

Е	27.03.20	ISSUED FOR APPROVAL	AGC	ST
D	16.05.19	ISSUED FOR DA	SF	JRH
С	06.05.19	ISSUED FOR DA - AMENDED PIT LOCATION	SF	JRH
В	02.05.19	ISSUED FOR DA	SF	JRH
А	29.04.19	Issued for Information	SF	JRH
Rev	Date	Description	Ву	Chk

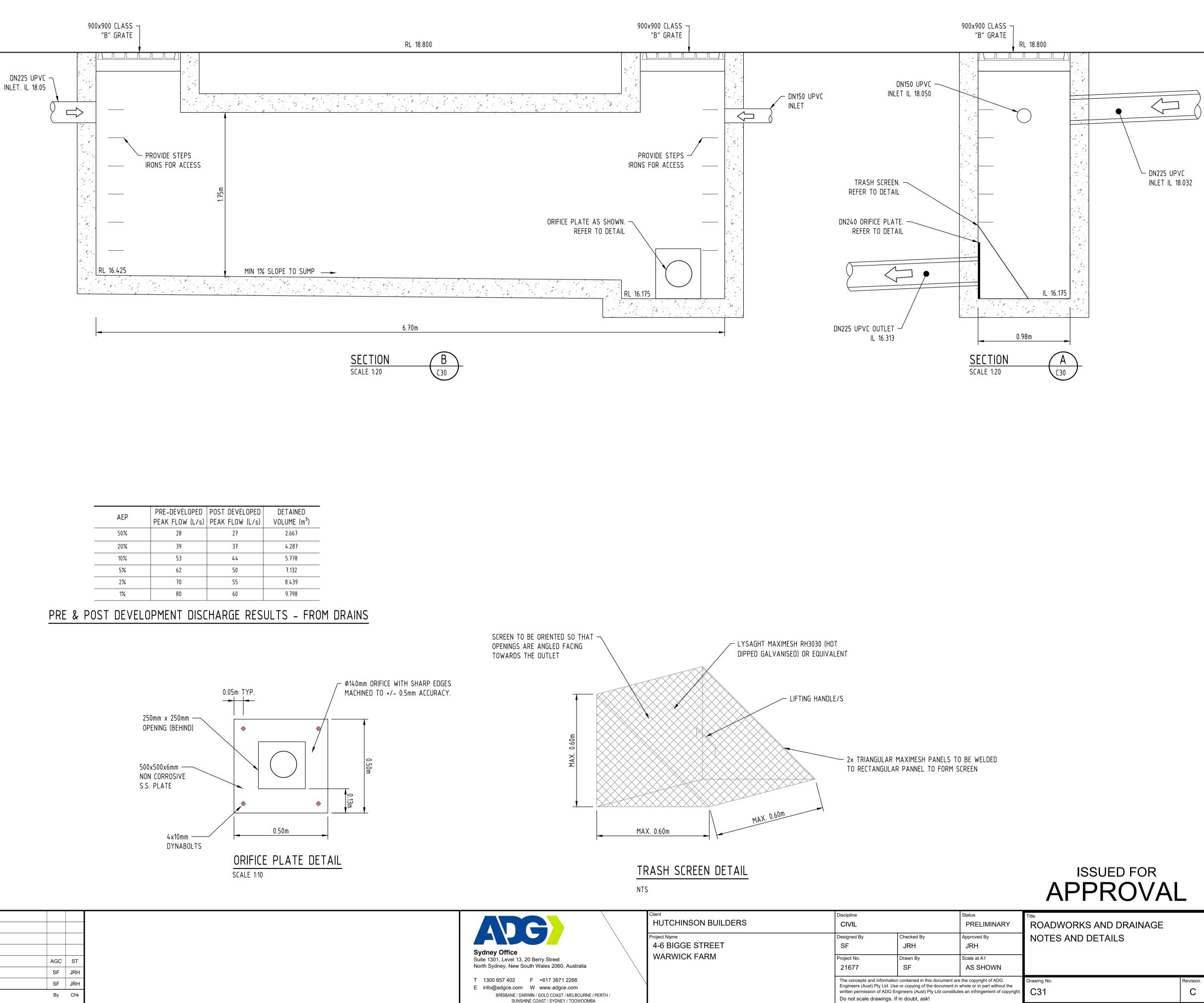
PLOT DATE: 3/27/2020 2:02 PM FILENAME: \\192.168.8.4\JOBS\21000\21677\CVL\DWG\21677_C30_ROADWORK AND DRAINAGE LAYOUT PLAN.DWG

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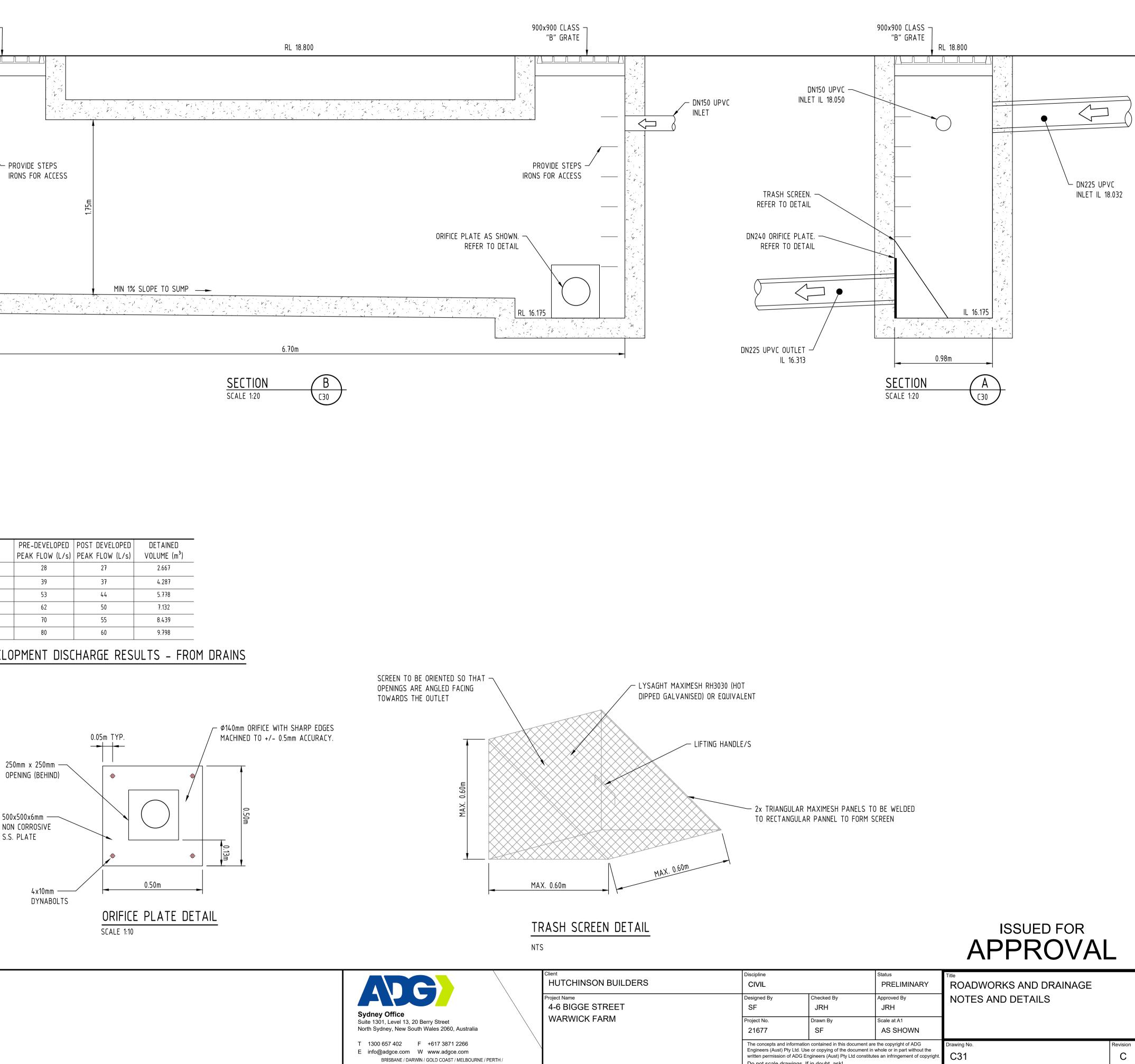
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ROADWORKS AND DRAINAGE NOTES

- 1. REFER TO DWG C01 FOR GENERAL NOTES.
- 2. REFER HYDRAULIC DRAWINGS FOR BASEMENT, ROOF AND UPPER LEVEL TERRACES DRAINAGE.
- 3. ALL ROADWORKS AND DRAINAGE (EXTERNAL TO SITE BOUNDARIES AND/OR COUNCIL OWNED DRAINAGE PIPES INTERNAL TO THE SITE BOUNDARIES) CONSTRUCTION AND TESTING TO BE IN ACCORDANCE WITH LIVERPOOL CITY COUNCIL DEVELOPMENT GUIDELINES, DRAWINGS AND SPECIFICATIONS.
- 4. ALL DRAINAGE CONSTRUCTION (PRIVATELY OWNED DRAINAGE LINES INTERNAL TO THE SITE BOUNDARIES) CONSTRUCTED AND TESTED TO BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
- 5. ALL STORMWATER DRAINAGE PIPES INTERNAL TO SITE SHALL BE: a) 225 DIA TO 375 DIA uPVC SN8 RUBBER RING JOINTED, BLACKMAX OR APPROVED EQUIVALENT.
- b) 450 DIA TO 600 DIA PP SN8 RUBBER RING JOINTED, BLACKMAX OR APPROVED EQUIVALENT
- 6. ALL STORMWATER DRAINAGE PIPES EXTERNAL TO SITE SHALL BE: a) 300 DIA AND GREATER CLASS 2 OR 3 R.C. RUBBER RING JOINTED
- 7. ALL STORMWATER PIPES ARE TO BE MANUFACTURED TO RELEVANT AUSTRALIAN STANDARDS INCLUDING BUT NOT LIMITED TO AS4058 AND AS1992.
- 8. STORMWATER DRAINAGE AND STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ONLY. CONTRACTOR TO CONSIDER CONSTRUCTION LOADINGS AND ENSURE NO EXCESSIVE LOADS ARE PLACED ON STORMWATER DRAINAGE OR STRUCTURES.
- 9. ALL PRECAST END STRUCTURES TO BE CONSTRUCTED WITH REINFORCED CONCRETE END WALL
- 10. CONTRACTOR TO CONFIRM LOCATION AND LEVEL OF EXISTING STORMWATER DRAINAGE WHERE CONNECTING ON TO EXISTING.
- 11. CONTRACTOR TO NOTIFY THE SUPERINTENDENT OF ANY UNSUITABLE FOUNDING MATERIAL WITHIN DRAINAGE TRENCH OR STORMWATER STRUCTURES AND AWAIT DIRECTION PRIOR TO LAYING OF PIPES.
- 12. TRENCH BACKFILL UNDER PAVEMENT TO BE COMPACTED TO 100% STANDARD DRY DENSITY (AS1289 5.1.1) IN LAYERS NOT EXCEEDING 150mm OF CBR 15 MATERIAL OR APPROVED EQUIVALENT. TRENCH BACKFILL IN ROADS TO BE MINIMUM CBR15 MATERIAL UP TO ROAD SUBGRADE LEVEL.
- 13. ALL STORMWATER GRATES/LIDS WITHIN TRAFFICABLE AREAS TO BE CLASS "D" IN ACCORDANCE WITH AS3996.
- 14. ALL GRATES AND LIDS SHALL SIT FLAT WITH ITS SURROUND AND NOT BE LOOSE OR MOVE UNDER WHEEL LOADS.
- 15. ALL STORMWATER STRUCTURES TO BE CONSTRUCTED IN ACCORDANCE WITH PROJECT SPECIFICATION, AND LOCAL AUTHORITY GUIDELINES AND SPECIFICATIONS. WHERE STRUCTURES EXCEED MAXIMUM DEPTH AS IDENTIFIED WITHIN STANDARD DRAWINGS THE CONTRACTOR WILL ENSURE AN ADEQUATE STRUCTURAL DESIGN IS UNDERTAKEN FOR THE SUBJECT STRUCTURE TO BE CONSTRUCTED TO.
- 16. CONTRACTOR TO ENSURE ALL MANHOLE STRUCTURES COMPLY WITH THE MAXIMUM DEPTH SPECIFIED IN THE PROJECT SPECIFICATION OR LOCAL AUTHORITY FROM FINISHED SURFACE LEVEL TO UNDERSIDE OF ROOF SLAB. ANY NON CONFORMANCE IS TO BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- 17. CONTRACTOR TO INSTALL STEP IRONS WITHIN MANHOLES/FIELD INLETS WHERE REQUIRED BY LOCAL AUTHORITY.
- 18. ALL FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH ARCHITECTURAL/LANDSCAPING DRAWINGS AND RELEVANT AUTHORITY STANDARD DRAWINGS AND SPECIFICATIONS. FOOTPATHS TO BE CONSTRUCTED WITH MAXIMUM 2% CROSSFALL. SHOULD CONSTRUCTED FOOTPATHS EXCEED 2.5% CROSSFALL, THE CONTRACTOR WILL BE REQUIRED TO RECTIFY BY REMOVING AND REPLACING AT THEIR COST.
- 19. WHERE A STORMWATER DRAINAGE TRENCH HAS BEEN CONSTRUCTED LONGITUDINALLY IN THE ROAD, THEN THE FINAL PAVEMENT SURFACE REPAIR WIDTH IS TO MATCH THE EXISTING LANE WIDTH AND TERMINATE 50mm CLEAR OF THE ROAD CENTERLINE OR LANE LINE LINEMARKING TO ALLOW FOR THE BITUMEN EMULSION JOINT SEAL. REINSTATEMENT OF SURFACE ADJACENT TO THE KERB OR ROAD PAVEMENT EDGE TO EXTEND FULLY TO THE KERB LINE OR EDGE OF PAVEMENT.
- 20. THE CONTRACTOR IS TO CONFIRM THE LOCATION OF SERVICE CONDUITS WITH THE SUPERINTENDENT PRIOR TO LAYING STORMWATER DRAINAGE. ALL TRENCH EXCAVATION AND CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 2011.
- 21. REMOVE ANY REDUNDANT DRAINAGE OUTLETS FROM THE KERB AND CHANNEL INCLUDING ANY ASSOCIATED PIPEWORK ACROSS THE FOOTWAY AND REINSTATE THE KERB AND CHANNEL AND THE FOOTWAY AREA IN ACCORDANCE WITH COUNCIL GUIDELINES.
- 22. CONTRACTOR TO UNDERTAKE ROADWORKS TESTING IN ACCORDANCE WITH COUNCIL GUIDELINES, DRAWINGS AND SPECIFICATIONS.
- 23. CONTRACTOR TO UNDERTAKE AND PROVIDE CCTV OF ALL STORMWATER LINES AT ON MAINTENANCE AND OFF MAINTENANCE. SHOULD THE CCTV IDENTIFY DAMAGE OR CRACKING WITHIN THE STORMWATER PIPES, THE CONTRACTOR WILL RECTIFY THE DAMAGE WITHIN THE PIPES BY MEANS DIRECTED BY THE SUPERINTENDENT WHICH MAY INCLUDE BUT NOT BE LIMITED TO PIPE RELINING OR PIPE REPLACEMENT.



	PRE-DEVELOPED	POST DEVELOPED				
AEP	PEAK FLOW (L/s)	PEAK FLOW (L/s)				
50%	28	27				
20%	39	37				
10%	53	44				
5%	62	50				
2%	70	55				
1%	80	60				



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t No. 677	Drawn By SF	Scale at A1 AS SHOWN																
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