AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
FOR THE AUSTRALIAN FEDERAL POLICE

STORMWATER DRAINAGE

LEGEND

ABBREVIATIONS

BG	BOX GUTTER
CI	CAST IRON
CIC	CAST IN COLUMN
CIS	CAST IN SLAB
CO	CLEAR OUT
Cu	COPPER
DI	DUCTILE IRON
DP	DOWN PIPE
DTU	DRAINAGE TURN-UP
DWG	DRAWING
Ex	EXISTING
FFL	FINISHED FLOOR LEVEL
GMS	GALVANISED MILD STEEL
HDC	HEAVY DUTY COVER
HDG	HEAVY DUTY GRATE
HL	HIGH LEVEL
IL	INVERT LEVEL
KEP	KERB ENTRY PIT
LDC	LIGHT DUTY COVER
LDG	LIGHT DUTY GRATE
LL	LOW LEVEL
LTG	LONGITUDINAL TRENCH GRATE
NTS	NOT TO SCALE
OFP	OVERFLOW PATH
P	PENETRATION
PLRO	PLANTER RAINWATER OUTLET
PRO	PARAPET RAINWATER OUTLET
RL	REDUCED LEVEL
RO	RAINWATER OUTLET
RWT	RAINWATER TANK
SRO	SQUARE RAINWATER OUTLET
STW	STORMWATER
SWP	STORMWATER PIT
TG	TRENCH GRATE
TOK	TOP OF KERB
TRO	TERRACE RAINWATER OUTLET
U.N.O.	UNLESS NOTED OTHERWISE
uPVC	UNPLASTICISED POLYVINYL CHLORIDE

SYMBOLS

- EXISTING KERB ENTRY PIT TO BE REMOVED
- RAINWATER OUTLET
- STORMWATER PIT (ACCESS ONLY)
- STORMWATER PIT (INLET)
- SQUARE RAINWATER OUTLET
- KERB ENTRY PIT (SINGLE GRATE)
- KERB ENTRY PIT (DOUBLE GRATE)
- STORMWATER HEADWALL
- SPREADER
- CONTINUATION SYMBOL (CONTINUATION OF SERVICE NOT SHOWN)
- CAPPED OFF SERVICE
- DROPPER
- RISER
- PUMP
- REFLUX VALVE (DRAINAGE)
- ELECTRICAL CONTROL PANEL
- DIRECTIONAL ARROW

LINETYPES

- STORMWATER DRAINAGE
- SUBSOIL DRAINAGE
- SWRM — STORMWATER RISING MAIN
- EXISTING SERVICE
- EXISTING SERVICE TO BE REDUNDANT
- OF — OVERLAND FLOW PATH
- P — PENETRATION
- DIRECTION OF FLOW / SERVICE / SIZE
- HX — CONTINUED ON DWG HX

ABBREVIATIONS, SYMBOLS AND LINETYPES IN THE LEGEND MAY NOT APPEAR ELSEWHERE ON THE DRAWINGS. THIS LEGEND SHOULD BE USED AS A GUIDE ONLY

DRAWING SCHEDULE

DWG No	DESCRIPTION
SW1	PROJECT INFORMATION
SW2	STORMWATER DRAINAGE - MASTERPLAN
SW3	DETAIL SHEET

NOTES

1. DRAWINGS ARE DIAGRAMMATIC ONLY. FOR DIMENSIONAL AND CONSTRUCTIONAL DETAILS OF BUILDING REFER ARCHITECTURAL DRAWINGS AND SITE.
2. ALL PIPEWORK ON DRAWINGS IS SHOWN BELOW SLAB (OR GROUND) UNLESS NOTED OTHERWISE.
3. SUBSOIL DRAINAGE TO BE PROVIDED IN ACCORDANCE WITH STRUCTURAL ENGINEER'S AND LANDSCAPE ARCHITECTS REQUIREMENTS. (e.g RETAINING WALL, PLANTERS, LANDSCAPE & BEHIND KERBS THAT ADJACENT LANDSCAPE ETC.)
4. ROOF PLAN NOT SHOWN.
5. FOR DOWNPIPE & GUTTER SIZES REFER TO HYDRAULIC ENGINEER'S DOCUMENTATION.
6. HEAVY DUTY GATES/COVERS SHALL BE PROVIDED TO ALL SWP'S, LTG'S, RO'S & SRO'S LOCATED WITHIN THE AREAS OF VEHICULAR ACCESS.
7. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, STRUCTURAL, HYDRAULIC, LANDSCAPE ARCHITECT AND ALL OTHER SERVICES DOCUMENTATION.

SPECIFICATION NOTES

GENERAL REQUIREMENTS

DIMENSIONS

THE DRAWINGS ARE INDICATIVE ONLY. ALL DIMENSIONS MUST BE CONFIRMED ON SITE BEFORE ANY SITEWORK OR OFF-SITE FABRICATION TAKES PLACE.

MATERIALS

ALL MATERIALS USED IN THE WORK SHALL BE NEW AND OF THE BEST QUALITY AND TYPE AVAILABLE TO CONFORM WITH THE RELEVANT AUSTRALIAN STANDARDS AND BEAR THE REQUIRED STANDARDS MARK AND WATERMARK.

FEES AND PERMITS

MAKE ALL APPLICATIONS TO THE WATER AUTHORITY AND LOCAL COUNCIL. PAY ALL FEES AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS AS REQUIRED BY THE AUTHORITIES.

COORDINATION

COORDINATE SERVICES WITH ALL OTHER TRADES AND WORKS ON THE SITE. REVIEW ALL AVAILABLE EXISTING SERVICES DOCUMENTATION.

EXISTING SERVICES

EXISTING SERVICES SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY AND MAY NOT BE COMPLETE. LOCATE AND CONFIRM ALL EXISTING SERVICES RELEVANT TO THE WORKS, PRIOR TO CARRYING OUT ANY WORK.

NOTE:
EXISTING SERVICES TO BE CAPPED OFF BELOW FINISHED GROUND LEVEL UNLESS THEY ARE REQUIRED TO BE REMOVED DUE TO CONSTRUCTION WORK.

STORMWATER DRAINAGE

STANDARDS

THE INSTALLATION IS TO BE IN ACCORDANCE WITH AS3500.3., NSW CODE OF PRACTICE FOR PLUMBING AND DRAINAGE AND LOCAL AUTHORITY REQUIREMENTS.

PIPEWORK MATERIAL

PIPEWORK UP TO 225mm DIAMETER SHALL BE UPVC DRAINAGE WASTE AND VENT (DWV) GRADE WITH SOLVENT WELDED JOINTS. PIPEWORK 300mm AND LARGER SHALL BE FIBRE REINFORCED CONCRETE (FRC) WITH 'SUPERTITE' JOINTS.

PIPE GRADES

PIPEWORK SHALL BE LAID AT 1:100 MINIMUM GRADE UNLESS NOTED OTHERWISE. PIPEWORK MAY BE LAID AT STEEPER GRADES AS REQUIRED TO MEET COVER REQUIREMENTS OR AS NOMINATED BY PIPEWORK INVERT LEVELS.

STORMWATER PITS (SWP)

STORMWATER PITS 300 x 300 AND 450 x 450 TO BE 'ACO POLYCRETE' PITS. STORMWATER PITS 600 x 600 OR LARGER SHALL BE PRECAST CONCRETE PITS WITH EXTENSION RISERS AS NECESSARY TO MATCH REQUIRED DEPTHS. PROVIDE STEP IRONS TO THE REQUIREMENTS OF AS 3500.3.

COVERED STORMWATER PITS - CONCRETE INFILL COVERS WITH LIFTING LUGS WITH THE DUTY APPROPRIATE TO THE LOCATION OF THE COVER AND AS NOMINATED ON THE DRAWINGS.

GRATED STORMWATER PITS (NON-TRAFFICABLE AREAS) - GALVANIZED MILD STEEL OR CAST IRON MEDIUM DUTY GRATES.

STORMWATER PITS (TRAFFICABLE AREAS) AS NOMINATED ON THE DRAWINGS - CAST IRON HEAVY DUTY GRATES.

ACOUSTIC TREATMENT

WRAP ALL PIPEWORK ABOVE HABITABLE AREAS WITH 'SOUNDGUARD 4525C' ACOUSTIC INSULATION MANUFACTURED BY PYROTEK. INSULATION IS TO BE INSTALLED TO MANUFACTURER'S RECOMMENDATIONS.

CLEAR OUTS (CO)

CLEAR OUTS SHALL BE A LINE SIZE JUNCTION ON THE PIPE WORK BELOW GROUND AND EXTENDED TO FINISHED SURFACE LEVEL WITH A PIPE AND CAP. THE CAP SHALL BE BRASS FOR INTERNAL AREAS AND WHERE LOCATED IN HARD SURFACE OUTDOOR AREAS BUT MAY BE UPVC WHERE LOCATED SOFT LANDSCAPED AREAS.

DRAINAGE TURN UPS (DTU)

SHALL BE UPVC RISERS WITH UPVC GRATES.

LONGITUDINAL TRENCH GRATES (LTG)

SHALL BE 'ACO POLYCRETE' TO SIZE AS NOMINATED AND WITH GRATES AS NOMINATED ON THE DRAWINGS. ALL HEAVY DUTY GRATES TO BE CAST IRON.

ALL LTG'S LOCATED WITHIN TRAFFICABLE AREAS SHALL BE 225mm WIDE WITH HEAVY DUTY CAST IRON GRATES. ALL LTG'S LOCATED WITHIN NON TRAFFICABLE AREAS SHALL BE 100mm WIDE WITH GALVANISED MILD STEEL OR CAST IRON MEDIUM DUTY GRATES.

SUBSOIL DRAINAGE

SHALL BE 90mm SLOTTED UPVC PIPE WRAPPED IN CLOTH SOCK AND SURROUNDED WITH 150mm THICKNESS OF 20mm DIAMETER BLUE METAL AND SURROUNDED IN GEOTEXTILE FABRIC.

KERB ENTRY PITS (KEP)

KEP'S SHALL BE ICON INDUSTRIES ONE PIECE KERB ENTRY AND ROADWAY PIT SYSTEM MODEL KE1 WITH 1200 CLEAR OPENING IN LINTEL. GRATINGS SHALL BE HEAVY DUTY CAST IRON AND STORMWATER PITS SHALL BE 900mmx900mm AND IN ACCORDANCE WITH THE SPECIFICATION. IN PRIVATE ROADS WHERE ROLLED KERBS ARE PROVIDED, PROVIDE WELDLOK ROLLED FORMED KERB GULLY GRATES WITH HEAVY DUTY CAST IRON GRATES AND 900mmx600mm PITS.

RAINWATER OUTLETS

RAINWATER OUTLETS (RO) SHALL BE "GATIC WADE" MODEL W1104/A6 FLOOR DRAIN, WITH 150 mm DIAMETER POLISHED NICKEL BRONZE GRATE AND 100 mm DIAMETER OUTLET.

SQUARE RAINWATER OUTLETS (SRO) SHALL BE "GATIC WADE" MODEL W1216/J12 FLOOR DRAIN, WITH 280 mm x 280 mm SQUARE POLISHED NICKEL BRONZE GRATE WITH SEDIMENT BUCKET AND 100 mm DIAMETER OUTLET.

STORMWATER PIT SCHEDULE:

PIT No.	TYPE	SIZE	GRATE OR COVER	REDUCED LEVEL	INVERT LEVEL	OUTLET SIZE DIA.
P1	KEP		GRATE (HDG)	15.70	15.10	225Ø
P2	KEP		GRATE (HDG)	16.75	14.94	225Ø
P3	SWP	900 x 900	COVER (HDC)	16.80	14.78	300Ø
P4	SWP	600 x 600	GRATE	15.15	14.75	150Ø
P5	SWP	600 x 600	GRATE	15.35	14.40	225Ø
P6	SWP	900 x 900	GRATE	17.50	16.00	225Ø
P7	SWP	600 x 600	COVER (HDC)	14.55	13.70	375Ø
P8	SWP	600 x 600	GRATE	13.30	12.60	375Ø
P9	SWP	450 x 450	GRATE	15.40	14.85	150Ø
P10	SWP	450 x 450	GRATE	15.35	15.00	225Ø
P11	KEP		GRATE (HDG)	14.60	13.95	225Ø
P12	SWP	450 x 450	GRATE	13.90	13.14	225Ø
P13	SWP	600 x 600	GRATE	12.30	11.30	450Ø
P14	SWP	900 x 900	GRATE	11.60	TO MATCH EXISTING	450Ø
P15	SWP	600 x 600	GRATE	13.10	12.30	150Ø
P16	SWP	450 x 450	GRATE	14.55	13.97	225Ø
P17	SWP	450 x 450	GRATE	14.55	13.77	225Ø
P18	SWP	900 x 900	GRATE (HDG)	14.90	13.71	300Ø
P19	SWP	600 x 600	GRATE	15.07	13.63	300Ø
P20	SWP	600 x 600	GRATE	13.90	13.30	375Ø
P21	SWP	600 x 600	GRATE	12.50	11.70	375Ø
P22	SWP	600 x 600	GRATE	12.20	11.40	375Ø
P23	SWP	600 x 600	GRATE	11.50	10.70	375Ø
P24	SWP	600 x 600	COVER	11.50	10.55	375Ø
P25	SWP	450 x 450	GRATE	14.15	13.55	225Ø

ISSUE	DATE	AMENDMENT
06	16.12.08	ISSUED FOR PREFERRED PROJECT REPORT
05	11.12.08	RE-ISSUED FOR FINAL DRAFT
04	8.12.08	DRAFT FINAL ISSUE
03	5.12.08	ISSUED FOR PREFERRED PROJECT REPORT
02	3.12.08	ISSUED FOR REVIEW
01	20.11.08	ISSUED FOR DRAFT REPORT

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PROJECT

AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
FOR THE AUSTRALIAN FEDERAL POLICE

DRAWING TITLE:

PROJECT INFORMATION

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DISCIPLINE STORMWATER

NORTH	DRAWN TP	DESIGNED JM	
	DATE 16.12.08	SCALE AS SHOWN	
	APPROVED FOR CONSTRUCTION		
JOB No. 08-147	DRAWING No. SW1	ISSUE 06	