

# CIVIL OPERATIONAL WORKS

## VANTAGE YATALA - STAGE 1



planning | environment | landscape | engineering | survey

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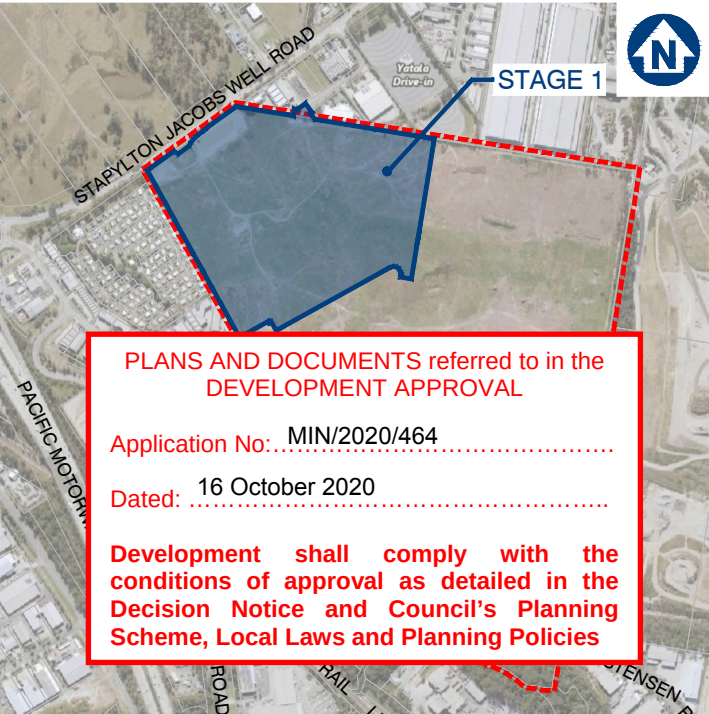
Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

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| STANDARD DRAWINGS |     |             |                                                                                                   |
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| DS-015            | C   | IPWEA       | ACCESS CHAMBER – MANHOLE FRAME – ROADWAY AND NON ROADWAY – 1050 TO 2100 DIA                       |
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| DS-062            | D   | IPWEA       | DRAINAGE PITS – KERB INLET – GRATE AND FRAME                                                      |
| DS-063            | C   | IPWEA       | DRAINAGE PITS – KERB INLET – LIP IN LINE – GENERAL ARRANGEMENT                                    |
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| RS-080            | F   | IPWEA       | KERB AND CHANNEL – PROFILES AND DIMENSIONS – INCLUDING EDGE RESTRAINTS, MEDIAN & CHANNEL          |
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| 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                                                         |
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| SD1033            | K   | DTMR        | KERB AND CHANNEL                                                                                  |
| SD1304            | N   | DTMR        | PIPE CULVERTS – WINGWALLS, HEADWALLS AND APRON FOR PIPE DIA 750 TO 2400                           |
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| 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                                                    |
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| 03-102            | I   | CoGC        | STORMWATER ACCESS CHAMBER 1050 DIA TO 1500 DIA ROOF SLABS                                         |
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| 05-014            | I   | CoGC        | CHAIN WIRE FENCING – 1.8m HIGH                                                                    |



**PLANS AND DOCUMENTS** referred to in the **DEVELOPMENT APPROVAL**

Application No:.....MIN/2020/464

Dated: .....16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

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 E

SEPTEMBER 2020



1. CONTRACT DOCUMENTATION  
ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION AND C&G STANDARD DRAWINGS AND SPECIFICATIONS.
2. DATUM  
LEVELS SHOWN ON THE PLANS ARE A.H.D.

3. **SURVEY SETOUT**  
THE SURVEY SET OUT INFORMATION TO ALLOW THE CONTRACTOR TO ACCURATELY SET OUT THE WORKS HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR. THE CONTRACTOR IS NOT TO SCALE FROM THESE PLANS AS A MEANS OF OBTAINING SETOUT INFORMATION.
4. **EXISTING SURVEY CONTROL STATIONS**  
IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT EXISTING SURVEY CONTROL STATIONS ARE NOT DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES. SHOULD THE CONTRACTOR IDENTIFY ANY CONFLICT BETWEEN EXISTING SURVEY CONTROL AND THE REQUIRED CONSTRUCTION ACTIVITIES THE SUPERINTENDENT IS TO BE NOTIFIED IMMEDIATELY.
5. **EXISTING SERVICES**  
THE LOCATION OF EXISTING SERVICES WHEN SHOWN ON THE PLANS ARE INDICATIVE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT SERVICE AUTHORITIES TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORKS AND TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE EXISTING SERVICES.
6. **SITE ACCESS**  
THE CONTRACTOR SHALL ONLY GAIN ACCESS TO THE SITE VIA ACCESS LOCATIONS APPROVED BY THE SUPERINTENDENT. FREEDOM OF ACCESS TO OTHER WORK AREAS ON THE SITE SHALL BE MAINTAINED AT ALL TIMES.
7. **PROVISION FOR TRAFFIC**  
PROVISION FOR TRAFFIC ON LOCAL ROADS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND CoGC COUNCIL REQUIREMENTS.
8. **WORK EXTENT**  
THE CONTRACTOR IS TO RESTRICT ACTIVITIES TO THOSE AREAS DESIGNATED AS WORKS AREAS UNDER THE CONTRACT. AT NO TIME IS THE CONTRACTOR TO ENTER ADJOINING PROPERTIES OR CONTRACT AREAS WITHOUT THE WRITTEN AUTHORISATION OF THE SUPERINTENDENT.
9. **TESTING**  
ALL TESTING IS TO BE CARRIED OUT BY AN APPROVED N.A.T.A TESTING AUTHORITY IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND REQUIREMENTS OF CoGC COUNCIL.
10. **"AS CONSTRUCTED" SURVEY**  
"AS CONSTRUCTED" SURVEY SHALL BE CARRIED OUT BY THE PRINCIPAL'S SURVEYOR AS WORK PROCEEDS. THE CONTRACTOR IS TO PROVIDE ADEQUATE NOTICE TO THE PRINCIPAL'S SURVEYOR ON WHEN THIS IS REQUIRED TO ENSURE COMPLIANCE WITH THE REQUIREMENTS OF CoGC COUNCIL.
11. **MAINTENANCE OF SITE CONDITION**  
AT THE COMPLETION OF WORKS THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT AND CoGC.

1. **PRECEDENCE**  
EARTHWORKS SPECIFICATION PREPARED BY PROJECT GEOTECHNICAL ENGINEER TO TAKE PRECEDENCE OVER STANDARD COUNCIL EARTHWORKS NOTES.
2. **TOPSOIL STRIPPING**  
TOPSOIL SHALL BE STRIPPED PREPARED THE ENTIRE LIMIT OF THE EARTHWORKS CUT AND FILL AREAS AND SHALL BE STOCKPILED IN A LOCATION APPROVED BY THE SUPERINTENDENT. THE EXISTING STRATA IS TO BE TREATED IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO PLACING ANY FILL.
3. **EARTHWORKS LEVELS**  
EARTHWORKS LEVELS SHOWN ON THE DRAWING ARE TO FINISHED SURFACE LEVELS AND INCLUDE 100mm OF TOPSOIL. THE CONTRACTOR SHALL VERIFY BENCH MARK LEVELS AND ADVISE THE SUPERINTENDENT OF ANY DISCREPANCY BEFORE COMMENCEMENT OF CONSTRUCTION.
4. **UNDESIRABLE MATERIAL**  
THE ENTIRE SITE/WORK AREAS SHALL BE CLEARED OF ALL UNDESIRABLE MATTER. THIS SHALL INCLUDE DEAD TIMBER, GRASS, OLD FOUNDATIONS, CONCRETE, MASONRY REMAINS, GARBAGE, DEBRIS AND ALL OTHER OBSTRUCTIONS TO THE WORKS UNLESS NOTED OTHERWISE. HOLES LEFT BY THE REMOVAL OF ANY OF THE ABOVE SHALL BE FILLED WITH APPROVED COMPACTED MATERIAL WITH PROPERTIES AT LEAST SIMILAR TO INSITU SOILS.
5. **COMPACTION STANDARD**  
FILL MATERIAL SHALL BE COMPACTED TO THE FOLLOWING STANDARD, WHERE DRY DENSITY RATIO IS DETERMINED IN ACCORDANCE WITH AS 1289 USING STANDARD COMPACTION METHODS.
  - a. 100% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 80% IN COHESIONLESS MATERIAL FOR ROAD SUBGRADE.
  - b. 98% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 65% IN COHESIONLESS MATERIAL FOR ALL AREAS OTHER THAN THE ROADWAY AND BUILDING PADS.
  - c. 98% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 70% IN COHESIONLESS MATERIAL FOR BUILDING PADS.
5. **PAVEMENT DEPTHS**  
EARTHWORKS VOLUMES DO NOT INCLUDE DESIGN PAVEMENT DEPTHS AS INDICATED ON THE TYPICAL BULK EARTHWORKS ROAD SECTION.
6. **TESTING**  
ALL EARTHWORKS TO BE CARRIED OUT UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3798 UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT. ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A TESTING AUTHORITY.
7. **ROCK**  
THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR EARTHWORKS RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT DOCUMENT.

- DAMS AND PONDS**  
WHERE POSSIBLE, WATER FROM DAMS AND PONDS SHALL BE MAINTAINED AND UTILISED FOR CONSTRUCTION PURPOSES AND DUST SUPPRESSION. DAMS AND PONDS NOT TO BE RETAINED SHALL BE DEWATERED, CLEARED OF ANY FOREIGN MATTER AND ORGANIC MATERIAL BEING THIS MATERIAL TO BE REMOVED OFF SITE.
9. **RETAINING STRUCTURES**  
THE DESIGN AND STRUCTURAL CERTIFICATION OF RETAINING STRUCTURES SHALL BE UNDERTAKEN BY THE CONTRACTOR'S STRUCTURAL ENGINEER (RPEC) IN CONSULTATION WITH THE PROJECT'S CIVIL ENGINEER AND LANDSCAPE CONSULTANT. THE CONTRACTOR IS RESPONSIBLE FOR THE SUBMISSION AND APPROVAL COORDINATION OF THE ASSOCIATED DRAWINGS AND CERTIFICATION TO GOGC. A COPY OF THIS SUBMISSION IS TO BE PROVIDED TO THE SUPERINTENDENT.
10. **TOPSOIL REPLACEMENT**  
ALL BATTERS AND ALLOTMENT CUT & FILL AREAS SHALL BE TOP SOILED FROM ONSITE STOCKPILES. IF DIRECTED BY THE SUPERINTENDENT THE TOPSOIL SHALL BE SCREENED PRIOR TO PLACING. THE CONTRACTOR SHALL ALLOW IN THEIR RATE FOR SCREENING AND THE DISPOSAL OF REJECT MATERIAL TO TIP OFFSITE INCLUDING ALL FEES. THE CONTRACTOR MUST ENSURE THAT THE STRIPPING SHALL BE UNDERTAKEN IN SUCH A MANNER AS TO AVOID CONTAMINATION BY OVER CUTTING. IF TOPSOIL IS CONTAMINATED BY OVER CUTTING AND DETERMINED NOT SUITABLE FOR REUSE BY THE SUPERINTENDENT, THE CONTRACTOR SHALL BEAR THE COST OF REMOVAL FROM SITE OF ALL CONTAMINATED TOPSOIL AND THE COST TO SUPPLY AND IMPORT SUITABLE TOPSOIL FOR RE-SPREADING.
11. **GRASSING / SEEDING**  
ALL CUT & FILL AREAS AND DISTURBED AREAS SHALL BE GRASSED OR SEEDED TO THE SATISFACTION OF THE SUPERINTENDENT.
12. **STOCKPILES**  
ALL MATERIAL/SPOIL ARISING FROM WORKS ON SITE SHALL BE COMPACTED TO AN APPROPRIATE STANDARD WITHIN THE FILL AREAS OF FUTURE STAGES AS NOMINATED BY THE SUPERINTENDENT. THE CONTRACTOR IS NOT TO CREATE STOCKPILES OF SURPLUS MATERIALS UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM THE SUPERINTENDENT.

- a. THE OBJECTIVES OF THE EROSION AND SEDIMENT CONTROL PROGRAM ARE:
  - a. ALLOW STORMWATER TO PASS THROUGH THE SITE IN A CONTROLLED MANNER AT NON-EROSIVE FLOW VELOCITIES.
  - b. MINIMISE SOIL EROSION FROM WATER AND WIND
  - c. MINIMISE ADVERSE EFFECTS OF SEDIMENT RUNOFF.
  - d. MINIMISE OR PREVENT ENVIRONMENTAL HARM ASSOCIATED WITH DISCHARGE FROM THE CONSTRUCTED SITE.
  - e. ENSURE THAT THE VALUE AND USE OF RESIDENTIAL AND INDUSTRIAL PROPERTIES ADJACENT TO THE DEVELOPMENT ARE NOT DIMINISHED AS A RESULT OF THE MIGRATION OF SEDIMENT FROM THE DEVELOPMENT.
2. THE EROSION AND SEDIMENT CONTROL PROGRAM SHALL COMPLY WITH THE ENVIRONMENTAL BEST ENGINEERING GUIDELINES FOR QUEENSLAND CONSTRUCTION SITES. THE CURRENT INSTITUTION OF ENGINEERS AUSTRALIA AND LOCAL AUTHORITY GUIDELINES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTIONS INCLUDING THE MAINTENANCE PERIOD. NOTWITHSTANDING THE FINISHED EARTHWORK DESIGN SHOWN ON THE DRAWINGS THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AND DEVICES USING BEST PRACTICES AS NECESSARY TO MINIMISE THE QUANTITY LEAVING THE SITE DURING CONSTRUCTION AND UPON COMPLETION OF EARTHWORKS.
3. THE CONTRACTOR IS TO FOLLOW CONSTRUCTION PHASE AS OUTLINED IN THE CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM. ALL SEDIMENT CONTROL DEVICES SHALL BE MONITORED, CLEANED AND/OR REPLACED WHENEVER THE ACCUMULATED SEDIMENT REDUCES THE CAPACITY BY 50%. ALL PERIMETER BANK/SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION AND GULLY INLETS. INLETS TO HAVE SILT PROTECTION IN ACCORDANCE WITH KERB INLET PROTECTION DETAIL AT LOCATIONS SHOWN OR AS INDICATED BY THE ENGINEER.
4. PRIOR TO THE COMMENCEMENT OF EARTHWORKS, THE CONTRACTOR IS TO CARRY OUT SOIL TESTING (IF REQUIRED BY SUPERINTENDENT) TO DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL AND RESULTS TO BE GIVEN TO THE ENGINEERS SO THE FINALIZATION OF THE EROSION AND SEDIMENT CONTROL PLAN CAN BE COMPLETE.
5. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS AGREED WITH THE SUPERINTENDENT. CLEARING OF SITE AND STOCKPILE AREAS TO BE AS DIRECTED BY THE SUPERVISING ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AT ALL TIMES INCLUDING WEEKENDS AND PUBLIC HOLIDAYS.
6. SUITABLE ACCESS SHALL BE PROVIDED TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES (IT IS TO BE NOTED THAT CLEARING SHALL ONLY OCCUR IN AREAS WHERE THERE IS NO OTHER ALTERNATIVE TO GAIN ACCESS TO THE LOCATION OF THE SEDIMENT CONTROL DEVICES). APPROVAL FOR REMOVAL OF PROTECTED SIZE VEGETATION MUST BE OBTAINED PRIOR TO CLEARING.
7. ROCK BUNDS TO BE PLACED AROUND ALL HEADWALLS DURING CONSTRUCTION.
8. 0.8m TURF IS TO BE PLACED BEHIND ON ALL BATTERS WITHIN PRIVATE OPEN SPACE STEEPER THAN 1:4 UNLESS OTHERWISE NOTED. THE EXTENT OF GRASSING SHALL BE DETERMINED BY THE ENGINEER AND SHALL BE SEED, AS SPECIFIED, WITHIN 7 DAYS OF FINAL TRIMMING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT GRASS STRIKE RATES ARE ACHIEVED AT ON AND OFF MAINTENANCE INSPECTION IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
9. TURF IS TO BE PLACED FROM BACK OF KERB TO ROAD RESERVE BOUNDARY ON ALL ROADS AFTER EARTHWORKS ARE COMPLETE.
10. GEO-FABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS.
11. FILLING AND OR MAINTENANCE OF EXISTING AND OR SEDIMENT BASINS MAY REQUIRE FLOCCULATION.
12. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH THE APPROVED OPEN SPACE MANAGEMENT PLAN (OSMP).
13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN OUT GPT'S, SEDIMENT FOREBAYS AND ALL OTHER SEDIMENT CONTROL DEVICES DURING CONSTRUCTION AND PRIOR BOTH ON AND OFF MAINTENANCE INSPECTIONS WITH CoGo. THE CONTRACTOR SHALL ALLOW FOR THE COST OF THESE WORKS WITHIN THEIR SUBMITTED TENDER PRICE.

- a. ERECT SITE SIGNAGE, CONSTRUCT ENTRY AND EXIT POINT AS INDICATED CONSTRUCT VEHICLE WASH-DOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.
- b. CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA
- c. ERECT SILT FENCE AT LOW POINTS OF THE SITE AS DEMONSTRATED
- d. ERECT TEMPORARY TREE PROTECTION FENCING FOR VEGETATION TO BE RETAINED IN ACCORDANCE WITH AN OPW (TREE CLEARING) APPROVAL OR IN ACCORDANCE WITH AS4970 PROTECTION OF TREES ON DEVELOPMENT SITE.
- e. CONSTRUCT ROCK CHECK DAMS AND SILT FENCE DOWN STREAM OF BASIN.
- f. CONSTRUCT BASIN TO FULL DEPTH.
- g. CONSTRUCT BALANCE OF BASIN IN CONJUNCTION WITH CLEARING AND BULK EARTHWORKS OPERATIONS.
- h. BASIN TO BE UTILISED AS A TEMPORARY SEDIMENT BASIN. DO NOT FILL IN FILTRATION MATERIAL UNTIL CONSTRUCTION OF DEVELOPMENT IS COMPLETE.
2. CLEARING AND BULK EARTHWORKS

THERE SHALL BE NO CLEARING OF PROTECTED SITE VEGETATION WITHOUT AN APPROVED TREE CLEARING PLAN WHICH SHALL BE IN ACCORDANCE WITH AS4970.

SILT FENCE, SAND BAGS AND EARTH RILLS WITHIN ROADS TO BE ERECTED AS INDICATED OR REQUIRED DURING CLEARING & EARTHWORKS.

SUPERINTENDENT TO CONFIRM THE EXTENT OF CLEARING PRIOR TO COMMENCEMENT OF WORKS.
3. CONSTRUCTION OF SEWER/ROOFWATER / STORMWATER / SERVICES

EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS.

TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION.

DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.
4. CONSTRUCTION – SEDIMENT BASINS

SEDIMENT BASIN TO BE CONSTRUCTED TO THE EARTHWORK PROFILES SHOWN.

STORMWATER OUTLET PIPES TO BE TEMPORARY BLOCKED OFF UNTIL DECOMMISSIONING OF SEDIMENT BASIN (SUBSEQUENT TO CONSTRUCTION OF ALL STAGES).

PLACE SPOIL FROM SEDIMENT BASIN INTO ALLOCATED AREAS AS ENGINEERED FILL IN ACCORDANCE WITH THE STAGING ORDER.

SEDIMENT BASIN SHALL ONLY BE REMOVED AFTER APPROVAL BY SUPERINTENDENT AND COUNCIL.
5. CONSTRUCTION – STOCKPILING

TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING.

STOCKPILE SITE TO BE CLEARED OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE NUISANCE TO ADJOINING PROPERTIES.

NO STOCKPILES ARE TO BE LOCATED WITHIN THE DRIP ZONE OR STRUCTURAL ROOT ZONE OF ANY RETAINED VEGETATION.
6. CONSTRUCTION – ROADWORKS

SILT FENCES TO ALLOTMENTS TO BE ERECTED.

KERB INLET PROTECTION TO BE PROVIDED TO ALL GULLIES.
7. CONSTRUCTION – ALLOTMENTS

TOPSOIL AND SEED ALLOTMENTS.

SILT FENCES TO ALLOTMENTS TO BE RE-ERECTED.

COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATE THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT RIMMING).
8. POST CONSTRUCTION – ALLOTMENTS

TOPSOIL AND GRASS SEED ALL ALLOTMENTS.

COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATES THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT TRIMMING).
9. POST CONSTRUCTION – BASIN

BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL COMPLETION OF ALL STAGES.
10. POST CONSTRUCTION – ROAD RESERVES

TOPSOIL AND TURFING IS TO BE PROVIDED BEHIND KERB.
11. MAINTENANCE (PRE TO POST CONSTRUCTION)

THE SILT FENCES ARE TO BE INSPECTED WEEKLY.

ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY.

SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE OF THE FAILURE.
12. BASIN CONSTRUCTION

PRIOR TO COMMENCING CONSTRUCTION OF THE DETENTION BASIN THE DIVERSION OF SURFACE WATER FROM THE PROPOSED WORK AREAS, USING MEASURES SUCH AS OPEN DRAINS/SUMPS, ARE REQUIRED TO AID IN SITE DE-WATERING.

BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL 85% OF CATCHMENT CONSTRUCTION IS COMPLETE.

THE CLAY FILLING FOR THE BASIN WALLS SHALL BE PLACED IN HORIZONTAL LAYERS OF 200mm THICKNESS AND COMPACTED TO DENSITY RATIO WITHIN THE RANGE 98%-102% STANDARD COMPACTION (AS 1289.5.1.1). PLACEMENT MOISTURE CONTENT SHOULD BE WITHIN THE RANGE OMC -1% TO OMC -2% (WHERE OMC = OPTIMUM MOISTURE CONTENT FOR STANDARD COMPACTION). CONTRACTOR TO PROVIDE SAFETY FENCING TO BASIN DURING CONSTRUCTION AND APPROPRIATE SIGNAGE (PERMANENT OR TEMPORARY).

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FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

VANTAGE YATALA  
STAGE 1

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

RPD:

Lot: 501  
Plan: SP295994  
Local Authority: CITY OF GOLD COAST  
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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

GENERAL NOTES  
SHEET 1 OF 3

|       |            |  |                         |     |     |
|-------|------------|--|-------------------------|-----|-----|
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| B     | 02-09-2020 |  | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| A     | 01-05-2020 |  | ORIGINAL ISSUE          | BA  | MG  |
| Issue | Date       |  | Description             | DRN | CHN |

NOT APPLICABLE

|              |                                                                                       |
|--------------|---------------------------------------------------------------------------------------|
| Scale at A1: | NTS                                                                                   |
| Designed:    | IG                                                                                    |
| Drafted:     | BA                                                                                    |
| Approved:    | MG                                                                                    |
| RPEQ:        | 16939                                                                                 |
| Signed:      |  |
| Date:        | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 002 | B        |









## FEATURE LEGEND

|  |                                   |
|--|-----------------------------------|
|  | 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                      |
|  | BRIFEX 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                   |

## SERVICES LEGEND

|  |                                    |
|--|------------------------------------|
|  | PROPOSED RISING MAIN               |
|  | PROPOSED SEWER                     |
|  | PROPOSED STORMWATER                |
|  | PROPOSED EXTERNAL STORMWATER       |
|  | PROPOSED ROOFWATER                 |
|  | PROPOSED ROOFWATER                 |
|  | PROPOSED SUBSOIL                   |
|  | PROPOSED WATER                     |
|  | PROPOSED RECYCLED WATER            |
|  | PROPOSED OIL                       |
|  | PROPOSED FUEL                      |
|  | PROPOSED GAS                       |
|  | PROPOSED PIPELINE                  |
|  | PROPOSED HIGH VOLTAGE ELECTRICITY  |
|  | PROPOSED UNDERGROUND ELECTRICITY   |
|  | PROPOSED OVERHEAD ELECTRICITY      |
|  | PROPOSED LIGHTING                  |
|  | PROPOSED TELSTRA                   |
|  | PROPOSED COMMUNICATIONS            |
|  | PROPOSED GAS, ELECT                |
|  | PROPOSED GAS, TELSTRA              |
|  | PROPOSED ELECT, TELSTRA            |
|  | PROPOSED GAS, ELECTRICITY, TELSTRA |
|  | EXISTING RISING MAIN               |
|  | EXISTING SEWER                     |
|  | EXISTING STORMWATER                |
|  | EXISTING ROOFWATER                 |
|  | EXISTING SUBSOIL                   |
|  | EXISTING WATER                     |
|  | EXISTING RECYCLED WATER            |
|  | EXISTING OIL                       |
|  | EXISTING FUEL                      |
|  | EXISTING GAS                       |
|  | EXISTING PIPELINE                  |
|  | EXISTING HIGH VOLTAGE ELECTRICITY  |
|  | EXISTING UNDERGROUND ELECTRICITY   |
|  | EXISTING OVERHEAD ELECTRICITY      |
|  | EXISTING LIGHTING                  |
|  | EXISTING TELSTRA                   |
|  | EXISTING COMMUNICATIONS            |
|  | EXISTING GAS, ELECT                |
|  | EXISTING GAS, TELSTRA              |
|  | EXISTING ELECT, TELSTRA            |
|  | EXISTING GAS, ELECTRICITY, TELSTRA |
|  | DEMOLISH RISING MAIN               |
|  | DEMOLISH SEWER                     |
|  | DEMOLISH STORMWATER                |
|  | DEMOLISH SUBSOIL                   |
|  | DEMOLISH WATER                     |
|  | DEMOLISH OIL                       |
|  | DEMOLISH FUEL                      |
|  | DEMOLISH HIGH VOLTAGE ELECTRICITY  |
|  | DEMOLISH UNDERGROUND ELECTRICITY   |
|  | DEMOLISH OVERHEAD ELECTRICITY      |
|  | DEMOLISH LIGHTING                  |
|  | DEMOLISH GAS                       |
|  | DEMOLISH PIPELINE                  |
|  | DEMOLISH TELSTRA                   |
|  | DEMOLISH COMMUNICATIONS            |

## SYMBOLS

|         |                                              |
|---------|----------------------------------------------|
| 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 DIOL                                   |
|         | 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 - GRADE  |
|         | GULLY PIT (LIP INLINE) BARRIER KERB - SAG    |
|         | GULLY PIT (LIP INLINE) ROLL TOP KERB - GRADE |
|         | GULLY PIT (LIP INLINE) ROLL TOP KERB - SAG   |
|         | GULLY PIT (KERB INLINE) - GRADE              |
|         | GULLY PIT (KERB INLINE) - SAG                |
|         | INFILTRATION TRENCH                          |
|         | HEADWALL                                     |
|         | GROSS POLLUTANT TRAP                         |
|         | STORMWATER CHAMBER                           |

|  |                            |
|--|----------------------------|
|  | BUND                       |
|  | POWER POLE                 |
|  | POWER POLE WITH LIGHT      |
|  | LIGHT POLE                 |
|  | STAY POLE                  |
|  | LIGHT POLE WITH EXTENSION  |
|  | ELECTRICAL INSPECTION BOX  |
|  | ELECTRICAL POLE            |
|  | ELECTRICAL TURRET          |
|  | TRAFFIC SIGNAL             |
|  | MAIN ROADS PIT             |
|  | TANGENT POINT              |
|  | KERB RETURN NO.            |
|  | PRISM RAMP                 |
|  | GRAVEL ROCK CHECK DAM      |
|  | MESH & GRAVEL INLET FILTER |
|  | STORMWATER INLET FILTER    |
|  | DIRECTION OF OVERLAND FLOW |
|  | VEHICLE SHAKEDOWN          |
|  | GATE                       |
|  | NOT IN SCOPE OF WORKS      |
|  | DEMOLITION                 |
|  | PROPOSED CONCRETE FOOTPATH |
|  | SCOUR PROTECTION           |
|  | TREES                      |
|  | TADPOLE                    |

## PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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

## LEGEND

|       |            |                         |     |     |
|-------|------------|-------------------------|-----|-----|
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|       |            |                         |     |     |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MG  |
| Issue | Date       | Description             | DRN | CHK |

## SCALE IN METRES

NOT APPLICABLE

|              |            |
|--------------|------------|
| Scale at A1: | NTS        |
| Designed:    | IG         |
| Drafted:     | BA         |
| Approved:    | MG         |
| RPEQ:        | 16939      |
| Signed:      |            |
| Date:        | 02-09-2020 |

Drawing No: 5941 ENG OPW1 005 Rev. No: B

## LEGEND





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DRAWING TITLE

## KEY PLAN LAYOUT

|         |            |                              |     |     |
|---------|------------|------------------------------|-----|-----|
|         |            |                              |     |     |
|         |            |                              |     |     |
|         |            |                              |     |     |
|         |            |                              |     |     |
| C       | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B       | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A       | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Inquire | Date       | Description                  | TYP | CHN |
|         |            |                              |     |     |
|         |            |                              |     |     |

SCALE IN METRES



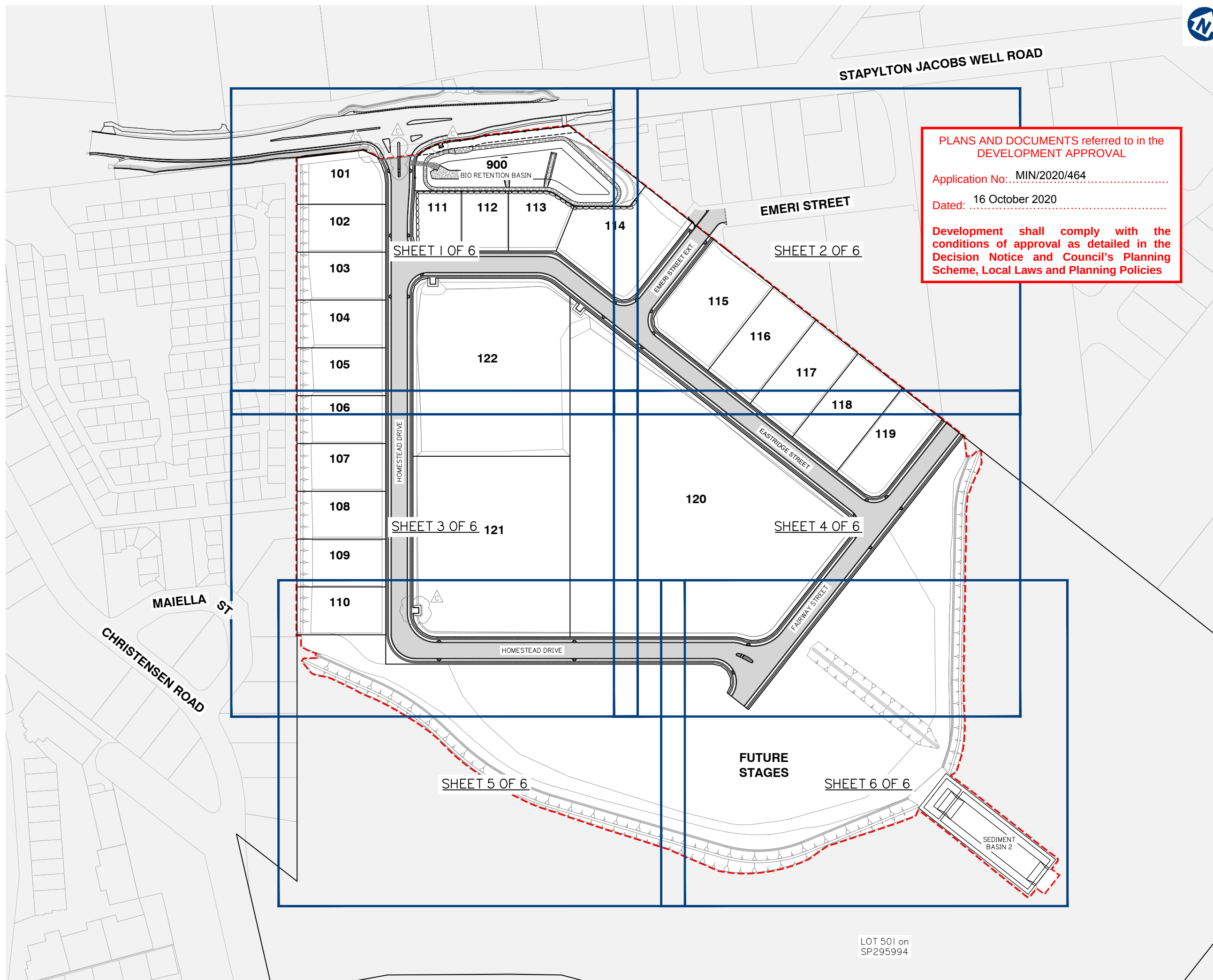
1:1500 (FULL SIZE A1)

1:3000 (HALF SIZE A3)

|              |        |
|--------------|--------|
| Scale at A1: | 1:1500 |
|--------------|--------|

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 006 | C        |



## KEY PLAN LAYOUT





## FUTURE STAGE

## PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

## SUBJECT SITE STAGE 1

501 on  
SP295994

EXISTING DRAIN

— EXISTING 750Ø  
RCP OUTLET  
HEADWALL

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD

## Project:

## VANTAGE YATALA STAGE 1

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

## EXISTING SURFACE AND FEATURE PLAN

|       |            |                         |     |    |
|-------|------------|-------------------------|-----|----|
|       |            |                         |     |    |
|       |            |                         |     |    |
|       |            |                         |     |    |
|       |            |                         |     |    |
|       |            |                         |     |    |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | M  |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | M  |
| Issue | Date       | Description             | DRN | CH |

## SCALE IN METRES



1:1500 (FULL SIZE A1)  
1:3000 (HALF SIZE A3)

Scale at A1: 1:1500

|           |    |
|-----------|----|
| Designed: | IG |
|-----------|----|

|          |    |
|----------|----|
| Drafted: | BA |
|----------|----|

|           |    |
|-----------|----|
| Approved: | MG |
|-----------|----|

|       |       |
|-------|-------|
| RPEQ: | 16939 |
|-------|-------|

Signed: 

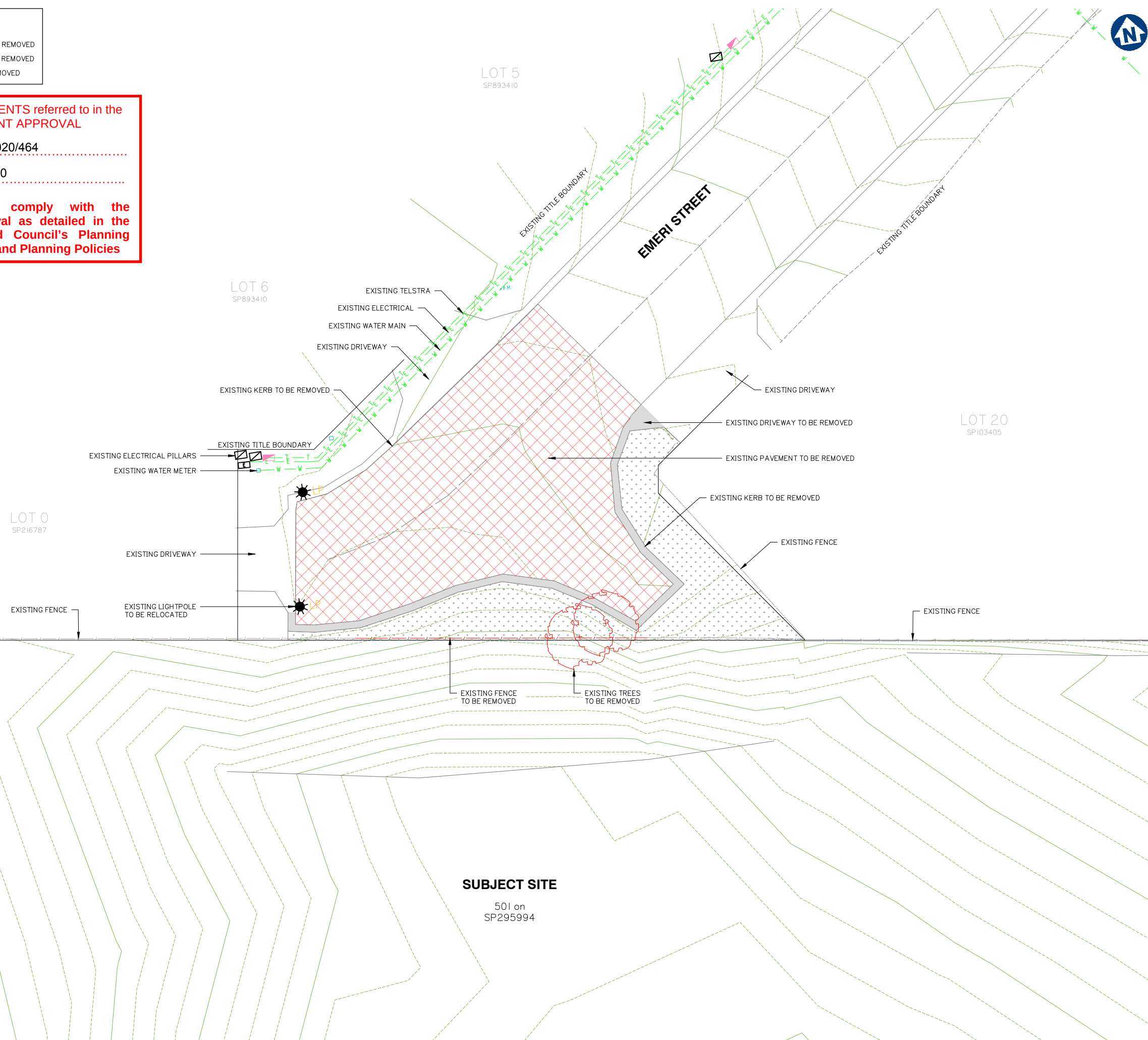
Date: 02-09-2020

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 010 | B        |



|                                                                                   |                                 |
|-----------------------------------------------------------------------------------|---------------------------------|
|  | EXISTING PAVEMENT TO BE REMOVED |
|  | EXISTING CONCRETE TO BE REMOVED |
|  | EXISTING VERGE TO BE REMOVED    |

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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VANTAGE YATALA  
STAGE 1

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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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|       |            |                         |  |     |     |
|-------|------------|-------------------------|--|-----|-----|
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|       |            |                         |  |     |     |
|       |            |                         |  |     |     |
|       |            |                         |  |     |     |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 |  | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE          |  | BA  | MG  |
| Issue | Date       | Description             |  | DRN | CHK |

0 3 6 9 12 15

1:150 (FULL SIZE A1)

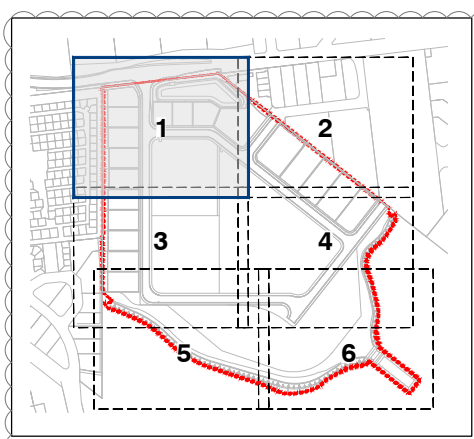
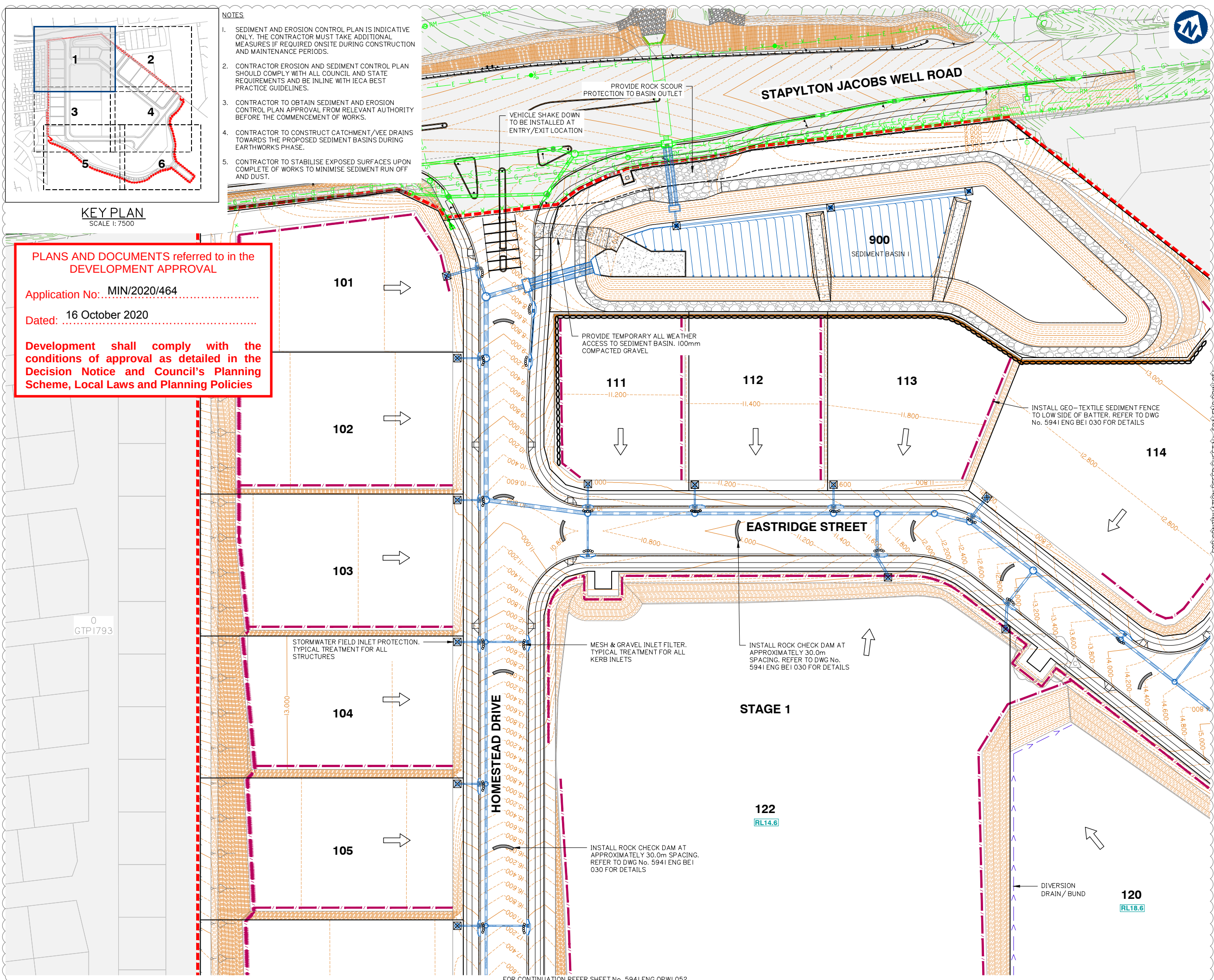
1:300 (HALF SIZE A3)

Scale at A1: 1:150

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 020 | B        |





- 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.

**PLANS AND DOCUMENTS** referred to in the **DEVELOPMENT APPROVAL**

Application No: MIN/2020/464

Dated: 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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est. 1985

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Client:



FRASERS  
PROPERTY

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Project:

VANTAGE YATALA  
STAGE 1

Site Address:

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

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BE PRINTED IN COLOUR

RPD:

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

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DRAWING TITLE

SEDIMENT AND  
EROSION CONTROL  
PLAN SHEET 1 OF 6

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

SCALE IN METRES



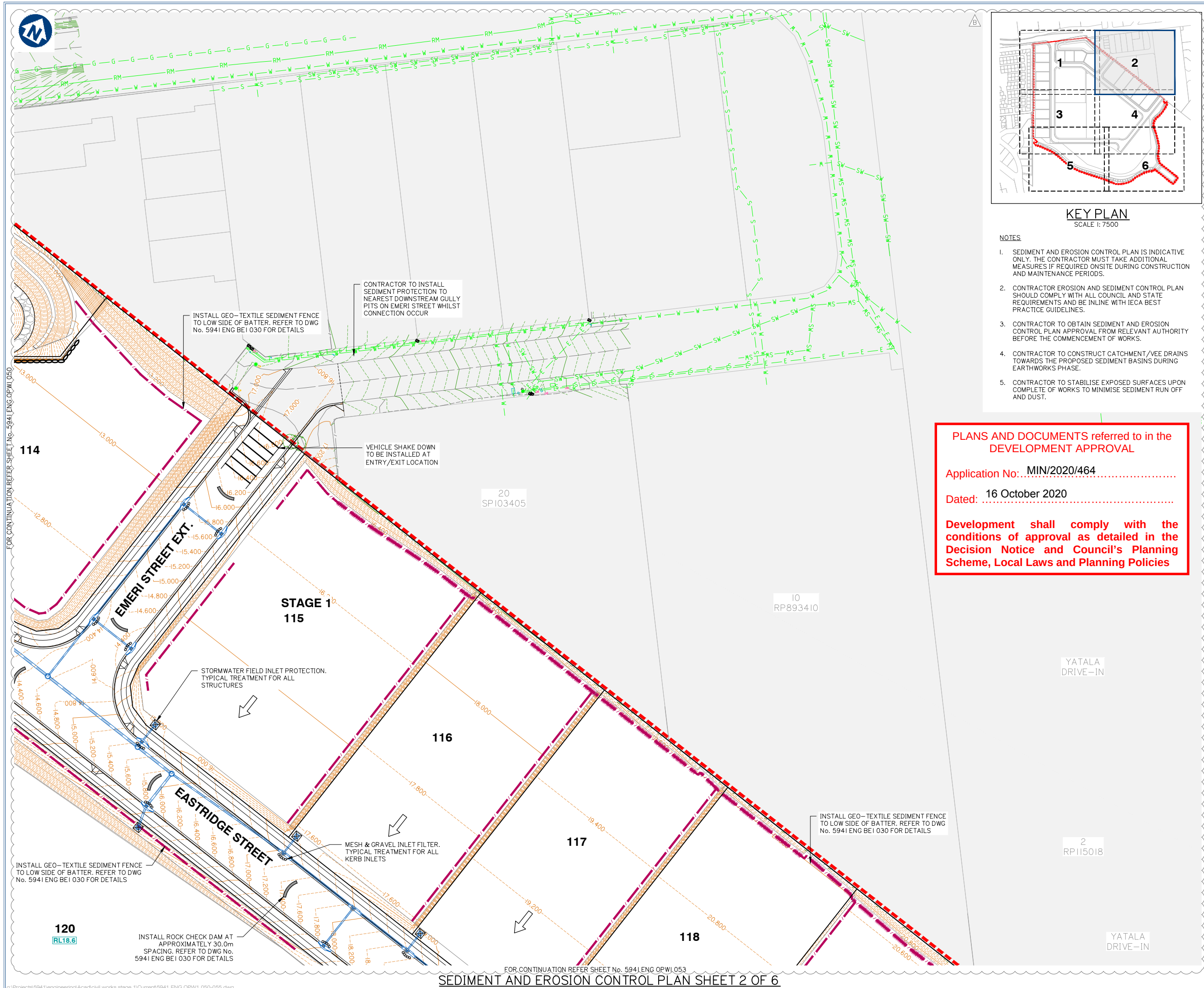
0 10 20 30 40 50

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

|              |                                                                                       |
|--------------|---------------------------------------------------------------------------------------|
| Scale at A1: | 1:500                                                                                 |
| Designed:    | IG                                                                                    |
| Drafted:     | BA                                                                                    |
| Approved:    | MG                                                                                    |
| RPEQ:        | 16939                                                                                 |
| Signed:      |  |
| Date:        | 02-09-2020                                                                            |

|             |                   |          |   |
|-------------|-------------------|----------|---|
| Drawing No: | 5941 ENG OPW1 050 | Rev. No: | C |
|-------------|-------------------|----------|---|





# 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.

## PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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## Project:

## VANTAGE YATALA STAGE 1

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: -  
RL: -

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## DRAWING TITLE

SEDIMENT AND  
EROSION CONTROL  
PLAN SHEET 2 OF 6

|       |            |                         |     |    |
|-------|------------|-------------------------|-----|----|
|       |            |                         |     |    |
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|       |            |                         |     |    |
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|       |            |                         |     |    |
|       |            |                         |     |    |
|       |            |                         |     |    |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MO |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MO |
| Issue | Date       | Description             | DRN | CH |

SCALE IN METRES



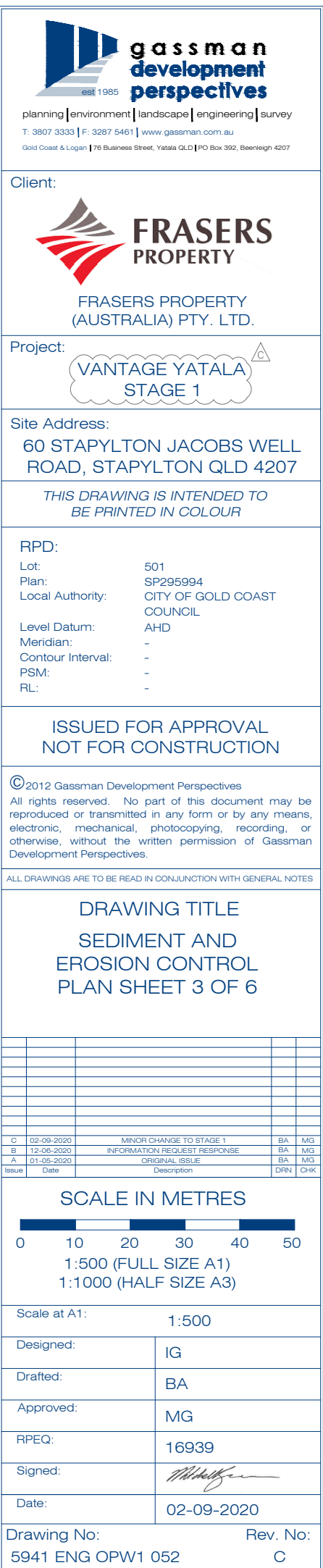
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1:1000 (HALF SIZE A3)

Scale at A1: 1:500

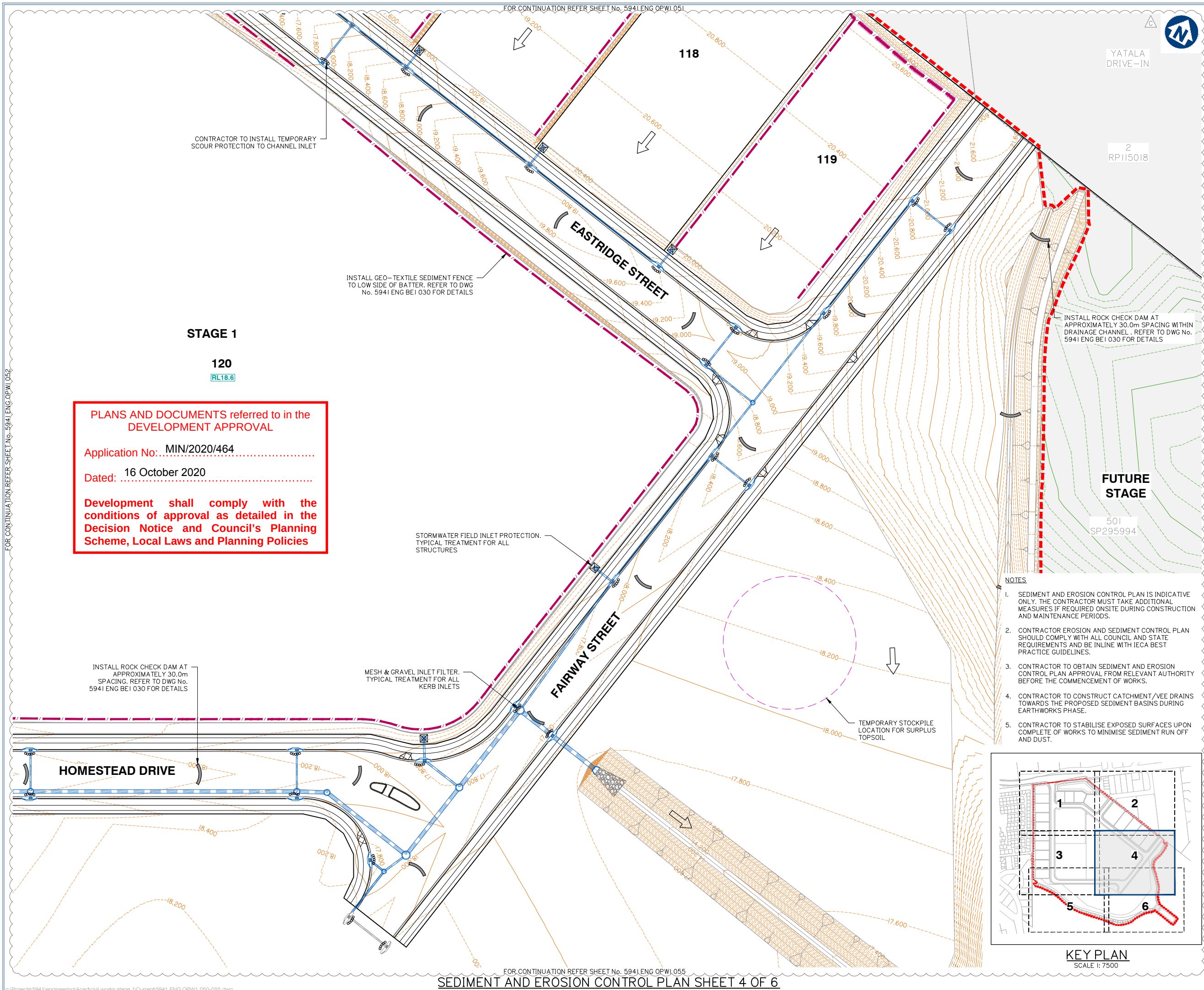
|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

Drawing No:  
5941 ENG OPW1 051

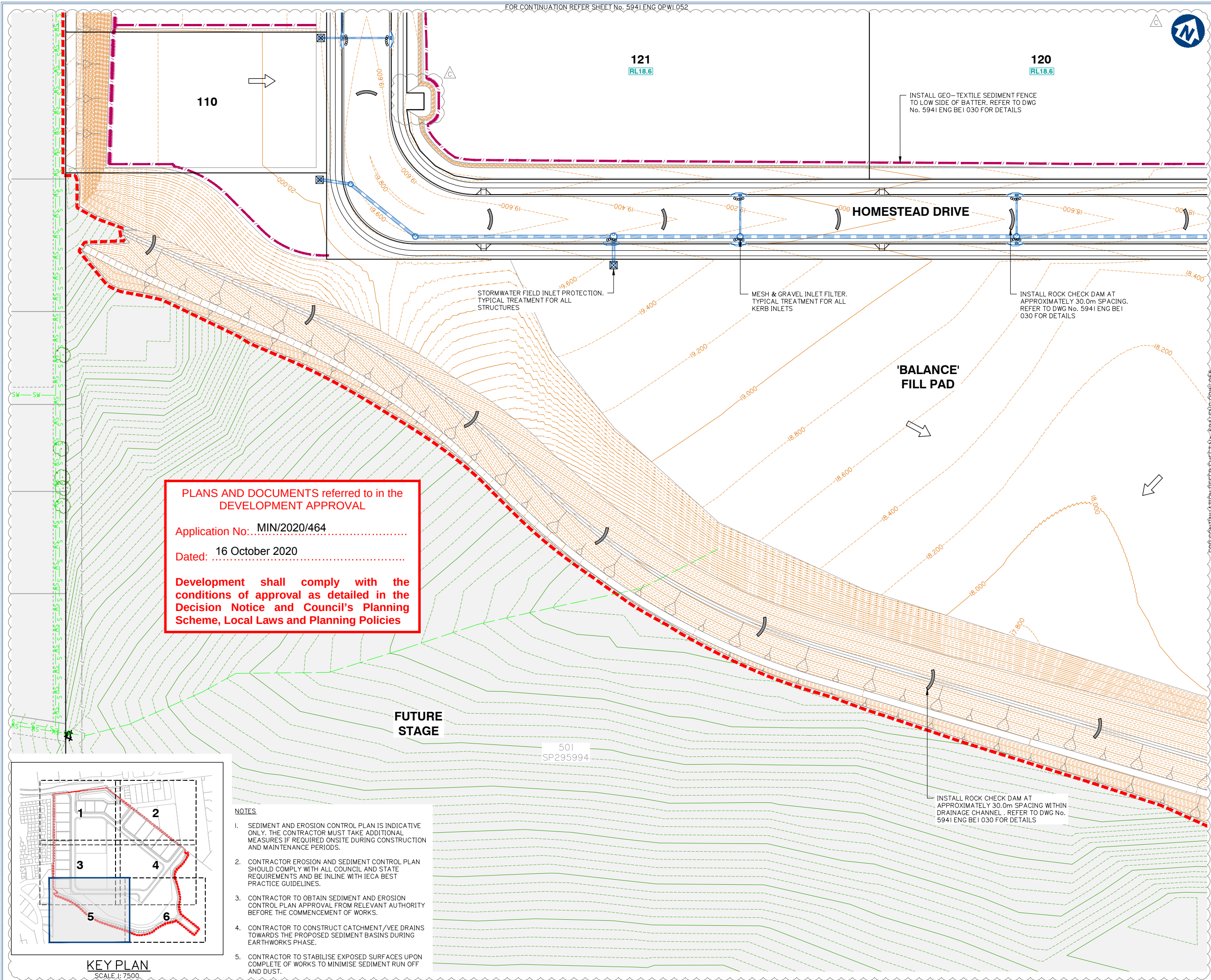
Rev. No:  
B











Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
SEDIMENT AND  
EROSION CONTROL  
PLAN SHEET 5 OF 6

| Issue | Date       | Description                  | BA | MG |
|-------|------------|------------------------------|----|----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA | MG |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA | MG |

SCALE IN METRES

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

Scale at A1: 1:500

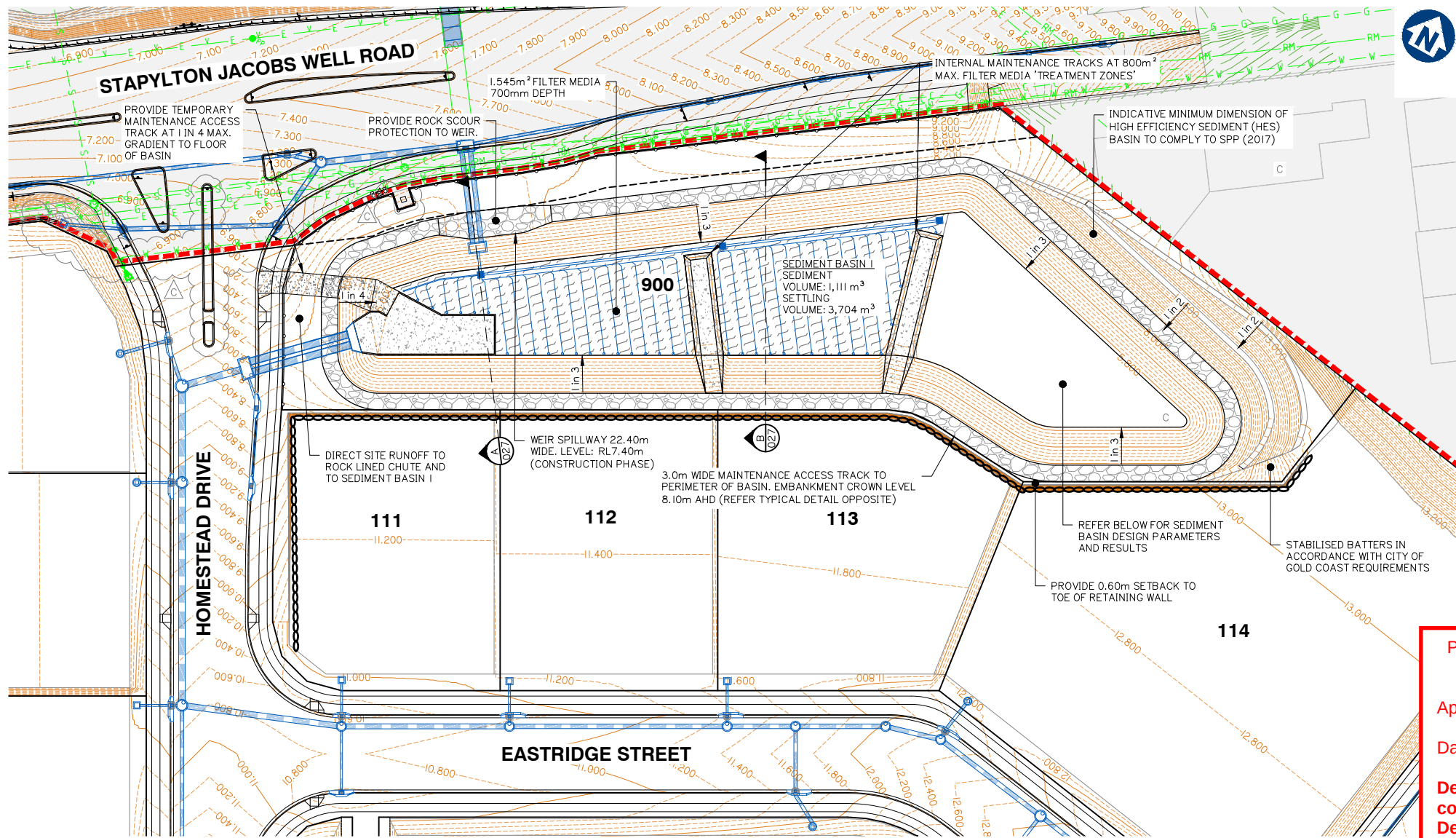
|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

Drawing No: 5941 ENG OPW1 054  
Rev. No: C









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

- NOTES:
- ALL ALLOTMENTS TO GRADE TOWARDS THE ROAD AT MINIMUM 1:150 (0.67%) FALL, EXCEPT IF NOTED OTHERWISE.
  - SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY. THE CONTRACTOR MUST TAKE ADDITIONAL MEASURES IF REQUIRED ON SITE DURING CONSTRUCTION AND MAINTENANCE PERIODS.
  - CONTRACTOR EROSION AND SEDIMENT CONTROL PLAN SHOULD COMPLY WITH ALL CITY OF GOLD COAST COUNCIL AND STATE REQUIREMENTS AND TO BE IN ACCORDANCE WITH INDUSTRY BEST PRACTICE GUIDELINES.
  - CONTRACTOR TO OBTAIN SEDIMENT AND EROSION CONTROL PLAN APPROVAL FROM RELEVANT AUTHORITY BEFORE THE COMMENCEMENT OF WORKS.

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

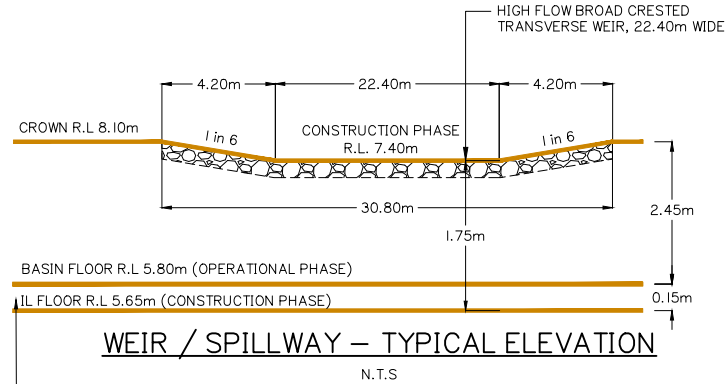
| SEDIMENT BASIN DESIGN |                                          |                                     |                              |                        |                                           |            |                  |
|-----------------------|------------------------------------------|-------------------------------------|------------------------------|------------------------|-------------------------------------------|------------|------------------|
| 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 <sub>x</sub> yr. 24 hr | WATER TEMPERATURE | K <sub>s</sub> | SETTLING ZONE DEPTH (D <sub>s</sub> ) | W: L   | OPTIMUM LOW-FLOW DEWATER RATE | SELECTED LOW-FLOW DEWATER RATE (Q <sub>d</sub> ) | MIN SETTLING ZONE VOLUME (Min V <sub>s</sub> ) | MIN SETTLING ZONE SURFACE AREA (Min A <sub>s</sub> ) | 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         | 1            | 4.53                     | 20                | 11150          | 1.3                                   | 4.8    | 9                             | 9                                                | 3704                                           | 1512                                                 | VOLUME            |

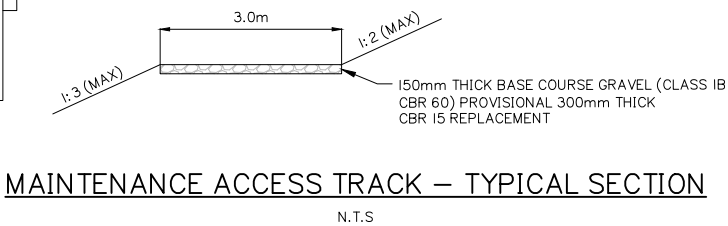
| BASIN ID | SETTLING ZONE                                 |                                             | SCOUR VELOCITY | FREE WATER ZONE          |                           | SEDIMENT STORAGE ZONE   |                                  | OVERALL DIMENSIONS RELATIVE TO SPILLWAY CREST (EXCL. FOREBAY) |       |        |       |
|----------|-----------------------------------------------|---------------------------------------------|----------------|--------------------------|---------------------------|-------------------------|----------------------------------|---------------------------------------------------------------|-------|--------|-------|
|          | ACTUAL SETTLING ZONE VOLUME (V <sub>s</sub> ) | ACTUAL SETTLING ZONE AREA (A <sub>s</sub> ) |                | DEPTH OF FREE WATER ZONE | VOLUME OF FREE WATER ZONE | SEDIMENT STORAGE VOLUME | SEDIMENT STORAGE DEPTH (APPROX.) | BATTER                                                        | WIDTH | LENGTH | DEPTH |
| No. 1    | (m³)                                          | (m²)                                        | (m/s)          | (m)                      | (m³)                      | (m³)                    | (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  |

| BASIN ID | BASIN DESIGN LIFE | DESIGN ARI | C <sub>10</sub> | C    | t <sub>c</sub> | I       | Q      | HEAD OVER SPILLWAY | SPILLWAY CREST LENGTH | SPILLWAY CREST RL | MIN EMBANKMENT RL |
|----------|-------------------|------------|-----------------|------|----------------|---------|--------|--------------------|-----------------------|-------------------|-------------------|
|          |                   | yr         |                 |      |                | (mm/hr) | (m³/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                      |



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 I LAYOUT

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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: -  
RL: -

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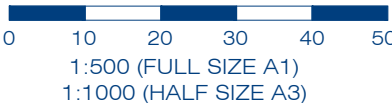
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DRAWING TITLE  
CONSTRUCTION PHASE  
SEDIMENT BASIN 1  
LAYOUT

| Rev.  | Date       | Description                  | BA  | MG  |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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

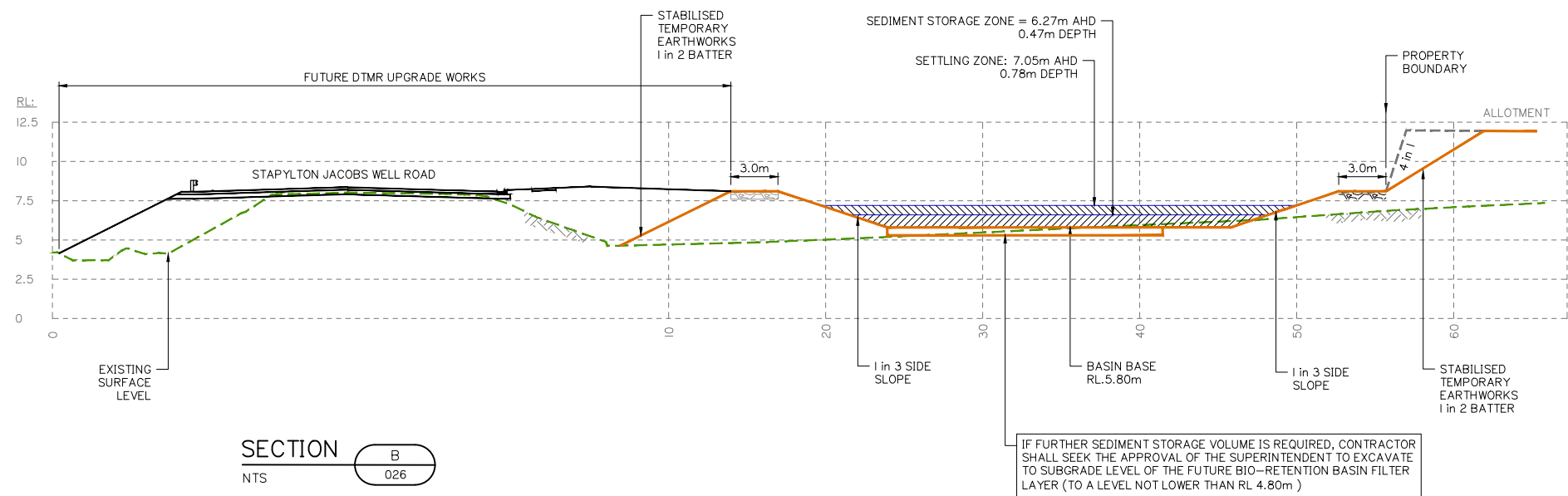
RPEQ: 16939

Signed:

Date: 02-09-2020

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





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Client:

 **FRASERS  
PROPERTY**

FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:  VANTAGE YATALA  
STAGE 1

Site Address:  
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ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

|                   |                               |
|-------------------|-------------------------------|
| RPD:              |                               |
| Lot:              | 501                           |
| Plan:             | SP295994                      |
| Local Authority:  | CITY OF GOLD COAST<br>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  
CONSTRUCTION PHASE  
SEDIMENT BASIN 1  
SECTIONS

|       |            |                         |     |
|-------|------------|-------------------------|-----|
|       |            |                         |     |
|       |            |                         |     |
|       |            |                         |     |
|       |            |                         |     |
|       |            |                         |     |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  |
| Issue | Date       | Description             | DRN |

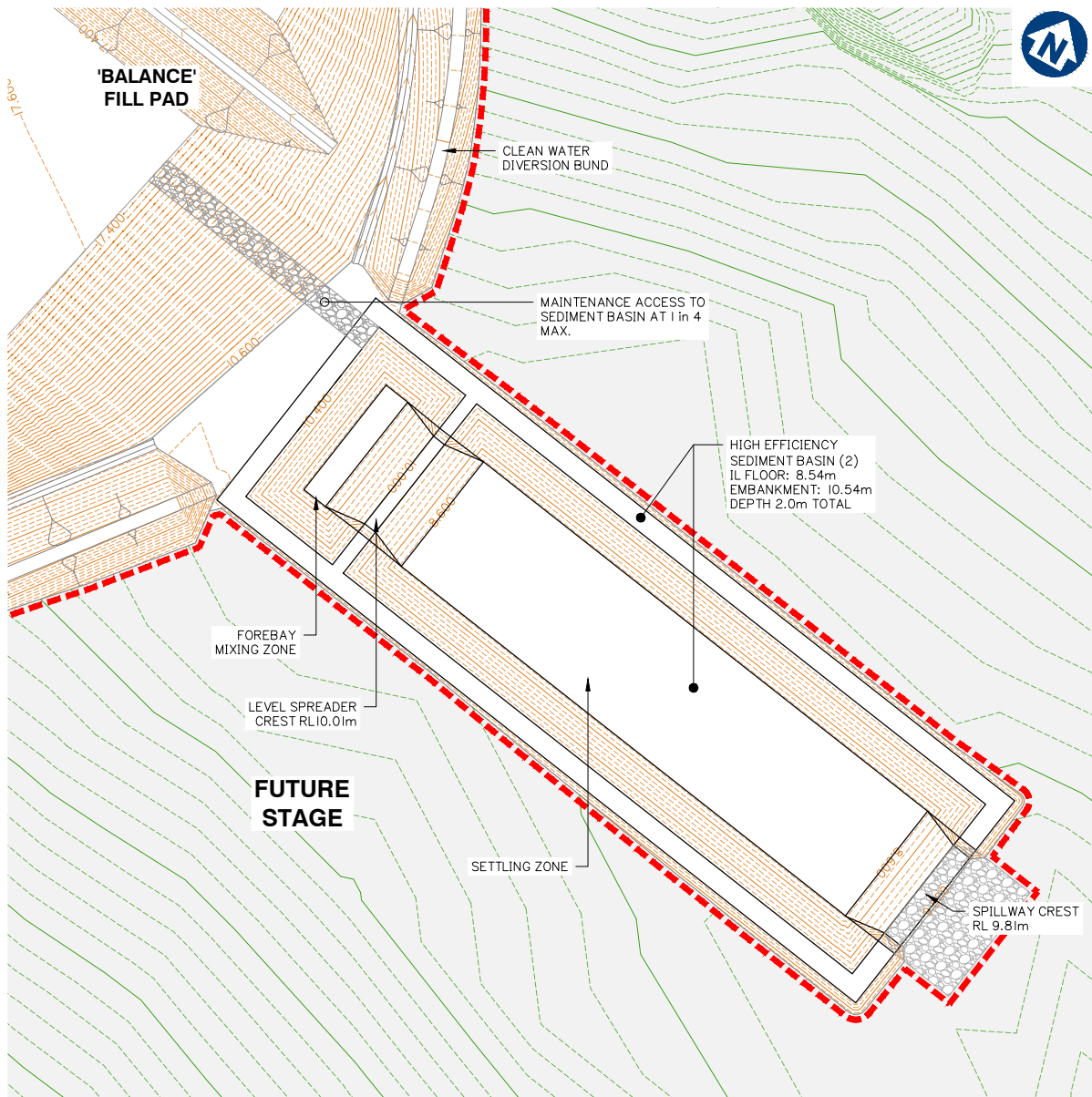
SCALE IN METRES

NOT TO SCALE

|              |                                                                                       |
|--------------|---------------------------------------------------------------------------------------|
| Scale at A1: | NTS                                                                                   |
| Designed:    | IG                                                                                    |
| Drafted:     | BA                                                                                    |
| Approved:    | MG                                                                                    |
| RPEQ:        | 16939                                                                                 |
| Signed:      |  |
| Date:        | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 057 | B        |





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

| DESIGN SEDIMENT BASIN PARAMETERS |                                           |            |           |           |             |            |           |           |                           |                     |                 |                           |
|----------------------------------|-------------------------------------------|------------|-----------|-----------|-------------|------------|-----------|-----------|---------------------------|---------------------|-----------------|---------------------------|
| BASIN ID                         | SETTLING ZONE<br>(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 <sub>x</sub> yr. 24 hr | WATER TEMPERATURE | K <sub>s</sub> | SETTLING ZONE DEPTH (D <sub>s</sub> ) | W: L   | OPTIMUM LOW-FLOW DECAN T RATE | SELECTED LOW-FLOW DECAN T RATE (Q <sub>d</sub> ) | MIN SETTling ZONE VOLUME (Min V <sub>s</sub> ) | MIN SETTling ZONE SURFACE AREA (Min A <sub>s</sub> ) | 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                                 |                                             | SCOUR VELOCITY | FREE WATER ZONE          |                           | SEDIMENT STORAGE ZONE   |                                  | OVERALL DIMENSIONS RELATIVE TO SPILLWAY CREST (EXCL. FOREBAY) |       |        |       |
|----------|-----------------------------------------------|---------------------------------------------|----------------|--------------------------|---------------------------|-------------------------|----------------------------------|---------------------------------------------------------------|-------|--------|-------|
|          | ACTUAL SETTling ZONE VOLUME (V <sub>s</sub> ) | ACTUAL SETTling ZONE AREA (A <sub>s</sub> ) |                | DEPTH OF FREE WATER ZONE | VOLUME OF FREE WATER ZONE | SEDIMENT STORAGE VOLUME | SEDIMENT STORAGE DEPTH (APPROX.) | BATTER                                                        | WIDTH | LENGTH | DEPTH |
|          | (m³)                                          | (m²)                                        |                | (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 | DESIGN ARI | C <sub>10</sub> | C    | t <sub>c</sub> | SPILLWAY |        |                    |                       |                   |                   |
|----------|-------------------|------------|-----------------|------|----------------|----------|--------|--------------------|-----------------------|-------------------|-------------------|
|          |                   |            |                 |      |                | I        | Q      | HEAD OVER SPILLWAY | SPILLWAY CREST LENGTH | SPILLWAY CREST RL | MIN EMBANKMENT RL |
|          |                   | yr         |                 |      |                | (mm/hr)  | (m³/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             |

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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

CONSTRUCTION PHASE  
SEDIMENT BASIN 2 LAYOUT

| Issue | Date       | Description             | BA | MG | DRN | CHK |
|-------|------------|-------------------------|----|----|-----|-----|
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA | MG |     |     |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA | MG |     |     |

SCALE IN METRES



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

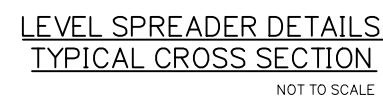
Scale at A1: 1:500

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

Drawing No:  
5941 ENG OPW1 058

Rev. No:  
B





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



Project:  VANTAGE YATALA  
STAGE 1

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

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  
CONSTRUCTION PHASE  
SEDIMENT BASIN 2  
SECTIONS

|       |            |                         |     |     |
|-------|------------|-------------------------|-----|-----|
|       |            |                         |     |     |
|       |            |                         |     |     |
|       |            |                         |     |     |
|       |            |                         |     |     |
|       |            |                         |     |     |
|       |            |                         |     |     |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| A     | 01-09-2020 | ORIGINAL ISSUE          | BA  | MG  |
| Issue | Date       | Description             | DRN | CHK |

NOT TO SCALE

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 059 | B        |

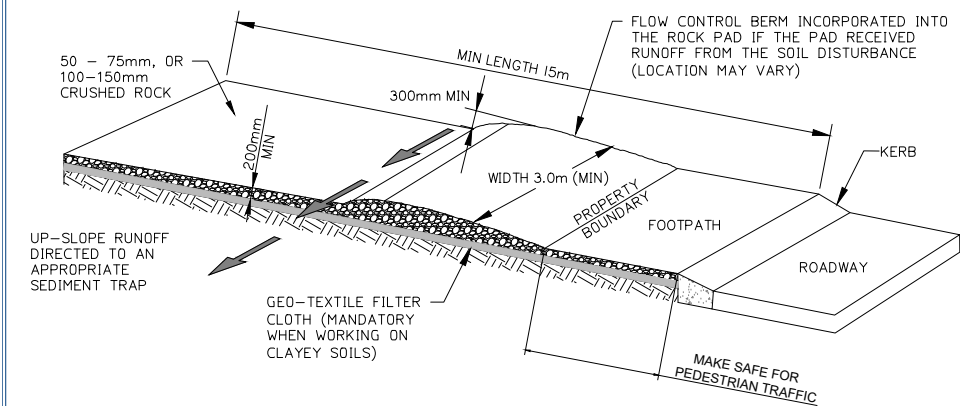
PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/464

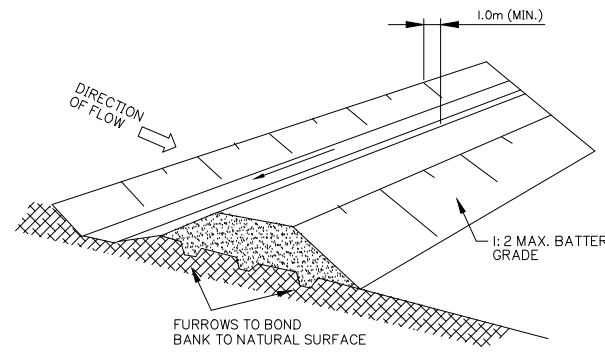
**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

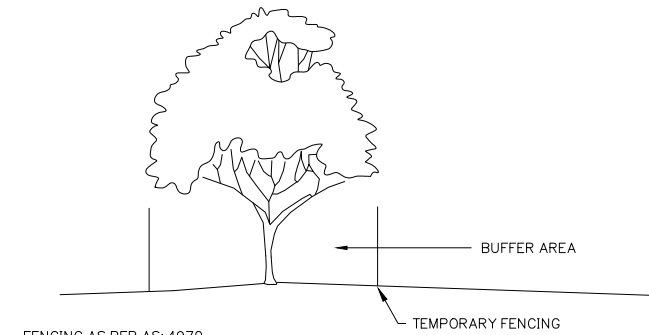
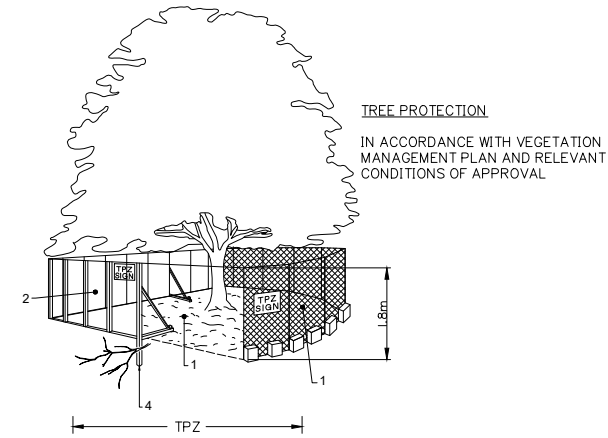




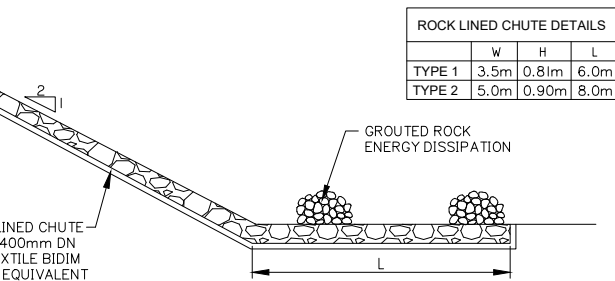
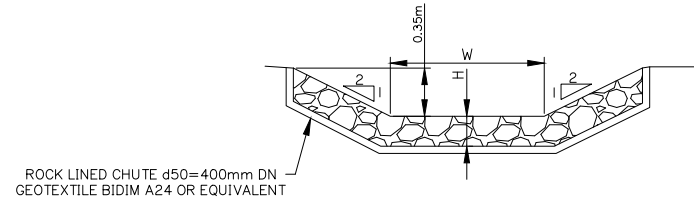
**ENTRY/EXIT PAD FOR CONSTRUCTION SITE**  
NOT TO SCALE



**DIVERSION DRAIN**  
NOT TO SCALE



**ROCK CHECK DAM**  
NOT TO SCALE



**ROCK LINED CHUTE**  
NOT TO SCALE

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

1. CHAIN WIRE MESH PANELS WITH SHADE CLOTH (IF REQUIRED) ATTACHED, HELD IN PLACE WITH CONCRETE FEET.
2. ALTERNATIVE PLYWOOD OR WOODEN PALING FENCE PANELS. THIS FENCING MATERIAL ALSO PREVENTS BUILDING MATERIALS OR SOIL ENTERING THE TPZ.
3. MULCH INSTALLATION ACROSS SURFACE OF TPZ (AT THE DISCRETION OF THE PROJECT ARBORIST.) NO EXCAVATION, CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT OR STORAGE OF MATERIALS OF ANY KIND IS PERMITTED WITHIN THE TPZ.
4. BRACING IS PERMITTED WITHIN THE TPZ. INSTALLATION OF SUPPORTS SHOULD AVOID DAMAGING ROOTS.
5. THE CONSTRUCTION CONTRACTOR IS NOT TO UNDERTAKE ANY PRUNING OF TREES. TREE MANAGEMENT IS TO BE UNDERTAKEN BY A SUITABLY QUALIFIED ARBORIST.
6. NO STOCKPILE/S ARE PERMITTED WITHIN THE ZONE OF ANY RETAINED VEGETATION WITHOUT SUPERVISION AND AUTHORIZATION OF THE SUPERVISING ARBORIST.
7. NO CLEARING OF PROTECTED SIZE VEGETATION IS TO OCCUR WITHOUT APPROVAL FROM LOGAN CITY COUNCIL.

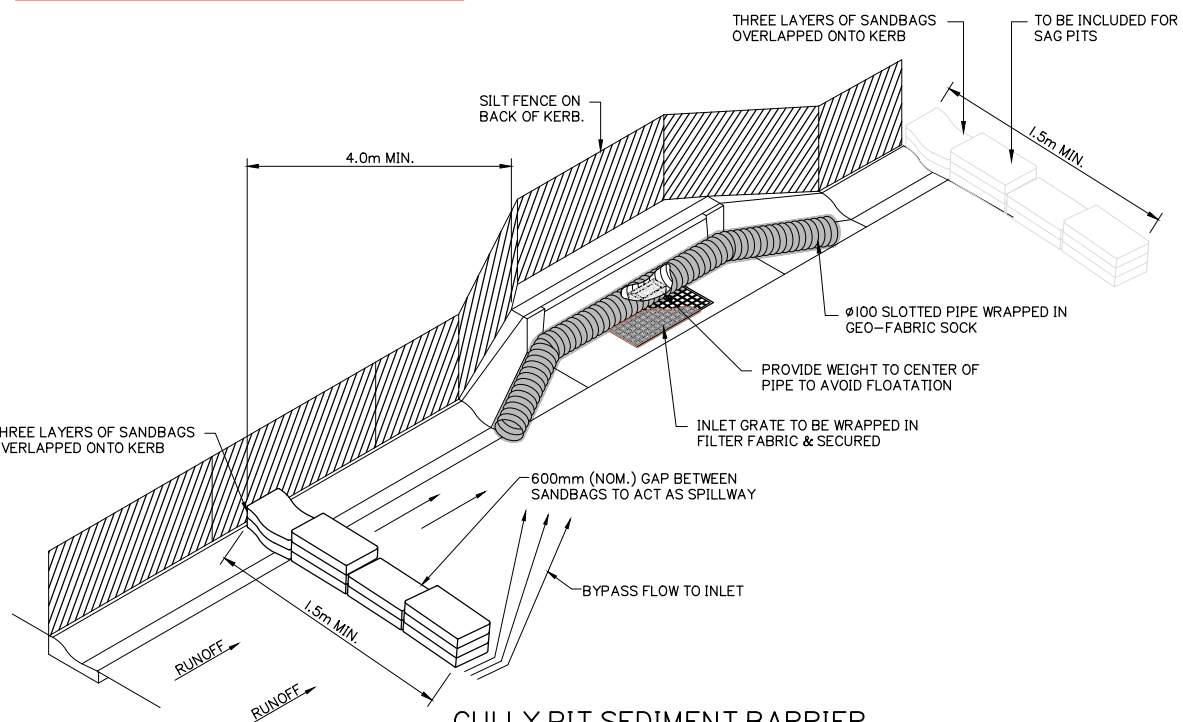
#### DETERMINING THE TPZ

THE RADIUS OF THE TPZ IS CALCULATED FOR EACH TREE BY MULTIPLYING ITS DBH X 12 = TRUNK DIAMETER MEASURED AT 1.4M ABOVE GROUND. RADIUS IS MEASURED FROM THE CENTRE OF THE STEM AT GROUND LEVEL.

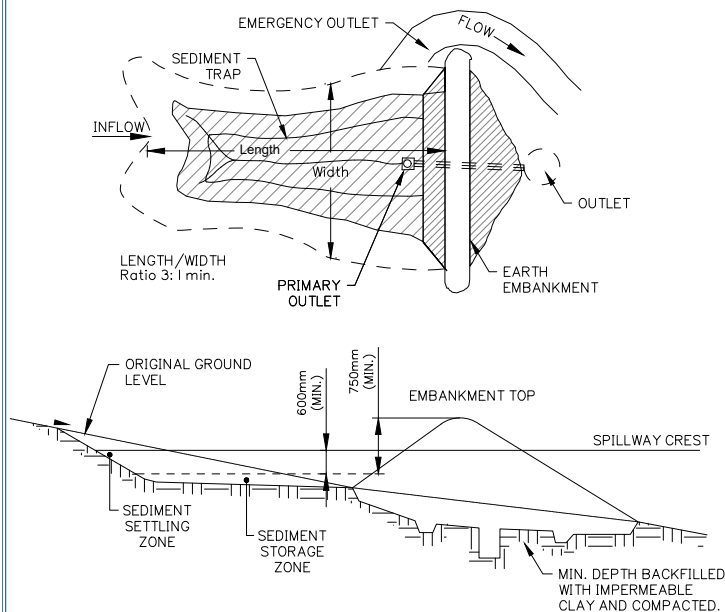
A TPZ SHOULD NOT BE LESS THAN 2M NOR GREATER THAN 15M (EXCEPT WHERE CROWN PROTECTION IS REQUIRED). THE TPZ OF PALMS, OTHER MONOCOTS, CYCADS AND TREE FERNS SHOULD NOT BE LESS THAN 1M OUTSIDE THE CROWN PROJECTION.

#### PROTECTIVE FENCING

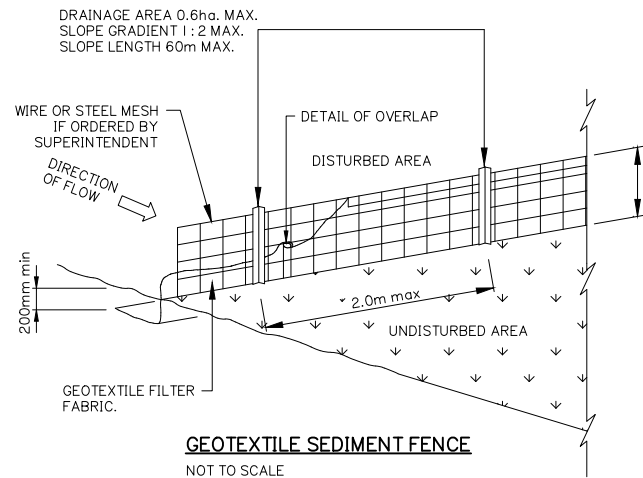
NOT TO SCALE



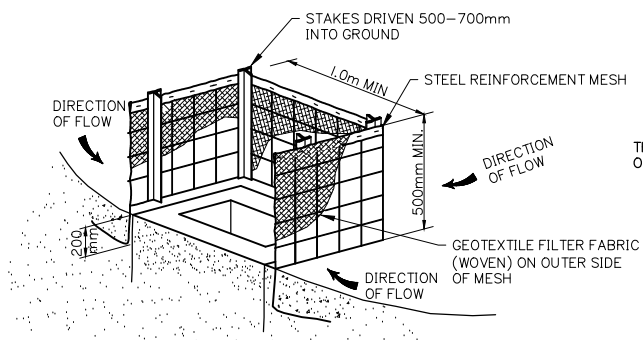
**GULLY PIT SEDIMENT BARRIER**  
SCALE N.T.S.



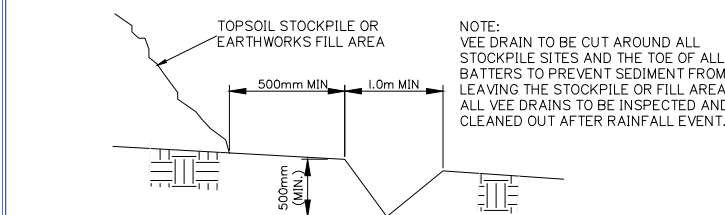
**TYPICAL SEDIMENT BASIN**  
NOT TO SCALE



**GEOTEXTILE SEDIMENT FENCE**  
NOT TO SCALE



**STORMWATER INLET - SEDIMENT TRAP**  
NOTE:  
FOURTH SIDE OF TRAP NOT SHOWN FOR CLARITY



**TYPICAL SECTION VEE DRAIN**  
NOT TO SCALE

#### SEDIMENT AND EROSION TYPICAL DETAILS

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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

SEDIMENT AND EROSION  
TYPICAL DETAILS

| Rev | Date       | Description             | By | Check |
|-----|------------|-------------------------|----|-------|
| A   | 01-05-2020 | ORIGINAL ISSUE          | BA | MG    |
| B   | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA | MG    |

SCALE IN METRES

NOT APPLICABLE

Scale at A1:

NTS

Designed:

IG

Drafted:

BA

Approved:

MG

RPEQ:

16939

Signed:

Date:

02-09-2020

Drawing No:

5941 ENG OPW1 060

Rev. No:

B



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



0  
GTP1793

**STAPYLTON JACOBS WELL ROAD**

101

102

103

104

105

900

111

112

113

114

EASTRIDGE STREET

### PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

122

120

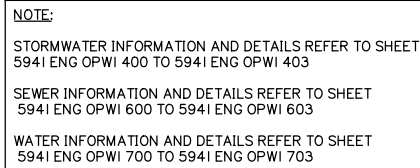
FOR CONTINUATION REFER SHEET No.594| ENG OPWL 403

OVERALL SERVICES LAYOUT PLAN SHEET 1 OF 4









THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN INTERPOLATED FROM AERIAL PHOTOGRAMMETRIC DATA OR KNOWN POSITIONS OF VALVES, ACCESS CHAMBERS ETC. OR INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.

120

119

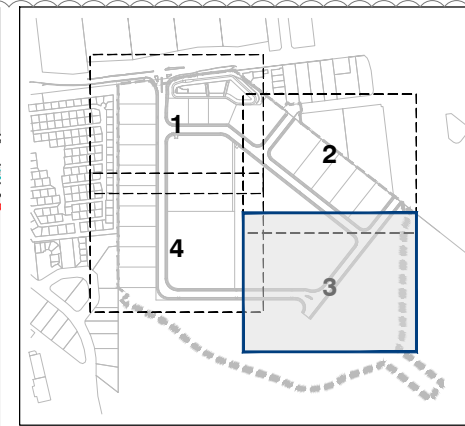
A map showing the location of the proposed development on Eastridge Street. The map includes a red line indicating the proposed road layout, with labels for 'EASTRIDGE STREET' and 'STATION ROAD'.

**FAIRWAY STREET**

**HOMESTEAD DRIVE**

## FUTURE STAGES

OVERALL SERVICES LAYOUT PLAN SHEET 3 OF 4



KEY PLAN  
SCALE 1: 7500

501  
SP295994

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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

OVERALL SERVICES LAYOUT  
PLAN SHEET 3 OF 4

| G     | 02-09-2020 | MINOR CHANGE TO STAGE 1      |     |     | BA MG |
|-------|------------|------------------------------|-----|-----|-------|
| B     | 09-06-2020 | INFORMATION REQUEST RESPONSE |     |     | BA MG |
| 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:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 302 | C        |



SCALE 1: 7500

— 100 —

CEDAR DRIVE

114  
RP855793

116  
RP901397

17  
P807576

g:\Projects\5941\engineering\Acad\civil works stage 1\Current\5941 ENG OPW1 300-303.dwg

THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN INTERPOLATED FROM AERIAL PHOTOGRAMMETRIC DATA OR KNOWN POSITIONS OF VALVES, ACCESS CHAMBERS ETC. OR INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.

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

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

**HOMESTEAD DRIVE**

OVERALL SERVICES LAYOUT PLAN SHEET 4 OF 4



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

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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<br>COUNCIL |
| Level Datum:      | AHD                           |
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| Contour Interval: | -                             |
| PSM:              | -                             |
| RL:               | -                             |

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DRAWING TITLE

OVERALL SERVICES LAYOUT  
PLAN SHEET 4 OF 4

| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      |     |     | BA MG |
|-------|------------|------------------------------|-----|-----|-------|
| S     | 12-09-2020 | INFORMATION REQUEST RESPONSE |     |     | BA MG |
| A     | 01-05-2020 | ORIGINAL ISSUE               |     |     | BA MG |
| Issue | Date       | Description                  | DRN | CHK |       |

SCALE IN METRES



1:500 (FULL SIZE A1)

1:1000 (HALF SIZE A3)

|              |       |
|--------------|-------|
| Scale at A1: | 1:500 |
|--------------|-------|

|           |    |
|-----------|----|
| Designed: | IG |
|-----------|----|

|          |    |
|----------|----|
| Drafted: | BA |
|----------|----|

|           |    |
|-----------|----|
| Approved: | MG |
|-----------|----|

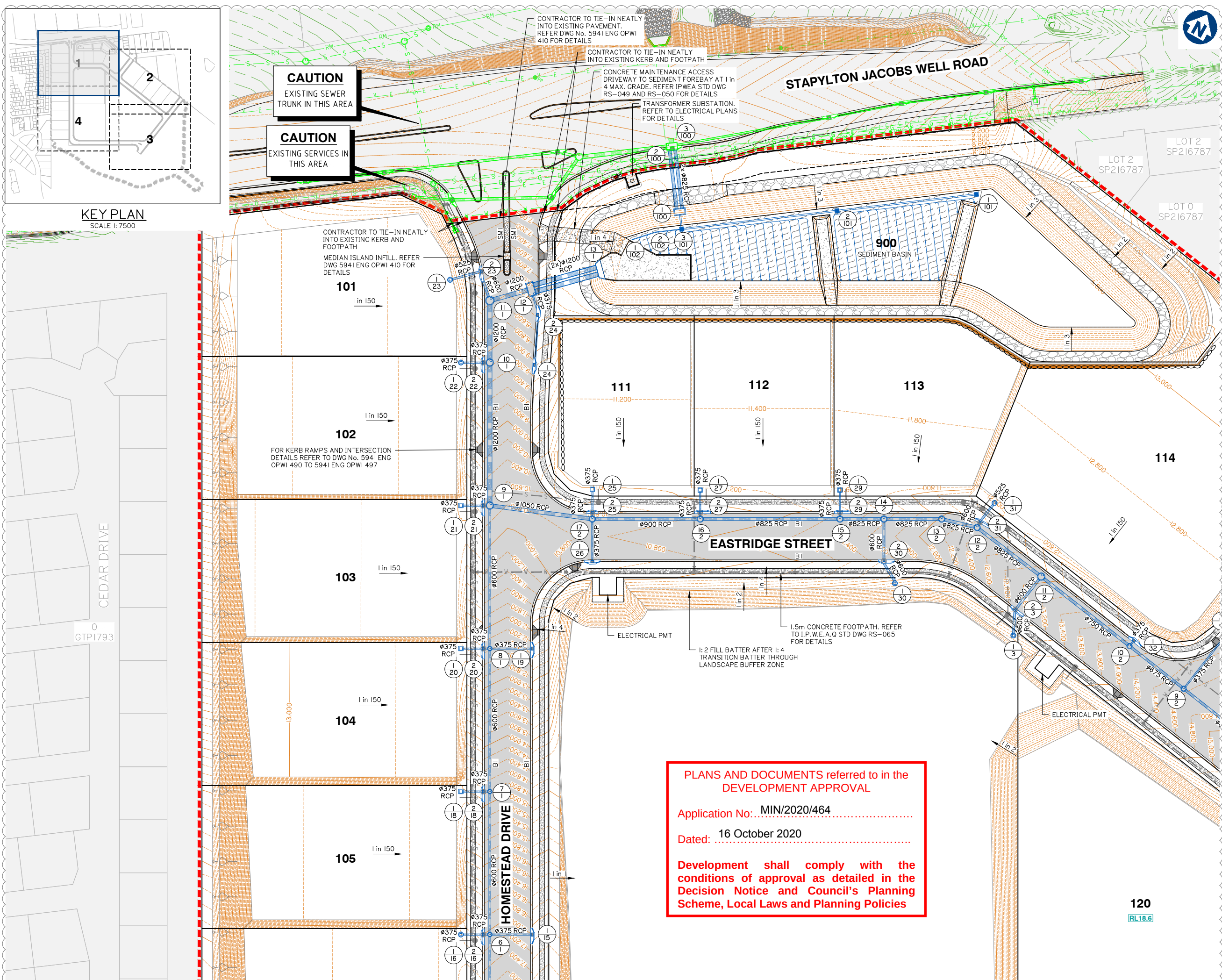
|       |       |
|-------|-------|
| RPEQ: | 16939 |
|-------|-------|

|         |  |
|---------|--|
| Signed: |  |
|---------|--|

|       |            |
|-------|------------|
| Date: | 02-09-2020 |
|-------|------------|

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 303 | C        |





Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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

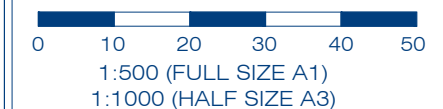
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DRAWING TITLE  
ROADWORKS AND  
DRAINAGE LAYOUT PLAN  
SHEET 1 OF 4

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

SCALE IN METRES



Scale at A1: 1:500

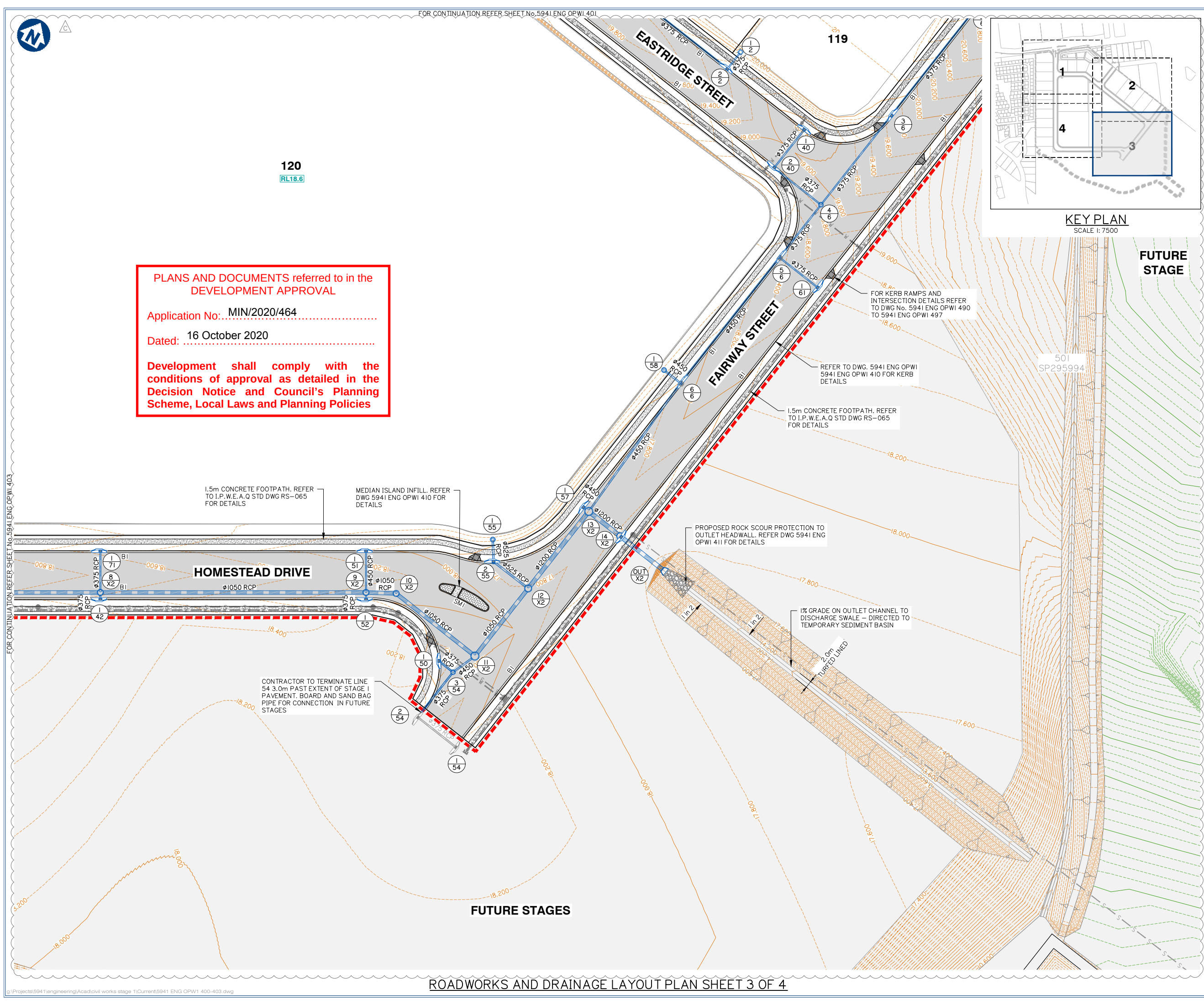
|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

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









FOR CONTINUATION REFER SHEET No. 594 | ENG OPW 1401

g:\Projects\5941\engineering\Acad\civil works stage 1\Current\5941 ENG OPW1 400-403.dwg

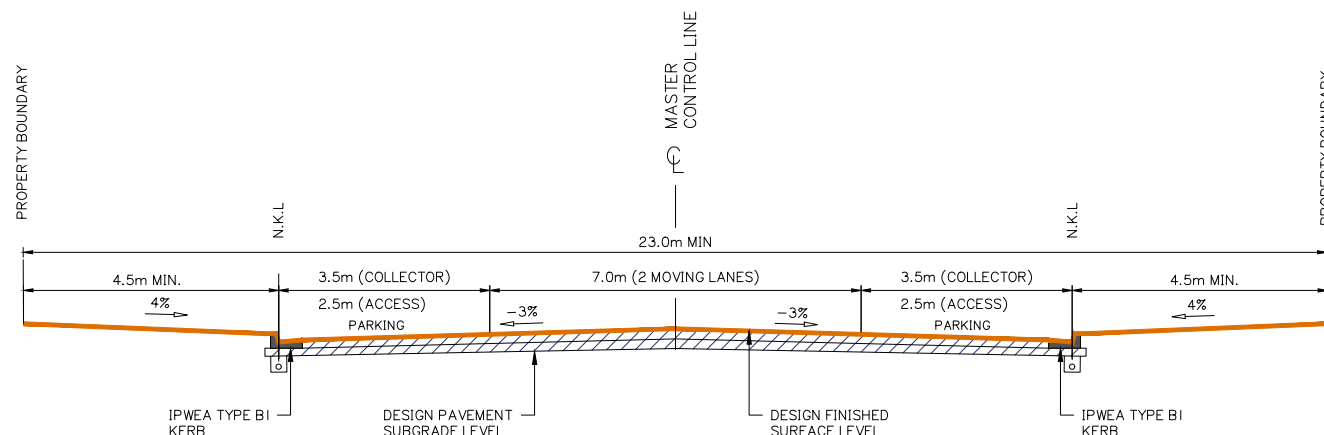




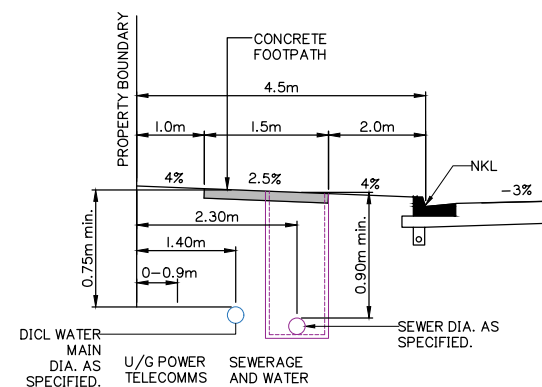




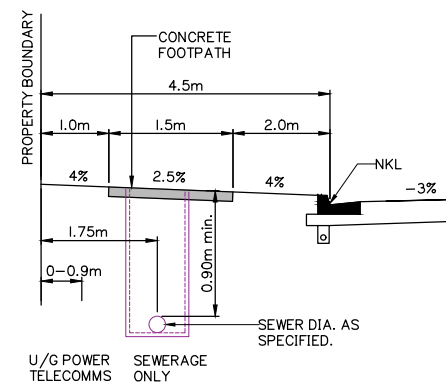




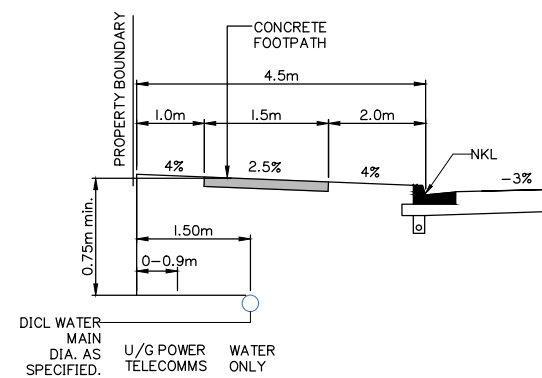
**TYPICAL CROSS SECTION – INDUSTRIAL / COMMERCIAL  
COLLECTOR AND ACCESS STREETS (23.0m)  
HOMESTEAD DRIVE, EASTRIDGE STREET, FAIRWAY STREET & EMERI STREET EXT.**  
REFER ALSO CoGC STD DWG 05-02-2004 FOR DETAILS



**TYPICAL SERVICES IN SHARED VERGE  
POTABLE WATER AND SEWER  
RETICULATION**  
SCALE: N.T.S

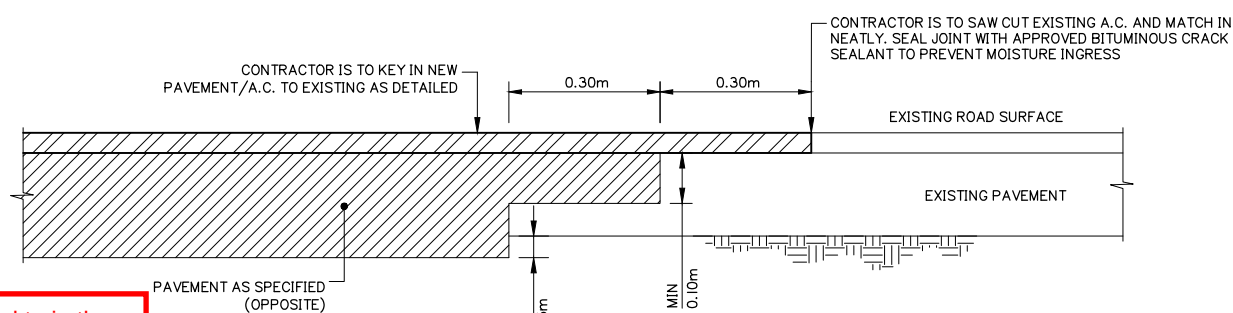


**TYPICAL SERVICES IN VERGE  
SEWER RETICULATION ONLY**  
SCALE: N.T.S



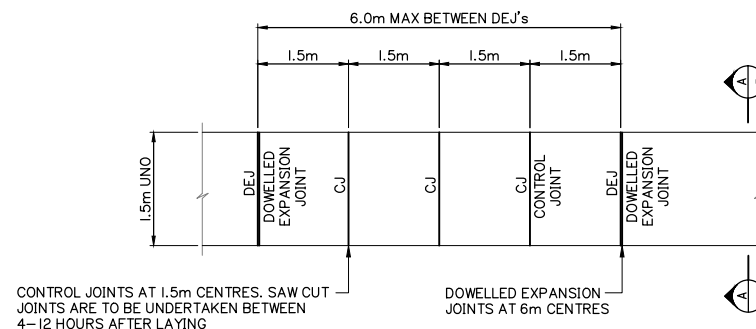
**TYPICAL SERVICES IN VERGE  
POTABLE WATER RETICULATION ONLY**  
SCALE: N.T.S

**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.

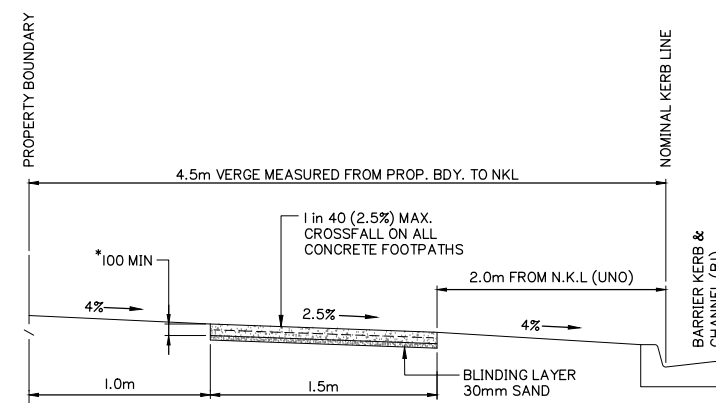


**CONNECTION TO EXISTING PAVEMENT**  
N.T.S

TYPICAL DETAIL  
SHOWING LONGITUDINAL CONSTRUCTION DETAIL FOR  
CONNECTION TO EXISTING PAVEMENT / A.C.



**TYPICAL CONCRETE JOINTING PLAN**  
SCALE: N.T.S



**1.5m CONCRETE FOOTPATH DETAIL IN VERGE**

\*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

**SECTION A-A**  
SCALE: N.T.S

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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

TYPICAL SECTIONS AND  
DETAILS SHEET 2 OF 3

|  |  |  |  |  |  |
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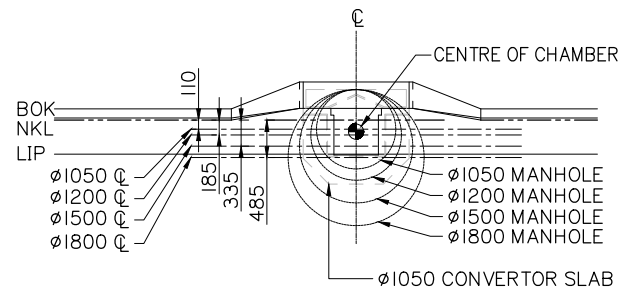
|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

SCALE IN METRES

NOT APPLICABLE

|              |            |
|--------------|------------|
| Scale at A1: | NTS        |
| Designed:    | IG         |
| Drafted:     | BA         |
| Approved:    | MG         |
| RPEQ:        | 16939      |
| Signed:      |            |
| Date:        | 02-09-2020 |

Drawing No: 5941 ENG OPW1 411  
Rev. No: C



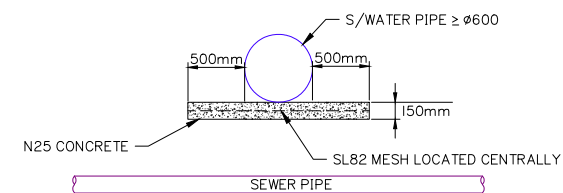
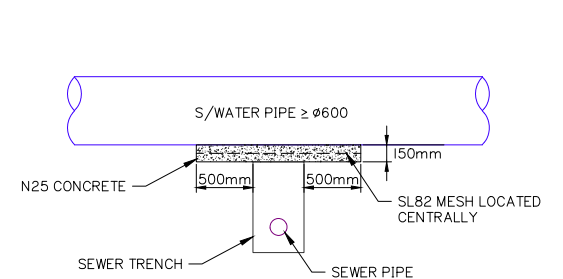
**TYPICAL DETAIL  
DRAINWAY SIDE INLET GULLY**

SCALE 1 : 50

☉ DENOTES GIVEN STRUCTURE SETOUT LOCATION

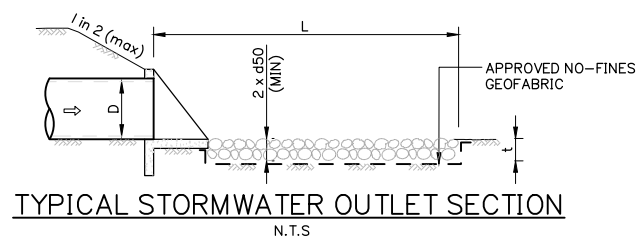
CIRCULAR PRECAST DRAINWAY CONVERTOR SLABS ARE AVAILABLE IN SIZES LISTED BELOW:

1200 ID (1650 OD) x 150mm THICK – 1000mm HOLE  
1350 ID (1830 OD) x 150mm THICK – 1000mm HOLE  
1500 ID (1970 OD) x 175mm THICK – 1000mm HOLE  
1650 ID (2100 OD) x 225mm THICK – 1000mm HOLE  
1800 ID (2300 OD) x 225mm THICK – 1000mm HOLE  
2000 ID (2450 OD) x 250mm THICK – 1000mm HOLE



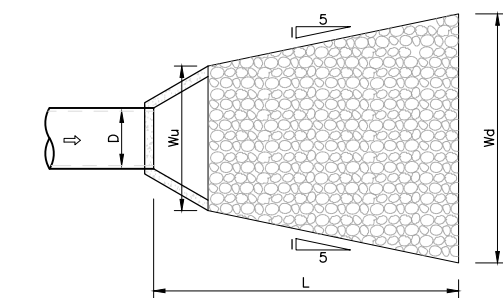
**BRIDGING DETAILS FOR  
STORMWATER PIPES ≥ Ø600**

NOT TO SCALE



**TYPICAL STORMWATER OUTLET SECTION**

N.T.S



**TYPICAL STORMWATER OUTLET PLAN**

N.T.S

## PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

**Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies**

## REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

| STRUCTURE TYPE  | HORIZONTAL CONTROL<br>(REFERENCE POINT LOCATION) | VERTICAL CONTROL<br>(REFERENCE LEVEL)      |
|-----------------|--------------------------------------------------|--------------------------------------------|
| MANHOLE         | CENTRE OF MANHOLE                                | FINISHED SURFACE LEVEL                     |
| GULLY PIT       | SETOUT TO CENTRE OF CHAMBER                      | FINISHED SURFACE LEVEL<br>(INVERT OF KERB) |
| HEADWALL        | INTERSECTION OF HEADWALL FACE & PIPE CENTRELINE  | INVERT LEVEL                               |
| FIELD INLET PIT | CENTRE OF PIT                                    | FINISHED SURFACE LEVEL                     |

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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

TYPICAL SECTIONS AND  
DETAILS SHEET 3 OF 3

| Rev   | Date       | Description             | By  | Check |
|-------|------------|-------------------------|-----|-------|
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG    |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MG    |
| Issue | Date       | Description             | DRN | CHK   |

SCALE IN METRES

NOT APPLICABLE

|              |            |
|--------------|------------|
| Scale at A1: | NTS        |
| Designed:    | IG         |
| Drafted:     | BA         |
| Approved:    | MG         |
| RPEQ:        | 16939      |
| Signed:      |            |
| Date:        | 02-09-2020 |

Drawing No: 5941 ENG OPW1 412 Rev. No: B



EXTERNAL INTERSECTION  
DESIGN SHOWN FOR  
REFERENCE ONLY

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
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DRAWING TITLE

CONTROL LINE LAYOUT  
PLAN

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

SCALE IN METRES

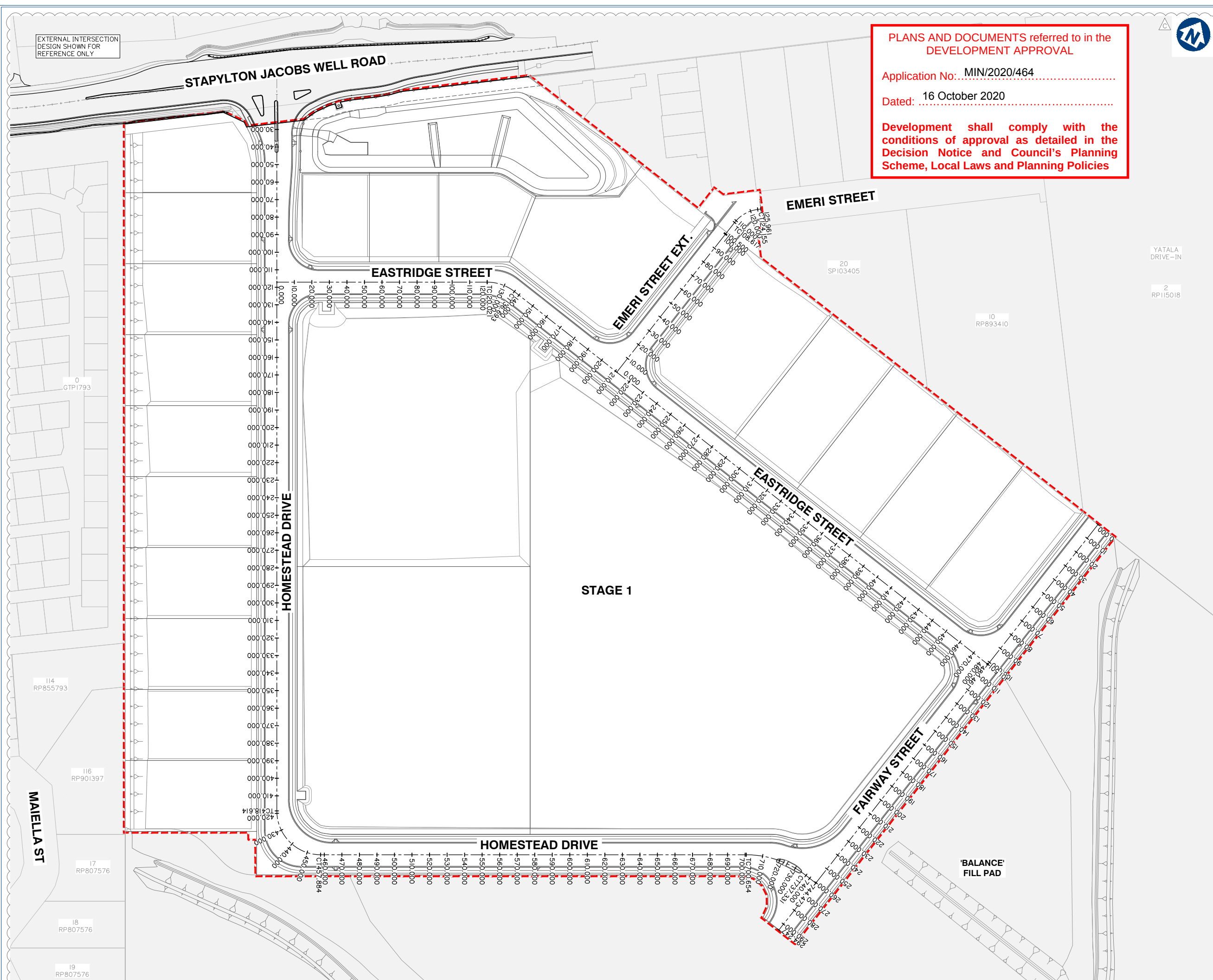


1:1000 (FULL SIZE A1)  
1:2000 (HALF SIZE A3)

Scale at A1: 1:1000

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

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



CONTROL LINE LAYOUT PLAN





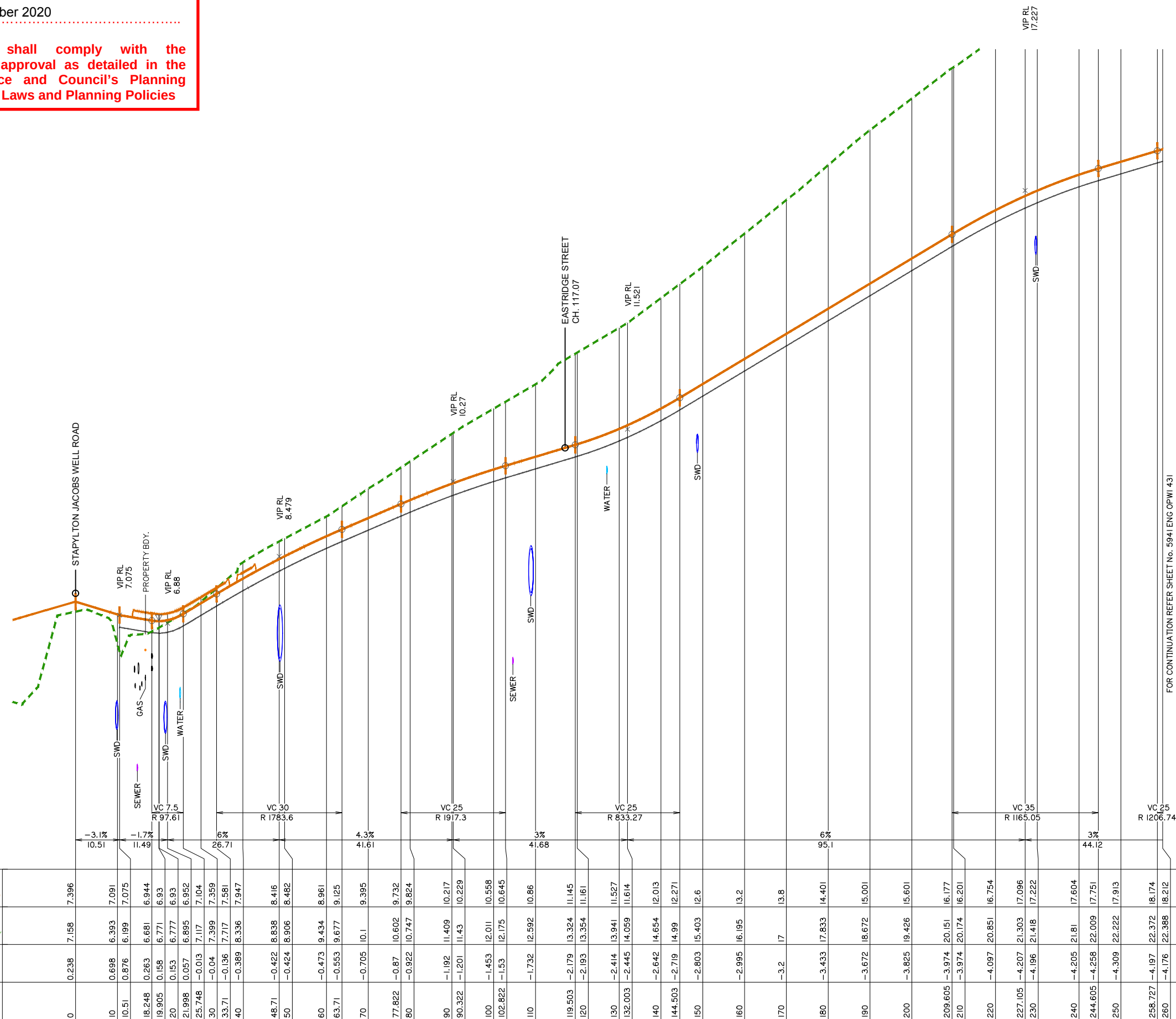


PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No.: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



#### 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 - HOMESTEAD DRIVE - SHEET 1 OF 3

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

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SECTION - HOMESTEAD DRIVE  
SHEET 1 OF 3

| Issue | Date       | Description                  | BA | MG |
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| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA | MG |
| 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:   |            |
| Date:     | 02-09-2020 |

Drawing No: 5941 ENG OPW1 430  
Rev. No: C



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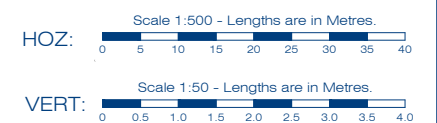
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DRAWING TITLE  
ROAD LONGITUDINAL  
SECTION - EASTRIDGE  
STREET SHEET 1 OF 2

| Issue | Date       | Description                  | BA | MG |
|-------|------------|------------------------------|----|----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA | MG |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA | MG |

SCALE IN METRES



Scale at A1: AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

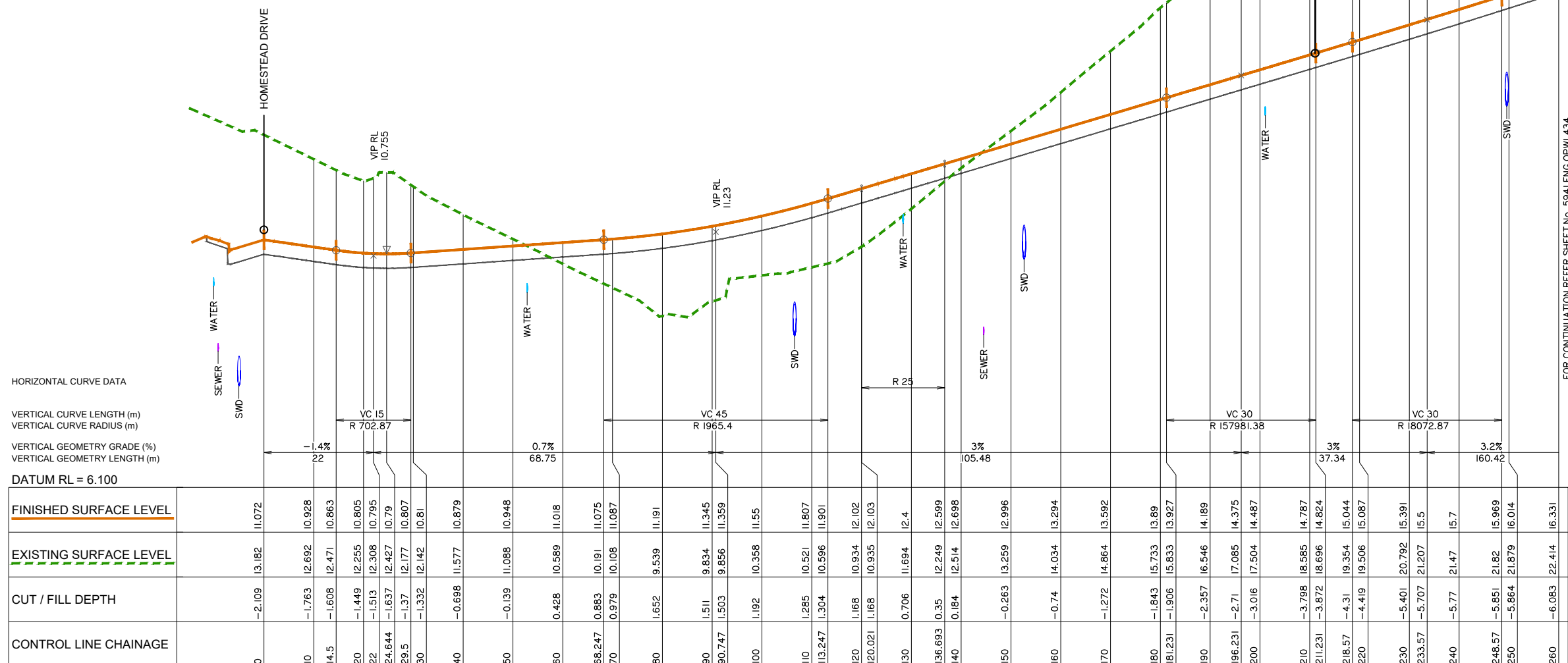
Drawing No: 5941 ENG OPW1 433  
Rev. No: C

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



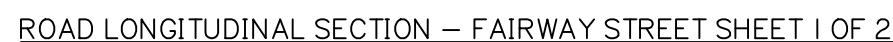
LONGITUDINAL SECTION - EASTRIDGE STREET - SHEET 1 OF 2

ROAD LONGITUDINAL SECTION - EASTRIDGE STREET SHEET 1 OF 2





**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

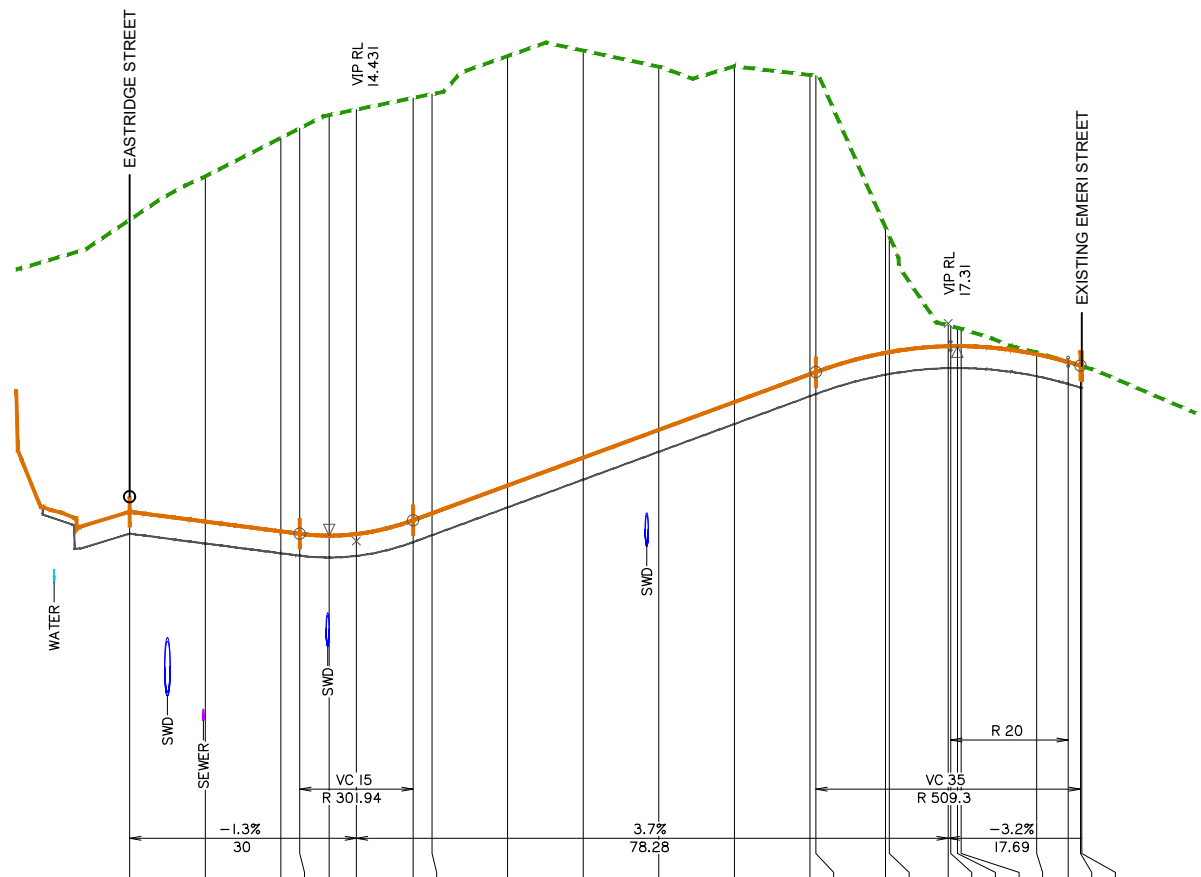




**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 436 | C        |





#### HORIZONTAL CURVE DATA

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

DATUM RL = 9.800

| FINISHED SURFACE LEVEL | 14.818 | 14.689 | 14.56  | 14.528 | 14.503 | 14.524 | 14.707 | 14.799 | 15.166 | 15.534 | 15.902 | 16.27  | 16.637 | 16.666 | 16.922 | 16.931 | 17.009  | 17.01   | 17.01   | 17.01  | 16.902 | 16.8    | 16.75   | 16.745  |
|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|---------|---------|---------|
| EXISTING SURFACE LEVEL | 18.68  | 19.255 | 19.762 | 19.889 | 20.064 | 20.138 | 20.292 | 20.343 | 20.845 | 20.918 | 20.704 | 20.71  | 20.594 | 20.585 | 18.578 | 18.464 | 17.283  | 17.275  | 17.252  | 17.239 | 16.925 | 16.802  | 16.75   | 16.745  |
| CUT / FILL DEPTH       | -3.861 | -4.565 | -5.202 | -5.362 | -5.562 | -5.614 | -5.585 | -5.544 | -5.678 | -5.384 | -4.803 | -4.441 | -3.957 | -3.919 | -1.656 | -1.533 | -0.275  | -0.265  | -0.242  | -0.229 | -0.023 | -0.003  | 0       | 0       |
| CONTROL LINE CHAINAGE  | 0      | 10     | 20     | 22.5   | 26.397 | 30     | 37.5   | 40     | 50     | 60     | 70     | 80     | 90     | 90.783 | 100    | 100.5  | 108.283 | 108.617 | 109.511 | 110    | 120    | 124.155 | 125.783 | 125.961 |

LONGITUDINAL SECTION - EMERI STREET EXTENSION - SHEET 1 OF 1

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



planning | environment | landscape | engineering | survey  
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Project:

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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 - EMERI STREET EXTENSION

| Issue | Date       | Description             | BA | MG | CHK |
|-------|------------|-------------------------|----|----|-----|
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA | MG |     |
| 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:   |            |
| Date:     | 02-09-2020 |

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





Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

## VANTAGE YATALA STAGE 1

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  
- HOMESTEAD DRIVE  
SHEET 2 OF 14

|       |            |  |                              |     |     |
|-------|------------|--|------------------------------|-----|-----|
|       |            |  |                              |     |     |
|       |            |  |                              |     |     |
|       |            |  |                              |     |     |
|       |            |  |                              |     |     |
|       |            |  |                              |     |     |
| G     | 02-09-2020 |  | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 |  | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 |  | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       |  | Description                  | DRN | CHK |

SCALE IN METRES



Scale at A1: 1:100

|           |    |
|-----------|----|
| Designed: | IG |
|-----------|----|

|          |    |
|----------|----|
| Drafted: | BA |
|----------|----|

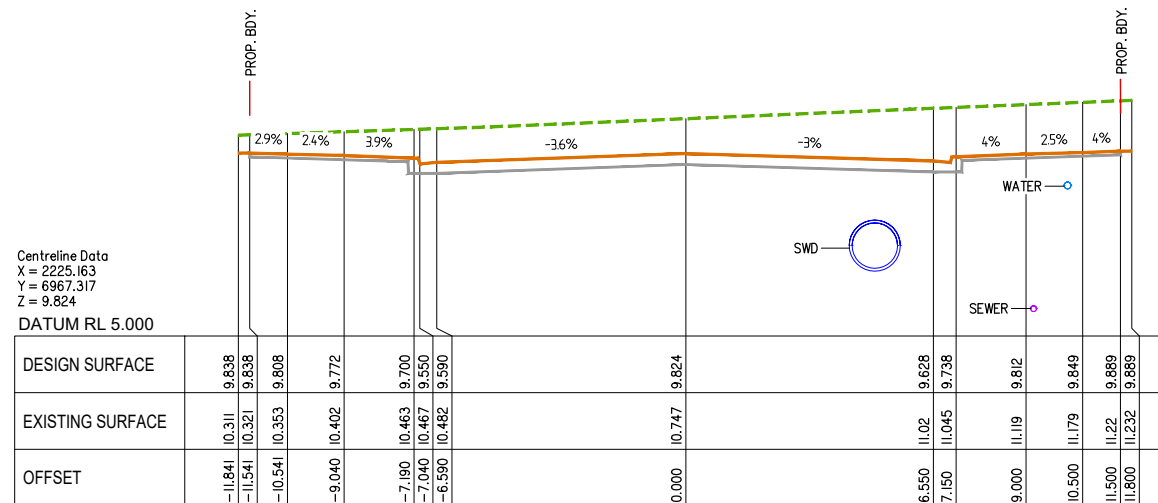
|           |    |
|-----------|----|
| Approved: | MG |
|-----------|----|

|       |       |
|-------|-------|
| RPEQ: | 16939 |
|-------|-------|

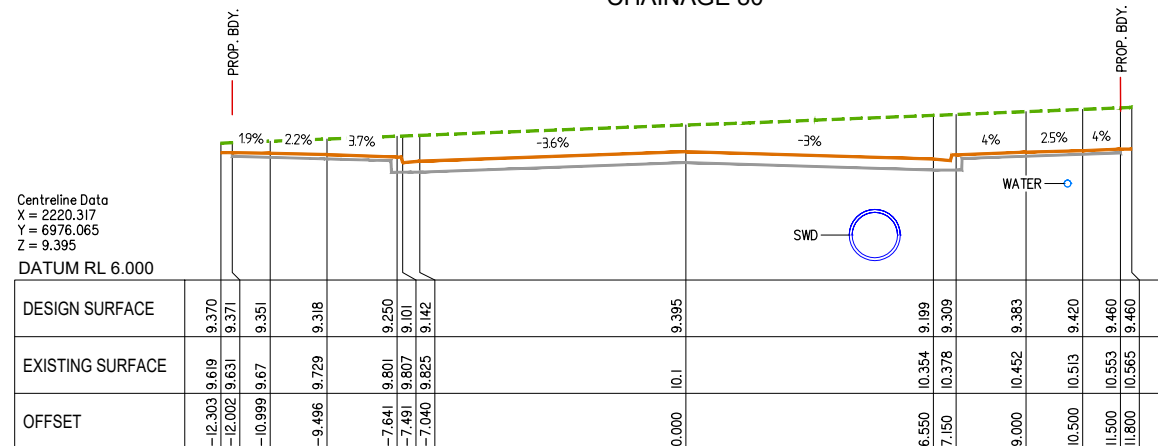
|         |                                                                                       |
|---------|---------------------------------------------------------------------------------------|
| Signed: |  |
|---------|---------------------------------------------------------------------------------------|

|       |            |
|-------|------------|
| Date: | 02-09-2020 |
|-------|------------|

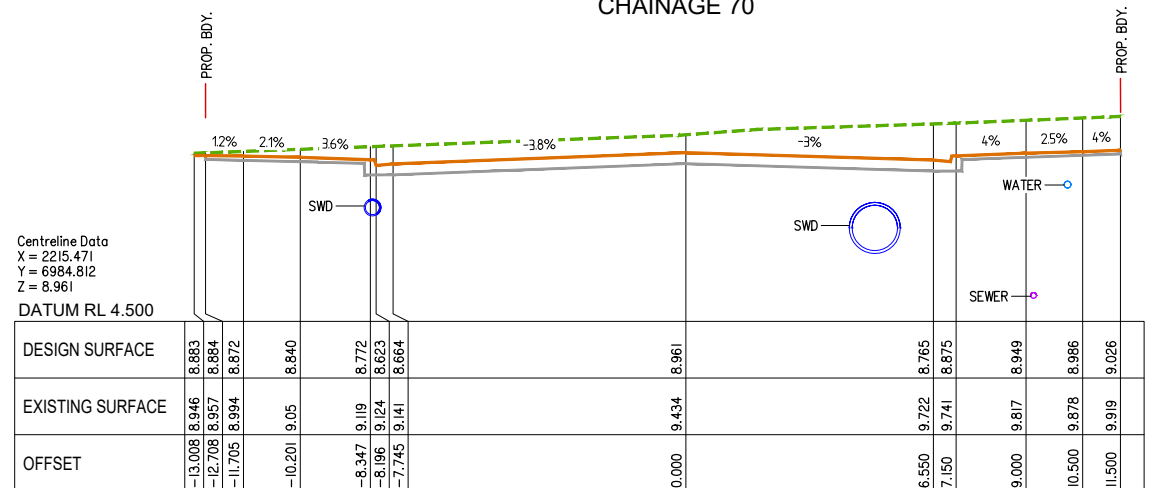
Drawing No:  
5941 ENG OPW1 451

Rev. No:  
C

CHAINAGE 80



CHAINAGE 70



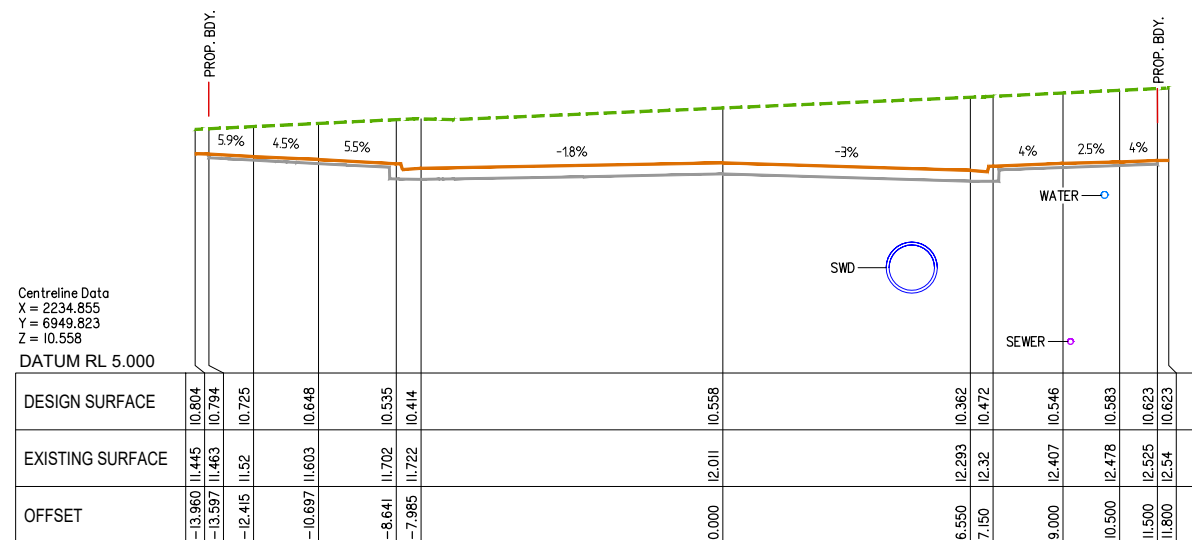
CHAINAGE 60

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

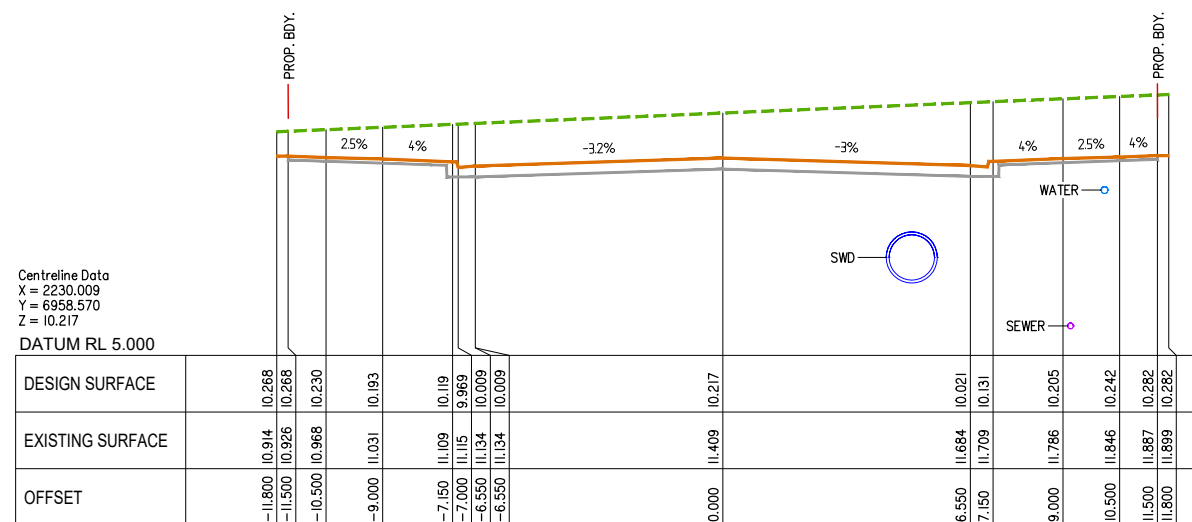
Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



CHAINAGE 100



CHAINAGE 90



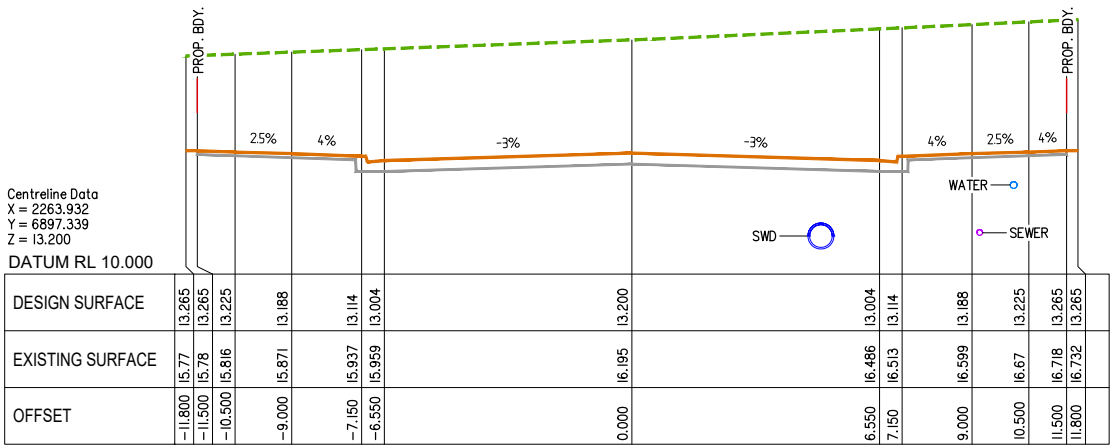


PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

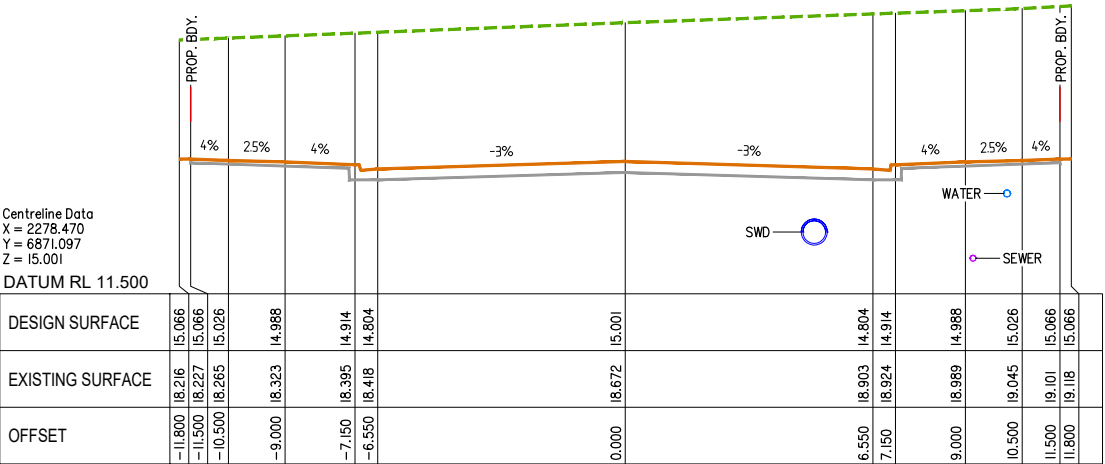
Application No: MIN/2020/541

Dated: 16 October 2020

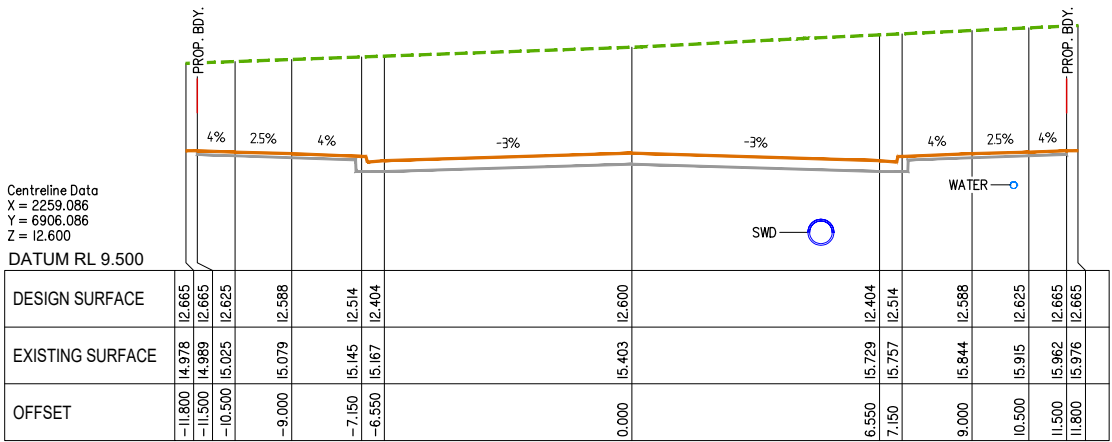
Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



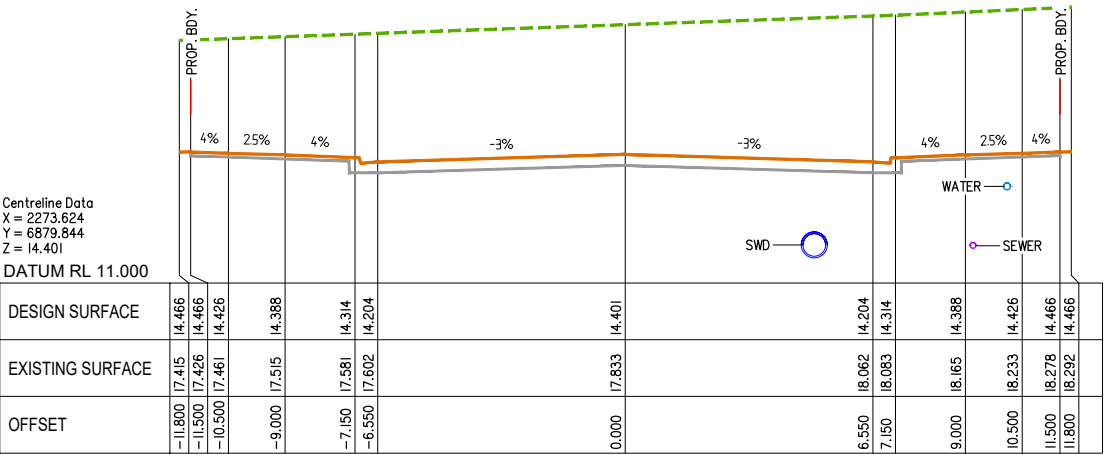
CHAINAGE 160



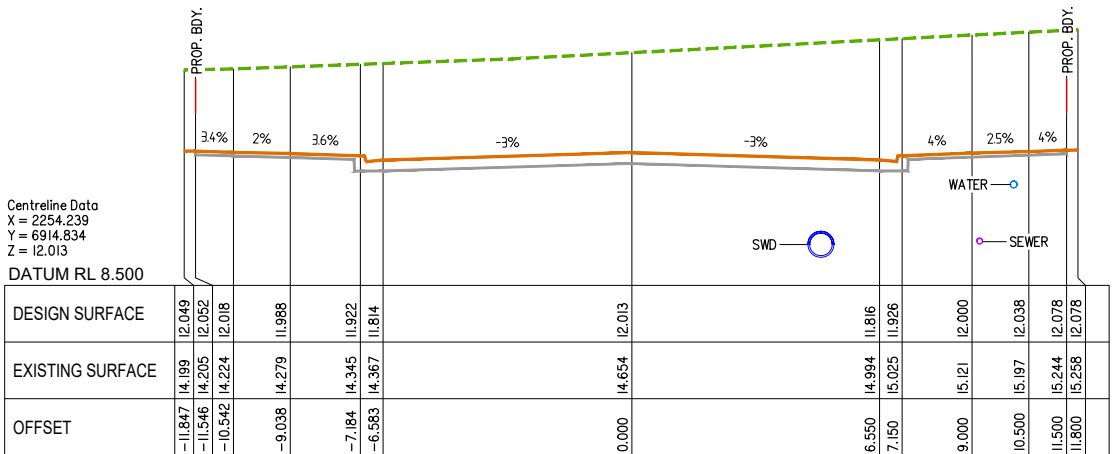
CHAINAGE 190



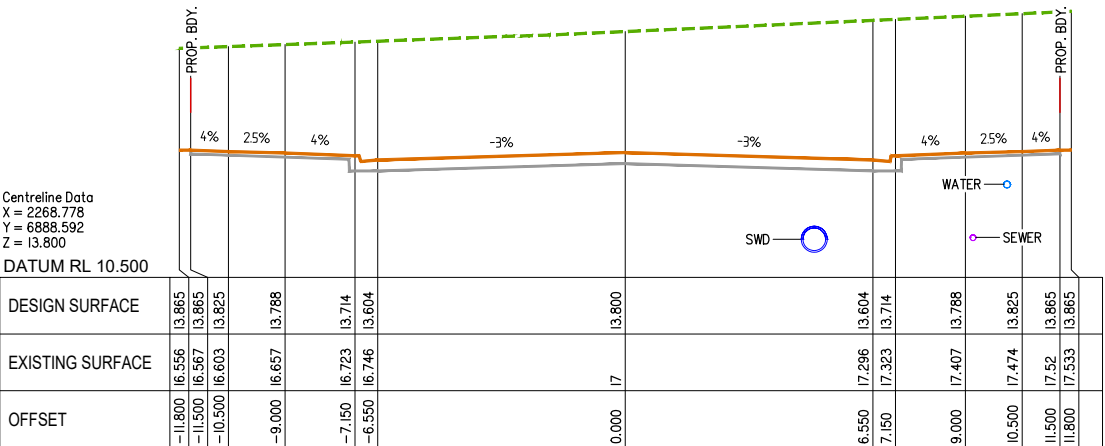
CHAINAGE 150



CHAINAGE 180



CHAINAGE 140



CHAINAGE 170

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
- HOMESTEAD DRIVE  
SHEET 4 OF 14

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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:     | 02-09-2020 |

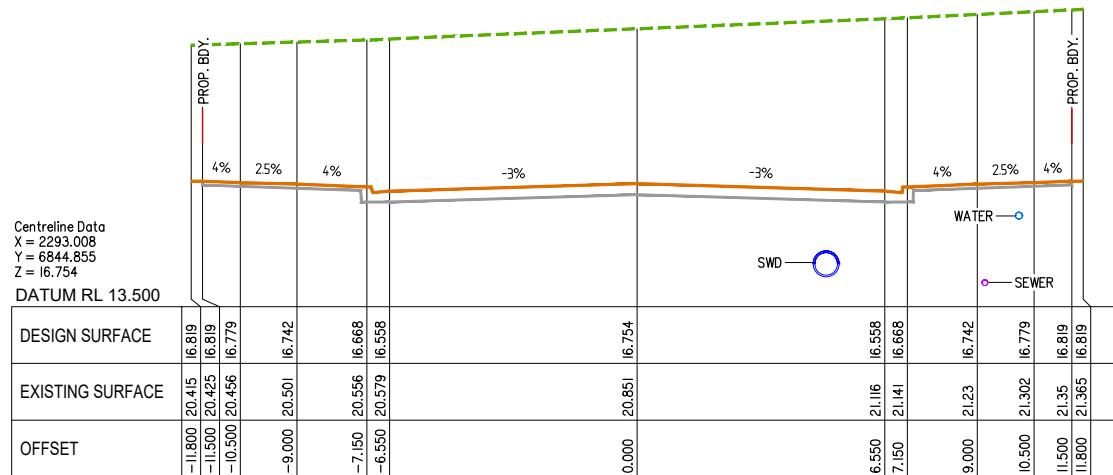
Drawing No: 5941 ENG OPW1 453  
Rev. No: C

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

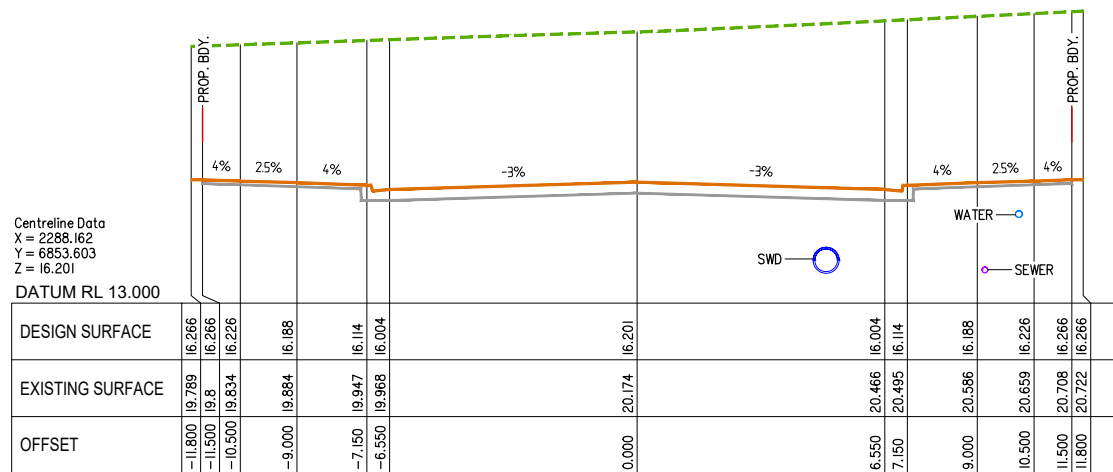
Application No: MIN/2020/541

Dated: 16 October 2020

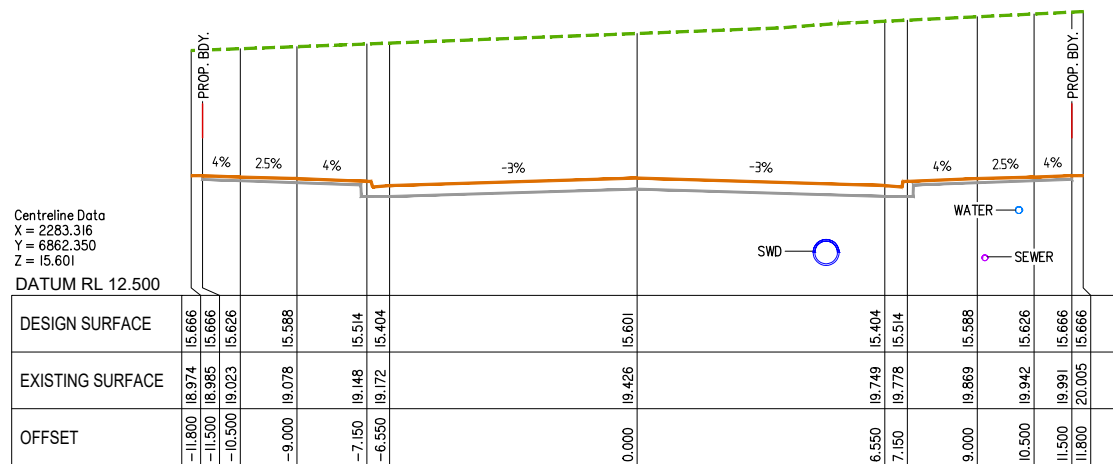
Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



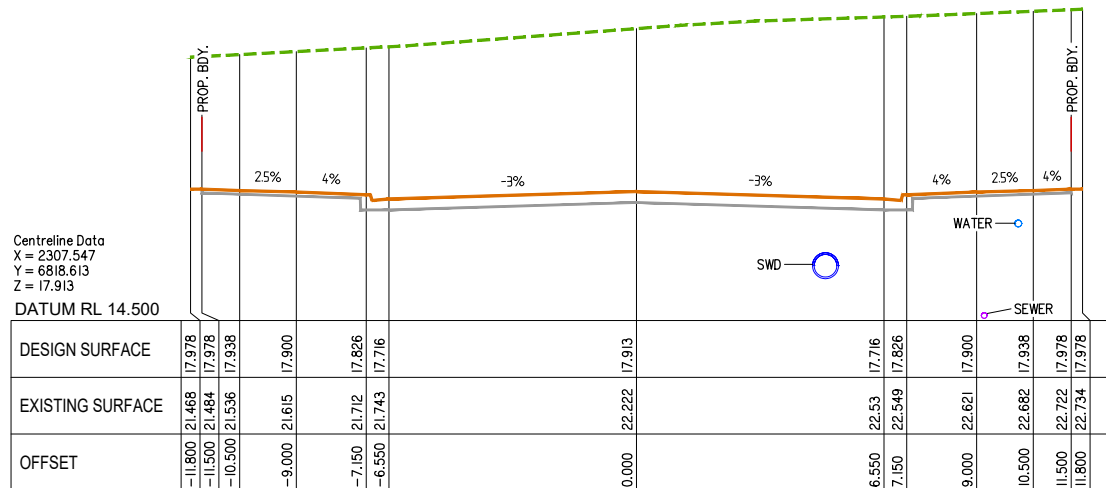
CHAINAGE 220



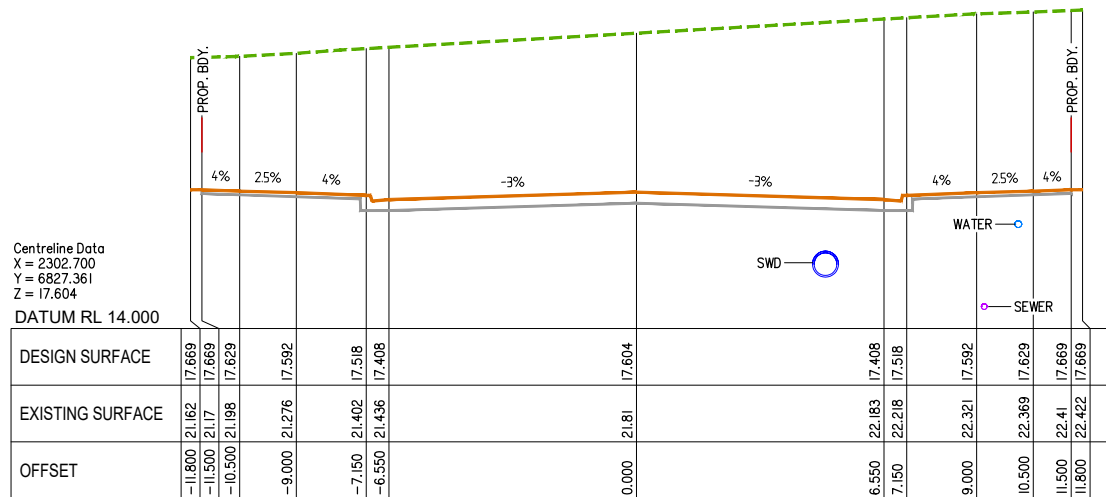
CHAINAGE 210



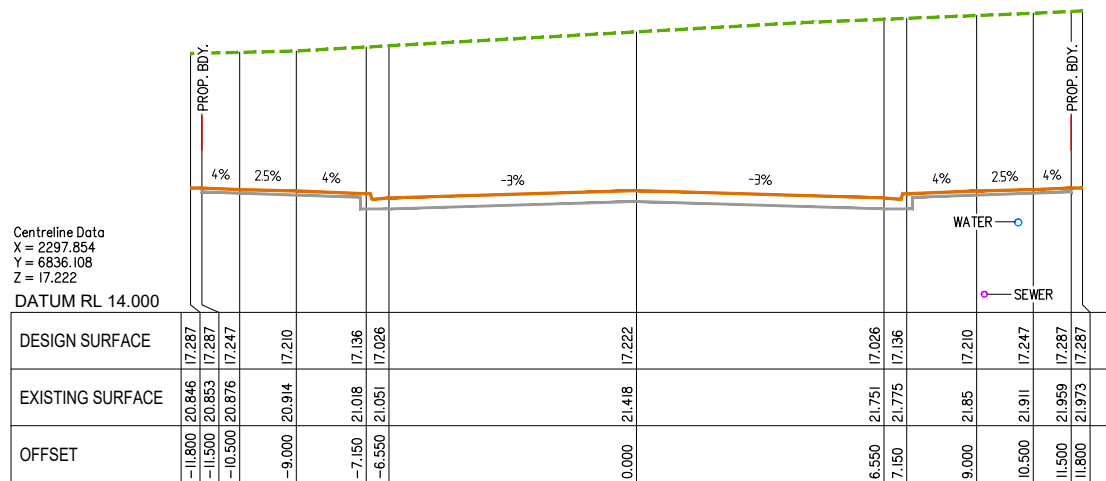
CHAINAGE 200



CHAINAGE 250



CHAINAGE 240



CHAINAGE 230

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
- HOMESTEAD DRIVE  
SHEET 5 OF 14

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

SCALE IN METRES

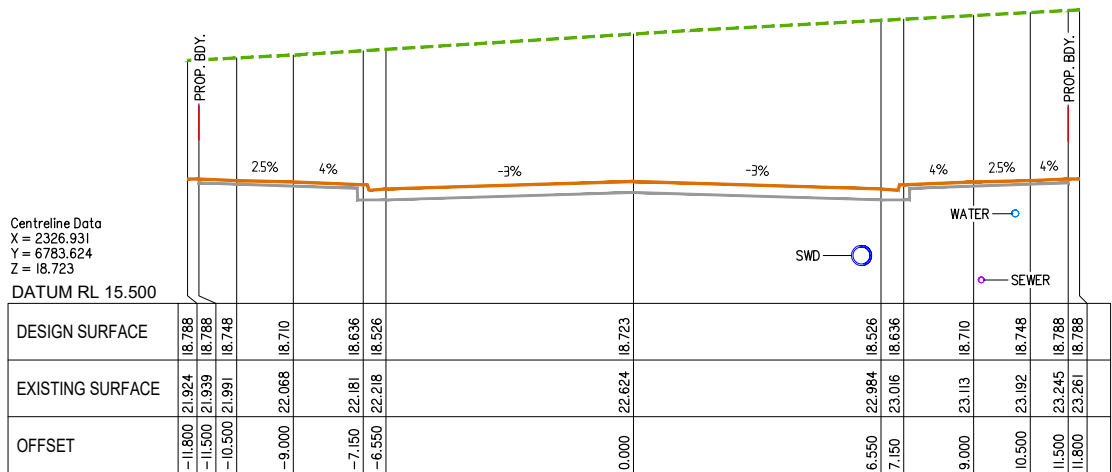
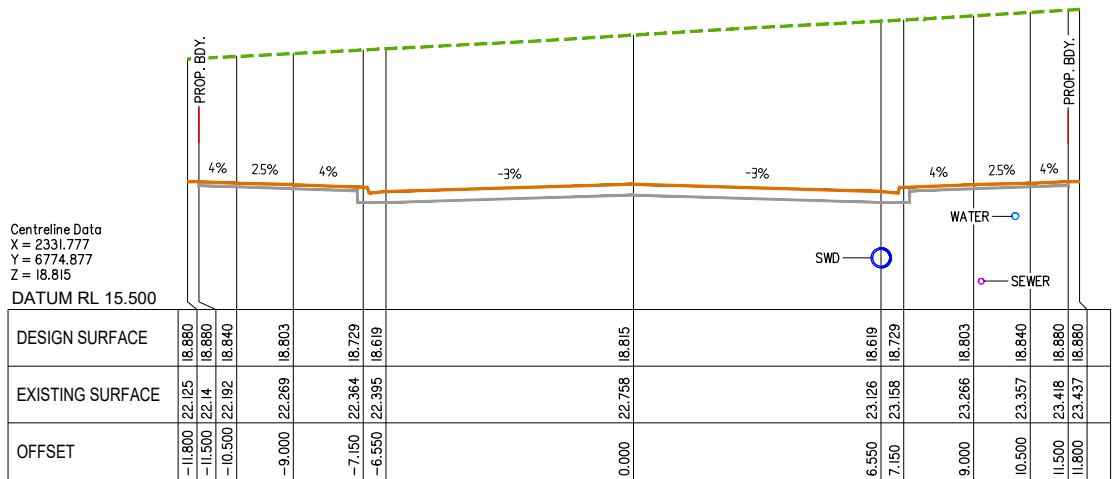
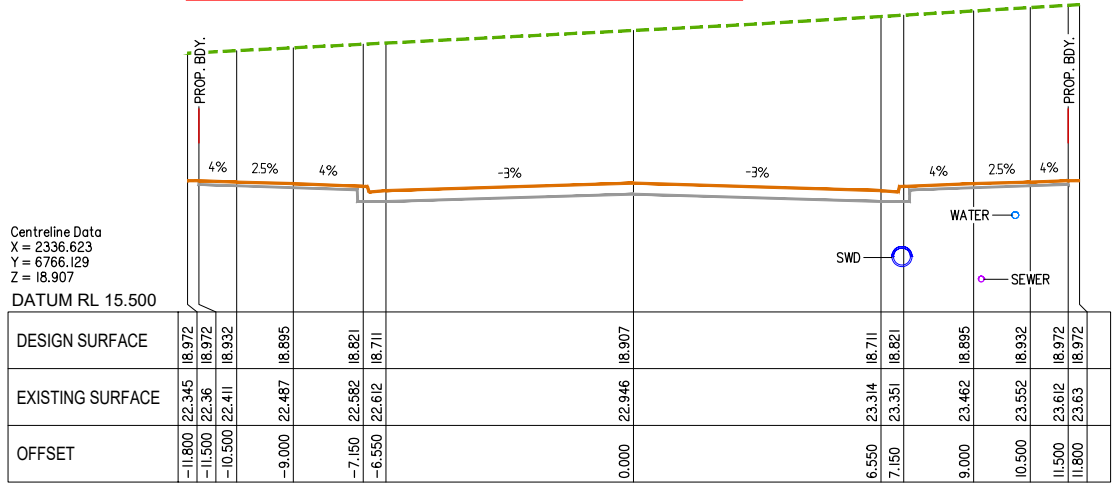
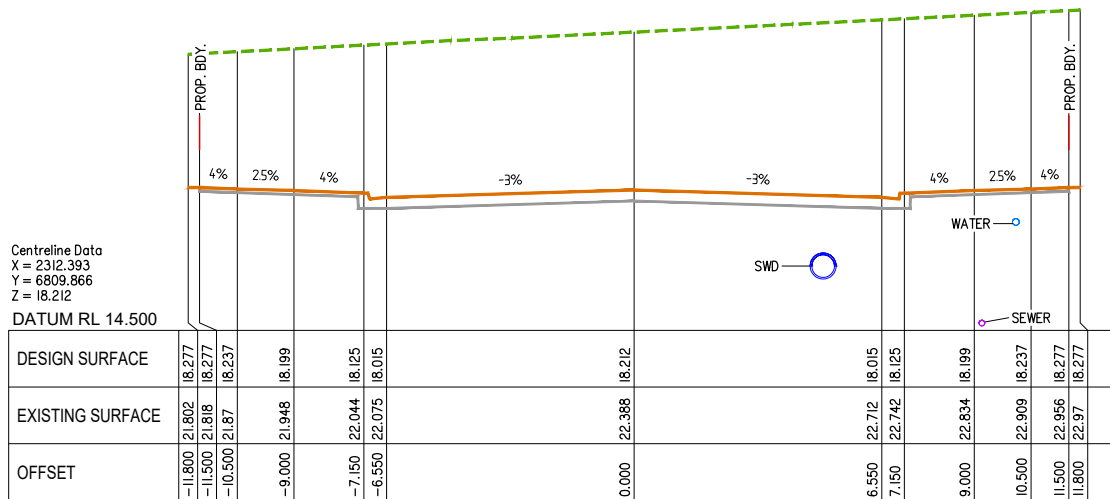
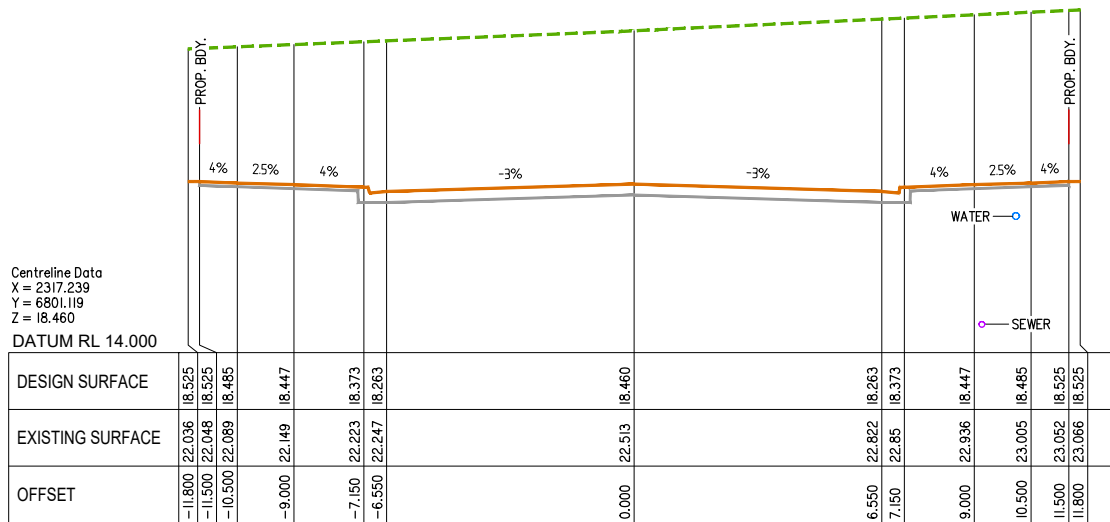
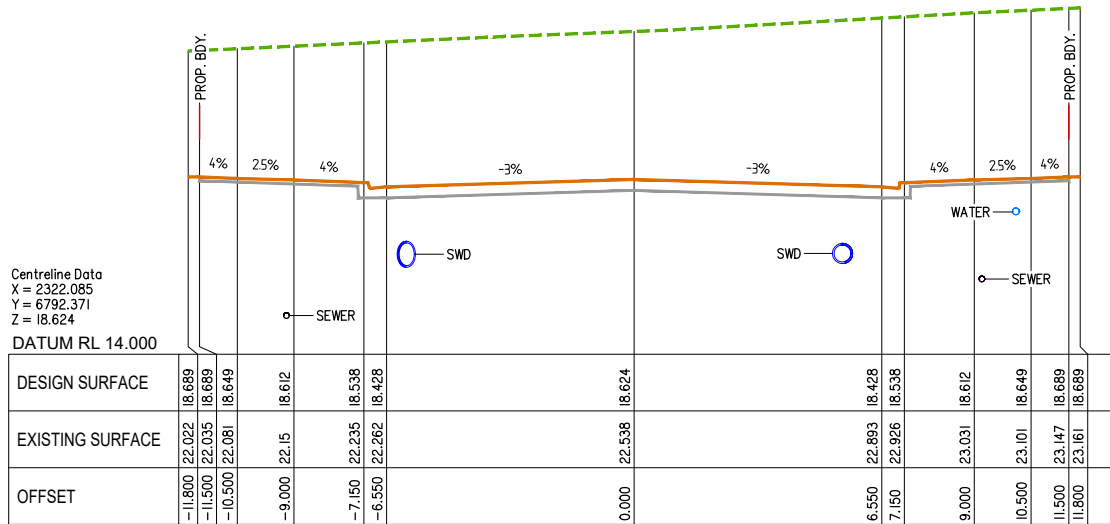
Scale 1:100 - Lengths are in Metres.

Scale at A1: 1:100

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

Drawing No: 5941 ENG OPW1 454  
Rev. No: C





PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
- HOMESTEAD DRIVE  
SHEET 6 OF 14

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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: 02-09-2020

Drawing No:  
5941 ENG OPW1 455

Rev. No:  
C









Project: **VANTAGE YATALA**  
**STAGE 1**

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

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

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[illegible]

SCALE IN METRES

Scale 1:100 - Lengths are in Metres.

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| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

CHAINAGE 440



**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**





Project:

Project: **VANTAGE YATALA**  
**STAGE 1**

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:

Meridian:

Contour Interval:

PSM:

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DRAWING TITLE  
ROAD CROSS SECTIONS  
- HOMESTEAD DRIVE  
SHEET 10 OF 14

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SCALE IN METRES

Scale 1:100 - Lengths are in Metres.

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| Scale at A1: | 1:100 |
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| Designed: | IG |
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| Drafted: | BA |
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| Approved: | MC |
|-----------|----|

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| RPEQ: | 16030 |
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|---------|---------------------------------------------------------------------------------------|
| Signed: |  |
|---------|---------------------------------------------------------------------------------------|

|       |            |
|-------|------------|
| Date: | 02-09-2020 |
|-------|------------|

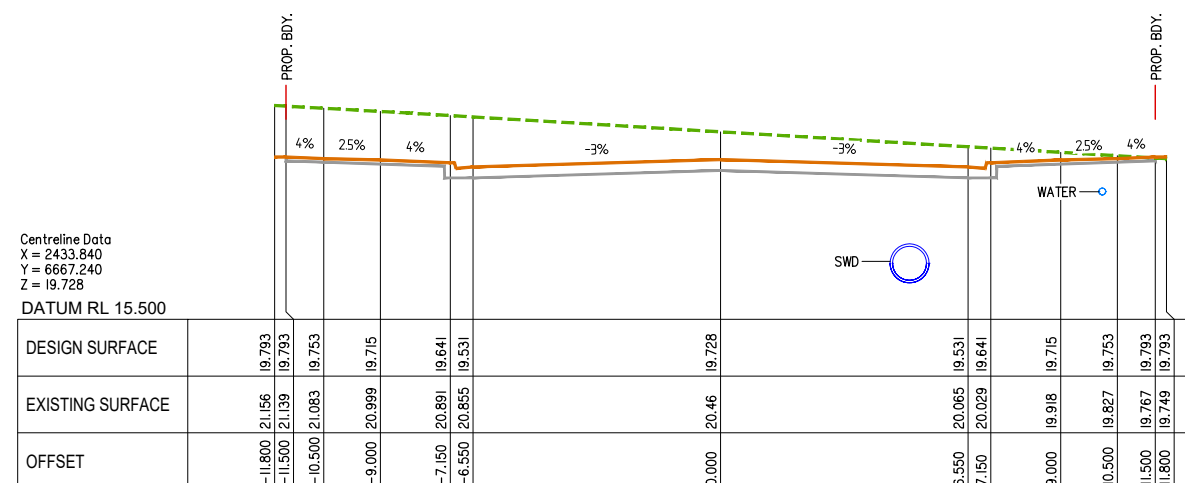
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|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 459 | C        |

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

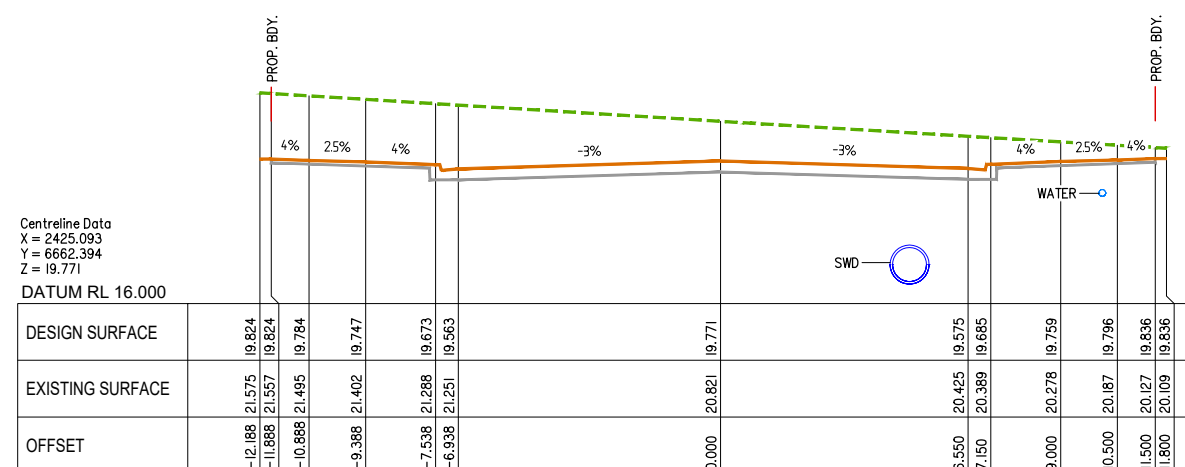
Application No: MIN/2020/541

Dated: 16 October 2020

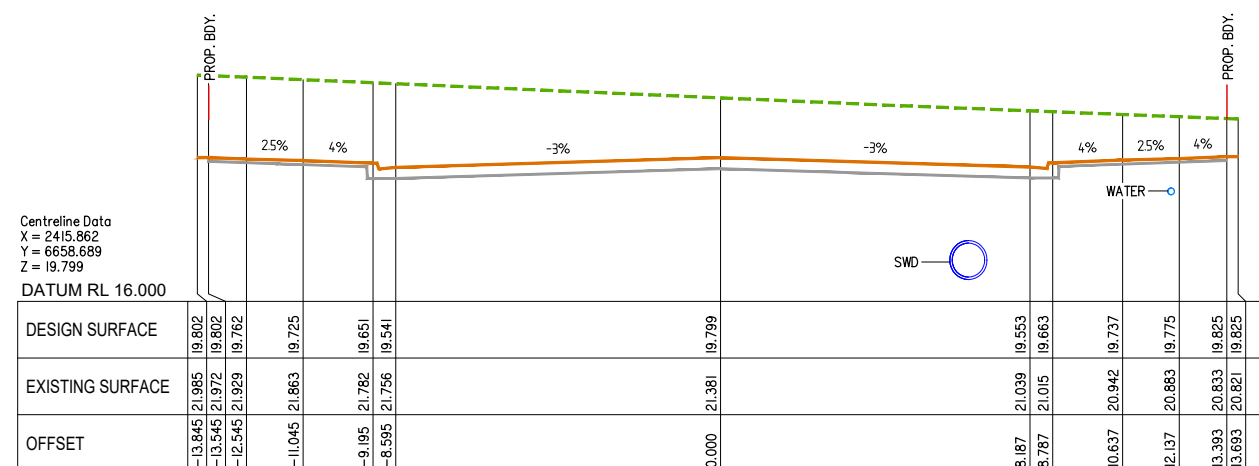
Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



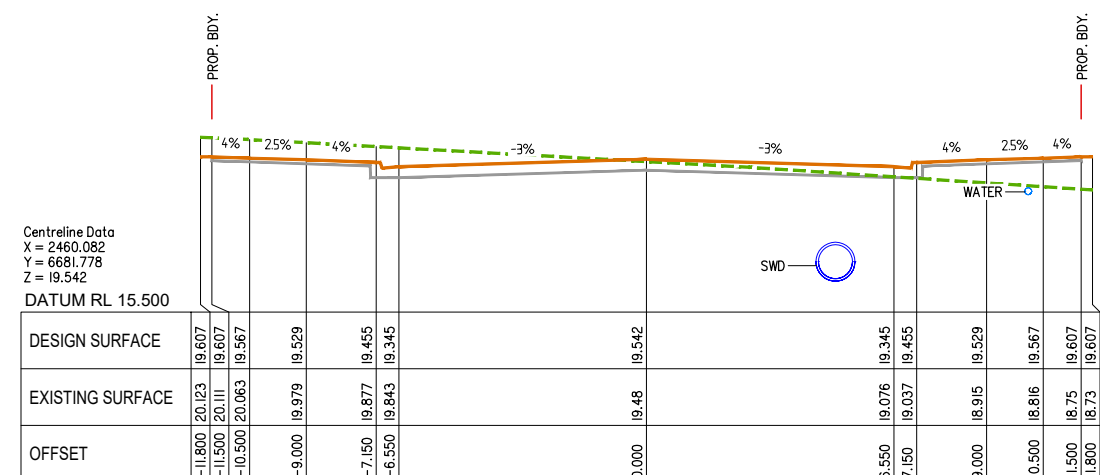
CHAINAGE 470



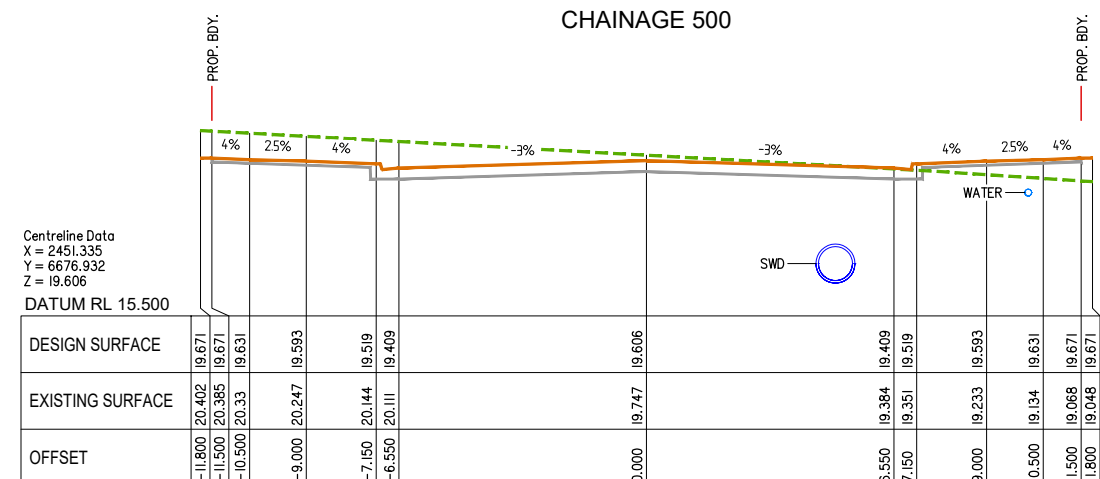
CHAINAGE 460



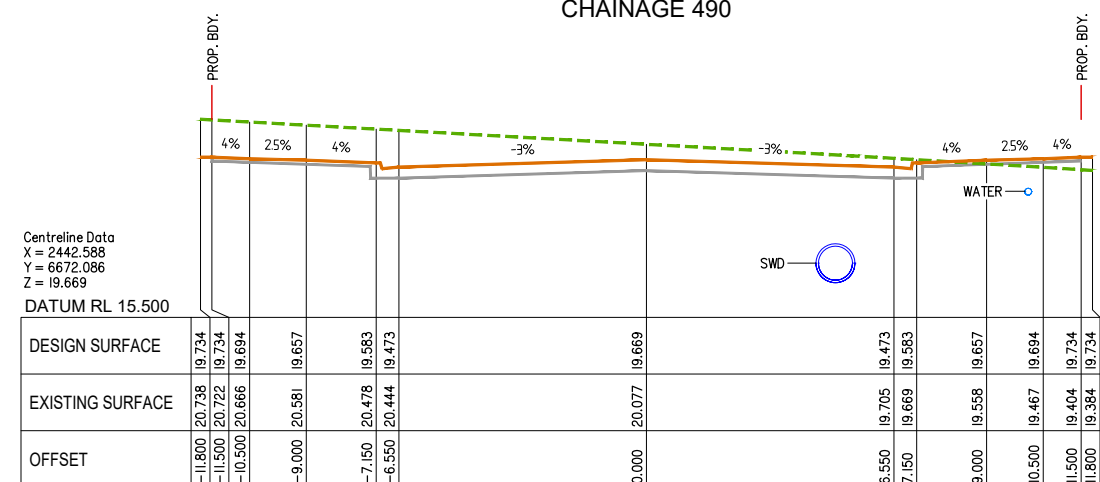
CHAINAGE 450



CHAINAGE 500



CHAINAGE 490



CHAINAGE 480

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 460 | C        |







g:\Projects\5941\engineering\Acad\civil works stage 1\Current\5941 ENG OPW1 450-479.dwg





Project:

VANTAGE YATALA  
STAGE 1

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<br>COUNCIL |
| Level Datum:      | AHD                           |
| Meridian:         | -                             |
| Contour Interval: | -                             |
| PSM:              | -                             |
| RL:               | -                             |

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DRAWING TITLE  
ROAD CROSS SECTIONS  
- HOMESTEAD DRIVE  
SHEET 14 OF 14

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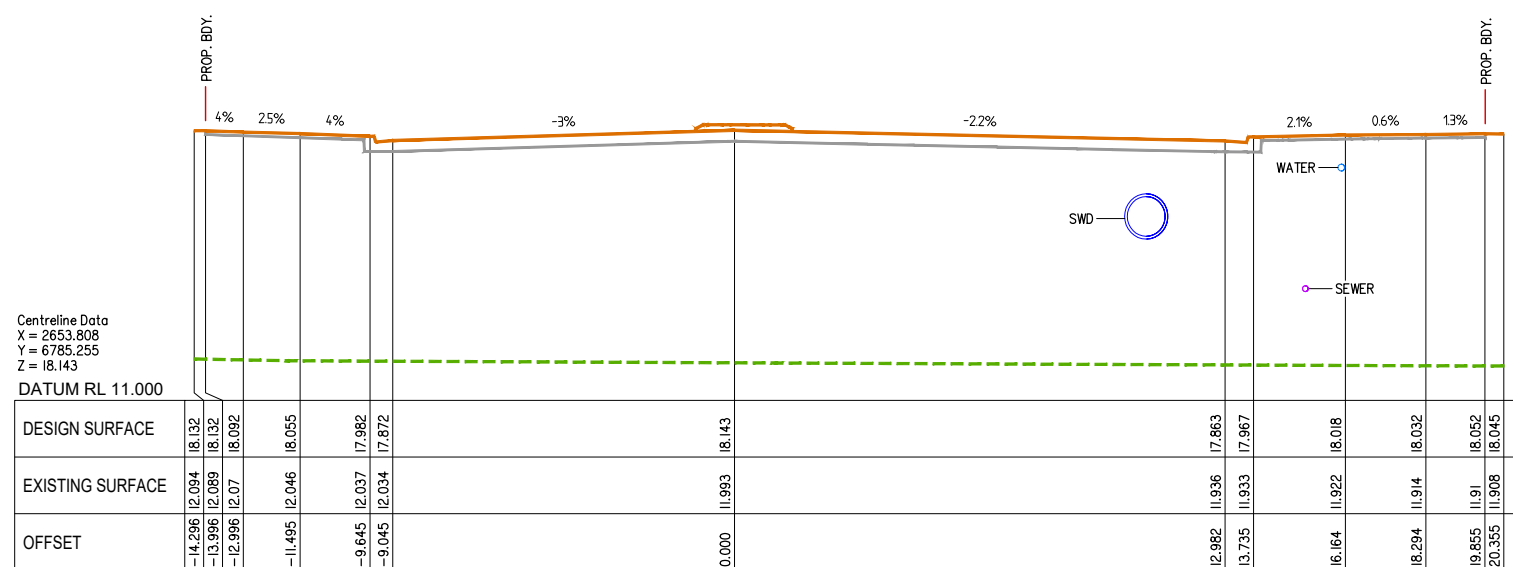
Scale 1:100 - Lengths are in Metres.



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| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

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| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 463 | C        |



CHAINAGE 720

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**







**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

## Project:

## VANTAGE YATALA STAGE 1

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  
- EASTRIDGE STREET  
SHEET 3 OF 8

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| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MC |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MC |
| Issue | Date       | Description             | DRN | CH |

SCALE IN METRES



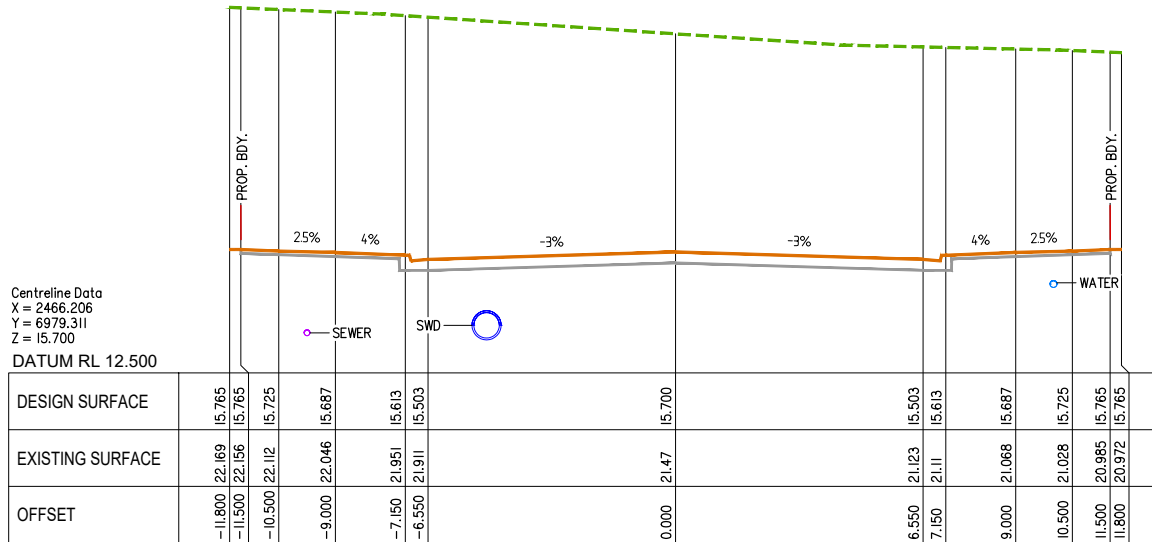
Scale at A1: 1:100

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| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

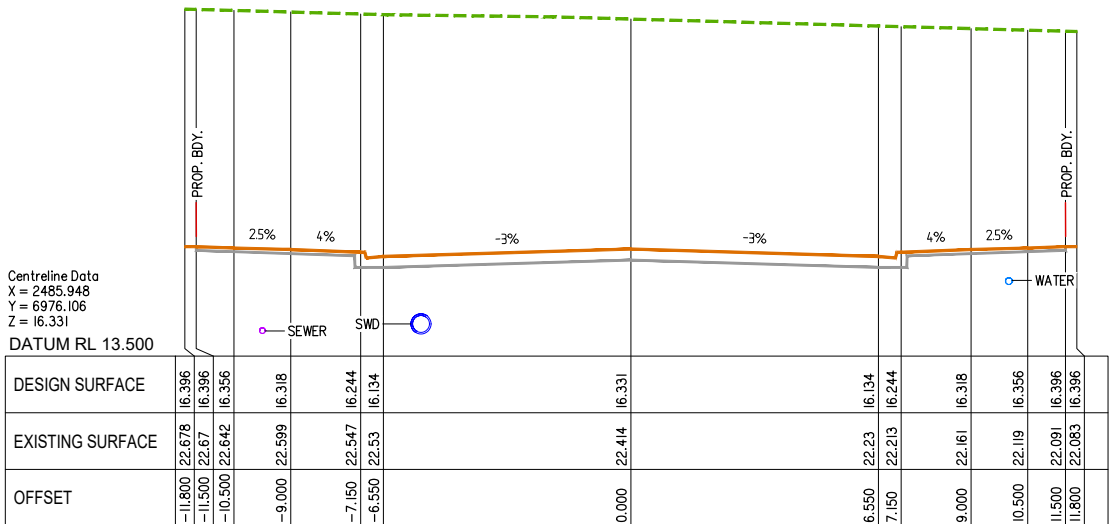
Drawing No:  
5941 ENG OPW1 466

Rev. No:  
B

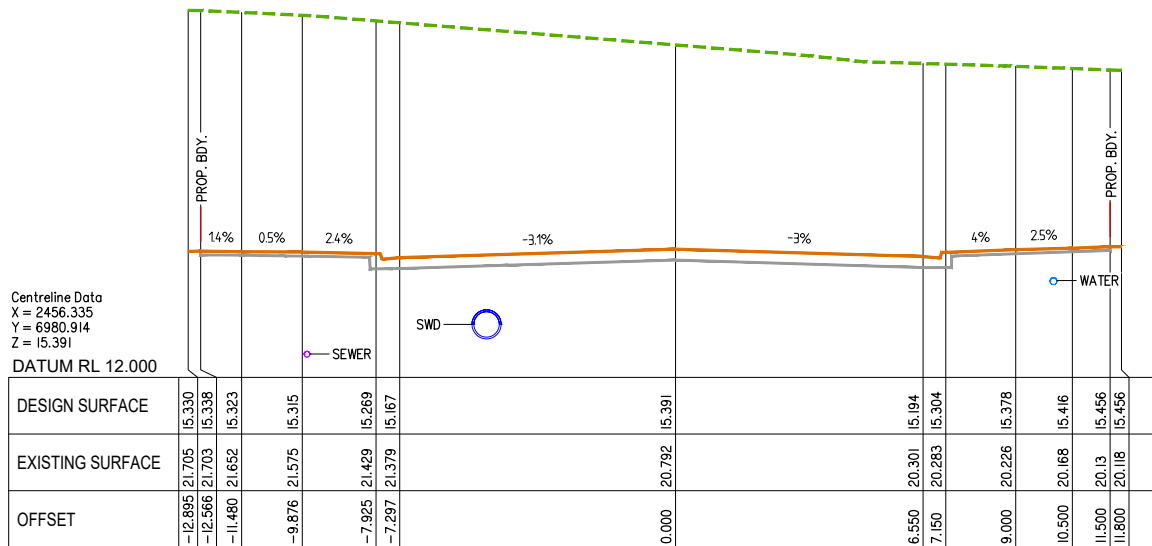




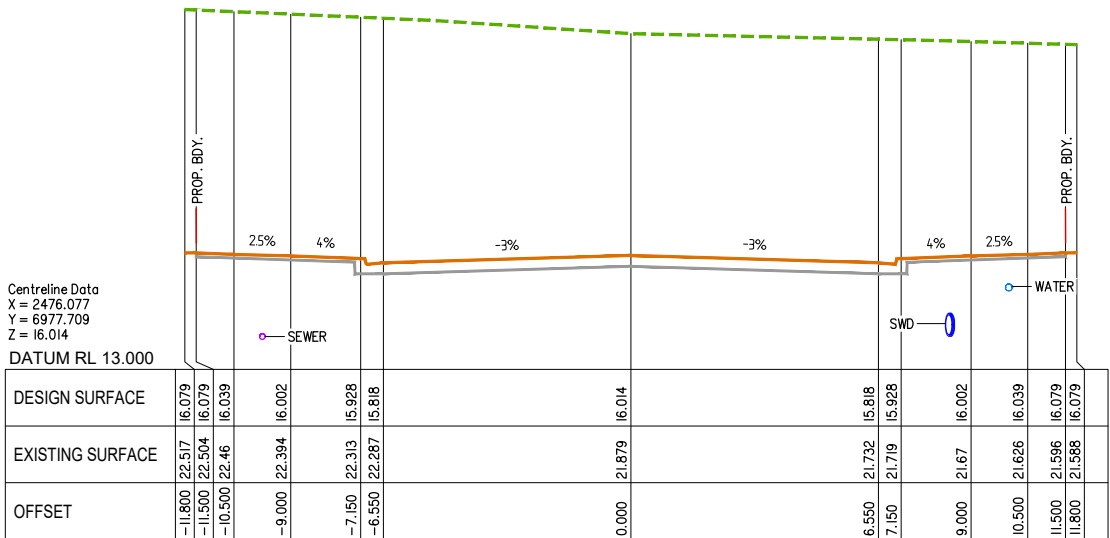
CHAINAGE 240



CHAINAGE 260



CHAINAGE 230



CHAINAGE 250

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



planning | environment | landscape | engineering | survey  
T: 3807 3333 | F: 3287 5461 | www.gassman.com.au  
Gold Coast & Logan | 176 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
- EASTRIDGE STREET  
SHEET 4 OF 8

|       |            |                         |     |     |
|-------|------------|-------------------------|-----|-----|
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| 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: 02-09-2020

Drawing No:  
5941 ENG OPW1 467

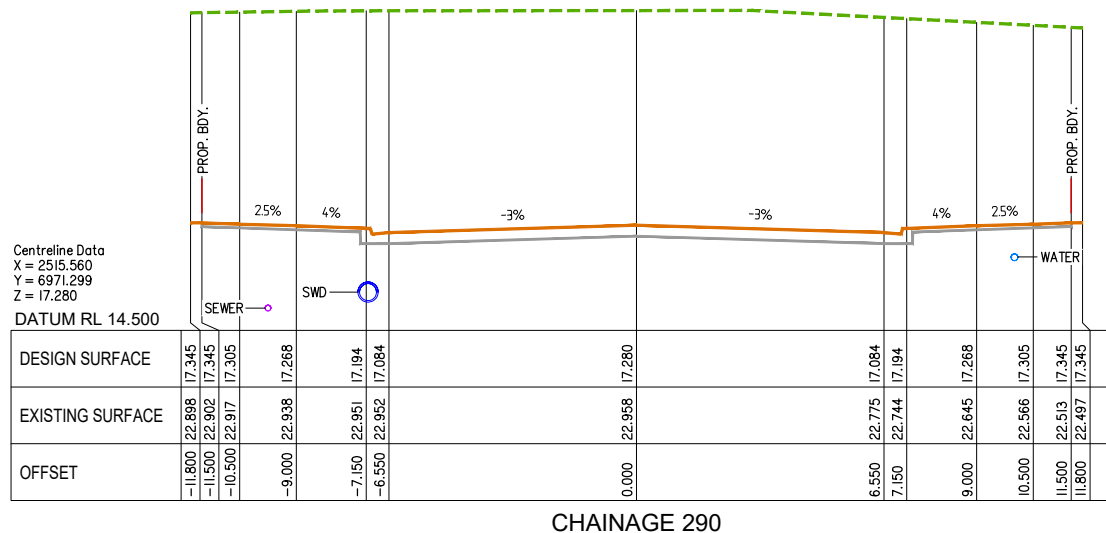
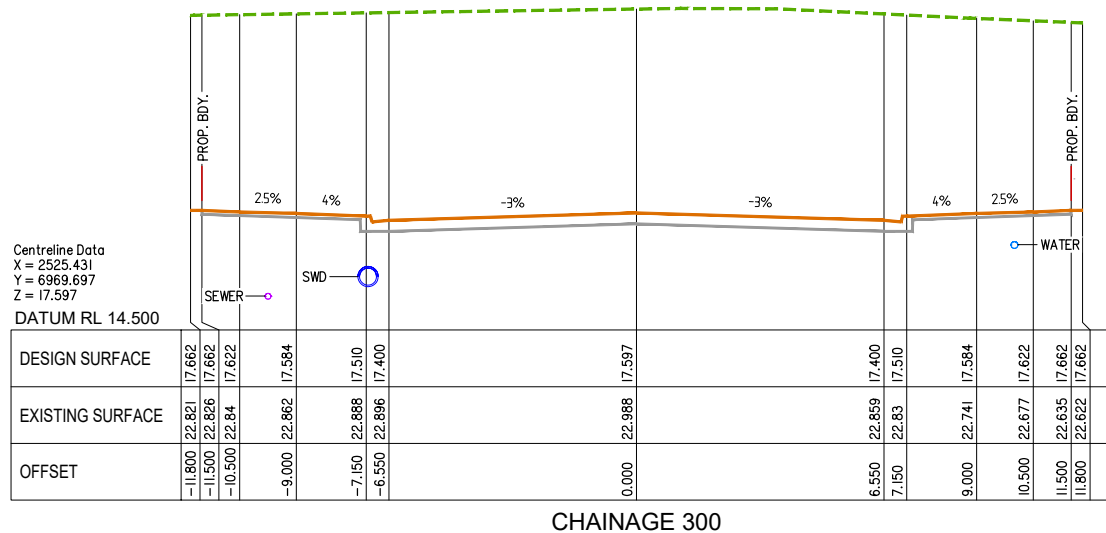
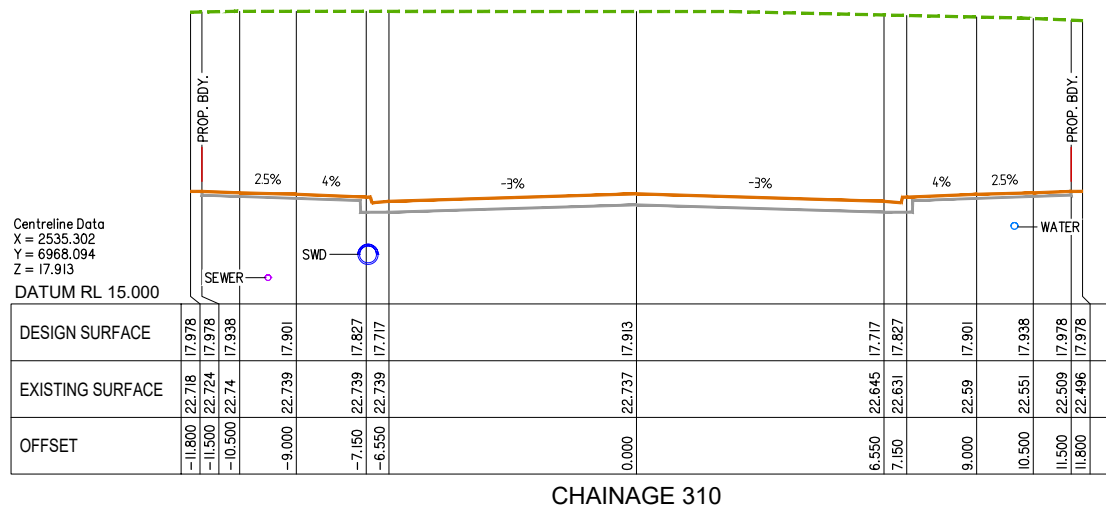
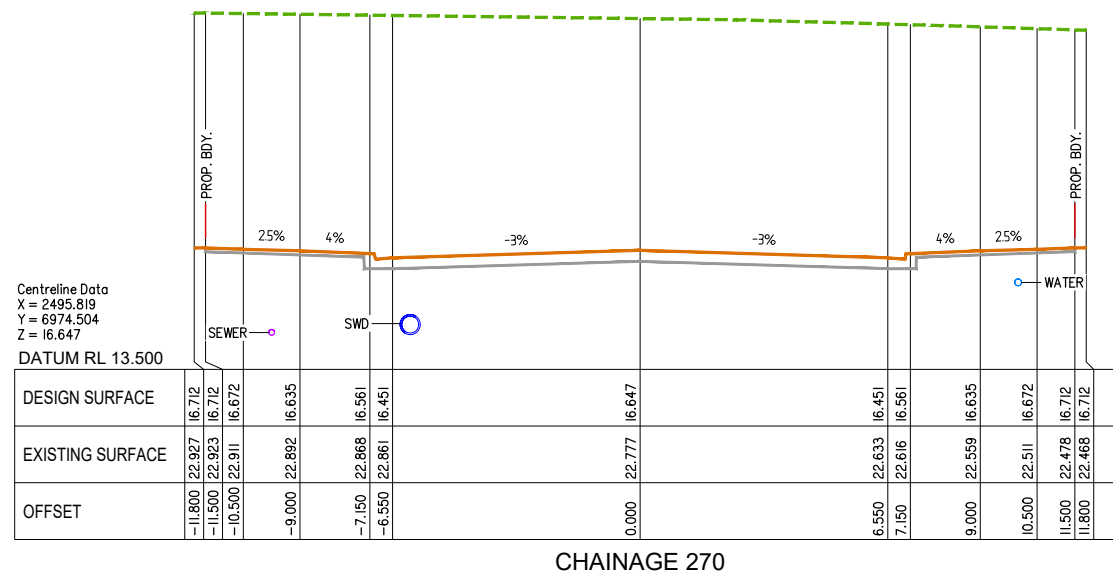
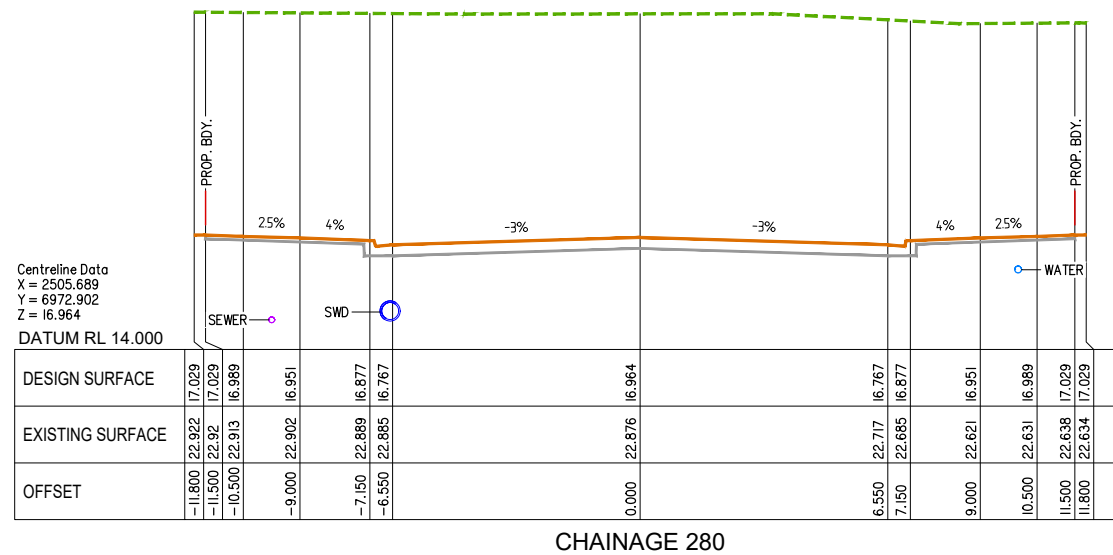
Rev. No:  
B

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
- EASTRIDGE STREET  
SHEET 5 OF 8

|       |            |                         |     |     |
|-------|------------|-------------------------|-----|-----|
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MG  |
| Issue | Date       | Description             | DRN | CHK |

SCALE IN METRES

Scale 1:100 - Lengths are in Metres.

Scale at A1: 1:100

Designed: IG

Drafted: BA

Approved: MG

RPEQ: 16939

Signed:

Date: 02-09-2020

Drawing No:  
5941 ENG OPW1 468

Rev. No:  
B

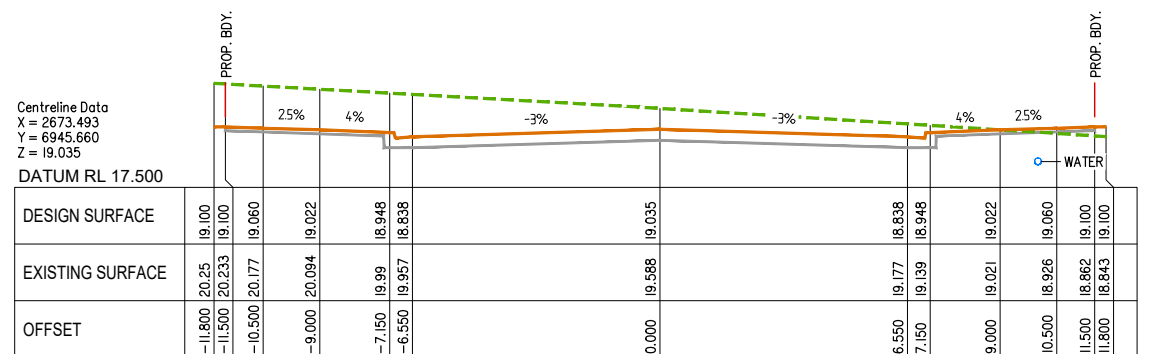








|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 471 | B        |



**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**











Project:

VANTAGE YATALA  
STAGE 1

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  
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DRAWING TITLE  
ROAD CROSS SECTIONS  
- FAIRWAY STREET  
SHEET 4 OF 6

|       |            |  |                              |     |     |
|-------|------------|--|------------------------------|-----|-----|
|       |            |  |                              |     |     |
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|       |            |  |                              |     |     |
| G     | 02-09-2020 |  | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 |  | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 |  | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       |  | Description                  | DRN | CHK |

SCALE IN METRES

Scale 1:100 - Lengths are in Metres.



Scale at A1: 1:100

|           |    |
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| 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: |  |
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|       |            |
|-------|------------|
| Date: | 02-09-2020 |
|-------|------------|

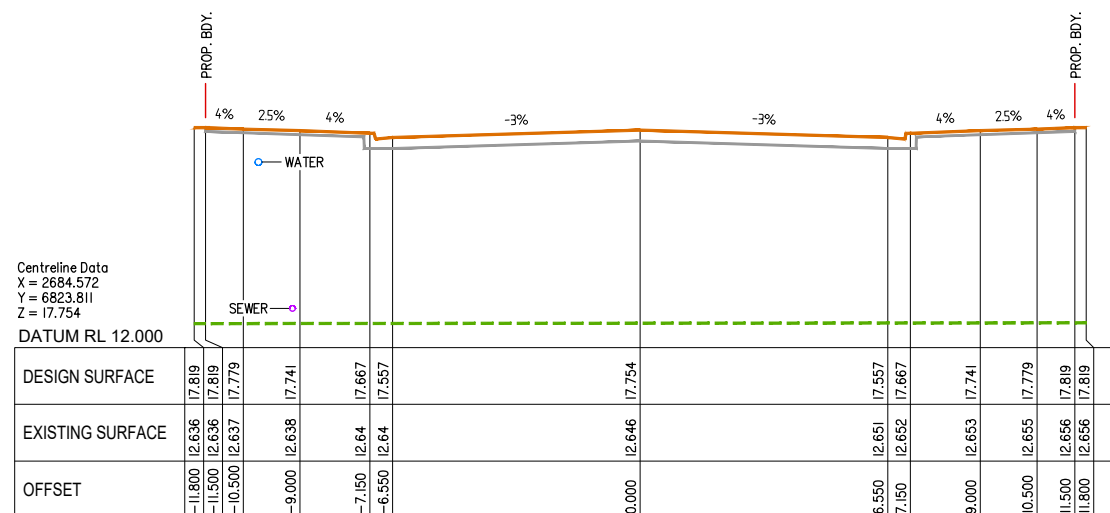
|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 475 | C        |

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

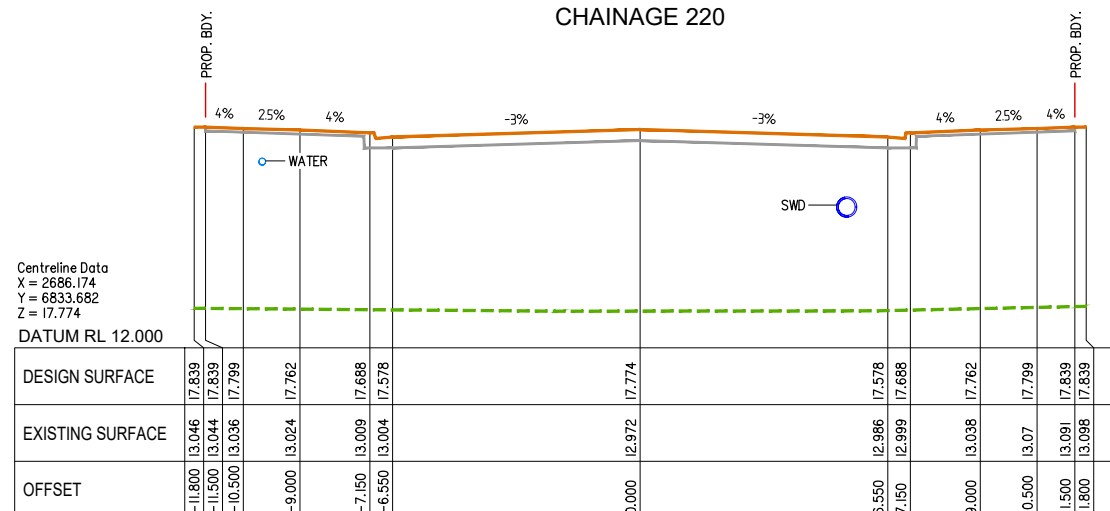
Application No: MIN/2020/541

Dated: 16 October 2020

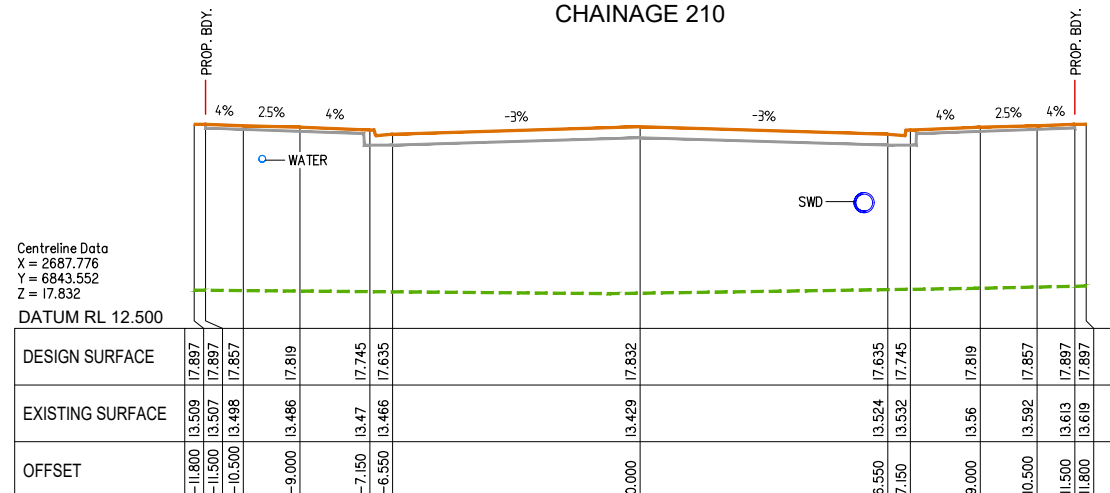
**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



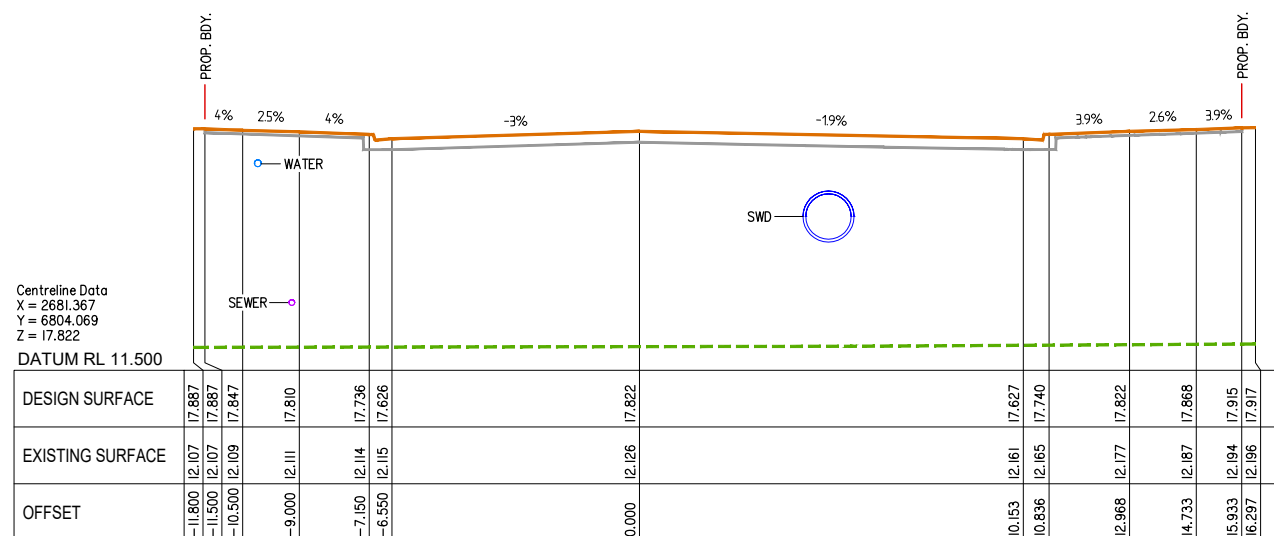
CHAINAGE 220



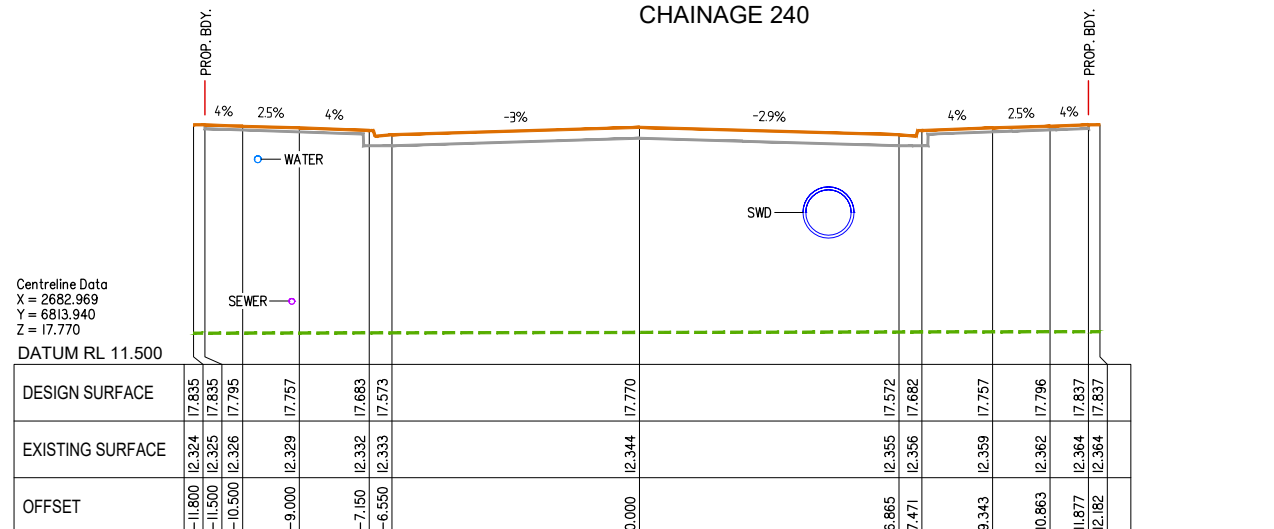
CHAINAGE 210



CHAINAGE 200



CHAINAGE 240



CHAINAGE 230



THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

RPD:

|                   |                               |
|-------------------|-------------------------------|
| Lot:              | 501                           |
| Plan:             | SP295994                      |
| Local Authority:  | CITY OF GOLD COAST<br>COUNCIL |
| Level Datum:      | AHD                           |
| Meridian:         | -                             |
| Contour Interval: | -                             |
| PSM:              | -                             |
| RI:               | -                             |

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE  
ROAD CROSS SECTIONS  
- FAIRWAY STREET  
SHEET 5 OF 6

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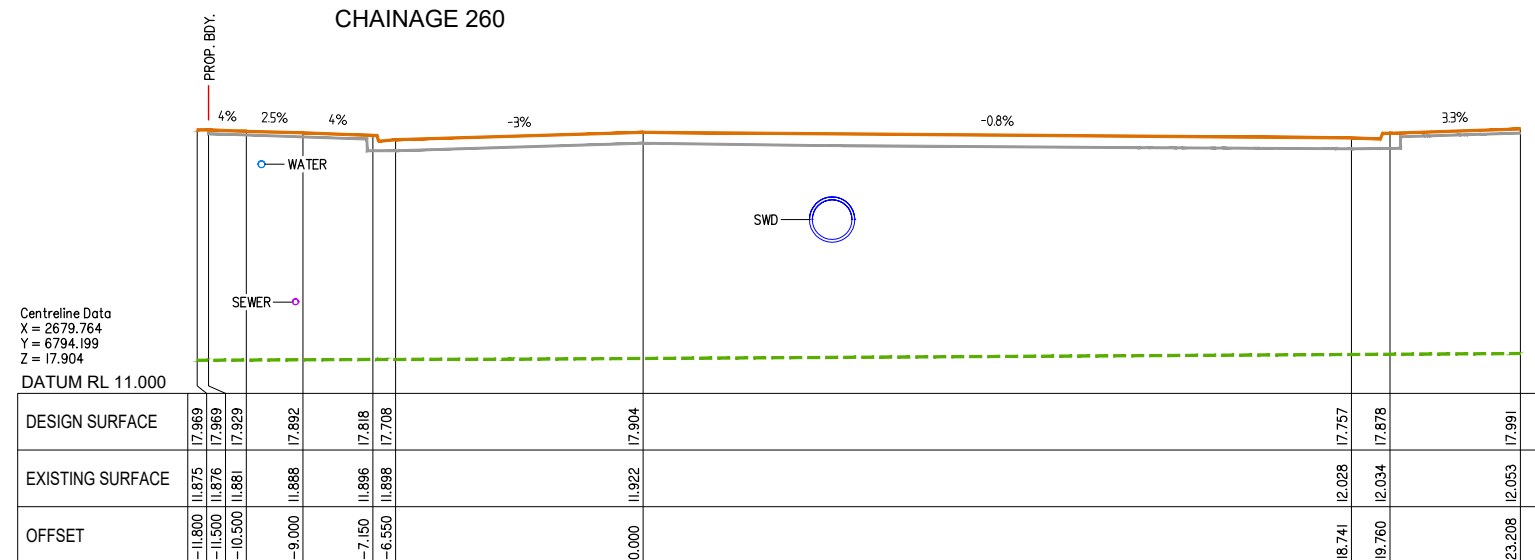
SCALE IN METRES



|              |       |
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| Scale at A1: | 1:100 |
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| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 476 | C        |



PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**









### Project:

## VANTAGE YATALA STAGE 1

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 -  
EMERI STREET EXTENSION  
SHEET 2 OF 2

|       |            |                         |     |    |
|-------|------------|-------------------------|-----|----|
|       |            |                         |     |    |
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|       |            |                         |     |    |
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|       |            |                         |     |    |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MC |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MC |
| Issue | Date       | Description             | DRN | CH |

SCALE IN METRES

Scale 1:100 - Lengths are in Metres.



Scale at A1: 1:100

|           |    |
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| Designed: | IG |
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| Drafted: | BA |
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| Approved: | MC |
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| RPEQ: | 16939 |
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| Signed: |  |
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| Date: | 02-09-2020 |
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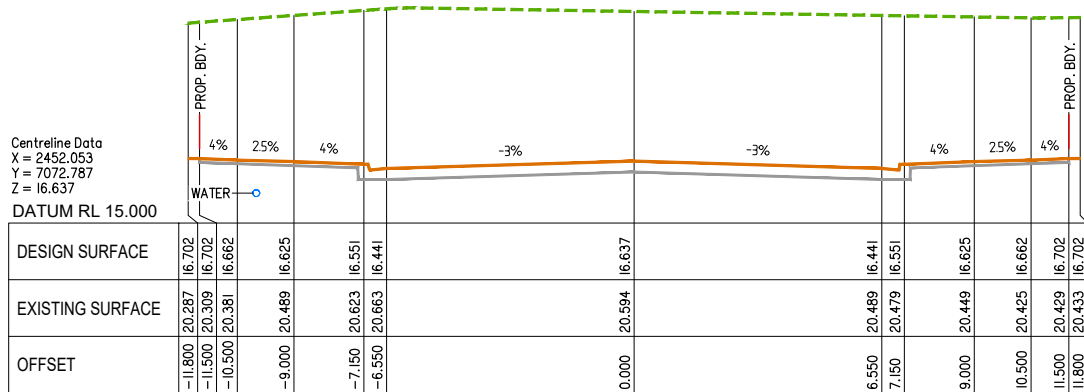
|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 479 | B        |

## PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

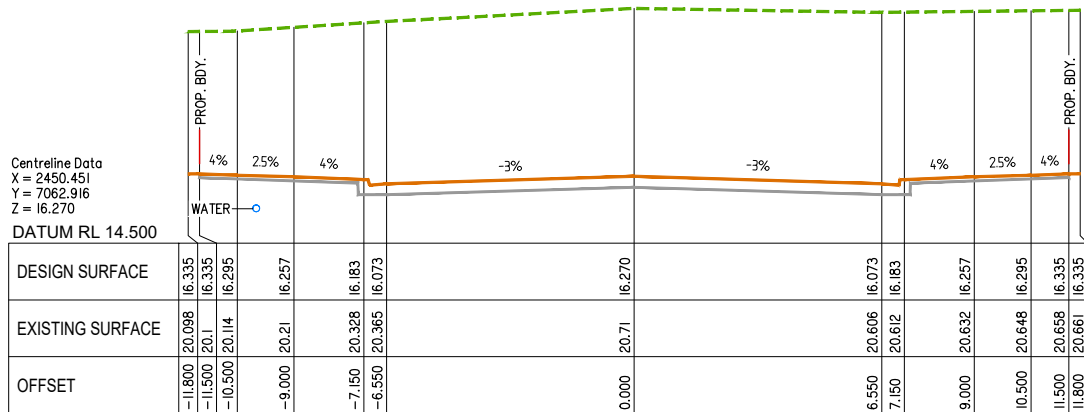
Application No: MIN/2020/541

**Dated:** 16 October 2020

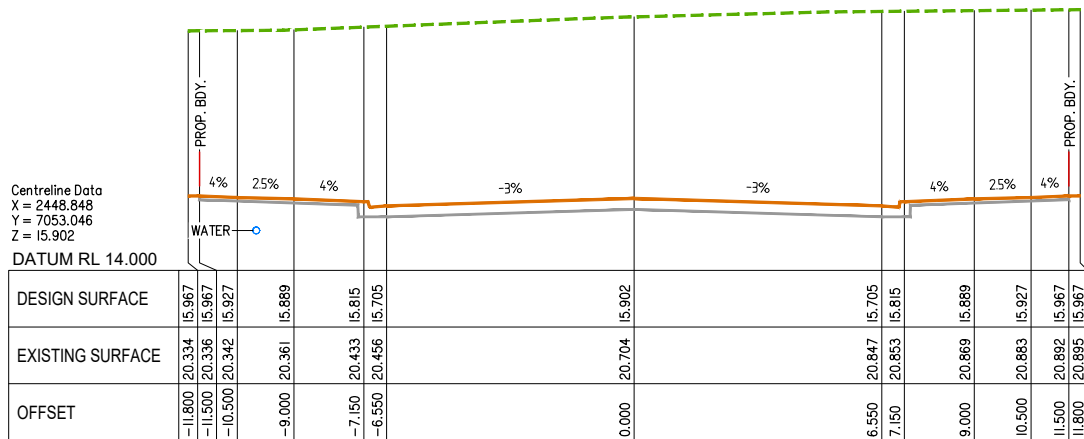
**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



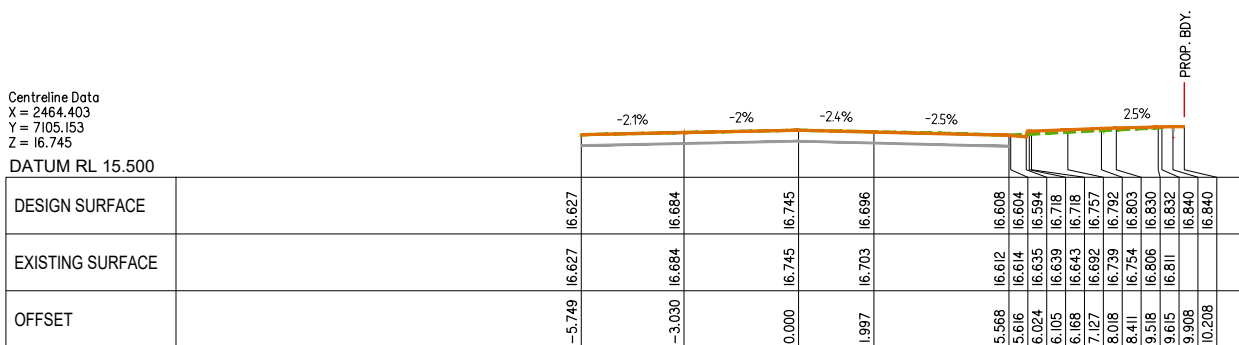
CHAINAGE 90



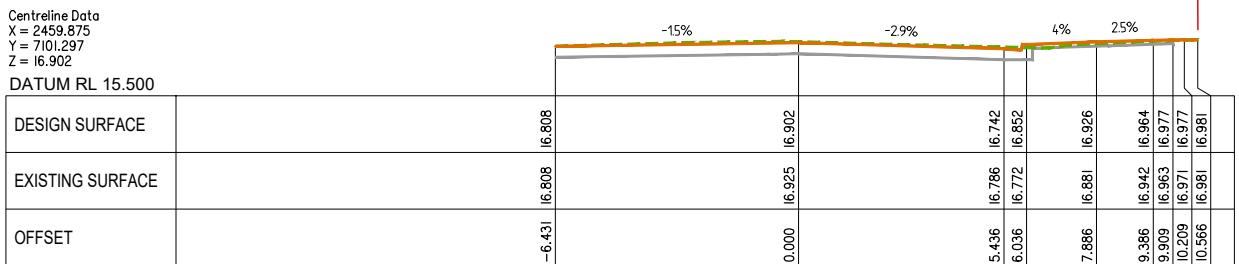
CHAINAGE 80



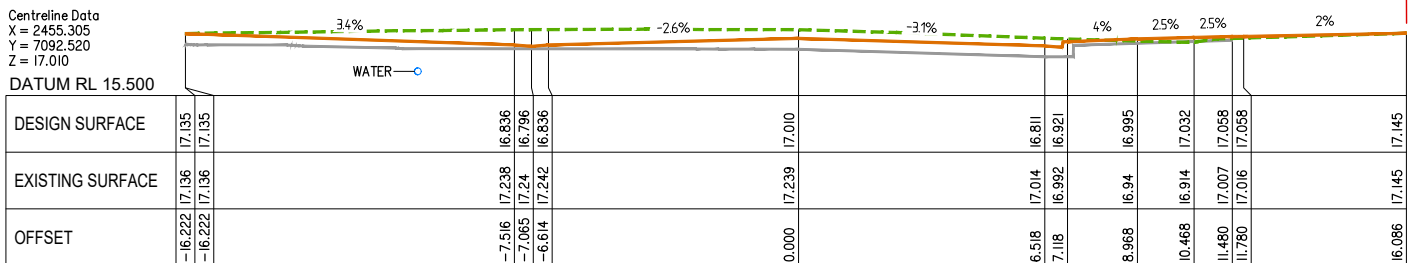
CHAINAGE 70



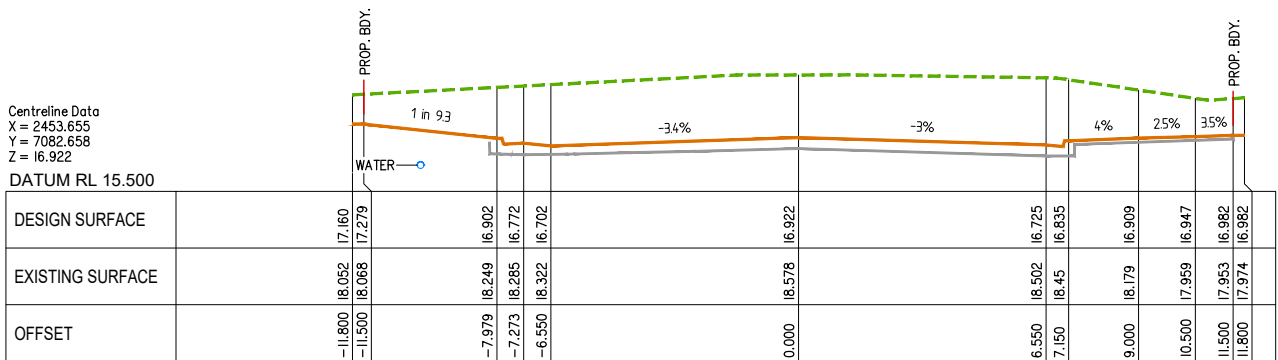
CHAINAGE 125.961



CHAINAGE 120



CHAINAGE 110



CHAINAGE 100





Project: **VANTAGE YATALA**  
**STAGE 1**

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

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

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KARB ISLAND SETOUT  
DETAILS SHEET 1 OF 2

|   |            |                              |     |     |
|---|------------|------------------------------|-----|-----|
|   |            |                              |     |     |
|   |            |                              |     |     |
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|   |            |                              |     |     |
| C | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MO  |
| B | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MO  |
| A | 01-05-2020 | ORIGINAL ISSUE               | BA  | MO  |
|   | Date       | Description                  | DRN | CHI |

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| Scale at A1: | 1:100 |
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| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 480 | C        |



| KERB ISLAND KI 6 SETOUT TABLE |          |          |          |        |               |            |          |              |
|-------------------------------|----------|----------|----------|--------|---------------|------------|----------|--------------|
| PT                            | CHAINAGE | EASTING  | NORTHING | HEIGHT | BEARING       | RAD/SPIRAL | A.LENGTH | DEFL.ANGLE   |
| IP 1                          | 0.000    | 2205.315 | 7003.677 | 7.856  |               |            |          |              |
| TC                            | 0.800    | 2204.616 | 7003.289 | 7.850  | 240°59'55.12" |            |          |              |
| IP 2                          | 1.275    | 2204.085 | 7002.995 | 7.848  |               | R = -0.600 | 0.949    | 90°37'26.61" |
| CT                            | 1.749    | 2204.385 | 7002.467 | 7.867  | 150°22'28.51" |            |          |              |
| TC                            | 4.799    | 2205.893 | 6999.816 | 8.038  | 150°22'28.51" |            |          |              |
|                               | 5.000    | 2206.009 | 6999.652 | 8.049  | 138°52'45.56" |            |          |              |
| IP 3                          | 5.585    | 2206.387 | 6998.946 | 8.085  |               | R = -1.000 | 1.571    | 90°00'00.00" |
| CC                            | 6.370    | 2207.256 | 6999.441 | 8.122  | 60°22'28.51"  |            |          |              |
| IP 4                          | 7.156    | 2208.126 | 6999.935 | 8.085  |               | R = -1.000 | 1.571    | 90°00'00.00" |
| CT                            | 7.941    | 2207.631 | 7000.804 | 8.035  | 330°22'28.51" |            |          |              |
|                               | 10.000   | 2206.614 | 7002.594 | 7.921  | 330°22'28.51" |            |          |              |
| TC                            | 10.983   | 2206.128 | 7003.448 | 7.866  | 330°22'28.51" |            |          |              |
| IP 5                          | 11.451   | 2205.834 | 7003.964 | 7.849  |               | R = -0.600 | 0.936    | 89°22'33.35" |
| CT                            | 11.919   | 2205.315 | 7003.677 | 7.856  | 240°59'55.12" |            |          |              |

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



**FRASERS**  
PROPERTY

FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

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

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

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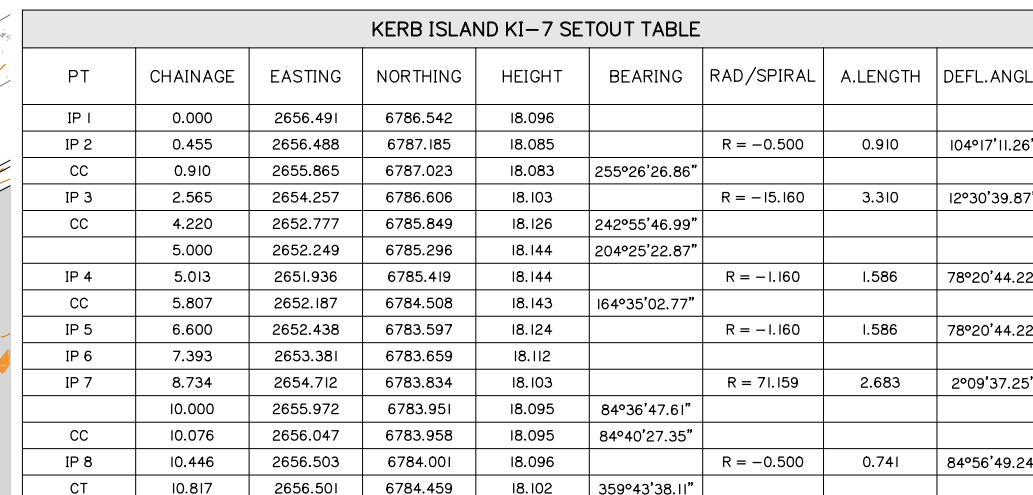
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KERB ISLAND SETOUT  
DETAILS SHEET 2 OF 2

|       |            |                              |     |     |  |
|-------|------------|------------------------------|-----|-----|--|
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |  |
| ISSUE | Date       | Description                  | DRN | CHK |  |

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 481 | C        |



PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

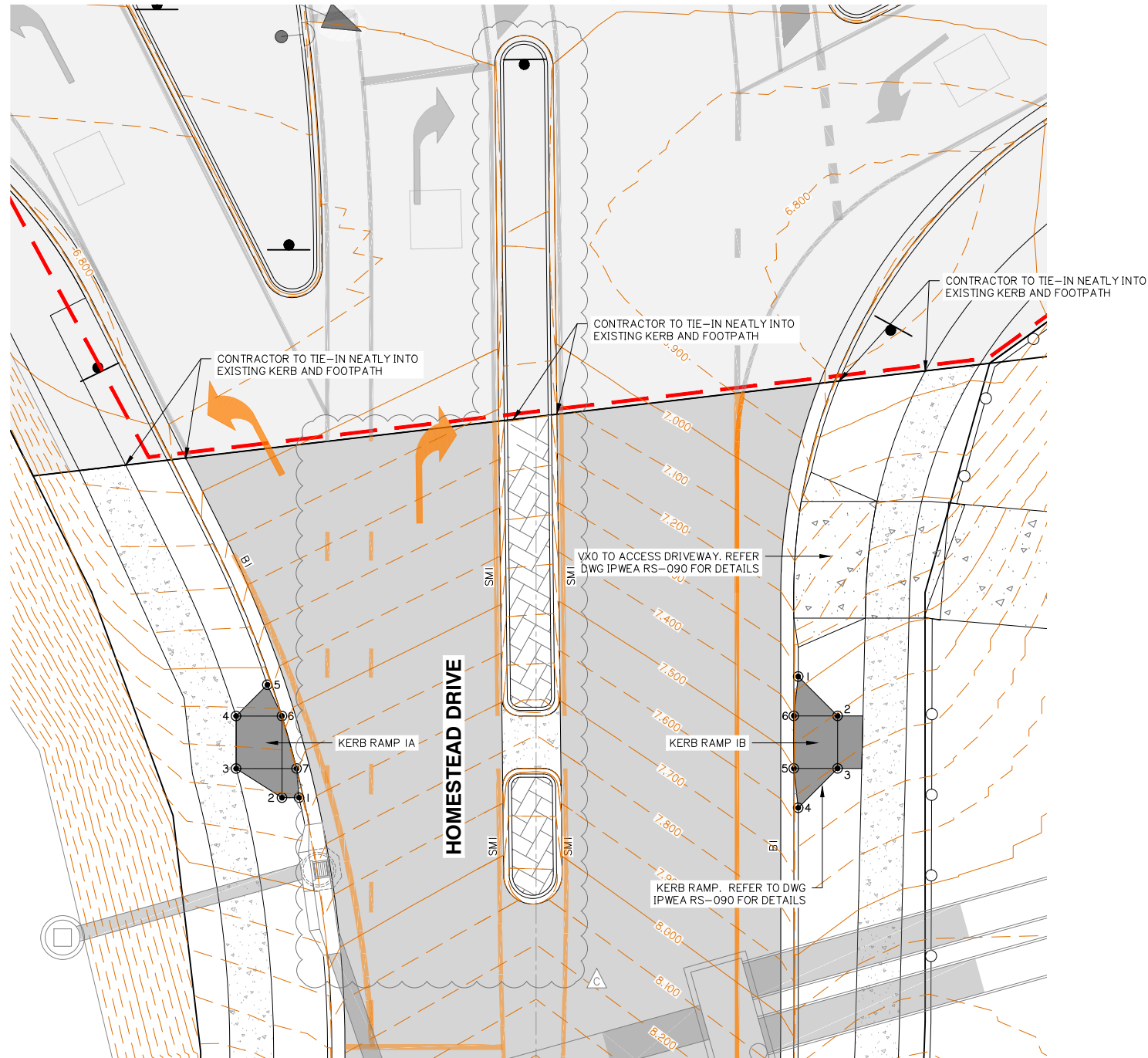
Development shall comply with the  
conditions of approval as detailed in the  
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Scheme, Local Laws and Planning Policies

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



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 |

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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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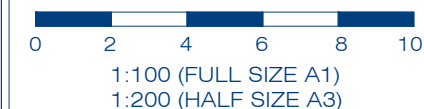
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DRAWING TITLE

ROAD INTERSECTION  
DETAILS SHEET 1 OF 8

| Issue | Date       | Description                  | DRN | CHK |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |

SCALE IN METRES

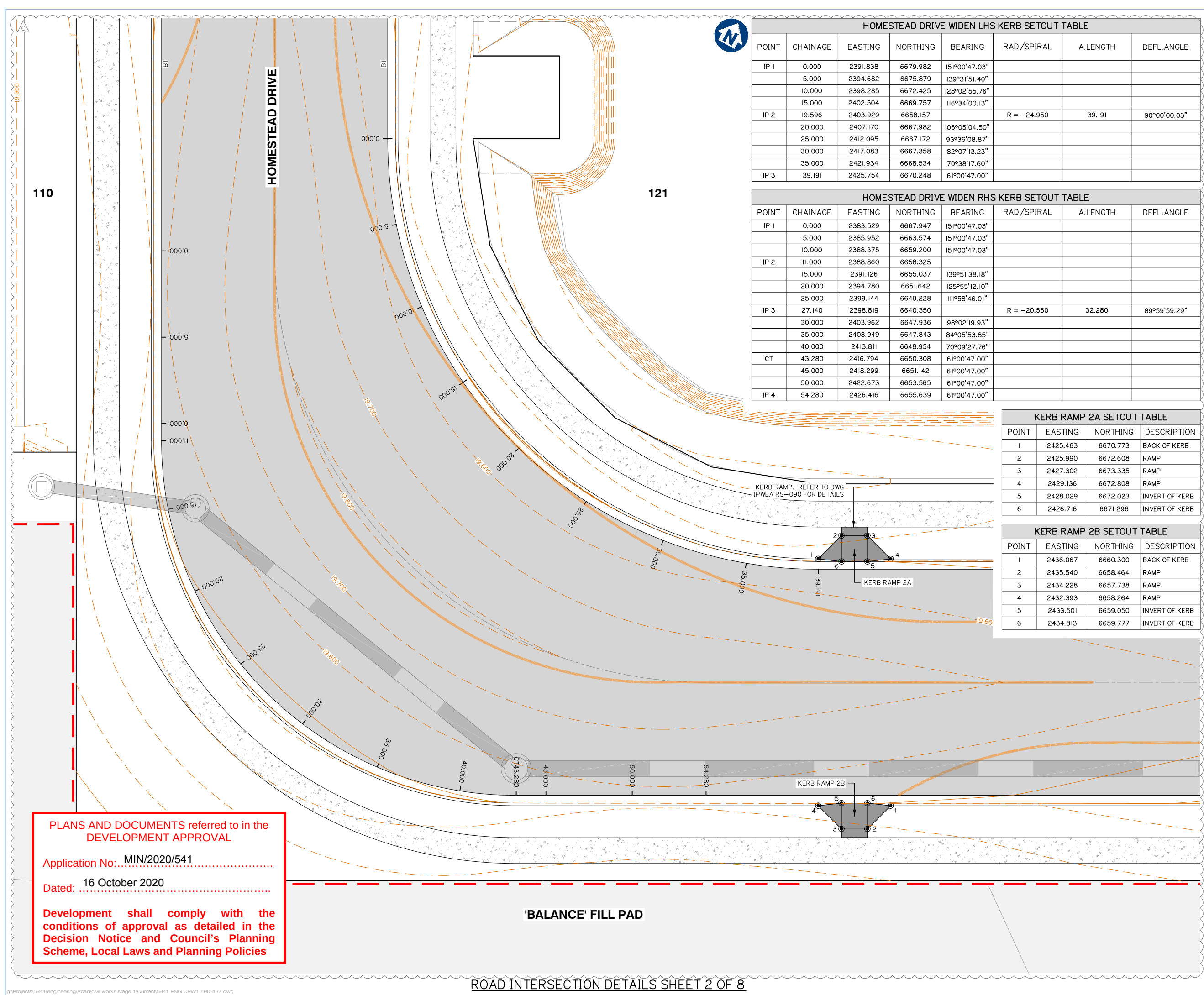


Scale at A1: 1:100

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

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





| HOMESTEAD 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"  |             |          |              |

| HOMESTEAD 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" |             |          |              |
|                                             | 11.000   | 2388.860 | 6658.325 |               |             |          |              |
| IP 2                                        | 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" |             |          |              |
|                                             | 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"  |             |          |              |
| IP 3                                        | 35.000   | 2408.949 | 6647.843 | 84°05'53.85"  |             |          |              |
|                                             | 40.000   | 2413.811 | 6648.954 | 70°09'27.76"  |             |          |              |
|                                             | 43.280   | 2416.794 | 6650.308 | 61°00'47.00"  |             |          |              |
|                                             | 45.000   | 2418.299 | 6651.142 | 61°00'47.00"  |             |          |              |
| CT                                          | 50.000   | 2422.673 | 6653.565 | 61°00'47.00"  |             |          |              |
|                                             | 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 |

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



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Client:



FRASERS  
PROPERTY

FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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 INTERSECTION  
DETAILS SHEET 2 OF 8

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

SCALE IN METRES

0 2 4 6 8 10

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

Scale at A1: 1:100

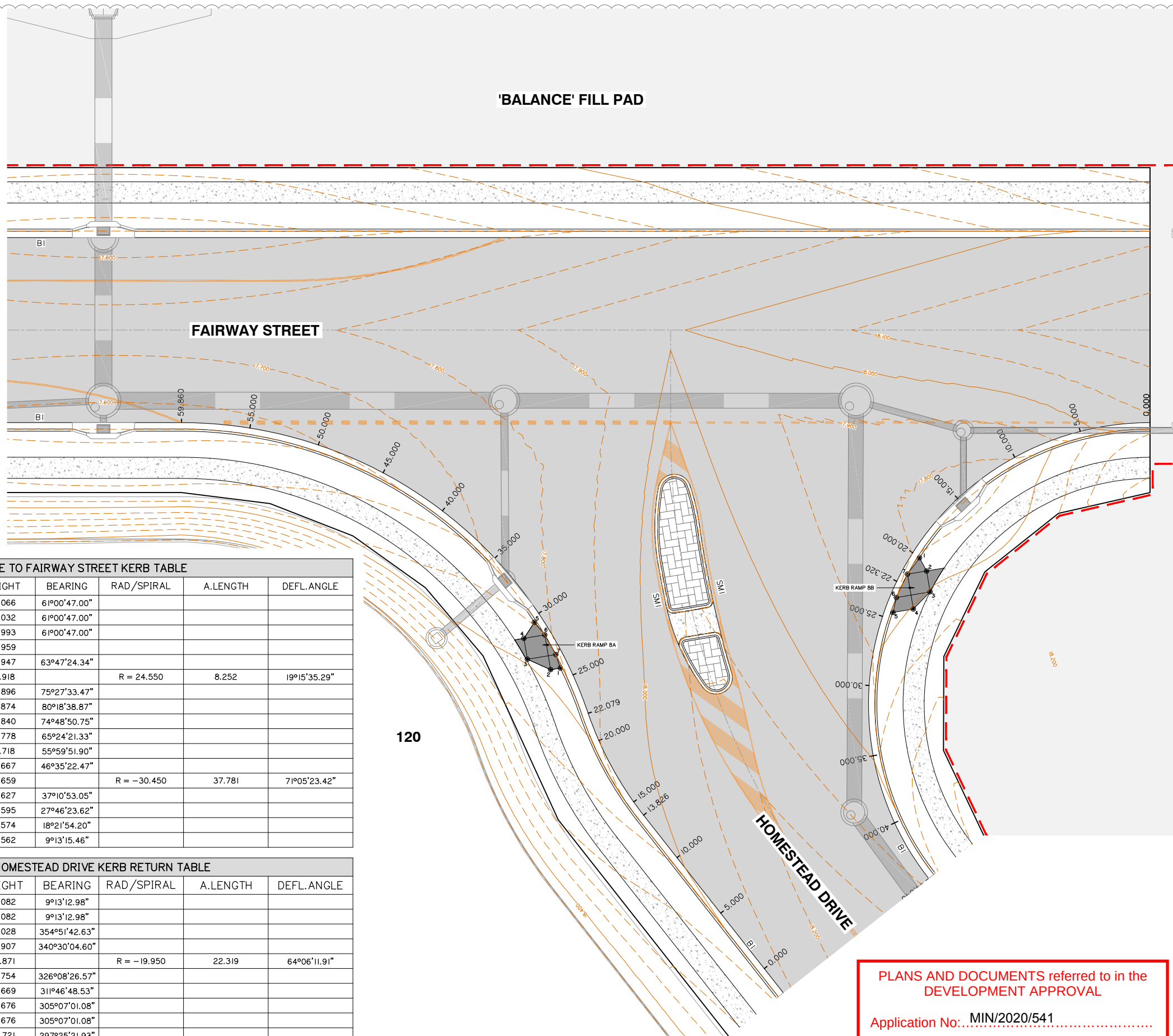
|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

Drawing No: 5941 ENG OPW1 491

Rev. No: C



'BALANCE' FILL PAD



| KERB RAMP 8A SETOUT TABLE |          |          |                |
|---------------------------|----------|----------|----------------|
| POINT                     | EASTING  | NORTHING | DESCRIPTION    |
| 1                         | 2655.748 | 6795.596 | BACK OF KERB   |
| 2                         | 2655.745 | 6796.297 | RAMP           |
| 3                         | 2656.737 | 6797.801 | RAMP           |
| 4                         | 2658.237 | 6797.808 | RAMP           |
| 5                         | 2659.242 | 6796.891 | INVERT OF KERB |
| 6                         | 2658.245 | 6796.308 | INVERT OF KERB |
| 7                         | 2656.747 | 6795.758 | RAMP           |

| KERB RAMP 8B SETOUT TABLE |          |          |                |
|---------------------------|----------|----------|----------------|
| POINT                     | EASTING  | NORTHING | DESCRIPTION    |
| 1                         | 2659.374 | 6769.231 | BACK OF KERB   |
| 2                         | 2658.375 | 6768.882 | RAMP           |
| 3                         | 2656.884 | 6768.875 | RAMP           |
| 4                         | 2655.869 | 6770.243 | RAMP           |
| 5                         | 2655.862 | 6771.714 | INVERT OF KERB |
| 6                         | 2656.864 | 6771.298 | INVERT OF KERB |
| 7                         | 2658.369 | 6770.255 | RAMP           |

| HOMESTEAD DRIVE TO FAIRWAY STREET KERB TABLE |          |          |          |        |              |             |          |              |
|----------------------------------------------|----------|----------|----------|--------|--------------|-------------|----------|--------------|
| PT                                           | CHAINAGE | EASTING  | NORTHING | HEIGHT | BEARING      | RAD/SPIRAL  | A.LENGTH | DEFL.ANGLE   |
| IP 1                                         | 0.000    | 2632.426 | 6784.747 | 18.066 | 61°00'47.00" |             |          |              |
|                                              | 5.000    | 2636.800 | 6787.170 | 18.032 | 61°00'47.00" |             |          |              |
|                                              | 10.000   | 2641.174 | 6789.593 | 17.993 | 61°00'47.00" |             |          |              |
| IP 2                                         | 13.826   | 2644.521 | 6791.447 | 17.959 |              |             |          |              |
|                                              | 15.000   | 2645.561 | 6791.991 | 17.947 | 63°47'24.34" |             |          |              |
|                                              | 17.953   | 2648.166 | 6793.464 | 17.918 |              | R = 24.550  | 8.252    | 19°15'35.29" |
| CC                                           | 20.000   | 2650.240 | 6793.729 | 17.896 | 75°27'33.47" |             |          |              |
|                                              | 22.079   | 2652.272 | 6794.165 | 17.874 | 80°18'38.87" |             |          |              |
|                                              | 25.000   | 2655.123 | 6794.794 | 17.840 | 74°48'50.75" |             |          |              |
|                                              | 30.000   | 2659.820 | 6796.493 | 17.778 | 65°24'21.33" |             |          |              |
|                                              | 35.000   | 2664.175 | 6798.937 | 17.718 | 55°59'51.90" |             |          |              |
| IP 4                                         | 40.000   | 2668.073 | 6802.060 | 17.667 | 46°35'22.47" |             |          |              |
|                                              | 40.969   | 2673.717 | 6797.826 | 17.659 |              | R = -30.450 | 37.781   | 71°05'23.42" |
|                                              | 45.000   | 2671.407 | 6805.778 | 17.627 | 37°10'53.05" |             |          |              |
|                                              | 50.000   | 2674.089 | 6809.991 | 17.595 | 27°46'23.62" |             |          |              |
|                                              | 55.000   | 2676.046 | 6814.586 | 17.574 | 18°21'54.20" |             |          |              |
| IP 5                                         | 59.860   | 2677.203 | 6819.301 | 17.562 | 9°13'15.46"  |             |          |              |

| FAIRWAY STREET TO HOMESTEAD DRIVE KERB RETURN TABLE |          |          |          |          |               |             |          |              |
|-----------------------------------------------------|----------|----------|----------|----------|---------------|-------------|----------|--------------|
| PT                                                  | CHAINAGE | EASTING  | NORTHING | HEIGHT   | BEARING       | RAD/SPIRAL  | A.LENGTH | DEFL.ANGLE   |
| IP 1                                                | 0.000    | 2666.209 | 6751.573 | 18.082   | 9°13'12.98"   |             |          |              |
|                                                     | TC       | 0.001    | 2666.209 | 6751.574 | 18.082        |             |          |              |
|                                                     | 5.000    | 2666.386 | 6756.557 | 18.028   | 354°51'42.63" |             |          |              |
| IP 2                                                | 10.000   | 2665.322 | 6761.429 | 17.907   | 340°30'04.60" |             |          |              |
|                                                     | 11.160   | 2668.210 | 6763.903 | 17.871   |               | R = -19.950 | 22.319   | 64°06'11.91" |
|                                                     | 15.000   | 2663.083 | 6765.885 | 17.754   | 326°08'26.57" |             |          |              |
| CT                                                  | 20.000   | 2659.809 | 6769.646 | 17.669   | 311°46'48.53" |             |          |              |
|                                                     | 22.320   | 2657.993 | 6771.088 | 17.676   | 305°07'01.08" |             |          |              |
|                                                     | TC       | 22.321   | 2657.992 | 6771.089 | 17.676        |             |          |              |
|                                                     | 25.000   | 2655.704 | 6772.478 | 17.721   | 297°25'21.93" |             |          |              |
|                                                     | 30.000   | 2651.025 | 6774.204 | 17.842   | 283°03'43.90" |             |          |              |
| IP 3                                                | 33.481   | 2647.775 | 6778.274 | 17.926   |               | R = -19.950 | 22.319   | 64°06'13.49" |
|                                                     | 35.000   | 2646.064 | 6774.715 | 17.962   | 268°42'05.87" |             |          |              |
|                                                     | 40.000   | 2641.132 | 6773.980 | 18.045   | 254°20'27.84" |             |          |              |
| CT                                                  | 44.640   | 2636.849 | 6772.221 | 18.080   | 241°00'47.59" |             |          |              |
| IP 4                                                | 44.641   | 2636.849 | 6772.221 | 18.080   |               |             |          |              |
|                                                     | 45.000   | 2636.535 | 6772.047 | 18.082   | 241°00'47.17" |             |          |              |
| IP 5                                                | 45.093   | 2636.453 | 6772.002 | 18.083   | 241°00'47.17" |             |          |              |

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Client:



Project:

VANTAGE YATALA  
STAGE 1

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  
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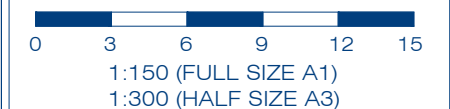
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DRAWING TITLE

ROAD INTERSECTION  
DETAILS SHEET 3 OF 8

| Issue | Date       | Description                  | BA | MG |
|-------|------------|------------------------------|----|----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG |
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SCALE IN METRES

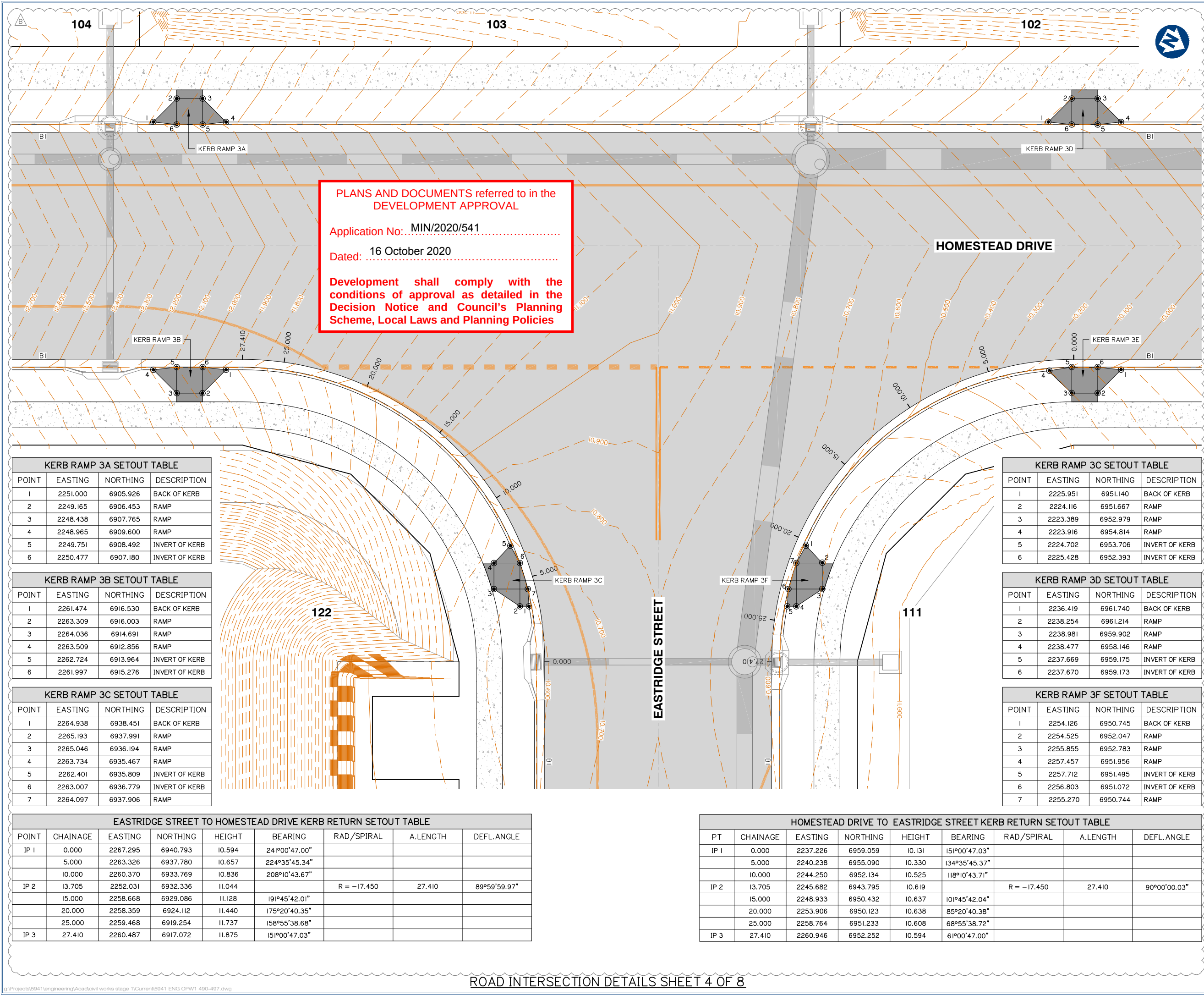


Scale at A1: 1:150

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

Drawing No: 5941 ENG OPW1 492  
Rev. No: C







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DRAWING TITLE

ROAD INTERSECTION  
DETAILS SHEET 4 OF 8

| ISSUE | DATE       | DESCRIPTION                  | BA | MG |
|-------|------------|------------------------------|----|----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG |
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| A     | 01-05-2020 | ORIGINAL ISSUE               | BA | MG |

SCALE IN METRES

0 2 4 6 8 10

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

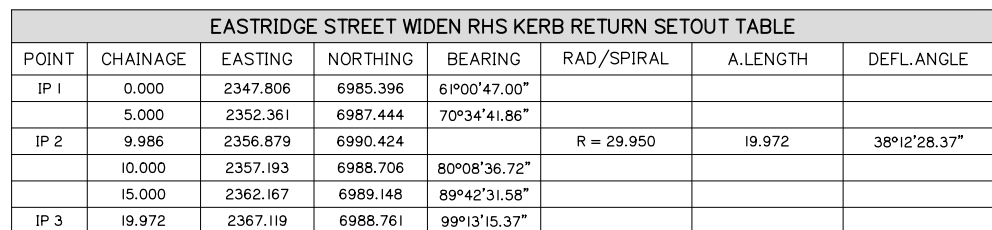
Scale at A1: 1:100

|           |                                                                                       |
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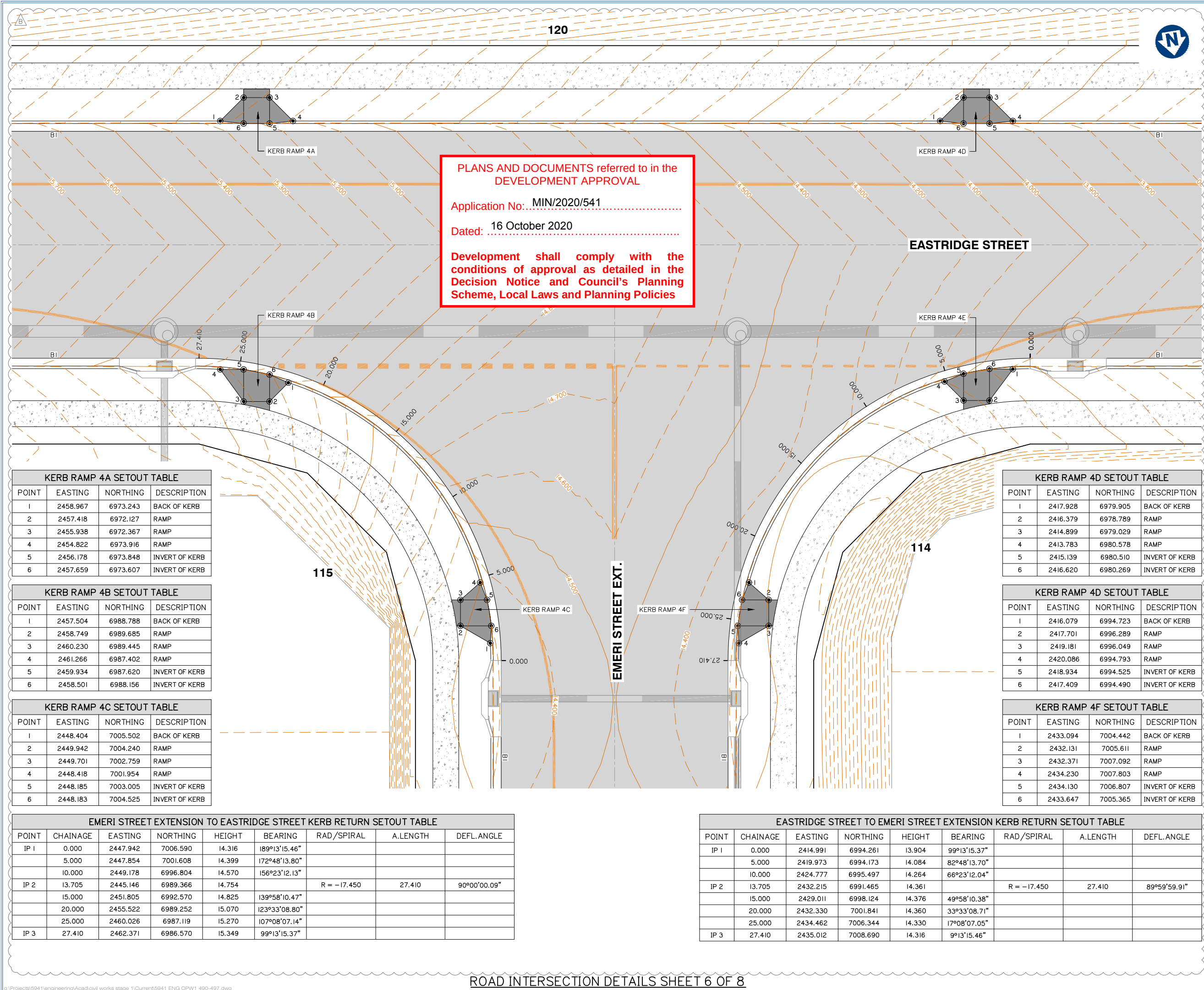
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Rev. No: C





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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

ROAD INTERSECTION DETAILS  
SHEET 6 OF 8

|       |            |                         |     |     |
|-------|------------|-------------------------|-----|-----|
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MG  |
| ISSUE | Date       | Description             | DRN | CHK |

SCALE IN METRES

0 2 4 6 8 10

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

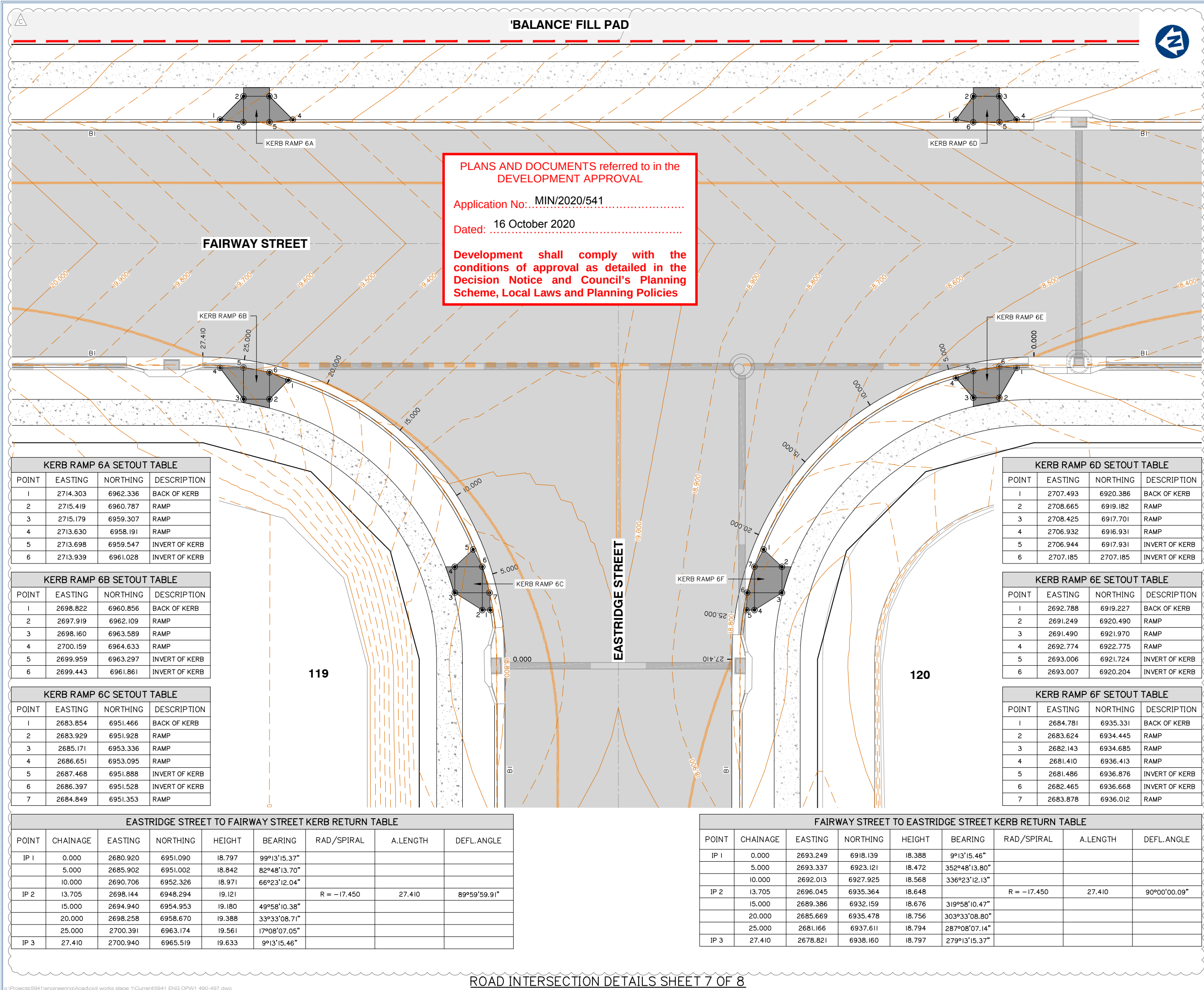
Scale at A1: 1:100

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

Drawing No: 5941 ENG OPW1 495

Rev. No: B







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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  
STAGE 1

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<br>COUNCIL |
| Level Datum:      | AHD                           |
| Meridian:         | -                             |
| Contour Interval: | -                             |
| PSM:              | -                             |
| RL:               | -                             |

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DRAWING TITLE

ROAD INTERSECTION DETAILS  
SHEET 7 OF 8

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| ISSUE | Date       | Description                  | DRN | CHK |

SCALE IN METRES

0 2 4 6 8 10

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:     | 02-09-2020                                                                            |

Drawing No: 5941 ENG OPW1 496

Rev. No: C

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ROAD INTERSECTION DETAILS SHEET 7 OF 8







**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     | 0.073               |
| CAT 3/EXT2     | 0.099               |
| CAT 1/EXT3     | 0.162               |
| CAT 3/EXT3     | 0.016               |
| CAT 3/100      | 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              |
| CAT TD01       | 0.306               |
| CAT TD02       | 0.136               |
| CAT RCBC       | 0.053               |

**PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL**

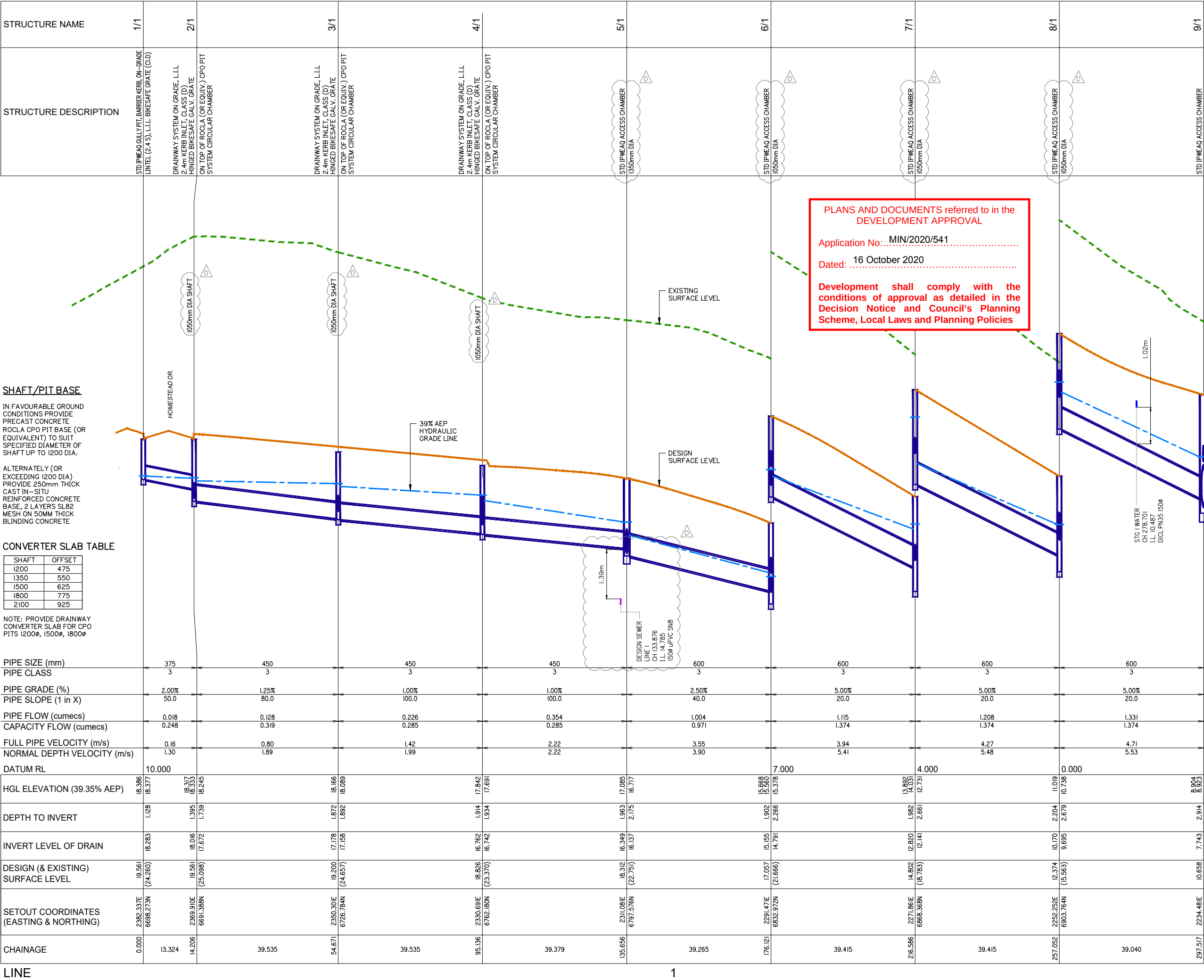
Application No: MIN/2020/541

Dated: 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------|-----|-----|
|  <p><b>gassman<br/>development<br/>perspectives</b></p> <p>planning   environment   landscape   engineering   survey</p> <p>T: 3807 3333   F: 3287 5461   www.gassman.com.au</p> <p>Gold Coast &amp; Logan   76 Business Street, Yatala QLD   PO Box 392, Beerleigh 4207</p> |            |                                                                                       |     |     |
| Client:                                                                                                                                                                                                                                                                                                                                                         |            |                                                                                       |     |     |
|  <p><b>FRASERS<br/>PROPERTY</b></p> <p>FRASERS PROPERTY<br/>(AUSTRALIA) PTY. LTD.</p>                                                                                                                                                                                        |            |                                                                                       |     |     |
| Project:                                                                                                                                                                                                                                                                                                                                                        |            |                                                                                       |     |     |
| <div>VANTAGE YATALA<br/>STAGE 1</div>                                                                                                                                                                                                                                                                                                                           |            |                                                                                       |     |     |
| Site Address:                                                                                                                                                                                                                                                                                                                                                   |            |                                                                                       |     |     |
| 60 STAPYLTON JACOBS WELL<br>ROAD, STAPYLTON QLD 4207                                                                                                                                                                                                                                                                                                            |            |                                                                                       |     |     |
| THIS DRAWING IS INTENDED TO<br>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<br>CATCHMENT PLAN                                                                                                                                                                                                                                                                                                                           |            |                                                                                       |     |     |
|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
|                                                                                                                                                                                                                                                                                                                                                                 |            |                                                                                       |     |     |
| C                                                                                                                                                                                                                                                                                                                                                               | 02-09-2020 | MINOR CHANGE TO STAGE 1                                                               | BA  | MG  |
| B                                                                                                                                                                                                                                                                                                                                                               | 12-06-2020 | INFORMATION REQUEST RESPONSE                                                          | BA  | MG  |
| A                                                                                                                                                                                                                                                                                                                                                               | 01-05-2020 | ORIGINAL ISSUE                                                                        | BA  | MG  |
| Issue                                                                                                                                                                                                                                                                                                                                                           | Date       | Description                                                                           | DRN | 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:                                                                                                                                                                                                                                                                                                                                                           |            | 02-09-2020                                                                            |     |     |
| Drawing No:                                                                                                                                                                                                                                                                                                                                                     |            | Rev. No:                                                                              |     |     |
| 5941 ENG OPW1 500                                                                                                                                                                                                                                                                                                                                               |            | C                                                                                     |     |     |







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Project:

VANTAGE YATALA  
STAGE 1

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 1 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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

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:     | 10-09-2020                                                                            |

Drawing No: 5941 ENG OPW1 510

Rev. No: D

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|                       |                                         |                                         |                                         |                                                                  |                                                                                              |
|-----------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| STRUCTURE NAME        | 9/1                                     | 10/1                                    | 11/1                                    | 12/1                                                             | 13/1                                                                                         |
| STRUCTURE DESCRIPTION | STD IPWEAQ ACCESS CHAMBER<br>1800mm DIA | STD IPWEAQ ACCESS CHAMBER<br>1800mm DIA | STD IPWEAQ ACCESS CHAMBER<br>2100mm DIA | OVERSIZE CHAMBER CAST-IN-SITU<br>3566x1800mm - REFER DETAIL PLAN | 1200mm DIA DUAL OUTLET HEADWALL<br>DISCHARGE TO COARSE SEDIMENT FOREBAY<br>REFER DETAIL PLAN |

#### 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    |
| I100  | 925    |

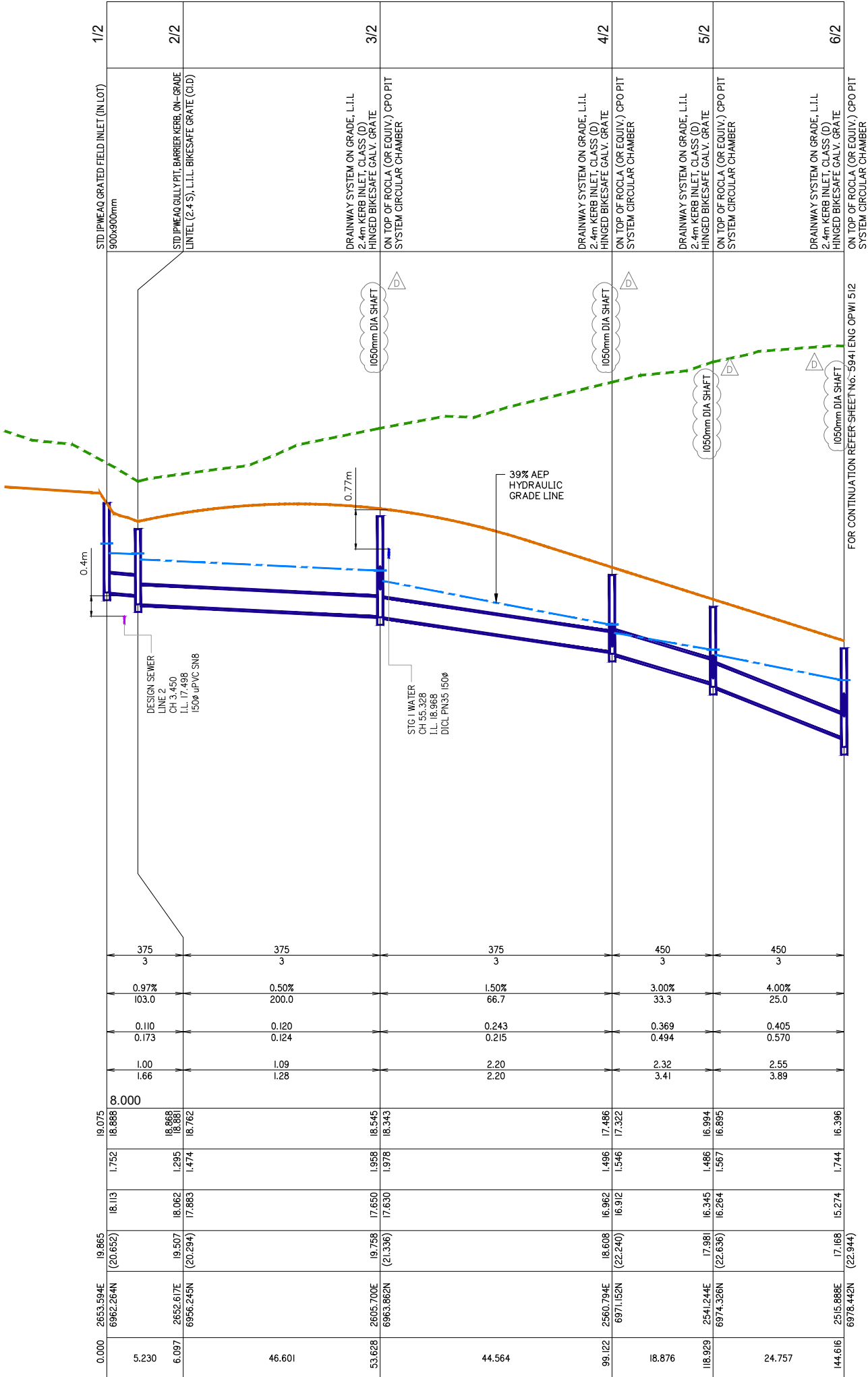
NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR CPO PITS I200Ø, I500Ø, I800Ø

|                                            |                        |        |                        |                |                        |                |                        |           |
|--------------------------------------------|------------------------|--------|------------------------|----------------|------------------------|----------------|------------------------|-----------|
| 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)                         | 3.737                  |        | 3.816                  |                | 3.891                  |                | 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 RL                                   | -1.000                 |        |                        |                |                        |                |                        |           |
| HGL ELEVATION (39.35% AEP)                 | 8.904<br>8.923         | 8.382  |                        | 7.995<br>7.875 |                        | 7.726<br>7.808 | 6.982<br>6.935         |           |
| DEPTH TO INVERT                            | 2.914<br>3.321         |        | 2.587<br>2.607         |                | 2.191<br>2.297         |                | 2.020<br>2.040         | 1.450     |
| INVERT LEVEL OF DRAIN                      | 7.743<br>7.336         |        | 6.563<br>6.543         |                | 6.154<br>6.048         |                | 6.038<br>6.018         | 6.000     |
| DESIGN (& EXISTING)<br>SURFACE LEVEL       | 10.658<br>(12.712)     |        | 9.150<br>(10.147)      |                | 8.346<br>(9.103)       |                | 8.059<br>(8.296)       | 7.391     |
| SETOUT COORDINATES<br>(EASTING & NORTHING) | 2234.481E<br>6940.180N |        | 2214.872E<br>6975.576N |                | 2206.383E<br>6990.898N |                | 2215.148E<br>6999.517N | 2228.933E |
| CHAINAGE                                   | 297.517                | 38.665 | 337.982                | 15.567         | 355.499                | 10.192         | 367.791                | 387.123   |
|                                            |                        |        |                        |                |                        |                | 18.157                 |           |
|                                            |                        |        |                        |                |                        |                |                        |           |
|                                            |                        |        |                        |                |                        |                |                        |           |

LINE

1

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 18



2



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Client:



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Project:

VANTAGE YATALA  
STAGE 1

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 2 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| ISSUE | Date       | Description                  | DRN | CHK |

#### SCALE IN METRES

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

VERT: Scale 1:50 - Lengths are in Metres.

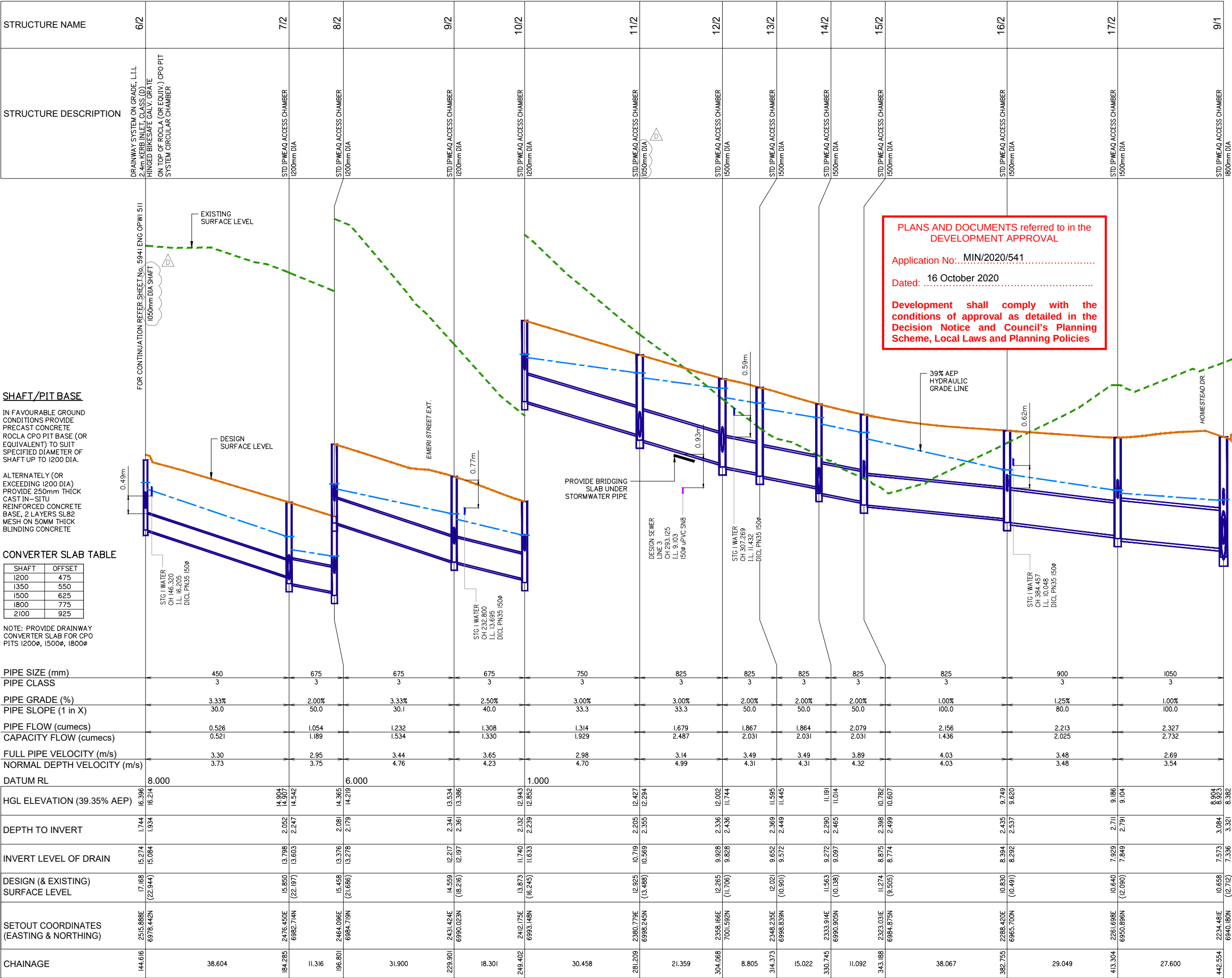
Scale at A1:

AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 10-09-2020 |

Drawing No:  
5941 ENG OPW1 511

Rev. No:  
D





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Client:



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Project:

VANTAGE YATALA  
STAGE 1

Site Address:

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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 3 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
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| ISSUE | Date       | Description                  | DRN | CHK |

SCALE IN METRES

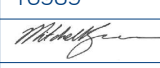
Scale 1:500 - Lengths are in Metres.

HORIZ: 0 5 10 15 20 25 30 35 40

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:     | 10-09-2020                                                                            |

Drawing No: 5941 ENG OPW1 512

Rev. No: D

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|                       |                                                                                                                                                    |      |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------|
| STRUCTURE NAME        | 1/3                                                                                                                                                |      |
| STRUCTURE DESCRIPTION | STD IPWEAQ MANHOLE 600x600 GRATE SET WITH CONVERTOR SLAB 1200mm DIA                                                                                | 2/3  |
|                       | DRAINWAY SYSTEM ON GRADE, L.L.L 2.4m KERB INLET, CLASS (D) HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER | 11/2 |
|                       | 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

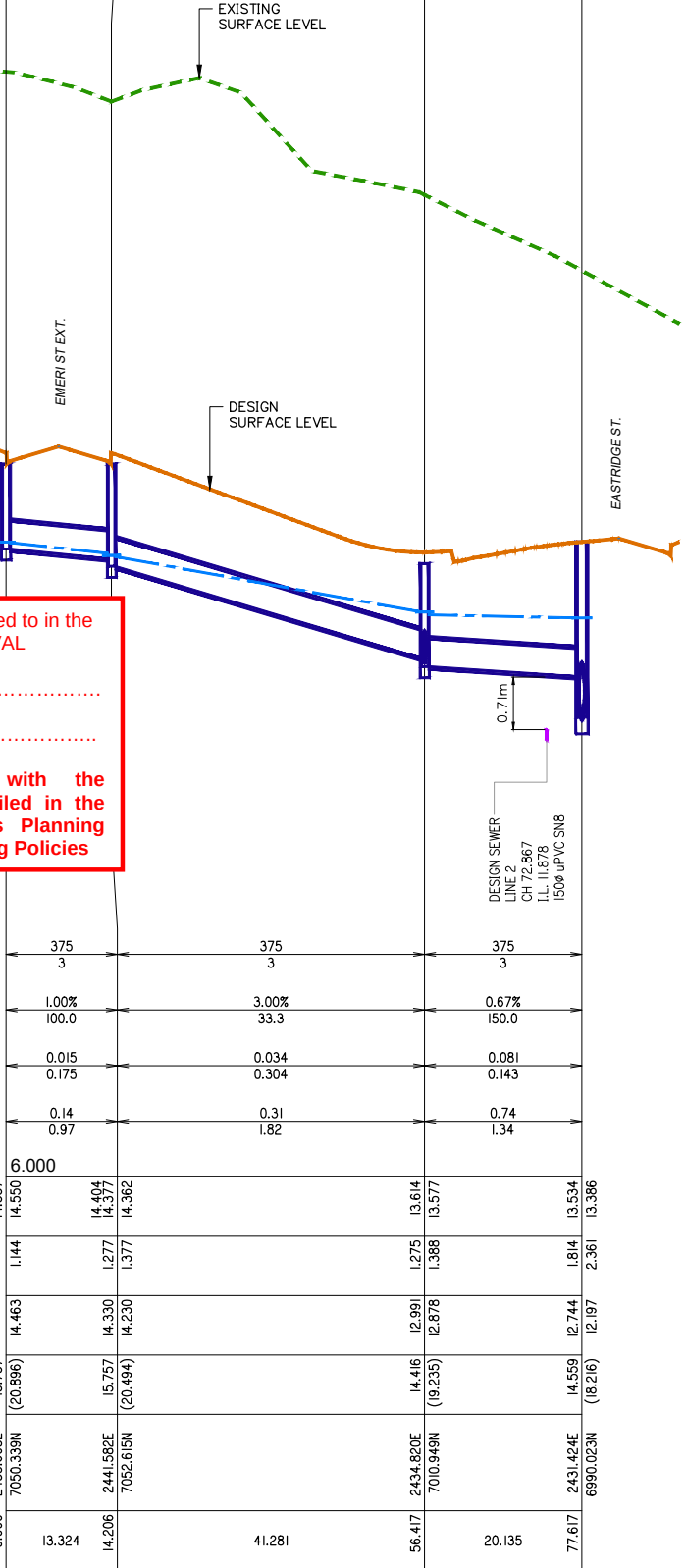
| SHAFT | OFFSET |
|-------|--------|
| I200  | 475    |
| I350  | 550    |
| I500  | 625    |
| I800  | 775    |
| 2100  | 925    |

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR CPO PITS I200Ø, I500Ø, I800Ø

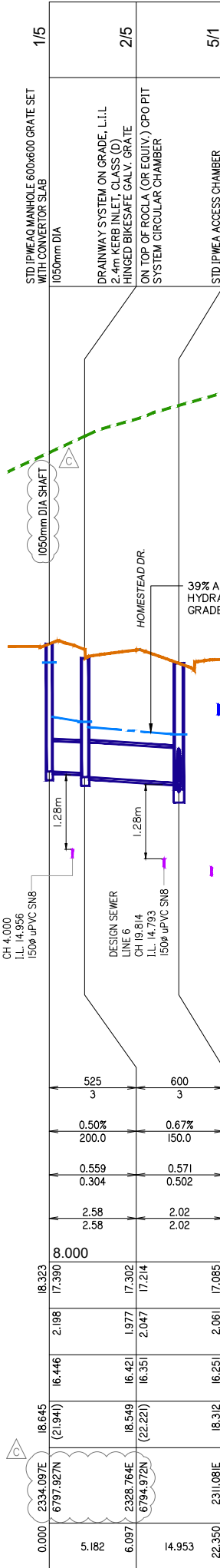
|                                         |                                   |                        |
|-----------------------------------------|-----------------------------------|------------------------|
| PIPE SIZE (mm)                          | 600                               | 600                    |
| PIPE CLASS                              | 3                                 | 3                      |
| PIPE GRADE (%)                          | 0.50%                             | 0.50%                  |
| PIPE SLOPE (1 in X)                     | 200.0                             | 200.0                  |
| PIPE FLOW (cumecs)                      | 0.339                             | 0.381                  |
| CAPACITY FLOW (cumecs)                  | 0.434                             | 0.434                  |
| FULL PIPE VELOCITY (m/s)                | 1.20                              | 1.35                   |
| NORMAL DEPTH VELOCITY (m/s)             | 1.70                              | 1.73                   |
| DATUM RL                                | 1.000                             |                        |
| HGL ELEVATION (39.35% AEP)              | 12.783<br>12.562                  | 12.544<br>12.469       |
| DEPTH TO INVERT                         | 2.691                             | 2.077                  |
| INVERT LEVEL OF DRAIN                   | 10.871                            | 10.761                 |
| DESIGN (& EXISTING) SURFACE LEVEL       | 13.562<br>(13.599)                | 12.988<br>(13.379)     |
| SETOUT COORDINATES (EASTING & NORTHING) | 2338.944E<br>6979.820N            | 2378.539E<br>6986.298N |
| CHAINAGE                                | 0.000<br>6.016<br>7.184<br>10.888 | 19.287                 |

LINE 3

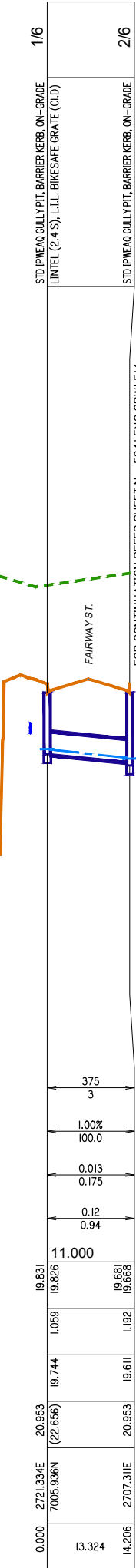
|     |                                                                                          |     |
|-----|------------------------------------------------------------------------------------------|-----|
| 1/4 | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) | 1/4 |
| 2/4 | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) | 2/4 |
| 3/4 | STD IPWEAQ GULLY PIT, BARRIER KERB, IN SAG LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D)   | 3/4 |
| 9/2 | STD IPWEAQ ACCESS CHAMBER 1200mm DIA                                                     | 9/2 |



LINE 4



LINE 5



LINE 6

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Client:

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PROPERTY

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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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 4 OF 18

|       |            |                         |     |     |
|-------|------------|-------------------------|-----|-----|
| C     | 10-09-2020 | RESPONSE TO RFI No. 4   | BA  | MG  |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| 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:     | 10-09-2020 |

Drawing No: 5941 ENG OPW1 513

Rev. No: C



|                       |                                                                                          |                                                                                          |                                      |                                                                                                                                                     |                                                                                                                                                     |                                      |
|-----------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| STRUCTURE NAME        | 2/6                                                                                      | 3/6                                                                                      | 4/6                                  | 5/6                                                                                                                                                 | 6/6                                                                                                                                                 | 13/X2                                |
| STRUCTURE DESCRIPTION | STD IPWEAO GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.I.L. BIKESAFE GRATE (C/D) | STD IPWEAO GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.I.L. BIKESAFE GRATE (C/D) | STD IPWEAO ACCESS CHAMBER 1050mm DIA | DRAINWAY SYSTEM ON GRADE, L.I.L. 2.4m KERB INLET, CLASS (D) HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER | DRAINWAY SYSTEM ON GRADE, L.I.L. 2.4m KERB INLET, CLASS (D) HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER | STD IPWEAO 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 |
|-------|--------|
| I200  | 475    |
| I350  | 550    |
| I500  | 625    |
| I800  | 775    |
| 2100  | 925    |

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR CPO PITS I200Ø, I500Ø, I800Ø

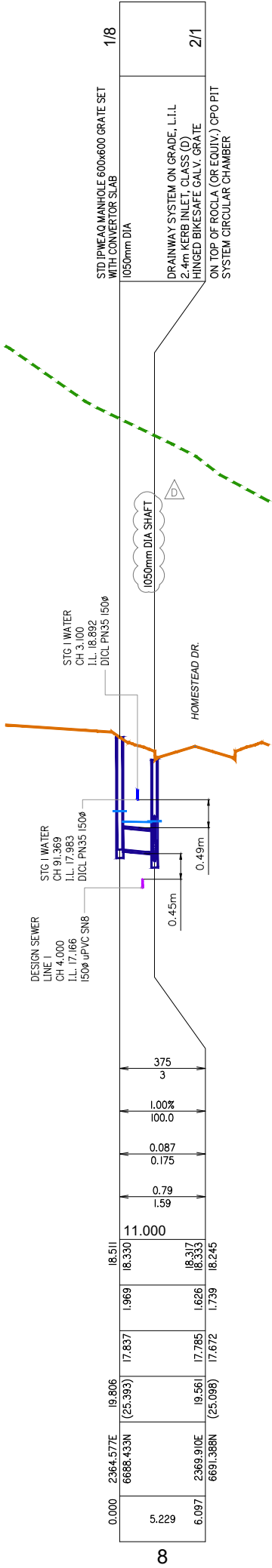
|                                         |                      |                        |                        |                        |                        |
|-----------------------------------------|----------------------|------------------------|------------------------|------------------------|------------------------|
| PIPE SIZE (mm)                          | 375                  | 375                    | 375                    | 450                    | 450                    |
| PIPE CLASS                              | 3                    | 3                      | 3                      | 3                      | 3                      |
| PIPE GRADE (%)                          | 3.00%                | 4.00%                  | 2.00%                  | 1.25%                  | 1.00%                  |
| PIPE SLOPE (1 in X)                     | 33.3                 | 25.0                   | 50.0                   | 80.0                   | 100.0                  |
| PIPE FLOW (cumecs)                      | 0.024                | 0.037                  | 0.085                  | 0.137                  | 0.256                  |
| CAPACITY FLOW (cumecs)                  | 0.304                | 0.351                  | 0.248                  | 0.319                  | 0.285                  |
| FULL PIPE VELOCITY (m/s)                | 0.22                 | 0.34                   | 0.77                   | 0.86                   | 1.61                   |
| NORMAL DEPTH VELOCITY (m/s)             | 1.64                 | 2.06                   | 2.03                   | 1.93                   | 2.03                   |
| DATUM RL                                | 7.000                |                        |                        |                        |                        |
| HGL ELEVATION (39.35% AEP)              | 19.681<br>19.668     | 18.465<br>18.456       | 17.131<br>17.103       | 16.793<br>16.759       | 16.032<br>16.155       |
| DEPTH TO INVERT                         | 1.82<br>1.252        | 1.305<br>1.325         | 1.809<br>1.959         | 1.766<br>1.806         | 2.194<br>2.894         |
| INVERT LEVEL OF DRAIN                   | 19.611<br>19.551     | 18.338<br>18.318       | 17.040<br>16.890       | 16.520<br>16.500       | 15.409<br>14.709       |
| DESIGN (& EXISTING) SURFACE LEVEL       | 20.953<br>(22.862)   | 19.793<br>(21.145)     | 18.845<br>(19.219)     | 18.456<br>(18.044)     | 17.989<br>(15.071)     |
| SETOUT COORDINATES (EASTING & NORTHING) | 2707.31E<br>7008.21N | 2700.682E<br>6967.381N | 2695.404E<br>6934.866N | 2692.286E<br>6915.660N | 2684.863E<br>6869.937N |
| CHAINAGE                                | 14.206               | 40.436                 | 55.572                 | 88.513                 | 154.292                |

LINE

6

8

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 5 OF 18



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Client:



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Project:

VANTAGE YATALA  
STAGE 1

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 5 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

SCALE IN METRES

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

VERT: Scale 1:50 - Lengths are in Metres.

Scale at A1: AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 10-09-2020 |

Drawing No:  
5941 ENG OPW1 514

Rev. No:  
D

SHAFT/PIT BASE

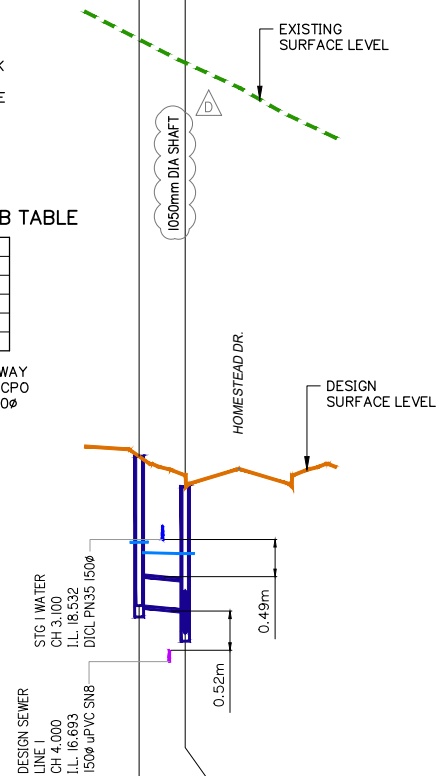
IN FAVOURABLE GROUND  
CONDITIONS PROVIDE  
PRECAST CONCRETE  
ROCLA CPO PIT BASE (OR  
EQUIVALENT) TO SUIT  
SPECIFIED DIAMETER OF  
SHAFT UP TO 1200 DIA.

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

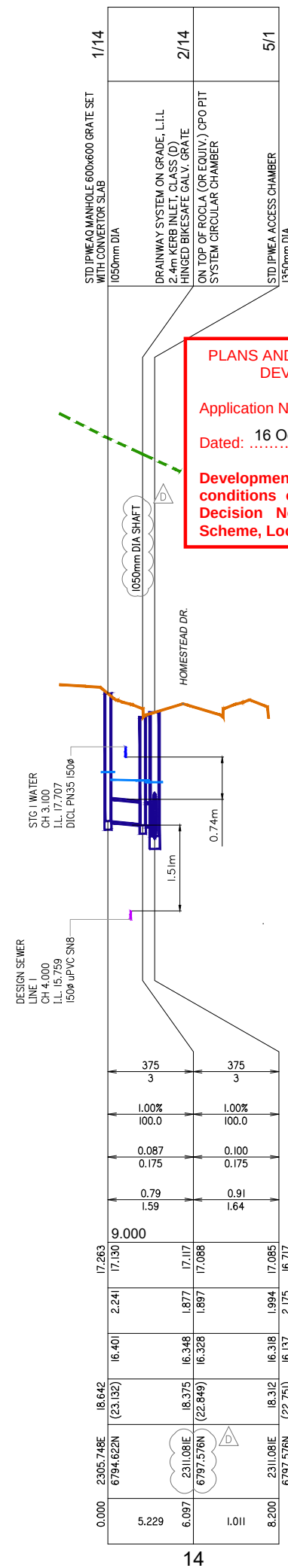
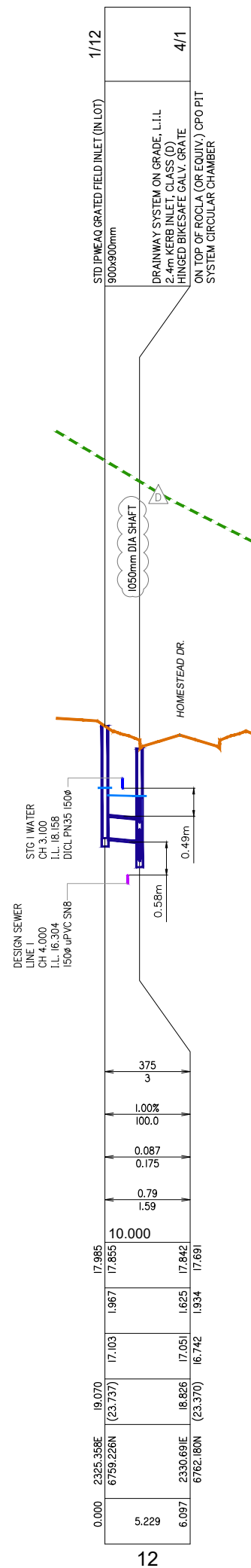
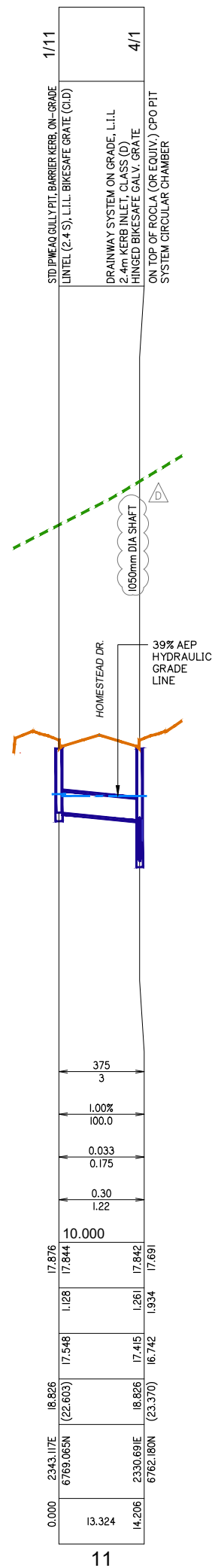
| SHAFT | OFFSET |
|-------|--------|
| 1200  | 475    |
| 1350  | 550    |
| 1500  | 625    |
| 1800  | 775    |
| 2100  | 925    |

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)                         |                        | 0.087  |                        |
| CAPACITY FLOW (cumecs)                     |                        | 0.175  |                        |
| FULL PIPE VELOCITY (m/s)                   |                        | 0.79   |                        |
| NORMAL DEPTH VELOCITY (m/s)                |                        | 1.59   |                        |
| DATUM RL                                   |                        | 11.000 |                        |
| HGL ELEVATION (39.35% AEP)                 | 18.316<br>18.179       |        | 18.166<br>18.089       |
| DEPTH TO INVERT                            |                        | 1.975  | 1.625<br>1.892         |
| INVERT LEVEL OF DRAIN                      |                        | 17.477 | 17.425<br>17.58        |
| DESIGN (& EXISTING)<br>SURFACE LEVEL       | 19.452<br>(24.965)     |        | 19.200<br>(24.657)     |
| SETOUT COORDINATES<br>(EASTING & NORTHING) | 2344.967E<br>6723.830N |        | 2350.301E<br>6726.784N |
| CHAINAGE                                   | 0.000                  | 5.229  | 6.097                  |

LINE 10

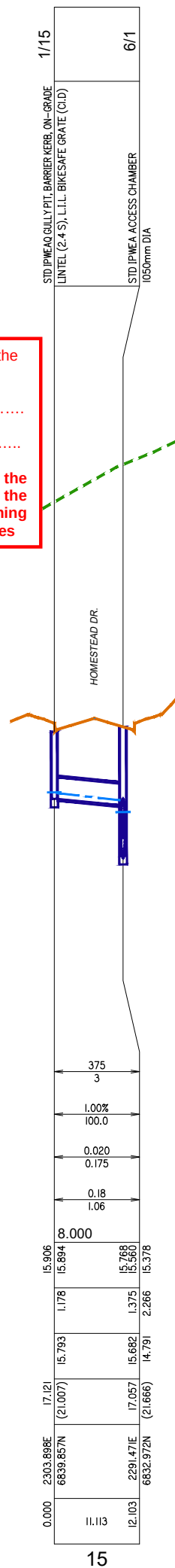


## PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

## VANTAGE YATALA STAGE 1

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 6 OF 18

| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |  |
|-------|------------|------------------------------|-----|-----|--|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |  |
| B     | 12-08-2020 | INFORMATION REQUEST RESPONSE | BA  | MCL |  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |  |
| Issue | Date       | Description                  | DRN | CHK |  |

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.

**HORZ:**  Scale 1:500 - Lengths are in metres.

**VERT:**  Scale 1:50 - Lengths are in metres.

Scale at A1: AS SHOWN

|           |    |
|-----------|----|
| Designed: | IG |
|-----------|----|

|          |    |
|----------|----|
| Drafted: | BA |
|----------|----|

|           |    |
|-----------|----|
| Approved: | MG |
|-----------|----|

|       |       |
|-------|-------|
| RPEQ: | 16939 |
|-------|-------|

Signed: 

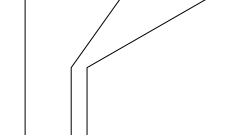
Date: 10-09-2020

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 515 | D        |

### SHAFT/PIT BASE

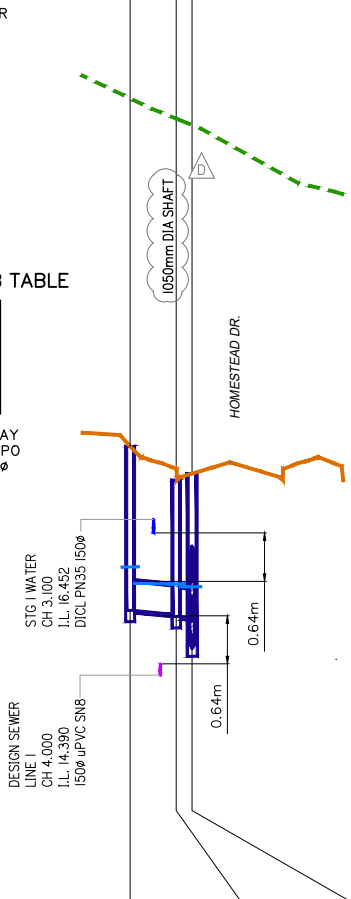
IN FAVOURABLE GROUND CONDITIONS PROVIDE PRECAST CONCRETE ROCLA CPO PIT BASE (OR EQUIVALENT) TO SUIT SPECIFIED DIAMETER OF SHAFT UP TO 1200 DIA.

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



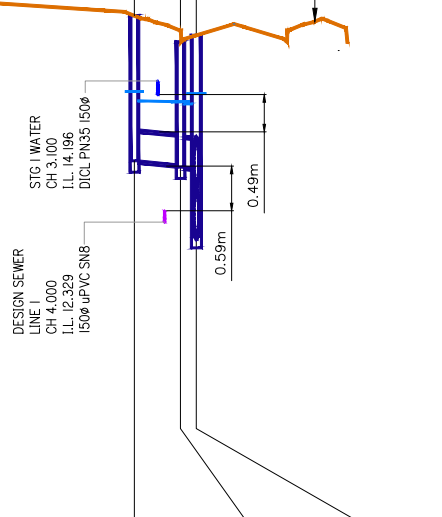
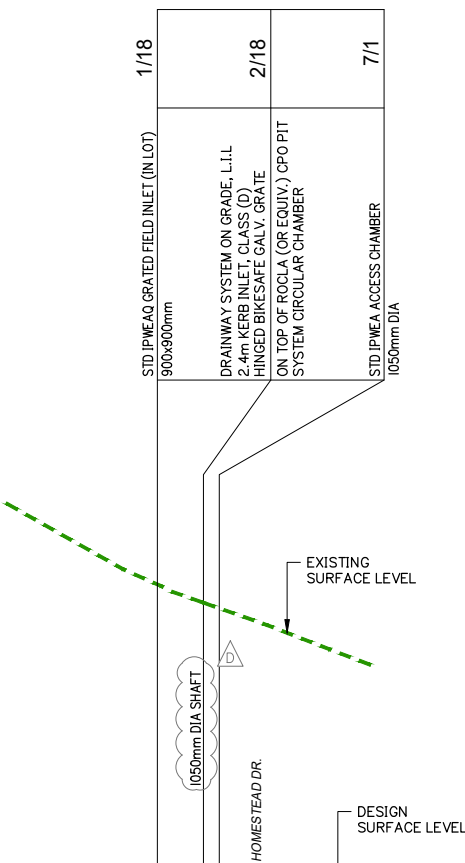
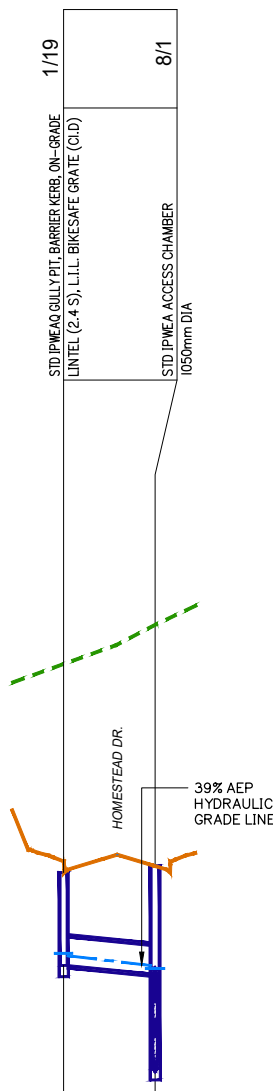
The diagram illustrates a cross-section of a shaft or pit. A dashed green line represents the ground surface. Below it, a solid black line represents the shaft wall. At the bottom, a horizontal line represents the base. A vertical line with a circle at the bottom is labeled 'SHAFT'. A triangle with the letter 'D' inside is shown near the base.

NOTE: PROVIDE DRAINWAY  
CONVERTER SLAB FOR CPC  
PITS 1200 $\phi$ , 1500 $\phi$ , 1800 $\phi$



LINE 16

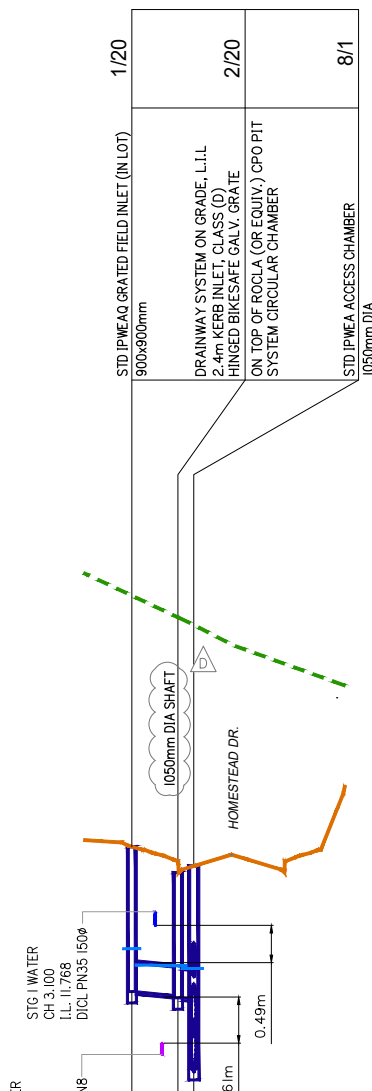
LINE 16

18

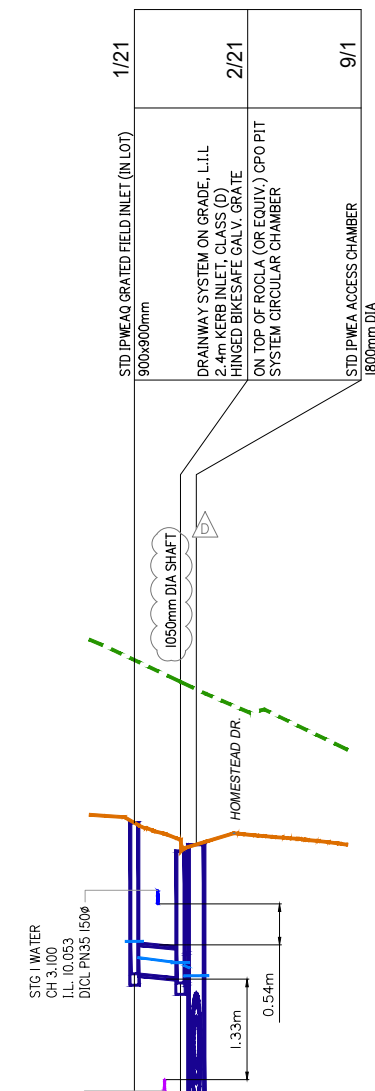
Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

19

20 84N

21

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD

### Project:

## VANTAGE YATALA STAGE 1

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: -  
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PSM: -  
RL: -

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DRAWING TITLE  
STORMWATER DRAINAGE  
LONGITUDINAL SECTIONS  
SHEET 7 OF 18

|       |            |                              |     |    |
|-------|------------|------------------------------|-----|----|
|       |            |                              |     |    |
|       |            |                              |     |    |
|       |            |                              |     |    |
|       |            |                              |     |    |
|       |            |                              |     |    |
|       |            |                              |     |    |
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | M  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | M  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | M  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | M  |
| Issue | Date       | Description                  | DRN | Ch |

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:     | 10-09-2020                                                                            |

Drawing No:  
5941 ENG OPW1 516

Rev. No:  
D



|                       |                                                                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| STRUCTURE NAME        | 1/22                                                                                                                                                |
| STRUCTURE DESCRIPTION | STD IPWEAQ MANHOLE 600x600 GRATE SET WITH CONVERTOR SLAB<br>1050mm DIA                                                                              |
|                       | 2/22                                                                                                                                                |
|                       | DRAINWAY SYSTEM ON GRADE, L.L.L. 2.4m KERB INLET, CLASS (O) HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER |
|                       | 10/1                                                                                                                                                |
|                       | STD IPWEAQ ACCESS CHAMBER 1800mm 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    |
| I1000 | 925    |

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR CPO PITS I200Ø, I500Ø, I800Ø

|                                         |                        |                        |
|-----------------------------------------|------------------------|------------------------|
| 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 RL                                | -2.000                 |                        |
| HGL ELEVATION (39.35% AEP)              | 8.193<br>8.040         | 8.027<br>7.998         |
| DEPTH TO INVERT                         | 2.050                  | 1.676<br>1.745         |
| INVERT LEVEL OF DRAIN                   | 7.440                  | 7.388<br>7.319         |
| DESIGN (& EXISTING) SURFACE LEVEL       | 9.437<br>(10.482)      | 9.214<br>(10.233)      |
| SETOUT COORDINATES (EASTING & NORTHING) | 2207.699E<br>6971.602N | 2213.032E<br>6974.556N |
| CHAINAGE                                | 0.000<br>5.182         | 6.097<br>0.738         |

LINE 22

|      |                                                                                                                                                     |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1/23 | STD IPWEAQ MANHOLE 600x600 GRATE SET WITH CONVERTOR SLAB<br>1050mm DIA                                                                              |
| 2/23 | DRAINWAY SYSTEM ON GRADE, L.L.L. 2.4m KERB INLET, CLASS (O) HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER |
| 11/1 | STD IPWEAQ ACCESS CHAMBER 2100mm DIA                                                                                                                |



PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

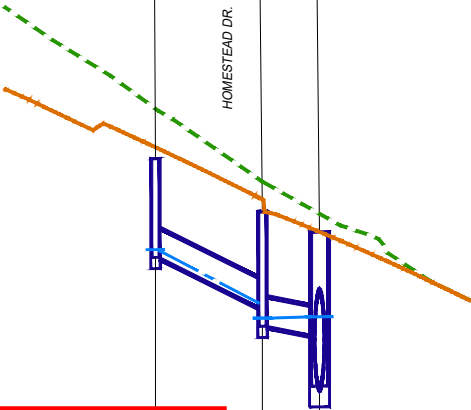
Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

|                        |                        |
|------------------------|------------------------|
| 525                    | 600                    |
| 3                      | 3                      |
| 0.25%                  | 0.20%                  |
| 399.9                  | 500.0                  |
| 0.075                  | 0.084                  |
| 0.215                  | 0.275                  |
| 0.35                   | 0.30                   |
| 0.91                   | 0.85                   |
| -3.000                 |                        |
| 7.758<br>7.737         | 7.755<br>7.727         |
| 3.248                  | 1.594<br>1.664         |
| 6.234                  | 6.214<br>6.144         |
| 9.482<br>(9.125)       | 7.959<br>(8.669)       |
| 2193.696E<br>6990.614N | 2200.052E<br>6996.760N |
| 0.000<br>7.973         | 2206.383E<br>6990.698N |
|                        | 17.469<br>7.112        |

LINE 23

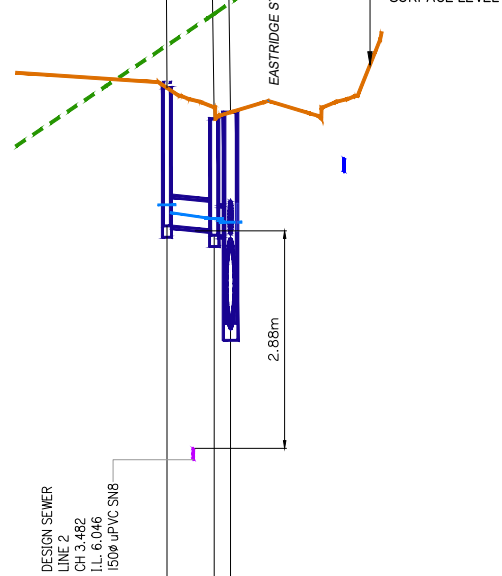
|      |                                                                                          |
|------|------------------------------------------------------------------------------------------|
| 1/24 | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) |
| 2/24 | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) |
| 12/1 | OVERSIZE CHAMBER CAST-IN-SITU 356x1800mm - REFER DETAIL PLAN                             |



|                        |                        |
|------------------------|------------------------|
| 375                    | 375                    |
| 3                      | 3                      |
| 5.00%                  | 2.00%                  |
| 20.0                   | 50.0                   |
| 0.017                  | 0.022                  |
| 0.392                  | 0.248                  |
| 0.16                   | 0.20                   |
| 1.78                   | 1.38                   |
| -2.000                 |                        |
| 7.823<br>7.815         | 7.114<br>6.916         |
| 1.305                  | 1.263<br>1.513         |
| 7.722                  | 7.060<br>6.810         |
| 9.177<br>(9.668)       | 8.487<br>(8.723)       |
| 2226.297E<br>6981.171N | 2220.310E<br>6994.000N |
| 0.000<br>13.225        | 2215.148E<br>6999.517N |
|                        | 21.712<br>6.028        |

LINE 24

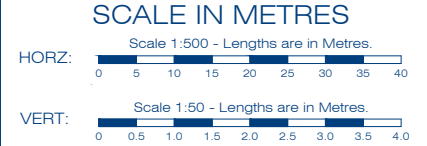
|      |                                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1/25 | STD IPWEAQ GRATED FIELD INLET (IN LOT) 900x900mm                                                                                                  |
| 2/25 | DRAINWAY SYSTEM IN SAG, L.L.L. 2.4m KERB INLET, CLASS (O) HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER |
| 17/2 | STD IPWEAQ ACCESS CHAMBER 1500mm DIA                                                                                                              |



|                        |                        |
|------------------------|------------------------|
| 375                    | 375                    |
| 3                      | 3                      |
| 1.00%                  | 1.00%                  |
| 100.0                  | 100.0                  |
| 0.059                  | 0.073                  |
| 0.175                  | 0.175                  |
| 0.53                   | 0.66                   |
| 1.43                   | 1.52                   |
| -1.000                 |                        |
| 9.416<br>9.314         | 9.235<br>9.211         |
| 1.826                  | 1.470<br>1.540         |
| 9.138                  | 9.084<br>9.014         |
| 10.964<br>(11.524)     | 10.705<br>(11.942)     |
| 2257.648E<br>6958.272N | 2260.662E<br>6952.804N |
| 0.000<br>5.329         | 2261.698E<br>6950.896N |
|                        | 8.414<br>0.956         |

LINE 25

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |



|              |            |
|--------------|------------|
| Scale at A1: | AS SHOWN   |
| Designed:    | IG         |
| Drafted:     | BA         |
| Approved:    | MG         |
| RPEQ:        | 16939      |
| Signed:      |            |
| Date:        | 10-09-2020 |

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 26



### PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD

Project:

## VANTAGE YATALA STAGE 1

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:

Meridian:  
Contour Interval:  
PSM:  
RL:

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DRAWING TITLE

STORMWATER DRAINAGE  
LONGITUDINAL SECTIONS  
SHEET 9 OF 18

[illegible]

|       |            |                         |     |    |
|-------|------------|-------------------------|-----|----|
| C     | 10-09-2020 | RESPONSE TO RFI No. 4   | BA  | M  |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | M  |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | M  |
| Issue | Date       | Description             | DRN | CH |

SCALE IN METRES

Scale 1:500 - Lengths are in Metres



Scale 1:50 - Lengths are in Metres



Scale at A1: AS SHOWN

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 10-09-2020                                                                            |

Drawing No:  
5941 ENG OPW1 518

Rev. No:  
C

|                       |                                                                        |                                                                                                                                       |                                         |
|-----------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| STRUCTURE NAME        | 1/31                                                                   | 2/31                                                                                                                                  | 12/2                                    |
| STRUCTURE DESCRIPTION | STD IPWEAQ MANHOLE 600x600 GRATE SET WITH CONVERTOR SLAB<br>1050mm DIA | DRAINWAY SYSTEM ON GRADE, L.L.L HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER<br>1200mm DIA | STD IPWEAQ ACCESS CHAMBER<br>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    |
| I1000 | 925    |

NOTE: PROVIDE DRAINWAY CONVERTER SLAB FOR CPO PITS I200Ø, I500Ø, I800Ø

|                                         |                        |                         |
|-----------------------------------------|------------------------|-------------------------|
| PIPE SIZE (mm)                          | 525                    | 600                     |
| PIPE CLASS                              | 3                      | 3                       |
| PIPE GRADE (%)                          | 1.00%                  | 2.00%                   |
| PIPE SLOPE (1 in X)                     | 100.0                  | 50.0                    |
| PIPE FLOW (cumecs)                      | 0.179                  | 0.197                   |
| CAPACITY FLOW (cumecs)                  | 0.430                  | 0.869                   |
| FULL PIPE VELOCITY (m/s)                | 0.83                   | 0.70                    |
| NORMAL DEPTH VELOCITY (m/s)             | 1.90                   | 2.48                    |
| DATUM RL                                | 0.000                  |                         |
| HGL ELEVATION (39.35% AEP)              | 12.121<br>12.016       | 12.007<br>12.003        |
| DEPTH TO INVERT                         | 2.139                  | 1.795<br>1.875          |
| INVERT LEVEL OF DRAIN                   | 10.440                 | 10.385<br>10.305        |
| DESIGN (& EXISTING) SURFACE LEVEL       | 12.579<br>(11.721)     | 12.181<br>(11.690)      |
| SETOUT COORDINATES (EASTING & NORTHING) | 2359.111E<br>7010.070N | 2358.134E<br>7003.588N  |
| CHAINAGE                                | 0.000                  | 5.484<br>6.555<br>0.781 |

LINE 31

|                                                                                          |                                         |
|------------------------------------------------------------------------------------------|-----------------------------------------|
| 1/32                                                                                     | 10/2                                    |
| STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (CID) | STD IPWEAQ ACCESS CHAMBER<br>1200mm DIA |

LINE 32

|                                                                        |                                                                                                                                                                  |                                         |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 1/33                                                                   | 2/33                                                                                                                                                             | 6/X2                                    |
| STD IPWEAQ MANHOLE 600x600 GRATE SET WITH CONVERTOR SLAB<br>1200mm DIA | DRAINWAY SYSTEM ON GRADE, L.L.L 2.4m KERB INLET, CLASS (O) HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER<br>1200mm DIA | STD IPWEAQ ACCESS CHAMBER<br>1500mm DIA |

LINE 33

|                                                     |                                                                                          |                                         |
|-----------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------|
| 1/34                                                | 2/34                                                                                     | 8/2                                     |
| STD IPWEAQ GRATED FIELD INLET (IN LOT)<br>900x900mm | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (CID) | STD IPWEAQ ACCESS CHAMBER<br>1200mm DIA |

LINE 34

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Client:



FRASERS PROPERTY (AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA STAGE 1

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 10 OF 18

|       |            |                         |     |     |
|-------|------------|-------------------------|-----|-----|
| C     | 10-09-2020 | RESPONSE TO RFI No. 4   | BA  | MG  |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MG  |
| Issue | Date       | Description             | DRN | CHK |

SCALE IN METRES

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

VERT: Scale 1:50 - Lengths are in Metres.

Scale at A1: AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 10-09-2020 |

Drawing No: 5941 ENG OPW1 519

Rev. No: C



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

35



**PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL**

Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD

### Project:

## VANTAGE YATALA STAGE 1

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 11 OF 18

| C     | 10-09-2020 | RESPONSE TO RFI No. 4   |  | BA  | M  |
|-------|------------|-------------------------|--|-----|----|
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 |  | BA  | M  |
| A     | 01-05-2020 | ORIGINAL ISSUE          |  | BA  | M  |
| Issue | Date       | Description             |  | DRN | Ch |

SCALE IN METRES

Scale 1:500 - Lengths are in Metres

HORZ: 

VERT:  Scale 1:50 - Lengths are in Metres.

Scale at A1: AS SHOWN

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 10-09-2020                                                                            |

Drawing No:  
5941 ENG OPW1 520

Rev. No  
C

|                       |                                                                                        |                                                                                                                                                      |                                      |
|-----------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| STRUCTURE NAME        | 1/40                                                                                   | 2/40                                                                                                                                                 | 4/6                                  |
| STRUCTURE DESCRIPTION | STD IPWEAQ GULLY PIT, BARRIER KERB, IN SAG LINTEL (2.4 S), L.L.L, BIKESAFE GRATE (CID) | DRAINWAY SYSTEM ON GRADE, L.L.L, 2.4m KERB INLET, CLASS (D), HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER | STD IPWEAQ ACCESS CHAMBER 1050mm 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 I200Ø, I500Ø, I800Ø

|                                         |                        |                        |
|-----------------------------------------|------------------------|------------------------|
| 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)                      | 0.024                  | 0.049                  |
| CAPACITY FLOW (cumecs)                  | 0.175                  | 0.175                  |
| FULL PIPE VELOCITY (m/s)                | 0.22                   | 0.44                   |
| NORMAL DEPTH VELOCITY (m/s)             | 1.12                   | 1.36                   |
| DATUM RL                                | 8.000                  |                        |
| HGL ELEVATION (39.35% AEP)              | 17.573<br>17.556       | 17.418<br>17.391       |
| DEPTH TO INVERT                         | 1.312                  | 1.446                  |
| INVERT LEVEL OF DRAIN                   | 17.445                 | 17.231                 |
| DESIGN (& EXISTING) SURFACE LEVEL       | 18.907<br>(20.006)     | 18.907<br>(19.161)     |
| SETOUT COORDINATES (EASTING & NORTHING) | 2680.636E<br>6951.744N | 2678.346E<br>6937.642N |
| CHAINAGE                                | 0.000<br>13.404        | 14.286<br>16.293       |

LINE 40

|                                                   |                                                                                                                                                      |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1/41                                              | 3/2                                                                                                                                                  |
| STD IPWEAQ GRAATED FIELD INLET (IN LOT) 900x900mm | DRAINWAY SYSTEM ON GRADE, L.L.L, 2.4m KERB INLET, CLASS (D), HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER |
| 1050mm DIA SHAFT                                  | 1050mm DIA SHAFT                                                                                                                                     |
| 18.877<br>18.543                                  | 17.198<br>17.168                                                                                                                                     |
| 1.920                                             | 1.527                                                                                                                                                |
| 18.265                                            | 17.014                                                                                                                                               |
| 19.758<br>(21.336)                                | 18.213<br>(15.130)                                                                                                                                   |
| 17.630                                            | 17.005                                                                                                                                               |
| 20.85<br>(21.434)                                 | 18.691<br>(15.026)                                                                                                                                   |
| 2568.677E<br>6969.860N                            | 2567.232E<br>6733.574N                                                                                                                               |
| 6.097                                             | 2.103                                                                                                                                                |
| 5.230                                             | 0.888                                                                                                                                                |

41

|                                                                                                                                                      |                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| 1/42                                                                                                                                                 | 8/X2                                 |
| DRAINWAY SYSTEM ON GRADE, L.L.L, 2.4m KERB INLET, CLASS (D), HINGED BIKESAFE GALV. GRATE ON TOP OF ROCLA (OR EQUIV.) CPO PIT SYSTEM CIRCULAR CHAMBER | STD IPWEAQ ACCESS CHAMBER 1500mm DIA |
| 1050mm DIA SHAFT                                                                                                                                     |                                      |
| 17.198<br>17.168                                                                                                                                     | 17.171<br>17.133                     |
| 1.527                                                                                                                                                | 1.623                                |
| 17.014                                                                                                                                               | 15.729                               |
| 18.213<br>(15.130)                                                                                                                                   | 15.729                               |
| 18.628<br>(15.130)                                                                                                                                   | 15.729                               |
| 18.691<br>(15.026)                                                                                                                                   | 15.729                               |
| 2568.677E<br>6733.574N                                                                                                                               | 2567.232E<br>6735.414N               |
| 2.103                                                                                                                                                |                                      |
| 0.888                                                                                                                                                |                                      |

42

|                                                                                        |                                                                                        |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1/44                                                                                   | 3/4                                                                                    |
| STD IPWEAQ GULLY PIT, BARRIER KERB, IN SAG LINTEL (2.4 S), L.L.L, BIKESAFE GRATE (CID) | STD IPWEAQ GULLY PIT, BARRIER KERB, IN SAG LINTEL (2.4 S), L.L.L, BIKESAFE GRATE (CID) |
| 1050mm DIA SHAFT                                                                       |                                                                                        |
| 13.643<br>13.618                                                                       | 13.614<br>13.577                                                                       |
| 1.177                                                                                  | 1.311                                                                                  |
| 13.089                                                                                 | 12.955                                                                                 |
| 14.416<br>(20.864)                                                                     | 14.416<br>(9.235)                                                                      |
| 2448.839E<br>7008.673N                                                                 | 2434.820E<br>7010.949N                                                                 |
| 13.320                                                                                 | 14.203                                                                                 |
|                                                                                        |                                                                                        |

44

|                                                                                          |                                      |
|------------------------------------------------------------------------------------------|--------------------------------------|
| 1/46                                                                                     | 7/X2                                 |
| STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE LINTEL (2.4 S), L.L.L, BIKESAFE GRATE (CID) | STD IPWEAQ ACCESS CHAMBER 1050mm DIA |
| 1050mm DIA SHAFT                                                                         |                                      |
| 17.915<br>17.908                                                                         | 17.886<br>17.476                     |
| 1.227                                                                                    | 1.322                                |
| 17.821                                                                                   | 17.812                               |
| 19.135<br>(8.108)                                                                        | 16.091                               |
| 19.135<br>(8.036)                                                                        | 16.091                               |
| 2497.710E<br>6695.069N                                                                   | 2497.710E<br>6696.909N               |
| 2.103                                                                                    |                                      |
| 0.888                                                                                    |                                      |

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STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 12 OF 18



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

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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 12 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

#### SCALE IN METRES

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

VERT: Scale 1:50 - Lengths are in Metres.

Scale at A1: AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 10-09-2020 |

Drawing No:  
5941 ENG OPW1 521

Rev. No:  
D

|                       |                                                                                                                                                            |                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| STRUCTURE NAME        | 1/50                                                                                                                                                       | 3/54                                     |
| STRUCTURE DESCRIPTION | DRAINWAY SYSTEM SAG, L.L.L.<br>2.4m KERB INLET, CLASS (D)<br>HINGED BIKESAFE GALV. GRATE<br>ON TOP OF ROCLA (OR EQUIV.) CPO PIT<br>SYSTEM CIRCULAR CHAMBER | STD. IPWEAQ ACCESS CHAMBER<br>1050mm 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 |
|-------|--------|
|       | 475    |
|       | 550    |
|       | 625    |
|       | 775    |
|       | 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)                      | 0.031                                            |
| CAPACITY FLOW (cumecs)                  | 0.175                                            |
| FULL PIPE VELOCITY (m/s)                | 0.28                                             |
| NORMAL DEPTH VELOCITY (m/s)             | 1.20                                             |
| DATUM RL                                | 5.000                                            |
| HGL ELEVATION (39.35% AEP)              | 16.643<br>16.614<br>16.613<br>16.601             |
| DEPTH TO INVERT                         | 1.599<br>1.807<br>1.934                          |
| INVERT LEVEL OF DRAIN                   | 16.110<br>16.067<br>15.940                       |
| DESIGN (& EXISTING) SURFACE LEVEL       | 17.861<br>(11.995)<br>17.874<br>(12.192)         |
| SETOUT COORDINATES (EASTING & NORTHING) | 2662.324E<br>6765.511N<br>2667.781E<br>6764.712N |
| CHAINAGE                                | 0.000<br>4.328<br>5.318                          |

LINE 50

|                                                                                             |                                         |
|---------------------------------------------------------------------------------------------|-----------------------------------------|
| 1/51                                                                                        | 9/X2                                    |
| STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE<br>LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) | STD IPWEAQ ACCESS CHAMBER<br>1500mm DIA |

16.892  
16.861  
16.861  
16.866  
16.826

18.201  
(12.323)  
16.674  
18.138  
16.565  
15.520  
(2.082)

2628.673E  
6783.300N  
2634.538E  
6772.713N

0.000  
10.888  
12.103

51

|                                                                                             |                                         |
|---------------------------------------------------------------------------------------------|-----------------------------------------|
| 1/52                                                                                        | 9/X2                                    |
| STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE<br>LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) | STD IPWEAQ ACCESS CHAMBER<br>1500mm DIA |

16.895  
16.865  
16.865  
16.866  
16.826

18.201  
(12.072)  
16.674  
18.138  
16.665  
15.520  
(2.082)

2635.557E  
6770.873N  
2634.538E  
6772.713N

0.000  
0.888  
2.103

52

|                                                                                             |                                                                                             |                                         |                                         |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| 1/54                                                                                        | 2/54                                                                                        | 3/54                                    | 11/X2                                   |
| STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE<br>LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE<br>LINTEL (2.4 S), L.L.L. BIKESAFE GRATE (C/D) | STD IPWEAQ ACCESS CHAMBER<br>1050mm DIA | STD IPWEAQ ACCESS CHAMBER<br>2100mm DIA |

17.077  
17.072  
1.081  
16.990  
16.927  
16.920  
16.913  
16.613  
16.616  
16.601  
16.598  
16.696

18.221  
(3.280)  
16.857  
16.857  
16.797  
16.485  
15.940  
17.874  
(12.192)  
17.942  
(12.058)

6746.078N  
2665.128E  
6748.355N  
2667.781E  
6764.712N  
2671.076E  
6771.886N

0.000  
13.324  
14.206  
15.581  
30.778  
6.620  
38.673

54

54

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 13 OF 18



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Client:



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Project:

VANTAGE YATALA  
STAGE 1

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

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DRAWING TITLE  
STORMWATER DRAINAGE  
LONGITUDINAL SECTIONS  
SHEET 13 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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:     | 10-09-2020 |

Drawing No: 5941 ENG OPW1 522 Rev. No: D



|                       |                                                                        |                                                                                                                                                                |                                         |
|-----------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| STRUCTURE NAME        | 1/55                                                                   | 2/55                                                                                                                                                           | 12/X2                                   |
| STRUCTURE DESCRIPTION | STD IPWEAQ MANHOLE 600x600 GRATE SET WITH CONVERTER SLAB<br>1050mm DIA | DRAINWAY SYSTEM ON GRADE, L.L.L<br>2.4m KERB INLET, CLASS (D)<br>HINGED BIKESAFE GALV. GRATE<br>ON TOP OF ROCLA (OR EQUIV.) CPO PIT<br>SYSTEM CIRCULAR CHAMBER | STD IPWEAQ ACCESS CHAMBER<br>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

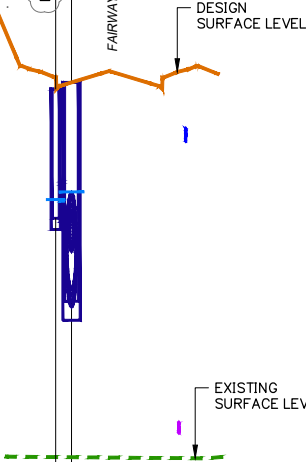
| SHAFT | OFFSET |
|-------|--------|
| 1200  | 475    |
| 1350  | 550    |
| 1500  | 625    |
| 1800  | 775    |
| 2100  | 925    |

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 RL                                | 5.000                  |                            |
| HGL ELEVATION (39.35% AEP)              | 17.672<br>16.781       | 16.692<br>16.697<br>16.346 |
| DEPTH TO INVERT                         | 2.646                  | 2.113<br>2.214             |
| INVERT LEVEL OF DRAIN                   | 15.632                 | 15.581<br>15.480           |
| DESIGN (& EXISTING) SURFACE LEVEL       | 18.278<br>(12.159)     | 17.848<br>(12.051)         |
| SETOUT COORDINATES (EASTING & NORTHING) | 2659.241E<br>6803.910N | 2662.438E<br>6798.579N     |
| CHAINAGE                                | 0.000<br>5.067         | 6.216<br>11.589            |

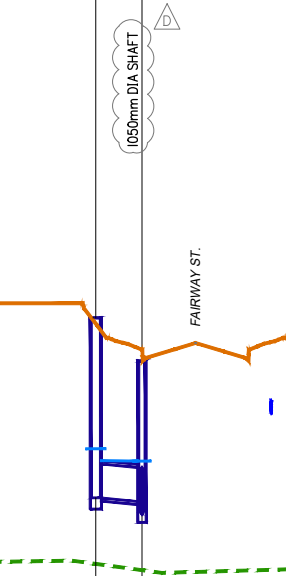
LINE 55

|                                                                                                                                                                |                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 1/57                                                                                                                                                           | 13/X2                                   |
| DRAINWAY SYSTEM ON GRADE, L.L.L<br>2.4m KERB INLET, CLASS (D)<br>HINGED BIKESAFE GALV. GRATE<br>ON TOP OF ROCLA (OR EQUIV.) CPO PIT<br>SYSTEM CIRCULAR CHAMBER | STD IPWEAQ ACCESS CHAMBER<br>1800mm DIA |



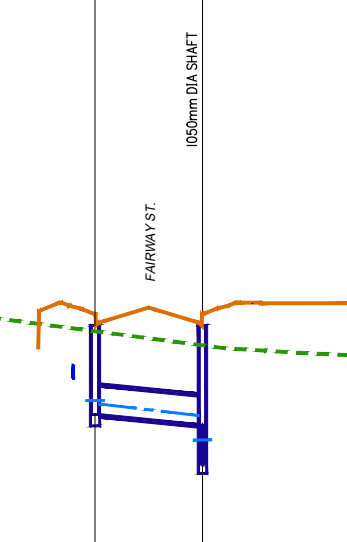
57

|                                                                                                                                                                |                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 1/58                                                                                                                                                           | 6/6                                                                                        |
| DRAINWAY SYSTEM ON GRADE, L.L.L<br>2.4m KERB INLET, CLASS (D)<br>HINGED BIKESAFE GALV. GRATE<br>ON TOP OF ROCLA (OR EQUIV.) CPO PIT<br>SYSTEM CIRCULAR CHAMBER | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE<br>LINTEL (2.4 S), L.L.L BIKESAFE GRATE (C/D) |



58

|                                                                                                                                                                |                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 1/61                                                                                                                                                           | 5/6                                                                                        |
| DRAINWAY SYSTEM ON GRADE, L.L.L<br>2.4m KERB INLET, CLASS (D)<br>HINGED BIKESAFE GALV. GRATE<br>ON TOP OF ROCLA (OR EQUIV.) CPO PIT<br>SYSTEM CIRCULAR CHAMBER | STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE<br>LINTEL (2.4 S), L.L.L BIKESAFE GRATE (C/D) |



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PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No.: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

|                                                                                            |                                         |
|--------------------------------------------------------------------------------------------|-----------------------------------------|
| 1/71                                                                                       | 8/X2                                    |
| STD IPWEAQ GULLY PIT, BARRIER KERB, ON-GRADE<br>LINTEL (2.4 S), L.L.L BIKESAFE GRATE (C/D) | STD IPWEAQ ACCESS CHAMBER<br>1500mm DIA |



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Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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: -  
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PSM: -  
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DRAWING TITLE  
STORMWATER DRAINAGE  
LONGITUDINAL SECTIONS  
SHEET 14 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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:     | 10-09-2020 |

Drawing No:  
5941 ENG OPW1 523

Rev. No:  
D

|                       |                                                                           |                                        |
|-----------------------|---------------------------------------------------------------------------|----------------------------------------|
| STRUCTURE NAME        | 1/72                                                                      | 7/102                                  |
| STRUCTURE DESCRIPTION | STD.IPMEA GULLY BARRIER KERB ON GRADE<br>LINET (S), LIP IN LINE, GRATE(D) | STD.IPMEA ACCESS CHAMBER<br>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 |
|-------|--------|
| 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)                      | 0.040                  |
| CAPACITY FLOW (cumecs)                  | 0.175                  |
| FULL PIPE VELOCITY (m/s)                | 0.36                   |
| NORMAL DEPTH VELOCITY (m/s)             | 1.28                   |
| DATUM RL                                | 7.000                  |
| HGL ELEVATION (39.35% AEP)              | 18.009<br>17.964       |
| DEPTH TO INVERT                         | 1.227<br>1.422         |
| INVERT LEVEL OF DRAIN                   | 17.821<br>17.712       |
| DESIGN (& EXISTING) SURFACE LEVEL       | 19.198<br>(18.522)     |
| SETOUT COORDINATES (EASTING & NORTHING) | 2491.845E<br>6707.496N |
| CHAINAGE                                | 0.000<br>10.888        |

LINE 72

|                                                                                                         |                                                                                                                                                    |                                                                                                                          |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1/100                                                                                                   | 2/100                                                                                                                                              | 3/100                                                                                                                    |
| GRATED FIELD INLET (SPECIAL)<br>1500x2835mm CHAMBER (IN BASIN)<br>HIGH FLOW OUTLET STRUCTURE w/ ORIFICE | DRAINWAY SYSTEM ON GRADE, L.L.L<br>37/7C KERB INLET, CLASS (D)<br>HINGED BIKESAFE GALV. GRATE<br>ON TOP OF SPECIAL OVERSIZE<br>CHAMBER 1950x2900mm | CONNECTION TO EXISTING CATTLE 'CREEP'<br>CONSTRUCT CONCRETE ENDWALL TO FILL<br>ROCC OPENING AND SET 1350Ø PIPE INTO WALL |
| 1.08%                                                                                                   | 1.08%                                                                                                                                              |                                                                                                                          |
| 92.3                                                                                                    | 92.2                                                                                                                                               |                                                                                                                          |
| 0.000                                                                                                   | 0.295                                                                                                                                              |                                                                                                                          |
| 2.990                                                                                                   | 5.559                                                                                                                                              |                                                                                                                          |
| 0.00                                                                                                    | 0.21                                                                                                                                               |                                                                                                                          |
| 0.00                                                                                                    | 2.06                                                                                                                                               |                                                                                                                          |
| -5.000                                                                                                  |                                                                                                                                                    |                                                                                                                          |
| 5.583                                                                                                   | 5.583                                                                                                                                              | 5.578                                                                                                                    |
| 2.756                                                                                                   | 3.360                                                                                                                                              | 3.508                                                                                                                    |
| 4.219                                                                                                   | 4.029                                                                                                                                              | 3.991                                                                                                                    |
| 4.662                                                                                                   | 4.009                                                                                                                                              | 3.991                                                                                                                    |
| 7.083                                                                                                   | 7.436                                                                                                                                              | 7.499                                                                                                                    |
| 7038.970N                                                                                               | 7054.184N                                                                                                                                          | 7055.313N                                                                                                                |
| 0.000                                                                                                   | 17.527                                                                                                                                             | 1.655                                                                                                                    |
| 2241.91E                                                                                                | 2230.246E                                                                                                                                          | 2229.016E                                                                                                                |
| 7038.970N                                                                                               | 7054.184N                                                                                                                                          | 7055.313N                                                                                                                |

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

100

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 15 OF 18

|                                                                      |                                                                      |                                                                      |                                                                                               |
|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 1/101                                                                | 2/101                                                                | 3/101                                                                | 1/100                                                                                         |
| STD.IPMEA Q GRATED FIELD INLET<br>600x600mm (300mm ABOVE BASIN I.L.) | STD.IPMEA Q GRATED FIELD INLET<br>600x600mm (300mm ABOVE BASIN I.L.) | STD.IPMEA Q GRATED FIELD INLET<br>600x600mm (300mm ABOVE BASIN I.L.) | GRATED FIELD INLET (SPECIAL)<br>1500x2835mm IN BASIN<br>HIGH FLOW OUTLET STRUCTURE w/ ORIFICE |
| 39% AEP<br>HYDRAULIC<br>GRADE LINE                                   |                                                                      |                                                                      |                                                                                               |
| 150<br>uPVC SNI0                                                     | 225<br>uPVC SNI0                                                     | 225<br>uPVC SNI0                                                     |                                                                                               |
| 0.50%                                                                | 0.50%                                                                | 0.50%                                                                |                                                                                               |
| 200.0                                                                | 200.0                                                                | 200.0                                                                |                                                                                               |
| 0.000                                                                | 0.000                                                                | 0.000                                                                |                                                                                               |
| 0.013                                                                | 0.038                                                                | 0.037                                                                |                                                                                               |
| 0.00                                                                 | 0.00                                                                 | 0.00                                                                 |                                                                                               |
| 0.00                                                                 | 0.00                                                                 | 0.00                                                                 |                                                                                               |
| -5.000                                                               |                                                                      |                                                                      |                                                                                               |
| 5.395                                                                | 5.395                                                                | 5.395                                                                | 5.395                                                                                         |
| 1.330                                                                | 1.524                                                                | 1.721                                                                | 2.793                                                                                         |
| 4.770                                                                | 4.576                                                                | 4.379                                                                | 4.219                                                                                         |
| 4.770                                                                | 4.596                                                                | 4.319                                                                | 4.219                                                                                         |
| 6.100                                                                | 6.100                                                                | 6.100                                                                | 7.093                                                                                         |
| 7.404                                                                | 4.864                                                                | 5.038                                                                | 4.662                                                                                         |
| 2312.286E                                                            | 2280.038E                                                            | 2244.088E                                                            | 2241.91E                                                                                      |
| 7063.948N                                                            | 7060.768N                                                            | 7034.928N                                                            | 7038.970N                                                                                     |
| 0.000                                                                | 38.814                                                               | 43.373                                                               | 3.772                                                                                         |
| 39.714                                                               |                                                                      |                                                                      | 88.960                                                                                        |

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planning | environment | landscape | engineering | survey  
T: 3807 3333 | F: 3287 5461 | www.gassman.com.au  
Gold Coast & Logan | 176 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



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(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

Site Address:

60 STAPYLTON JACOBS WELL  
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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  
STORMWATER DRAINAGE  
LONGITUDINAL SECTIONS  
SHEET 15 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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:     | 10-09-2020 |

Drawing No:  
5941 ENG OPW1 524

Rev. No:  
D

The diagram illustrates the relationship between the shaft/pit base, the 39% AEP hydraulic grade line, and the basin level. The basin level is represented by a horizontal orange line. The 39% AEP hydraulic grade line is shown as a dashed green line that slopes downward from left to right. The shaft/pit base is indicated by a solid blue line that follows the slope of the hydraulic grade line. A vertical line marks the transition from the shaft/pit base to the basin level.

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

### CONVERTER SLAB TABLE

NOTE: PROVIDE DRAINWAY  
CONVERTER SLAB FOR CPO  
PITS 1200 $\phi$ , 1500 $\phi$ , 1800 $\phi$

LINE 102



**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

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|       |            |                         |     |     |  |
|       |            |                         |     |     |  |
| C     | 10-09-2020 | RESPONSE TO RFI No. 4   | BA  | MG  |  |
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| A     | 01-05-2020 | ORIGINAL ISSUE          | BA  | MG  |  |
| Issue | Date       | Description             | DRN | CHK |  |

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



A horizontal scale bar with a black background and white markings. The scale ranges from 0 to 40 metres, with major tick marks every 5 metres (0, 5, 10, 15, 20, 25, 30, 35, 40). The numbers are in white.

**VERT:** Scale 1:500 - Lengths are in Metres.



A vertical scale bar with a black background and white markings. The scale ranges from 0 to 4.0 metres, with major tick marks every 0.5 metres (0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0). The numbers are in white.

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 525 | C        |



| STRUCTURE NAME        | 3/X2                                                                                                                       | 4/X2                                     | 5/X2                                     | 6/X2                                     | 7/X2                                     | 8/X2                                     | 9/X2                                     | 10/X2                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| STRUCTURE DESCRIPTION | STD IPW/EAQ MANHOLE 600x600 GRATE SET WITH CONVERTOR SLAB<br>1200mm DIA<br>PROVIDE 2.44m LENGTH STUB FOR FUTURE CONNECTION | STD IPW/EAQ ACCESS CHAMBER<br>1200mm DIA | STD IPW/EAQ ACCESS CHAMBER<br>1350mm DIA | STD IPW/EAQ ACCESS CHAMBER<br>1500mm DIA | STD IPW/EAQ ACCESS CHAMBER<br>1500mm DIA | STD IPW/EAQ ACCESS CHAMBER<br>1500mm DIA | STD IPW/EAQ ACCESS CHAMBER<br>1500mm DIA | STD IPW/EAQ ACCESS CHAMBER<br>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

PROVIDE 2.44m LENGTH STUB FOR FUTURE CONNECTION (750mm RCP)

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)                          | 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<br>18.147                       | 18.126<br>18.111       | 18.076<br>18.058       | 18.004<br>18.015<br>17.773  | 17.647<br>17.608       | 17.316<br>17.275       | 16.985<br>16.942<br>16.914          |
| DEPTH TO INVERT OF PIPE                 | 2.724<br>2.784                         | 2.763<br>2.823         | 2.897<br>2.947         | 3.000<br>3.050              | 2.993<br>3.043         | 2.849<br>2.899         | 2.597<br>2.617<br>2.608             |
| INVERT LEVEL OF PIPE                    | 16.876<br>16.816                       | 16.800<br>16.740       | 16.695<br>16.645       | 16.367<br>16.317            | 16.141<br>16.091       | 15.779<br>15.729       | 15.540<br>15.520<br>15.483          |
| DESIGN (& EXISTING) SURFACE LEVEL       | 19.823<br>(23.563)                     | 19.563<br>(23.021)     | 19.592<br>(21.167)     | 19.367<br>(19.056)          | 19.135<br>(18.108)     | 18.628<br>(15.130)     | 18.138<br>(12.082)<br>18.092        |
| SETOUT COORDINATES (EASTING & NORTHING) | 2384.070E<br>6652.630N                 | 2392.470E<br>6655.649N | 2416.043E<br>6651.664N | 2465.884E<br>6679.277N      | 2497.710E<br>6696.909N | 2567.213E<br>6735.414N | 2634.538E<br>6772.713N<br>2642.323E |
| PIPE CHAINAGE                           | 230.762<br>7.871<br>239.758<br>263.699 | 22.742                 | 263.699                | 55.629<br>320.678<br>35.034 | 357.062<br>78.106      | 436.518<br>75.617      | 513.485<br>7.390<br>522.225         |

LINE X2

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



planning | environment | landscape | engineering | survey  
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Gold Coast & Logan | 176 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

Site Address:

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

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DRAWING TITLE  
STORMWATER DRAINAGE  
LONGITUDINAL SECTIONS  
SHEET 17 OF 18

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 10-09-2020 | RESPONSE TO RFI No. 4        | BA  | MG  |
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| ISSUE | Date       | Description                  | DRN | CHK |

SCALE IN METRES

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

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

Scale at A1: AS SHOWN

|           |            |
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| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 10-09-2020 |

Drawing No:  
5941 ENG OPW1 526

Rev. No:  
D

|                       |                                         |                                         |                                         |                                         |                                                                                                                                                              |                                                                                                                                       |
|-----------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| STRUCTURE NAME        | 10/X2                                   | 11/X2                                   | 12/X2                                   | 13/X2                                   | 14/X2                                                                                                                                                        | OUT/X2                                                                                                                                |
| STRUCTURE DESCRIPTION | STD IPWEAQ ACCESS CHAMBER<br>1500mm DIA | STD IPWEAQ ACCESS CHAMBER<br>2100mm DIA | STD IPWEAQ ACCESS CHAMBER<br>1800mm DIA | STD IPWEAQ ACCESS CHAMBER<br>2100mm DIA | DRAINWAY SYSTEM IN SAG, L.I.L<br>2.4m KERB INLET, CLASS (D)<br>HINGED BIKESAFE GALV. GRATE<br>ON TOP OF ROCLA (OR EQUIV.) CPO PIT<br>SYSTEM CIRCULAR CHAMBER | 1200mmØ SINGLE OUTLET HEADWALL<br>PROVIDE APRON AND CUT-OFF WALL<br>DISCHARGE TO OPEN CHANNEL<br>PROVIDE ROCK OUTLET SCOUR PROTECTION |

#### 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 I200Ø, I500Ø, I800Ø

|                                         |                        |          |                        |        |          |                        |          |        |                        |          |                        |  |           |          |        |
|-----------------------------------------|------------------------|----------|------------------------|--------|----------|------------------------|----------|--------|------------------------|----------|------------------------|--|-----------|----------|--------|
| PIPE SIZE (mm)                          | 1050                   |          | 1050                   |        | 1200     |                        | 1200     |        | 1200                   |          |                        |  |           |          |        |
| PIPE CLASS                              | 3                      |          | 3                      |        | 3        |                        | 3        |        | 3                      |          |                        |  |           |          |        |
| PIPE GRADE (%)                          | 0.50%                  |          | 0.50%                  |        | 0.50%    |                        | 1.00%    |        | 0.72%                  |          |                        |  |           |          |        |
| PIPE SLOPE (1 in X)                     | 200.0                  |          | 200.0                  |        | 200.0    |                        | 100.0    |        | 138.4                  |          |                        |  |           |          |        |
| PIPE FLOW (cumecs)                      | 1.698                  |          | 1.735                  |        | 2.221    |                        | 2.464    |        | 2.520                  |          |                        |  |           |          |        |
| CAPACITY FLOW (cumecs)                  | 1.932                  |          | 1.932                  |        | 2.758    |                        | 3.900    |        | 3.316                  |          |                        |  |           |          |        |
| FULL PIPE VELOCITY (m/s)                | 1.96                   |          | 2.00                   |        | 1.96     |                        | 2.18     |        | 2.23                   |          |                        |  |           |          |        |
| NORMAL DEPTH VELOCITY (m/s)             | 2.52                   |          | 2.52                   |        | 2.71     |                        | 3.65     |        | 3.22                   |          |                        |  |           |          |        |
| DATUM R.L.                              | 4.000                  |          |                        |        |          |                        |          |        |                        |          |                        |  |           |          |        |
| HGL ELEVATION (39.35% AEP)              | 16.914                 | 16.802   |                        | 16.695 | 16.799   | 16.186                 | 16.140   |        | 16.070                 | 16.199   | 15.575                 |  | 15.547    | 15.461   |        |
| DEPTH TO INVERT OF PIPE                 | 2.608                  | 2.688    |                        | 2.677  | 2.757    | 2.748                  | 2.808    |        | 2.732                  | 2.894    |                        |  | 2.911     | 2.931    | 1.445  |
| INVERT LEVEL OF PIPE                    | 15.483                 | 15.403   |                        | 15.264 | 15.184   | 15.066                 | 15.006   |        | 14.871                 | 14.709   |                        |  | 14.606    | 14.586   |        |
| DESIGN (& EXISTING) SURFACE LEVEL       | 18.092                 | (12.040) |                        | 17.942 | (12.058) | 17.814                 | (11.978) |        | 17.604                 | (12.647) |                        |  | 17.551    | (12.637) | 15.921 |
| SETOUT COORDINATES (EASTING & NORTHING) | 2642.323E<br>6776.685N |          | 2671.076E<br>6771.886N |        |          | 2675.070E<br>6796.488N |          |        | 2679.621E<br>6824.518N |          | 2690.913E<br>6822.685N |  | 2833.880E |          |        |
| PIPE CHAINAGE                           | 522.225                | 27.801   | 551.376                | 23.574 | 576.300  | 27.047                 | 604.697  | 10.300 | 616.137                | 15.273   | 632.000                |  |           |          |        |

LINE X2

#### STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 18 OF 18



planning | environment | landscape | engineering | survey  
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Gold Coast & Logan | 176 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

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#### DRAWING TITLE STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 18 OF 18

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

Scale 1:50 - Lengths are in Metres.  
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Scale at A1: AS SHOWN

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| Designed: | IG         |
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| Date:     | 10-09-2020 |

Drawing No: 5941 ENG OPW1 527 Rev. No: D

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies

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

| LOCATION      |               | SUB-CATCHMENT RUNOFF                        |                                    |                                  |                                |                                         |                                           | INLET DESIGN                |                            |                   |                |                                 |                             | DRAIN DESIGN            |                                        |                                     |                              |                              |                          | HEAD LOSSES               |                         |                    |               |                                       |                                 |                                     |                                 |                  |                                |                                   |                                   | PART FULL                  |                               |                                   |                                       |                            |                                  |                  |                   |                     |                      |            |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| STRUCTURE No. | DRAIN SECTION | Tc<br>SUB-CATCHMENT<br>TIME OF CONC.<br>min | I<br>RAINFALL<br>INTENSITY<br>mm/h | A<br>SUB-CATCHMENT<br>AREA<br>ha | CA<br>EQUIVALENT<br>AREA<br>ha | Qc<br>SUB-CATCHMENT<br>DISCHARGE<br>L/s | Qa<br>FLOW IN K&C<br>(INC. BYPASS)<br>L/s | ROAD GRADE<br>AT INLET<br>% | ROAD FALL<br>AT INLET<br>% | INLET<br>TYPE     | INLET<br>CURVE | Qg<br>FLOW INTO<br>INLET<br>L/s | Qb<br>BYPASS<br>FLOW<br>L/s | ByPASS<br>STRUCTURE No. | Tc<br>CRITICAL<br>TIME OF CONC.<br>min | I<br>RAINFALL<br>INTENSITY<br>mm/hr | CA<br>TOTAL<br>(C x A)<br>ha | Qcrit<br>PEAK<br>FLOW<br>L/s | Q<br>PIPE<br>FLOW<br>L/s | L<br>REACH<br>LENGTH<br>m | S<br>PIPE<br>GRADE<br>% | PIPE<br>SIZE<br>mm | PIPE<br>CLASS | VH-QA<br>FULL PIPE<br>VELOCITY<br>m/s | Qcap<br>CAPACITY<br>FLOW<br>L/s | Vcap<br>CAPACITY<br>VELOCITY<br>m/s | Vt<br>TRAVEL<br>VELOCITY<br>m/s | CHART(S)<br>USED | VH-Qg<br>VELOCITY<br>HEAD<br>m | Ku<br>US HEAD LOSS<br>COEFFICIENT | hu<br>US HEAD LOSS<br>COEFFICIENT | Kw<br>W.S.E<br>COEFFICIENT | hw<br>CHANGE<br>IN W.S.E<br>m | Sf<br>PIPE FRICTION<br>SLOPE<br>% | hf<br>PIPE FRICTION<br>HEAD LOSS<br>m | dn<br>NORMAL<br>DEPTH<br>m | Vn<br>NORMAL<br>DEPTH VEL<br>m/s | PIPE US I/L<br>m | PIPE DIS L/L<br>m | PIPE US H.G.L.<br>m | PIPE DIS H.G.L.<br>m | W.S.E<br>m | GRATE<br>LEVEL<br>m |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1/1           | 1/1 to 2/1    | 5                                           | 138                                | 0.058                            | 0.046                          | 18                                      | 18                                        | 0.93                        | 3                          | GRADE_BK_2409_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                      | 0.45                          | 0.092                             | 0.068                                 | 1.3                        | 18.283                           | 18.016           | 18.377            | 18.317              | 18.386               | 19.411     |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2/1           | 2/1 to 3/1    | 5                                           | 138                                | 0.077                            | 0.061                          | 23                                      | 23                                        | 0.93                        | 3                          | GRADE_BK_2409_Lip | 0.5G 3X        | 23                              | 0                           | 3/1                     | 5.65                                   | 138                                 | 0.334                        | 128                          | 128                      | 39.535                    | 1.25                    | 450                | 3             | 0.8                                   | 319                             | 2.01                                | 1.89                            | T10              | 0.033                          | 2.18                              | 0.072                             | 2.66                       | 0.088                         | 0.2                               | 0.079                                 | 0.198                      | 1.89                             | 17.672           | 17.178            | 18.245              | 18.166               | 18.333     | 19.411              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3/1           | 3/1 to 4/1    | 5                                           | 138                                | 0.044                            | 0.035                          | 13                                      | 13                                        | 0.93                        | 3                          | GRADE_BK_2409_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                          | 0.75                              | 0.077                             | 0.077                      | 0.63                          | 0.247                             | 0.302                                 | 1.09                       | 17.108                           | 16.762           | 18.089            | 17.842              | 18.166               | 19.05      |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4/1           | 4/1 to 5/1    | 5                                           | 138                                | 0.044                            | 0.035                          | 13                                      | 13                                        | 0.93                        | 3                          | GRADE_BK_2409_Lip | 0.5G 3X        | 13                              | 0                           | 2/14                    | 5.73                                   | 134                                 | 0.949                        | 355                          | 354                      | 39.379                    | 1                       | 450                | 3             | 2.22                                  | 285                             | 1.79                                | 2.22                            | T2/T5            | 0.253                          | 0.6                               | 0.151                             | 0.151                      | 1.54                          | 0.806                             | 0.45                                  | 2.22                       | 16.742                           | 16.349           | 17.691            | 17.085              | 17.842               | 18.676     |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5/1           | 5/1 to 6/1    |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_1350      |                |                                 |                             |                         | 5.88                                   | 135                                 | 2.683                        | 1004                         | 1004                     | 39.265                    | 2.5                     | 600                | 3             | 3.55                                  | 971                             | 3.44                                | 3.9                             | T2/T5            | 0.643                          | 0.57                              | 0.368                             | 0.368                      | 2.67                          | 0.928                             | 0.513                                 | 3.9                        | 16.137                           | 15.155           | 16.717            | 15.668              | 17.085               | 18.312     |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6/1           | 6/1 to 7/1    |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_1050      |                |                                 |                             |                         | 5.85                                   | 134                                 | 2.986                        | 1115                         | 1115                     | 39.415                    | 5                       | 600                | 3             | 3.94                                  | 1374                            | 4.86                                | 5.41                            | T1/T2            | 0.794                          | 0.23                              | 0.182                             | 0.182                      | 3.77                          | 1.494                             | 0.411                                 | 5.41                       | 14.791                           | 12.82            | 15.378            | 13.892              | 15.56                | 17.057     |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7/1           | 7/1 to 8/1    |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_1050      |                |                                 |                             |                         | 5.97                                   | 133                                 | 3.261                        | 1208                         | 1208                     | 39.415                    | 5                       | 600                | 3             | 4.27                                  | 1374                            | 4.86                                | 5.48                            | T8/T10           | 0.931                          | 1.25                              | 1.161                             | 1.4                        | 1.3                           | 4.34                              | 1.719                                 | 0.437                      | 5.48                             | 12.141           | 10.17             | 12.731              | 11.019               | 14.031     | 14.892              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8/1           | 8/1 to 9/1    |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_1050      |                |                                 |                             |                         | 6.49                                   | 133                                 | 3.612                        | 1332                         | 1331                     | 39.04                     | 5                       | 600                | 3             | 4.71                                  | 1374                            | 4.86                                | 5.53                            | T1/T2            | 1.131                          | 0.25                              | 0.281                             | 0.281                      | 4.7                           | 1.834                             | 0.476                                 | 5.53                       | 9.695                            | 7.743            | 10.738            | 8.904               | 11.019               | 12.374     |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9/1           | 9/1 to 10/1   |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_1800      |                |                                 |                             |                         | 6.25                                   | 132                                 | 10.192                       | 3737                         | 3737                     | 38.665                    | 2                       | 1200               | 3             | 3.3                                   | 5516                            | 4.88                                | 5.24                            | T4/T8            | 0.557                          | 0.94                              | 0.522                             | 0.97                       | 0.541                         | 1                                 | 0.481                                 | 0.724                      | 5.24                             | 7.336            | 6.563             | 8.382               | 7.995                | 8.923      | 10.657              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10/1          | 10/1 to 11/1  |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_1800      |                |                                 |                             |                         | 6.33                                   | 132                                 | 10.439                       | 3816                         | 3816                     | 15.567                    | 2.5                     | 1200               | 3             | 3.37                                  | 6167                            | 5.45                                | 5.74                            | T1/T2            | 0.581                          | 0.21                              | 0.12                              | 0.12                       | 0.12                          | 0.86                              | 0.149                                 | 0.683                      | 5.74                             | 6.543            | 6.154             | 7.878               | 7.726                | 7.995      | 9.15                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11/1          | 11/1 to 12/1  |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_2100      |                |                                 |                             |                         | 6.38                                   | 131                                 | 10.66                        | 3891                         | 3891                     | 10.192                    | 0.1                     | 1200               | 3             | 3.44                                  | 1233                            | 1.09                                | 3.44                            | T8/T10           | 0.346                          | 1.88                              | 0.581                             | 1.92                       | 0.664                         | 1.59                              | 0.854                                 | 1.2                        | 3.44                             | 6.048            | 6.038             | 7.144               | 6.982                | 7.808      | 8.345               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12/1          | 12/1 to 13/1  |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | ACC_CHA_2100      |                |                                 |                             |                         | 6.43                                   | 131                                 | 10.718                       | 3905                         | 3905                     | 18.157                    | 0.1                     | (2x)1200           | 3             | 1.73                                  | 2467                            | 1.89                                | 1.73                            | T1               | 0.152                          | 0                                 | 0                                 | 0                          | 0                             | 0.92                              | 0.06                                  | 1.2                        | 1.73                             | 6.018            | 6                 | 6.935               | 6.769                | 6.935      | 8.058               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13/1          |               |                                             |                                    |                                  |                                |                                         |                                           |                             |                            | HW outlet         |                |                                 |                             |                         |                                        |                                     |                              |                              |                          |                           |                         |                    |               |                                       |                                 |                                     |                                 |                  |                                |                                   |                                   |                            |                               |                                   |                                       |                            |                                  |                  |                   |                     |                      |            |                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



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/h | 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 FALL 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) L/s | Qcrit PEAK FLOW L/s | Q PIPE FLOW L/s | L REACH LENGTH m | s PIPE GRADE % | PIPE SIZE mm | PIPE CLASS | VH-Q/A FULL PIPE VELOCITY m/s | Qcap CAPACITY FLOW L/s | Vcap CAPACITY VELOCITY m/s | Vt TRAVEL VELOCITY m/s | CHART(S) USED | VH2g 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 US LL | PIPE DIS LL | PIPE US H.G.L | PIPE DIS H.G.L | W.S.E m | GRATE LEVEL m |        |  |  |  |  |  |
| 1/29          | 1/29 to 2/29  | 5                                  | 138                       | 0.228                   | 0.181                 | 69                             | 69                               |                       |                      | 900x900           |             | 69                     | 0                  | 2/29                 | 5                             | 138                        | 0.181                | 69                  | 69              | 5.182            | 1              | 375          | 3          | 0.63                          | 175                    | 1.59                       | 1.49                   | G1            | 0.02                 | 3.11                        | 0.062             |                      | 0.062                | 0.16                     | 0.008                        | 0.164             | 1.49                    | 9.726      | 9.674       | 10.81         | 10.802         | 10.873  | 11.654        |        |  |  |  |  |  |
| 2/29          | 2/29 to 1/30  | 5                                  | 138                       | 0.045                   | 0.035                 | 14                             | 14                               | 1.2                   | 3                    | GRADE_BK_2400_Lip | 10 3X       | 14                     | 0                  | 1/27                 | 5.86                          | 138                        | 0.216                | 83                  | 83              | 0.888            | 2              | 375          | 3          | 0.75                          | 248                    | 2.25                       | 2.02                   | T1            | 0.029                | 0.85                        | 0.019             |                      | 0.019                | 0.22                     | 0.002                        | 0.149             | 2.02                    | 9.601      | 9.586       | 10.784        | 10.782         | 10.802  | 11.189        |        |  |  |  |  |  |
| 1/30          | 1/30 to 2/30  | 5                                  | 138                       | 0.679                   | 0.539                 | 207                            | 207                              |                       |                      | 1200x1200         |             | 207                    | 0                  | 2/30                 | 5                             | 138                        | 0.539                | 207                 | 207             | 5.717            | 0.5            | 600          | 3          | 0.73                          | 434                    | 1.54                       | 1.52                   | G1            | 0.027                | 2.94                        | 0.06              |                      | 0.06                 | 0.11                     | 0.006                        | 0.291             | 1.52                    | 9.328      | 9.299       | 11.231        | 11.225         | 11.311  | 13            |        |  |  |  |  |  |
| 2/30          | 2/30 to 1/42  | 5                                  | 138                       | 0.058                   | 0.046                 | 18                             | 18                               | 2.8                   | 3                    | GRADE_BK_2400_Lip | 20 3X       | 18                     | 0                  | 1/26                 | 5.86                          | 138                        | 0.585                | 224                 | 224             | 11.038           | 0.5            | 600          | 3          | 0.79                          | 434                    | 1.54                       | 1.55                   | T2/T5         | 0.032                | 0.59                        | 0.019             |                      | 0.019                | 0.13                     | 0.015                        | 0.305             | 1.55                    | 9.219      | 9.164       | 11.206        | 11.191         | 11.225  | 11.476        |        |  |  |  |  |  |
| 1/31          | 1/31 to 2/31  | 5                                  | 138                       | 0.588                   | 0.467                 | 179                            | 179                              |                       |                      | 1200x1200         |             | 179                    | 0                  | 2/31                 | 5                             | 138                        | 0.467                | 179                 | 179             | 5.484            | 1              | 525          | 3          | 0.83                          | 430                    | 1.99                       | 1.9                    | G1            | 0.035                | 3.01                        | 0.105             |                      | 0.105                | 0.17                     | 0.01                         | 0.236             | 1.9                     | 10.44      | 10.385      | 12.016        | 12.007         | 12.121  | 12.579        |        |  |  |  |  |  |
| 2/31          | 2/31 to 1/32  | 5                                  | 138                       | 0.060                   | 0.048                 | 18                             | 18                               | 2.98                  | 3                    | GRADE_BK_2400_Lip | 20 3X       | 18                     | 0                  | 2/29                 | 5.85                          | 138                        | 0.515                | 197                 | 197             | 0.781            | 2              | 600          | 3          | 0.7                           | 869                    | 3.07                       | 2.48                   | T1/T2         | 0.025                | 0.14                        | 0.003             |                      | 0.003                | 0.1                      | 0.001                        | 0.194             | 2.48                    | 10.305     | 10.289      | 12.003        | 12.002         | 12.007  | 12.18         |        |  |  |  |  |  |
| 1/32          | 1/32 to 1/30  | 5                                  | 138                       | 0.033                   | 0.027                 | 10                             | 10                               | 2.98                  | 3                    | GRADE_BK_2400_Lip | 20 3X       | 10                     | 0                  | 2/31                 | 5                             | 138                        | 0.027                | 10                  | 10              | 1.038            | 1              | 375          | 3          | 0.09                          | 175                    | 1.59                       | 0.86                   | G1            | 0                    | 7                           | 0.003             |                      | 0.003                | 0                        | 0                            | 0                 | 0.061                   | 0.86       | 12.54       | 12.549        | 12.943         | 12.943  | 12.946        | 13.786 |  |  |  |  |  |
| 1/33          | 1/33 to 2/33  | 5                                  | 138                       | 3.839                   | 3.048                 | 1168                           | 1168                             |                       |                      | 1200x1200         |             | 1168                   | 0                  | 2/33                 | 5                             | 138                        | 3.048                | 1168                | 1168            | 5.032            | 0.4            | 750          | 3          | 2.64                          | 704                    | 1.59                       | 2.84                   | G1            | 0.357                | 3.43                        | 1.224             |                      | 1.224                | 1.1                      | 0.055                        | 0.75              | 2.64                    | 17.033     | 17.013      | 17.886        | 17.831         | 18.11   | 19.6          |        |  |  |  |  |  |
| 2/33          | 2/33 to 6/32  | 5                                  | 138                       | 0.114                   | 0.090                 | 35                             | 35                               | 0.64                  | 3                    | 1TCS90_UNCHECKED  | 0.50 3X     | 35                     | 0                  | 1/46                 | 5.83                          | 138                        | 3.139                | 1202                | 1202            | 0.888            | 0.4            | 825          | 3          | 2.25                          | 908                    | 1.7                        | 2.25                   | T1            | 0.258                | 0.01                        | 0.002             |                      | 0.002                | 0.7                      | 0.006                        | 0.825             | 2.25                    | 16.928     | 16.925      | 17.629        | 17.623         | 17.831  | 19.281        |        |  |  |  |  |  |
| 1/34          | 1/34 to 2/34  | 5                                  | 138                       | 0.549                   | 0.436                 | 167                            | 167                              |                       |                      | 900x900           |             | 167                    | 0                  | 2/34                 | 5                             | 138                        | 0.436                | 167                 | 167             | 5.182            | 1              | 375          | 3          | 1.51                          | 175                    | 1.59                       | 1.81                   | G1            | 0.117                | 3.9                         | 0.455             |                      | 0.455                | 0.91                     | 0.047                        | 0.293             | 1.81                    | 14.009     | 14.007      | 14.513        | 14.466         | 14.969  | 15.899        |        |  |  |  |  |  |
| 2/34          | 2/34 to 8/2   | 5                                  | 138                       | 0.057                   | 0.045                 | 17                             | 17                               | 3.17                  | 3                    | GRADE_BK_2400_Lip | 30 3X       | 17                     | 0                  | 1/44                 | 5.85                          | 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                 | 1.1                      | 0.011                        | 0.327             | 1.8                     | 13.938     | 13.927      | 14.376        | 14.365         | 14.466  | 15.371        |        |  |  |  |  |  |
| 1/35          | 1/35 to 2/35  | 5                                  | 138                       | 1.710                   | 1.358                 | 521                            | 521                              |                       |                      | 1200x1200         |             | 521                    | 0                  | 2/35                 | 5                             | 138                        | 1.358                | 521                 | 521             | 5.319            | 1              | 525          | 3          | 2.4                           | 430                    | 1.99                       | 2.4                    | G1            | 0.295                | 2.89                        | 0.792             |                      | 0.792                | 1.46                     | 0.078                        | 0.525             | 2.4                     | 13.961     | 13.908      | 15.091        | 15.013         | 15.884  | 18.6          |        |  |  |  |  |  |
| 2/35          | 2/35 to 7/2   | 5                                  | 138                       | 0.090                   | 0.071                 | 27                             | 28                               | 3.17                  | 3                    | GRADE_BK_2400_Lip | 30 3X       | 28                     | 0                  | 2/3                  | 5.84                          | 138                        | 1.429                | 547                 | 547             | 11.038           | 1              | 600          | 3          | 1.94                          | 614                    | 2.17                       | 2.45                   | T1/T2         | 0.191                | 0.12                        | 0.022             |                      | 0.022                | 0.79                     | 0.088                        | 0.442             | 2.45                    | 13.888     | 13.757      | 14.991        | 14.904         | 15.013  | 15.764        |        |  |  |  |  |  |
| 1/36          | 1/36 to 6/2   | 5                                  | 138                       | 0.387                   | 0.307                 | 118                            | 118                              |                       |                      | 1200x1200         |             | 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                | 4.87                        | 0.236             |                      | 0.236                | 0.45                     | 0.023                        | 0.225             | 1.7                     | 15.773     | 15.723      | 16.418        | 16.390         | 16.855  | 17.591        |        |  |  |  |  |  |
| 1/38          | 1/38 to 5/2   | 5                                  | 138                       | 0.108                   | 0.086                 | 33                             | 33                               | 3.17                  | 3                    | GRADE_BK_2400_Lip | 30 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                | 0.03                     | 0.005                        | 0.109             | 1.21                    | 16.003     | 16.47       | 16.999        | 16.994         | 17.029  | 17.831        |        |  |  |  |  |  |
| 1/39          | 1/39 to 4/2   | 5                                  | 138                       | 0.387                   | 0.307                 | 118                            | 118                              |                       |                      | 900x900           |             | 118                    | 0                  | 4/2                  | 5                             | 138                        | 0.307                | 118                 | 118             | 5.23             | 1              | 375          | 3          | 1.07                          | 175                    | 1.59                       | 1.7                    | G1            | 0.058                | 5.47                        | 0.318             |                      | 0.318                | 0.41                     | 0.023                        | 0.225             | 1.7                     | 17.145     | 17.093      | 17.507        | 17.486         | 17.825  | 19.032        |        |  |  |  |  |  |
| 1/40          | 1/40 to 2/40  | 5                                  | 138                       | 0.080                   | 0.063                 | 24                             | 24                               |                       |                      | SAG_BK_2400_Lip   | SAG         | 24                     | 0                  | 2/40                 | 5                             | 138                        | 0.063                | 24                  | 24              | 13.404           | 1              | 375          | 3          | 0.22                          | 175                    | 1.59                       | 1.12                   | G1            | 0.002                | 7                           | 0.017             |                      | 0.017                | 1.05                     | 0.133                        | 0.094             | 1.12                    | 17.445     | 17.311      | 17.586        | 17.415         | 17.573  | 18.757        |        |  |  |  |  |  |
| 2/40          | 2/40 to 4/6   | 5                                  | 138                       | 0.082                   | 0.065                 | 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                        | 0.924             | 2.73                 | 0.927                | 1.15                     | 0.153                        | 0.136             | 1.36                    | 17.231     | 17.068      | 17.391        | 17.203         | 17.418  | 18.757        |        |  |  |  |  |  |
| 1/41          | 1/41 to 3/2   | 5                                  | 138                       | 0.404                   | 0.321                 | 123                            | 123                              |                       |                      | 900x900           |             | 123                    | 0                  | 3/2                  | 5                             | 138                        | 0.321                | 123                 | 123             | 5.23             | 1              | 375          | 3          | 1.11                          | 175                    | 1.59                       | 1.72                   | G1            | 0.063                | 5.28                        | 0.334             |                      | 0.334                | -0.04                    | 0.026                        | 0.232             | 1.72                    | 18.265     | 18.213      | 18.545        | 18.477         | 20.438  |               |        |  |  |  |  |  |
| 1/42          | 1/42 to 8/32  | 5                                  | 138                       | 0.109                   | 0.086                 | 33                             | 33                               | 0.64                  | 3                    | GRADE_BK_2400_Lip | 0.50 3X     | 32                     | 1                  | 1/52                 | 5                             | 138                        | 0.086                | 33                  | 32              | 0.888            | 1              | 375          | 3          | 0.29                          | 175                    | 1.59                       | 1.21                   | G1            | 0.004                | 7                           | 0.031             |                      | 0.031                | -0.36                    | 0.002                        | 0.109             | 1.21                    | 17.014     | 17.005      | 17.168        | 17.171         | 17.198  | 18.541        |        |  |  |  |  |  |
| 1/44          | 1/44 to 3/4   | 5                                  | 138                       | 0.096                   | 0.076                 | 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                    | 13.809     | 12.955      | 13.618        | 13.614         | 13.643  | 14.266        |        |  |  |  |  |  |
| 1/46          | 1/46 to 7/32  | 5                                  | 138                       | 0.050                   | 0.040                 | 15                             | 15                               | 0.64                  | 3                    | GRADE_BK_</       |             |                        |                    |                      |                               |                            |                      |                     |                 |                  |                |              |            |                               |                        |                            |                        |               |                      |                             |                   |                      |                      |                          |                              |                   |                         |            |             |               |                |         |               |        |  |  |  |  |  |

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

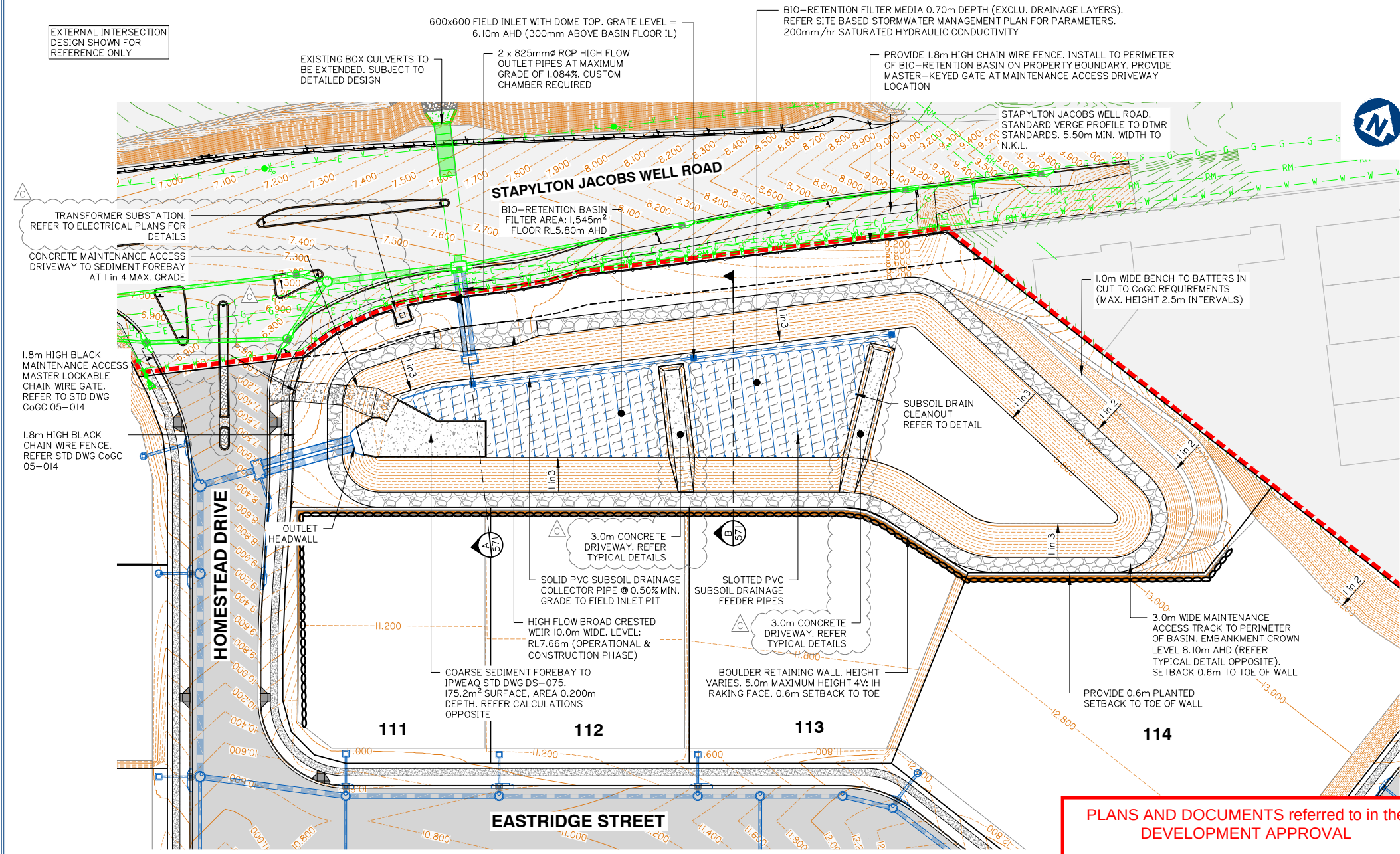
| LOCATION      |               | SUB-CATCHMENT RUNOFF                        |                                     |                                  |                                |                                         |                                           | INLET DESIGN                |                             |                   |                |                                 |                             | DRAIN DESIGN  |                                        |                                     |                              |                             |                          | HEAD LOSSES               |                         |                    |               |                                       |                                 |                                     |                                 |                  |                               |                                   |                            | PART FULL                  |                               |                                   |                                       |                            |                                     |                    |                         |            |                     |        |        |
|---------------|---------------|---------------------------------------------|-------------------------------------|----------------------------------|--------------------------------|-----------------------------------------|-------------------------------------------|-----------------------------|-----------------------------|-------------------|----------------|---------------------------------|-----------------------------|---------------|----------------------------------------|-------------------------------------|------------------------------|-----------------------------|--------------------------|---------------------------|-------------------------|--------------------|---------------|---------------------------------------|---------------------------------|-------------------------------------|---------------------------------|------------------|-------------------------------|-----------------------------------|----------------------------|----------------------------|-------------------------------|-----------------------------------|---------------------------------------|----------------------------|-------------------------------------|--------------------|-------------------------|------------|---------------------|--------|--------|
| STRUCTURE No. | DRAIN SECTION | Tc<br>SUB-CATCHMENT<br>TIME OF CONC.<br>min | I<br>RAINFALL<br>INTENSITY<br>mm/hr | A<br>SUB-CATCHMENT<br>AREA<br>ha | CA<br>EQUIVALENT<br>AREA<br>ha | Qc<br>SUB-CATCHMENT<br>DISCHARGE<br>L/s | Qa<br>FLOW IN K&C<br>(INC. BYPASS)<br>L/s | ROAD GRADE<br>AT INLET<br>% | ROAD XFALL<br>AT INLET<br>% | INLET<br>TYPE     | INLET<br>CURVE | Qg<br>FLOW INTO<br>INLET<br>L/s | Qb<br>BYPASS<br>FLOW<br>L/s | STRUCTURE No. | Tc<br>CRITICAL<br>TIME OF CONC.<br>min | I<br>RAINFALL<br>INTENSITY<br>mm/hr | CA<br>TOTAL<br>(C x A)<br>ha | Qrat<br>PEAK<br>FLOW<br>L/s | Q<br>PIPE<br>FLOW<br>L/s | L<br>REACH<br>LENGTH<br>m | S<br>PIPE<br>GRADE<br>% | PIPE<br>SIZE<br>mm | PIPE<br>CLASS | VH/QA<br>FULL PIPE<br>VELOCITY<br>m/s | Qcap<br>CAPACITY<br>FLOW<br>L/s | Vcap<br>CAPACITY<br>VELOCITY<br>m/s | Vt<br>TRAVEL<br>VELOCITY<br>m/s | CHART(S)<br>USED | VH2g<br>VELOCITY<br>HEAD<br>m | Ku<br>US HEAD LOSS<br>COEFFICIENT | hu<br>US<br>HEAD LOSS<br>m | Kw<br>W.S.E<br>COEFFICIENT | hw<br>CHANGE<br>IN W.S.E<br>m | Sf<br>PIPE FRICTION<br>SLOPE<br>% | Hf<br>PIPE FRICTION<br>HEAD LOSS<br>m | dn<br>NORMAL<br>DEPTH<br>m | Vn<br>NORMAL<br>DEPTH<br>VEL<br>m/s | PIPE<br>DIS L<br>m | PIPE<br>DIS H.G.L.<br>m | W.S.E<br>m | GRATE<br>LEVEL<br>m |        |        |
|               | 1/1 to 2/1    | 5                                           | 307                                 | 0.058                            | 0.057                          | 49                                      | 49                                        | 0.93                        | 3                           | GRADE_BK_2400_Lip | 0.5G 3X        | 2                               | 47                          | 1/11          | 5                                      | 307                                 | 0.057                        | 49                          | 2                        | 13.324                    | 2                       | 375                | 3             | 0.02                                  | 248                             | 2.25                                | 0.67                            | G1               | 0                             | 3.14                              | 0                          |                            | 0                             | 0.623                             | 0.67                                  | 18.283                     | 18.616                              | 19.411             | 19.411                  | 19.411     | 19.411              |        |        |
| 2/1           | 2/1 to 3/1    | 5                                           | 307                                 | 0.077                            | 0.076                          | 65                                      | 110                                       | 0.93                        | 3                           | GRADE_BK_2400_Lip | 0.5G 3X        | -2                              | 112                         | 3/1           | 5.85                                   | 306                                 | 0.414                        | 352                         | 193                      | 39.535                    | 1.25                    | 450                | 3             | 1.21                                  | 319                             | 2.01                                | 2.1                             | T10              | 0.075                         | 1.56                              | 0.117                      | 1.94                       | 0.146                         | 0.46                              | 0.181                                 | 0.253                      | 2.1                                 | 17.672             | 17.178                  | 19.231     | 19.05               | 19.377 | 19.411 |
| 3/1           | 3/1 to 4/1    | 5                                           | 307                                 | 0.044                            | 0.043                          | 37                                      | 193                                       | 0.93                        | 3                           | GRADE_BK_2400_Lip | 0.5G 3X        | -141                            | 333                         | 4/1           | 5.38                                   | 302                                 | 0.741                        | 622                         | 242                      | 39.535                    | 1                       | 450                | 3             | 1.52                                  | 285                             | 1.79                                | 2.01                            | T5               | 0.118                         | 0.76                              | 0.09                       |                            | 0.09                          | 0.72                              | 0.284                                 | 0.318                      | 2.01                                | 17.108             | 16.762                  | 18.06      | 18.676              | 19.05  | 19.05  |
| 4/1           | 4/1 to 5/1    | 5                                           | 307                                 | 0.044                            | 0.043                          | 37                                      | 416                                       | 0.93                        | 3                           | GRADE_BK_2400_Lip | 0.5G 3X        | -88                             | 514                         | 2/14          | 5.89                                   | 298                                 | 1.179                        | 975                         | 323                      | 39.379                    | 1                       | 450                | 3             | 2.03                                  | 285                             | 1.79                                | 2.03                            | T2/75            | 0.211                         | 0.66                              | 0.14                       |                            | 0.14                          | 1.29                              | 0.506                                 | 0.45                       | 2.03                                | 16.742             | 16.349                  | 18.537     | 18.03               | 18.676 | 18.676 |
| 5/1           | 5/1 to 6/1    |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1350      |                |                                 |                             |               | 5.7                                    | 298                                 | 3.34                         | 2762                        | 822                      | 39.265                    | 2.5                     | 600                | 3             | 2.91                                  | 971                             | 3.44                                | 3.85                            | T2/75            | 0.431                         | 0.63                              | 0.271                      |                            | 0.271                         | 1.79                              | 0.703                                 | 0.424                      | 3.85                                | 16.137             | 15.195                  | 17.759     | 17.056              | 18.03  | 18.312 |
| 6/1           | 6/1 to 7/1    |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1050      |                |                                 |                             |               | 5.87                                   | 295                                 | 3.733                        | 3063                        | 1365                     | 39.415                    | 5                       | 600                | 3             | 4.83                                  | 1374                            | 4.86                                | 5.54                            | T2/75            | 1.096                         | 0.98                              | 0.635                      |                            | 0.635                         | 4.55                              | 1.794                                 | 0.488                      | 5.54                                | 14.791             | 12.82                   | 16.421     | 14.627              | 17.056 | 17.057 |
| 7/1           | 7/1 to 8/1    |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1050      |                |                                 |                             |               | 5.99                                   | 294                                 | 4.06                         | 3313                        | 1581                     | 39.415                    | 5                       | 600                | 3             | 5.59                                  | 1374                            | 4.86                                | 5.59                            | T8/T10           | 0.784                         | 1.24                              | 0.972                      | 1.35                       | 1.059                         | 3.25                              | 1.283                                 | 0.6                        | 5.59                                | 12.141             | 10.17                   | 13.656     | 12.373              | 14.715 | 14.802 |
| 8/1           | 8/1 to 9/1    |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1050      |                |                                 |                             |               | 5.78                                   | 297                                 | 4.433                        | 3652                        | 2125                     | 39.04                     | 5                       | 600                | 3             | 7.52                                  | 1374                            | 4.88                                | 7.52                            | T2/74            | 1.439                         | 0.37                              | 0.53                       |                            | 0.53                          | 5.98                              | 2.333                                 | 0.6                        | 7.52                                | 9.895              | 7.743                   | 11.843     | 9.511               | 12.373 | 12.374 |
| 9/1           | 9/1 to 10/1   |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1800      |                |                                 |                             |               | 6.19                                   | 291                                 | 12.655                       | 10231                       | 4884                     | 38.665                    | 2                       | 1200               | 3             | 4.32                                  | 5516                            | 4.88                                | 5.51                            | T4/T8            | 0.952                         | 0.69                              | 0.652                      | 0.69                       | 0.66                          | 1.57                              | 0.606                                 | 0.878                      | 5.51                                | 7.335              | 6.563                   | 8.858      | 8.252               | 9.519  | 10.657 |
| 10/1          | 10/1 to 11/1  |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1800      |                |                                 |                             |               | 6.31                                   | 289                                 | 12.884                       | 10440                       | 5197                     | 15.067                    | 2.5                     | 1200               | 3             | 4.59                                  | 6167                            | 5.45                                | 6.11                            | T1/T2            | 1.077                         | 0.22                              | 0.237                      |                            | 0.237                         | 1.78                              | 0.276                                 | 0.844                      | 6.11                                | 6.543              | 6.154                   | 8.015      | 7.739               | 8.252  | 9.15   |
| 11/1          | 11/1 to 12/1  |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_2100      |                |                                 |                             |               | 6.35                                   | 289                                 | 13.259                       | 10640                       | 5384                     | 10.192                    | 0.1                     | 1200               | 3             | 4.76                                  | 1233                            | 1.09                                | 4.76                            | T8/T10           | 0.278                         | 1.7                               | 0.473                      | 1.95                       | 0.543                         | 0.46                              | 0.945                                 | 1.2                        | 4.76                                | 6.048              | 6.038                   | 7.265      | 7.218               | 7.808  | 8.345  |
| 12/1          | 12/1 to 13/1  |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_2100      |                |                                 |                             |               | 6.39                                   | 288                                 | 13.331                       | 10680                       | 5697                     | 18.157                    | 0.1                     | (2x)1200           | 3             | 2.52                                  | 2467                            | 1.09                                | 2.52                            | T1/T2            | 0.324                         | -1.14                             | -0.368                     |                            | -0.368                        | 0.53                              | 0.097                                 | 1.2                        | 2.52                                | 6.019              | 6                       | 7.586      | 7.489               | 7.218  | 8.058  |
| 13/1          |               |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | HW outlet         |                |                                 |                             |               |                                        |                                     |                              |                             |                          |                           |                         |                    |               |                                       |                                 |                                     |                                 |                  |                               |                                   |                            |                            |                               |                                   |                                       |                            |                                     |                    |                         |            |                     |        |        |
| 1/2           | 1/2 to 2/2    | 5                                           | 307                                 | 0.362                            | 0.358                          | 305                                     | 305                                       |                             |                             | 900x900           |                | 261                             | 44                          | 2/2           | 5                                      | 307                                 | 0.358                        | 305                         | 261                      | 5.23                      | 0.97                    | 375                | 3             | 2.36                                  | 173                             | 1.57                                | 2.36                            | G1               | 0.285                         | 2.06                              | 0.587                      |                            | 0.587                         | 2.21                              | 0.116                                 | 0.375                      | 2.36                                | 18.113             | 18.062                  | 19.473     | 19.357              | 20.06  | 20.06  |
| 2/2           | 2/2 to 3/2    | 5                                           | 307                                 | 0.033                            | 0.032                          | 28                                      | 72                                        | 2.82                        | 3                           | GRADE_BK_2400_Lip | 2G 3X          | -224                            | 296                         | 1/40          | 5.84                                   | 307                                 | 0.39                         | 332                         | 36                       | 46.091                    | 0.5                     | 375                | 3             | 0.33                                  | 124                             | 1.12                                | 0.98                            | T10              | 0.006                         | 1.54                              | 0.009                      | 1.93                       | 0.011                         | 0.04                              | 0.02                                  | 0.139                      | 0.98                                | 17.883             | 17.85                   | 19.342     | 19.322              | 19.353 | 19.357 |
| 3/2           | 3/2 to 4/2    | 5                                           | 307                                 | 0.017                            | 0.017                          | 15                                      | 85                                        | 1                           | 3                           | GRADE_BK_2400_Lip | 1G 3X          | 63                              | 22                          | 4/2           | 5.83                                   | 296                                 | 0.809                        | 665                         | 348                      | 44.564                    | 1.5                     | 375                | 3             | 3.15                                  | 215                             | 1.95                                | 3.15                            | T8/T10           | 0.178                         | 1.4                               | 0.248                      | 1.59                       | 0.283                         | 1.38                              | 0.616                                 | 0.375                      | 3.15                                | 17.63              | 16.962                  | 19.074     | 18.458              | 19.357 | 19.608 |
| 4/2           | 4/2 to 5/2    | 5                                           | 307                                 | 0.048                            | 0.047                          | 40                                      | 154                                       | 3.17                        | 3                           | GRADE_BK_2400_Lip | 3G 3X          | -135                            | 286                         | 5/2           | 6.87                                   | 293                                 | 1.242                        | 1010                        | 428                      | 18.876                    | 3                       | 450                | 3             | 2.68                                  | 494                             | 3.11                                | 3.49                            | T2/75            | 0.366                         | 0.96                              | 0.206                      |                            | 0.206                         | 2.23                              | 0.421                                 | 0.322                      | 3.49                                | 16.912             | 16.345                  | 18.243     | 17.822              | 18.449 | 18.458 |
| 5/2           | 5/2 to 6/2    | 5                                           | 307                                 | 0.022                            | 0.021                          | 18                                      | 307                                       | 3.17                        | 3                           | GRADE_BK_2400_Lip | 3G 3X          | 36                              | 270                         | 6/2           | 6.16                                   | 291                                 | 1.371                        | 1110                        | 455                      | 24.757                    | 4                       | 450                | 3             | 2.86                                  | 570                             | 3.59                                | 3.98                            | T1               | 0.417                         | 0.42                              | 0.175                      |                            | 0.175                         | 2.54                              | 0.629                                 | 0.304                      | 3.98                                | 16.264             | 15.274                  | 17.647     | 17.018              | 17.822 | 17.831 |
| 6/2           | 6/2 to 7/2    | 5                                           | 307                                 | 0.028                            | 0.027                          | 23                                      | 388                                       | 3.17                        | 3                           | GRADE_BK_2400_Lip | 3G 3X          | -154                            | 542                         | 2/34          | 6.23                                   | 291                                 | 1.762                        | 1438                        | 911                      | 38.004                    | 3.33                    | 450                | 3             | 3.21                                  | 521                             | 3.27                                | 3.73                            | T2/75            | 0.526                         | 0.48                              | 0.253                      |                            | 0.253                         | 3.21                              | 1.237                                 | 0.361                      | 3.73                                | 15.084             | 13.798                  | 16.198     | 14.961              | 16.451 | 17.018 |
| 7/2           | 7/2 to 8/2    |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1200      |                |                                 |                             |               | 5.84                                   | 298                                 | 3.498                        | 2900                        | 889                      | 11.316                    | 2                       | 675                | 3             | 2.48                                  | 1189                            | 3.32                                | 3.64                            | T2/75            | 0.315                         | 0.7                               | 0.222                      |                            | 0.222                         | 1.12                              | 0.127                                 | 0.435                      | 3.64                                | 13.603             | 13.376                  | 14.739     | 14.612              | 14.961 | 15.85  |
| 8/2           | 8/2 to 9/2    |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1200      |                |                                 |                             |               | 5.89                                   | 298                                 | 4.1                          | 3391                        | 1186                     | 31.9                      | 3.33                    | 675                | 3             | 3.31                                  | 1534                            | 4.29                                | 4.73                            | T2/75            | 0.56                          | 0.29                              | 0.164                      |                            | 0.164                         | 1.99                              | 0.634                                 | 0.446                      | 4.73                                | 13.278             | 12.217                  | 14.449     | 13.815              | 14.812 | 15.457 |
| 9/2           | 9/2 to 10/2   |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1200      |                |                                 |                             |               | 5.8                                    | 296                                 | 4.37                         | 3996                        | 1288                     | 18.301                    | 2.5                     | 675                | 3             | 3.6                                   | 1330                            | 3.72                                | 4.23                            | T1/T2            | 0.661                         | 0.23                              | 0.149                      |                            | 0.149                         | 2.34                              | 0.429                                 | 0.535                      | 4.23                                | 12.197             | 11.74                   | 13.665     | 13.236              | 13.815 | 14.598 |
| 10/2          | 10/2 to 11/2  |                                             |                                     |                                  |                                |                                         |                                           |                             |                             | ACC_CHA_1200      |                |                                 |                             |               | 5.87                                   |                                     |                              |                             |                          |                           |                         |                    |               |                                       |                                 |                                     |                                 |                  |                               |                                   |                            |                            |                               |                                   |                                       |                            |                                     |                    |                         |            |                     |        |        |



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

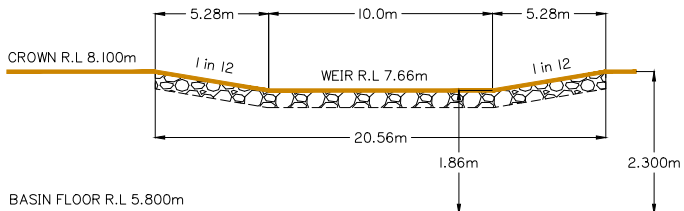
| LOCATION      |               | SUB-CATCHMENT RUNOFF                        |                                     |                                  |                                |                                         |                                           | INLET DESIGN                |                             |                   |                |                                 |                             | DRAIN DESIGN            |                                        |                                     |                              |                              |                          |                           |                         |                    |               | HEAD LOSSES                           |                                 |                                     |                                 |                  |                               |                                   |                                   |                            |                               | PART FULL                         |                                       |                            |                                   |                    |                      |                         |                         |            |                     |
|---------------|---------------|---------------------------------------------|-------------------------------------|----------------------------------|--------------------------------|-----------------------------------------|-------------------------------------------|-----------------------------|-----------------------------|-------------------|----------------|---------------------------------|-----------------------------|-------------------------|----------------------------------------|-------------------------------------|------------------------------|------------------------------|--------------------------|---------------------------|-------------------------|--------------------|---------------|---------------------------------------|---------------------------------|-------------------------------------|---------------------------------|------------------|-------------------------------|-----------------------------------|-----------------------------------|----------------------------|-------------------------------|-----------------------------------|---------------------------------------|----------------------------|-----------------------------------|--------------------|----------------------|-------------------------|-------------------------|------------|---------------------|
| STRUCTURE No. | DRAIN SECTION | Tc<br>SUB-CATCHMENT<br>TIME OF CONC.<br>min | I<br>RAINFALL<br>INTENSITY<br>mm/hr | A<br>SUB-CATCHMENT<br>AREA<br>ha | CA<br>EQUIVALENT<br>AREA<br>ha | Qc<br>SUB-CATCHMENT<br>DISCHARGE<br>L/s | Qa<br>FLOW IN K&C<br>(INC. BYPASS)<br>L/s | ROAD GRADE<br>AT INLET<br>% | ROAD XFALL<br>AT INLET<br>% | INLET<br>TYPE     | INLET<br>CURVE | Qg<br>FLOW INTO<br>INLET<br>L/s | Qb<br>BYPASS<br>FLOW<br>L/s | BYPASS<br>STRUCTURE No. | Tc<br>CRITICAL<br>TIME OF CONC.<br>min | I<br>RAINFALL<br>INTENSITY<br>mm/hr | CA<br>TOTAL<br>(C x A)<br>ha | Qinst<br>PEAK<br>FLOW<br>L/s | Q<br>PIPE<br>FLOW<br>L/s | L<br>REACH<br>LENGTH<br>m | S<br>PIPE<br>GRADE<br>% | PIPE<br>SIZE<br>mm | PIPE<br>CLASS | VH/QA<br>FULL PIPE<br>VELOCITY<br>m/s | Qcap<br>CAPACITY<br>FLOW<br>L/s | Vcap<br>CAPACITY<br>VELOCITY<br>m/s | Vt<br>TRAVEL<br>VELOCITY<br>m/s | CHART(S)<br>USED | VH2g<br>VELOCITY<br>HEAD<br>m | Ku<br>US HEAD LOSS<br>COEFFICIENT | Ku<br>US HEAD LOSS<br>COEFFICIENT | Kw<br>W.S.E<br>COEFFICIENT | hw<br>CHANGE<br>IN W.S.E<br>m | Sf<br>PIPE FRICTION<br>SLOPE<br>% | hf<br>PIPE FRICTION<br>HEAD LOSS<br>m | dn<br>NORMAL<br>DEPTH<br>m | Vn<br>NORMAL<br>DEPTH VEL.<br>m/s | PIPE<br>DIS L<br>m | PIPE<br>DIS L L<br>m | PIPE<br>DIS H.G.L.<br>m | PIPE<br>DIS H.G.L.<br>m | W.S.E<br>m | GRATE<br>LEVEL<br>m |
| 2/25          | 2/25 to 1/72  | 5                                           | 307                                 | 0.047                            | 0.046                          | 40                                      | 40                                        |                             |                             | SAG_BK_2400_Lip   | SAG            | -4689                           | 4728                        | 1/24                    | 5                                      | 307                                 | 0.238                        | 203                          | 739                      | 0.956                     | 1                       | 375                | 3             | 6.69                                  | 175                             | 1.59                                | 6.69                            | T1               | 2.285                         | 0                                 | 0.46                              |                            | 0.46                          | 17.76                             | 0.17                                  | 0.375                      | 6.69                              | 9.014              | 9.004                | 10.094                  | 9.924                   | 10.554     | 10.554              |
| 1/26          | 1/26 to 1/72  | 5                                           | 307                                 | 0.183                            | 0.181                          | 155                                     | 3657                                      |                             |                             | SAG_BK_2400_Lip   | SAG            | 2                               | 3654                        | 1/25                    | 5                                      | 307                                 | 0.181                        | 155                          | 2                        | 10.956                    | 1                       | 375                | 3             | 0.02                                  | 175                             | 1.59                                | 0.55                            | G1               | 0                             | 4.78                              | 0                                 |                            | 0                             | 0                                 | 0                                     | 0.029                      | 0.55                              | 9.17               | 9.06                 | 9.924                   | 9.924                   | 10.554     | 10.554              |
| 1/27          | 1/27 to 2/27  | 5                                           | 307                                 | 0.191                            | 0.189                          | 161                                     | 1579                                      |                             |                             | 900x900           |                | 1579                            | 0                           | 1/27                    | 5                                      | 307                                 | 0.189                        | 161                          | 1579                     | 5.182                     | 1                       | 375                | 3             | 14.3                                  | 175                             | 1.59                                | 14.3                            | G1               | 0.207                         | 2.07                              | 0.429                             |                            | 0.429                         | 1.61                              | 0.083                                 | 0.375                      | 14.3                              | 9.332              | 9.28                 | 10.826                  | 10.743                  | 11.255     | 11.255              |
| 2/27          | 2/27 to 1/62  | 5                                           | 307                                 | 0.044                            | 0.044                          | 37                                      | 37                                        | 0.69                        | 3                           | GRADE_BK_2400_Lip | 0.5G 3X        | -1573                           | 1610                        | 1/25                    | 5.91                                   | 307                                 | 0.232                        | 198                          | 7                        | 0.888                     | 1                       | 375                | 3             | 0.06                                  | 175                             | 1.59                                | 0.77                            | T1               | 0                             | 0.2                               | 0                                 |                            | 0                             | 0                                 | 0                                     | 0.05                       | 0.77                              | 9.21               | 9.201                | 10.284                  | 10.284                  | 10.743     | 10.743              |
| 1/29          | 1/29 to 2/29  | 5                                           | 307                                 | 0.228                            | 0.225                          | 192                                     | 192                                       |                             |                             | 900x900           |                | 192                             | 0                           | 2/29                    | 5                                      | 307                                 | 0.225                        | 192                          | 192                      | 5.182                     | 1                       | 375                | 3             | 1.74                                  | 175                             | 1.59                                | 1.74                            | G1               | 0.154                         | 2.12                              | 0.327                             |                            | 0.327                         | 1.2                               | 0.062                                 | 0.375                      | 1.74                              | 9.726              | 9.674                | 11.251                  | 11.189                  | 11.578     | 11.578              |
| 2/29          | 2/29 to 1/52  | 5                                           | 307                                 | 0.045                            | 0.044                          | 38                                      | 1232                                      | 1.2                         | 3                           | GRADE_BK_2400_Lip | 1G 3X          | -186                            | 1419                        | 1/27                    | 5.05                                   | 306                                 | 0.269                        | 229                          | 5                        | 0.888                     | 2                       | 375                | 3             | 0.05                                  | 248                             | 2.25                                | 0.9                             | T1               | 0                             | 0.2                               | 0                                 |                            | 0                             | 0                                 | 0                                     | 0.037                      | 0.9                               | 9.603              | 9.586                | 11.021                  | 11.021                  | 11.021     | 11.189              |
| 1/30          | 1/30 to 2/30  | 5                                           | 307                                 | 0.679                            | 0.671                          | 572                                     | 572                                       |                             |                             | 1200x1200         |                | 491                             | 91                          | 2/30                    | 5                                      | 307                                 | 0.671                        | 572                          | 491                      | 5.717                     | 6.5                     | 600                | 3             | 1.7                                   | 434                             | 1.54                                | 1.7                             | G1               | 0.147                         | 2.37                              | 0.35                              |                            | 0.35                          | 0.61                              | 0.035                                 | 0.6                        | 1.7                               | 9.328              | 9.299                | 11.511                  | 11.476                  | 11.861     | 13                  |
| 2/30          | 2/30 to 1/42  | 5                                           | 307                                 | 0.058                            | 0.058                          | 49                                      | 1907                                      | 2.8                         | 3                           | GRADE_BK_2400_Lip | 2G 3X          | -471                            | 2378                        | 1/26                    | 5.06                                   | 306                                 | 0.728                        | 620                          | 8                        | 11.038                    | 6.5                     | 600                | 3             | 0.03                                  | 434                             | 1.54                                | 0.6                             | T2/T5            | 0                             | 0.36                              | 0                                 |                            | 0                             | 0                                 | 0                                     | 0.057                      | 0.6                               | 9.219              | 9.164                | 11.326                  | 11.326                  | 11.476     | 11.476              |
| 1/31          | 1/31 to 2/31  | 5                                           | 307                                 | 0.588                            | 0.582                          | 496                                     | 496                                       |                             |                             | 1200x1200         |                | 369                             | 127                         | 2/31                    | 5                                      | 307                                 | 0.582                        | 496                          | 369                      | 5.484                     | 1                       | 525                | 3             | 1.7                                   | 430                             | 1.99                                | 2.23                            | G1               | 0.148                         | 2.42                              | 0.359                             |                            | 0.359                         | 0.73                              | 0.04                                  | 0.374                      | 2.23                              | 10.44              | 10.385               | 12.22                   | 12.18                   | 12.579     | 12.579              |
| 2/31          | 2/31 to 1/32  | 5                                           | 307                                 | 0.060                            | 0.060                          | 51                                      | 888                                       | 2.98                        | 3                           | GRADE_BK_2400_Lip | 2G 3X          | -307                            | 1195                        | 2/29                    | 5.04                                   | 306                                 | 0.641                        | 546                          | 61                       | 0.781                     | 2                       | 600                | 3             | 0.22                                  | 869                             | 3.07                                | 1.77                            | T1/T2            | 0.002                         | -0.25                             | -0.001                            |                            | -0.001                        | 0.01                              | 0                                     | 0.108                      | 1.77                              | 10.305             | 10.289               | 12.092                  | 12.092                  | 12.691     | 12.18               |
| 1/32          | 1/32 to 1/62  | 5                                           | 307                                 | 0.033                            | 0.033                          | 28                                      | 868                                       | 2.98                        | 3                           | GRADE_BK_2400_Lip | 2G 3X          | 158                             | 710                         | 2/31                    | 5                                      | 307                                 | 0.033                        | 28                           | 158                      | 1.038                     | 1                       | 375                | 3             | 1.43                                  | 175                             | 1.59                                | 1.8                             | G1               | 0.104                         | 3.42                              | 0.356                             |                            | 0.356                         | 0.81                              | 0.008                                 | 0.278                      | 1.8                               | 12.56              | 12.549               | 13.245                  | 13.236                  | 13.6       | 13.786              |
| 1/33          | 1/33 to 2/33  | 5                                           | 307                                 | 3.839                            | 3.794                          | 3236                                    | 3236                                      |                             |                             | 1200x1200         |                | 680                             | 2556                        | 2/33                    | 5                                      | 307                                 | 3.794                        | 3236                         | 680                      | 5.032                     | 6.4                     | 750                | 3             | 1.54                                  | 704                             | 1.59                                | 1.82                            | G1               | 0.121                         | 3.74                              | 0.433                             |                            | 0.433                         | 0.37                              | 0.019                                 | 0.593                      | 1.82                              | 17.033             | 17.013               | 18.459                  | 18.441                  | 18.912     | 19.6                |
| 2/33          | 2/33 to 8/62  | 5                                           | 307                                 | 0.114                            | 0.112                          | 96                                      | 3557                                      | 0.64                        | 3                           | 1TCS9_UNCHECKED   | 0.5G 3X        | 239                             | 3317                        | 1/46                    | 5.05                                   | 306                                 | 3.907                        | 3325                         | 913                      | 0.888                     | 6.4                     | 825                | 3             | 1.71                                  | 908                             | 1.7                                 | 1.94                            | T1               | 0.149                         | 0.99                              | 0.147                             |                            | 0.147                         | 0.4                               | 0.004                                 | 0.68                       | 1.94                              | 16.928             | 16.925               | 18.284                  | 18.291                  | 18.441     | 19.281              |
| 1/34          | 1/34 to 2/34  | 5                                           | 307                                 | 0.549                            | 0.542                          | 463                                     | 463                                       |                             |                             | 900x900           |                | 200                             | 263                         | 2/34                    | 5                                      | 307                                 | 0.542                        | 463                          | 200                      | 5.182                     | 1                       | 375                | 3             | 1.81                                  | 175                             | 1.59                                | 1.81                            | G1               | 0.167                         | 2.43                              | 0.407                             |                            | 0.407                         | 1.3                               | 0.067                                 | 0.375                      | 1.81                              | 14.009             | 14.007               | 15.171                  | 15.104                  | 15.578     | 15.809              |
| 2/34          | 2/34 to 8/2   | 5                                           | 307                                 | 0.057                            | 0.056                          | 48                                      | 893                                       | 3.17                        | 3                           | GRADE_BK_2400_Lip | 3G 3X          | 116                             | 736                         | 1/44                    | 5.05                                   | 306                                 | 0.998                        | 509                          | 315                      | 1.038                     | 1                       | 375                | 3             | 2.85                                  | 175                             | 1.59                                | 2.85                            | T1               | 0.415                         | 1.1                               | 0.458                             |                            | 0.458                         | 3.23                              | 0.034                                 | 0.375                      | 2.85                              | 13.938             | 13.927               | 14.646                  | 14.612                  | 15.104     | 15.371              |
| 1/35          | 1/35 to 2/35  | 5                                           | 307                                 | 1.710                            | 1.690                          | 1441                                    | 1441                                      |                             |                             | 1200x1200         |                | 491                             | 961                         | 2/35                    | 5                                      | 307                                 | 1.69                         | 1441                         | 490                      | 5.319                     | 1                       | 525                | 3             | 2.22                                  | 430                             | 1.99                                | 2.22                            | G1               | 0.251                         | 2.23                              | 0.561                             |                            | 0.561                         | 1.25                              | 0.066                                 | 0.525                      | 2.22                              | 13.961             | 13.908               | 15.83                   | 15.764                  | 16.391     | 16.6                |
| 2/35          | 2/35 to 7/2   | 5                                           | 307                                 | 0.090                            | 0.088                          | 75                                      | 1126                                      | 3.17                        | 3                           | GRADE_BK_2400_Lip | 3G 3X          | -47                             | 1173                        | 2/3                     | 5.04                                   | 306                                 | 1.779                        | 1514                         | 431                      | 11.038                    | 1                       | 600                | 3             | 1.52                                  | 614                             | 2.17                                | 2.35                            | T1/T2            | 0.116                         | -0.14                             | -0.017                            |                            | -0.017                        | 0.49                              | 0.054                                 | 0.37                       | 2.35                              | 13.868             | 13.757               | 15.015                  | 14.961                  | 14.998     | 15.764              |
| 1/36          | 1/36 to 8/2   | 5                                           | 307                                 | 0.387                            | 0.383                          | 326                                     | 326                                       |                             |                             | 1200x1200         |                | 232                             | 94                          | 6/2                     | 5                                      | 307                                 | 0.383                        | 326                          | 232                      | 5.079                     | 1                       | 375                | 3             | 2.1                                   | 175                             | 1.59                                | 2.1                             | G1               | 0.225                         | 2.15                              | 0.404                             |                            | 0.404                         | 1.75                              | 0.089                                 | 0.375                      | 2.1                               | 15.773             | 15.723               | 17.107                  | 17.018                  | 17.591     | 17.591              |
| 1/38          | 1/38 to 5/2   | 5                                           | 307                                 | 0.108                            | 0.107                          | 91                                      | 91                                        | 3.17                        | 3                           | GRADE_BK_2400_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                             | 2.97                              | 0                                 |                            | 0                             | 0                                 | 0                                     | 0.024                      | 0.48                              | 16.603             | 16.47                | 17.822                  | 17.822                  | 17.831     |                     |
| 1/39          | 1/39 to 4/2   | 5                                           | 307                                 | 0.387                            | 0.383                          | 326                                     | 326                                       |                             |                             | 900x900           |                | 234                             | 92                          | 4/2                     | 5                                      | 307                                 | 0.383                        | 326                          | 234                      | 5.23                      | 1                       | 375                | 3             | 2.12                                  | 175                             | 1.59                                | 2.12                            | G1               | 0.23                          | 2.09                              | 0.481                             |                            | 0.481                         | 1.78                              | 0.093                                 | 0.375                      | 2.12                              | 17.145             | 17.093               | 18.551                  | 18.458                  | 19.032     | 19.032              |
| 1/40          | 1/40 to 2/40  | 5                                           | 307                                 | 0.080                            | 0.079                          | 67                                      | 373                                       |                             |                             | SAG_BK_2400_Lip   | SAG            | 2                               |                             |                         |                                        |                                     |                              |                              |                          |                           |                         |                    |               |                                       |                                 |                                     |                                 |                  |                               |                                   |                                   |                            |                               |                                   |                                       |                            |                                   |                    |                      |                         |                         |            |                     |



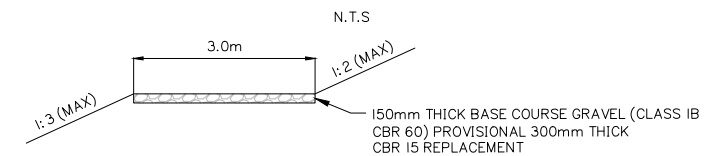


BIORETENTION BASIN I LAYOUT PLAN

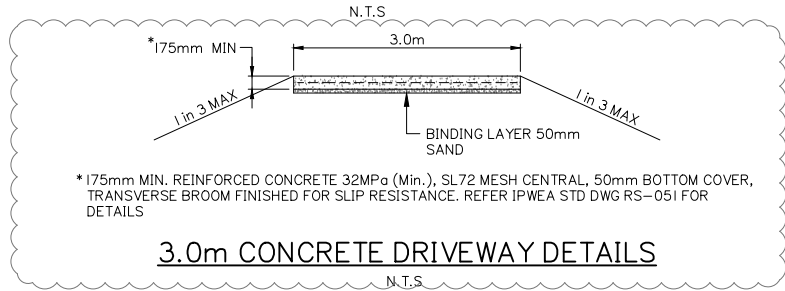
SCALE 1:500 (A1)



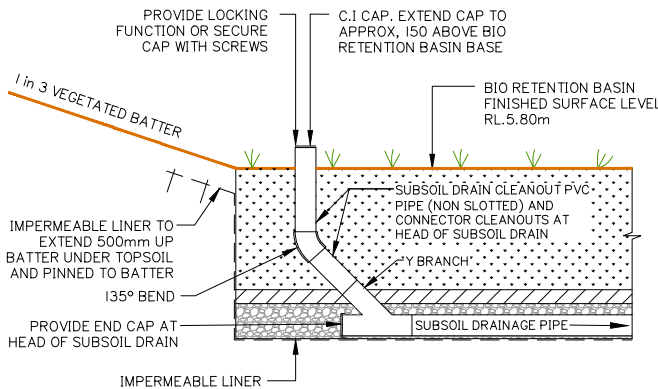
EMERGENCY WEIR – TYPICAL ELEVATION



MAINTENANCE ACCESS TRACK – TYPICAL SECTION

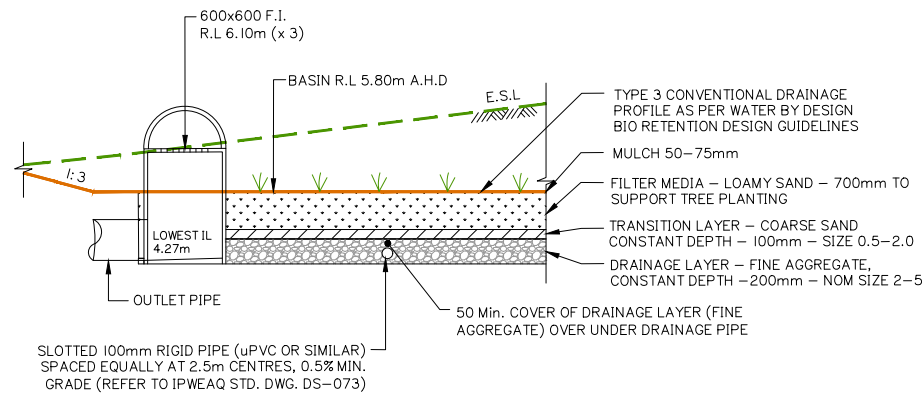


3.0m CONCRETE DRIVEWAY DETAILS



SUBSOIL DRAIN CLEANOUT – IN BASIN

N.T.S



TYPICAL BIO-RETENTION BASIN DETAIL

N.T.S

BIO-RETENTION NOTES:

MINIMUM BIO-RETENTION 'PROFILE' IS TO BE 1.00m AND IS TO CONSIST OF THE FOLLOWING:

\* 0.70 OF SANDY LOAM MATERIAL WITH A HYDRAULIC CONDUCTIVITY OF 200mm/h AND A PARTICLE SIZE OF 0.45–0.50mm.

\* 0.10m OF COURSE SAND. PARTICLE SIZE TYPICALLY 0.5–2.0mm.

\* 0.20m OF GRAVEL DRAINAGE. PARTICLE SIZE 2–5mm SCREENING.

AGRICULTURAL PIPE TO BE INCLUDED IN FREE DRAINING AREAS TO ASSIST IN DRYING OUT THE DEVICE

BIO RETENTION – COARSE SEDIMENT FOREBAY SIZING GUIDE CALCULATIONS

$$V_s = A_c \times R \times L_o \times F = 7.234 \text{ m}^3$$

$$R = 1 - \left[ 1 + \frac{1}{n} \left( \frac{V_s}{0.7 A_c} \right) \right]^{-n}$$

$$0.8 = 1 - \left[ 1 + \frac{0.10}{0.5 \times 2.423 / A_f} \right]^{-0.5} \quad A_f = 234.72 \text{ m}^2$$

$$D_s = \frac{V_s}{A_f} \quad D_s = \frac{7.234}{234.72} = 0.031 \text{ m}$$

OPTIMIZATION OF MINIMUM FOREBAY SIZE:

$$D_s = \frac{7.234 \text{ m}^3}{175.2 \text{ m}^2} = 0.041 \text{ m}$$

$V_s = 7.234 \text{ m}^3$  (Workings Above)

$A_c = 15.071 \text{ ha}$  (Refer Catchment Plans)

UNMITIGATED POST-DEVELOPMENT FLOW  
 $Q = 1.956 \text{ m}^3/\text{s}$  (3 month ARI = 0.5 x 63.2% AEP)

$V_s = 0.1 \text{ m/s}$  (Recommended for Imm Particle)

$R = 0.8$  (Recommended 80% Capture)

$L_o = 0.6$  (From Healthy Waterways Guide)

$n = 0.5$  (Recommended Turbulence)

$F_c = 1.0$  (Frequency of Clean Out / Yr)

REFER TO BIO RETENTION TECHNICAL DESIGN GUIDELINES FOR FURTHER INFORMATION

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

| AEP (%) | MAX. WATER ELEVATION (m) A.H.D | MAX. WATER DEPTH (m) |
|---------|--------------------------------|----------------------|
| 63.2    | 6.635                          | 0.835                |
| 50      | 6.720                          | 0.920                |
| 20      | 7.057                          | 1.257                |
| 10      | 7.179                          | 1.379                |
| 5       | 7.256                          | 1.456                |
| 2       | 7.357                          | 1.557                |
| 1       | 7.489                          | 1.689                |

Client:



FRASERS PROPERTY (AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA STAGE 1

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  
OPERATIONAL PHASE BIORETENTION BASIN  
SHEET 1 OF 2

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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: [Signature]

Date: 02-09-2020

Drawing No: 5941 ENG OPW1 570

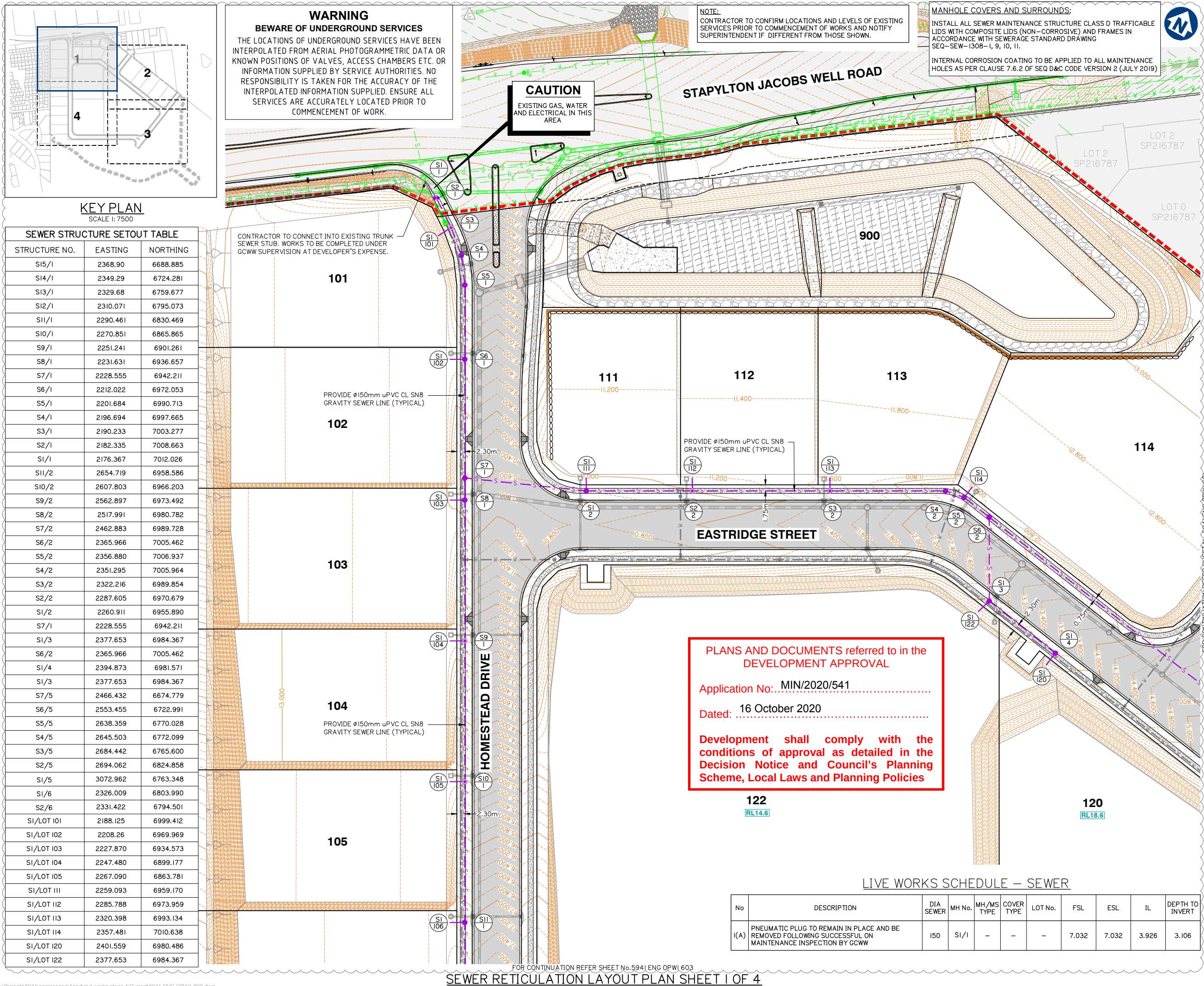
Rev. No: C











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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 STAGE 1**

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

THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR

RPD:  
Lot: 501  
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**DRAWING TITLE**  
**SEWER RETICULATION LAYOUT PLAN SHEET 1 OF 4**

| Rev | Date       | Description                  | By | Check |
|-----|------------|------------------------------|----|-------|
| C   | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG    |
| B   | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA | MG    |
| A   | 01-05-2020 | ORIGINAL ISSUE               | BA | MG    |

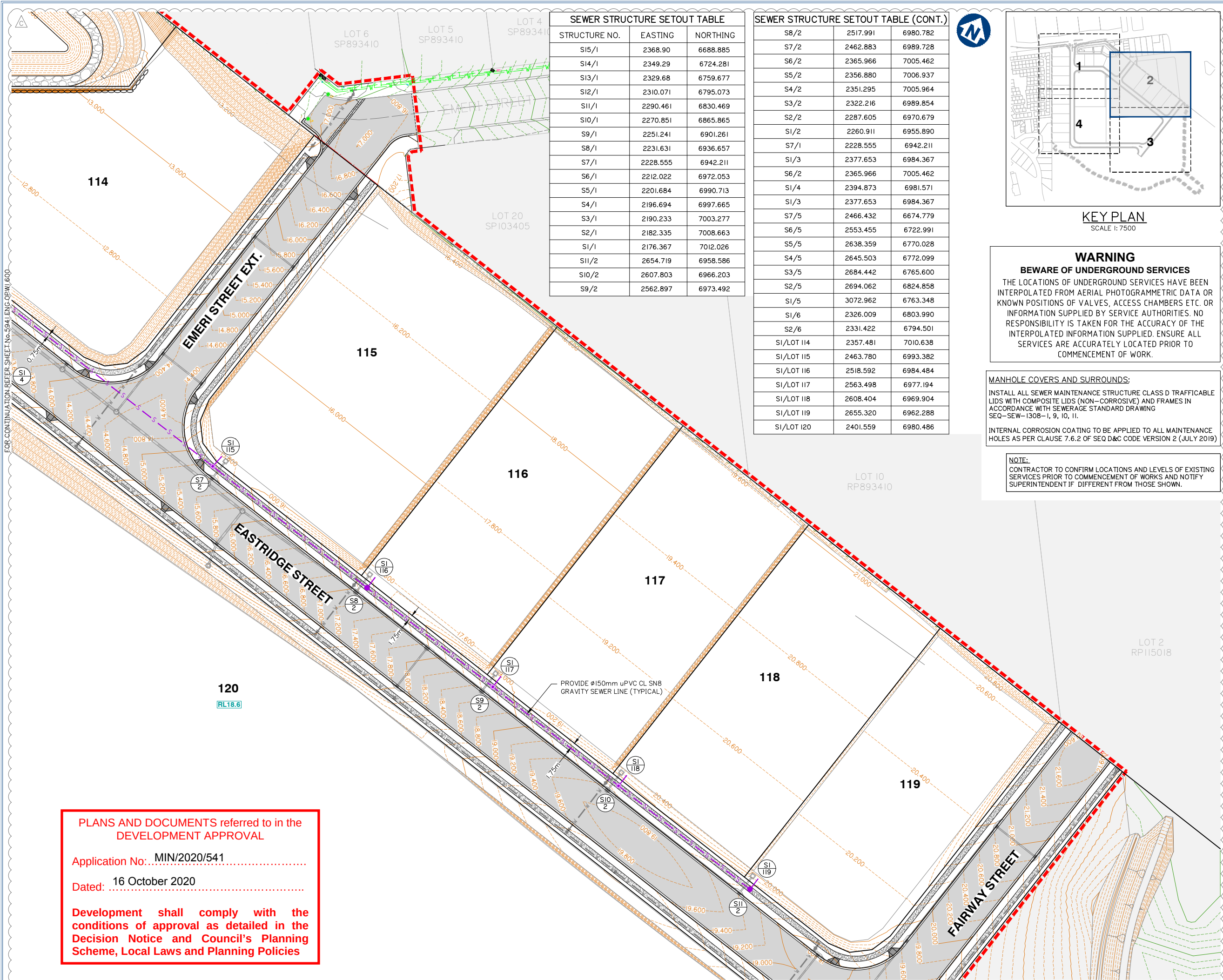
**SCALE IN METRES**  
0 10 20 30 40 50  
1:500 (FULL SIZE A1)  
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

|           |                    |
|-----------|--------------------|
| Designed: | IG                 |
| Drafted:  | BA                 |
| Approved: | MG                 |
| RPEQ:     | 16939              |
| Signed:   | <i>[Signature]</i> |
| Date:     | 02-09-2020         |

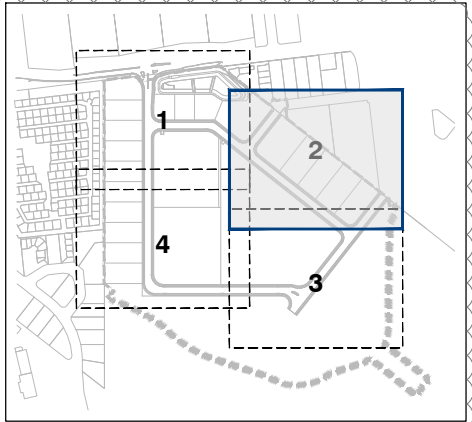
Drawing No: 5941 ENG OPW1 600 Rev. No: C





| SEWER STRUCTURE SETOUT TABLE |          |          |
|------------------------------|----------|----------|
| STRUCTURE NO.                | EASTING  | NORTHING |
| SI5/1                        | 2368.90  | 6688.885 |
| SI4/1                        | 2349.29  | 6724.281 |
| SI3/1                        | 2329.68  | 6759.677 |
| SI2/1                        | 2310.071 | 6795.073 |
| SI1/1                        | 2290.461 | 6830.469 |
| SI0/1                        | 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 |
| SI/1                         | 2176.367 | 7012.026 |
| SI1/2                        | 2654.719 | 6958.586 |
| SI0/2                        | 2607.803 | 6966.203 |
| S9/2                         | 2562.897 | 6973.492 |

| SEWER STRUCTURE SETOUT TABLE (CONT.) |          |          |
|--------------------------------------|----------|----------|
| 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 |
| SI/2                                 | 2260.911 | 6955.890 |
| S7/1                                 | 2228.555 | 6942.211 |
| SI/3                                 | 2377.653 | 6984.367 |
| S6/2                                 | 2365.966 | 7005.462 |
| SI/4                                 | 2394.873 | 6981.571 |
| SI/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 |
| SI/5                                 | 3072.962 | 6763.348 |
| SI/6                                 | 2326.009 | 6803.990 |
| S2/6                                 | 2331.422 | 6794.501 |
| 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                           | 2401.559 | 6980.486 |



KEY PLAN  
SCALE 1: 7500

**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN INTERPOLATED FROM AERIAL PHOTOGRAMMETRIC DATA OR KNOWN POSITIONS OF VALVES, ACCESS CHAMBERS ETC. OR INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.

**MANHOLE COVERS AND SURROUNDS:**  
INSTALL ALL SEWER MAINTENANCE STRUCTURE CLASS D TRAFFICABLE LIDS WITH COMPOSITE LIDS (NON-CORROSIVE) AND FRAMES 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 7.6.2 OF SEQ D&C CODE VERSION 2 (JULY 2019)

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

FOR CONTINUATION REFER SHEET No.5941 ENG OPW1 600

FOR CONTINUATION REFER SHEET No.5941 ENG OPW1 602

SEWER RETICULATION LAYOUT PLAN SHEET 2 OF 4

g:\Projects\5941\engineering\Acad\civil works stage 1\Current\5941 ENG OPW1 600.dwg

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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: -  
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DRAWING TITLE

SEWER RETICULATION  
LAYOUT PLAN SHEET 2 OF 4

| Rev   | Date       | Description                  | By  | Check |
|-------|------------|------------------------------|-----|-------|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG    |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG    |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG    |
| Issue | Date       | Description                  | DRN | 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:   |            |
| Date:     | 02-09-2020 |

Drawing No:  
5941 ENG OPW1 601

Rev. No:  
C

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

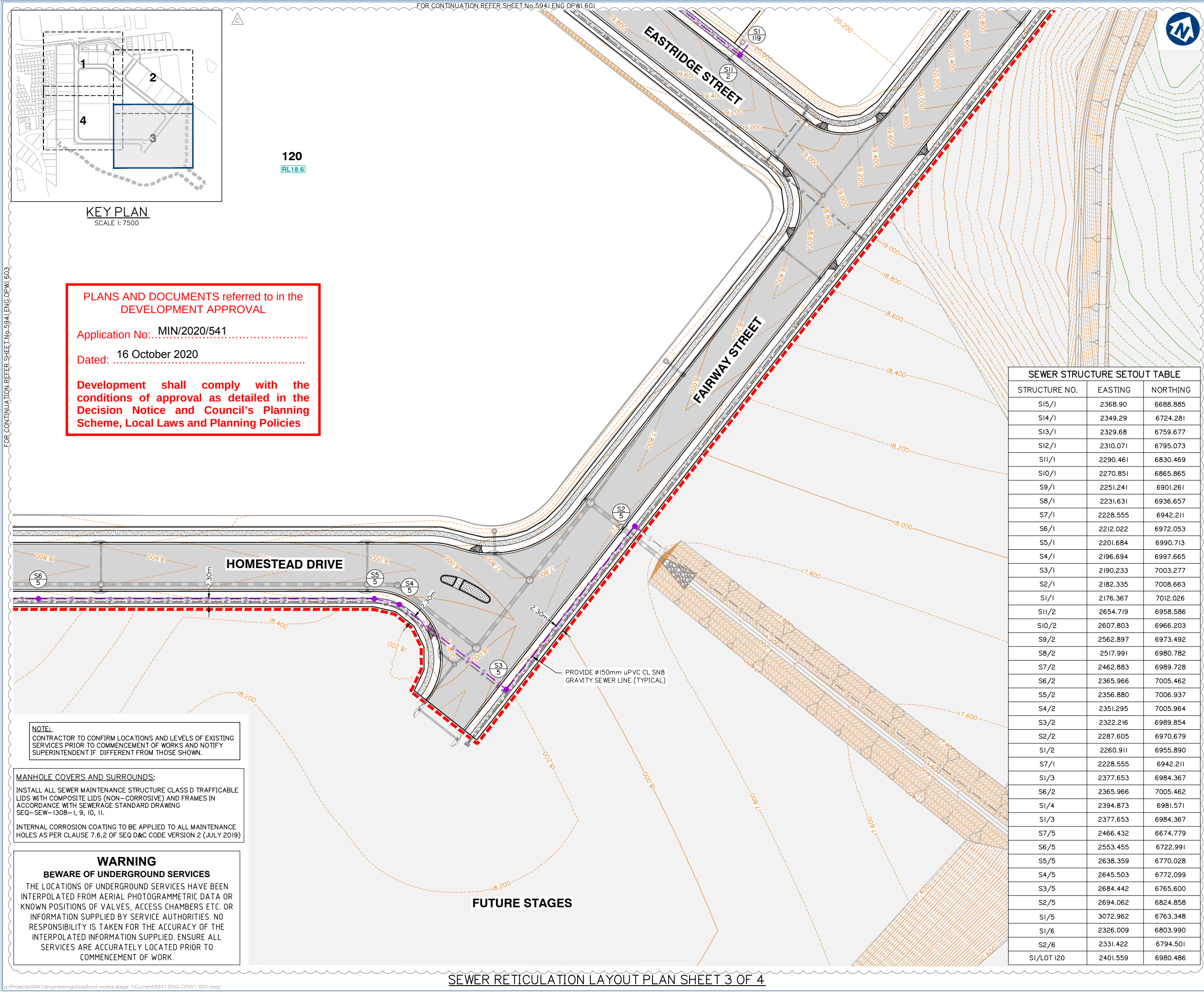
Application No: MIN/2020/541

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



FOR CONTINUATION REFER SHEET No.5941 ENG OPW1 603



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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: -  
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DRAWING TITLE

SEWER RETICULATION  
LAYOUT PLAN SHEET 3 OF 4

| Rev   | Date       | Description                  | By  | Check |
|-------|------------|------------------------------|-----|-------|
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG    |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG    |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG    |
| Issue | Date       | Description                  | DRN | CHK   |

SCALE IN METRES

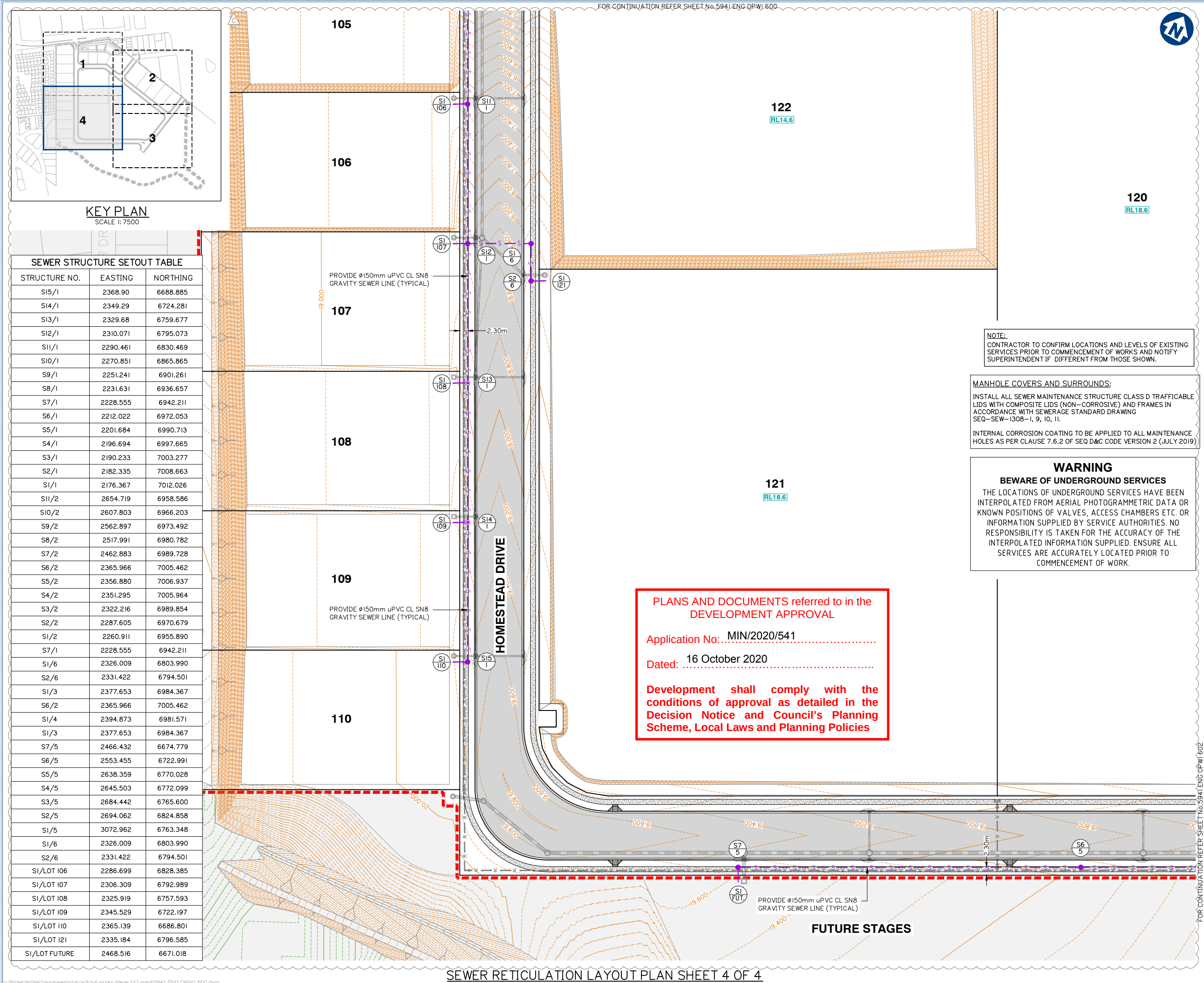


Scale at A1: 1:500

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 02-09-2020 |

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





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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 STAGE 1**

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 LAYOUT PLAN SHEET 4 OF 4**

| Rev. | Date       | Description                  | By | Check |
|------|------------|------------------------------|----|-------|
| C    | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG    |
| B    | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA | MG    |
| A    | 01-05-2020 | ORIGINAL ISSUE               | BA | MG    |

**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:   | <i>Michael</i> |
| Date:     | 02-09-2020     |

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

SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 1 OF 11



MAINTENANCE HOLE / SHAFT NAME

|                                 |          |          |          |          |
|---------------------------------|----------|----------|----------|----------|
| MH / MS COVER TYPE              | D/C      | D        | D        | D/C      |
| MH / MS TYPE                    | P3       | JI       | JI       | P3       |
| MH / MS DROP TYPE               | X        | V        | V        | -        |
| LINE DEFLECTION ANG. & BRANCHES | 107° 90° | 108° 90° | 109° 90° | 110° 90° |
| PROPERTY CONNECTION TYPE        | X        | Z        | Z        | X        |
| INTERNAL CORROSION PROTECTION   | Y        | N        | N        | Y        |

|                                                   |                                                        |
|---------------------------------------------------|--------------------------------------------------------|
| RIGSS STRUCTURE DROPS                             | CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH |
| V STRAIGHT THROUGH SEWER SEQ STD DWG SEQ-1303-1   | TRENCHSTOPS, BULKHEADS & CONCRETE ENCASUREMENTS        |
| 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                                      |
|                                                   | C COMPOSITE                                            |

|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| 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 |

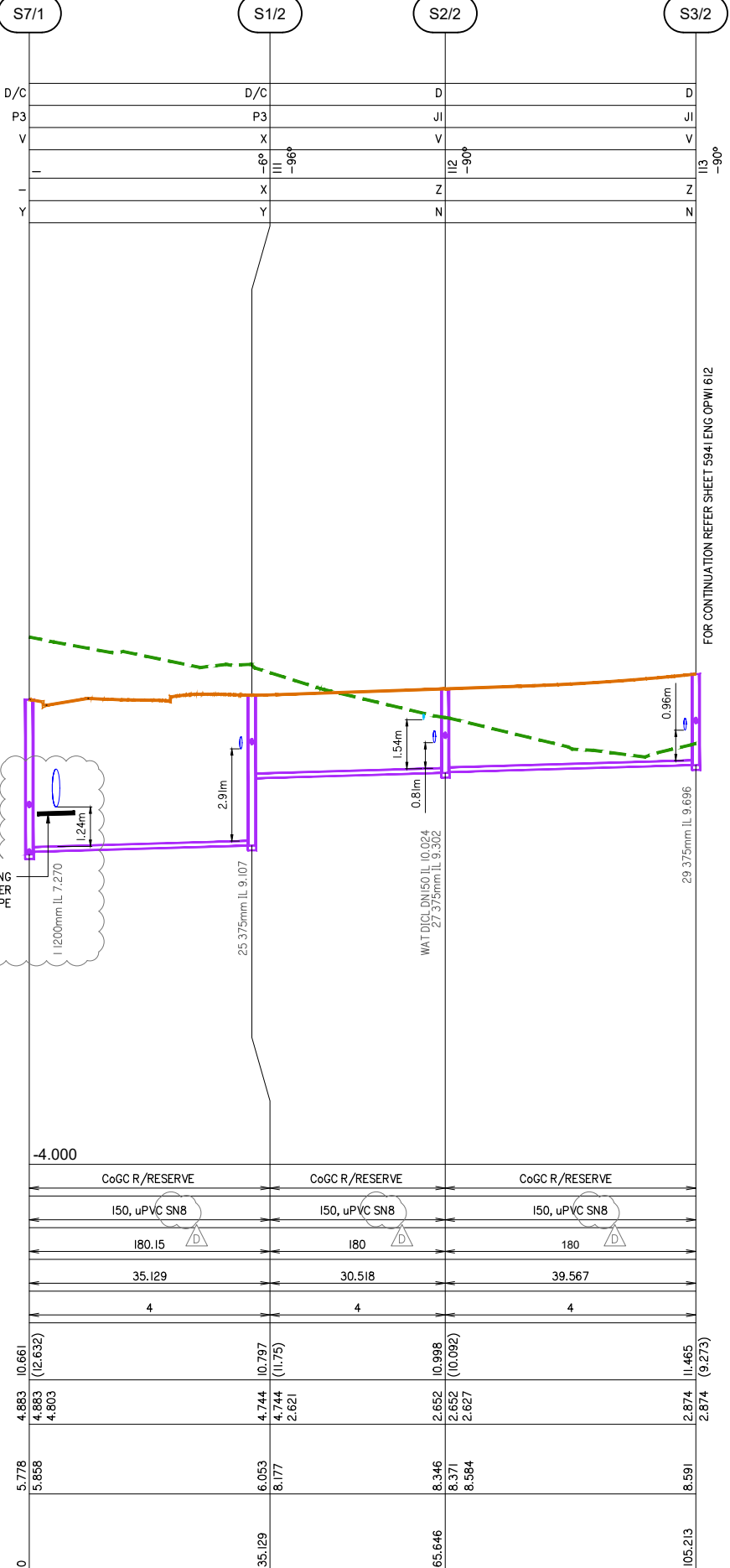
|                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Ø 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 ENCASUREMENTS 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.                                                                          |
| 11 ALL MAINTENANCE HOLES WHERE TRAFFICABLE LIDS ARE SPECIFIED TO BE COMPOSITE LIDS AND FRAMES (NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(1) TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST. |

|                                     |                           |                            |                            |                    |
|-------------------------------------|---------------------------|----------------------------|----------------------------|--------------------|
| DATUM RL                            | 7.000                     |                            |                            |                    |
| LOCATION DESCRIPTION                | CoGC R/RESERVE            | CoGC R/RESERVE             | CoGC R/RESERVE             |                    |
| PIPE SIZE (mm), MATERIAL & CLASS    | 150, uPVC SN8             | 150, uPVC SN8              | 150, uPVC SN8              |                    |
| PIPE GRADE (1 IN X)                 | 80.98                     | 100                        | 100                        |                    |
| PIPE LENGTH                         | 40.465                    | 40.465                     | 40.465                     |                    |
| PIPE EMBEDMENT TYPE                 | 4                         | 4                          | 4                          |                    |
| FINISHED (& EXISTING) SURFACE LEVEL | 18.488<br>(22.962)        | 18.921<br>(23.563)         | 19.295<br>(24.818)         | 19.652<br>(25.171) |
| DEPTH TO PIPE INVERT BELOW FSL      | 3.807<br>3.807<br>2.668   | 2.602<br>2.602<br>2.577    | 2.546<br>2.546<br>2.521    | 2.473<br>2.473     |
| PIPE INVERT LEVEL                   | 14.681<br>15.82<br>16.304 | 16.319<br>16.344<br>16.737 | 16.749<br>16.774<br>17.166 | 17.179             |
| PIPE CHAINAGE                       | 257.183<br>295.948        | 297.648<br>336.413         | 338.113<br>376.878         | 378.578            |

LINE

1

SEWER RETICULATION LONGITUDINAL SECTIONS SHEET 2 OF 11



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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: -  
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RL: -

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DRAWING TITLE  
SEWER RETICULATION  
LONGITUDINAL SECTIONS  
SHEET 2 OF 11

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| D     | 30-09-2020 | AMENDED SEWER PIPE CLASS     | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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:     | 30-09-2020 |

Drawing No:  
5941 ENG OPW1 611

Rev. No:  
D





MAINTENANCE HOLE / SHAFT NAME

MH / MS COVER TYPE

MH / MS TYPE

MH / MS DROP TYPE

LINE DEFLECTION ANG. & BRANCHES

PROPERTY CONNECTION TYPE

INTERNAL CORROSION PROTECTION

RIGSS STRUCTURE DROPS

V STRAIGHT THROUGH SEWER

W OBLIQUE 45° "Y" JUNCTION

X INTERNAL BACKDROP

Z VERTICAL DROP JUNCTION

CONSTRUCT BRIDGING  
STRUCTURE SPANNING  
THE SEWER TRENCH

TRENCHSTOPS, BULKHEADS  
& CONCRETE ENCASEMENTS

RIGSS STRUCTURE LIDS  
B NON-TRAFFICABLE LID  
D TRAFFICABLE LID  
C COMPOSITE

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-1303-1

JI TYPE "JI" 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.

11 ALL MAINTENANCE HOLES WHERE TRAFFICABLE LIDS ARE  
SPECIFIED TO BE COMPOSITE LIDS AND FRAMES

(NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL  
PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(1)  
TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST.

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MAINTENANCE HOLE / SHAFT NAME

S2/5

S3/5

S4/5

S5/5

S6/5

MH / MS COVER TYPE

D/C

D/C

D/C

D/C

D/C

MH / MS TYPE

P3

P3

P3

P3

P3

MH / MS DROP TYPE

V

V

V

V

V

LINE DEFLECTION ANG. & BRANCHES

-90°

90°

-26°

-13°

-

PROPERTY CONNECTION TYPE

-

-

-

-

-

INTERNAL CORROSION PROTECTION

Y

Y

Y

Y

Y

RIGSS STRUCTURE DROPS

V STRAIGHT THROUGH SEWER  
SEQ DWG SEQ-SEW-1303-1

W OBLIQUE 45° "Y" JUNCTION  
SEQ DWG SEQ-SEW-1303-1

X INTERNAL BACKDROP  
SEQ DWG SEQ-SEW-1303-1

Z VERTICAL DROP JUNCTION  
STD DWG SEQ-SEW-1314-1

CONSTRUCT BRIDGING  
STRUCTURE SPANNING  
THE SEWER TRENCH

TRENCHSTOPS, BULKHEADS  
& CONCRETE ENCASEMENTS

| RIGSS STRUCTURE LIDS |                     |
|----------------------|---------------------|
| B                    | NON-TRAFFICABLE LID |
| D                    | TRAFFICABLE LID     |
| C                    | COMPOSITE           |

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

JI TYPE "JI" 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.

11 ALL MAINTENANCE HOLES WHERE TRAFFICABLE LIDS ARE  
SPECIFIED TO BE COMPOSITE LIDS AND FRAMES  
(NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL  
PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(1)  
TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST.

DATUM RL 2.000

LOCATION DESCRIPTION

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

PIPE GRADE (1 IN X)

100

100

180

180

PIPE LENGTH

60.034

39.477

7.439

97.063

PIPE EMBEDMENT TYPE

4

4

4

4

FINISHED (& EXISTING)  
SURFACE LEVEL

17.748

(12.721)

18.129

(12.7)

18.191

(12.004)

18.267

(12.051)

18.886

(15.815)

DEPTH TO PIPE INVERT BELOW FSL

4.81

4.81

4.441

4.441

4.411

4.254

4.254

4.214

4.248

4.248

4.216

4.298

4.298

PIPE INVERT LEVEL

12.908

12.938

13.688

13.718

13.938

13.978

14.019

14.049

14.588

PIPE CHAINAGE

0

60.034

99.511

106.95

204.013

LINE

5

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies

FOR CONTINUATION REFER SHEET 5941 ENG OPW1 615

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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 5 OF 11

| Rev | Date       | Description                  | By | CHK |
|-----|------------|------------------------------|----|-----|
| E   | 30-09-2020 | AMENDED SEWER PIPE CLASS     | BA | MG  |
| D   | 11-09-2020 | AMENDED SEWER STRUCTURES     | BA | MG  |
| C   | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG  |
| B   | 12-08-2020 | INFORMATION REQUEST RESPONSE | BA | MG  |
| A   | 01-05-2020 | ORIGINAL ISSUE               | BA | MG  |

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:     | 30-09-2020 |

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



MAINTENANCE HOLE / SHAFT NAME

S6/5

S7/5

|                                 |     |             |
|---------------------------------|-----|-------------|
| MH / MS COVER TYPE              | D/C | D/C         |
| MH / MS TYPE                    | P3  | P3          |
| MH / MS DROP TYPE               | V   | V           |
| LINE DEFLECTION ANG. & BRANCHES | -   | V FUT. -90° |
| PROPERTY CONNECTION TYPE        | -   | -           |
| INTERNAL CORROSION PROTECTION   | Y   | 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        |                                                        |
| Z VERTICAL DROP JUNCTION STD DWG SEQ-SEW-1314-1   |                                                        |

|                       |
|-----------------------|
| RIGSS STRUCTURE LIDS  |
| B NON-TRAFFICABLE LID |
| D TRAFFICABLE LID     |
| C COMPOSITE           |

|                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------|
| 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 |
| JI TYPE "JI" 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 |

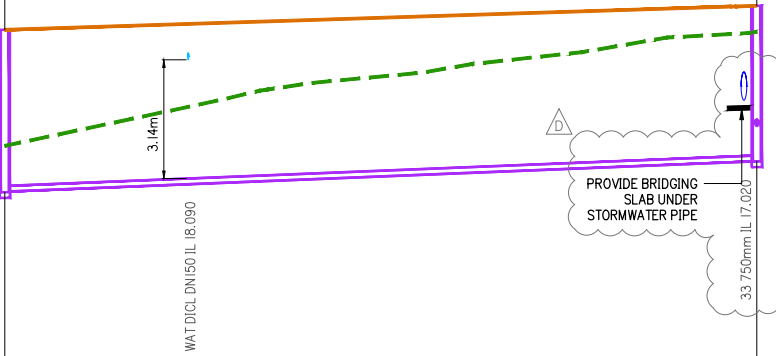
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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                                                                          |
| 11 ALL MAINTENANCE HOLES WHERE TRAFFICABLE LIDS ARE SPECIFIED TO BE COMPOSITE LIDS AND FRAMES (NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(1) TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST. |

|                                     |                         |                   |
|-------------------------------------|-------------------------|-------------------|
| DATUM RL                            | 4.000                   |                   |
| LOCATION DESCRIPTION                |                         | CoGC R/RESERVE    |
| PIPE SIZE (mm), MATERIAL & CLASS    |                         | 150, uPVC SN8     |
| PIPE GRADE (1 IN X)                 |                         | 125               |
| PIPE LENGTH                         |                         | 99.485            |
| PIPE EMBEDMENT TYPE                 |                         | 4                 |
| FINISHED (& EXISTING) SURFACE LEVEL | 18.886<br>(15.815)      | 19.52<br>(18.833) |
| DEPTH TO PIPE INVERT BELOW FSL      | 4.298<br>4.298<br>4.278 | 4.117<br>4.117    |
| PIPE INVERT LEVEL                   | 14.588<br>14.608        | 15.404            |
| PIPE CHAINAGE                       | 204.013                 | 303.498           |

LINE

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FOR CONTINUATION REFER SHEET 5941 ENG OPW1 614



PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies



planning | environment | landscape | engineering | survey  
T: 3807 3333 | F: 3287 5461 | www.gassman.com.au  
Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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 6 OF 11

|       |            |                              |     |     |
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|       |            |                              |     |     |
|       |            |                              |     |     |
| D     | 30-09-2020 | AMENDED SEWER PIPE CLASS     | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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:     | 30-09-2020 |

Drawing No: 5941 ENG OPW1 615 Rev. No: D

**PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL**

**Application No:** MIN/2020/464 .....

**Dated:** 16 October 2020 .....

**Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies**

Client:



Project:

## VANTAGE YATALA STAGE 1

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: -  
RL: -

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DRAWING TITLE  
SEWER RETICULATION  
LONGITUDINAL SECTIONS  
SHEET 7 OF 11

|        |            |                              |     |    |  |
|--------|------------|------------------------------|-----|----|--|
|        |            |                              |     |    |  |
| E      | 30-09-2020 | AMENDED SEWER PIPE CLASS     | BA  | MC |  |
| D      | 11-09-2020 | AMENDED SEWER STRUCTURES     | BA  | MC |  |
| C      | 02-08-2020 | MINOR CHANGE TO STAGE 1      | BA  | MC |  |
| B      | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MC |  |
| A      | 01-05-2020 | ORIGINAL ISSUE               | BA  | MC |  |
| Issue# | Date       | Description                  | DRN | CH |  |

SCALE IN METRES

Scale 1:500 - Lengths are in Metres.

HORZ: 

VERT: 

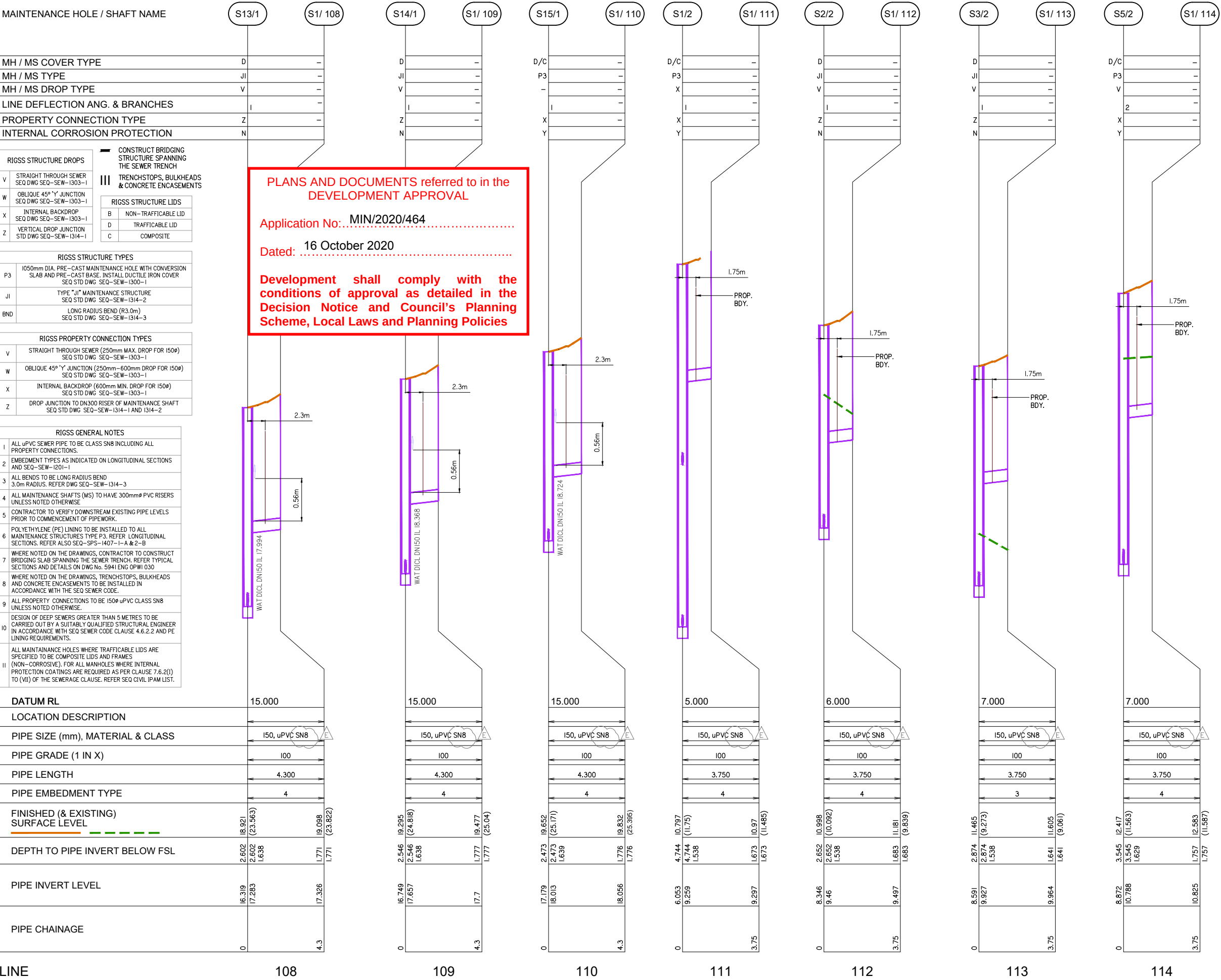
Scale at A1: AS SHOWN

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 30-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 616 | E        |







Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
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DRAWING TITLE  
SEWER RETICULATION  
LONGITUDINAL SECTIONS  
SHEET 9 OF 11

| Rev   | Date       | Description                  | BA  | MG  |
|-------|------------|------------------------------|-----|-----|
| E     | 30-09-2020 | AMENDED SEWER PIPE CLASS     | BA  | MG  |
| D     | 11-09-2020 | AMENDED SEWER STRUCTURES     | BA  | MG  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| 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.

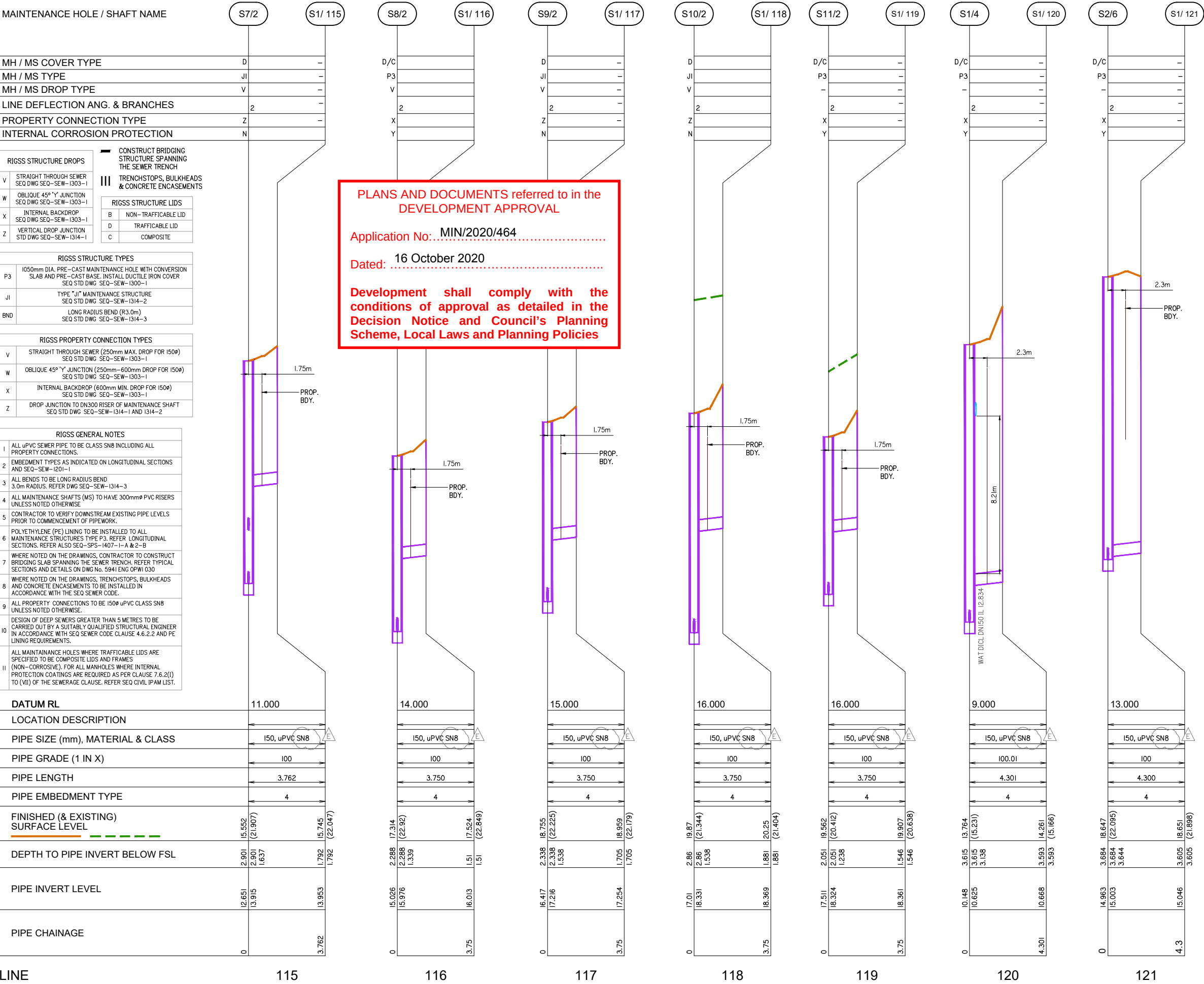
VERT: 0 0.25 0.5 0.75 1.0 1.25 1.5 1.75 2.0

Scale at A1:

AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 30-09-2020 |

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



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
SEWER RETICULATION  
LONGITUDINAL SECTIONS  
SHEET 10 OF 11

| Rev   | Date       | Description                  | By  | Check |
|-------|------------|------------------------------|-----|-------|
| E     | 30-09-2020 | AMENDED SEWER PIPE CLASS     | BA  | MG    |
| D     | 11-09-2020 | AMENDED SEWER STRUCTURES     | BA  | MG    |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG    |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG    |
| 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 1.25 1.5 1.75 2.0

Scale at A1: AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 30-09-2020 |

Drawing No: 5941 ENG OPW1 619 Rev. No: E

MAINTENANCE HOLE / SHAFT NAME

|                                 |     |   |
|---------------------------------|-----|---|
| MH / MS COVER TYPE              | D/C | - |
| MH / MS TYPE                    | P3  | - |
| MH / MS DROP TYPE               | -   | - |
| LINE DEFLECTION ANG. & BRANCHES | 2   | - |
| PROPERTY CONNECTION TYPE        | X   | - |
| INTERNAL CORROSION PROTECTION   | Y   | - |

| RIGSS STRUCTURE DROPS |                                                    |
|-----------------------|----------------------------------------------------|
| V                     | STRAIGHT THROUGH SEWER<br>SEQ DWG SEQ-SEW-1303-1   |
| W                     | OBLIQUE 45° "Y" JUNCTION<br>SEQ DWG SEQ-SEW-1303-1 |
| X                     | INTERNAL BACKDROP<br>SEQ DWG SEQ-SEW-1303-1        |
| Z                     | VERTICAL DROP JUNCTION<br>STD DWG SEQ-SEW-1314-1   |

CONSTRUCT BRIDGING  
STRUCTURE SPANNING  
THE SEWER TRENCH

TRENCHSTOPS, BULKHEADS  
& CONCRETE ENCASEMENTS

| RIGSS STRUCTURE LIDS |                     |
|----------------------|---------------------|
| B                    | NON-TRAFFICABLE LID |
| D                    | TRAFFICABLE LID     |
| C                    | COMPOSITE           |

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

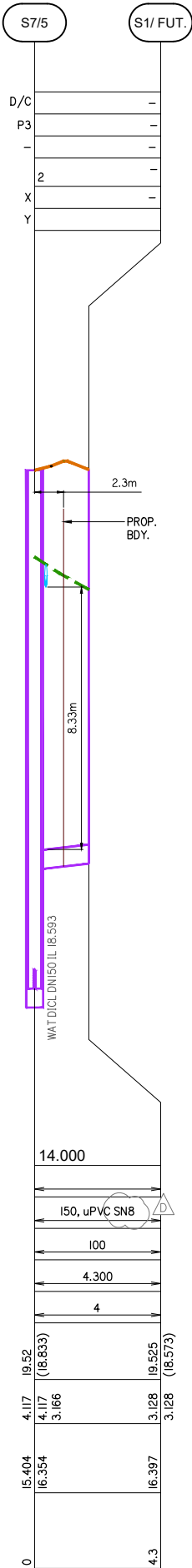
| RIGSS PROPERTY CONNECTION TYPES |                                                                                            |
|---------------------------------|--------------------------------------------------------------------------------------------|
| V                               | STRAIGHT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

| RIGSS GENERAL NOTES |                                                                                                                                                                                                                                                                             |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                   | ALL uPVC SEWER PIPE TO BE CLASS SN8 INCLUDING ALL<br>PROPERTY CONNECTIONS.                                                                                                                                                                                                  |
| 2                   | EMBEDMENT TYPES AS INDICATED ON LONGITUDINAL SECTIONS<br>AND SEQ-SEW-1201-1                                                                                                                                                                                                 |
| 3                   | ALL BENDS TO BE LONG RADIUS BEND<br>3.0m RADIUS. REFER DWG SEQ-SEW-1314-3                                                                                                                                                                                                   |
| 4                   | ALL MAINTENANCE SHAFTS (MS) TO HAVE 300mmø PVC RISERS<br>UNLESS NOTED OTHERWISE.                                                                                                                                                                                            |
| 5                   | CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS<br>PRIOR TO COMMENCEMENT OF PIPEWORK.                                                                                                                                                                                  |
| 6                   | POLYETHYLENE (PE) LINING TO BE INSTALLED TO ALL<br>MAINTENANCE STRUCTURES TYPE P3. REFER LONGITUDINAL<br>SECTIONS. REFER ALSO SEQ-SPS-1407-1-A & 2-B                                                                                                                        |
| 7                   | WHERE NOTED ON THE DRAWINGS, CONTRACTOR TO CONSTRUCT<br>BRIDGING SLAB SPANNING THE SEWER TRENCH. REFER TYPICAL<br>SECTIONS AND DETAILS ON DWG No. 5941 ENG OPW1 030                                                                                                         |
| 8                   | WHERE NOTED ON THE DRAWINGS, TRENCHSTOPS, BULKHEADS<br>AND CONCRETE ENCASEMENTS TO BE INSTALLED IN<br>ACCORDANCE WITH THE SEQ SEWER CODE.                                                                                                                                   |
| 9                   | ALL PROPERTY CONNECTIONS TO BE 150ø uPVC CLASS SN8<br>UNLESS NOTED OTHERWISE.                                                                                                                                                                                               |
| 10                  | DESIGN OF DEEP SEWERS GREATER THAN 5 METRES TO BE<br>CARRIED OUT BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER<br>IN ACCORDANCE WITH SEQ SEWER CODE CLAUSE 4.6.2.2 AND PE<br>LINING REQUIREMENTS.                                                                             |
| 11                  | ALL MAINTENANCE HOLES WHERE TRAFFICABLE LIDS ARE<br>SPECIFIED TO BE COMPOSITE LIDS AND FRAMES<br>(NON-CORROSIVE). FOR ALL MANHOLES WHERE INTERNAL<br>PROTECTION COATINGS ARE REQUIRED AS PER CLAUSE 7.6.2(1)<br>TO (VII) OF THE SEWERAGE CLAUSE. REFER SEQ CIVIL IPAM LIST. |

|                                        |                    |
|----------------------------------------|--------------------|
| DATUM RL                               | 8.000              |
| LOCATION DESCRIPTION                   |                    |
| PIPE SIZE (mm), MATERIAL & CLASS       | 150, uPVC SN8      |
| PIPE GRADE (1 IN X)                    | 100                |
| PIPE LENGTH                            | 4.345              |
| PIPE EMBEDMENT TYPE                    | 4                  |
| FINISHED (& EXISTING)<br>SURFACE LEVEL | 13.042<br>(13.277) |
| DEPTH TO PIPE INVERT BELOW FSL         | 3.757<br>1.948     |
| PIPE INVERT LEVEL                      | 9.284<br>11.094    |
| PIPE CHAINAGE                          | 0<br>4.345         |

LINE

122



FUTURE

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/464

Dated: 16 October 2020

Development shall comply with the  
conditions of approval as detailed in the  
Decision Notice and Council's Planning  
Scheme, Local Laws and Planning Policies

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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  
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Contour Interval: -  
PSM: -  
RL: -

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DRAWING TITLE  
SEWER RETICULATION  
LONGITUDINAL SECTIONS  
SHEET 11 OF 11

|       |            |                              |     |     |  |
|-------|------------|------------------------------|-----|-----|--|
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
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|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
| D     | 30-09-2020 | AMENDED SEWER PIPE CLASS     | BA  | MG  |  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |  |
| 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

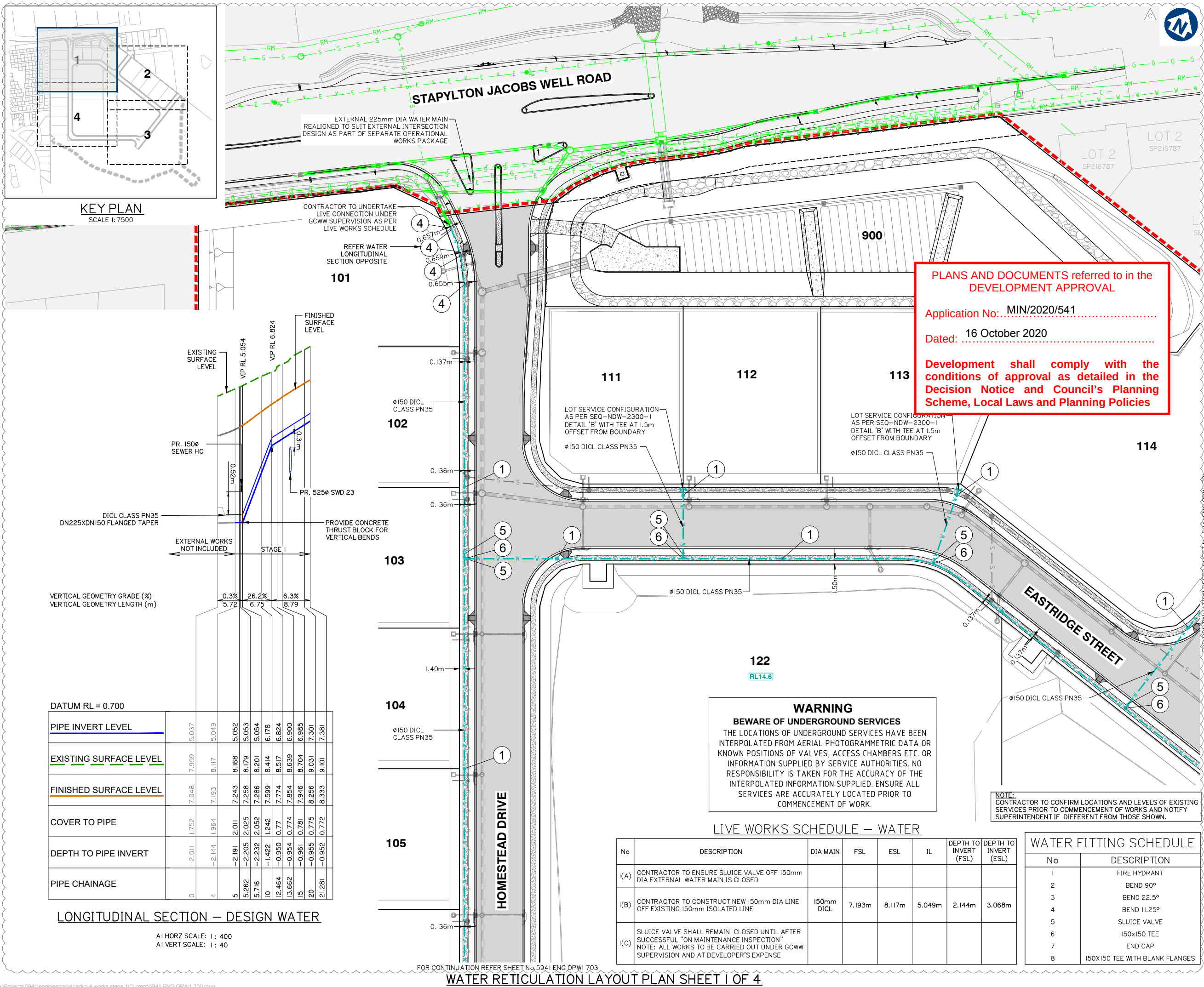
Scale 1:25 - Lengths are in Metres.  
VERT: 0 0.25 0.5 0.75 1 1.25 1.5 1.75 2.0

Scale at A1: AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | BA         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 30-09-2020 |

Drawing No: 5941 ENG OPW1 620 Rev. No: D





**gassman development perspectives**  
est. 1985  
planning | environment | landscape | engineering | survey  
T: 3807 3333 | F: 3287 5461 | www.gassman.com.au  
Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beerleigh 4207

Client:  
**FRASERS PROPERTY**  
FRASERS PROPERTY (AUSTRALIA) PTY. LTD.

Project:  
**VANTAGE YATALA STAGE 1**

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

THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR

RPD:  
Lot: 501  
Plan: SP295994  
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RL: -

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DRAWING TITLE  
**WATER RETICULATION LAYOUT PLAN SHEET 1 OF 4**

| Rev | Date       | Description                  | BA | MG |
|-----|------------|------------------------------|----|----|
| C   | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA | MG |
| B   | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA | MG |
| A   | 01-05-2020 | ORIGINAL ISSUE               | BA | MG |

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:   | <i>[Signature]</i> |
| Date:     | 02-09-2020         |

Drawing No: 5941 ENG OPW1 700  
Rev. No: C







RL18.6

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



| 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 |

WATER RETICULATION LAYOUT PLAN SHEET 3 OF 4







**FRASERS**  
PROPERTY

FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

VANTAGE YATALA  
STAGE 1

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

Lot: 501  
Plan: SP295994  
Local Authority: CITY OF GOLD COAST  
COUNCIL  
Level Datum: AHD  
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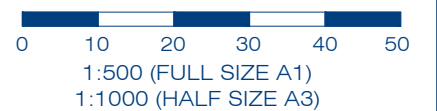
ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

WATER RETICULATION  
LAYOUT PLAN SHEET 4 OF 4

| G     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |
|-------|------------|------------------------------|-----|-----|
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

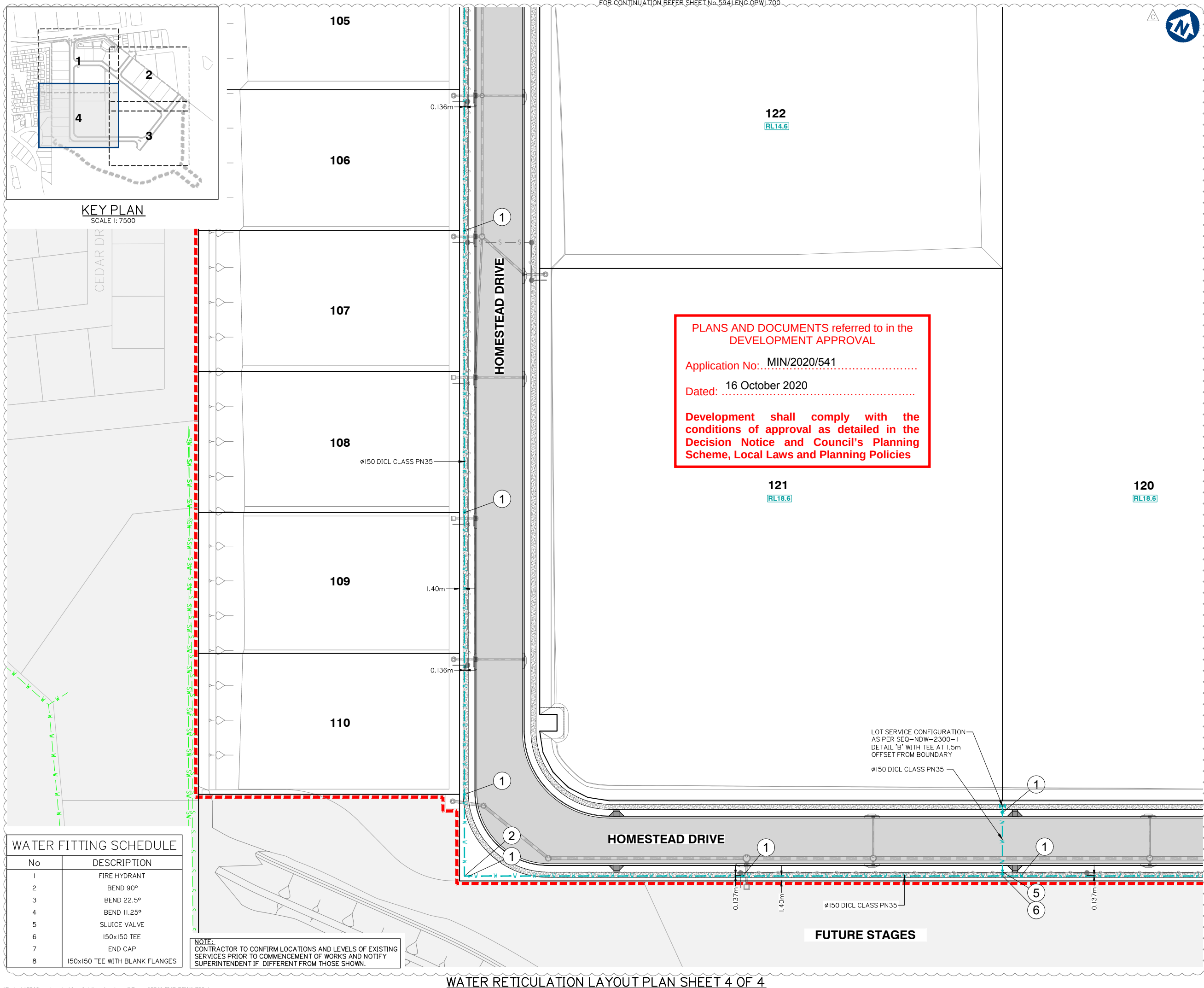
SCALE IN METRES



Scale at A1: 1:500

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 703 | C        |



| 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         |

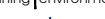
| PIPE DN.              | FITTING           | MAX. THRUST IN KN | THRUST BLOCK HEIGHT | STIFF CLAY 50 KPa. | VERY STIFF CLAY SANDY LOAM 100KPa. | SAND & GRAVEL HARD CLAY 150KPa. | SAND & GRAVEL CEMENTED WITH CLAY 200KPa. | ROCK 240KPa |
|-----------------------|-------------------|-------------------|---------------------|--------------------|------------------------------------|---------------------------------|------------------------------------------|-------------|
| 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<br>(0960<br>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

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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  $1200\text{kPa}$  AND ACTUAL DI $\phi$ L 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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development  
perspectives**

est. 1985

planning | environment | landscape | engineering | survey

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



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

VANTAGE YATALA  
STAGE 1

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

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

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

## WATER RETICULATION TYPICAL DETAILS

|       |            |  |                         |     |     |
|-------|------------|--|-------------------------|-----|-----|
|       |            |  |                         |     |     |
|       |            |  |                         |     |     |
|       |            |  |                         |     |     |
|       |            |  |                         |     |     |
|       |            |  |                         |     |     |
|       |            |  |                         |     |     |
| B     | 02-09-2020 |  | MINOR CHANGE TO STAGE 1 | BA  | MG  |
| A     | 01-05-2020 |  | ORIGINAL ISSUE          | BA  | MG  |
| Issue | Date       |  | Description             | DRN | CHI |

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:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 704 | B        |





## 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

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 800 | C        |





### PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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. I356
7. FOR TRAFFIC SIGN SUPPORT DETAILS, REFER DEPARTMENT OF MAIN ROADS STANDARD DRAWING No.'s I360 AND I362
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)                                                                            | PREFERRED |
|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------|
|                       |                                                                                       | MINIMUM                                                                               |           |
| 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



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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<br>COUNCIL |
| Level Datum:      | AHD                           |
| Meridian:         | -                             |
| Contour Interval: | -                             |
| PSM:              | -                             |
| RL:               | -                             |

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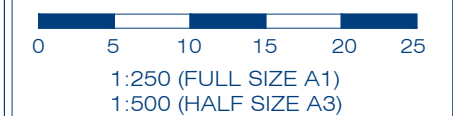
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## DRAWING TITLE

LINEMARKING AND SIGNAGE  
PLAN SHEET 2 OF 5

|       |            |                         |  |     |     |
|-------|------------|-------------------------|--|-----|-----|
|       |            |                         |  |     |     |
|       |            |                         |  |     |     |
|       |            |                         |  |     |     |
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|       |            |                         |  |     |     |
|       |            |                         |  |     |     |
|       |            |                         |  |     |     |
| B     | 02-09-2020 | MINOR CHANGE TO STAGE 1 |  | BA  | MG  |
| A     | 01-05-2020 | ORIGINAL ISSUE          |  | BA  | MG  |
| Issue | Date       | Description             |  | DBN | CHK |

SCALE IN METRES



|              |       |
|--------------|-------|
| Scale at A1: | 1:250 |
|--------------|-------|

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 801 | B        |



**KEY PLAN**  
SCALE 1: 7500

118

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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:

Meridian:

Contour Interval:  
RSM:

RL:

|  |  |
|--|--|
|  |  |
|  |  |

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DRAWING TITLE

LINEMARKING AND SIGNAGE  
PLAN SHEET 3 OF 5[illegible]

SCALE IN METRES



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

Scale at A1: 1:250

|           |    |
|-----------|----|
| Designed: | IG |
|-----------|----|

|          |    |
|----------|----|
| Drafted: | BA |
|----------|----|

|           |    |
|-----------|----|
| Approved: | MC |
|-----------|----|

|       |       |
|-------|-------|
| RPEQ: | 16939 |
|-------|-------|

|         |                                                                                       |
|---------|---------------------------------------------------------------------------------------|
| Signed: |  |
|---------|---------------------------------------------------------------------------------------|

|       |            |
|-------|------------|
| Date: | 02-09-2020 |
|-------|------------|

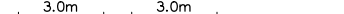
|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 802 | C        |

Rev. No:  
C

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".
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6. FOR GUIDE POST INSTALLATION AND DETAILS, REFER DEPARTMENT OF MAIN ROADS STANDARD DRAWING No. I356
7. FOR TRAFFIC SIGN SUPPORT DETAILS, REFER DEPARTMENT OF MAIN ROADS STANDARD DRAWING No.'s I360 AND I362
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) | PREFERRED |
|-----------------------|---------------------------------------------------------------------------------------|------------|-----------|
|                       |                                                                                       | MINIMUM    |           |
| 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

## FUTURE STAGES

LINEMARKING AND SIGNAGE PLAN SHEET 3 OF 5

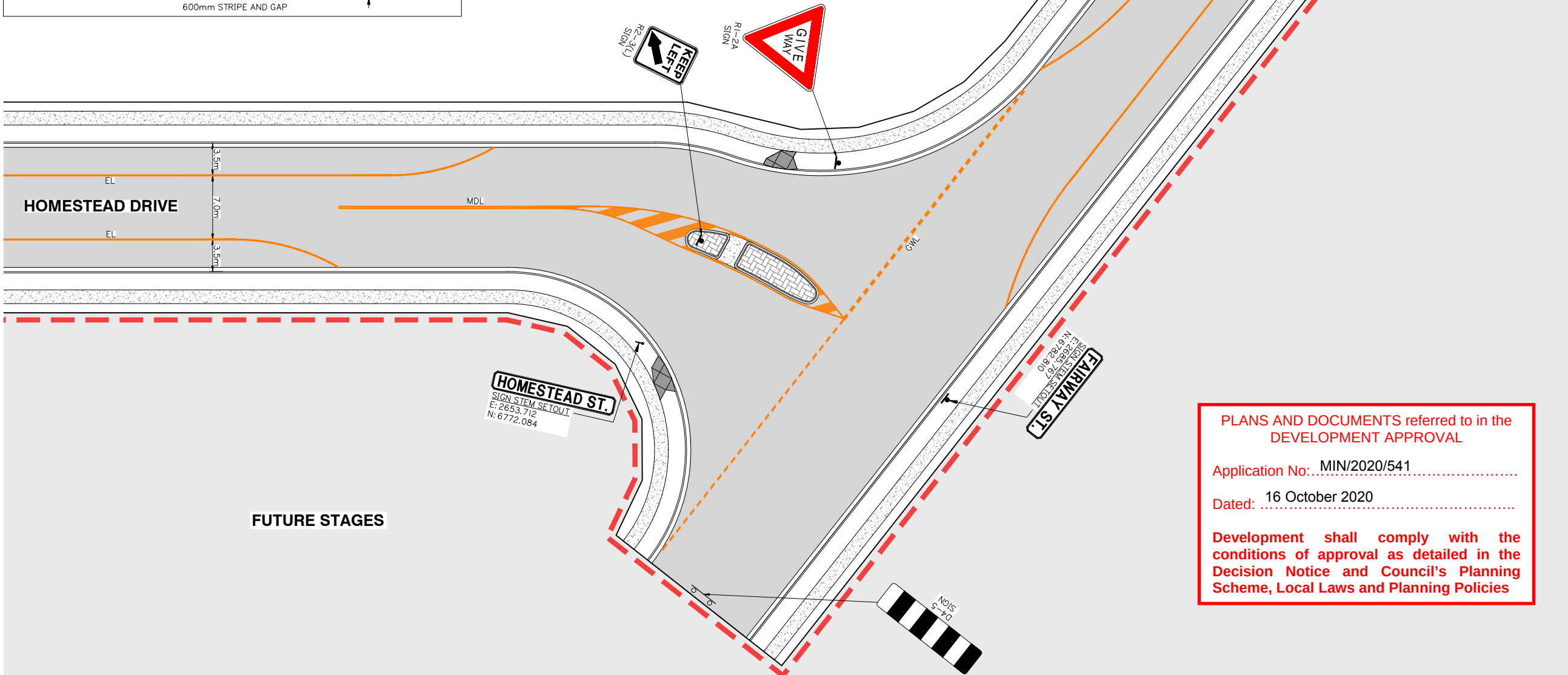




**LINEMARKING LEGEND**

|                       |  | 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       |

120



## FUTURE STAGES

PLANS AND DOCUMENTS referred to in the  
DEVELOPMENT APPROVAL

Application No: MIN/2020/541

**Dated:** 16 October 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

LINEMARKING AND SIGNAGE PLAN SHEET 4 OF 5



Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA  
STAGE 1

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<br>COUNCIL |
| Level Datum:      | AHD                           |
| Meridian:         | -                             |
| Contour Interval: | -                             |
| PSM:              | -                             |
| RL:               | -                             |

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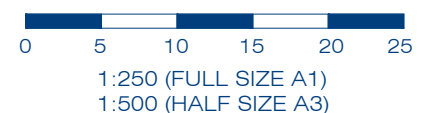
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DRAWING TITLE

LINEMARKING AND SIGNAGE  
PLAN SHEET 4 OF 5

|       |            |                              |     |     |  |
|-------|------------|------------------------------|-----|-----|--|
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
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|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG  |  |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG  |  |
| A     | 01-05-2020 | ORIGINAL ISSUE               | BA  | MG  |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
| Issue | Date       | Description                  | DBN | CHK |  |

SCALE IN METRES



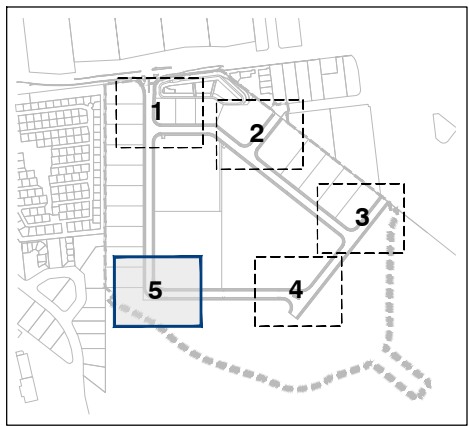
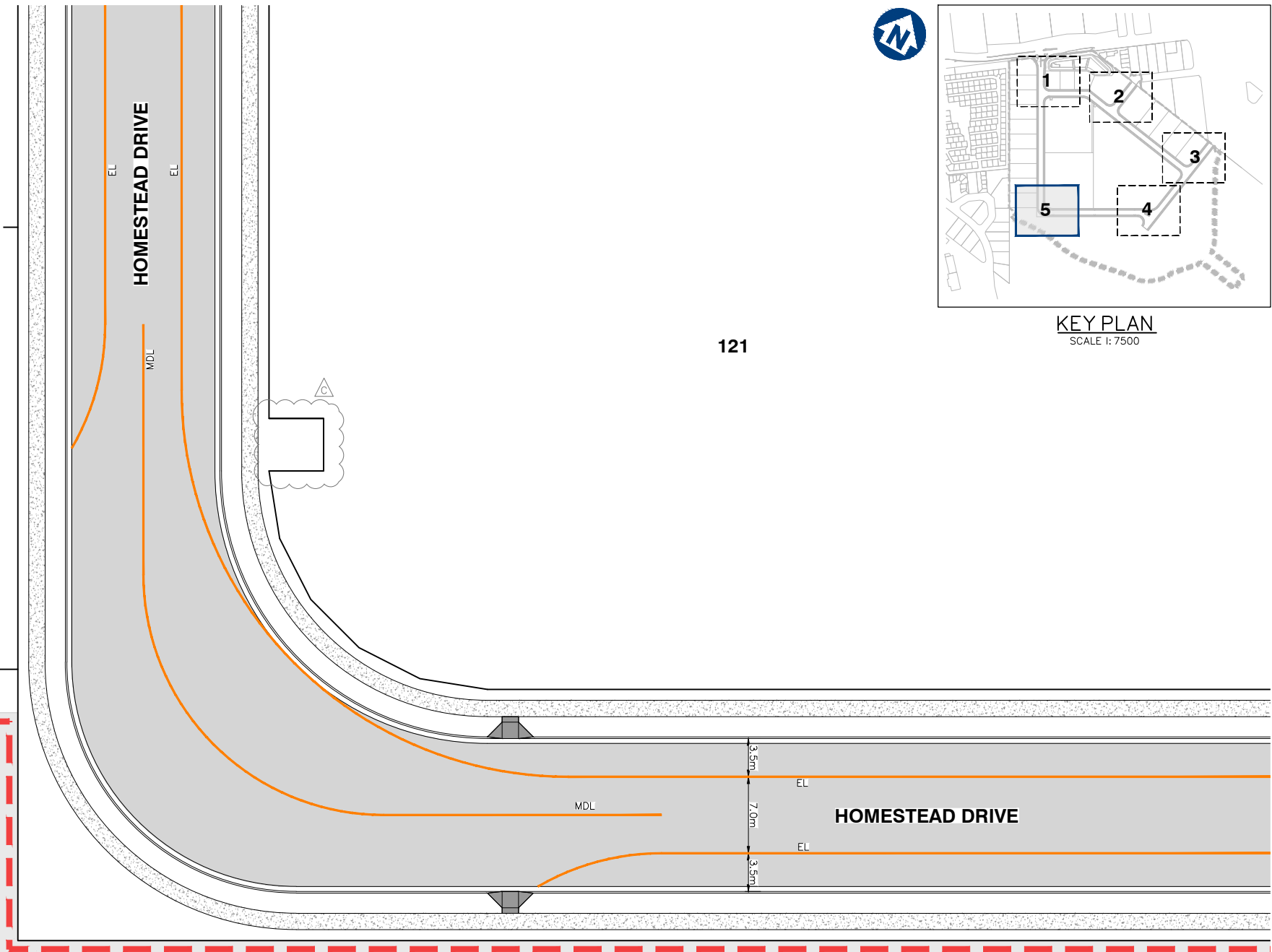
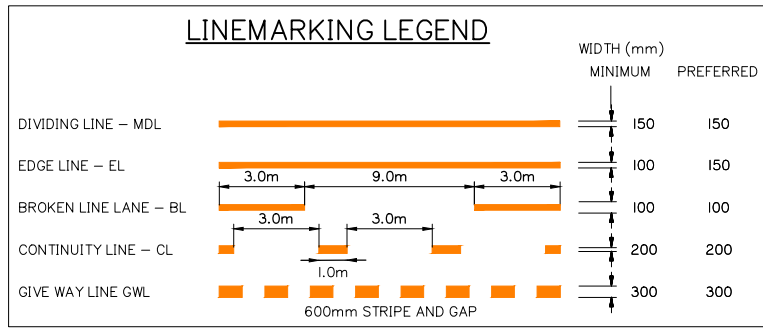
|              |       |
|--------------|-------|
| Scale at A1: | 1:250 |
|--------------|-------|

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 803 | C        |



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

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**



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

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

## Project:

## VANTAGE YATALA STAGE 1

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<br>COUNCIL |
| Level Datum:      | AHD                           |
| Meridian:         | -                             |
| Contour Interval: | -                             |
| PSM:              | -                             |
| RL:               | -                             |

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DRAWING TITLE

## LINEMARKING AND SIGNAGE PLAN SHEET 5 OF 5

|       |            |                              |     |    |
|-------|------------|------------------------------|-----|----|
|       |            |                              |     |    |
|       |            |                              |     |    |
|       |            |                              |     |    |
|       |            |                              |     |    |
|       |            |                              |     |    |
| C     | 02-09-2020 | MINOR CHANGE TO STAGE 1      | BA  | MG |
| B     | 12-06-2020 | INFORMATION REQUEST RESPONSE | BA  | MG |
| A     | 01-05-2020 | ORIGINAL ISSUE               | DRN | MG |
| Issue | Date       | Description                  | DRN | CH |

## SCALE IN METRES



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

Scale at A1: 1:250

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| Designed: | IG                                                                                    |
| Drafted:  | BA                                                                                    |
| Approved: | MG                                                                                    |
| RPEQ:     | 16939                                                                                 |
| Signed:   |  |
| Date:     | 02-09-2020                                                                            |

|                   |          |
|-------------------|----------|
| Drawing No:       | Rev. No: |
| 5941 ENG OPW1 804 | C        |