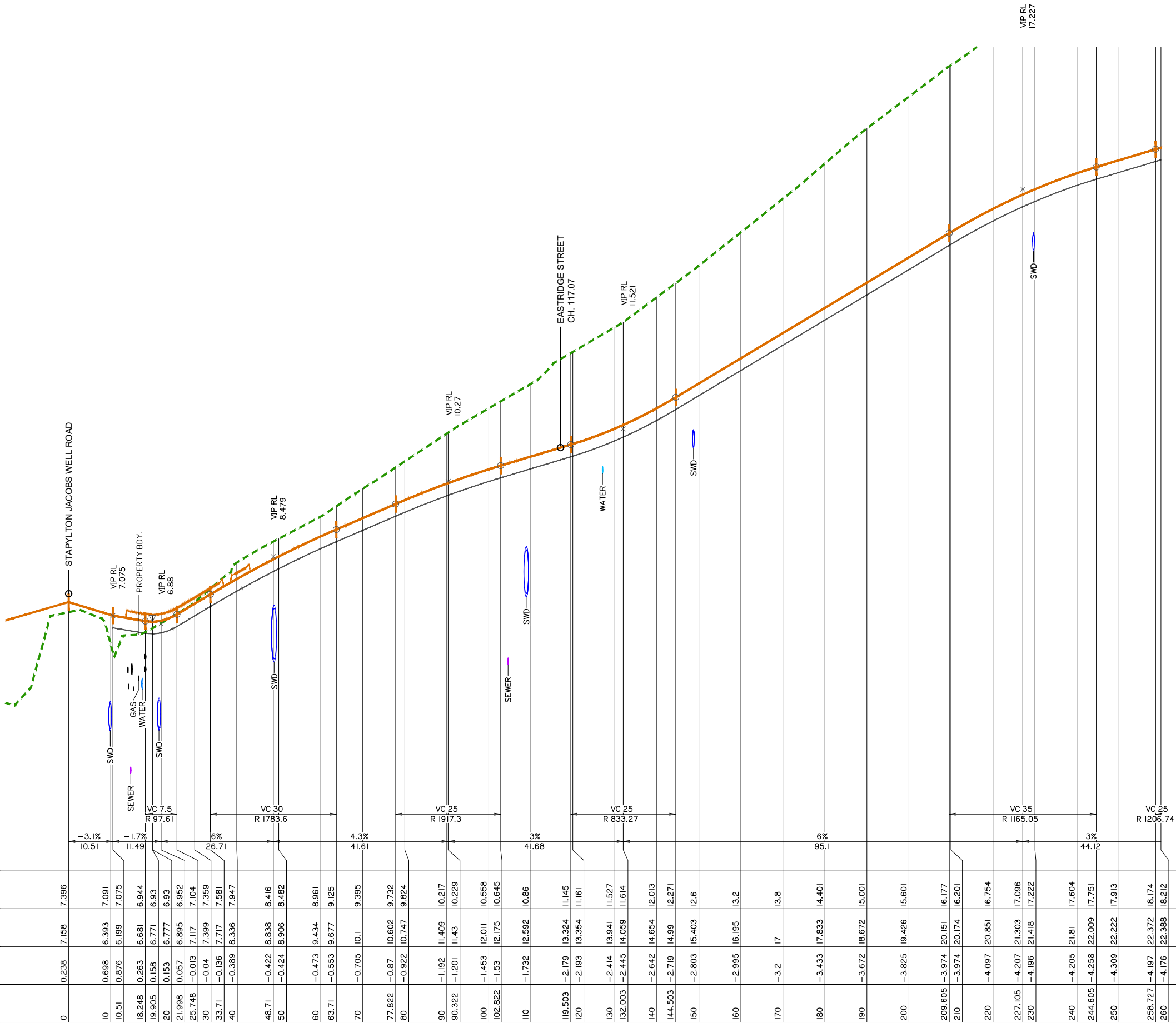
Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 420
Rev. No: A

PANORAMA DRIVE - CONTROL LINE SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2186.394	7037.296	7.396	151°00'47.03"			
	10.000	2191.240	7028.549	7.091	151°00'47.03"			
	20.000	2196.086	7019.801	6.930	151°00'47.03"			
	30.000	2200.932	7011.054	7.359	151°00'47.03"			
	40.000	2205.778	7002.307	7.947	151°00'47.03"			
	50.000	2210.625	6993.559	8.482	151°00'47.03"			
	60.000	2215.471	6984.812	8.961	151°00'47.03"			
	70.000	2220.317	6976.065	9.395	151°00'47.03"			
	80.000	2225.163	6967.317	9.824	151°00'47.03"			
	90.000	2230.009	6958.570	10.217	151°00'47.03"			
	100.000	2234.855	6949.823	10.558	151°00'47.03"			
	110.000	2239.701	6941.076	10.860	151°00'47.03"			
	120.000	2244.547	6932.328	11.161	151°00'47.03"			
	130.000	2249.393	6923.581	11.527	151°00'47.03"			
	140.000	2254.239	6914.834	12.013	151°00'47.03"			
TC	150.000	2259.086	6906.086	12.600	151°00'47.03"			
	160.000	2263.932	6897.339	13.200	151°00'47.03"			
	170.000	2268.778	6888.592	13.800	151°00'47.03"			
	180.000	2273.624	6879.844	14.401	151°00'47.03"			
	190.000	2278.470	6871.097	15.001	151°00'47.03"			
	200.000	2283.316	6862.350	15.601	151°00'47.03"			
	210.000	2288.162	6853.603	16.201	151°00'47.03"			
	220.000	2293.008	6844.855	16.754	151°00'47.03"			
	230.000	2297.854	6836.108	17.222	151°00'47.03"			
	240.000	2302.700	6827.361	17.604	151°00'47.03"			
	250.000	2307.547	6818.613	17.913	151°00'47.03"			
	260.000	2312.393	6809.866	18.212	151°00'47.03"			
	270.000	2317.239	6801.119	18.460	151°00'47.03"			
	280.000	2322.085	6792.371	18.624	151°00'47.03"			
	290.000	2326.931	6783.624	18.723	151°00'47.03"			
IP 2	300.000	2331.777	6774.877	18.815	151°00'47.03"			
	310.000	2336.623	6766.129	18.907	151°00'47.03"			
	320.000	2341.469	6757.382	19.000	151°00'47.03"			
	330.000	2346.315	6748.635	19.092	151°00'47.03"			
	340.000	2351.161	6739.888	19.185	151°00'47.03"			
	350.000	2356.008	6731.140	19.277	151°00'47.03"			
	360.000	2360.854	6722.393	19.370	151°00'47.03"			
	370.000	2365.700	6713.646	19.462	151°00'47.03"			
	380.000	2370.546	6704.898	19.554	151°00'47.03"			
	390.000	2375.392	6696.151	19.636	151°00'47.03"			
	400.000	2380.238	6687.404	19.702	151°00'47.03"			
	410.000	2385.084	6678.656	19.753	151°00'47.03"			
	420.000	2389.964	6669.928	19.788	147°50'11.49"			
	430.000	2396.817	6662.738	19.807	124°55'05.57"			
	440.000	2405.929	6658.783	19.811	101°59'59.65"			
CT	450.000	2415.862	6658.689	19.799	79°04'53.73"			
	457.884	2423.242	6661.369	19.778	61°00'47.17"			
	460.000	2425.093	6662.394	19.771	61°00'47.17"			
	470.000	2433.840	6667.240	19.728	61°00'47.17"			
	480.000	2442.588	6672.086	19.669	61°00'47.17"			
	490.000	2451.335	6676.932	19.606	61°00'47.17"			
	500.000	2460.082	6681.778	19.542	61°00'47.17"			
	510.000	2468.830	6686.625	19.478	61°00'47.17"			
	520.000	2477.577	6691.471	19.414	61°00'47.17"			
	530.000	2486.324	6696.317	19.350	61°00'47.17"			
	540.000	2495.072	6701.163	19.287	61°00'47.17"			
	550.000	2503.819	6706.009	19.223	61°00'47.17"			
	560.000	2512.566	6710.855	19.159	61°00'47.17"			
	570.000	2521.314	6715.701	19.095	61°00'47.17"			
	580.000	2530.061	6720.547	19.031	61°00'47.17"			
IP 3	590.000	2538.808	6725.393	18.968	61°00'47.17"			
	600.000	2547.555	6730.239	18.904	61°00'47.17"			
	610.000	2556.303	6735.085	18.840	61°00'47.17"			
	620.000	2565.050	6739.932	18.776	61°00'47.17"			
	630.000	2573.797	6744.778	18.712	61°00'47.17"			
	640.000	2582.545	6749.624	18.648	61°00'47.17"			
	650.000	2591.292	6754.470	18.585	61°00'47.17"			
	660.000	2600.039	6759.316	18.521	61°00'47.17"			
	670.000	2608.787	6764.162	18.457	61°00'47.17"			
	680.000	2617.534	6769.008	18.393	61°00'47.17"			
	690.000	2626.281	6773.854	18.330	61°00'47.17"			
	700.000	2635.028	6778.700	18.267	61°00'47.17"			

PANORAMA DRIVE - CONTROL LINE SETOUT TABLE (CONT.)								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
TC	700.654	2635.601	6779.017	18.263	61°00'47.17"			
	710.000	2644.120	6782.832	18.205	70°44'55.86"			
	718.993	2652.264	6788.249	18.149				
IP 3	720.000	2653.808	6785.255	18.143	81°09'58.55"	R = 55.000	36.676	38°12'26.65"
	730.000	2663.774	6785.886	18.081	91°35'01.24"			
CT	737.331	2671.067	6785.197	18.035	99°13'13.83"			
	740.000	2673.702	6784.769	18.019	99°13'13.83"			
IP 4	744.473	2678.117	6784.052	17.991	99°13'13.83"			

EASTRIDGE STREET – CONTROL LINE SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2243.127	6934.892	11.072	61°00'44.11"			
	10.000	2251.874	6939.738	10.928	61°00'44.11"			
	20.000	2260.622	6944.584	10.805	61°00'44.11"			
	30.000	2269.369	6949.430	10.810	61°00'44.11"			
	40.000	2278.116	6954.276	10.879	61°00'44.11"			
	50.000	2286.863	6959.123	10.948	61°00'44.11"			
	60.000	2295.611	6963.969	11.018	61°00'44.11"			
	70.000	2304.358	6968.815	11.087	61°00'44.11"			
	80.000	2313.105	6973.661	11.191	61°00'44.11"			
	90.000	2321.852	6978.508	11.345	61°00'44.11"			
	100.000	2330.599	6983.354	11.550	61°00'44.11"			
	110.000	2339.347	6988.200	11.807	61°00'44.11"			
		120.000	2348.094	6993.046	12.102	61°00'44.11"		
TC	120.021	2348.113	6993.057	12.103	61°00'44.11"			
IP 2	128.357	2355.687	6997.253	12.351	R = 25.000	16.672	38°12'31.40"	
	130.000	2357.564	6996.046	12.400				83°52'53.88"
CT	136.693	2364.234	6995.865	12.599	99°13'15.51"			
	140.000	2367.498	6995.336	12.698	99°13'15.51"			
	150.000	2377.369	6993.733	12.996	99°13'15.51"			
	160.000	2387.240	6992.131	13.294	99°13'15.51"			
	170.000	2397.111	6990.528	13.592	99°13'15.51"			
	180.000	2406.982	6988.926	13.890	99°13'15.51"			
	190.000	2416.852	6987.323	14.189	99°13'15.51"			
	200.000	2426.723	6985.721	14.487	99°13'15.51"			
	210.000	2436.594	6984.119	14.787	99°13'15.51"			
	220.000	2446.465	6982.516	15.087	99°13'15.51"			
	230.000	2456.335	6980.914	15.391	99°13'15.51"			
	240.000	2466.206	6979.311	15.700	99°13'15.51"			
	250.000	2476.077	6977.709	16.014	99°13'15.51"			
	260.000	2485.948	6976.106	16.331	99°13'15.51"			
	270.000	2495.819	6974.504	16.647	99°13'15.51"			
	280.000	2505.689	6972.902	16.964	99°13'15.51"			
	290.000	2515.560	6971.299	17.280	99°13'15.51"			
	300.000	2525.431	6969.697	17.597	99°13'15.51"			
	310.000	2535.302	6968.094	17.913	99°13'15.51"			
	320.000	2545.172	6966.492	18.230	99°13'15.51"			
	330.000	2555.043	6964.889	18.547	99°13'15.51"			
	340.000	2564.914	6963.287	18.863	99°13'15.51"			
	350.000	2574.785	6961.685	19.180	99°13'15.51"			
	360.000	2584.656	6960.082	19.471	99°13'15.51"			
	370.000	2594.526	6958.480	19.692	99°13'15.51"			
	380.000	2604.397	6956.877	19.843	99°13'15.51"			
	390.000	2614.268	6955.275	19.924	99°13'15.51"			
	400.000	2624.139	6953.672	19.934	99°13'15.51"			
	410.000	2634.009	6952.070	19.873	99°13'15.51"			
	420.000	2643.880	6950.468	19.743	99°13'15.51"			
	430.000	2653.751	6948.865	19.542	99°13'15.51"			
	440.000	2663.622	6947.263	19.274	99°13'15.51"			
	450.000	2673.493	6945.660	19.035	99°13'15.51"			
	460.000	2683.363	6944.058	19.012	99°13'15.51"			
	470.000	2693.234	6942.455	19.084	99°13'15.51"			
	480.000	2703.105	6940.853	19.156	99°13'15.51"			
IP 3	480.461	2703.560	6940.779	19.160	99°13'15.51"			



HORIZONTAL CURVE DATA

VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GEOMETRY GRADE (%)
VERTICAL GEOMETRY LENGTH (m)

DATUM RL = 1.000

FINISHED SURFACE LEVEL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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LONGITUDINAL SECTION - PANORAMA DRIVE - SHEET 1 OF 3

ROAD LONGITUDINAL SECTION – PANORAMA DRIVE SHEET 1 OF 3



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Client:



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Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
ROAD LONGITUDINAL
SECTION - PANORAMA
DRIVE SHEET 1 OF 3

Issue	Date	Description	BA	MG	CHK
A	01-05-2020	ORIGINAL ISSUE	BA	MG	

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.
HOZ: 0 5 10 15 20 25 30 35 40

Scale 1:50 - Lengths are in Metres.
VERT: 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1:

AS SHOWN

Designed:

IG

Drafted:

BA

Approved:

MG

RPEQ:

16939

Signed:

Michael

Date:

01-05-2020

Drawing No:

5941 ENG OPW1 430

Rev. No:

A



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Project:

VANTAGE YATALA

Site Address:
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DRAWING TITLE
ROAD LONGITUDINAL
SECTION - PANORAMA
DRIVE SHEET 3 OF 3

A Issue	01-05-2020 Date	ORIGINAL ISSUE Description	BA DRN	MG CHK

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.

HOZ: 

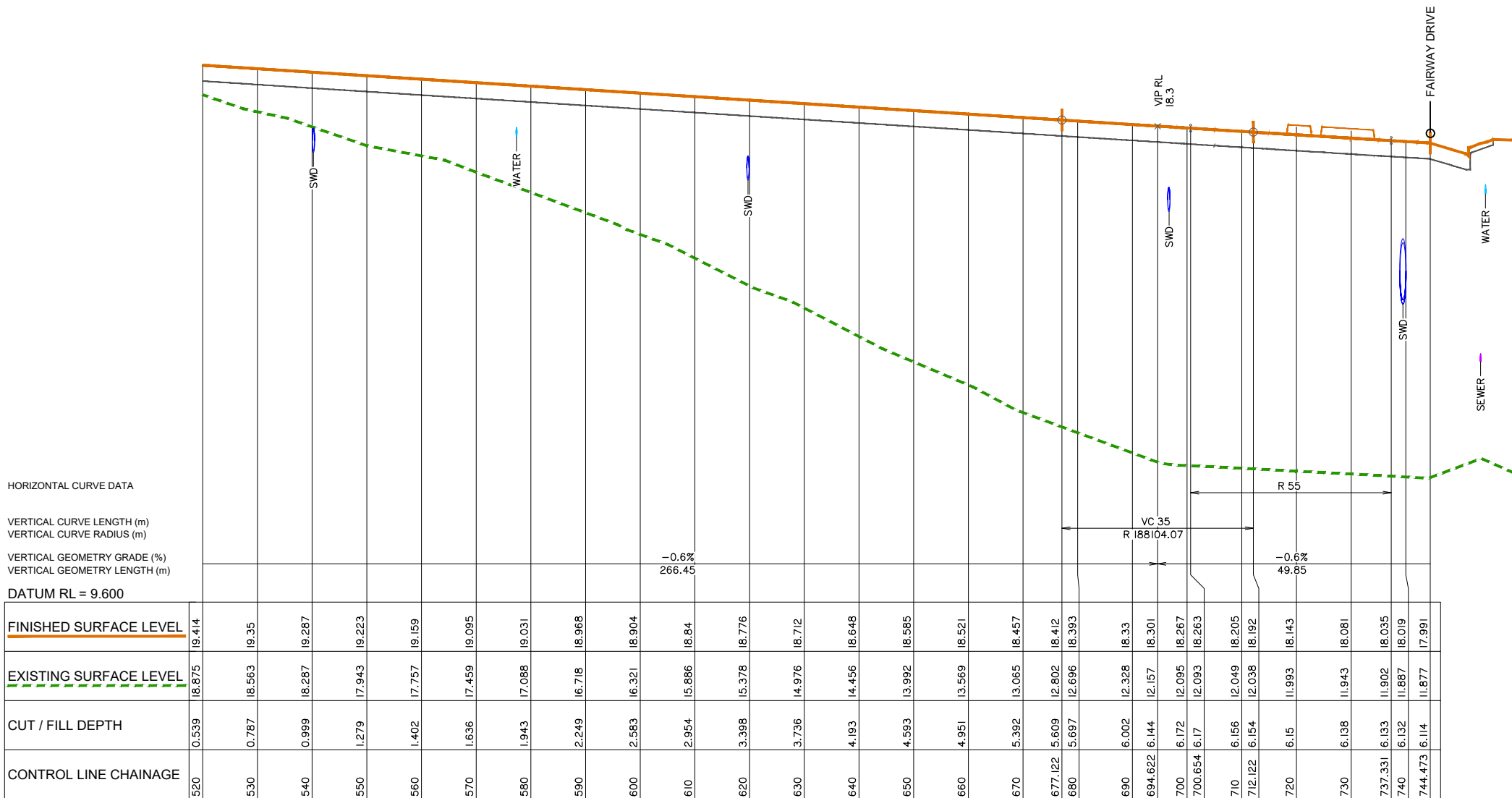
Scale 1:50 - Lengths are in Metres.

VERT: 

Scale at A1: AS SHOWN

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Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 432	A



LONGITUDINAL SECTION - PANORAMA DRIVE - SHEET 3 OF 3

ROAD LONGITUDINAL SECTION – PANORAMA DRIVE SHEET 3 OF 3

01-05-2020	ORIGINAL ISSUE	BA
Date	Description	DRN

HOZ: 

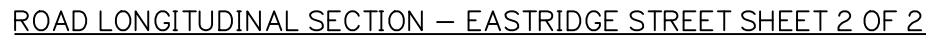
Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
PEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. N
041 ENG OPW1 433	A



ROAD LONGITUDINAL SECTION – EASTRIDGE STREET SHEET 1 OF 2







Client



Projects

VANTAGE YATALA

Site Address:
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ROAD, STAPYLTON QLD 4207

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RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
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DRAWING TITLE
ROAD LONGITUDINAL
SECTION - FAIRWAY DRIVE
SHEET 2 OF 2

A	01-05-2020	ORIGINAL ISSUE	BA	MG
LUE	Date	Description	DRI	CHK

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.

HOZ: 

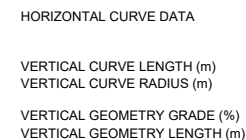
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VERT: 

Scale at A1: AS SHOWN

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Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 436	A



[illegible]

ROAD LONGITUDINAL SECTION – EMERI STREET EXTENSION

[illegible]

A	01-05-2020	ORIGINAL ISSUE	BA	MO
Issue	Date	Description	DRN	CH

Scale 1:500 - Lengths are in Metres.

HOZ:

Scale 1:50 - Lengths are in Metres.

VERT:

Scale at A1: AS SHOWN

Designed:	IG
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Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 437	A



Project:

VANTAGE YATALA

Site Address:
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DRAWING TITLE
ROAD CROSS SECTIONS
- PANORAMA DRIVE
SHEET 1 OF 14

A	01-05-2020	ORIGINAL ISSUE		BA	MG
Issue	Date	Description		DRN	CH

SCALE IN METRES

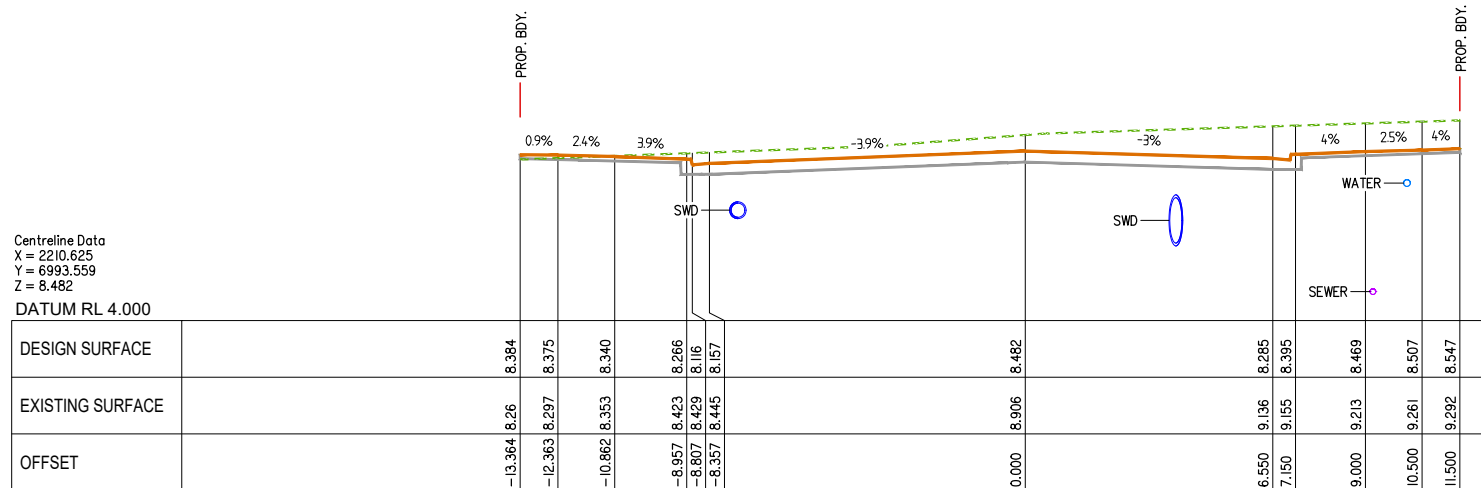
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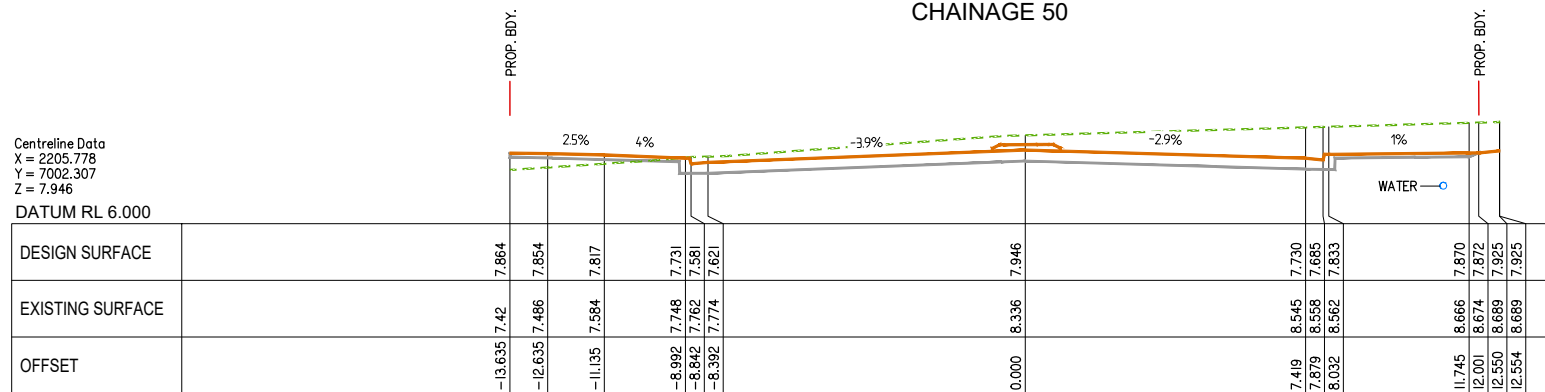
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Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

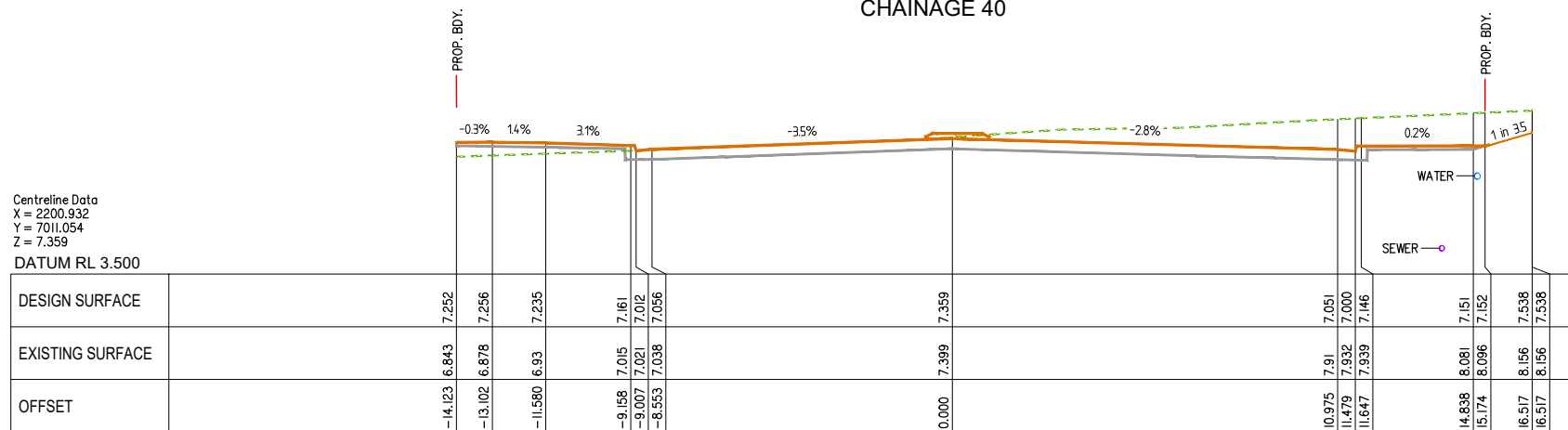
Drawing No:	Rev. No:
5941 ENG OPW1 450	A



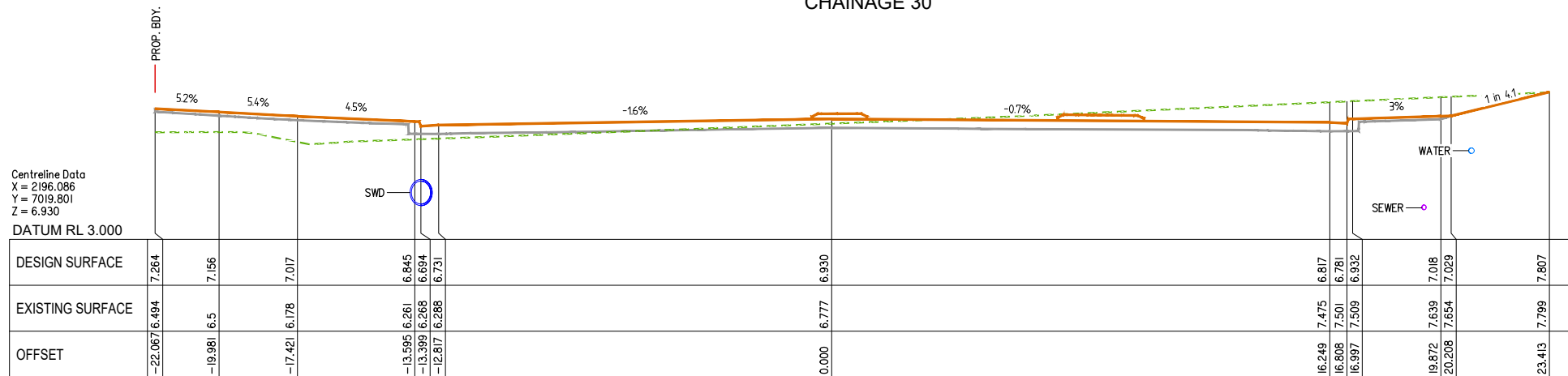
CHAINAGE 50



CHAINAGE 40



CHAINAGE 30



CHAINAGE 20

01-05-2020	ORIGINAL ISSUE	BA
Date	Description	DRN



A	01-05-2020		ORIGINAL ISSUE	BA	
Issue	Date		Description	DRN	C

Scale at A1:	1:100
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Date:	01-05-2020

Drawing No: 5941 ENG OPW1 458 Rev. No: A

01-05-2020	ORIGINAL ISSUE	BA
Date	Description	DRN

[illegible][illegible]

Centreline Data
X = 2460.082
Y = 6681.778
Z = 19.542
DATUM RL 15.500

	11.800	10.500	9.000	7.150	6.550	0.000	6.550	7.150	9.000	10.500	11.500
DESIGN SURFACE	19.607	19.567	19.529	19.455	19.345	19.542	19.345	19.455	19.529	19.567	19.607
EXISTING SURFACE	20.123	20.111	19.979	19.877	19.843	19.48	19.076	19.037	18.915	18.816	18.75
OFFSET	-11.800	-10.500	-9.000	-7.150	-6.550	0.000	6.550	7.150	9.000	10.500	11.500

PROF. B.O.Y.

PROF. B.O.Y.

SWD

WATER

CHAINAGE 500

Centreline Data
X = 2451.335
Y = 6676.932
Z = 19.606
DATUM RL 15.500

PROP. BDY.

4% 25% 4% -3% -3% 4% 25% 4%

WATER

SWD

	11.800	20.402	19.671	19.631	19.593	19.519	19.409	19.606	19.409	19.384	19.351	19.519	19.593	19.631	19.671	19.671
DESIGN SURFACE	19.671	19.671	19.631	19.593	19.519	19.409	19.606	19.409	19.384	19.351	19.519	19.593	19.631	19.671	19.671	
EXISTING SURFACE	20.402	20.385	20.33	20.247	20.144	20.111	19.747	19.747	19.384	19.351	19.351	19.233	19.134	19.068	19.048	19.048
OFFSET	-11.800	-11.500	-10.500	-9.000	-7.150	-6.550	0.000	0.000	6.550	7.150	9.000	10.500	11.500	11.800	11.800	

Centreline Data
X = 2442.588
Y = 6672.086
Z = 19.669

DATUM RL 15.500

CHAINAGE 490

PROF. BDY.

PROF. BDY.

4% 25% 4% -3% -3% 4% 25% 4%

S.W.D.

WATER

	11.800	11.500	10.500	9.000	7.150	6.550	0.000	6.550	7.150	9.000	10.500	11.500	11.800
DESIGN SURFACE	19.734	19.734	19.694	19.657	19.583	19.473	19.669	19.473	19.583	19.657	19.694	19.734	19.734
EXISTING SURFACE	20.738	20.722	20.666	20.581	20.478	20.444	20.077	19.705	19.669	19.558	19.467	19.404	19.384
OFFSET	-11.800	-11.500	-10.500	-9.000	-7.150	-6.550	0.000	6.550	7.150	9.000	10.500	11.500	11.800

CHAINAGE 480



CHAINAGE 720

Client:



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Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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ROAD CROSS SECTIONS
- EASTRIDGE STREET
SHEET 4 OF 8

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

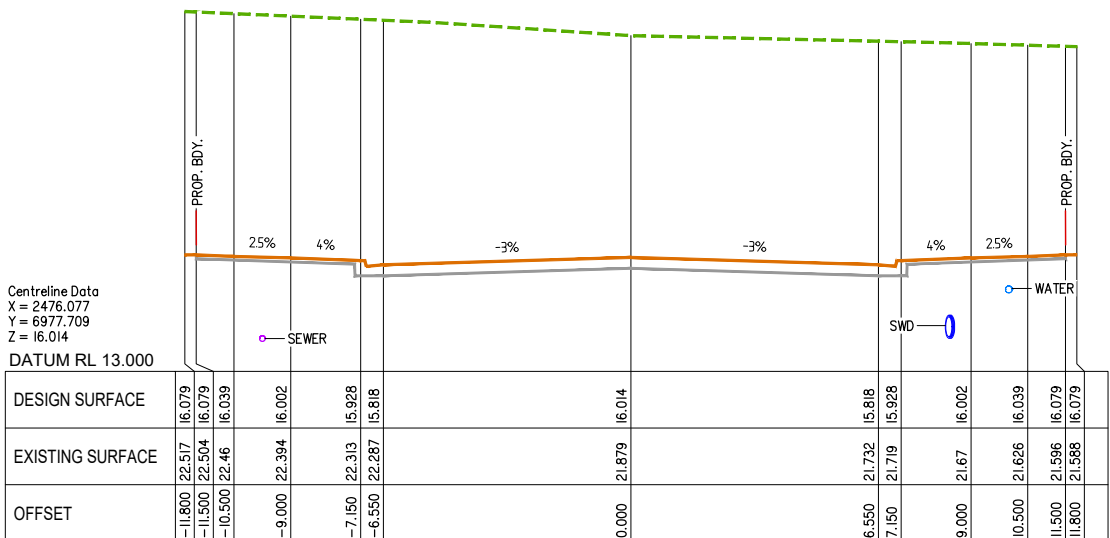
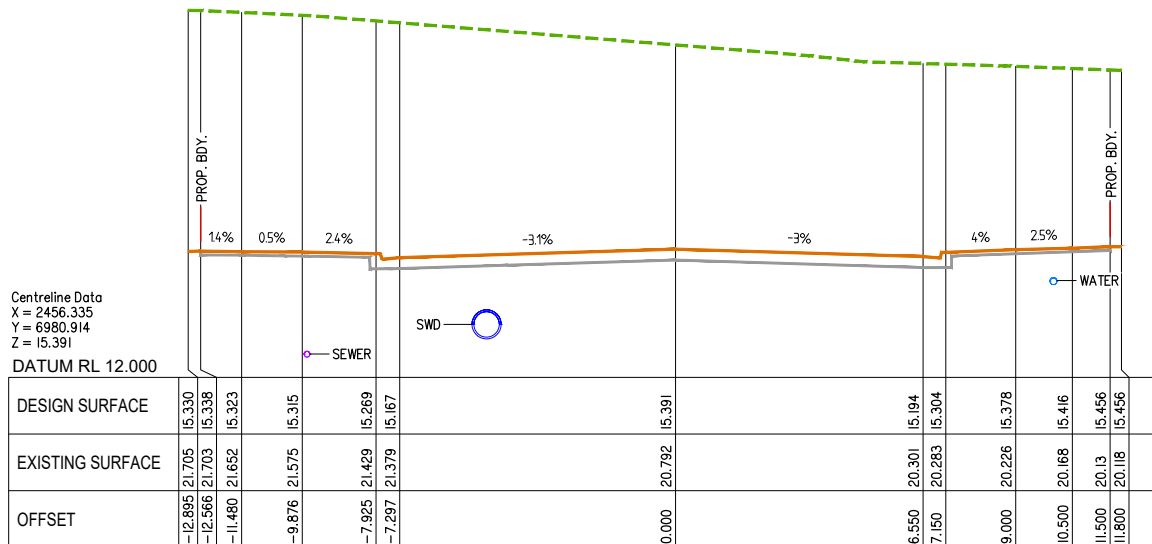
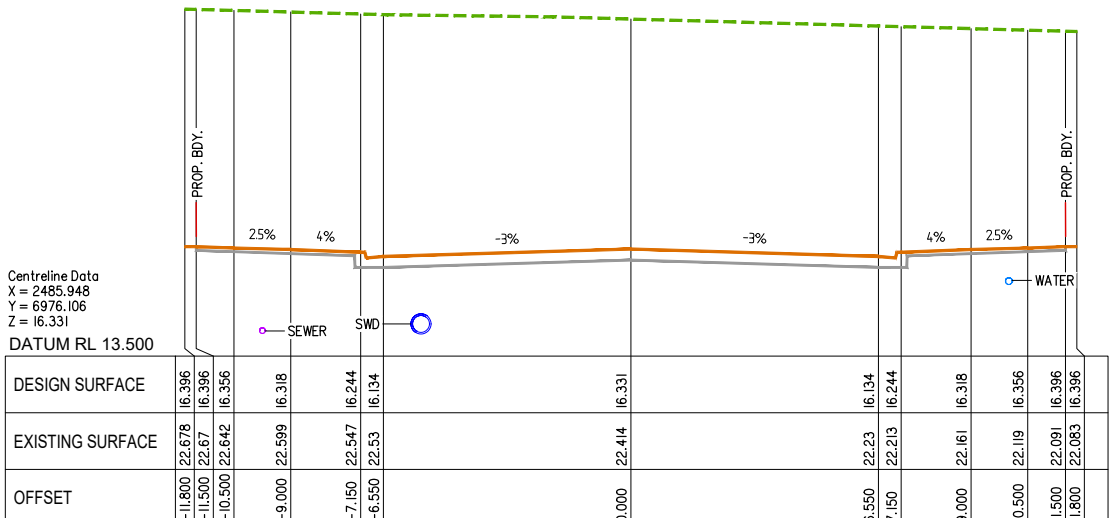
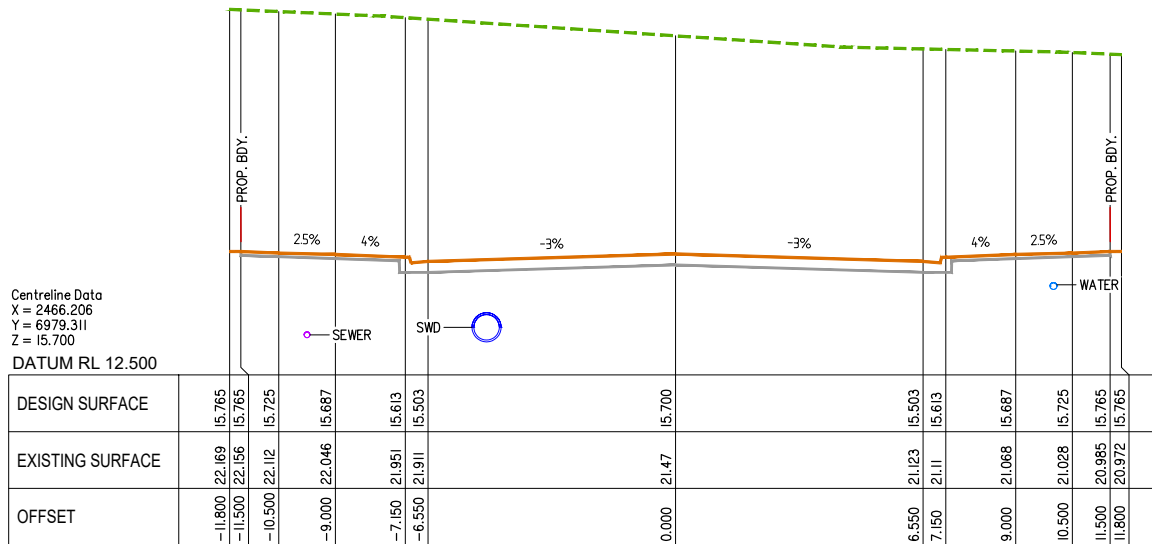
Scale 1:100 - Lengths are in Metres.
0 1 2 3 4 5 6 7 8

Scale at A1: 1:100

Designed:	IG
Drafted:	BA
Approved:	MG
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Date:	01-05-2020

Drawing No:
5941 ENG OPW1 467

Rev. No:
A



Client:



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Project:

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Site Address:

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ROAD, STAPYLTON QLD 4207

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RPD:

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Plan: SP295994
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ROAD CROSS SECTIONS
- EASTRIDGE STREET
SHEET 5 OF 8

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

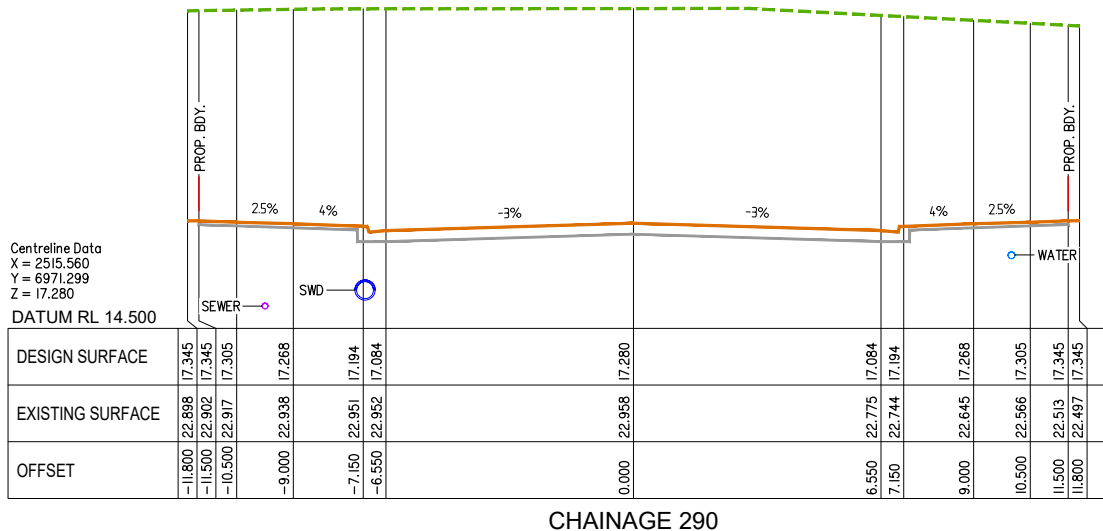
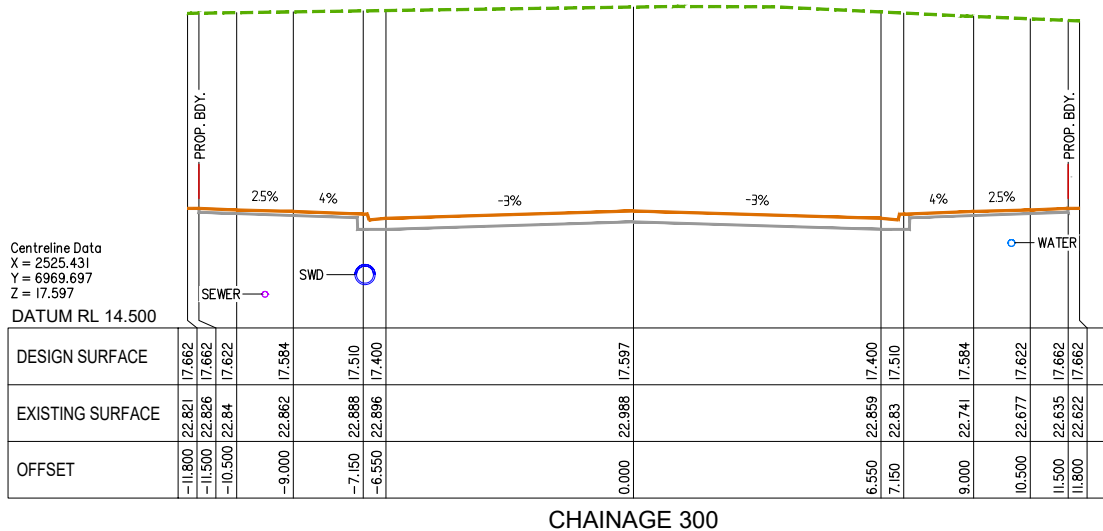
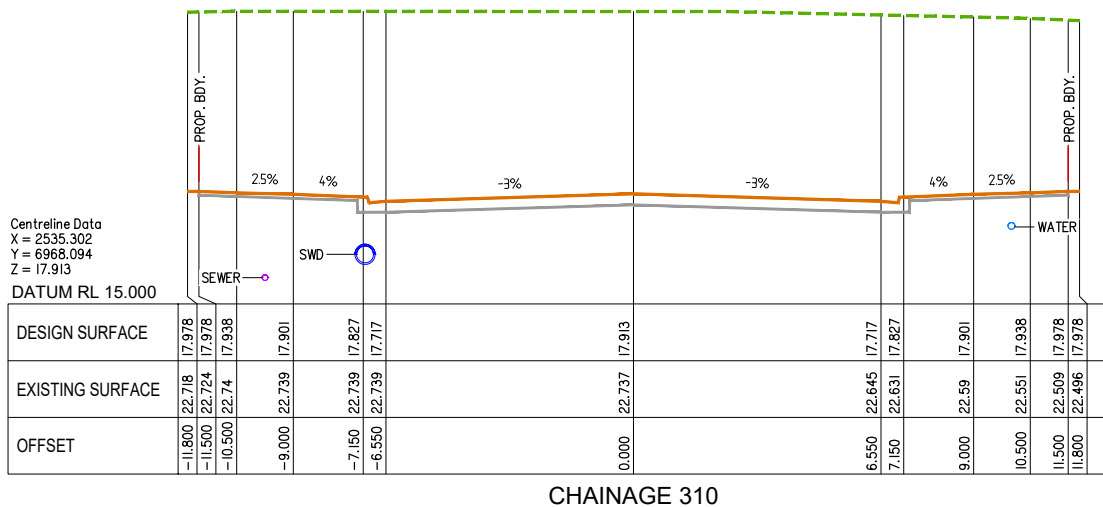
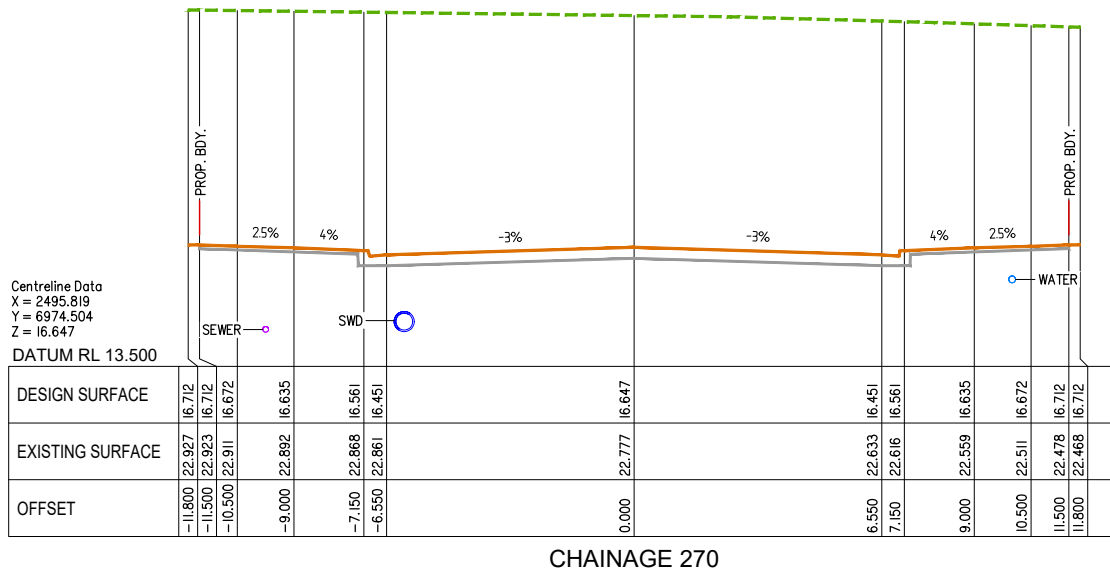
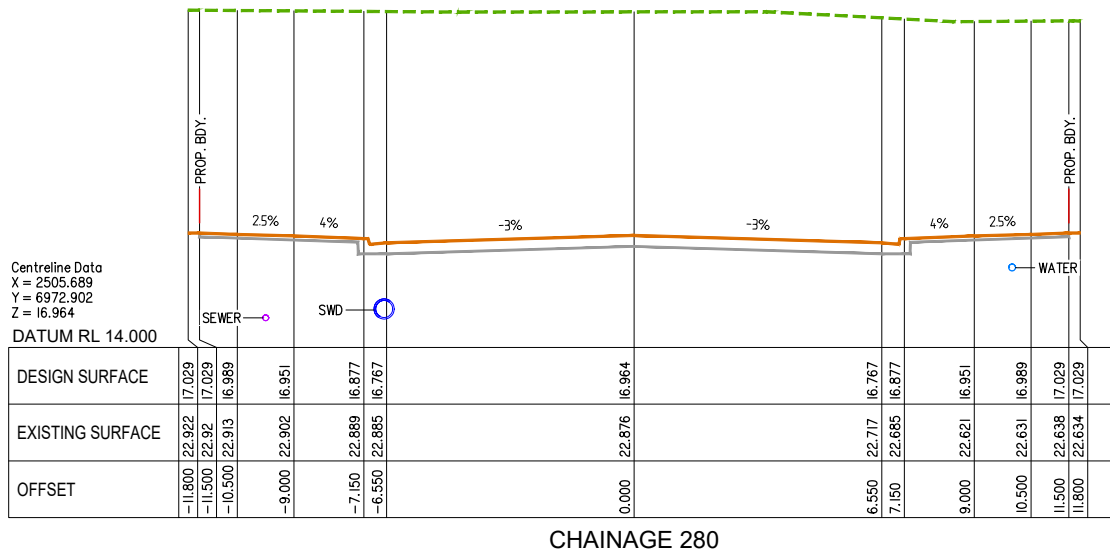
SCALE IN METRES

Scale 1:100 - Lengths are in Metres.
0 1 2 3 4 5 6 7 8

Scale at A1: 1:100

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 468
Rev. No: A



SCALE IN METRES

Scale 1:100 - Lengths are in Metres.



A horizontal scale bar with alternating dark blue and light blue segments. Below the bar are numerical markings from 0 to 8 at regular intervals.

Drawing No:	Rev. No:
5941 ENG OPW1 471	A



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL

Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
ROAD CROSS SECTIONS
- FAIRWAY DRIVE SHEET
1 OF 6

A	01-05-2020	ORIGINAL ISSUE			BA
Issue	Date	Description			DRN
					MG
					CHK

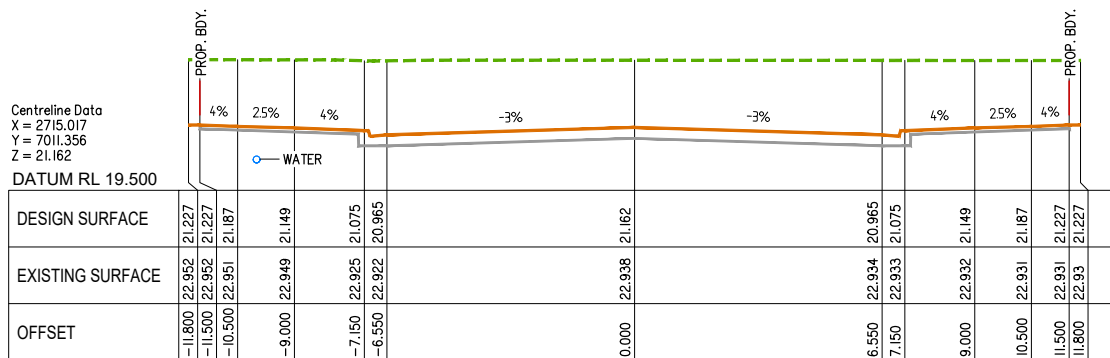
SCALE IN METRES



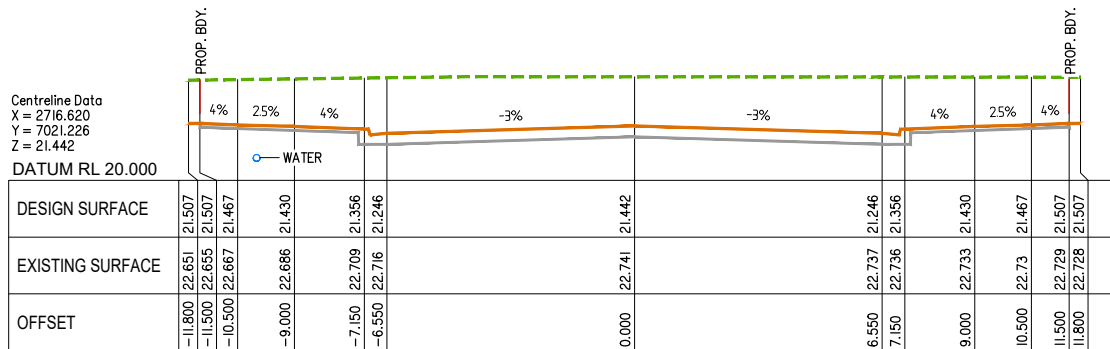
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

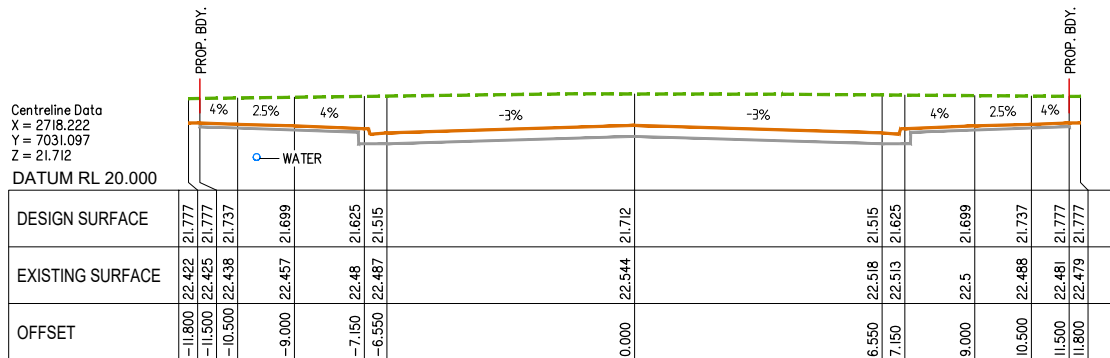
Drawing No:	Rev. No:
5941 ENG OPW1 472	A



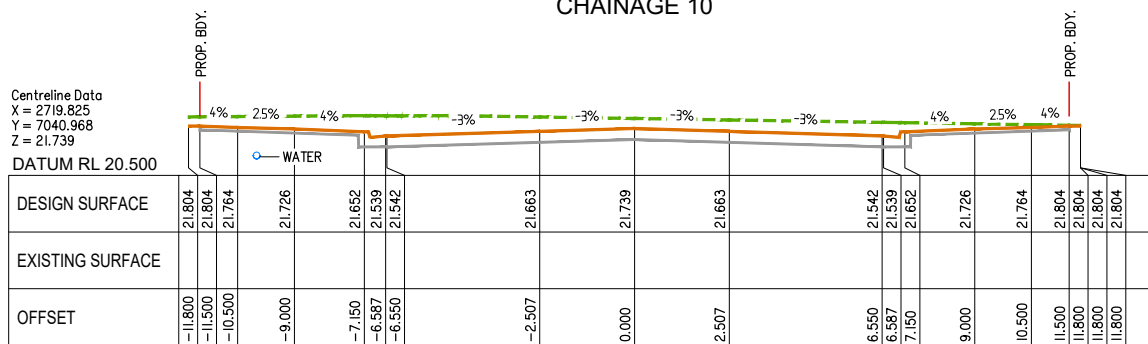
CHAINAGE 30



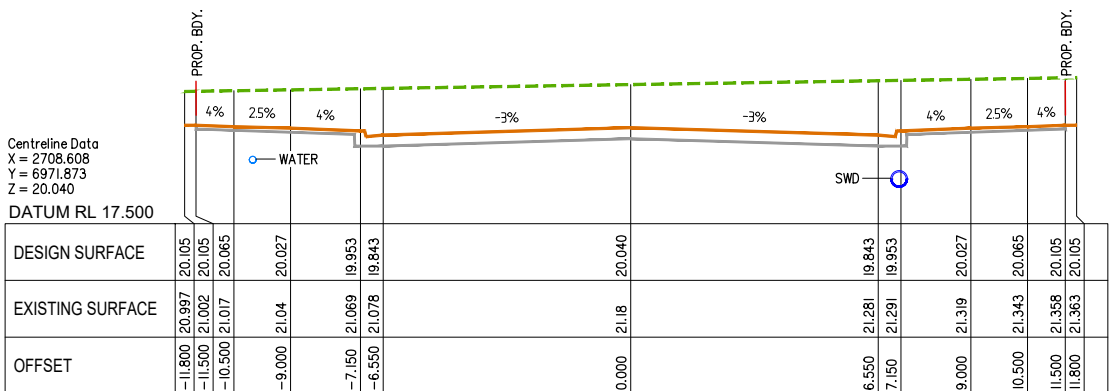
CHAINAGE 20



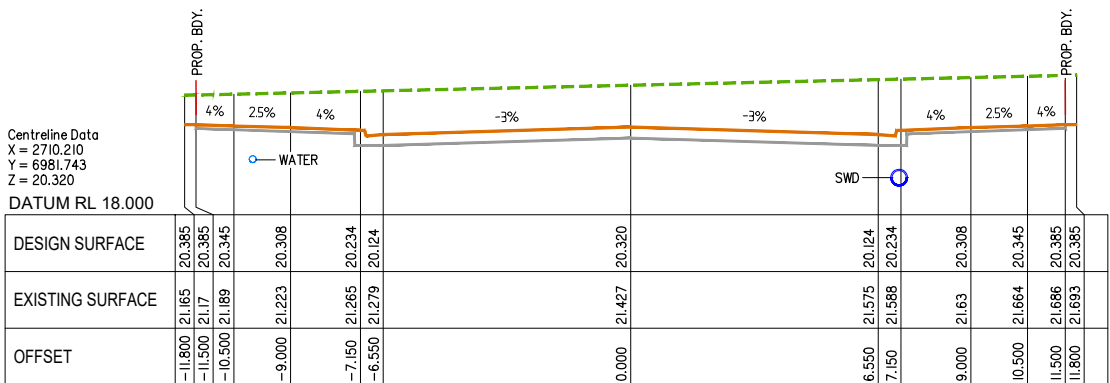
CHAINAGE 10



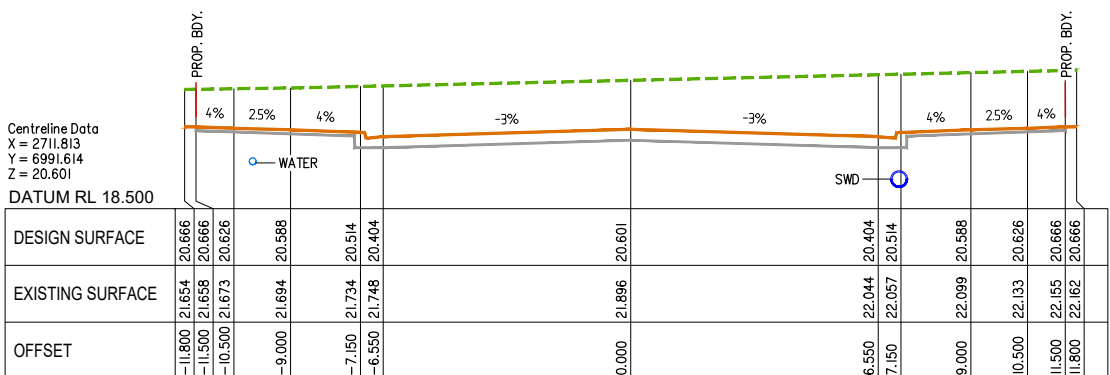
CHAINAGE 0



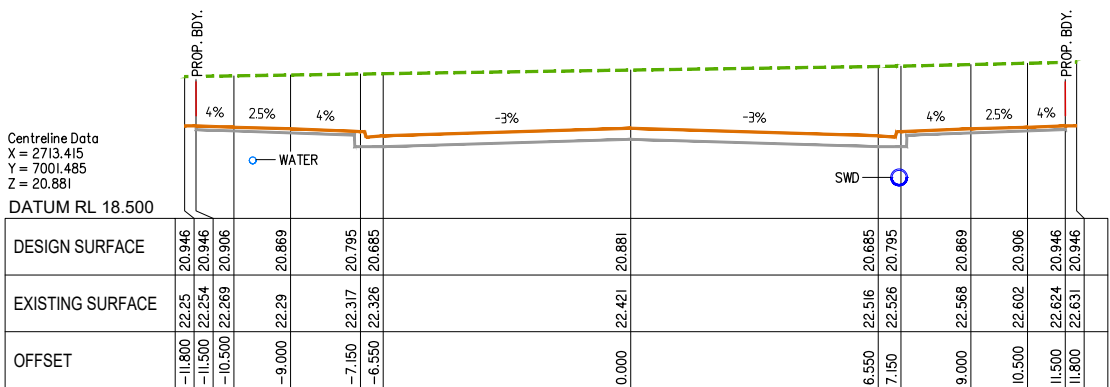
CHAINAGE 70



CHAINAGE 60



CHAINAGE 50



CHAINAGE 40



Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
ROAD CROSS SECTIONS -
EMERI STREET EXTENSION
SHEET 1 OF 2

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

Scale 1:100 - Lengths are in Metres.
0 1 2 3 4 5 6 7 8

Scale at A1: 1:100

Designed: IG

Drafted: BA

Approved: MG

RPEQ: 16939

Signed:

Date: 01-05-2020

Drawing No:
5941 ENG OPW1 478

Rev. No:
A

Centreline Data
X = 2442.438
Y = 7013.562
Z = 14.524

DATUM RL 12.500

DESIGN SURFACE	14.589	14.589	14.549	14.512	14.438	14.328	14.524	14.549	14.589
EXISTING SURFACE	18.902	18.936	18.951	19.12	19.33	19.397	20.138	20.879	20.947
OFFSET	-11.800	-11.500	-10.500	-9.000	-7.150	-6.550	0.000	6.550	7.150

CHAINAGE 30

Centreline Data
X = 2440.836
Y = 7003.692
Z = 14.560

DATUM RL 12.000

DESIGN SURFACE	14.612	14.611	14.569	14.528	14.451	14.340	14.560	14.576	14.627
EXISTING SURFACE	18.331	18.366	18.481	18.652	18.861	18.931	19.762	20.594	20.667
OFFSET	-12.474	-12.157	-11.106	-9.543	-7.632	-7.015	0.000	7.015	7.632

CHAINAGE 20

Centreline Data
X = 2447.246
Y = 7043.175
Z = 15.534

DATUM RL 13.000

DESIGN SURFACE	15.599	15.599	15.599	15.522	15.448	15.338	15.534	15.599	15.599
EXISTING SURFACE	20.621	20.628	20.653	20.691	20.738	20.753	20.918	21.083	21.098
OFFSET	-11.800	-11.500	-10.500	-9.000	-7.150	-6.550	0.000	6.550	7.150

CHAINAGE 60

Centreline Data
X = 2445.643
Y = 7033.304
Z = 15.166

DATUM RL 13.000

DESIGN SURFACE	15.231	15.231	15.191	15.154	15.080	14.970	15.166	15.231	15.231
EXISTING SURFACE	19.98	20.014	20.127	20.297	20.506	20.574	20.845	21.088	21.11
OFFSET	-11.800	-11.500	-10.500	-9.000	-7.150	-6.550	0.000	6.550	7.150

CHAINAGE 50

Centreline Data
X = 2444.041
Y = 7023.433
Z = 14.799

DATUM RL 12.500

DESIGN SURFACE	14.864	14.864	14.824	14.786	14.712	14.602	14.799	14.824	14.864
EXISTING SURFACE	18.995	19.029	19.143	19.315	19.526	19.594	20.343	20.945	20.989
OFFSET	-11.800	-11.500	-10.500	-9.000	-7.150	-6.550	0.000	6.550	7.150

CHAINAGE 40



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour interval: -
PSM: -
RL: -

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DRAWING TITLE

KERB ISLAND SETOUT
DETAILS SHEET 1 OF 2

SCALE IN METRES



1:100 (FULL SIZE A1)
1:200 (HALF SIZE A3)

Scale at A1: 1:100

Designed: IG

Drafted: BA

Approved: MG

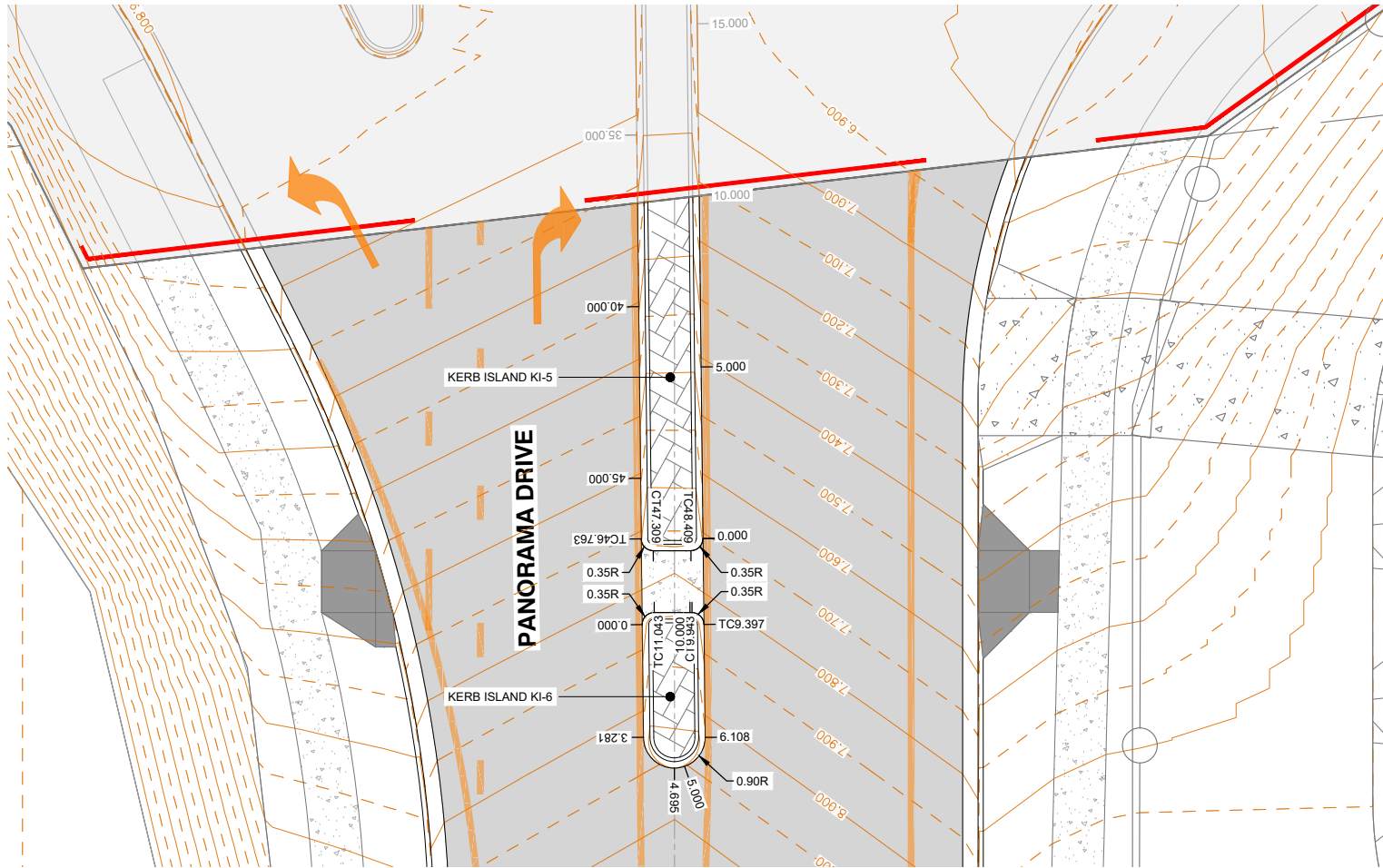
RPEQ: 16939

Signed:

Date: 01-05-2020

Drawing No:
5941 ENG OPW1 480

Rev. No:
A



KERB ISLAND KI 5 & 6 LAYOUT PLAN

KERB ISLAND KI 5 SETOUT TABLE

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2204.770	7005.837	7.711				
	5.000	2202.298	7010.183	7.416	330°22'28.51"			
	10.000	2199.826	7014.529	7.122	330°22'28.51"			
	15.000	2197.355	7018.876	6.932	330°22'28.51"			
	20.000	2194.883	7023.222	6.967	330°22'28.51"			
IP 2	21.974	2193.907	7024.938	7.000				
IP 3	22.681	2193.462	7025.720	7.014		R = -0.900	1.414	90°00'00.00"
CC	23.388	2192.680	7025.275	7.022	240°19'49.54"			
IP 4	24.095	2191.898	7024.829	7.014		R = -0.900	1.414	90°00'00.00"
IP 5	24.802	2192.343	7024.047	7.001				
	25.000	2192.441	7023.875	6.998	150°22'27.69"			
	30.000	2194.913	7019.529	6.930	150°22'27.69"			
	35.000	2197.384	7015.182	7.025	150°22'27.69"			
	40.000	2199.856	7010.836	7.308	150°22'27.69"			
	45.000	2202.328	7006.490	7.609	150°22'27.69"			
TC	46.763	2203.199	7004.957	7.714	150°22'27.69"			
IP 6	47.036	2203.370	7004.656	7.731		R = -0.350	0.546	89°22'32.57"
CT	47.309	2203.673	7004.824	7.744	60°59'55.12"			
TC	48.409	2204.635	7005.358	7.744	60°59'55.12"			
IP 7	48.686	2204.945	7005.529	7.729		R = -0.350	0.554	90°37'26.61"
CT	48.962	2204.770	7005.837	7.711	330°22'28.51"			

KERB ISLAND KI 6 SETOUT TABLE

POINT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2204.435	7002.784	7.859				
IP 2	3.281	2206.057	6999.932	8.043				
IP 3	3.281	2206.057	6999.932	8.043				
IP 4	3.988	2206.493	6999.145	8.085		R = -0.900	1.414	90°00'00.00"
CC	4.695	2207.280	6999.581	8.119	61°00'44.54"			
	5.000	2207.517	6999.771	8.105	41°34'06.64"			
IP 5	5.401	2208.068	7000.017	8.082		R = -0.900	1.414	90°00'00.00"
IP 6	6.108	2207.631	7000.804	8.037				
TC	9.397	2206.006	7003.663	7.854	330°22'28.51"			
IP 7	9.670	2205.834	7003.964	7.843		R = -0.350	0.546	89°22'33.39"
CT	9.943	2205.532	7003.796	7.847	240°59'55.12"			
	10.000	2205.482	7003.769	7.849	240°59'55.12"			
TC	11.043	2204.570	7003.263	7.849	240°59'55.12"			
IP 8	11.320	2204.260	7003.092	7.847		R = -0.350	0.554	90°37'27.43"
CT	11.597	2204.435	7002.784		150°22'27.69"			



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VANTAGE YATALA

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Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

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KARB ISLAND SETOUT
DETAILS SHEET 2 OF 2

A	01-05-2020	ORIGINAL ISSUE	BA	M3	
Issue	Date	Description	DBN	CHK	

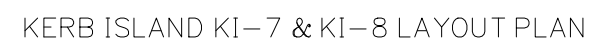
0 2 4 6 8 10

1:100 (FULL SIZE A1)
1:200 (HALF SIZE A3)

Scale at A1:	1:100
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 481	A



KERB ISLAND KI-7 SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL. ANGLE
IP 1	0.000	2656.491	6786.542	18.096				
IP 2	0.455	2656.488	6787.185	18.085		R = -0.500	0.910	104°17'11.26"
CC	0.910	2655.865	6787.023	18.083	255°26'26.86"			
IP 3	2.565	2654.257	6786.606	18.103		R = -15.160	3.310	12°30'39.87"
CC	4.220	2652.777	6785.849	18.126	242°55'46.99"			
	5.000	2652.249	6785.296	18.144	204°25'22.87"			
IP 4	5.013	2651.936	6785.419	18.144		R = -1.160	1.586	78°20'44.22"
CC	5.807	2652.187	6784.508	18.143	164°35'02.77"			
IP 5	6.600	2652.438	6783.597	18.124		R = -1.160	1.586	78°20'44.22"
IP 6	7.393	2653.381	6783.659	18.112				
IP 7	8.734	2654.712	6783.834	18.103		R = 71.159	2.683	2°09'37.25"
	10.000	2655.972	6783.951	18.095	84°36'47.61"			
CC	10.076	2656.047	6783.958	18.095	84°40'27.35"			
IP 8	10.446	2656.503	6784.001	18.096		R = -0.500	0.741	84°56'49.24"
CT	10.817	2656.501	6784.459	18.102	359°43'38.11"			

KERB ISLAND KI-8 SETOUT TABLE								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2658.827	6784.163	18.078				
IP 2	2.672	2661.497	6784.306	18.062		R = 71.159	5.344	4°18'11.74"
	5.000	2663.825	6784.256	18.049	90°56'39.67"			
CC	5.344	2664.169	6784.249	18.047	91°13'18.18"			
IP 3	6.788	2665.617	6784.219	18.041		R = -15.160	2.886	10°54'30.50"
CC	8.231	2667.044	6784.462	18.038	80°18'47.68"			
IP 4	8.992	2667.924	6784.612	18.041		R = -1.160	1.523	75°13'12.90"
CC	9.754	2668.004	6785.503	18.053	5°05'34.78"			
	10.000	2668.000	6785.748	18.050	352°55'32.54"			
IP 5	10.515	2668.083	6786.393	18.038		R = -1.160	1.523	75°13'12.90"
IP 6	11.277	2667.243	6786.696	18.028				
IP 7	13.961	2664.688	6787.611	18.029		R = -15.160	5.370	20°17'38.98"
	15.000	2663.619	6787.510	18.031	275°37'17.11"			
IP 8	16.646	2661.975	6787.582	18.039				
IP 9	18.167	2660.454	6787.566	18.048		R = -79.156	3.041	2°12'04.85"
CC	19.687	2658.935	6787.492	18.057	267°11'54.77"			
IP 10	19.776	2658.847	6787.488	18.058		R = -15.160	0.177	0°40'06.87"
CC	19.864	2658.759	6787.482	18.059	266°31'47.90"			
	20.000	2658.626	6787.456	18.060	250°58'38.61"			
IP 11	20.243	2658.287	6787.454	18.065		R = -0.500	0.757	86°48'09.75"
CT	20.622	2658.289	6786.981	18.076	179°43'38.11"			
TC	22.943	2658.300	6784.660	18.092	179°43'38.11"			
IP 12	23.348	2658.303	6784.134	18.083		R = -0.500	0.810	92°48'31.62"



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour interval: -
PSM: -
RL: -

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DRAWING TITLE

ROAD INTERSECTION
DETAILS SHEET 1 OF 8

Issue	Date	Original Issue Description	BA DRN	MG CHK
A	01-05-2020			

SCALE IN METRES

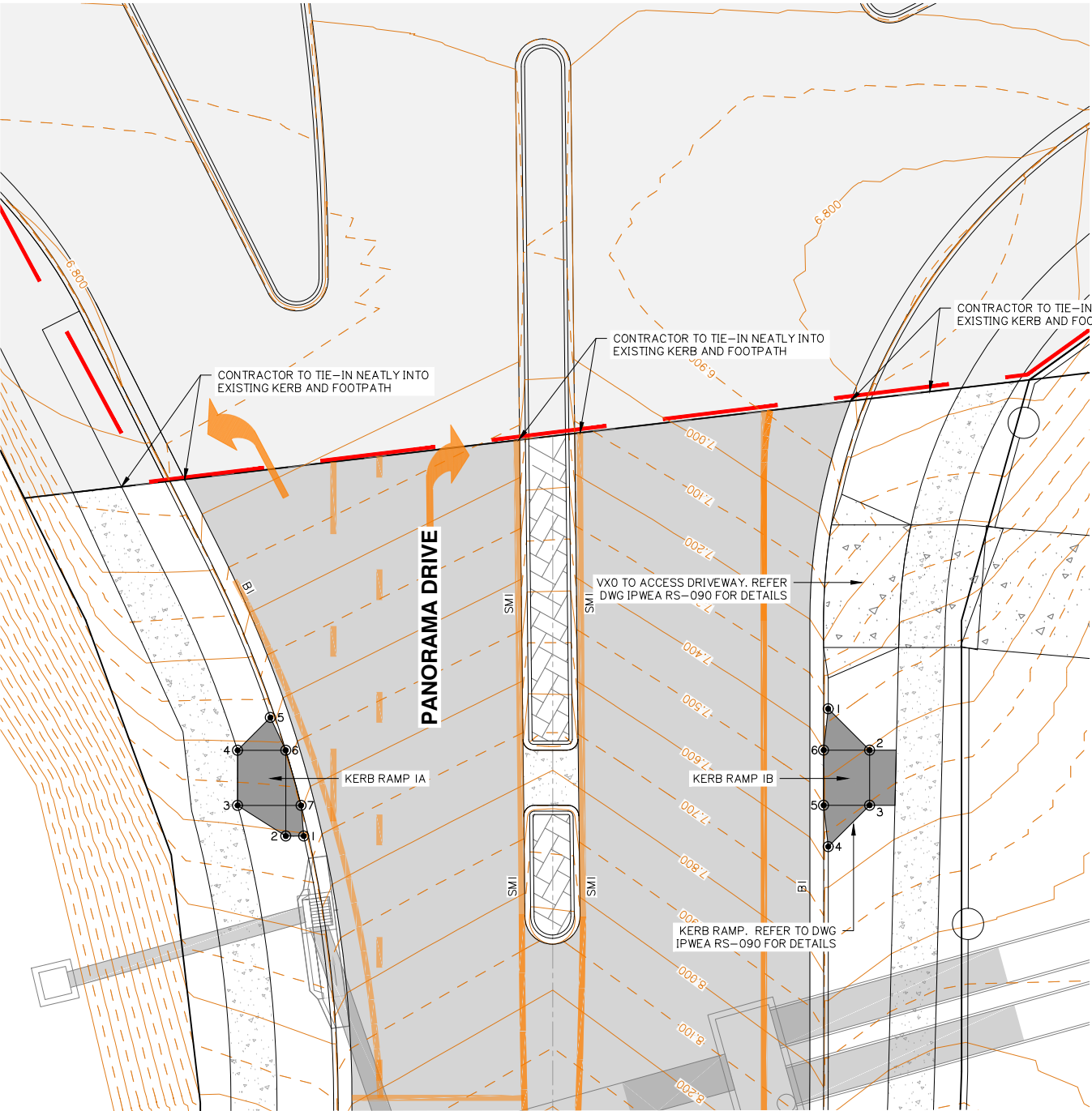


1:100 (FULL SIZE A1)
1:200 (HALF SIZE A3)

Scale at A1: 1:100

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 490 Rev. No: A



KERB RAMP IA SETOUT TABLE			
POINT	EASTING	NORTHING	DESCRIPTION
1	2198.467	6998.737	BACK OF KERB
2	2197.954	6998.453	RAMP
3	2196.092	6998.564	RAMP
4	2195.221	7000.139	RAMP
5	1064.222	7001.595	BACK OF KERB
6	2196.597	7000.901	INVERT OF KERB
7	2197.908	6999.570	INVERT OF KERB

KERB RAMP IB SETOUT TABLE			
POINT	EASTING	NORTHING	DESCRIPTION
1	2211.426	7010.666	BACK OF KERB
2	2213.261	7010.139	RAMP
3	2214.134	7008.565	RAMP
4	2213.608	7006.730	BACK OF KERB
5	2212.822	7007.838	INVERT OF KERB
6	2211.949	7009.412	INVERT OF KERB



PANORAMA DRIVE WIDEN LHS KERB SETOUT TABLE							
POINT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2391.838	6679.982	151°00'47.03"			
	5.000	2394.682	6675.879	139°31'51.40"			
	10.000	2398.285	6672.425	128°02'55.76"			
	15.000	2402.504	6669.757	116°34'00.13"			
IP 2	19.596	2403.929	6658.157		R = -24.950	39.191	90°00'00.03"
	20.000	2407.170	6667.982	105°05'04.50"			
	25.000	2412.095	6667.172	93°36'08.87"			
	30.000	2417.083	6667.358	82°07'13.23"			
	35.000	2421.934	6668.534	70°38'17.60"			
IP 3	39.191	2425.754	6670.248	61°00'47.00"			

PANORAMA DRIVE WIDEN RHS KERB SETOUT TABLE							
POINT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	2383.529	6667.947	151°00'47.03"			
	5.000	2385.952	6663.574	151°00'47.03"			
	10.000	2388.375	6659.200	151°00'47.03"			
IP 2	11.000	2388.860	6658.325				
	15.000	2391.126	6655.037	139°51'38.18"			
	20.000	2394.780	6651.642	125°55'12.10"			
	25.000	2399.144	6649.228	111°58'46.01"			
IP 3	27.140	2398.819	6640.350		R = -20.550	32.280	89°59'59.29"
	30.000	2403.962	6647.936	98°02'19.93"			
	35.000	2408.949	6647.843	84°05'53.85"			
	40.000	2413.811	6648.954	70°09'27.76"			
CT	43.280	2416.794	6650.308	61°00'47.00"			
	45.000	2418.299	6651.142	61°00'47.00"			
	50.000	2422.673	6653.565	61°00'47.00"			
IP 4	54.280	2426.416	6655.639	61°00'47.00"			

KERB RAMP 2A SETOUT TABLE			
POINT	EASTING	NORTHING	DESCRIPTION
1	2425.463	6670.773	BACK OF KERB
2	2425.990	6672.608	RAMP
3	2427.302	6673.335	RAMP
4	2429.136	6672.808	RAMP
5	2428.029	6672.023	INVERT OF KERB
6	2426.716	6671.296	INVERT OF KERB

KERB RAMP 2B SETOUT TABLE			
POINT	EASTING	NORTHING	DESCRIPTION
1	2436.067	6660.300	BACK OF KERB
2	2435.540	6658.464	RAMP
3	2434.228	6657.738	RAMP
4	2432.393	6658.264	RAMP
5	2433.501	6659.050	INVERT OF KERB
6	2434.813	6659.777	INVERT OF KERB



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Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL

Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RI :	-

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DRAWING TITLE

ROAD INTERSECTION
DETAILS SHEET 2 OF 8[illegible]

SCALE IN METRES



1:100 (FULL SIZE A1)
1:200 (HALF SIZE A3)

Scale at A1: 1:100

Designed:	IG
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Drafted:	BA
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Approved:	MG
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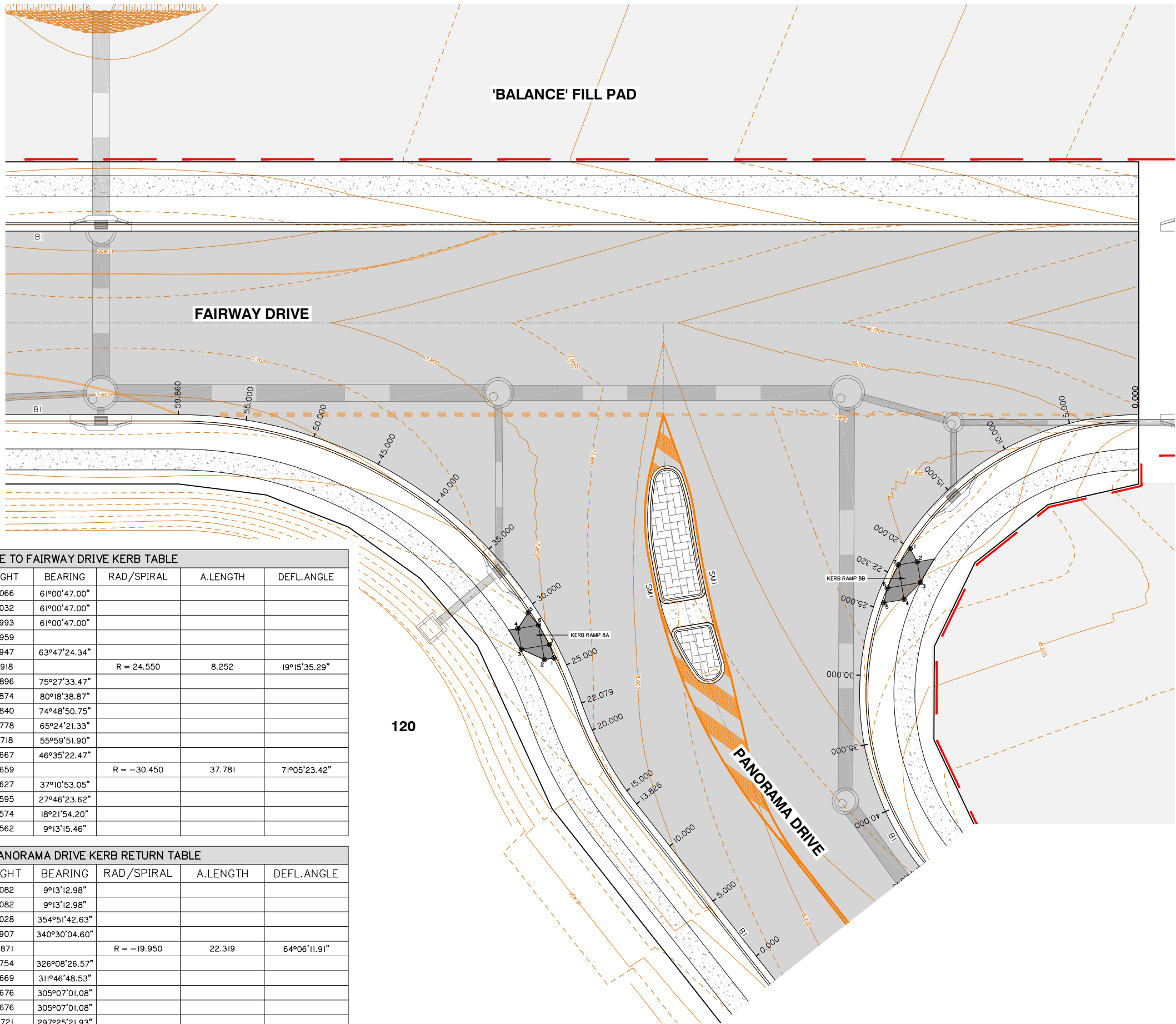
RPEQ:	16939
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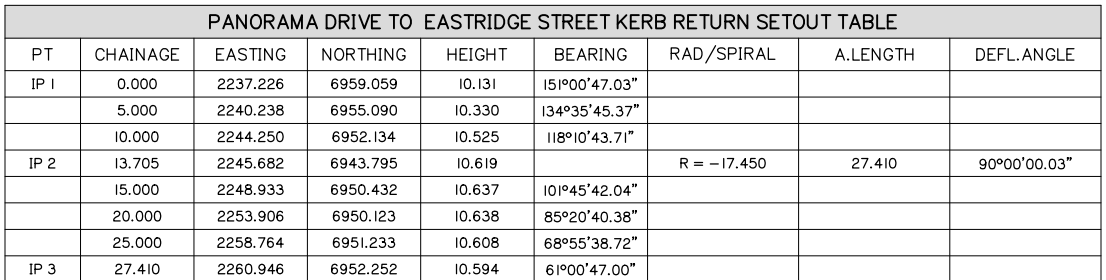
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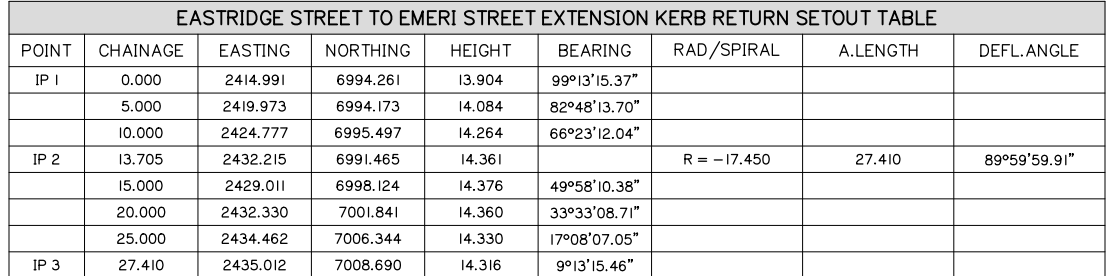
Date:	01-05-2020
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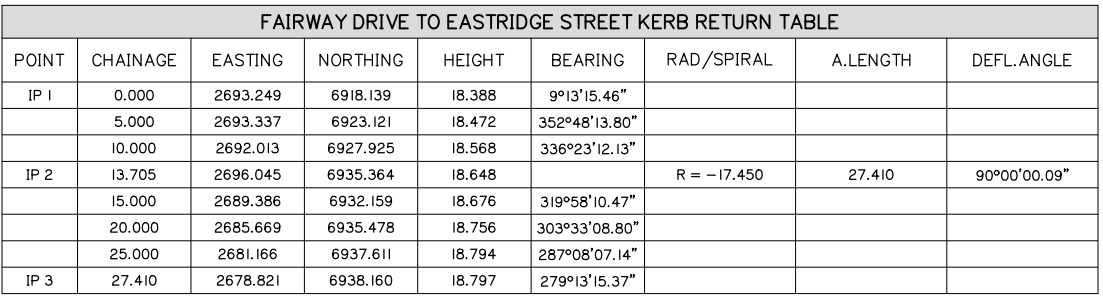
Drawing No:
5941 ENG OPW1 491

Rev. No:
A











Site Address:
60 STAPYLTON JACOBS WELL
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RPD:
 Lot: 501
 Plan: SP295994
 Local Authority: CITY OF GOLD COAST
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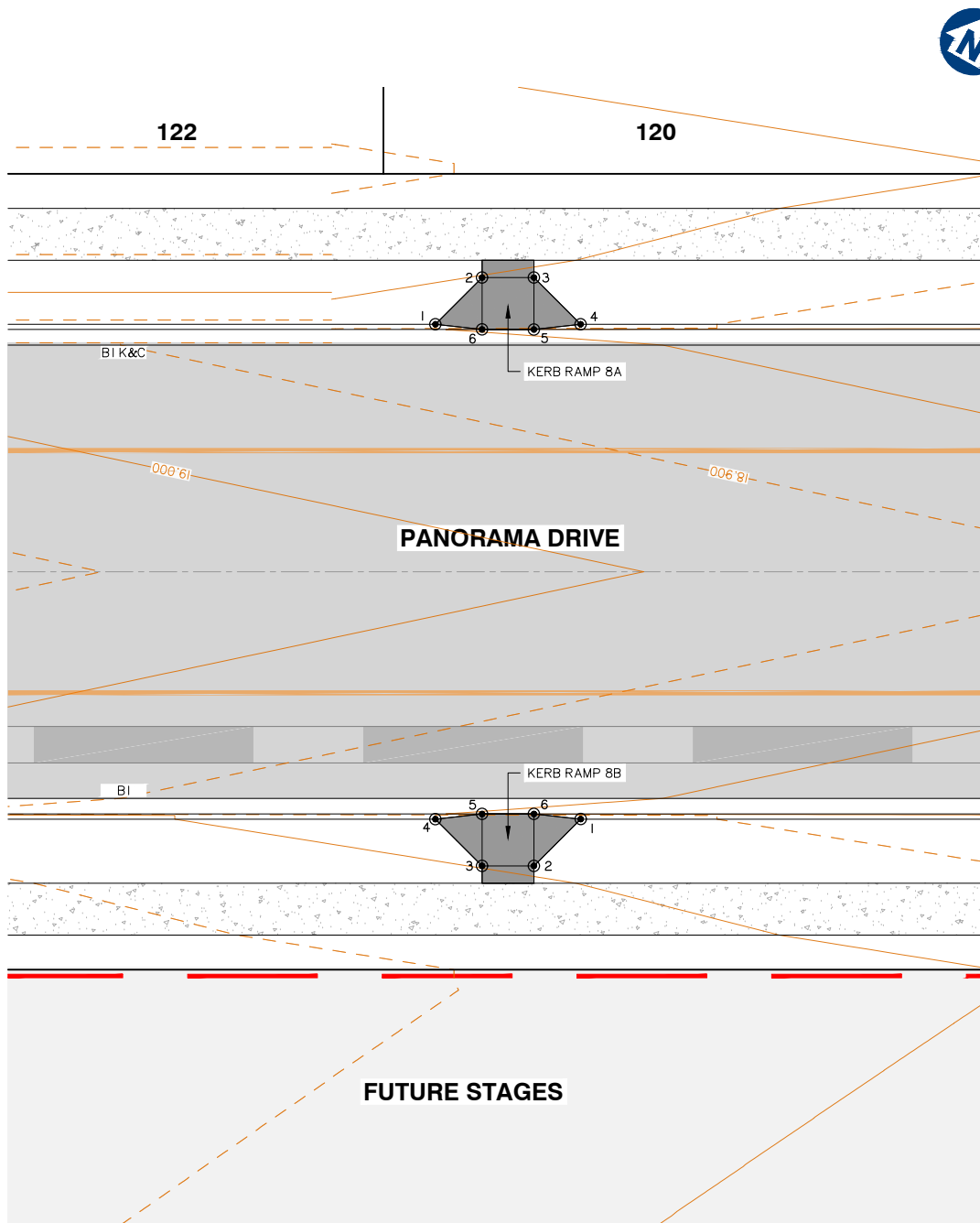
DRAWING TITLE

ROAD INTERSECTION
DETAILS SHEET 8 OF 8

01-05-2020	ORIGINAL ISSUE	BA
Date	Description	DRN

Scale at A1:	1:100
Designed:	IG
Drafted:	BA
Approved:	MG
PEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. N
041 ENG OPW1 497	A



KERB RAMP 8B SETOUT TABLE			
POINT	EASTING	NORTHING	DESCRIPTION
1	2536.224	6715.791	BACK OF KERB
2	2535.697	6713.952	RAMP
3	2534.385	6713.220	RAMP
4	2532.549	6713.752	RAMP
5	2533.658	6714.538	INVERT OF KERB
6	2534.970	6715.264	INVERT OF KERB

CATCHMENT TABLE

CATCHMENT NAME	CATCHMENT AREA (HA)
CAT 1/EXT1	0.405
CAT 2/EXT1	0.0045
CAT 3/EXT1	0.0064
CAT 1/EXT2	0.052
CAT 2/EXT2	0.113
CAT 3/EXT2	0.142
CAT 1/EXT3	0.162
CAT 3/EXT3	0.016
CAT 2/EXT3	0.077
CAT 4/EXT3	0.036
CAT 5/EXT3	0.033
CAT 1/EXT4	0.020
CAT 7/X2	0.0528
CAT 8/X2	0.1151
CAT 9/X2	0.1116
CAT 14/X2	0.2471

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DRAWING TITLE					
STORMWATER DRAINAGE CATCHMENT PLAN					
A Issue	01-05-2020 Date	ORIGINAL ISSUE Description			BA DRN MG CHK
SCALE IN METRES					
					
0 30 60 90 120 150					
1:1500 (FULL SIZE A1)					
1:3000 (HALF SIZE A3)					
Scale at A1:		1:1500			
Designed:		IG			
Drafted:		BA			
Approved:		MG			
RPEQ:		16939			
Signed:					
Date:		01-05-2020			
Drawing No:			Rev. No:		

Date:	01-05-2020
Drawing No:	Rev. No:
5941 ENG OPW1 510	A

STRUCTURE NAME	9/1	10/1	11/1	12/1	13/1
STRUCTURE DESCRIPTION	STD IPWEAQ ACCESS CHAMBER 1800mm DIA	STD IPWEAQ ACCESS CHAMBER 1800mm DIA	STD IPWEAQ ACCESS CHAMBER 1200mm DIA	OVERSIZE CHAMBER CAST – INSTU 3566x1800mm – REFER DETAIL PLAN	1200mm DIA DUAL OUTLET HEADWALL

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

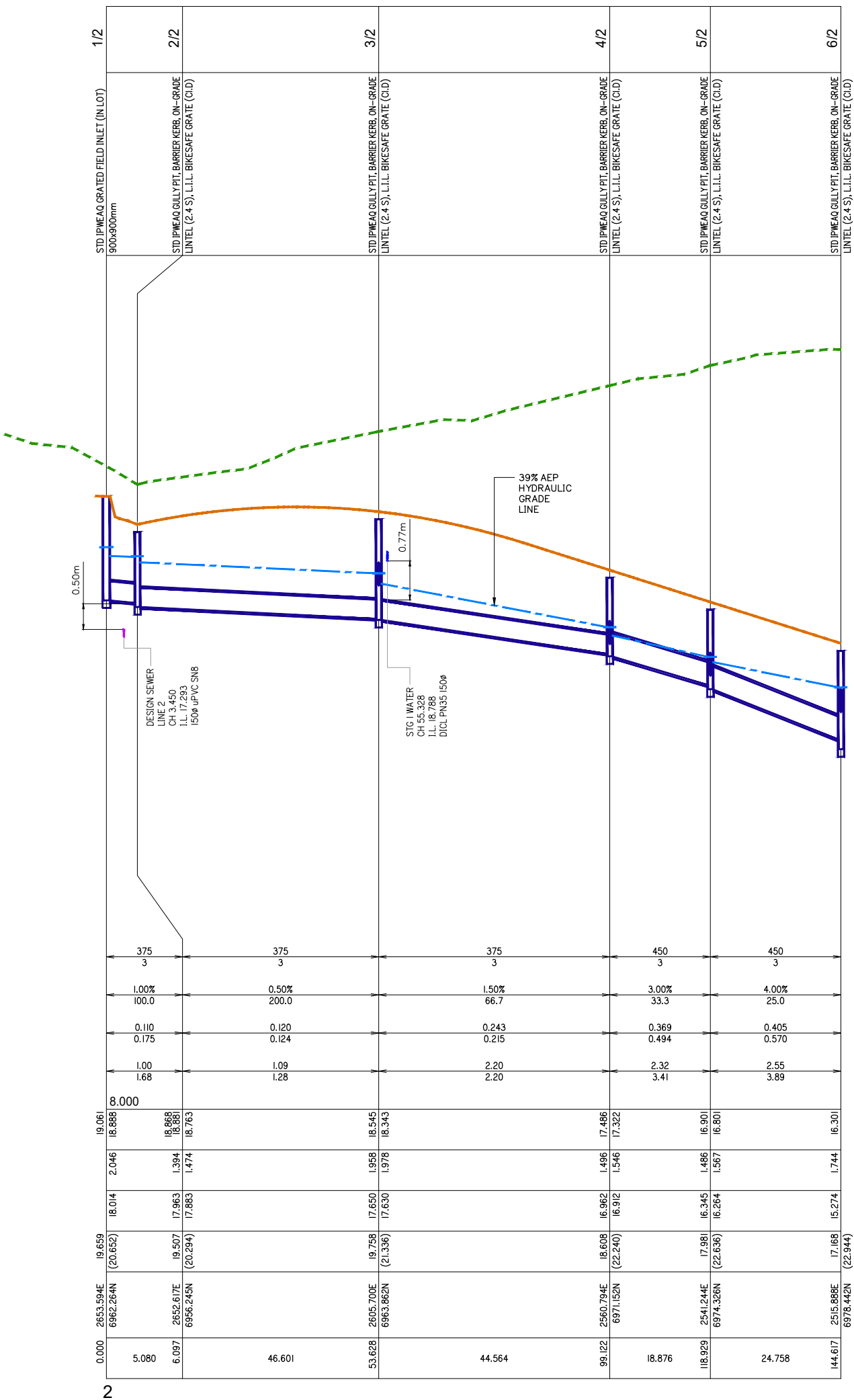
ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

SHAFT	OFFSET
I200	475
I350	550
I500	625
I800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

PIPE SIZE (mm)		1200	1200	1200	(2x)1200
PIPE CLASS		3	3	3	3
PIPE GRADE (%)		2.00%	2.50%	0.10%	0.10%
PIPE SLOPE (1 in X)		50.0	40.0	1000.0	1000.0
PIPE FLOW (cumecs)		3.728	3.807	3.892	3.905
CAPACITY FLOW (cumecs)		5.516	6.167	1.233	2.467
FULL PIPE VELOCITY (m/s)		3.30	3.37	3.44	1.73
NORMAL DEPTH VELOCITY (m/s)		5.24	5.74	3.44	1.73
DATUM R.L.		-1.000			
HGL ELEVATION (39.35% AEP)	9.52 9.193 8.38		7.994 7.874	7.726 7.808 7.144	6.982 6.935
DEPTH TO INVERT OF PIPE	2.528 3.321		2.587 2.607	2.191 2.297	2.020 2.040
INVERT LEVEL OF PIPE	8.129 7.336		6.563 6.543	6.154 6.048	6.038 6.018
DESIGN (& EXISTING) SURFACE LEVEL	10.658 (12.712)		9.150 (10.147)	8.346 (9.103)	8.059 (8.296)
SETOUT COORDINATES (EASTING & NORTHING)	2234.481E 6940.180N		2214.872E 6975.576N	2206.383E 6990.898N	2215.148E 6999.517N
PIPE CHAINAGE	297.517	38.665	337.982	15.567 355.499	10.192 367.792
					18.157 387.124

LINE 1



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DRAWING TITLE

STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 2 OF 18

A Issue	01-05-2020 Date	ORIGINAL ISSUE Description	BA DRN	MG CHK

SCALE IN METRES

HORZ:  Scale 1:500 - Lengths are in Metres.

Scale 1:50 - Lengths are in Metres.

VERT:

Scale at A1: AS SHOWN

Designed:	IG
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Drafted:	BA
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Approved:	MG
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RPEQ:	16930
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Signed:	
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Date:	01-05-2020
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Drawing No:
5941 ENG OPW1 511

Rev. No:
A

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 3 OF 18



STRUCTURE NAME	1/3	2/3	3/3	4/3	11/2
STRUCTURE DESCRIPTION	STD IPWEAQ GRATED FIELD INLET (IN LOT) 1200x1200mm	STD IPWEAQ ACCESS CHAMBER 1050mm DIA	STD IPWEAQ GRATED FIELD INLET (IN LOT) 1200x1200mm	DRAINWAY SYSTEM ON GRADE, L.L.L 2.4m KERB INLET, CLASS (D) HINGED BIKESAFE GALLY GRATE ON TOP OF ROCLA (OR EQUIV.) OPO PIT SYSTEM CIRCULAR CHAMBER	STD IPWEAQ ACCESS CHAMBER 1500mm DIA

SHAFT/PIT BASE

IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE ROCLA CPO PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA.

ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SL82 MESH ON 50MM THICK BLINDING CONCRETE

CONVERTER SLAB TABLE

SHAFT	OFFSET
I200	475
I350	550
I500	625
I800	775
2100	925

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR CPO PITS 1200ø, 1500ø, 1800ø

PIPE SIZE (mm)	525	525	825	900
PIPE CLASS	3	3	3	3
PIPE GRADE (%)	0.40%	5.02%	2.00%	1.50%
PIPE SLOPE (1 in X)	250.0	19.9	50.0	66.7
PIPE FLOW (cumecs)	0.559	0.547	0.874	0.913
CAPACITY FLOW (cumecs)	0.272	0.964	2.031	2.218
FULL PIPE VELOCITY (m/s)	2.58	2.53	1.64	1.44
NORMAL DEPTH VELOCITY (m/s)	2.58	4.59	3.66	3.32
DATUM R.L.	4.000			
HGL ELEVATION (39.35% AEP)	16.054 15.326	13.744 13.679	12.490 12.444	12.334 11.968
DEPTH TO INVERT OF PIPE	3.000	2.974 3.000	2.042 2.342	2.433 2.576
INVERT LEVEL OF PIPE	13.600	13.225 13.199	11.220 10.920	10.796 10.634
DESIGN (& EXISTING) SURFACE LEVEL	16.600 (17.771)	16.199 (15.405)	13.262 (13.599)	12.988 (13.379)
SETOUT COORDINATES (EASTING & NORTHING)	2447.716E 6861.101N	2401.660E 6944.233N	2381.944E 6979.820N	2378.830E 6986.898N
PIPE CHAINAGE	0.000	95.037	135.721	142.993

LINE 3

1/4	2/4	3/4	9/2
STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L BIKESAFE GRATE (C/D)	STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L BIKESAFE GRATE (C/D)	STD IPWEAQ GULLY PIT, BARRIER KERB, IN SAG LINTEL (2.4 S), L.L.L BIKESAFE GRATE (C/D)	STD IPWEAQ ACCESS CHAMBER 1200mm DIA
375 3	375 3	375 3	
1.00%	3.00%	0.67%	
100.0	33.3	150.0	
0.015	0.034	0.081	
0.175	0.304	0.143	
0.14	0.31	0.74	
0.97	1.82	1.34	
6.000	14.557 14.550	13.517 13.477	13.434 13.285
1.144	14.404 14.377	12.751 12.715	12.434 12.361
14.463	14.330 14.230	12.991 12.878	12.744 12.197
15.757 (20.896)	15.757 (20.494)	14.416 (9.235)	14.559 (8.216)
2455.605E 7050.339N	2441.582E 7052.615N	2434.820E 7010.949N	2431.424E 6990.023N
13.324	41.281	20.060	

4



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ROAD, STAPYLTON QLD 4207

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RPD:

Lot: 501
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Local Authority: CITY OF GOLD COAST
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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 4 OF 18

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.
HORIZ: 0 5 10 15 20 25 30 35 40

Scale 1:50 - Lengths are in Metres.
VERT: 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 513
Rev. No: A

STRUCTURE NAME	STRUCTURE DESCRIPTION	
1/6	STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (GID)	
2/6	STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (GID)	
3/6	STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (GID)	
4/6	STD IPWEAQ ACCESS CHAMBER 1050mm DIA	
5/6	STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (GID)	
6/6	STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (GID)	
13/X2	STD IPWEAQ ACCESS CHAMBER 2100mm DIA	

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

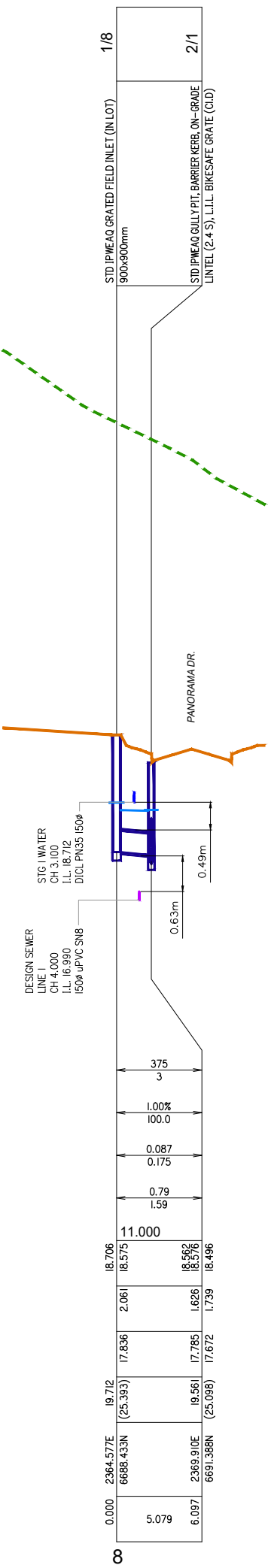
CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

PIPE SIZE (mm)	375	375	375	375	450	450
PIPE CLASS	3	3	3	3	3	3
PIPE GRADE (%)	1.00%	3.00%	4.00%	2.00%	1.25%	1.00%
PIPE SLOPE (1 in X)	100.0	33.3	25.0	50.0	80.0	100.0
PIPE FLOW (cumecs)	0.013	0.024	0.037	0.085	0.137	0.256
CAPACITY FLOW (cumecs)	0.175	0.304	0.351	0.248	0.319	0.285
FULL PIPE VELOCITY (m/s)	0.12	0.22	0.34	0.77	0.86	1.61
NORMAL DEPTH VELOCITY (m/s)	0.94	1.64	2.06	2.03	1.93	2.03
DATUM R.L.	7.000					
HGL ELEVATION (39.35% AEP)	19.831 19.826	19.681 19.668 19.661	18.466 18.456	17.131 17.132 17.103	16.793 16.759	16.070 16.190 15.575
DEPTH TO INVERT OF PIPE	1.059	1.192 1.252	1.305 1.325	1.809 1.959	1.786 1.806	1.906 1.986
INVERT LEVEL OF PIPE	19.744	19.611 19.551	18.338 18.318	17.040 16.890	16.520 16.500	15.933 15.853
DESIGN (& EXISTING) SURFACE LEVEL	20.953 (22.656)	20.953 (22.862)	19.793 (21.145)	18.850 (9.219)	18.456 (18.044)	17.989 (5.071)
SETOUT COORDINATES (EASTING & NORTHING)	2721.334E 7005.936N	2707.311E 7008.213N	2700.682E 6967.381N	2695.404E 6934.866N	2692.286E 6915.660N	2684.863E 6869.937N
PIPE CHAINAGE	0.000 13.324 14.206	40.436	55.572	31.950 88.513 18.468	107.970 45.392	154.293 44.580

LINE 6



8



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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 5 OF 18

A Issue	01-05-2020 Date	ORIGINAL ISSUE Description	BA DRN	MG CHK

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

VERT:

Scale at A1: AS SHOWN

Designed:	IG
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Approved:	MG
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Signed:	
Date:	01-05-2020

Drawing No:
5941 ENG OPW1 514

Rev. No:
A

SHAFT/PIT BASE

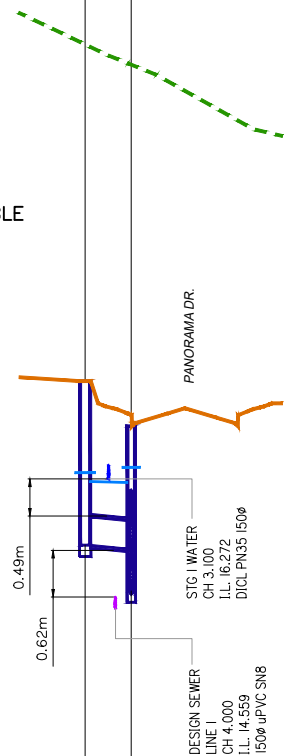
IN FAVOURABLE GROUND
CONDITIONS PROVIDE
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ALTERNATELY (OR
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MESH ON 50MM THICK
BLINDING CONCRETE

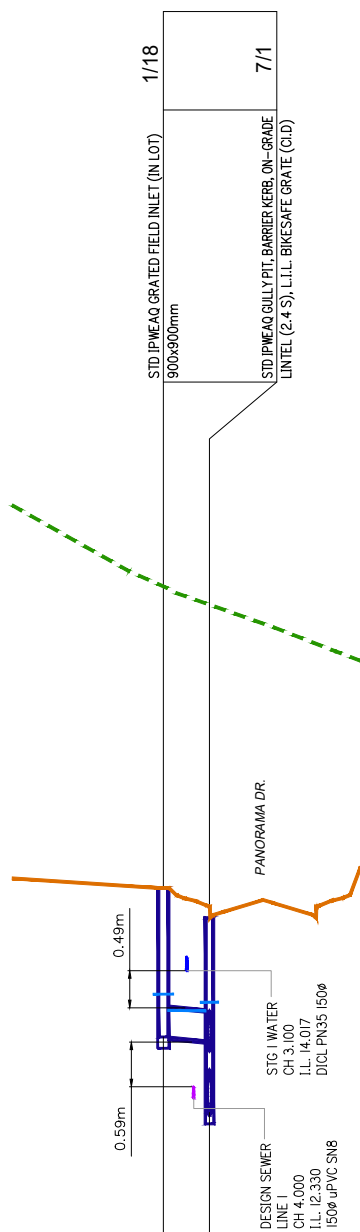
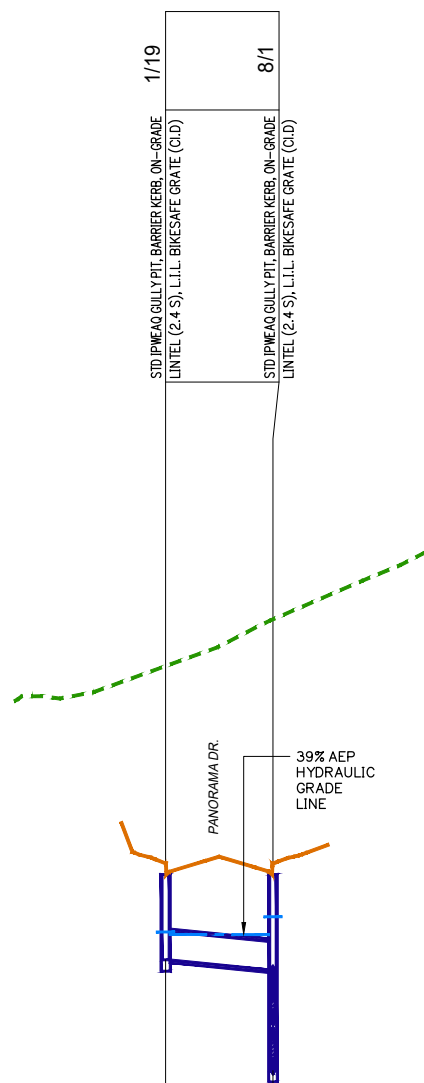
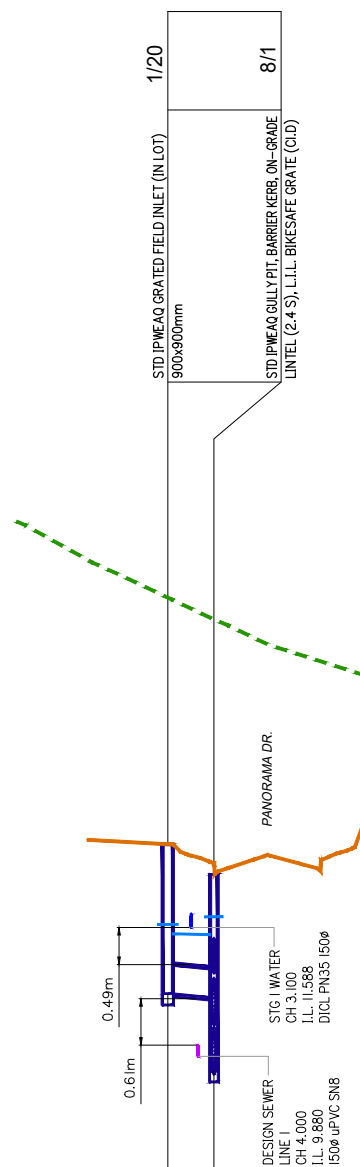
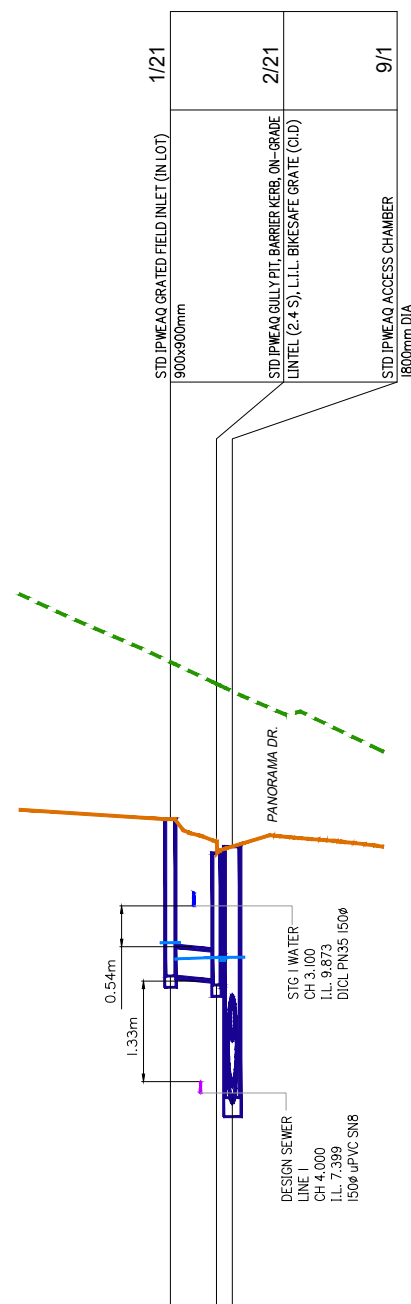
CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø



LINE 16

18192021

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Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL

Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE

STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 7 OF 18

[illegible]

A	01-05-2020	ORIGINAL ISSUE	BA	M
Issue	Date	Description	DRN	CH

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

Scale 1:50 - Lengths are in Metres.

VERT:

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:
5941 ENG OPW1 516

Rev. No:
A



IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

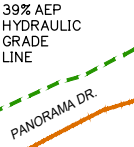
CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPC
PITS 1200Ø, 1500Ø, 1800Ø

PIPE SIZE (mm)		375		375
PIPE CLASS		3		3
PIPE GRADE (%)		1.00%		1.00%
PIPE SLOPE (1 in X)		100.0		100.0
PIPE FLOW (cumecs)		0.087		0.100
CAPACITY FLOW (cumecs)		0.175		0.175
FULL PIPE VELOCITY (m/s)		0.79		0.91
NORMAL DEPTH VELOCITY (m/s)		1.59		1.64
DATUM R.L.		-2.000		
HGL ELEVATION (39.35% AEP)	8.191 8.038		8.026 7.996	7.994
DEPTH TO INVERT OF PIPE	2.051		1.676 1.745	1.839
INVERT LEVEL OF PIPE	7.439		7.388 7.319	7.311
DESIGN (& EXISTING) SURFACE LEVEL	9.365 (10.482)		9.214 (10.233)	9.150
SETOUT COORDINATES (EASTING & NORTHING)	2207.699E 6971.602N		2213.032E 6974.556N	2214.872E
PIPE CHAINAGE	0.000	5.032	6.097	8.200

LINE 22



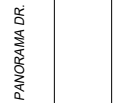
39% AEP
HYDRAULIC
GRADE
LINE

STG | WATER —
CH 5.708
I.L. 7.108
DICI PN35 1500

DESIGN SEWER
LINE 1
CH 6.617
I.L. 4.491
150ø uPVC SN8

[illegible]

23



PANORAMA DR.

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[illegible]

24



Line graph showing the number of people in the 18-24 age group in the East of London from 2001 to 2011. The Y-axis represents the number of people in thousands, ranging from 0 to 100. The X-axis represents the year. A solid orange line shows the population trend, which starts at approximately 85,000 in 2001, remains relatively stable until 2006, then drops sharply to about 65,000 in 2007, and recovers to around 75,000 by 2011. A dashed green line shows a projected increase from 2006 onwards, reaching approximately 95,000 by 2011. Vertical blue bars indicate election years (2001, 2005, 2009). A vertical line marks the location of Eastridge St.

DESIGN SEWER
LINE 2
CH 3.482
I.L. 6.046
150Ø uPVC SN8

0.000	2257.648E 6958.272N	10.855 (11.324)	9.236	1.801	9.718 9.616	-1.000	0.53 1.43	0.059 0.175	1.00% 100.0	375 3
5.179										
6.244	2260.662E 6952.804N	10.705 (11.942)	9.184 9.114	1.370 1.440	9.610 9.587				1.00% 100.0	375 3
0.956							0.66 1.52	0.073 0.175		
8.414	2261.698E	10.640	9.104	1.536	9.585					

25

STRUCTURE NAME	1/26	17/2
STRUCTURE DESCRIPTION	STD IPWEAQ GULLY PIT, BARRIER KERB, IN SAG INLET (2.4 S), LILL, BIKESAFE GRATE (CID)	STD IPWEAQ ACCESS CHAMBER

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

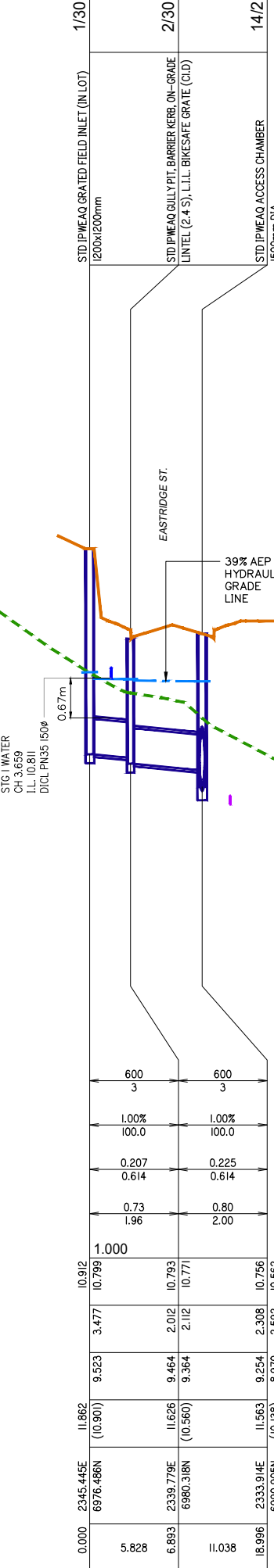
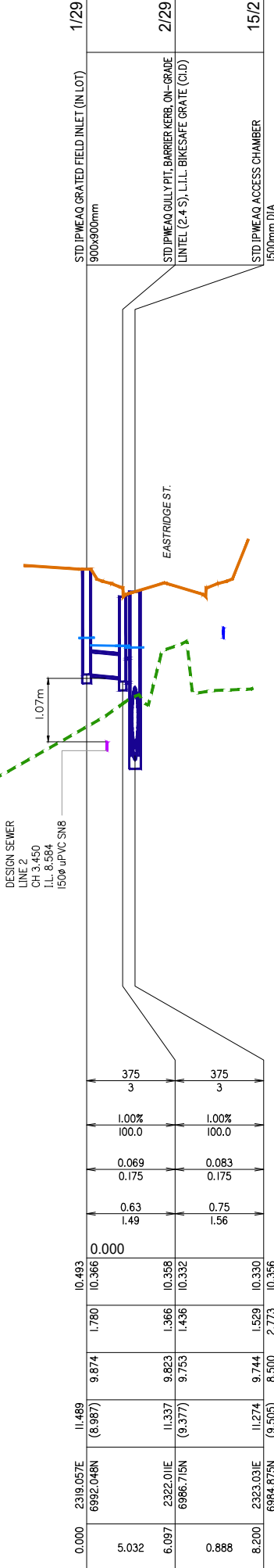
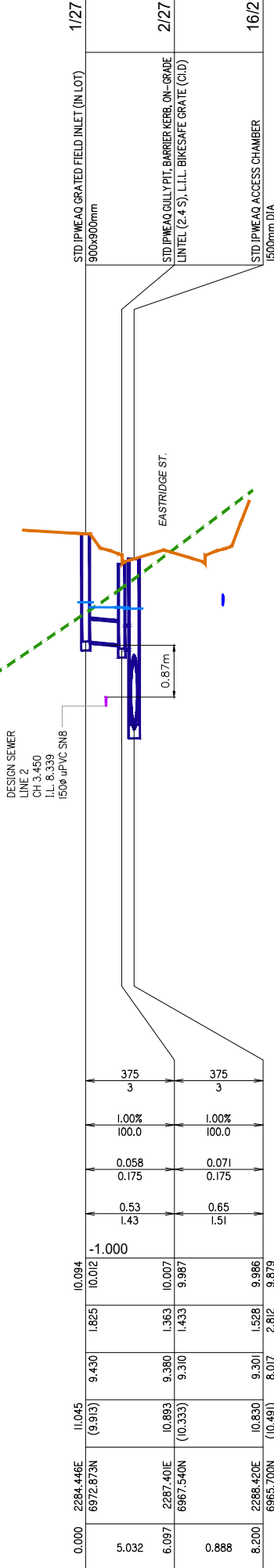
CONVERTER SLAB TABLE

SHAFT	OFFSET
I200	475
I350	550
I500	625
I800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

PIPE SIZE (mm)		375
PIPE CLASS		3
PIPE GRADE (%)		1.00%
PIPE SLOPE (1 in X)		100.0
PIPE FLOW (cumecs)		0.057
CAPACITY FLOW (cumecs)		0.175
FULL PIPE VELOCITY (m/s)		0.51
NORMAL DEPTH VELOCITY (m/s)		1.42
DATUM R.L.		0.000
HGL ELEVATION (39.35% AEP)	9.684 9.596	9.585
DEPTH TO INVERT OF PIPE	1.466	1.662
INVERT LEVEL OF PIPE	9.088	8.978
DESIGN (& EXISTING) SURFACE LEVEL	10.705 (12.309)	10.640
SETOUT COORDINATES (EASTING & NORTHING)	2267.612E 6940.259N	2261.698E
PIPE CHAINAGE	0.000	10.956 12.171

LINE 26



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Project:

VANTAGE YATALA

Site Address:

50 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 9 OF 18

SCALE IN METRES

Scale 1:500 - Lengths are in Metres

HORZ:

Scale 1:50 - Lengths are in Metres.

Age Group	Number of people
0-10	1
11-20	2
21-30	3
31-40	4
41-50	3
51-60	2
61-70	1
71-80	1
81-90	1
91-100	1

Scale at A1: AS SHOWN

Designed:	IG
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Drafted:	BA
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Approved:	MG
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169

Signed:

01-05-2020

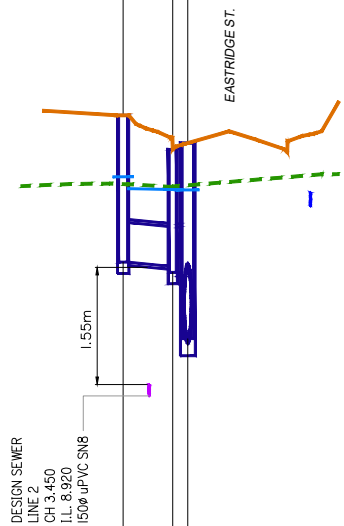
Drawing No:
5941 ENG OPW1 518

Rev. No:
A

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

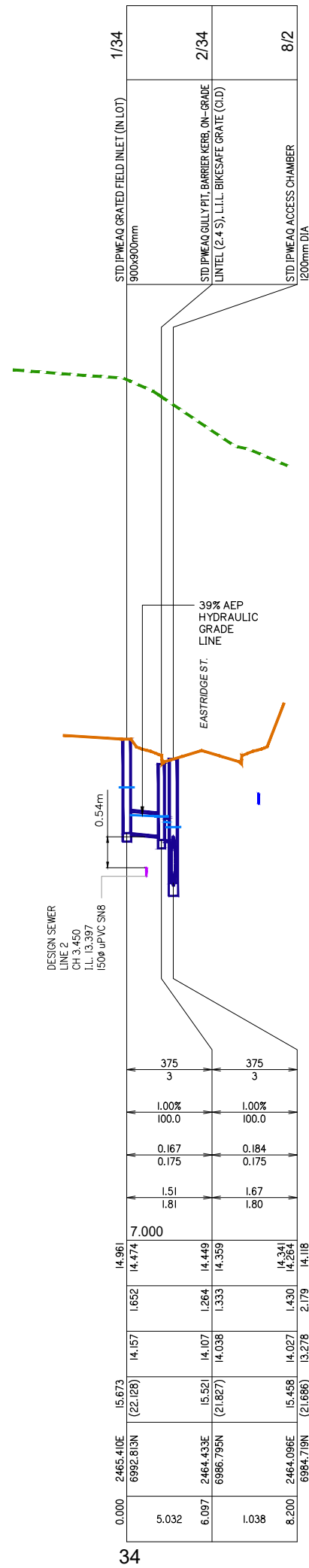
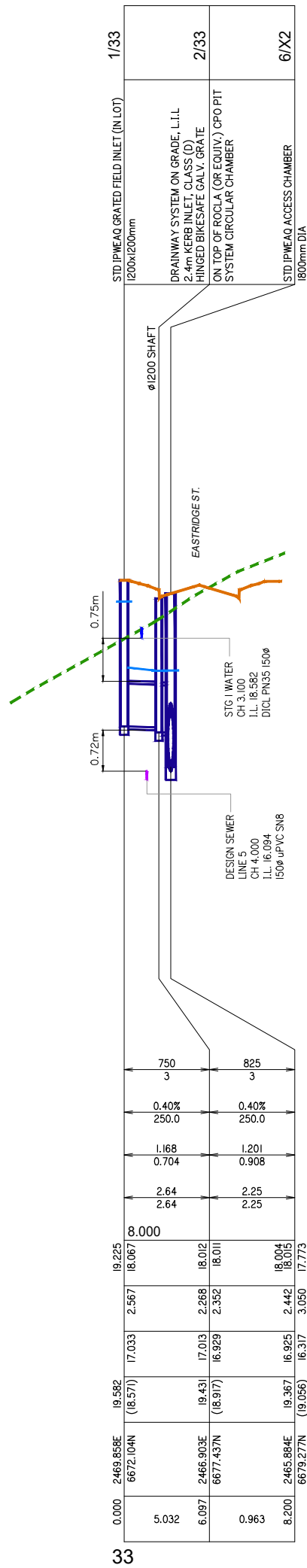
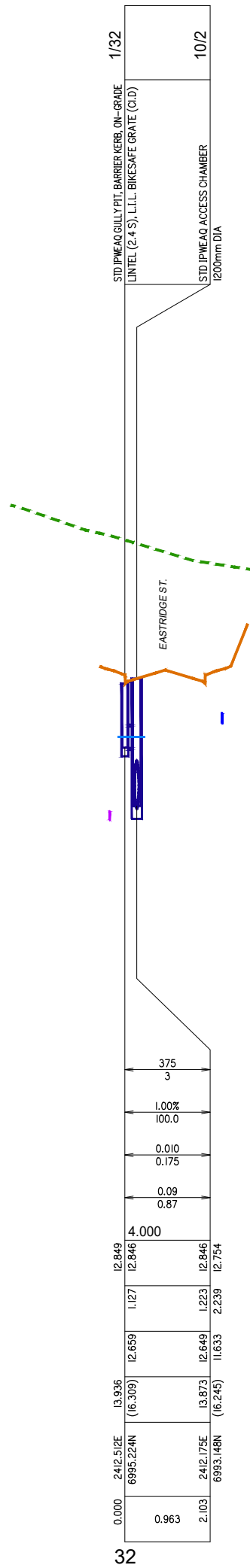


CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

LINE 31



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Project:

VANTAGE YATALA

Site Address:

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ROAD, STAPYLTON QLD 4207

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RPD:

Lot: 501
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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 10 OF 18

A	01-05-2020	ORIGINAL ISSUE		BA	MG
Issue	Date	Description		DRN	CH

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

Scale 1:50 - Lengths are in Metres.

VERT: 

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:
5941 ENG OPW1 519

Rev. No:
A

STRUCTURE NAME	2/40	4/6
STRUCTURE DESCRIPTION	STD IPWEAQ GULLY P/T, BARRIER KERB, ON-GRADE INTEL (2.4 S), L.I.L. BIKESAFE GRATE (GLO)	STD IPWEAQ ACCESS CHAMBER

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

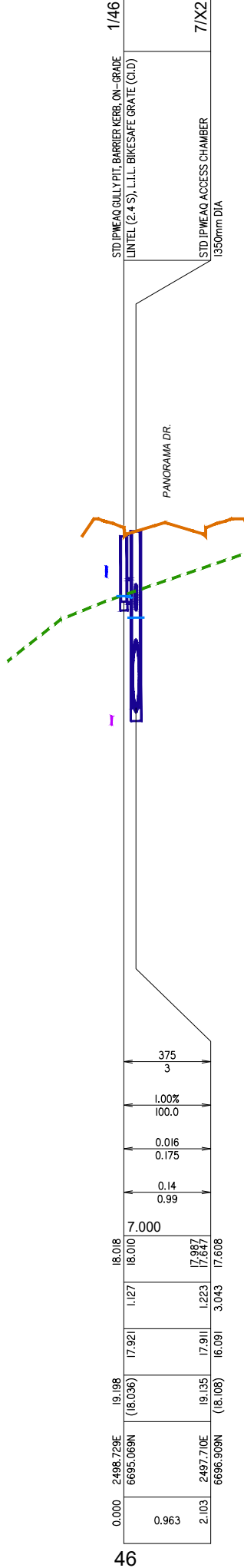
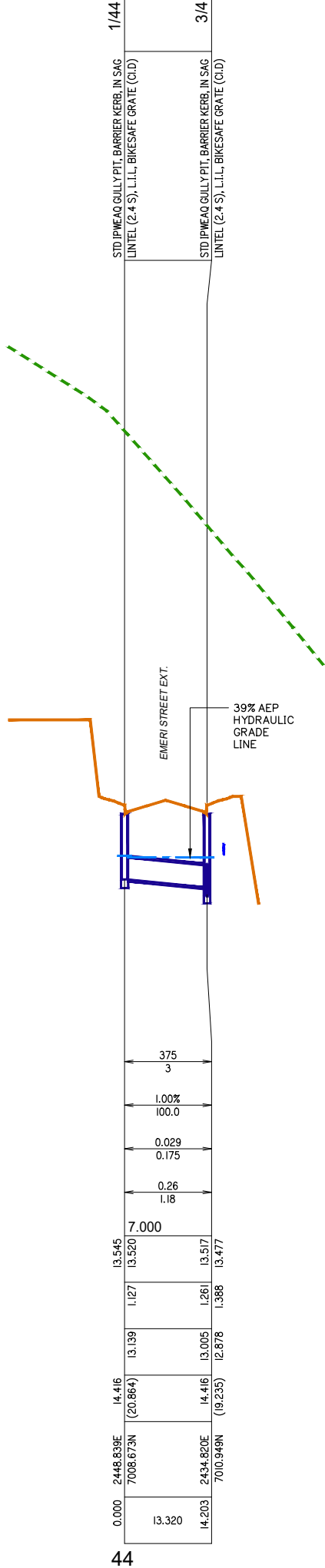
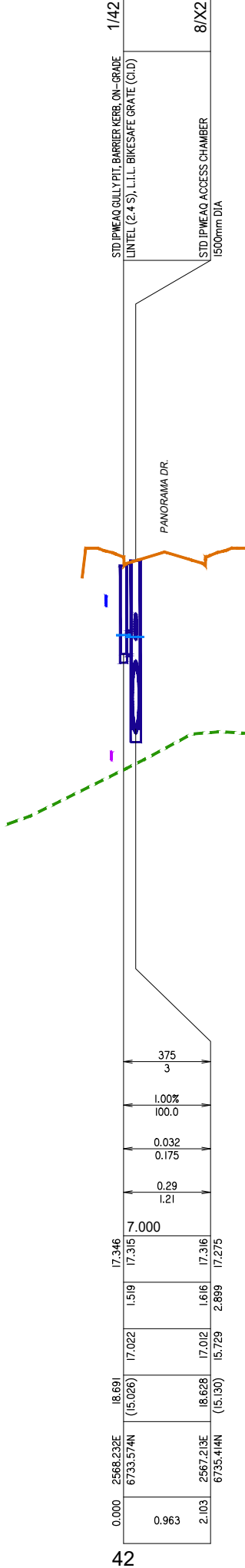
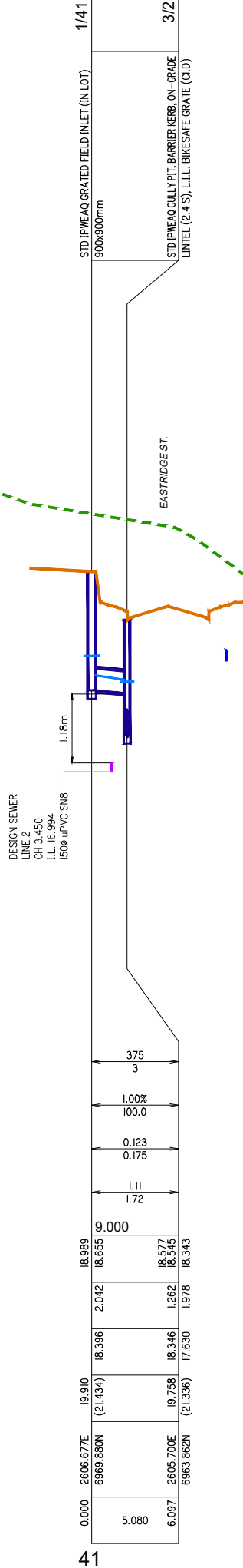
CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

PIPE SIZE (mm)		375
PIPE CLASS		3
PIPE GRADE (%)		1.00%
PIPE SLOPE (1 in X)		100.0
PIPE FLOW (cumecs)		0.049
CAPACITY FLOW (cumecs)		0.175
FULL PIPE VELOCITY (m/s)		0.44
NORMAL DEPTH VELOCITY (m/s)		1.36
DATUM R.L.		8.000
HGL ELEVATION (39.35% AEP)	17.565 17.568 17.541	17.353 17.132 17.132
DEPTH TO INVERT OF PIPE	1.296 1.376	1.631
INVERT LEVEL OF PIPE	17.461 17.381	17.218
DESIGN (& EXISTING) SURFACE LEVEL	18.907 (19.161)	18.950
SETOUT COORDINATES (EASTING & NORTHING)	2678.348E 6937.642N	2695.404E
PIPE CHAINAGE	14.286	16.293 31.569

LINE 40



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Project

VANTAGE YATALA

Site Address

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL

Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 12 OF 18

A Issue	01-05-2020	ORIGINAL ISSUE	BA DRN	M CR
	Date	Description		

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

VERT: 

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
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RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:
5941 ENG OPW1 52

Rev. No:
A

STRUCTURE NAME	1/55	
STRUCTURE DESCRIPTION	STD IPWEAQ GRATED FIELD INLET (IN LOT) 1200x1200mm	DRAINWAY SYSTEM SAG, L.I.L 2.4m KERB INLET, CLASS (D) HINGED BIKESAFE GALV GRATE ON TOP OF ROCLA (OR EQUIV.) CPD PIT SYSTEM CIRCULAR CHAMBER
		12/X2
		STD IPWEAQ ACCESS CHAMBER

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

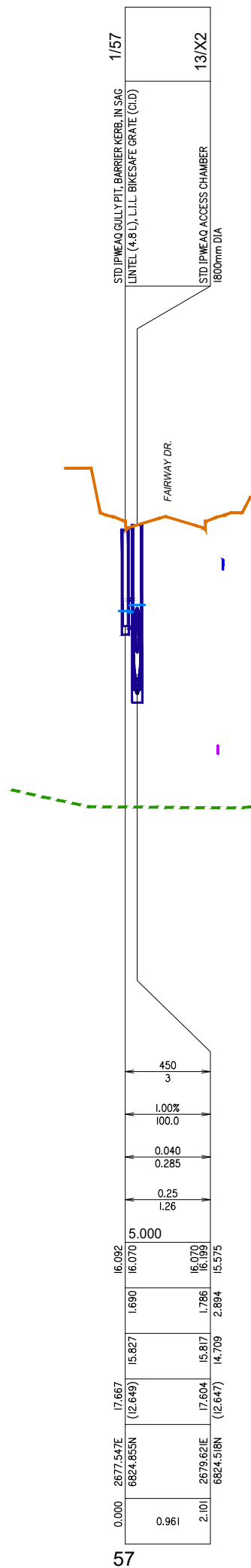
CONVERTER SLAB TABLE

SHAFT	OFFSET
I200	475
I350	550
I500	625
I800	775
I2100	925

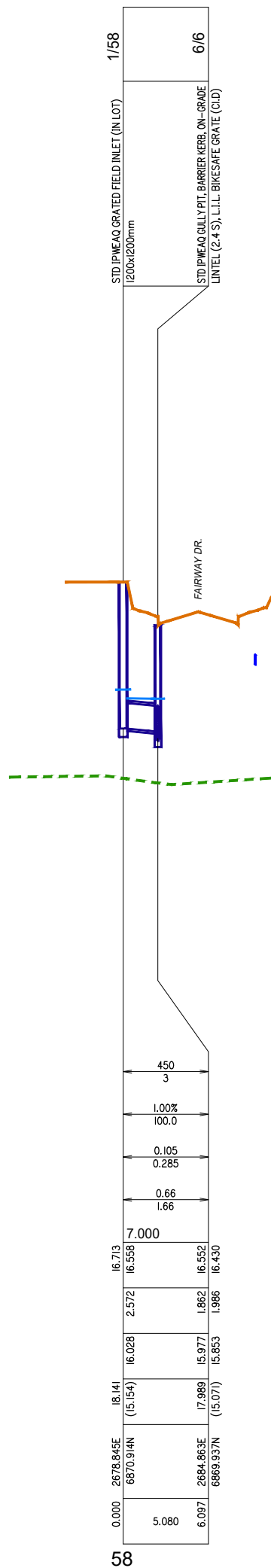
NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

PIPE SIZE (mm)		525		525
PIPE CLASS		3		3
PIPE GRADE (%)		1.00%		1.00%
PIPE SLOPE (1 in X)		100.0		100.0
PIPE FLOW (cumecs)		0.569		0.585
CAPACITY FLOW (cumecs)		0.430		0.430
FULL PIPE VELOCITY (m/s)		2.63		2.70
NORMAL DEPTH VELOCITY (m/s)		2.63		2.70
DATUM R.L.		5.000		
HGL ELEVATION (39.35% AEP)	17.697	16.817	16.724 16.726	16.160 16.186
DEPTH TO INVERT OF PIPE		2.966	2.114 2.214	2.449
INVERT LEVEL OF PIPE		15.634	15.581 15.481	15.365
DESIGN (& EXISTING) SURFACE LEVEL	17.998 (12.059)		17.848 (12.051)	17.814
SETOUT COORDINATES (EASTING & NORTHING)	2659.24E 6803.910N		2662.438E 6798.579N	2675.070E
PIPE CHAINAGE	0.000	5.304	6.321	11.664 19.125

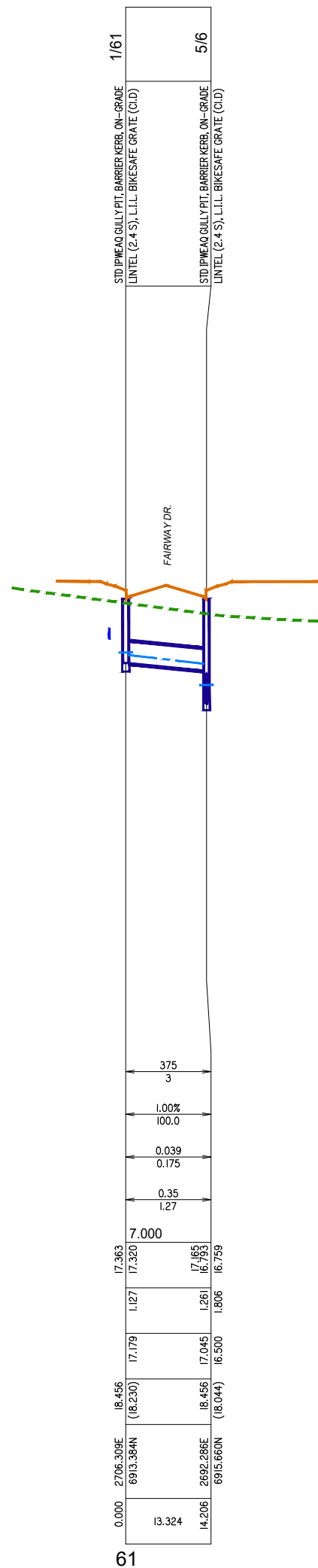
LINE 55



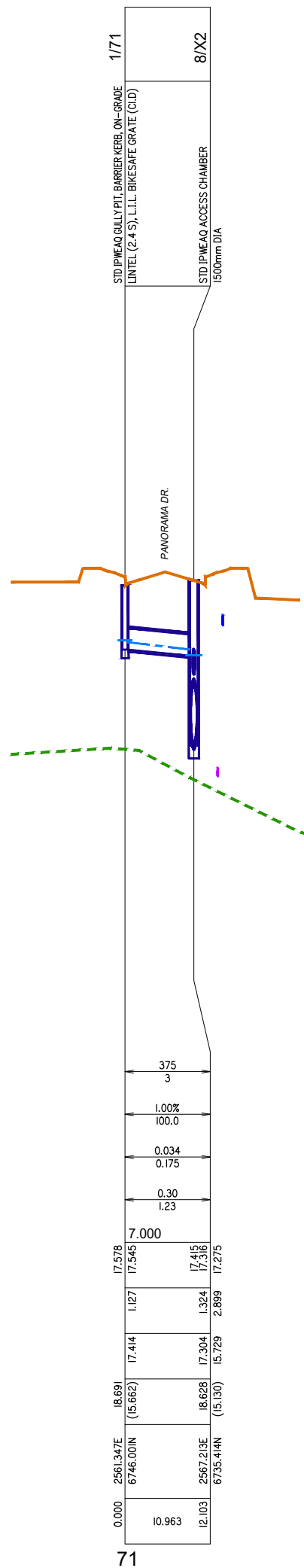
57



58



61



71



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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 14 OF 18

			</	

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

VERT: 

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:
5941 ENG OPW1 523

Rev. No:
A

STRUCTURE NAME	1/72	7/1X2
STRUCTURE DESCRIPTION	STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4'S), LTL, BIKESAFE GRATE (G.D)	STD IPWEAQ ACCESS CHAMBER

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

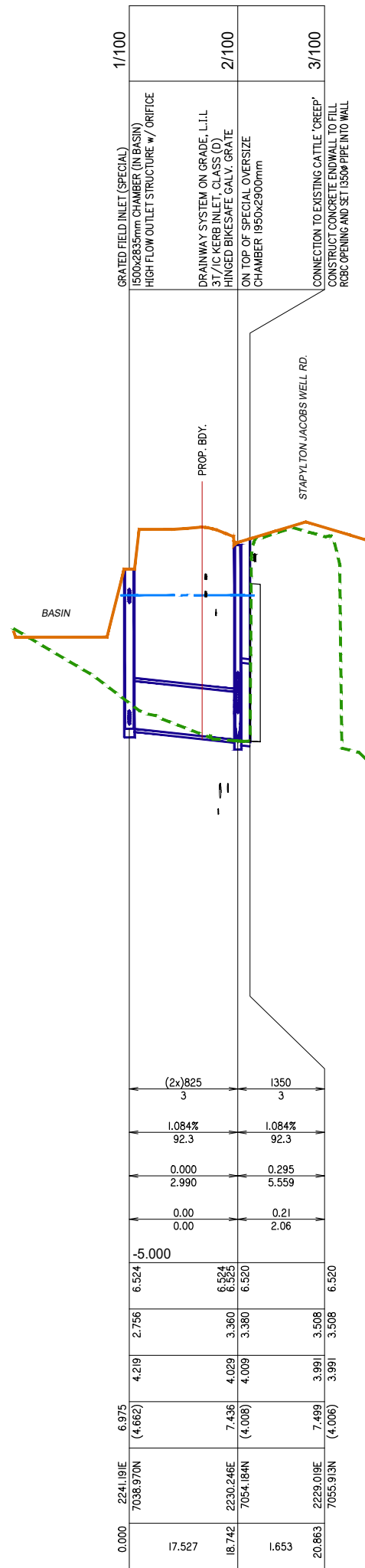
CONVERTER SLAB TABLE

SHAFT	OFFSET
I200	475
I350	550
I500	625
I800	775
I2100	925

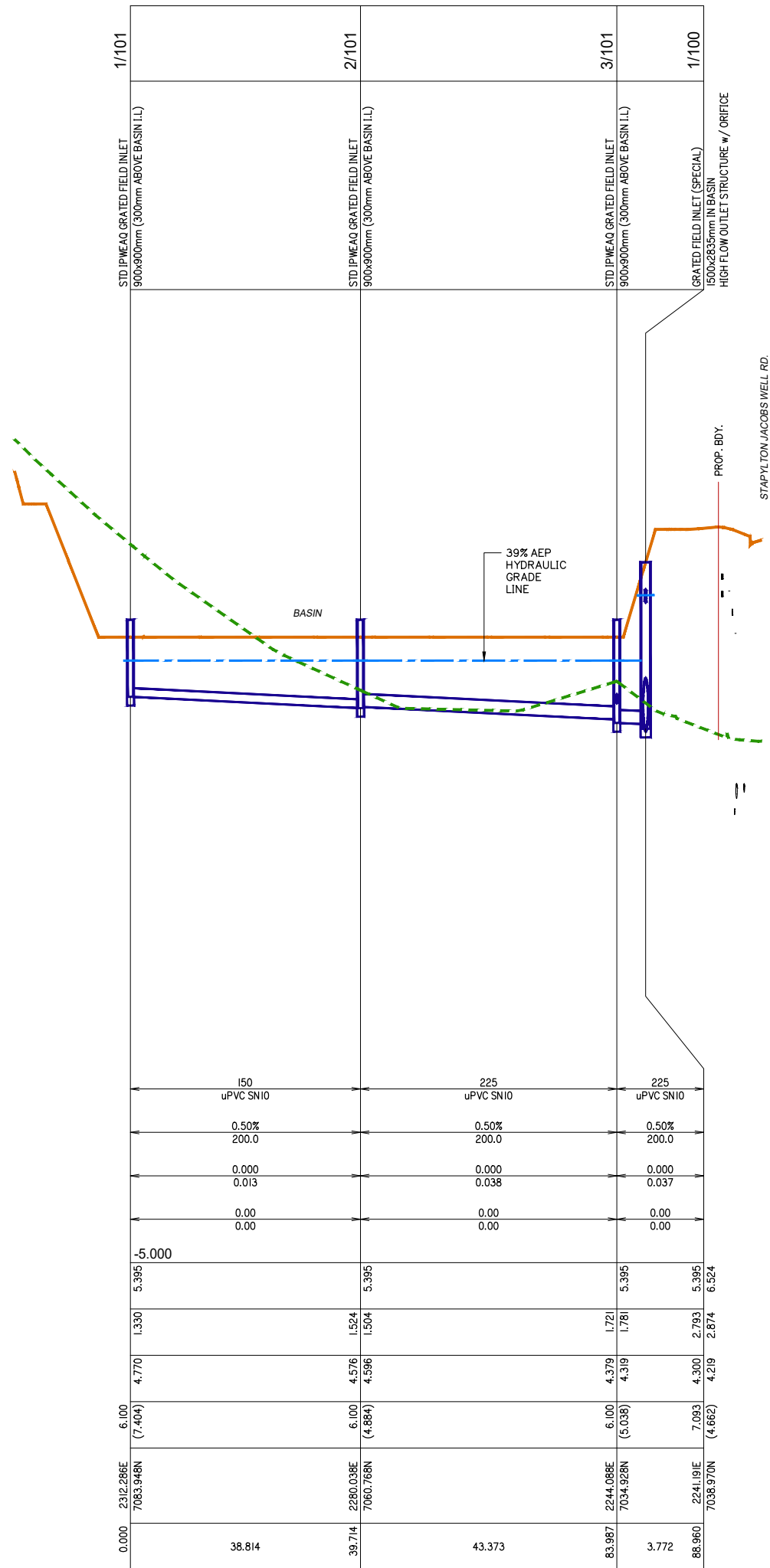
NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

PIPE SIZE (mm)		375
PIPE CLASS		3
PIPE GRADE (%)		1.00%
PIPE SLOPE (1 in X)		100.0
PIPE FLOW (cumecs)		0.040
CAPACITY FLOW (cumecs)		0.175
FULL PIPE VELOCITY (m/s)		0.36
NORMAL DEPTH VELOCITY (m/s)		1.28
DATUM R.L.		7.000
HGL ELEVATION (39.35% AEP)	18.09 18.064	17.932 17.647
DEPTH TO INVERT OF PIPE	1.127	1.323
INVERT LEVEL OF PIPE	17.921	17.811
DESIGN (& EXISTING) SURFACE LEVEL	19.198 (18.522)	19.135
SETOUT COORDINATES (EASTING & NORTHING)	2491.845E 6707.496N	2497.710E
PIPE CHAINAGE	0.000	10.963 12.103

LINE 72



100



101



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Contour Interval:	-
PSM:	-
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DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 15 OF 18

A	01-05-2020	ORIGINAL ISSUE		BA	MG
Issue	Date	Description		DRN	CHK

SCALE IN METRES

HORZ:  Scale 1:500 - Lengths are in Metres.

Scale 1:50 - Lengths are in Metres.

VERT: 

Scale at A1:	AS SHOWN
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 524	A

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR
EXCEEDING 1200 DIA)
PROVIDE 250mm THICK
CAST IN-SITU
REINFORCED CONCRETE
BASE, 2 LAYERS SL82
MESH ON 50MM THICK
BLINDING CONCRETE

CONVERTER SLAB TABLE	
SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

PIPE SIZE (mm)		750		825		900		1050		1050		1050		1050
PIPE CLASS		3		3		3		3		3		3		3
PIPE GRADE (%)		0.20%		0.20%		0.50%		0.50%		0.40%		0.25%		0.50%
PIPE SLOPE (1 in X)		500.0		500.0		200.0		200.0		250.0		400.0		200.0
PIPE FLOW (cumecs)		0.572		0.570		0.564		1.636		1.671		1.690		1.701
CAPACITY FLOW (cumecs)		0.498		0.642		1.281		1.932		1.728		1.366		1.932
FULL PIPE VELOCITY (m/s)		1.29		1.07		0.89		1.89		1.93		1.95		1.96
NORMAL DEPTH VELOCITY (m/s)		1.29		1.36		1.95		2.50		2.27		1.95		2.52
DATUM R.L.		9.000										5.000		
HGL ELEVATION (39.35% AEP)	18.166 18.147		18.126 18.111		18.076 18.058		18.004 18.005 17.773		17.647 17.608		17.316 17.275		16.985 16.942	16.914
DEPTH TO INVERT OF PIPE	2.724 2.784		2.763 2.823		2.897 2.947		3.000 3.050		2.993 3.043		2.849 2.899		2.597 2.617	2.608
INVERT LEVEL OF PIPE	16.876 16.816		16.800 16.740		16.695 16.645		16.367 16.317		16.141 16.091		15.779 15.729		15.540 15.520	15.483
DESIGN (& EXISTING) SURFACE LEVEL	19.823 (23.563)		19.563 (23.021)		19.592 (21.167)		19.367 (19.056)		19.135 (8.108)		18.628 (5.130)		18.138 (12.082)	18.092 (12.040)
SETOUT COORDINATES (EASTING & NORTHING)	2384.070E 6652.630N		2392.470E 6655.849N		2416.043E 6651.664N		2465.884E 6679.277N		2497.710E 6696.909N		2567.213E 6735.414N		2634.538E 6772.713N	2642.323E 6776.685N
PIPE CHAINAGE	230.762 239.758 263.699	7.871 22.742			55.629		320.678 357.062	35.034		78.106		436.518 75.617		513.485 7.390 522.225

LINE X2

The image displays two logos. On the left is the logo for Gassman Development Perspectives, featuring a stylized blue and white graphic of a building or staircase with the text 'gassman development perspectives' in a bold, sans-serif font, and 'est. 1985' below it. To the right is the logo for Frasers Property (Australia) Pty. Ltd., featuring a stylized red and grey graphic of a building or staircase with the text 'FRASERS PROPERTY' in a bold, sans-serif font, and 'FRASERS PROPERTY (AUSTRALIA) PTY. LTD.' below it.

Project: VANTAGE YATALA

Site Address:
60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 17 OF 18

A Issue	01-05-2020 Date	ORIGINAL ISSUE Description	BA DRN	MG CHK

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

Scale 1:50 - Lengths are in Metres.

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Drawing No:	Rev. No:
5941 ENG OPW1 526	A

STRUCTURE NAME	STRUCTURE DESCRIPTION
10/X2	STD IP/WEAQ ACCESS CHAMBER 1500mm DIA
11/X2	STD IP/WEAQ ACCESS CHAMBER 2100mm DIA
12/X2	STD IP/WEAQ ACCESS CHAMBER 1800mm DIA
13/X2	STD IP/WEAQ ACCESS CHAMBER 2100mm DIA
14/X2	DRAINWAY SYSTEM IN SAG, L.L.L DOWN THE SLOPE TO THE KERNEL PIT. (1000mm DIA) HINGED BIKESAFE GALLY. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER
OUT/X2	1200mmØ SINGLE OUTLET HEADWALL

SHAFT/PIT BASE

IN FAVOURABLE GROUND
CONDITIONS PROVIDE
PRECAST CONCRETE
ROCLA CPO PIT BASE (OR
EQUIVALENT) TO SUIT
SPECIFIED DIAMETER OF
SHAFT UP TO 1200 DIA.

ALTERNATELY (OR EXCEEDING 1200 DIA) PROVIDE 250mm THICK CAST IN-SITU REINFORCED CONCRETE BASE, 2 LAYERS SL82 MESH ON 50MM THICK BLINDING CONCRETE

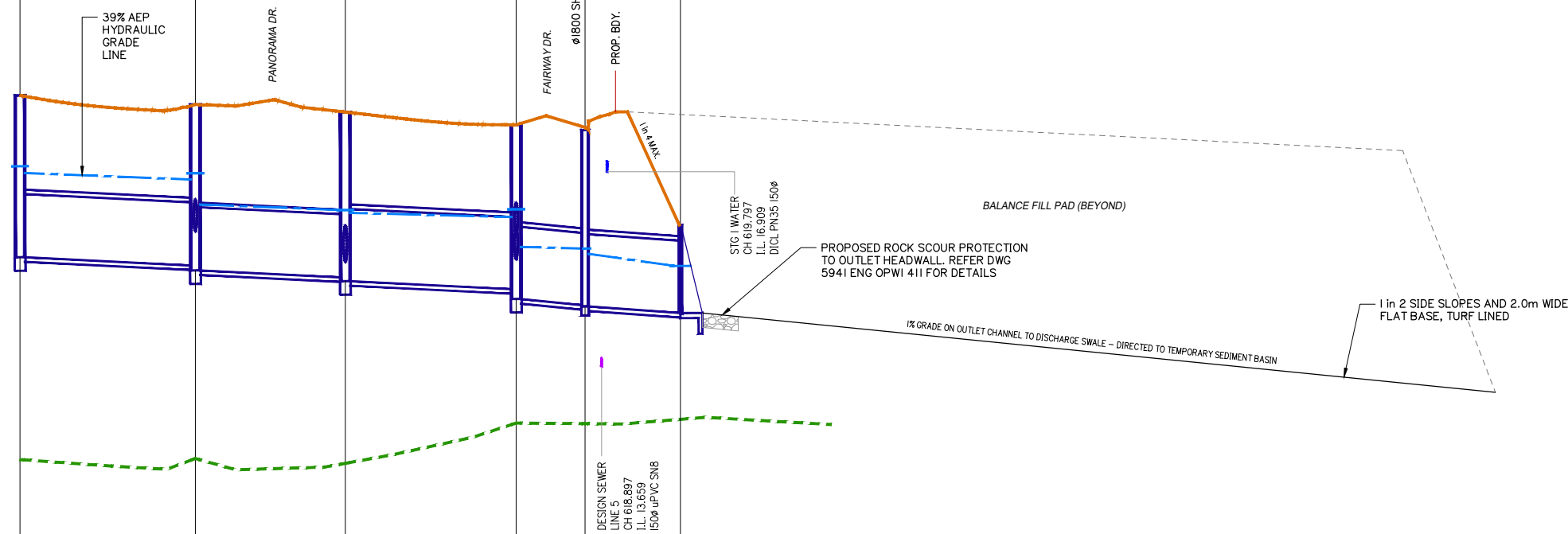
CONVERTER SLAB TABLE

SHAFT	OFFSET
1200	475
1350	550
1500	625
1800	775
2100	925

NOTE: PROVIDE DRAINWAY
CONVERTER SLAB FOR CPO
PITS 1200Ø, 1500Ø, 1800Ø

[illegible]

LINE	X2
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planning | environment | landscape | engineering | survey
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76 Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beerleigh 4207

Client



Project

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE
STORMWATER DRAINAGE
LONGITUDINAL SECTIONS
SHEET 18 OF 18

[illegible]

SCALE IN METRES

HORZ: 

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5941 ENG OPW1 527	A

STORMWATER DRAINAGE NETWORK - 39.35% AEP (2 YR ARI) DESIGN SHEET

LOCATION		SUB-CATCHMENT RUNOFF						INLET DESIGN						DRAIN DESIGN												HEAD LOSSES										PART FULL									
STRUCTURE No.	DRAIN SECTION	Tc SUB-CATCHMENT TIME OF CONC. min	I RAINFALL INTENSITY mm/hr	A SUB-CATCHMENT AREA ha	CA EQUIVALENT AREA ha	Qc SUB-CATCHMENT DISCHARGE L/s	Qa FLOW IN K&C (INC. BYPASS) L/s	ROAD GRADE AT INLET %	ROAD XFALL AT INLET %	INLET TYPE	INLET CURVE	Qg FLOW INTO INLET L/s	Qb BYPASS FLOW L/s	BYPASS STRUCTURE No.	Tc CRITICAL TIME OF CONC. min	I RAINFALL INTENSITY mm/hr	CA TOTAL (C x A) ha	Qinst PEAK FLOW L/s	Q PIPE FLOW L/s	L REACH LENGTH m	S PIPE GRADE %	PIPE SIZE mm	PIPE CLASS	VH/QA FULL PIPE VELOCITY m/s	Qcap CAPACITY FLOW L/s	Vcap CAPACITY VELOCITY m/s	Vt TRAVEL VELOCITY m/s	CHART(S) USED	VH/Qg VELOCITY HEAD m	Us HEAD LOSS COEFFICIENT	hu US HEAD LOSS m	Kw W.S.E COEFFICIENT	hw CHANGE IN W.S.E m	Sf PIPE FRICTION SLOPE %	hf PIPE FRICTION HEAD LOSS m	dn NORMAL DEPTH m	Vn NORMAL DEPTH VEL m/s	PIPE D/S I.L. m	PIPE D/S I.G.L. m	PIPE D/S H.G.L. m	PIPE D/S H.G.L. m	W.S.E m	GRATE LEVEL m		
1/1	1/1 to 2/1	5	138	0.862	0.050	18	18	0.93	3	GRADE_BK_2400_Lip	0.5G 3X	18	0	1/11	5	138	0.046	18	18	13.324	2	375	3	0.16	248	2.25	1.3	G1	0.001	7	0.009		0.009	0	0.001	0.068	1.3	18.283	18.016	18.562	18.562	18.571	19.411		
2/1	2/1 to 3/1	5	138	0.881	0.065	23	23	0.93	3	GRADE_BK_2400_Lip	0.5G 3X	23	0	3/1	5.06	138	0.334	128	128	39.535	1.25	450	3	0.8	319	2.01	1.89	T10	0.033	2	0.066	2.44	0.08	0.2	0.079	0.198	1.89	17.672	17.178	18.496	18.417	18.576	19.411		
3/1	3/1 to 4/1	5	138	0.846	0.037	13	13	0.93	3	GRADE_BK_2400_Lip	0.5G 3X	13	0	4/1	5.4	136	0.597	226	226	39.535	1	450	3	1.42	285	1.79	1.99	T2/T5	0.103	0.72	0.074		0.074	0.63	0.247	0.302	1.99	17.108	16.762	18.343	18.096	18.417	19.05		
4/1	4/1 to 5/1	5	138	0.847	0.038	13	13	0.93	3	GRADE_BK_2400_Lip	0.5G 3X	13	0	5/1	5.74	134	0.949	355	354	39.535	1	450	3	2.22	285	1.79	2.22	T2/T5	0.253	0.56	0.141		0.141	1.54	0.608	0.45	2.22	16.742	16.347	17.955	17.346	18.096	18.676		
5/1	5/1 to 6/1	5	138	0.846	0.037	13	13	2	3	GRADE_BK_2400_Lip	2G 3X	13	0	6/1	6.03	133	1.213	448	448	39.535	2.5	450	3	2.81	451	2.84	3.23	T1/T2	0.404	0.37	0.148		0.148	2.46	0.973	0.386	3.23	16.327	15.339	17.199	16.225	17.346	18.225		
6/1	6/1 to 7/1	5	138	0.844	0.036	13	13	4.5	3	GRADE_BK_2400_Lip	4G 3X	13	0	7/1	6.34	132	1.561	573	572	39.535	4.55	450	3	3.6	608	3.82	4.35	T8/T10	0.66	1.5	0.993	1.81	1.192	4.43	1.756	0.347	4.35	14.791	12.994	15.233	13.482	16.425	16.971		
7/1	7/1 to 8/1	5	138	0.845	0.036	13	13	6	3	GRADE_BK_2400_Lip	4G 3X	13	0	8/1	6.33	132	1.821	666	665	39.534	4.55	825	3	3.07	917	4.24	4.62	T10	0.482	1.74	0.84	1.98	0.955	2.91	1.165	0.332	4.62	12.141	10.344	12.643	11.493	13.598	14.715		
8/1	8/1 to 9/1	5	138	0.847	0.038	13	13	6	3	GRADE_BK_2400_Lip	4G 3X	13	0	2/21	6.47	131	2.173	790	790	39.155	4	525	3	3.65	860	3.98	4.51	T8/T10	0.679	1.51	1.021	1.85	1.259	3.37	1.319	0.396	4.51	9.695	8.129	10.471	9.153	11.73	12.287		
9/1	9/1 to 10/1									ACC_CHA_1880					6.46	131	10.249	3729	3729	38.665	2	1200	3	3.3	5516	4.88	5.24	T4/T8	0.555	1.39	0.772	1.47	0.813	1	0.482	0.723	5.24	7.336	6.583	8.381	7.594	9.194	10.657		
10/1	10/1 to 11/1									ACC_CHA_1880					6.58	130	10.513	3808	3808	15.967	2.5	1200	3	3.37	6167	5.45	5.74	T1/T2	0.578	0.21	0.12		0.12	0.95	0.148	0.682	5.74	6.943	6.154	7.874	7.726	7.994	9.15		
11/1	11/1 to 12/1									ACC_CHA_2160					6.63	130	10.734	3861	3861	10.192	0.1	1200	3	3.43	1233	1.09	3.43	T8/T10	0.346	1.68	0.582	1.92	0.664	1.59	0.054	1.2	3.43	6.048	6.038	7.144	6.982	7.808	8.345		
12/1	12/1 to 13/1									ACC_CHA_2160					6.68	130	10.792	3895	3895	18.157	0.1	(2x)1200	3	1.72	2467	1.09	1.72	T1	0.151	0	0		0	0.92	0.06	1.2	1.72	6.018	6	6.934	6.768	6.934	8.058		
13/1										HW outlet																																			
1/2	1/2 to 2/2	5	138	0.383	0.399	110	110			900x900 IG		110	0	2/2	5	138	0.287	110	110	5.23	0.97	375	3	1	173	1.57	1.66	G1	0.051	3.4	0.172		0.172	0.39	0.021	0.217	1.66	18.014	17.963	18.888	18.868	19.061	20.06		
2/2	2/2 to 3/2	5	138	0.835	0.028	10	10	2.82	3	GRADE_BK_2400_Lip	2G 3X	10	0	1/40	5.05	138	0.313	120	120	46.001	0.5	375	3	1.09	124	1.12	1.28	T10	0.06	1.75	0.105	1.97	0.119	0.47	0.216	0.297	1.28	17.883	17.85	18.762	18.545	18.881	19.357		
3/2	3/2 to 4/2	5	138	0.818	0.015	5	5	1	3	GRADE_BK_2400_Lip	1G 3X	5	0	4/2	5.06	135	0.65	243	243	44.964	1.5	375	3	2.2	215	1.95	2.2	T5	0.248	0.81	0.202		0.202	1.92	0.857	0.375	2.2	17.61	16.962	18.343	17.486	18.545	19.608		
4/2	4/2 to 5/2	5	138	0.859	0.041	15	15	3.17	3	GRADE_BK_2400_Lip	3G 3X	15	0	5/2	6	133	0.997	369	369	18.876	3	450	3	2.32	494	3.11	3.41	T2/T5	0.275	0.6	0.164		0.164	2.18	0.437	0.29	3.41	16.912	16.345	17.322	16.691	17.486	18.498		
5/2	5/2 to 6/2	5	138	0.823	0.018	7	7	3.17	3	GRADE_BK_2400_Lip	3G 3X	7	0	6/2	6.09	133	1.101	406	405	24.757	4	450	3	2.55	570	3.59	3.89	T1/T2	0.331	0.3	0.1		0.1	2.02	0.5	0.28	3.89	16.264	15.274	16.81	16.31	16.91	17.831		
6/2	6/2 to 7/2	5	138	0.829	0.024	8	8	3.17	3	GRADE_BK_2400_Lip	3G 3X	8	0	2/34	6.2	132	1.432	526	526	38.604	3.33	450	3	3.3	621	3.27	3.73	T2	0.557	0.33	0.182		0.182	3.4	1.311	0.373	3.73	15.084	13.798	16.128	14.817	16.31	17.018		
7/2	7/2 to 8/2									ACC_CHA_1280					5.76	134	2.827	1055	1055	11.316	2	675	3	2.95	1189	3.32	3.75	T5/T8	0.443	0.82	0.364	0.83	0.367	1.57	0.178	0.495	3.75	13.603	13.376	14.453	14.275	14.82	15.85		
8/2	8/2 to 9/2									ACC_CHA_1280					5.81	134	3.31	1233	1233	31.9	3.33	675	3	3.45	1534	4.29	4.76	T1/T2	0.606	0.24	0.146		0.146	2.15	0.886	0.459	4.76	13.278	12.217	14.129	13.443	14.275	15.457		
9/2	9/2 to 10/2									ACC_CHA_1280																																			

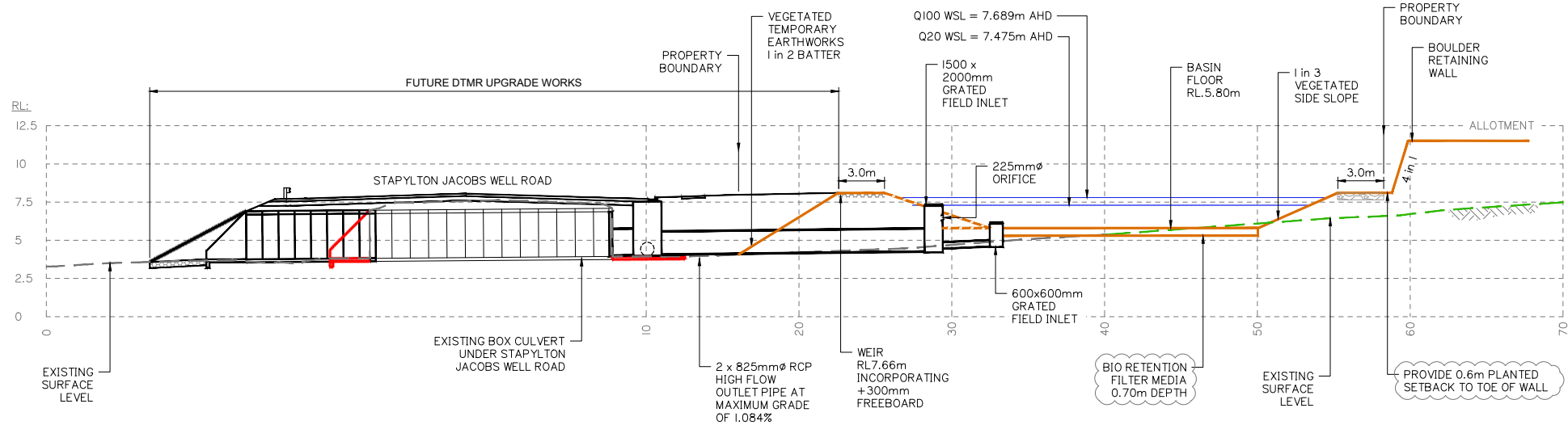
STORMWATER DRAINAGE NETWORK - 39.35% AEP (2 YR ARI) DESIGN SHEET

LOCATION		SUB-CATCHMENT RUNOFF						INLET DESIGN						DRAIN DESIGN														HEAD LOSSES											PART FULL										
STRUCTURE No.	DRAIN SECTION	Tc SUB-CATCHMENT TIME OF CONC. min	I RAINFALL INTENSITY mm/hr	A SUB-CATCHMENT AREA ha	CA EQUIVALENT AREA ha	Qc SUB-CATCHMENT DISCHARGE L/s	Qa FLOW N KSC (INC. BYPASS) L/s	ROAD GRADE AT INLET %	ROAD XFALL AT INLET %	INLET TYPE	INLET CURVE	Qg FLOW INTO INLET L/s	Qb BYPASS FLOW L/s	BYPASS STRUCTURE No.	Tc CRITICAL TIME OF CONC. min	I RAINFALL INTENSITY mm/hr	CA TOTAL (C + A) ha	Qint PEAK FLOW L/s	Q PIPE FLOW L/s	L REACH LENGTH m	S PIPE GRADE %	PIPE SIZE mm	PIPE CLASS	VH/QA FULL PIPE VELOCITY m/s	Qcap CAPACITY FLOW L/s	Vcap CAPACITY VELOCITY m/s	Vt TRAVEL VELOCITY m/s	CHART(S) USED	VH/Qg VELOCITY HEAD m	Ku US HEAD LOSS COEFFICIENT	hu US HEAD LOSS m	Kw W.S.E COEFFICIENT	hw CHANGE IN W.S.E m	Sf PIPE FRICTION SLOPE %	hf PIPE FRICTION HEAD LOSS m	dn NORMAL DEPTH m	Vn NORMAL DEPTH VEL m/s	PIPE D/S I.L. m	PIPE D/S L.H. m	PIPE D/S H.G.L. m	W.S.E m	GRATE LEVEL							
129	1/29 to 2/29	5	138	0.241	0.194	69	69			900x900 IG		69	0	2/29	5	138	0.181	69	69	5.182	0.37	375	3	0.63	173	1.56	1.48	G1	0.82	6.32	0.127		0.127	0.18	0.008	0.165	1.48	9.874	9.823	10.367	10.359	10.494	11.654						
229	2/29 to 1/52	5	138	0.847	0.038	14	14	1.2	3	GRADE_BK_2400_Lip	1G 3X	14	0	1/27	5.06	138	0.216	83	83	0.888	1	375	3	0.75	175	1.59	1.56	T1	0.029	0.91	0.626		0.026	0.22	0.002	0.181	1.56	9.793	9.744	10.333	10.331	10.359	11.189						
136	1/36 to 2/36	5	138	0.718	0.579	207	207			1200x1200 IG		207	0	1/12	5	138	0.539	207	207	5.717	1.32	600	3	0.73	620	2.19	1.97	G1	0.027	4.14	0.113		0.113	0.11	0.006	0.239	1.97	9.523	9.484	10.799	10.792	10.911	13						
236	2/36 to 14/2	5	138	0.062	0.050	18	18	2.8	3	GRADE_BK_2400_Lip	2G 3X	18	0	1/26	5.05	138	0.585	224	224	11.038	1	600	3	0.79	614	2.17	2	T2/T5	0.032	0.63	0.82		0.82	0.13	0.015	0.251	2	9.364	9.254	10.772	10.757	10.792	11.476						
131	1/31 to 2/31	5	138	0.622	0.552	179	179			1200x1200 IG		179	0	2/31	5	138	0.467	179	179	5.494	1	525	3	0.83	431	1.99	1.9	G1	0.035	4.48	0.156		0.156	0.17	0.01	0.236	1.9	10.69	10.635	11.664	11.654	11.82	12.631						
231	2/31 to 12/2	5	138	0.064	0.051	18	18	2.98	3	GRADE_BK_2400_Lip	2G 3X	18	0	2/29	5.05	138	0.515	197	197	0.781	1	600	3	0.7	614	2.17	1.93	T1/T2	0.025	0.24	0.006		0.006	0.1	0.001	0.234	1.93	10.555	10.547	11.648	11.648	11.854	12.18						
132	1/32 to 10/2	5	138	0.835	0.029	10	10	2.98	3	GRADE_BK_2400_Lip	2G 3X	10	0	2/31	5	138	0.027	10	10	1.038	0.33	375	3	0.09	169	1.53	0.84	G1	0	7	0.003		0.003	-0.91	0	0.062	0.84	12.659	12.649	12.851	12.851	12.854	13.786						
133	1/33 to 2/33	5	138	4.061	3.277	1168	1168			1200x1200 IG		1168	0	2/33	5	138	3.048	1168	1168	5.032	0.4	750	3	2.64	704	1.59	2.64	G1	0.357	3.43	1.223		1.223	1.1	0.055	0.75	2.64	17.033	17.013	17.887	17.832	19.11	19.6						
233	2/33 to 6/32	5	138	0.120	0.097	35	35	0.64	3	17CS0_UNCHECKED	0.5G 3X	35	0	1/46	5.03	138	3.139	1202	1202	0.888	0.43	825	3	2.25	946	1.77	2.25	T1	0.258	0.91	0.002		0.002	0.7	0.006	0.825	2.25	16.929	16.925	17.83	17.824	17.832	19.281						
134	1/34 to 2/34	5	138	0.580	0.468	167	167			900x900 IG		167	0	2/34	5	138	0.436	167	167	5.182	0.97	375	3	1.51	173	1.56	1.78	G1	0.117	4.17	0.487		0.487	0.58	0.042	0.297	1.78	14.157	14.107	14.478	14.449	14.965	15.809						
234	2/34 to 8/2	5	138	0.060	0.048	17	17	3.17	3	GRADE_BK_2400_Lip	3G 3X	17	0	1/44	5.05	138	0.481	184	184	1.038	1	375	3	1.67	175	1.59	1.8	T1	0.142	0.84	0.09		0.09	1.75	0.011	0.327	1.8	14.038	14.027	14.359	14.341	14.449	15.371						
135	1/35 to 2/35	5	138	1.812	1.462	521	521			1200x1200 IG		521	0	2/35	5	138	1.36	521	521	5.319	1.01	525	3	2.41	432	2	2.41	G1	0.296	2.76	0.818		0.818	1.47	0.078	0.525	2.41	13.962	13.908	15.008	14.93	15.826	18.6						
235	2/35 to 7/2	5	138	0.095	0.078	27	28	3.17	3	GRADE_BK_2400_Lip	3G 3X	28	0	4/3	5.04	138	1.431	548	548	11.038	1	600	3	1.94	614	2.17	2.46	T1/T2	0.192	0.13	0.025		0.025	0.8	0.088	0.442	2.46	13.868	13.757	14.905	14.817	14.93	15.764						
136	1/36 to 2/36	5	138	0.409	0.330	118	118			1200x1200 IG		118	0	6/2	5	138	0.307	118	118	5.079	1	375	3	1.07	175	1.59	1.7	G1	0.058	5.09	0.295		0.296	0.45	0.023	0.225	1.7	15.904	15.853	16.333	16.31	16.629	17.591						
138	1/38 to 5/2	5	138	0.115	0.092	33	33	3.17	3	GRADE_BK_2400_Lip	3G 3X	32	1	2/35	5	138	0.086	33	32	13.324	1	375	3	0.29	175	1.59	1.21	G1	0.004	7	0.031		0.031	-0.82	0.007	0.109	1.21	16.703	16.57	16.908	16.91	16.938	17.831						
139	1/39 to 2/39	5	138	0.409	0.330	118	118			900x900 IG		118	0	4/2	5	138	0.307	118	118	5.23	0.97	375	3	1.07	173	1.57	1.68	G1	0.058	5.47	0.318		0.318	0.21	0.041	0.227	1.68	17.244	17.193	17.497	17.486	17.815	19.032						
140	1/40 to 2/40	5	138	0.084	0.068	24	24			SAG_BK_2400_Lip	SAG	24	0	2/40	5	138	0.063	24	24	13.494	1	375	3	0.22	175	1.59	1.12	G1	0.002	7	0.017		0.017	1.06	0.133	0.094	1.12	17.995	17.481	17.706	17.585	17.723	18.757						
240	2/40 to 4/6	5	138	0.087	0.070	25	25	0.6	3	GRADE_BK_2400_Lip		25	0	5/6	5.2	137	0.129	49	49	16.293	1	375	3	0.44	175	1.59	1.36	G1/T10	0.01	2.36	0.024	2.73	0.027	1.15	0.153	0.136	1.36	17.381	17.218	17.541	17.353	17.568	18.757						
141	1/41 to 2/41	5	138	0.428	0.345	123	123			900x900 IG		123	0	3/2	5	138	0.321	123	123	5.23	0.97	375	3	1.11	173	1.57	1.7	G1	0.063	5.28	0.334		0.334	1.44	0.045	0.234	1.7	18.396	18.346	18.655	18.579	18.989	20.438						
142	1/42 to 8/32	5	138	0.115	0.093	33	33	0.64	3	GRADE_BK_2400_Lip	0.5G 3X	32	1	1/52	5	138	0.086	33	32	0.888	1.88	375	3	0.29	183	1.65	1.25	G1	0.004	7	0.031		0.031	-0.61	0.003	0.107	1.25	17.022	17.012	17.167	17.172	17.197	18.541						
144	1/44 to 3/4	5	138	0.101	0.082	29	29			SAG_BK_2400_Lip	SAG	29	0	3/4	5	138	0.076	29	29	13.32	1	375	3	0.26	175	1.59	1.18	G1	0.004	7	0.025		0.025	0.03	0.004	0.103	1.18	13.139	13.005	13.53	13.526	13.554	14.266						
146	1/46																																																

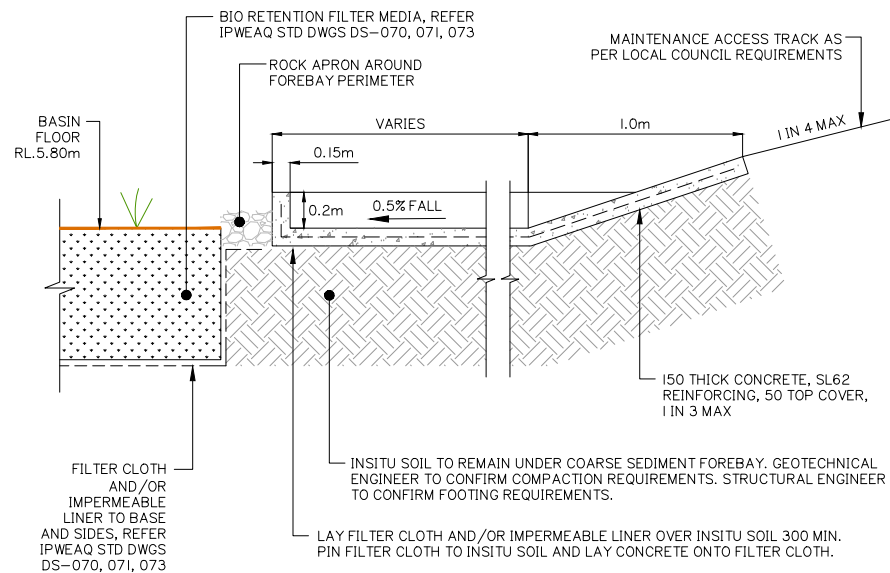
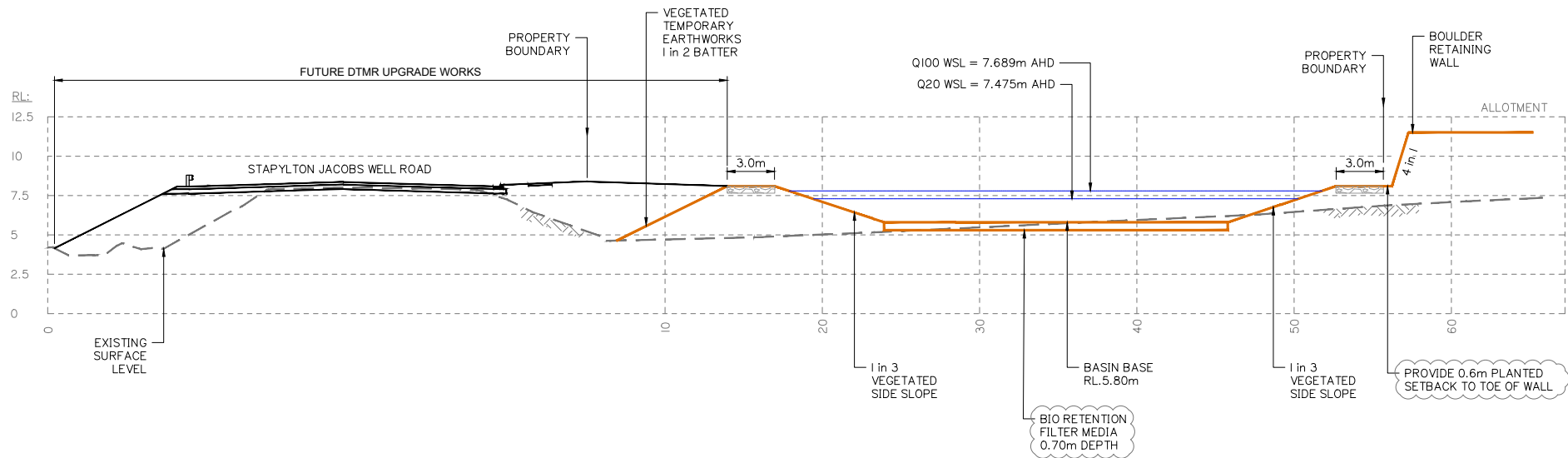
STORMWATER DRAINAGE NETWORK - 1.00% AEP (100 YR ARI) DESIGN SHEET

LOCATION		SUB-CATCHMENT RUNOFF						INLET DESIGN										DRAIN DESIGN										HEAD LOSSES										PART FULL									
STRUCTURE No.	DRAIN SECTION	Tc SUB-CATCHMENT TIME OF CONC. min	I RAINFALL INTENSITY mm/hr	A SUB-CATCHMENT AREA ha	CA EQUIVALENT AREA ha	Qc SUB-CATCHMENT DISCHARGE L/s	Qa FLOW IN K&C (INC. BYPASS) L/s	ROAD GRADE AT INLET %	ROAD XFALL AT INLET %	INLET TYPE	INLET CURVE	Qp FLOW INTO INLET L/s	Qb BYPASS FLOW L/s	BYPASS STRUCTURE No.	Tc CRITICAL TIME OF CONC. min	I RAINFALL INTENSITY mm/hr	CA TOTAL (C x A) ha	Qnet PEAK FLOW L/s	Q PIPE FLOW L/s	L REACH LENGTH m	S PIPE GRADE %	PIPE SIZE mm	PIPE CLASS	VH/QA FULL PIPE VELOCITY m/s	Qcap CAPACITY FLOW L/s	Vcap CAPACITY VELOCITY m/s	Vt TRAVEL VELOCITY m/s	CHART(S) USED	VH/Qp VELOCITY HEAD m	Ku US HEAD LOSS COEFFICIENT	hu US HEAD LOSS m	Kw W.S.E COEFFICIENT	hw CHANGE IN W.S.E m	Sf PIPE FRICTION SLOPE	hf PIPE FRICTION HEAD LOSS m	dn NORMAL DEPTH m	Vn NORMAL DEPTH VEL m/s	PIPE I/L m	PIPE D/S/L m	PIPE US H.G.L m	PIPE D/S H.G.L m	W.S.E m	GRATE LEVEL m				
1/29	1/29 to 2/29	5	307	0.241	0.241	192	192			900x900 IG		192	0	2/29	5	307	0.225	192	192	5.182	0.97	375	3	1.74	173	1.56	1.74	G1	0.154	2.6	0.401		0.401	1.2	0.062	0.375	1.74	9.874	9.823	10.891	10.829	11.292	11.654				
2/29	2/29 to 1/52	5	307	0.047	0.047	38	1241	1.2	3	GRADE_BK_2409_Lip	1G 3X	29	1212	1/27	5.85	306	0.269	229	229	0.888	1	375	3	1.99	175	1.59	1.99	T1	0.203	0.58	0.116		0.116	1.58	0.014	0.375	1.99	9.763	9.744	10.711	10.697	10.829	11.189				
1/30	1/30 to 2/30	5	307	0.718	0.718	572	572			1200x1200 IG		572	0	11/2	5	307	0.671	572	572	5.717	1.02	600	3	2.02	620	2.19	2.49	G1	0.209	2.39	0.499		0.499	0.87	0.05	0.455	2.49	9.523	9.464	11.526	11.476	12.825	13				
2/30	2/30 to 1/42	5	307	0.062	0.062	49	2975	2.8	3	GRADE_BK_2409_Lip	2G 3X	-428	3403	1/26	5.84	306	0.728	620	143	11.038	1	600	3	0.5	614	2.17	1.77	T2/T5	0.013	0.36	0.905		0.905	0.05	0.006	0.197	1.77	9.364	9.254	11.031	11.025	11.835	11.476				
1/31	1/31 to 2/31	5	307	0.622	0.622	496	496			1200x1200 IG		376	120	2/31	5	307	0.582	496	376	5.494	1	525	3	1.74	431	1.99	2.24	G1	0.154	2.66	0.409		0.409	0.76	0.042	0.38	2.24	10.69	10.635	12.222	12.18	12.631	12.631				
2/31	2/31 to 1/32	5	307	0.064	0.064	51	888	2.98	3	GRADE_BK_2409_Lip	2G 3X	-315	1203	2/29	5.84	306	0.641	546	60	0.781	1	600	3	0.21	614	2.17	1.38	T1/T2	0.002	-0.25	-0.001		-0.001	0.01	0	0.126	1.38	10.555	10.547	11.713	11.73	11.73	12.18				
1/32	1/32 to 1/32	5	307	0.035	0.035	28	871	2.98	3	GRADE_BK_2409_Lip	2G 3X	154	717	2/31	5	307	0.033	28	154	1.038	0.93	375	3	1.4	169	1.53	1.73	G1	0.099	4.43	0.441		0.441	0.31	0.008	0.282	1.73	12.659	12.649	12.968	12.964	13.408	13.786				
1/33	1/33 to 2/33	5	307	4.061	4.061	3236	3236			1200x1200 IG		680	2556	2/33	5	307	3.794	3236	680	5.032	0.4	750	3	1.54	704	1.59	1.82	G1	0.121	3.75	0.453		0.453	0.37	0.019	0.593	1.82	17.033	17.013	18.458	18.439	18.911	19.6				
2/33	2/33 to 6/32	5	307	0.120	0.120	96	3557	0.64	3	1TCS0_UNCHECKED	0.5G 3X	239	3317	1/46	5.85	306	3.907	3325	913	0.888	0.43	825	3	1.71	946	1.77	2.01	T1	0.140	0.99	0.147		0.147	0.4	0.004	0.652	2.01	16.929	16.925	18.293	18.289	18.439	19.291				
1/34	1/34 to 2/34	5	307	0.580	0.580	463	463			900x900 IG		197	266	2/34	5	307	0.542	463	197	5.182	0.97	375	3	1.78	173	1.56	1.78	G1	0.162	2.81	0.454		0.454	1.26	0.065	0.375	1.78	14.157	14.107	15.01	14.945	15.464	15.809				
2/34	2/34 to 8/2	5	307	0.060	0.060	48	856	3.17	3	GRADE_BK_2409_Lip	3G 3X	116	740	1/44	5.85	306	0.598	509	312	1.038	1	375	3	2.82	175	1.59	2.82	T1	0.406	1.27	0.514		0.514	3.93	0.033	0.375	2.82	14.018	14.027	14.431	14.39	14.945	15.371				
1/35	1/35 to 2/35	5	307	1.812	1.812	1444	1444			1200x1200 IG		481	963	2/35	5	307	1.693	1444	480	5.319	1.01	525	3	2.22	432	2	2.22	G1	0.251	2.23	0.561		0.561	1.25	0.066	0.525	2.22	13.962	13.908	15.83	15.764	16.391	16.6				
2/35	2/35 to 7/2	5	307	0.095	0.095	75	1128	3.17	3	GRADE_BK_2409_Lip	3G 3X	-40	1169	4/3	5.84	306	1.781	1516	437	11.038	1	600	3	1.55	614	2.17	2.36	T1/T2	0.122	-0.14	-0.017		-0.017	0.51	0.056	0.374	2.36	13.868	13.757	14.755	14.699	14.737	15.764				
1/36	1/36 to 2/36	5	307	0.409	0.409	326	326			1200x1200 IG		227	100	6/2	5	307	0.383	326	227	5.079	1	375	3	2.05	175	1.59	2.05	G1	0.215	2.28	0.488		0.488	1.67	0.085	0.375	2.05	15.984	15.853	17.103	17.016	17.591	17.591				
1/38	1/38 to 5/2	5	307	0.115	0.115	91	91	3.17	3	GRADE_BK_2409_Lip	3G 3X	1	90	2/35	5	307	0.107	91	1	13.324	1	375	3	0.01	175	1.59	0.48	G1	0	3.17	0		0	0	0	0.024	0.48	16.763	16.57	17.821	17.821	17.821	17.831				
1/39	1/39 to 2/39	5	307	0.409	0.409	326	326			900x900 IG		230	96	4/2	5	307	0.383	326	230	5.23	0.97	375	3	2.09	173	1.57	2.09	G1	0.222	2.18	0.484		0.484	1.72	0.09	0.375	2.09	17.244	17.193	18.548	18.458	19.032	19.032				
1/40	1/40 to 2/40	5	307	0.084	0.084	67	373			SAG_BK_2409_Lip	SAG	2	371	2/40	5	307	0.079	67	2	13.404	1	375	3	0.02	175	1.59	0.55	G1	0	3.13	0		0	0	0	0.03	0.55	17.555	17.461	18.731	18.731	18.731	18.757				
2/40	2/40 to 4/6	5	307	0.087	0.087	69	440	0.6	3	GRADE_BK_2409_Lip		93	348	5/6	5.41	302	0.16	134	93	16.293	1	375	3	0.84	175	1.59	1.61	G1/T10	0.036	2.67	0.096	2.68	0.097	0.28	0.046	0.194	1.61	17.381	17.218	18.634	18.589	18.731	18.757				
1/41	1/41 to 2/41	5	307	0.428	0.428	341	341			900x900 IG		271	70	3/2	5	307	0.4	341	271	5.23	0.97	375	3	2.45	173	1.57	2.45	G1	0.306	2.23	0.683		0.683	2.38	0.124	0.375	2.45	18.306	18.346	19.446	19.322	20.13	20.438				
1/42	1/42 to 8/32	5	307	0.115	0.115	92	3234	0.64	3	GRADE_BK_2409_Lip	0.5G 3X	212	3023	1/52	5	307	0.108	92	212	0.888	1.08	375	3	1.92	183	1.65	1.92	G1	0.188	2.46	0.462		0.462	1.46	0.013	0.375	1.92	17.022	17.012	18.052	18.039	18.514	18.541				
1/44	1/44 to 3/4	5	307	0.101	0.101	81	830																																								

SECTION A
NTS
570

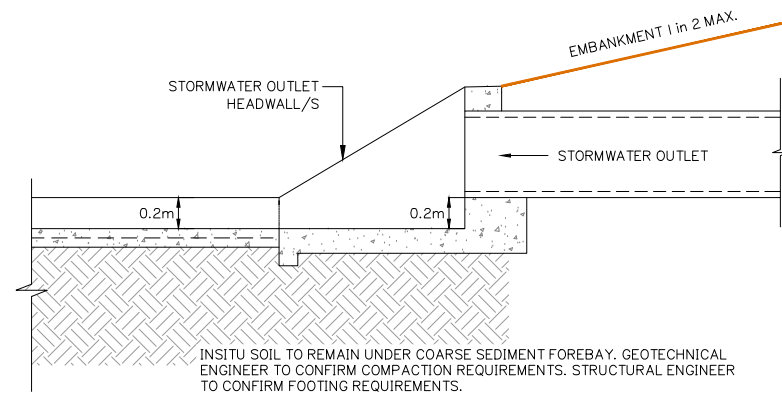


SECTION B
NTS
570



COURSE SEDIMENT FOREBAY TYPICAL SECTION

N.T.S



TYPICAL STORMWATER OUTLET TO SEDIMENT FOREBAY

N.T.S

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

ISSUED FOR APPROVAL
NOT FOR CONSTRUCTION

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DRAWING TITLE
OPERATIONAL PHASE
BIORETENTION BASIN
SHEET 2 OF 2

Issue	Date	Original Issue Description	BA DRN	MG CHK
A	01-05-2020	ORIGINAL ISSUE	BA	MG

SCALE IN METRES

NOT APPLICABLE

Scale at A1: NTS

Designed: IG

Drafted: BA

Approved: MG

RPEQ: 16939

Signed:

Date: 01-05-2020

Drawing No: 5941 ENG OPW1 571

Rev. No: A



Site Address:
60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

RPD:	
Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

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DRAWING TITLE
OPERATIONAL PHASE
BIORETENTION BASIN
SETOUT DETAILS

SCALE IN METRES

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

OPERATIONAL PHASE BIORETENTION BASIN SETOUT DETAILS

COARSE SEDIMENT FOREBAY SETOUT TABLE			
POINT	EASTING	NORTHING	RL (m AHD)
SF1	2232.724	7020.018	5.800
SF2	2232.665	7024.838	5.800
SF3	2241.340	7024.945	5.750
SF4	2249.837	7029.652	5.720
SF5	2253.250	7023.497	5.800
SF6	2234.654	7013.194	5.800
SF7	2231.908	7012.177	6.000
SF8	2230.325	7011.648	6.000
SF9	2227.539	7014.481	6.000
SF10	2228.087	7016.063	6.000
SF11	2229.841	7019.247	5.800
SF12	2231.200	7020.000	5.800



G:\Projects\5941\ENGINEERING\Acad\CIVIL WORKS STAGE 1\Current\5941 ENG OPW

MANHOLE COVERS AND SURROUNDS:

INSTALL TO ALL NEW SEWER MAINTENANCE STRUCTURES CLASS D
TRAFFICABLE COVER AND SURROUNDS WITH TYPE 'D' WATER SEALED
SOLID TOP IN ACCORDANCE WITH SEWERAGE STANDARD DRAWING
SEQ—SEW—1308—I, 9, 10, 11.

INTERNAL CORROSION COATING TO BE APPLIED TO ALL MAINTENANCE
HOLES AS PER CLAUSE 18.8 OF SEQ D&C CODE



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planning | environment | landscape | engineering | survey
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Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beerleigh 4207

Client:

FRASERS PROPERTY

FRASERS PROPERTY (AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:
60 STAPYLTON JACOBS WELL ROAD,
STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR

RPD:

Lot: SP295994
Plan: CITY OF GOLD COAST COUNCIL
Local Authority: AHD
Level Datum: -
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE

SEWER RETICULATION LAYOUT PLAN SHEET 1 OF 4

A	Issue	Date	Description	BA DRN	MG CHK

SCALE IN METRES

0 10 20 30 40 50

1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: IG

Drafted: BA

Approved: MG

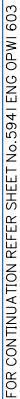
RPEQ: 16939

Signed: [Signature]

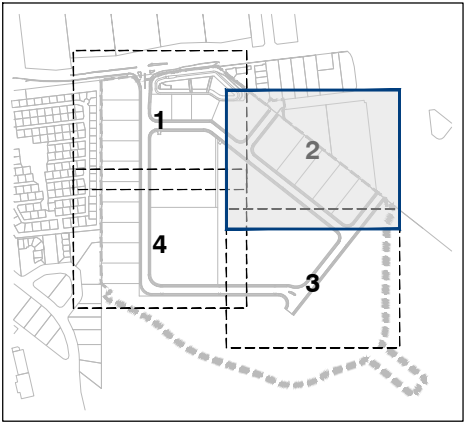
Date: 01-05-2020

Drawing No: 5941 ENG OPW1 600

Rev. No: A



S8/2	2517.991	6980.782
S7/2	2462.883	6989.728
S6/2	2365.966	7005.462
S5/2	2356.880	7006.937
S4/2	2351.295	7005.964
S3/2	2322.216	6989.854
S2/2	2287.605	6970.679
S1/2	2260.911	6955.890
S7/1	2228.555	6942.211
S3/3	2444.906	6862.974
S2/3	2401.141	6941.965
S1/3	2377.653	6984.367
S6/2	2365.966	7005.462
S1/4	2394.873	6981.571
S1/3	2377.653	6984.367
S7/5	2466.432	6674.779
S6/5	2553.455	6722.991
S5/5	2638.359	6770.028
S4/5	2645.503	6772.099
S3/5	2684.442	6765.600
S2/5	2694.062	6824.858
S1/5	3072.962	6763.348
SI/LOT 114	2357.481	7010.638
SI/LOT 115	2463.780	6993.382
SI/LOT 116	2518.592	6984.484
SI/LOT 117	2563.498	6977.194
SI/LOT 118	2608.404	6969.904
SI/LOT 119	2655.320	6962.288
SI/LOT 120	2394.184	6977.327



KEY PLAN

SCALE 1:7500

WARNING

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COMMENCEMENT OF WORK.

MANHOLE COVERS AND SURROUNDS:

INSTALL TO ALL NEW SEWER MAINTENANCE STRUCTURES CLASS D
TRAFFICABLE COVER AND SURROUNDS WITH TYPE 'D' WATER SEALED
SOLID TOP IN ACCORDANCE WITH SEWERAGE STANDARD DRAWING
SEQ-SEW-1308-I, 9, 10, 11.

INTERNAL CORROSION COATING TO BE APPLIED TO ALL MAINTENANCE HOLES AS PER CLAUSE 18.8 OF SEQ D&C CODE

NOTE:

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Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL

Level Datum:	AHD
Meridian:	-
Contour Interval:	-
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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 2 OF 4

A Issue	01-05-2020 Date	ORIGINAL ISSUE Description	BA DRN	MG CHK

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed:	IG
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Drafted:	BA
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Approved:	MG
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RPEQ:	16939
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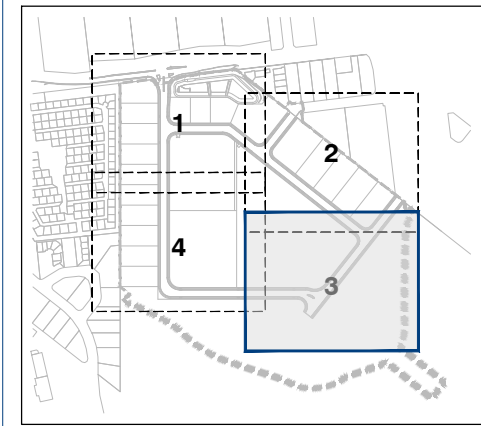
Signed:

Date:	01-05-2020
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Drawing No:
5941 ENG OPW1 601

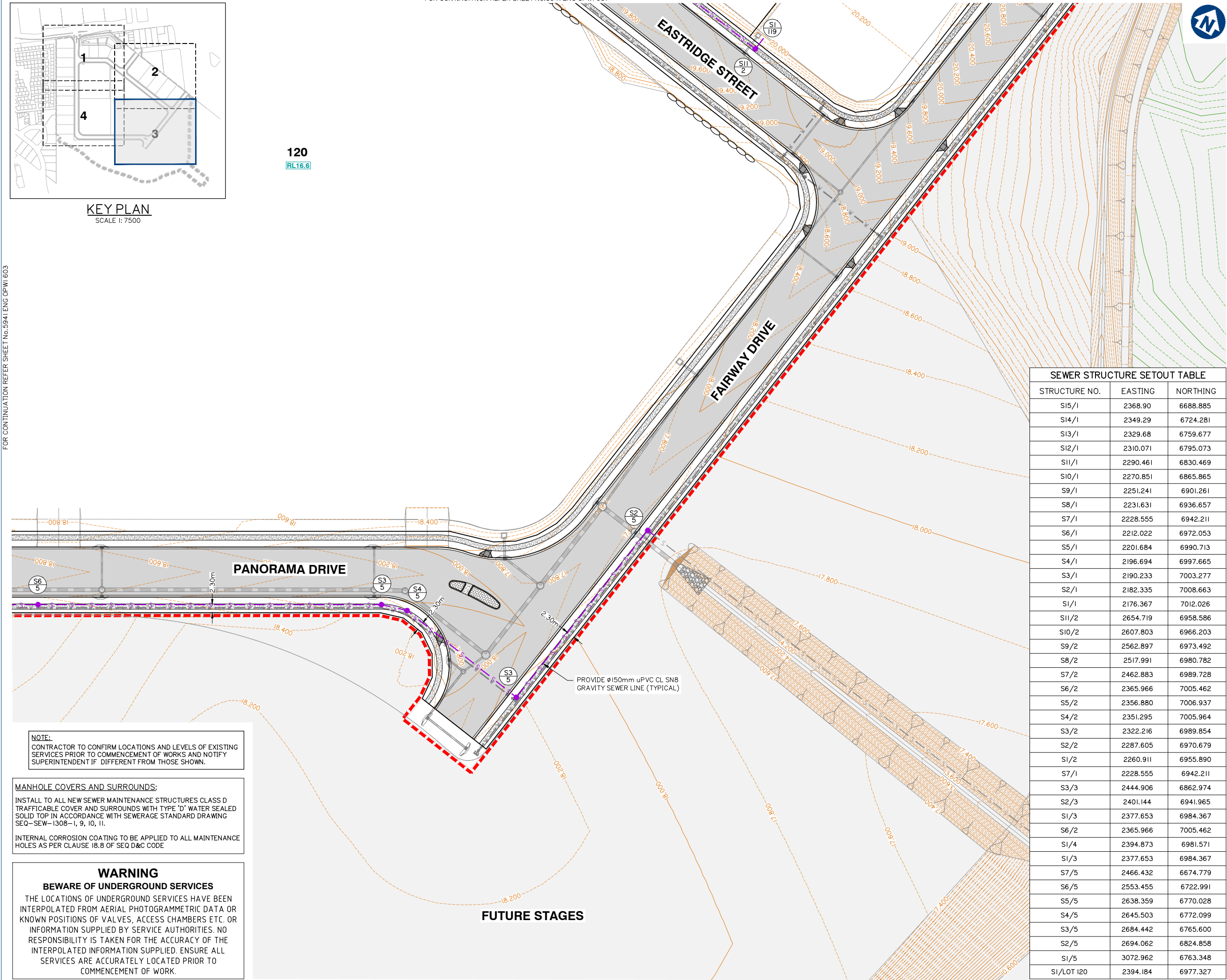
Rev. No:
A

FOR CONTINUATION REFER SHEET No.5941 ENG OPW1 603



KEY PLAN
SCALE 1: 7500

120
RL16.6



NOTE:
CONTRACTOR TO CONFIRM LOCATIONS AND LEVELS OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT IF DIFFERENT FROM THOSE SHOWN.

MANHOLE COVERS AND SURROUNDS:
INSTALL TO ALL NEW SEWER MAINTENANCE STRUCTURES CLASS D TRAFFICABLE COVER AND SURROUNDS WITH 'TYPE D' WATER SEALED SOLID TOP IN ACCORDANCE WITH SEWERAGE STANDARD DRAWING SEQ-SEW-1308-1, 9, 10, 11.

INTERNAL CORROSION COATING TO BE APPLIED TO ALL MAINTENANCE HOLES AS PER CLAUSE 18.8 OF SEQ D&C CODE

WARNING
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FUTURE STAGES

SEWER STRUCTURE SETOUT TABLE		
STRUCTURE NO.	EASTING	NORTHING
S15/1	2368.90	6688.885
S14/1	2349.29	6724.281
S13/1	2329.68	6759.677
S12/1	2310.071	6795.073
S11/1	2290.461	6830.469
S10/1	2270.851	6865.865
S9/1	2251.241	6901.261
S8/1	2231.631	6936.657
S7/1	2228.555	6942.211
S6/1	2212.022	6972.053
S5/1	2201.684	6990.713
S4/1	2196.694	6997.665
S3/1	2190.233	7003.277
S2/1	2182.335	7008.663
S1/1	2176.367	7012.026
S11/2	2654.719	6958.586
S10/2	2607.803	6966.203
S9/2	2562.897	6973.492
S8/2	2517.991	6980.782
S7/2	2462.883	6989.728
S6/2	2365.966	7005.462
S5/2	2356.880	7006.937
S4/2	2351.295	7005.964
S3/2	2322.216	6989.854
S2/2	2287.605	6970.679
S1/2	2260.911	6955.890
S7/1	2228.555	6942.211
S3/3	2444.906	6862.974
S2/3	2401.144	6941.965
S1/3	2377.653	6984.367
S6/2	2365.966	7005.462
S1/4	2394.873	6981.571
S1/3	2377.653	6984.367
S7/5	2466.432	6674.779
S6/5	2553.455	6722.991
S5/5	2638.359	6770.028
S4/5	2645.503	6772.099
S3/5	2684.442	6765.600
S2/5	2694.062	6824.858
S1/5	3072.962	6763.348
S1/LOT 120	2394.184	6977.327

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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RPD:

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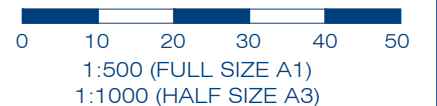
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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 3 OF 4

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES



Scale at A1: 1:500

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 602
Rev. No: A

SCALE 1: 7500

STRUCTURE NO.	EASTING	NORTHING
S15/1	2368.90	6688.885
S14/1	2349.29	6724.281
S13/1	2329.68	6759.677
S12/1	2310.071	6795.073
S11/1	2290.461	6830.469
S10/1	2270.851	6865.865
S9/1	2251.241	6901.261
S8/1	2231.631	6936.657
S7/1	2228.555	6942.211
S6/1	2212.022	6972.053
S5/1	2201.684	6990.713
S4/1	2196.694	6997.665
S3/1	2190.233	7003.277
S2/1	2182.335	7008.663
S1/1	2176.367	7012.026
S11/2	2654.719	6958.586
S10/2	2607.803	6966.203
S9/2	2562.897	6973.492
S8/2	2517.991	6980.782
S7/2	2462.883	6989.728
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S1/2	2260.911	6955.890
S7/1	2228.555	6942.211
S3/3	2444.906	6862.974
S2/3	2401.144	6941.965
S1/3	2377.653	6984.367
S6/2	2365.966	7005.462
S1/4	2394.873	6981.571
S1/3	2377.653	6984.367
S7/5	2466.432	6674.779
S6/5	2553.455	6722.991
S5/5	2638.359	6770.028
S4/5	2645.503	6772.099
S3/5	2684.442	6765.600
S2/5	2694.062	6824.858
S1/5	3072.962	6763.348
SI/LOT 106	2286.699	6828.385
SI/LOT 107	2306.309	6792.989
SI/LOT 108	2325.919	6757.593
SI/LOT 109	2345.529	6722.197
SI/LOT 110	2365.139	6686.801
SI/LOT 121	2446.340	6859.767
SI/LOT FUTURE	2468.516	6671.018

110

PROVIDE Ø150mm uPVC CL SN8
GRAVITY SEWER LINE (TYPICAL)

RL16.6

RL16.6

PROVIDE Ø150mm uPVC CL SN8
GRAVITY SEWER LINE (TYPICAL)

RL16.6

NOTE:

CONTRACTOR TO CONFIRM LOCATIONS AND LEVELS OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT IF DIFFERENT FROM THOSE SHOWN.

INSTALL TO ALL NEW SEWER MAINTENANCE STRUCTURES CLASS D
TRAFFICABLE COVER AND SURROUNDS WITH TYPE 'D' WATER SEALED
SOLID TOP IN ACCORDANCE WITH SEWERAGE STANDARD DRAWING
SEQ-SEW-1308-1, 9, 10, 11.

INTERNAL CORROSION COATING TO BE APPLIED TO ALL MAINTENANCE HOLES AS PER CLAUSE 18.8 OF SEQ D&C CODE

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FUTURE STAGES

SEWER RETICULATION LAYOUT PLAN SHEET 4 OF 4



Client:



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Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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RPD:

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Plan: SP295994
Local Authority: CITY OF GOLD COAST
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Level Datum: AHD
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DRAWING TITLE

SEWER RETICULATION
LAYOUT PLAN SHEET 4 OF 4

A	01-05-2020	ORIGINAL ISSUE	BA	M3	
Issue	Date	Description	DRN	CHK	

SCALE IN METRES



Scale at A1:	1:500
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 603	A

MAINTENANCE HOLE / SHAFT NAME

MH / MS COVER TYPE	EXIST.
MH / MS TYPE	EXIST.
MH / MS DROP TYPE	EXIST.
LINE DEFLECTION ANG. & BRANCHES	EXIST.
PROPERTY CONNECTION TYPE	-
INTERNAL CORROSION PROTECTION	EXIST.

RIGSS STRUCTURE DROPS	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH
V STRAIGHT THROUGH SEWER SEQ STD DWG SEQ-1303-1	III TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS
W OBLIQUE 45° "Y" JUNCTION SEQ STD DWG SEQ-1303-1	RIGSS STRUCTURE LIDS
X INTERNAL BACKDROP SEQ STD DWG SEQ-1303-1	B NON-TRAFFICABLE LID
Z VERTICAL DROP JUNCTION STD DWG SEQ-1314-1	D TRAFFICABLE LID

RIGSS STRUCTURE TYPES	
P3 1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-1300-1	
J1 TYPE "JT" MAINTENANCE STRUCTURE SEQ STD DWG SEQ-1314-2	
BND LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-1314-3	

RIGSS PROPERTY CONNECTION TYPES	
V STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150#) SEQ STD DWG SEQ-1303-1	
W OBLIQUE 45° "Y" JUNCTION (250mm-600mm MIN. DROP FOR 150#) SEQ STD DWG SEQ-1303-1	
X INTERNAL BACKDROP (600mm MIN. DROP FOR 150#) SEQ STD DWG SEQ-1303-1	
Z DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-1314-1 AND 1314-2	

RIGSS GENERAL NOTES	
1 ALL UPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.	
2 EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-1201-1	
3 ALL BENDS TO BE LONG RADIUS BEND 3.0m RADIUS. REFER DWG SEQ-1314-3	
4 ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mm# PVC RISERS UNLESS NOTED OTHERWISE	
5 CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.	
6 POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B	
7 WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW1 030	
8 WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.	
9 ALL PROPERTY CONNECTIONS TO BE 150# uPVC CLASS SN8 UNLESS NOTED OTHERWISE.	
10 DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2 AND PE LINING REQUIREMENTS.	

DATUM RL	-5.000											3.000	
LOCATION DESCRIPTION	DTMR R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE
PIPE SIZE (mm), MATERIAL & CLASS	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8	150, uPVC SN8
PIPE GRADE (1 IN X)	66.67	66.67	50	50	25	180	40	31.24	22.95	26.57	34.79		
PIPE LENGTH	6.850	9.560	8.558	8.558	21.332	34.117	6.349	40.465	40.465	40.465	40.465		
PIPE EMBEDMENT TYPE	4	4	4	4	4	4	4	4	4	4	4		
FINISHED (& EXISTING) SURFACE LEVEL	7.032 (7.615)	6.968 (7.718)	7.238 (8.117)	7.831 (8.558)	8.375 (9.112)	9.366 (10.426)	10.661 (12.632)	10.851 (13.011)	12.618 (15.884)	15.046 (19.072)	17.271 (21.944)	18.488 (22.962)	
DEPTH TO PIPE INVERT BELOW FSL	3.957 3.106 3.106	2.939 2.939 2.929	3.055 3.055 3.015	3.437 3.437 3.397	3.77 3.77 3.74	3.878 3.878 3.777	4.883 4.883 3.585	3.417 3.417 2.226	2.698 2.698 1.998	2.663 2.663 1.963	2.665 2.665 2.64	2.693 2.693	
PIPE INVERT LEVEL	3.075 3.926	4.029 4.039	4.182 4.222	4.394 4.434	4.605 4.635	5.488 5.588	5.778 7.276	7.434 8.625	9.92 10.62	12.383 13.083	14.607 14.632	15.795	
PIPE CHAINAGE	0	6.85	16.41	24.968	33.526	54.857	88.974	95.322	135.787	176.253	216.718	257.183	

LINE

1

SEWER RETICULATION LONGITUDINAL SECTIONS SHEET I OF II



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60 STAPYLTON JACOBS WELL
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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 1 OF 11

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.
HORZ: 0 5 10 15 20 25 30 35 40

Scale 1:100 - Lengths are in Metres.
VERT: 0 1 2 3 4 5 6 7 8

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 610 Rev. No: A

S7/1	S1/2	S2/2	S3/2
D	D	D	D
P3	P3	JI	JI
V	X	V	V
—	80 1	112 1	113 1
Y	Y	Z	Z
		N	N

RIGSS GENERAL NOTES	
1	ALL uPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201.
3	ALL BENDS TO BE LONG RADIUS BEND 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3
4	ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mmØ PVC RISERS UNLESS NOTED OTHERWISE
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3, REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SP5-1407-1 & A-2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BENT SPANNING OVER THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG NO. 5941 ENC PW1 030
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150Ø uPVC CLASS SN8 UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH THE SEQ SEWER CODE CLAUSE 4.6.2.2 AND FILING REQUIREMENTS.

Station	CoGC R/RESERVE	CoGC R/RESERVE	CoGC R/RESERVE
0	5.778	4.983	10.661
	5.858	4.883	(12.632)
		4.803	
35.129	6.053	4.744	10.797
	8.177	4.744	(11.75)
		2.621	
65.646	8.346	2.652	10.998
	8.371	2.652	(10.092)
		2.627	
105.213	8.591	2.874	11.465
		2.874	(9.273)

Diagram illustrating the cross-section of a drainage system with three manholes. The system is shown in profile, with the ground surface indicated by a dashed green line and the pipe profile by a solid orange line.

Manhole 1 (Left): Located at station 0. The pipe entering is 1200mm IL 7.270. The manhole depth is 1.24m.

Manhole 2 (Middle): Located at station 35.129. The pipe entering is 25 375mm IL 9.207. The manhole depth is 3.00m.

Manhole 3 (Right): Located at station 65.646. The pipe entering is 27 375mm IL 9.401. The manhole depth is 1.1m.

Ground Profile: The ground surface is shown as a dashed green line. The elevation at the first manhole is 10.698 (PANORAMA DR. RL 10.698). The elevation at the second manhole is 10.024 (WAT D1CL DN150 RL 10.024). The elevation at the third manhole is 9.845 (29 375mm IL 9.845).

Dimensions: The vertical dimensions of the manholes are 1.24m, 3.00m, and 1.1m. The horizontal dimensions between the manholes are 35.129, 30.518, and 39.567.

2

RIGSS STRUCTURE DROPS		 CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH	
V	STRAIGHT THROUGH SEWER SEQ DWG SEQ-SW-1303-I	 TRENCH STOPS, BULKHEADS & CONCRETE ENCASEMENTS	
W	OBLIQUE 45° "Y" JUNCTION SEQ DWG SEQ-SW-1303-I		
X	INTERNAL BACKDROP SEQ DWG SEQ-SW-1303-I		
Z	VERTICAL DROP JUNCTION STD DWG SEQ-SW-1314-I		
		RIGSS STRUCTURE LIDS	
		B	NON-TRAFFICABLE LID
		D	TRAFFICABLE LID

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-SW-1300-1
J1	TYPE "J1" MAINTENANCE STRUCTURE SEQ STD DWG SEQ-SW-1314-2
BND	LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SW-1314-3

RIGSS PROPERTY CONNECTION TYPES	
V	STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
W	OBlique 45° Y JUNCTION (250mm-600mm DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
X	INTERNAL BACKDROP (600mm MIN. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
Z	DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-I AND 1314-Z

RIGSS GENERAL NOTES	
1	all uPVC SEWER PIPE TO BE CLASS S8B INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SP-1201
3	ALL BENDS TO BE LONG RADII BEND 3.0m RADII. REFER DWG SEQ-S-1314-3
4	ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mmØ PVC RISERS UNLESS NOTED OTHERWISE.
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL 6 MAINTENANCE STRUCTURES TYPE P3, REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH, REFER TYPICAL DETAILS DETAIL ALL DWG NO. S54-ENG-CPW-035
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150Ø uPVC CLASS S8B UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH THE SEQ SEWER CODE CLAUSE 4.6.2.2 AND LINING REQUIREMENTS.

MAINTENANCE HOLE / SHAFT NAME

MH / MS COVER TYPE	D	D	D
MH / MS TYPE	J1	J1	P3
MH / MS DROP TYPE	V	V	-
LINE DEFLECTION ANG. & BRANCHES	117 -90°	118 -90°	119 -90°
PROPERTY CONNECTION TYPE	Z	Z	X
INTERNAL CORROSION PROTECTION	N	N	Y

RIGSS STRUCTURE DROPS	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH
V STRAIGHT THROUGH SEWER SEQ DWG SEQ-SEW-1303-1	TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS
W OBLIQUE 45° "Y" JUNCTION SEQ DWG SEQ-SEW-1303-1	
X INTERNAL BACKDROP SEQ DWG SEQ-SEW-1303-1	RIGSS STRUCTURE LIDS
Z VERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-1	B NON-TRAFFICABLE LID
	D TRAFFICABLE LID

RIGSS STRUCTURE TYPES	
P3 1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-SEW-1300-1	
J1 TYPE "JT" MAINTENANCE STRUCTURE SEQ STD DWG SEQ-SEW-1314-2	
BND LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SEW-1314-3	

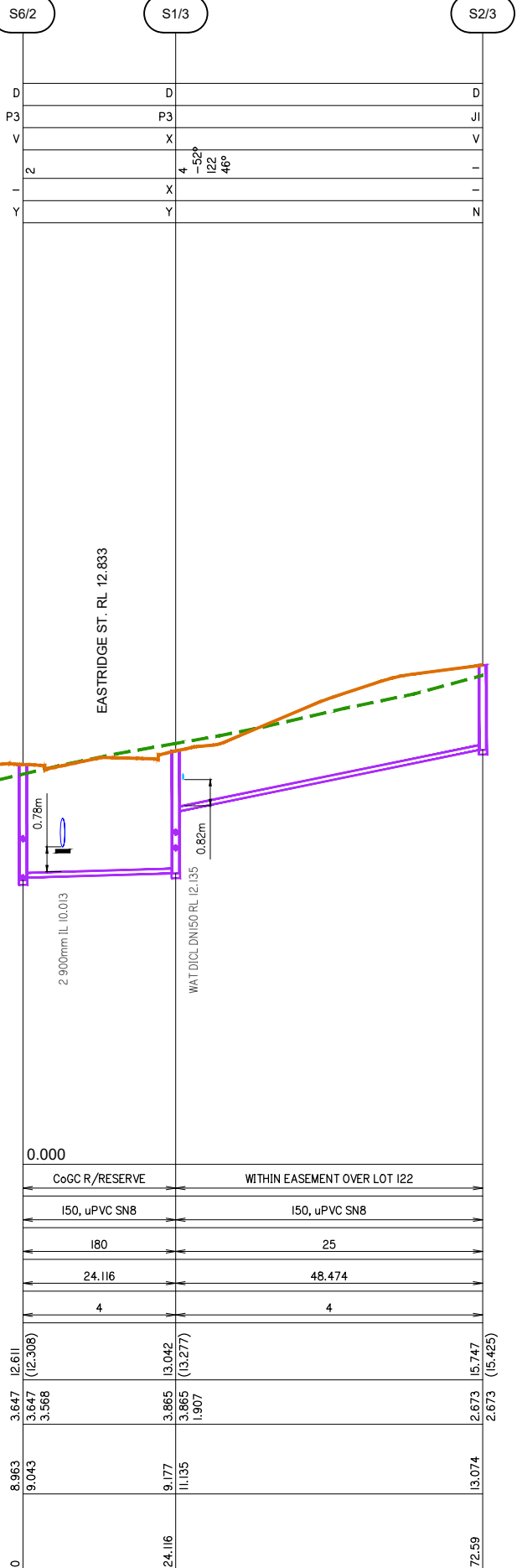
RIGSS PROPERTY CONNECTION TYPES	
V STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150#) SEQ STD DWG SEQ-SEW-1303-1	
W OBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150#) SEQ STD DWG SEQ-SEW-1303-1	
X INTERNAL BACKDROP (600mm MIN. DROP FOR 150#) SEQ STD DWG SEQ-SEW-1303-1	
Z DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-1 AND 1314-2	

RIGSS GENERAL NOTES	
1 ALL UPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.	
2 EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1	
3 ALL BENDS TO BE LONG RADIUS BEND 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3	
4 ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mm# PVC RISERS UNLESS NOTED OTHERWISE	
5 CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.	
6 POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B	
7 WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW1 030	
8 WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.	
9 ALL PROPERTY CONNECTIONS TO BE 150# uPVC CLASS SN8 UNLESS NOTED OTHERWISE.	
10 DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2 AND PE LINING REQUIREMENTS.	

DATUM RL	6.000		
LOCATION DESCRIPTION	CoGC R/RESERVE	CoGC R/RESERVE	
PIPE SIZE (mm), MATERIAL & CLASS	150, uPVC SN8	150, uPVC SN8	
PIPE GRADE (1 IN X)	80	180	
PIPE LENGTH	45.494	47.531	
PIPE EMBEDMENT TYPE	4	4	
FINISHED (& EXISTING) SURFACE LEVEL	18.755 (22.225) 2.338 2.313	19.87 (21.344) 2.86 2.834	19.562 (20.412) 2.262 2.262
DEPTH TO PIPE INVERT BELOW FSL	2.338 2.338 2.313	2.86 2.86 2.834	2.262 2.262 2.262
PIPE INVERT LEVEL	16.417 16.442	17.01 17.035	17.299
PIPE CHAINAGE	352.84	398.334	445.865

LINE

2



3



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Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 4 OF 11

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.
HORZ: 0 5 10 15 20 25 30 35 40

Scale 1:100 - Lengths are in Metres.
VERT: 0 1 2 3 4 5 6 7 8

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 613
Rev. No: A

RIGSS STRUCTURE DROPS			CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH
V	STRAIGHT THROUGH SEWER SEQ DWG SEQ-SW-1303-I		
W	OBLIQUE 45° Y JUNCTION SEQ DWG SEQ-SW-1303-I		
X	INTERNAL BACKDROP SEQ DWG SEQ-SW-1303-I		
Z	VERTICAL DROP JUNCTION STD DWG SEQ-SW-1314-I	RIGSS STRUCTURE LIDS	
		B	NON-TRAFFICABLE LID
		D	TRAFFICABLE LID

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-SW-1300-1
J1	TYPE "J1" MAINTENANCE STRUCTURE SEQ STD DWG SEQ-SW-1314-2
BND	LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SW-1314-3

RIGSS PROPERTY CONNECTION TYPES	
V	STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
W	OBLIQUE 45° Y JUNCTION (250mm-600mm DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
X	INTERNAL BACKDROP (600mm MIN. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
Z	DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-I AND 1314-Z

RIGSS GENERAL NOTES	
1	all uPVC SEWER PIPE TO BE CLASS S8B INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SP5-120I
3	ALL BENDS TO BE LONG RADII BEND 3.0m RADII. REFER DWG SEQ-S5-1314-3
4	ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mmØ PVC RISERS UNLESS NOTED OTHERWISE.
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL 6 MAINTENANCE STRUCTURES TYPE P3, REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SP5-1407-I-A & 2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH, REFER TYPICAL DETAILS DETAIL ALL DWG NO. S54-ENG 0PM 030
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150Ø uPVC CLASS S8B UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH THE SEQ SEWER CODE CLAUSE 4.6.2.2 AND LINING REQUIREMENTS.

LINE 3

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4

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PROPERTY**

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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:
60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
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RPD:	
Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

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DRAWING TITLE

SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 5 OF 11

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

HORIZ: Scale 1:500 - Lengths are in Metres.



A horizontal scale bar with alternating black and white segments. It is marked with numbers from 0 to 40 in increments of 5.

VERT: Scale 1:100 - Lengths are in Metres.



A vertical scale bar with alternating black and white segments. It is marked with numbers from 0 to 8 in increments of 1.

Scale at A1:	AS SHOWN
--------------	----------

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 614	A

LINE _____ 5

RIGGS STRUCTURE DROPS		CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH	
V	STRAIGHT THROUGH SEWER SEQ DWG SEQ-SEW-1303-I	III	TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS
W	OBLIQUE 45° "Y" JUNCTION SEQ DWG SEQ-SEW-1303-I		
X	INTERNAL BACKDROP SEQ DWG SEQ-SEW-1303-I		
Z	VERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-I		
		RIGGS STRUCTURE LIDS	
		B	NON-TRAFFICABLE LID
		D	TRAFFICABLE LID

RIGSS STRUCTURE TYPES	
P3	1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-SW-1300-1
J1	TYPE "J1" MAINTENANCE STRUCTURE SEQ STD DWG SEQ-SW-1314-2
BND	LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-SW-1314-3

RIGSS PROPERTY CONNECTION TYPES	
V	STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
W	OBlique 45° Y JUNCTION (250mm-600mm DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
X	INTERNAL BACKDROP (600mm MIN. DROP FOR 150ø) SEQ STD DWG SEQ-SEW-1303-I
Z	DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-SEW-1314-I AND 1314-Z

RIGSS GENERAL NOTES	
1	all uPVC SEWER PIPE TO BE CLASS S8B INCLUDING ALL PROPERTY CONNECTIONS.
2	EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SP5-120I
3	ALL BENDS TO BE LONG RADII BEND 3.0m RADII. REFER DWG SEQ-S5-1314-3
4	ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mmØ PVC RISERS UNLESS NOTED OTHERWISE.
5	CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6	POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL 6 MAINTENANCE STRUCTURES TYPE P3, REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SP5-1407-I-A & 2-B
7	WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH, REFER TYPICAL DETAILS DETAIL ALL DWG NO. S54-ENG 0PM 030
8	WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9	ALL PROPERTY CONNECTIONS TO BE 150Ø uPVC CLASS S8B UNLESS NOTED OTHERWISE.
10	DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH THE SEQ SEWER CODE CLAUSE 4.6.2.2 AND LINING REQUIREMENTS.

LINE

5

SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 7 OF 11



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Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL

Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RI :	-

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 7 OF 11

SCALE IN METRES

HORZ: Scale 1:500 - Lengths are in Metres.

Scale 1:100 - Lengths are in Metres.

VERT:

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 616	A

MAINTENANCE HOLE / SHAFT NAME

MH / MS COVER TYPE	D	-
MH / MS TYPE	P3	-
MH / MS DROP TYPE	-	-
LINE DEFLECTION ANG. & BRANCHES	-	-
PROPERTY CONNECTION TYPE	X	-
INTERNAL CORROSION PROTECTION	Y	-

RIGSS STRUCTURE DROPS	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH
V STRAIGHT THROUGH SEWER SEQ STD DWG SEQ-1303-1	TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS
W OBLIQUE 45° "Y" JUNCTION SEQ STD DWG SEQ-1303-1	RIGSS STRUCTURE LIDS
X INTERNAL BACKDROP SEQ STD DWG SEQ-1303-1	B NON-TRAFFICABLE LID
Z VERTICAL DROP JUNCTION STD DWG SEQ-1314-1	D TRAFFICABLE LID

RIGSS STRUCTURE TYPES
P3 1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-1300-1
JI TYPE "JI" MAINTENANCE STRUCTURE SEQ STD DWG SEQ-1314-2
BND LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-1314-3

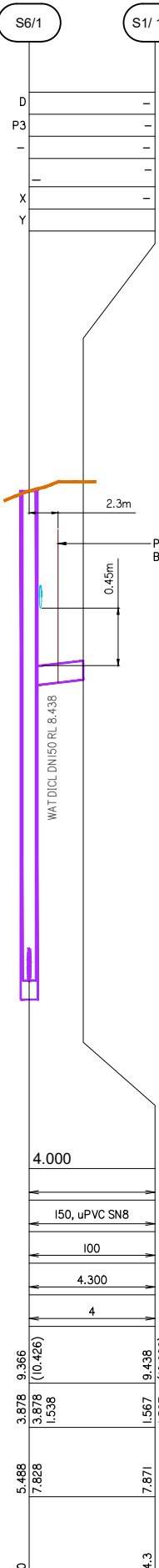
RIGSS PROPERTY CONNECTION TYPES
V STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150#) SEQ STD DWG SEQ-1303-1
W OBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150#) SEQ STD DWG SEQ-1303-1
X INTERNAL BACKDROP (600mm MIN. DROP FOR 150#) SEQ STD DWG SEQ-1303-1
Z DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-1314-1 AND 1314-2

RIGSS GENERAL NOTES
1 ALL UPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.
2 EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1
3 ALL BENDS TO BE LONG RADIUS BEND 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3
4 ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mmØ PVC RISERS UNLESS NOTED OTHERWISE
5 CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6 POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B
7 WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW1 030
8 WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9 ALL PROPERTY CONNECTIONS TO BE 150# uPVC CLASS SN8 UNLESS NOTED OTHERWISE.
10 DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2 AND PE LINING REQUIREMENTS.

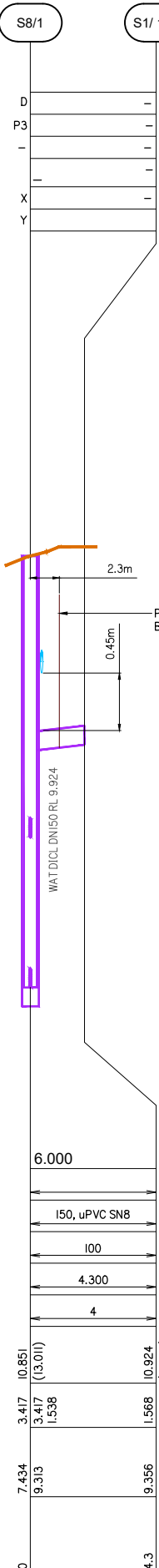
DATUM RL	3.000
LOCATION DESCRIPTION	CoGC R/RESERVE
PIPE SIZE (mm), MATERIAL & CLASS	150, uPVC SN8
PIPE GRADE (1 IN X)	100
PIPE LENGTH	4.402
PIPE EMBEDMENT TYPE	4
FINISHED (& EXISTING) SURFACE LEVEL	7.238 3.055 (8.117) 1.557
DEPTH TO PIPE INVERT BELOW FSL	3.055 4.182 5.689
PIPE INVERT LEVEL	4.182 5.689 8.413
PIPE CHAINAGE	0 4.402

LINE

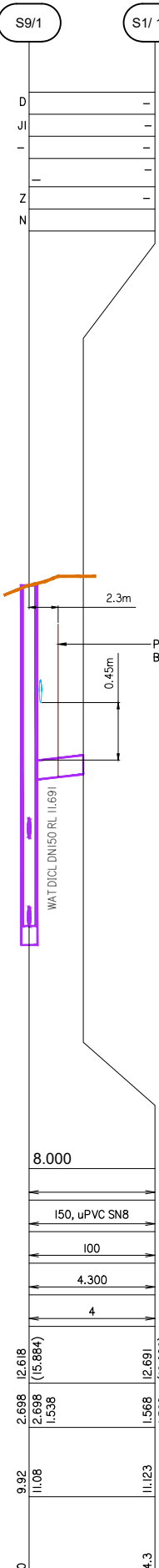
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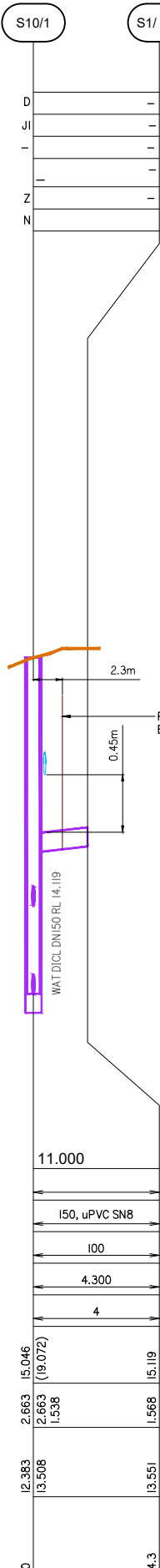
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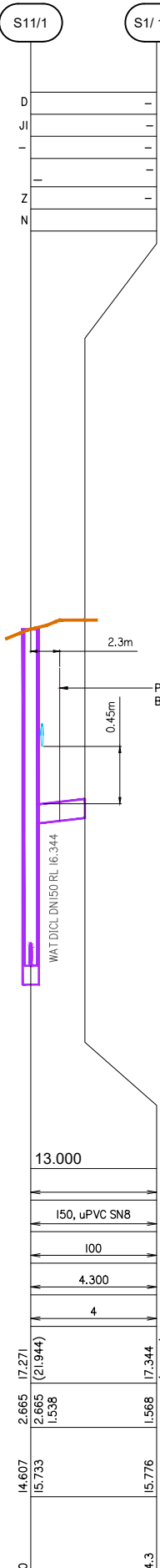
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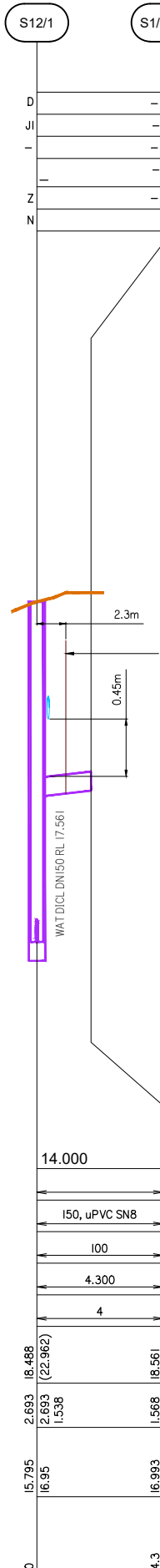
104



105



106



107

SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 8 OF 11

Client:



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Project:

VANTAGE YATALA

Site Address:

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ROAD, STAPYLTON QLD 4207

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RPD:

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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 8 OF 11

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES

Scale 1:250 - Lengths are in Metres.
HORZ: 0 2 4 6 8 10 12 14 16 18 20

Scale 1:25 - Lengths are in Metres.
VERT: 0 0.25 0.5 0.75 1.0 1.25 1.5 1.75 2.0

Scale at A1: AS SHOWN

Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No: 5941 ENG OPW1 617
Rev. No: A

MAINTENANCE HOLE / SHAFT NAME

MH / MS COVER TYPE	D	-
MH / MS TYPE	JI	-
MH / MS DROP TYPE	-	-
LINE DEFLECTION ANG. & BRANCHES	-	-
PROPERTY CONNECTION TYPE	Z	-
INTERNAL CORROSION PROTECTION	N	-

RIGSS STRUCTURE DROPS	CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH
V STRAIGHT THROUGH SEWER SEQ STD DWG SEQ-1303-1	TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS
W OBLIQUE 45° "Y" JUNCTION SEQ STD DWG SEQ-1303-1	
X INTERNAL BACKDROP SEQ STD DWG SEQ-1303-1	RIGSS STRUCTURE LIDS
Z VERTICAL DROP JUNCTION STD DWG SEQ-1314-1	B NON-TRAFFICABLE LID
	D TRAFFICABLE LID

RIGSS STRUCTURE TYPES	
P3 1050mm DIA. PRE-CAST MAINTENANCE HOLE WITH CONVERSION SLAB AND PRE-CAST BASE. INSTALL DUCTILE IRON COVER SEQ STD DWG SEQ-1300-1	
JI TYPE "JI" MAINTENANCE STRUCTURE SEQ STD DWG SEQ-1314-2	
BND LONG RADIUS BEND (R3.0m) SEQ STD DWG SEQ-1314-3	

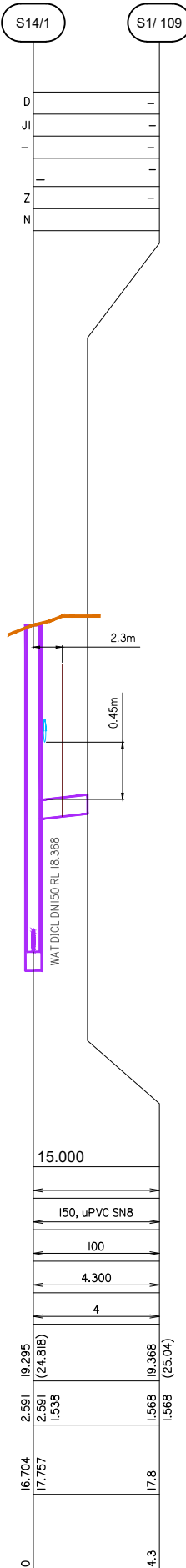
RIGSS PROPERTY CONNECTION TYPES	
V STRAIGHT THROUGH SEWER (250mm MAX. DROP FOR 150#) SEQ STD DWG SEQ-1303-1	
W OBLIQUE 45° "Y" JUNCTION (250mm-600mm DROP FOR 150#) SEQ STD DWG SEQ-1303-1	
X INTERNAL BACKDROP (600mm MIN. DROP FOR 150#) SEQ STD DWG SEQ-1303-1	
Z DROP JUNCTION TO DN300 RISER OF MAINTENANCE SHAFT SEQ STD DWG SEQ-1314-1 AND 1314-2	

RIGSS GENERAL NOTES
1 ALL UPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL PROPERTY CONNECTIONS.
2 EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS AND SEQ-SEW-1201-1
3 ALL BENDS TO BE LONG RADIUS BEND 3.0m RADIUS. REFER DWG SEQ-SEW-1314-3
4 ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mm# PVC RISERS UNLESS NOTED OTHERWISE
5 CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF PIPEWORK.
6 POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B
7 WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW1 030
8 WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS AND CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH THE SEQ SEWER CODE.
9 ALL PROPERTY CONNECTIONS TO BE 150# uPVC CLASS SN8 UNLESS NOTED OTHERWISE.
10 DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2 AND PE LINING REQUIREMENTS.

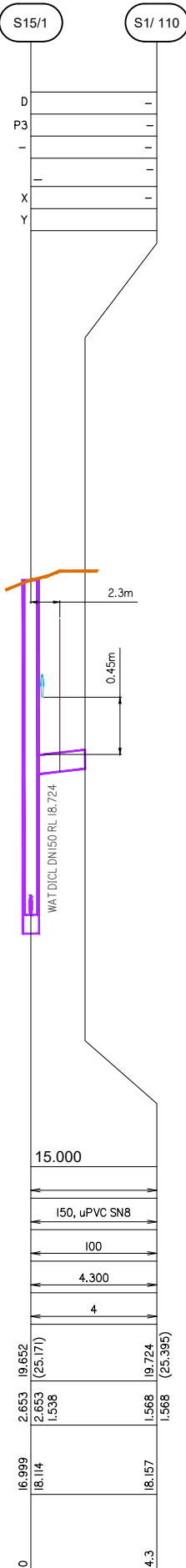
DATUM RL	15.000
LOCATION DESCRIPTION	
PIPE SIZE (mm), MATERIAL & CLASS	150, uPVC SN8
PIPE GRADE (1 IN X)	100
PIPE LENGTH	4.300
PIPE EMBEDMENT TYPE	4
FINISHED (& EXISTING) SURFACE LEVEL	18.921 2.602 (23.563) 17.383 1.538
DEPTH TO PIPE INVERT BELOW FSL	1.568 1.568 (23.822)
PIPE INVERT LEVEL	16.319 17.426
PIPE CHAINAGE	0 4.3

LINE

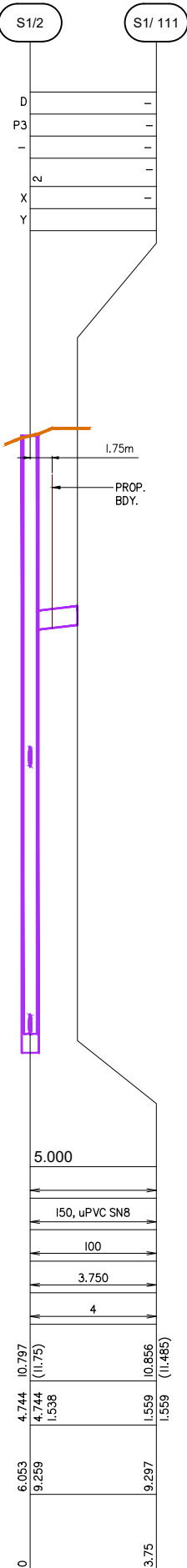
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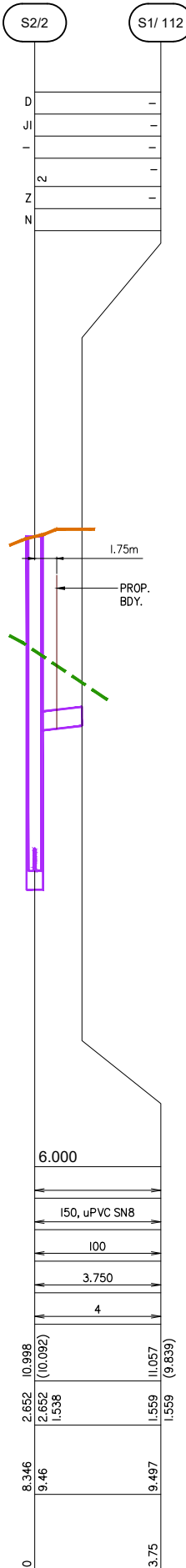
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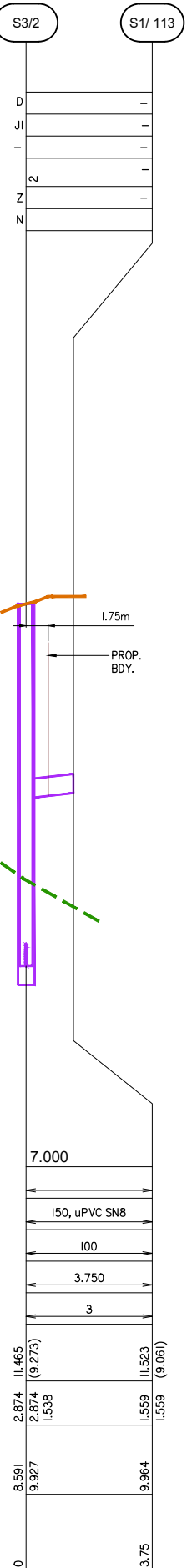
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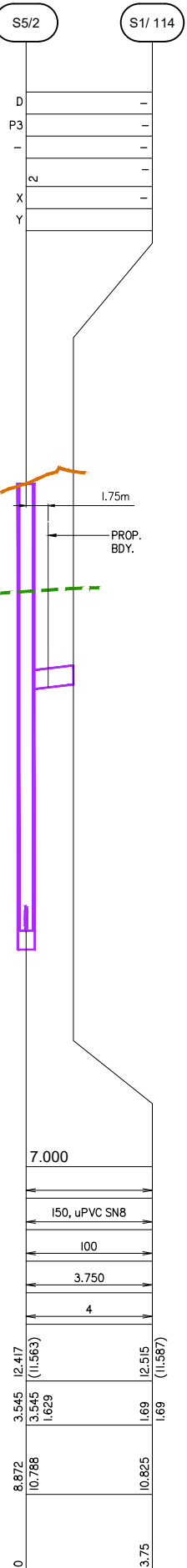
111



112



113



114

SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 9 OF 11



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Project:

VANTAGE YATALA

Site Address:

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ROAD, STAPYLTON QLD 4207

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Plan: SP295994
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Level Datum: AHD
Meridian: -
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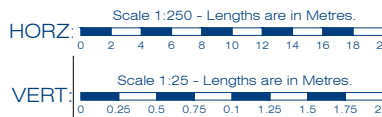
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DRAWING TITLE
SEWER RETICULATION
LONGITUDINAL SECTIONS
SHEET 9 OF 11

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES



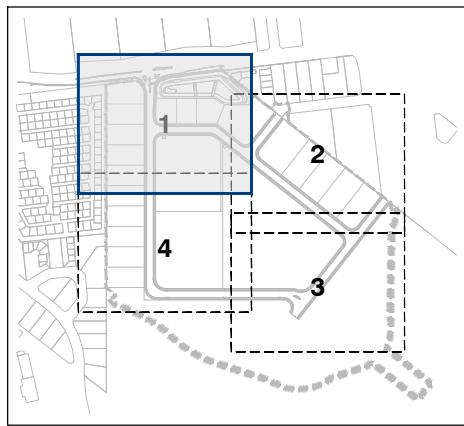
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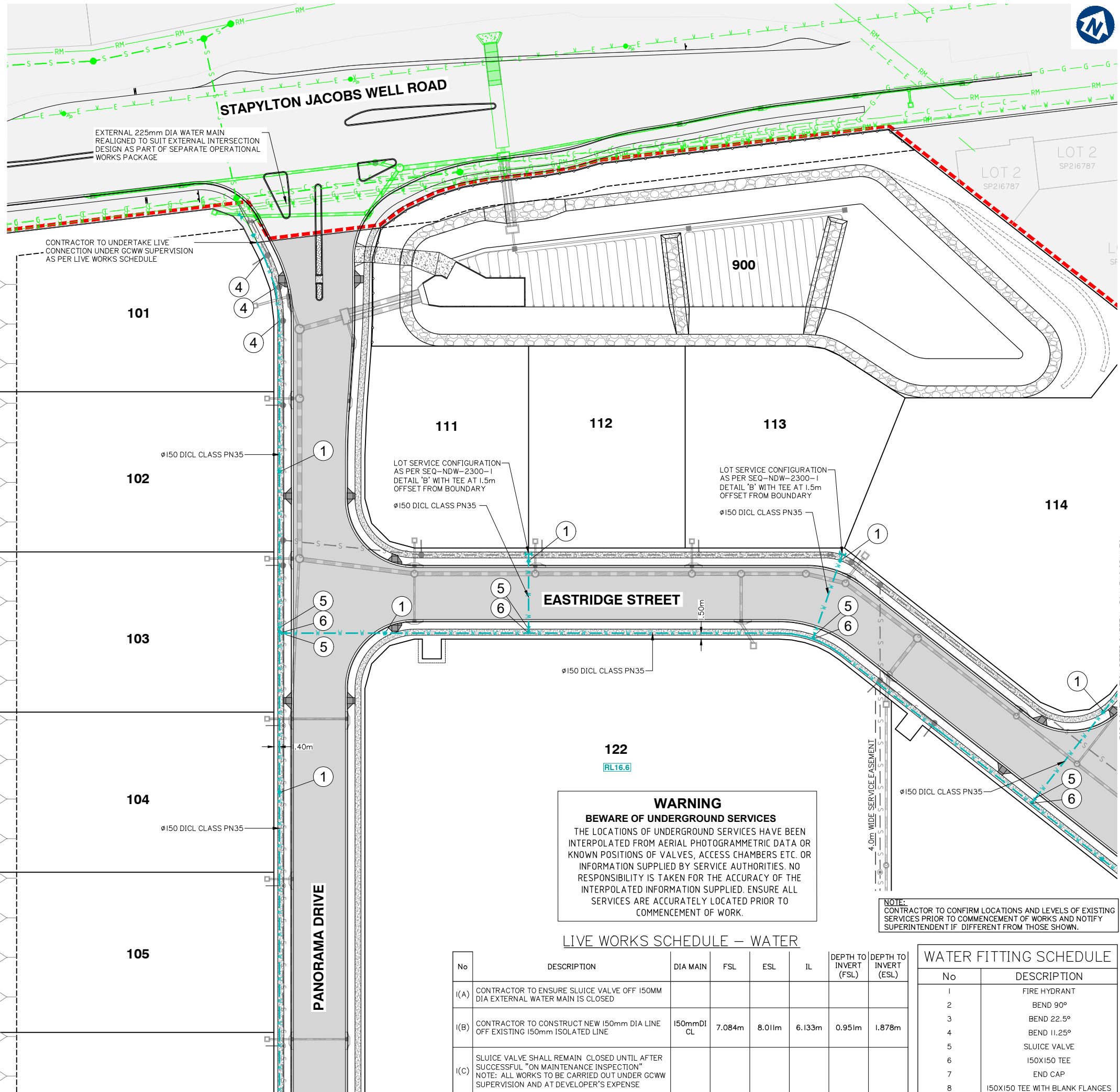
Drawing No: 5941 ENG OPW1 618 Rev. No: A

SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 10 OF 11

G:\Projects\5941\ENGINEERING\Acad\CIVIL WORKS STAGE 1\Current\5941 ENG OPW1 610.dwg



KEY PLAN
SCALE 1: 7500



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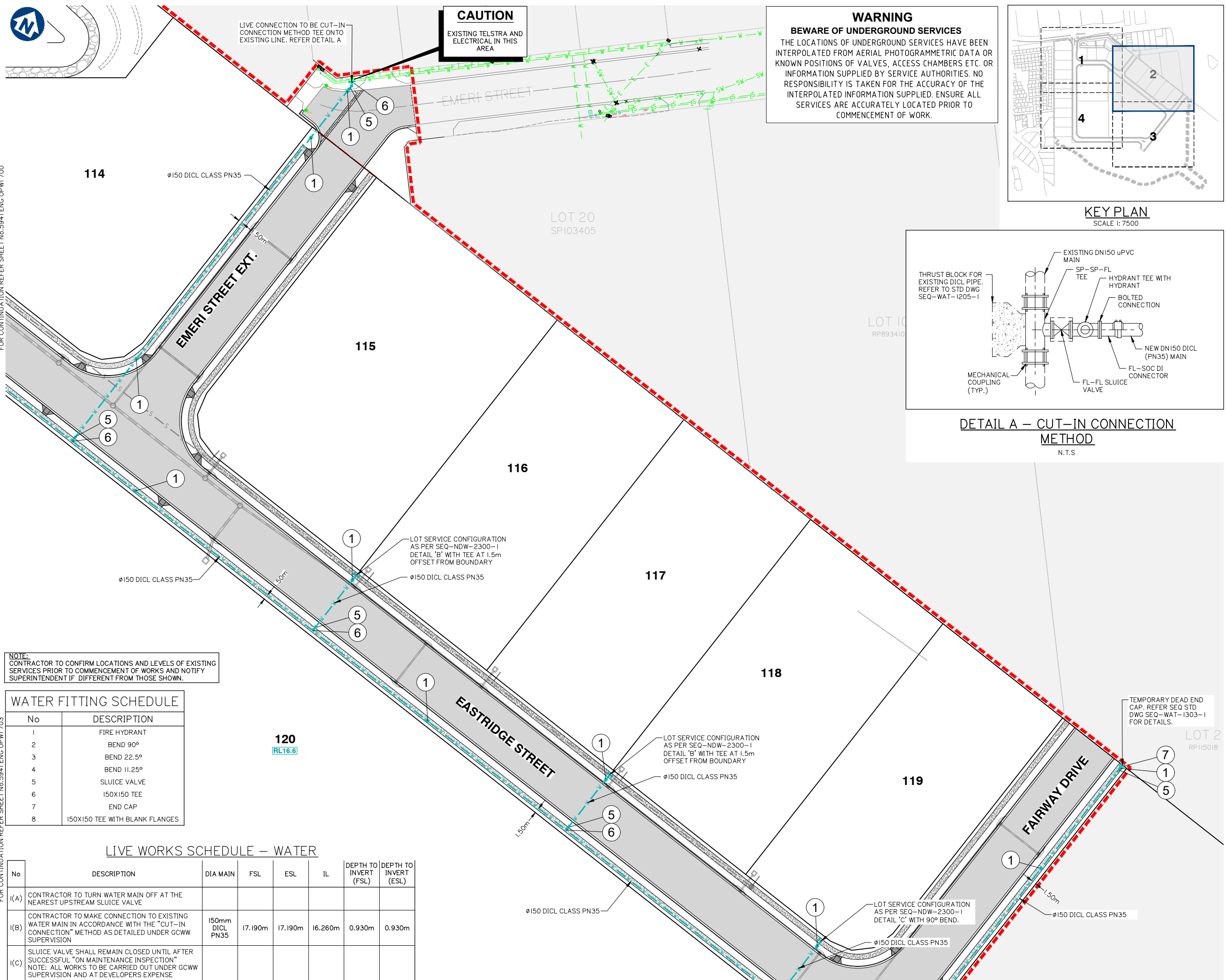
DRAWING TITLE

WATER RETICULATION
LAYOUT PLAN SHEET 1 OF 4

SCALE IN METRES
0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500
Designed: IG
Drafted: BA
Approved: MG
RPEQ: 16939
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Drawing No: 5941 ENG OPW1 700
Rev. No: A



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Issue	Date	Description	DRN	CHI



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RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 701	A



RL16.6



WATER FITTING SCHEDULE	
No	DESCRIPTION
1	FIRE HYDRANT
2	BEND 90°
3	BEND 22.5°
4	BEND 11.25°
5	SLUICE VALVE
6	150X150 TEE
7	END CAP
8	150X150 TEE WITH BLANK FLANGES

FUTURE STAGES

WATER RETICULATION LAYOUT PLAN SHEET 3 OF 4



Project:

VANTAGE YATALA

Site Address:

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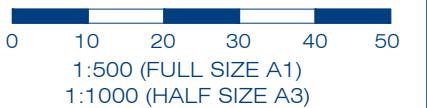
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WATER RETICULATION
LAYOUT PLAN SHEET 3 OF 4

[illegible]

SCALE IN METRES



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5941 ENG OPW1 702	A

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SCALE 1: 7500

No	DESCRIPTION
1	FIRE HYDRANT
2	BEND 90°
3	BEND 22.5°
4	BEND 11.25°
5	SLUICE VALVE
6	150X150 TEE
7	END CAP
8	150X150 TEE WITH BLANK FLANGES

NOTE:
CONTRACTOR TO CONFIRM LOCATIONS AND LEVELS OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT IF DIFFERENT FROM THOSE SHOWN.

110

PANORAMA DRIVE

RL16.6

RL16.6

LOT SERVICE CONFIGURATION-
AS PER SEQ-NDW-2300-1
DETAIL 'B' WITH TEE AT 1.5m
OFFSET FROM BOUNDARY

Ø150 DI CL CLASS PN35

PANORAMA DRIVE

FUTURE STAGES

WATER RETICULATION LAYOUT PLAN SHEET 4 OF 4



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WATER RETICULATION
LAYOUT PLAN SHEET 4 OF 4

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES



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Date:	01-05-2020
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Drawing No:	Rev. No:
5941 ENG OPW1 703	A

PIPE DN.	FITTING	MAX. THRUST IN KN	THRUST BLOCK HEIGHT	STIFF CLAY 50 kPa.	VERY STIFF CLAY SANDY LOAM 100kPa.	SAND & GRAVEL HARDCLAY 150kPa.	SAND & GRAVEL CEMENTED WITH CLAY 200kPa.	ROCK 240kPa
100	90° BEND	19.8	400	1000	●	●	●	●
	60° BEND	14.0		700	●	●	●	●
	45° BEND	10.7		●	●	●	●	●
	22.5° BEND	5.5		●	●	●	●	●
	11.25° BEND	2.7		●	●	●	●	●
	TEE OR CLOSED END	14.0		700	●	●	●	●
150	90° BEND	41.7	450	1860	930	●	●	●
	60° BEND	29.5		1320	660	●	●	●
	45° BEND	22.6		1000	●	●	●	●
	22.5° BEND	11.5		●	●	●	●	●
	11.25° BEND	5.8		●	●	●	●	●
	TEE OR CLOSED END	29.5		1300	660	●	●	●
200	90° BEND	71.7	550	*	1300	870	650	●
	60° BEND	50.7		1850	920	●	●	●
	45° BEND	38.8		1410	700	●	●	●
	22.5° BEND	19.8		720	●	●	●	●
	11.25° BEND	9.9		●	●	●	●	●
	TEE OR CLOSED END	50.7		1850	920	●	●	●
225	90° BEND	89.4	600	*	1500	1000	750	●
	60° BEND	63.2		2110	1060	700	●	●
	45° BEND	48.4		1620	810	●	●	●
	22.5° BEND	24.6		830	●	●	●	●
	11.25° BEND	12.4		●	●	●	●	●
	TEE OR CLOSED END	63.2		210	1060	700	●	●
250	90° BEND	109.0	650	*	1700	1120	840	700
	60° BEND	77.1		2400	1200	800	●	●
	45° BEND	59.0		1820	910	●	●	●
	22.5° BEND	30.1		930	●	●	●	●
	11.25° BEND	15.1		●	●	●	●	●
	TEE OR CLOSED END	77.1		2400	1200	800	●	●
300	90° BEND	158.6	700	*	2270	1510	1140	950
	60° BEND	112.2		*	1600	1070	800	670
	45° BEND	85.9		2453	1230	820	●	●
	22.5° BEND	43.8		1250	630	●	●	●
	11.25° BEND	22.0		630	●	●	●	●
	TEE OR CLOSED END	112.2		*	1600	1070	800	750

PIPE DN.	FITTING	MAX. THRUST IN KN	THRUST BLOCK HEIGHT	STIFF CLAY 50 KPa.	VERY STIFF CLAY SANDY LOAM 100KPa.	SAND & GRAVEL HARD CLAY 150KPa.	SAND & GRAVEL CEMENTED WITH CLAY 200KPa.	ROCK 240KPa
375	90° BEND	241.9	800	*	*	2220	1510	1260
	60° BEND	171.0		*	2140	1430	1070	890
	45° BEND	130.9		*	1640	1090	820	680
	22.5° BEND	66.7		1670	840	●	●	●
	11.25° BEND	33.5		840	●	●	●	●
	TEE OR CLOSED END	171.0		*	2140	1430	1070	890
450	90° BEND	342.6	900	*	*	2540	1900	1590
	60° BEND	242.3		*	2690	1800	1350	1120
	45° BEND	185.4		*	2060	1375	1030	860
	22.5° BEND	94.5		2100	1050	700	●	●
	11.25° BEND	47.5		1060	●	●	●	●
	TEE OR CLOSED END	242.3		*	2690	1800	1350	1120
500	90° BEND	418	1000	*	*	2790	2090	1740
	60° BEND	295.6		*	*	1970	1480	1230
	45° BEND	226.2		*	2260	1510	1130	940
	22.5° BEND	115.3		2310	1150	770	●	●
	11.25° BEND	58.0		1160	●	●	●	●
	TEE OR CLOSED END	295.5		*	*	1970	1480	1230
600	90° BEND	593	1100	*	*	*	2700	2250
	60° BEND	419		*	*	2540	1910	1590
	45° BEND	320		*	2920	1950	1460	1220
	22.5° BEND	164		2980	1490	990	750	620
	11.25° BEND	82.2		1500	750	●	●	●
	TEE OR CLOSED END	419		*	*	2540	1910	1590
750	90° BEND	909	1300	*	*	*	*	2920
	60° BEND	643		*	*	*	2480	2060
	45° BEND	492		*	*	2530	1890	1580
	22.5° BEND	251		*	1930	1290	970	810
	11.25° BEND	126.1		1940	970	650	●	●
	TEE OR CLOSED END	643		*	*	*	2480	2060
900 (0960 MSCL)	90° BEND	1,228	1500	*	*	*	*	3420
	60° BEND	868		*	*	*	2900	2420
	45° BEND	664		*	*	2960	2220	1850
	22.5° BEND	339		*	2260	1510	1130	940
	11.25° BEND	170		2270	1140	760	●	●
	TEE OR CLOSED END	868		*	*	*	3300	2650

● INDICATES BLOCK LENGTH OF 600
* = SPECIAL DESIGN



1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. CAST THE THRUST AREA OF ALL THRUST BLOCKS AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL. SOIL CLASSIFICATIONS USED ON THIS DRAWING ARE EXPLAINED IN SEQ-WAT-1200-1. DO NOT USE STANDARD THRUST BLOCKS AS SPECIFIED IN THIS DRAWING IN SOILS WITH $< 50\text{kPa}$ BEARING CAPACITY EG;
 - VERY SOFT, SOFT OR FIRM CLAY,
 - LOOSE CLEAN SAND,
 - UNCOMPACTED FILL OR REFUSE,A GEOTECHNICAL ASSESSMENT AND INDIVIDUAL DESIGN IS REQUIRED FOR THESE SOILS.
3. THRUST BLOCKS NOT TO INTERFERE WITH OTHER SERVICES OR BE LOCATED OUTSIDE THE WATER MAIN ALLOCATION WITHOUT WATER AGENCY APPROVAL.
4. ALL CONCRETE GRADE N20. TABLE OF DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL DICI PIPE DIAMETERS.
5. THE MINIMUM THRUST AREA FOR TAPER THRUST BLOCKS TO BE EQUAL TO THE DIFFERENCE BETWEEN THE THRUST AREAS FOR TEES OR CLOSED ENDS OF EQUIVALENT DIAMETER TO THOSE EACH SIDE OF TAPER. THE DETAIL SHOWN IS FOR $< \text{OR} = \text{DN}150$ MAINS. FOR LARGER MAINS, THE TAPER THRUST BLOCK SHALL BE REINFORCED AND OF A SIZE AS SHOWN IN SEQ-WAT-1206-1.
6. FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN.
7. WHEN POURING CONCRETE AGAINST FITTINGS PLACE A MEMBRANE OF POLYETHYLENE, PVC OR FELT BETWEEN THE FITTING AND CONCRETE TO PREVENT DAMAGE TO THE FITTING. PIPE JOINTS TO BE CLEAR OF CONCRETE.
8. CONCRETE THRUST BLOCK ANCHORS FOR VALVES TO BE AS DETAILED ON SEQ-WAT-1206-1.



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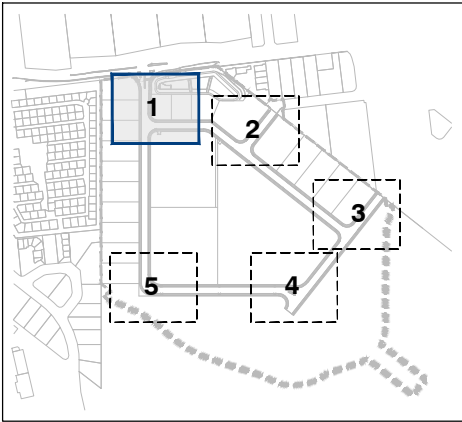
WATER RETICULATION TYPICAL DETAILS

A	01-05-2020	ORIGINAL ISSUE	BA	MG	
Issue	Date	Description	DRN	CHK	

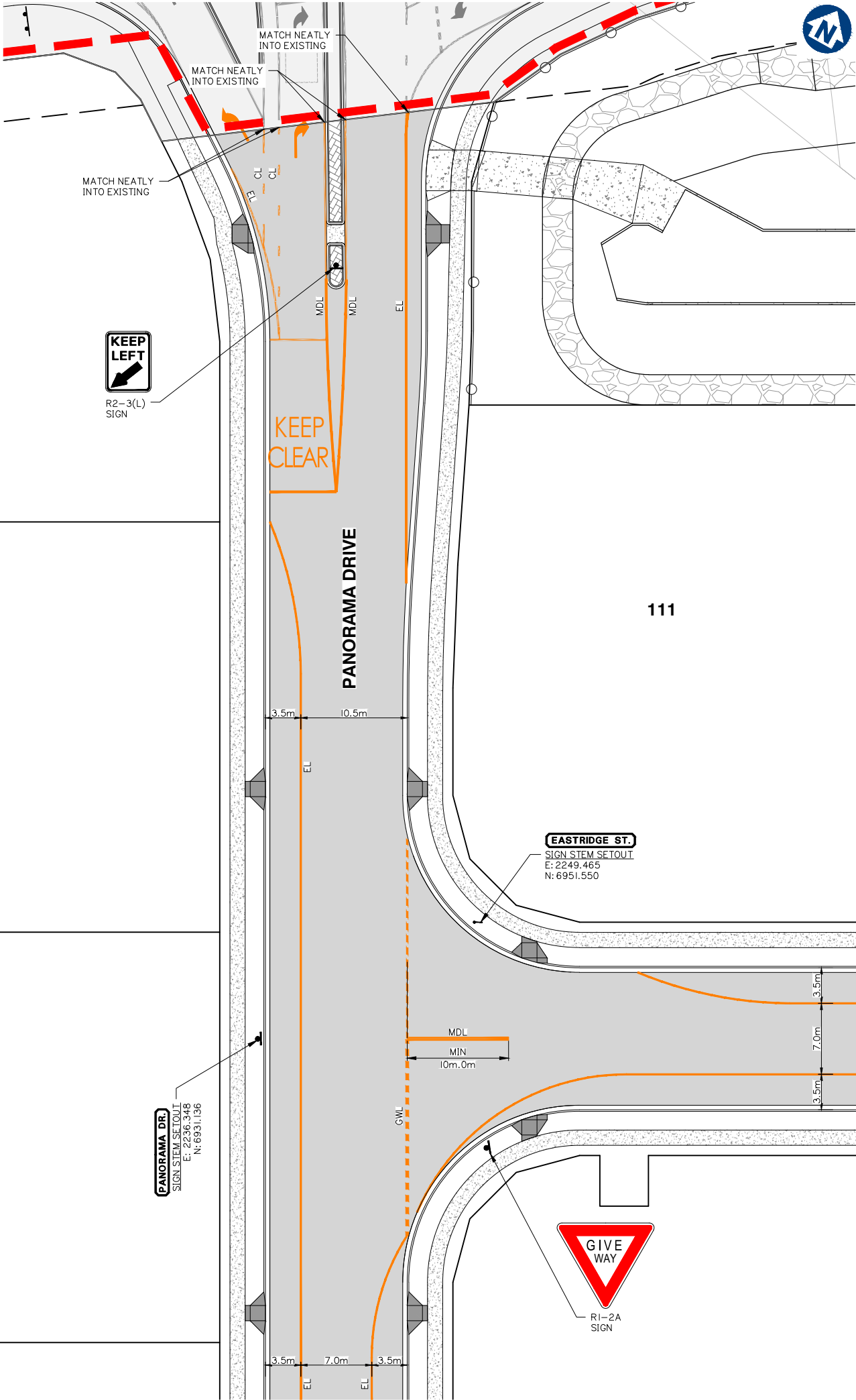
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Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 704	A



KEY PLAN
SCALE 1: 7500



- NOTE:**
1. ALL LINE-MARKING, SIGNAGE AND REFLECTORISED PAVEMENT MARKERS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT DEPARTMENT OF MAIN ROADS "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
 2. EXTENT OF LINE-MARKING IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO INSTALLATION.
 3. EXACT LOCATION OF ALL SIGNS IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO INSTALLATION.
 4. ALL SIGN POSTS & SIGN RAILS TO BE GALVANISED UNLESS NOTED OTHERWISE.
 5. ALL TRAFFIC SIGNS TO BE SIZE "B" UNLESS NOTED OTHERWISE.
 6. FOR GUIDE POST INSTALLATION AND DETAILS, REFER DEPARTMENT OF MAIN ROADS STANDARD DRAWING No.1356
 7. FOR TRAFFIC SIGN SUPPORT DETAILS, REFER DEPARTMENT OF MAIN ROADS STANDARD DRAWING No.'s 1360 AND 1362
 8. ALL ROUTE NAMES ON NEW GUIDE SIGNS TO BE BLACK LETTERING ON WHITE BACKGROUND U.N.O.
 9. ALL SIGN MATERIAL TO BE CLASS I.
 10. ALL LINEMARKING TO BE REFLECTORISED WHITE.

LINEMARKING LEGEND			WIDTH (mm)	
			MINIMUM	PREFERRED
DIVIDING LINE - MDL			150	150
EDGE LINE - EL			100	150
BROKEN LINE LANE - BL			100	100
CONTINUITY LINE - CL			200	200
GIVE WAY LINE GWL			300	300
600mm STRIPE AND GAP				

A	01-05-2020	ORIGINAL ISSUE	BA	MG
Issue	Date	Description	DRN	CHK



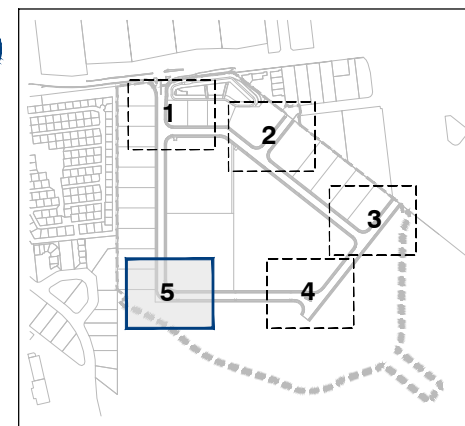
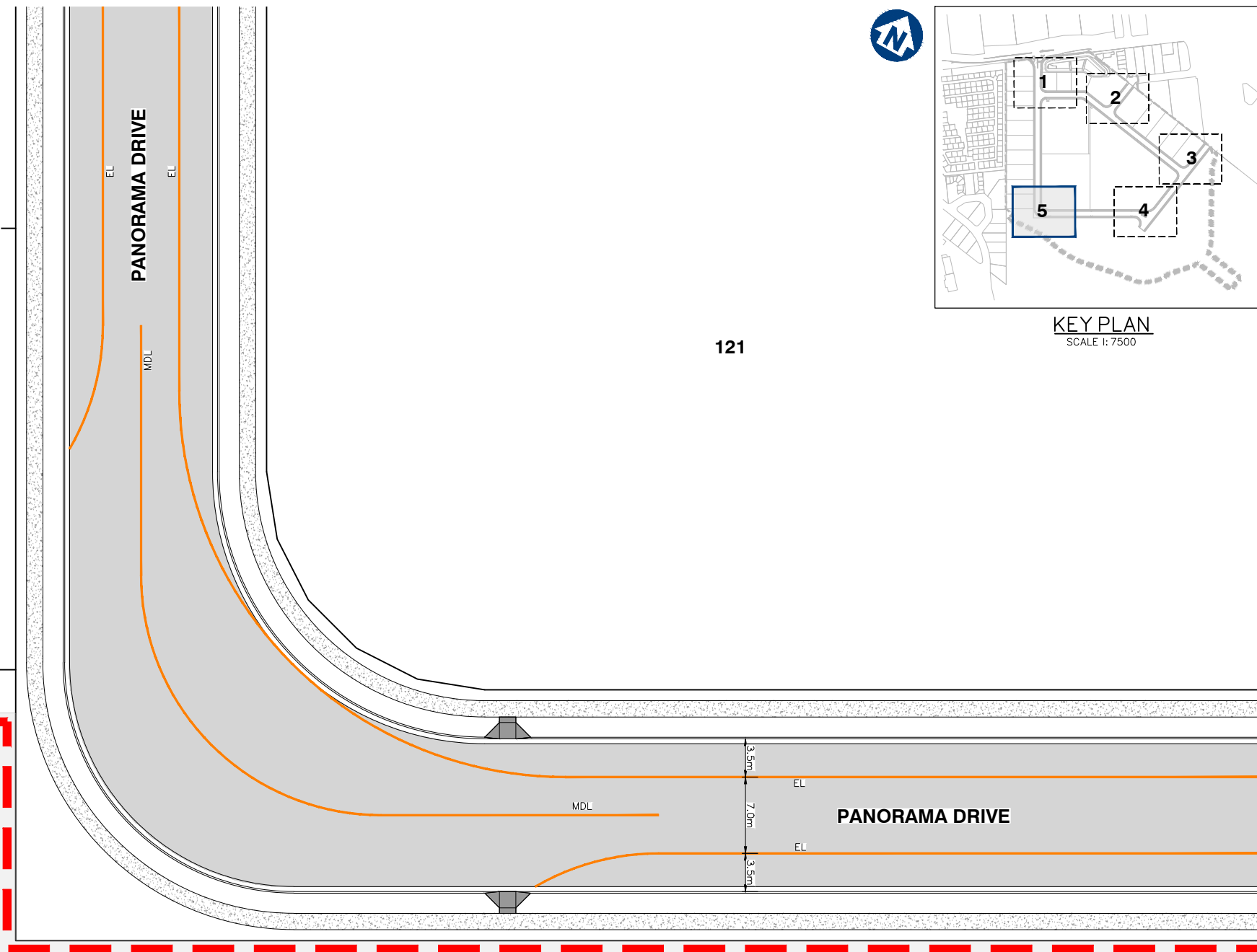
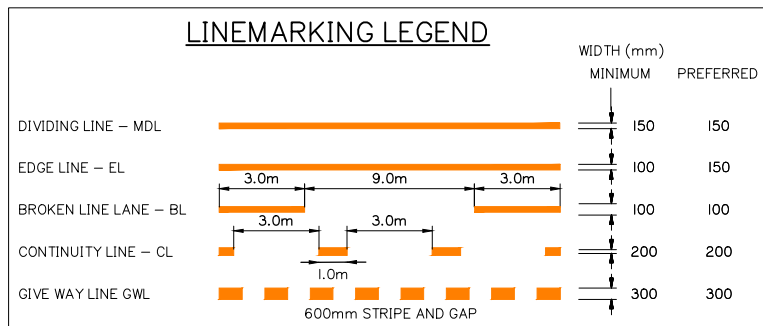
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5941 ENG OPW1 801	A

- ## LINEMARKING LEGEND
- | | | WIDTH (mm) | |
|-----------------------|---|---|-----------|
| | | MINIMUM | PREFERRED |
| DIVIDING LINE – MDL |  |  | 150 |
| EDGE LINE – EL |  |  | 150 |
| BROKEN LINE LANE – BL |  |  | 100 |
| CONTINUITY LINE – CL |  |  | 200 |
| GIVE WAY LINE GWL |  |  | 300 |
- 600mm STRIPE AND GAP



Drawing No:	Rev. No:
5941 ENG OPW1 802	A

1. ALL LINE-MARKING, SIGNAGE AND REFLECTORISED PAVEMENT MARKERS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT DEPARTMENT OF MAIN ROADS "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
2. EXTENT OF LINE-MARKING IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO INSTALLATION.
3. EXACT LOCATION OF ALL SIGNS IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO INSTALLATION.
4. ALL SIGN POSTS & SIGN RAILS TO BE GALVANISED UNLESS NOTED OTHERWISE.
5. ALL TRAFFIC SIGNS TO BE SIZE "B" UNLESS NOTED OTHERWISE.
6. FOR GUIDE POST INSTALLATION AND DETAILS, REFER DEPARTMENT OF MAIN ROADS STANDARD DRAWING No.1356
7. FOR TRAFFIC SIGN SUPPORT DETAILS, REFER DEPARTMENT OF MAIN ROADS STANDARD DRAWING No.'s 1360 AND 1362
8. ALL ROUTE NAMES ON NEW GUIDE SIGNS TO BE BLACK LETTERING ON WHITE BACKGROUND U.N.O.
9. ALL SIGN MATERIAL TO BE CLASS I.
10. ALL LINEMARKING TO BE REFLECTORISED WHITE.



KEY PLAN
SCALE 1: 7500

121

FUTURE STAGE



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planning | environment | landscape | engineering | survey

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Gold Coast & Logan | 176 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

ISSUED FOR APPROVAL
NOT FOR CONSTRUCTION

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

LINEMARKING AND SIGNAGE
PLAN SHEET 5 OF 5

A	01-05-2020	ORIGINAL ISSUE	BA	M3	
Issue	Date	Description	DBN	CHK	

SCALE IN METRES



1:250 (FULL SIZE A1)
1:500 (HALF SIZE A3)

Scale at A1:	1:250
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Designed:	IG
Drafted:	BA
Approved:	MG
RPEQ:	16939
Signed:	
Date:	01-05-2020

Drawing No:	Rev. No:
5941 ENG OPW1 804	A