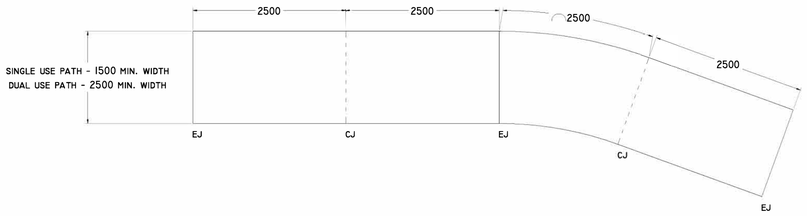
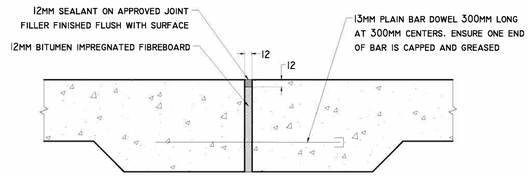
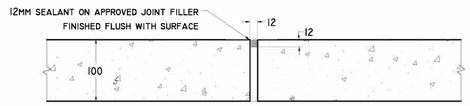


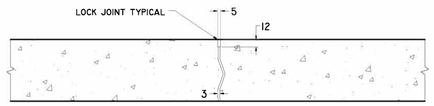
FOOTPATH PLAN
SCALE 1:50



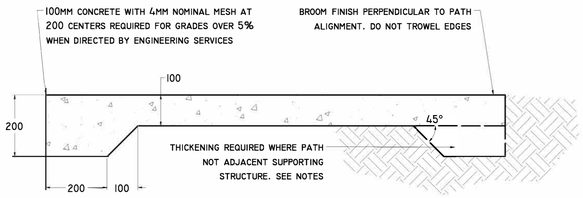
EXPANSION JOINT DETAIL
SCALE 1:5



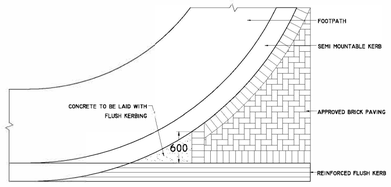
CONSTRUCTION JOINT DETAIL
SCALE 1:5



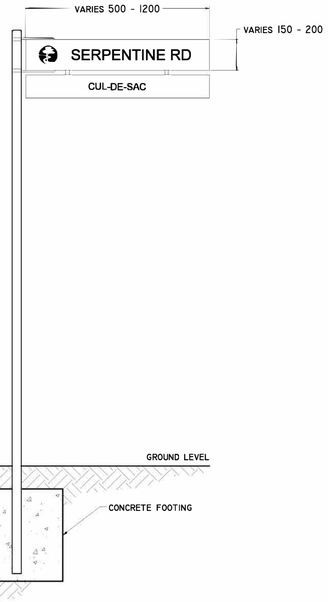
ALTERNATIVE EXPANSION JOINT DETAIL
SCALE 1:5



STANDARD FOOTPATH DETAIL
SCALE 1:10



STANDARD SEMI MOUNTABLE KERB
FOR BRICK PAVING WITH FOOTPATH
SCALE 1:50



FOOTPATH

1. ALL JOINTS TO MATCH ADJACENT KERB JOINTS WHERE POSSIBLE
2. CONCRETE TO BE 32MPA
3. FOOTPATH THICKNESS TO INCREASE AS SHOWN WHERE PATH IS NOT ADJACENT TO BACK OF KERB, DOES NOT TIE INTO AN INTERSECTING PATH OR PRAM RAMP, AND/OR WHERE NOT SUPPORTED BY RETAINING WALL
4. 2 METRE MINIMUM CLEARANCE FROM FINISHED PATH LEVEL TO OBJECT

PRAM RAMP

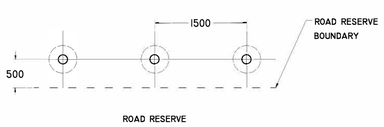
5. CONCRETE TO BE 32MPA
6. EDGE OF PRAM RAMP TO BE FLUSH WITH ROAD'S FINISHED PAVEMENT LEVEL
7. WHERE ASPHALT IS NOT TO BE APPLIED IN CURRENT STAGE, RAMP PAVEMENT DOWN TO ENSURE MINIMUM CONCRETE THICKNESS
8. ALL CONCRETE SHALL BE BROOM FINISHED ACROSS THE DIRECTION OF PEDESTRIAN TRAFFIC TO PROVIDE A NON-SLIP SURFACE.
9. FULL FOOTPATH WIDTH TO BE PROVIDED BEHIND AND AROUND RAMP WHERE RAMP JOINS PATH
10. A MINIMUM OF 500MM OF KERB SHALL BE PROVIDED BETWEEN ADJACENT RAMPS. WHERE THE MINIMUM CANNOT BE ACHIEVED, A SINGLE WIDE RAMP SHALL BE PROVIDED
11. PATHS PARALLEL TO KERB SHALL BE REALIGNED OR WIDENED TO PROVIDE A LEVEL SECTION 1500MM MINIMUM
12. THE PROVISION OF DIRECTIONAL AND TACTILE PAVING SHALL BE IN ACCORDANCE WITH AS1428.2-1992
13. PRAM RAMPS TO BE SKEWED TO MATCH THE DIRECTION OF ROAD CROSSING

BOLLARDS

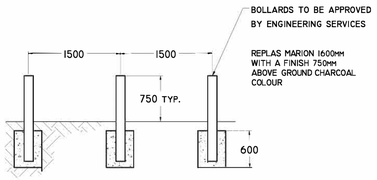
14. CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 20MPA

STREET SIGNS

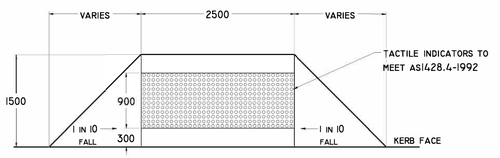
15. CUL-DE-SAC / NO THROUGH ROAD SIGN CLIP BOLTED TO NAME PLATE AS SHOWN
16. PRIMARY, DISTRICT A & B DISTRIBUTOR ROADS TO HAVE 150MM BLACK REFLECTIVE LETTERING ON 200MM DEEP PLATE. ALL OTHER ROADS TO HAVE 100MM BLACK REFLECTIVE LETTERING ON 150MM DEEP PLATE. BACKGROUND COLOUR FOR ALL PLATES TO BE WHITE (CLASS 2)
17. STANDARD ALUMINUM BRACKETS SECURELY FASTENED TO TOP AND BOTTOM OF SIGN, 50MM FROM TOP OF POST
18. POST TO BE 60MM GALVANISED IRON CIRCULAR HOLLOW SECTION
19. SHIRE LOGO TO BE AFFIXED AT MOUNTING END OF SIGN FOR EACH SIDE
20. STREET NAME SIGNS SHALL HAVE 3000MM CLEARANCE TO GROUND SURFACE
21. THE POLE IS TO BE ERECTED WITH A 600 x 600MM CONCRETE FOOTING WHICH IS TO BE 750MM DEEP
22. THE POST SHALL BE INSTALLED ON THE 2700 ALIGNMENT UNLESS OTHERWISE SPECIFIED. WHERE VERGE WIDTHS AND/OR FOOTPATH CONSTRAINT REQUIRE THE ALIGNMENT TO BE ALTERED, THE PROPOSED ALIGNMENT SHALL BE CLEARLY STATED ON THE SUBMITTED DRAWINGS
23. STREET NAME SIGNS MAY BE STRAPPED TO LIGHT POLES WHERE APPROPRIATE WITH APPROVAL FROM ENGINEERING SERVICES



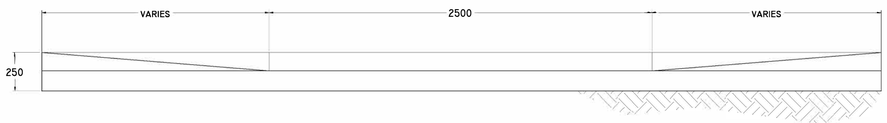
BOLLARD PLAN
SCALE 1:50



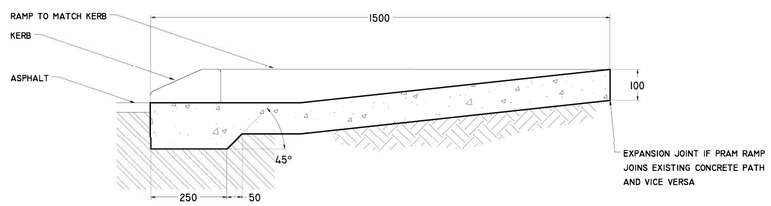
BOLLARD ELEVATION
SCALE 1:50



PRAM RAMP DETAIL
SCALE 1:50



PRAM RAMP ELEVATION
SCALE 1:20



PRAM RAMP SECTION
SCALE 1:10

Shire of Serpentine Jarrahdale

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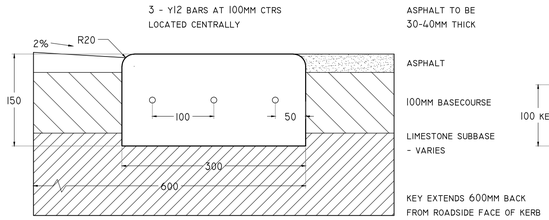
DRAWING TITLE

PATHS, RAMPS, BOLLARDS & SIGNS

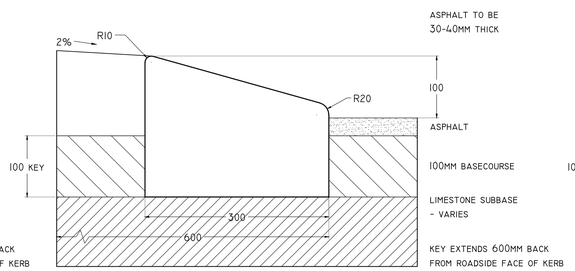
DRAWING NUMBER

SD.01



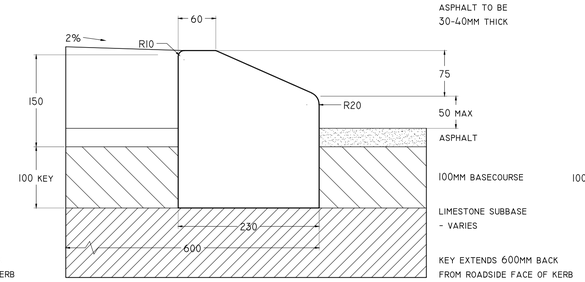
STANDARD REINFORCED FLUSH KERB

SCALE 1:5



STANDARD MOUNTABLE KERB

SCALE 1:5



STANDARD SEMI MOUNTABLE KERB

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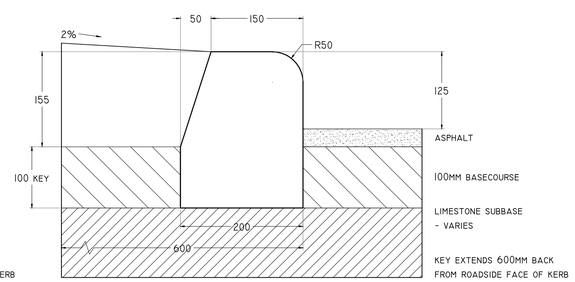
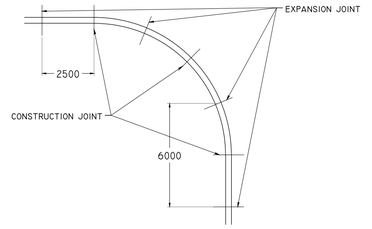


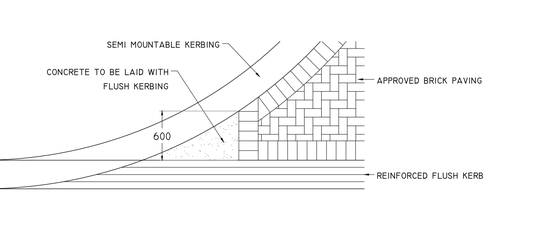
STANDARD BARRIER KERB

SCALE 1:5



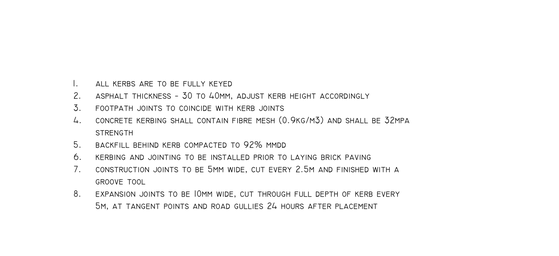
STANDARD REINFORCED FLUSH KERB
FOR BRICK PAVING

SCALE 1:5



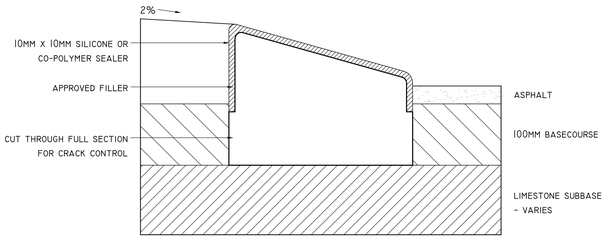
STANDARD SEMI MOUNTABLE KERB
FOR BRICK PAVING

SCALE 1:5



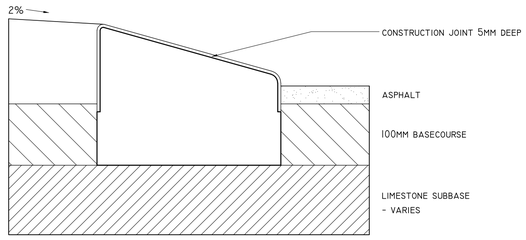
STANDARD SEMI MOUNTABLE KERB
FOR BRICK PAVING

SCALE 1:5



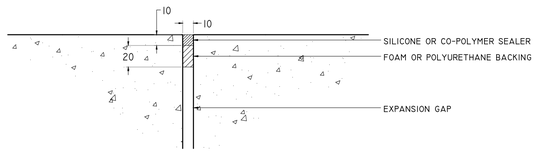
EXPANSION JOINT SECTION

SCALE 1:5



CONSTRUCTION JOINT SECTION

SCALE 1:5



EXPANSION JOINT DETAIL

N.T.S

CONSTRUCTION AND EXPANSION JOINT
LAYOUT DETAIL

N.T.S

STANDARD SEMI MOUNTABLE KERB
FOR BRICK PAVING

N.T.S

1. ALL KERBS ARE TO BE FULLY KEYED
2. ASPHALT THICKNESS - 30 TO 40MM, ADJUST KERB HEIGHT ACCORDINGLY
3. FOOTPATH JOINTS TO COINCIDE WITH KERB JOINTS
4. CONCRETE KERBING SHALL CONTAIN FIBRE MESH (0.9KG/M3) AND SHALL BE 32MPA STRENGTH
5. BACKFILL BEHIND KERB COMPACTED TO 92% MMDD
6. KERBING AND JOINTING TO BE INSTALLED PRIOR TO LAYING BRICK PAVING
7. CONSTRUCTION JOINTS TO BE 5MM WIDE, CUT EVERY 2.5M AND FINISHED WITH A GROOVE TOOL
8. EXPANSION JOINTS TO BE 10MM WIDE, CUT THROUGH FULL DEPTH OF KERB EVERY 5M, AT TANGENT POINTS AND ROAD GULLIES 24 HOURS AFTER PLACEMENT

Shire of Serpentine Jarrahdale

STANDARD DETAILS

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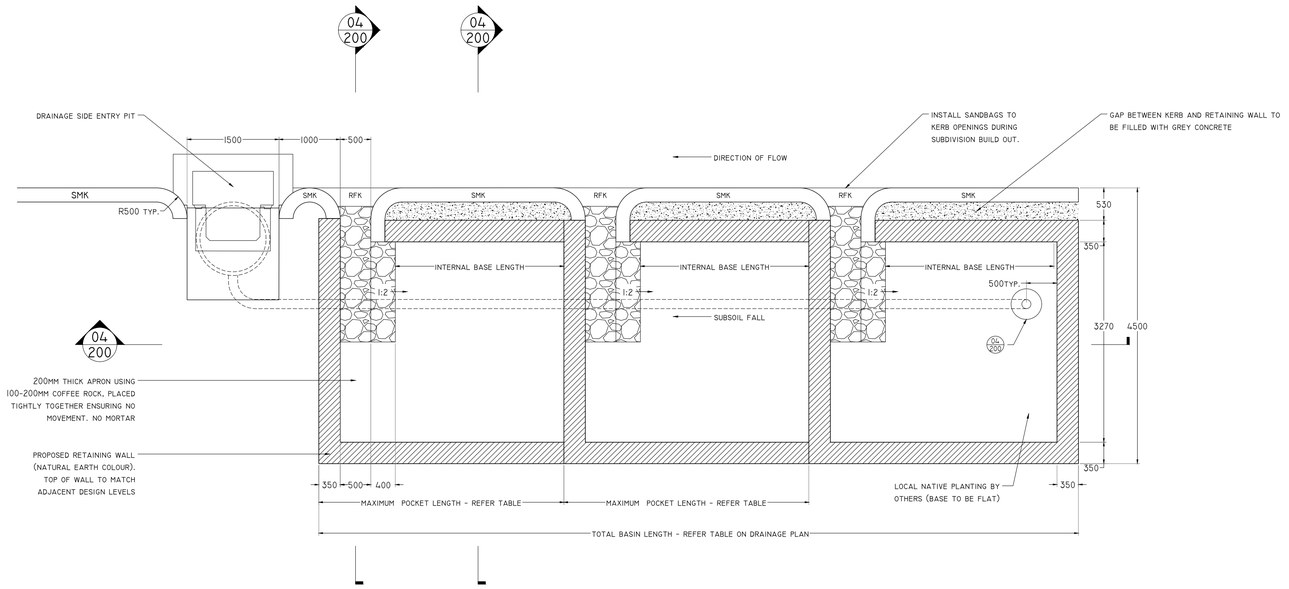
DRAWING TITLE

KERBING

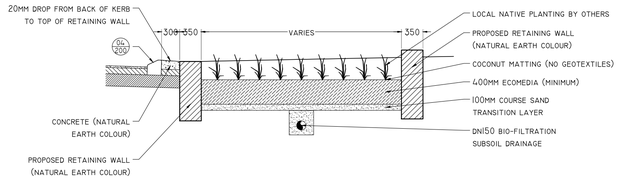
DRAWING NUMBER

SD.02



BIO-RETENTION POCKET TYPE I PLAN

1:50



BIO-RETENTION POCKET SECTION

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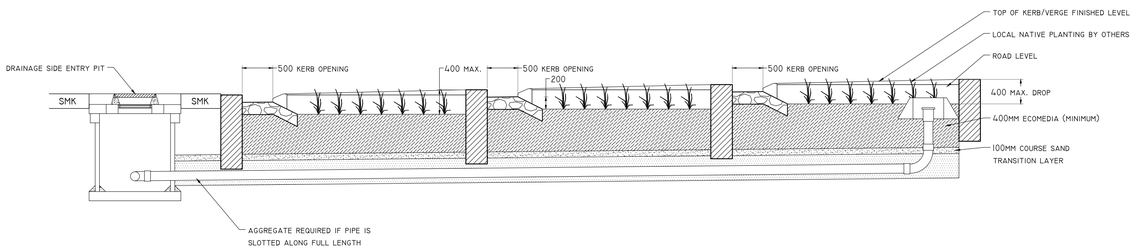

BIO-RETENTION POCKET TYPE I SECTION

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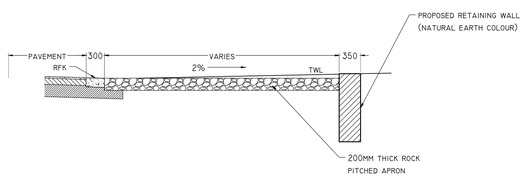

BIO-RETENTION POCKET SECTION

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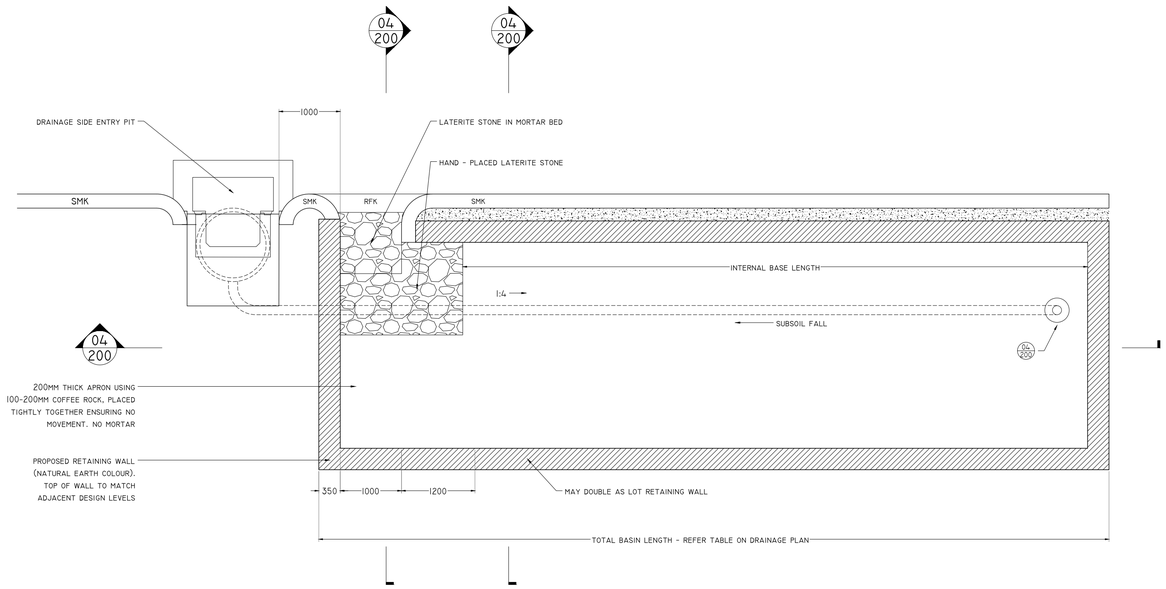

BIO-RETENTION POCKET TYPE II PLAN

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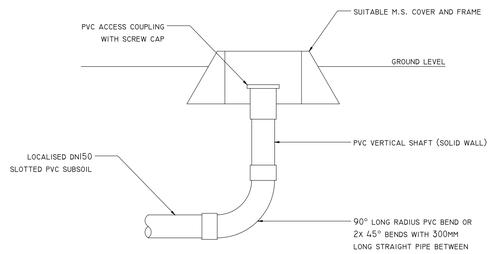

SUBSOIL PIPE UP-SHAFT ACCESS DETAIL

SCALE 1:20

Shire of Serpentine Jarrahdale

STANDARD DETAILS

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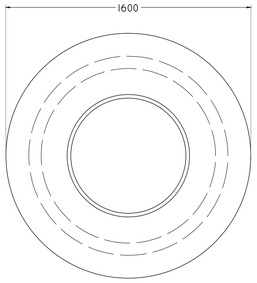
DRAWING TITLE

BIO-RETENTION POCKETS

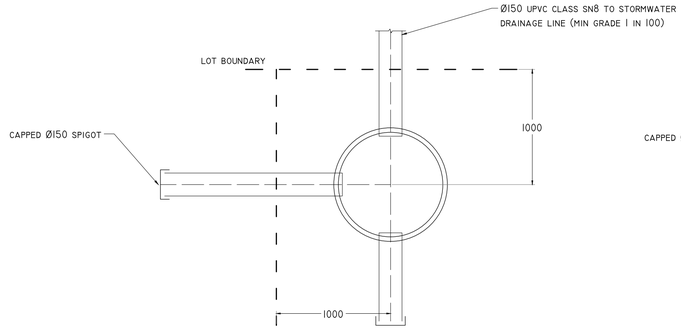
DRAWING NUMBER

SD.03



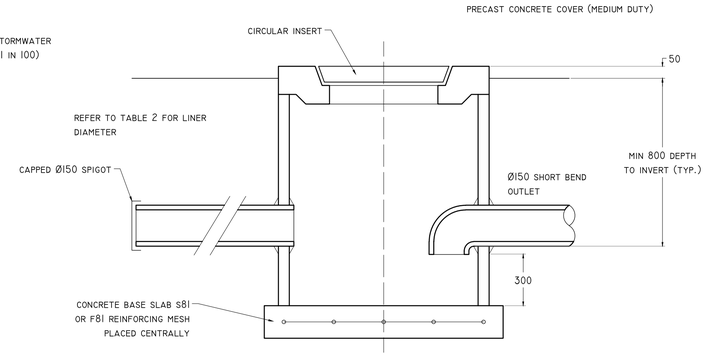
STORMWATER MANHOLE PLAN

SCALE 1:20



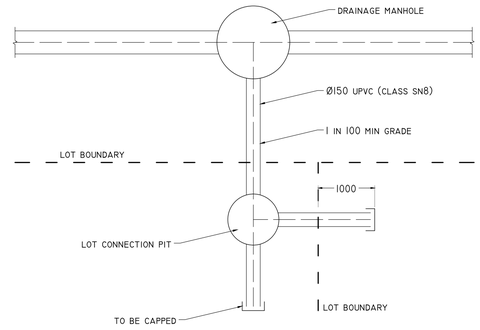
LOT CONNECTION DETAIL 1

N.T.S



LOT CONNECTION PIT SECTION

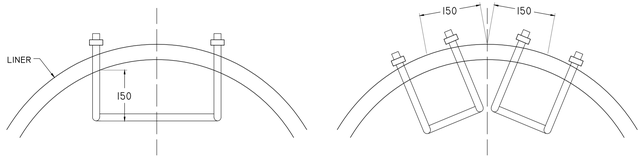
N.T.S



LOT CONNECTION DETAIL 2

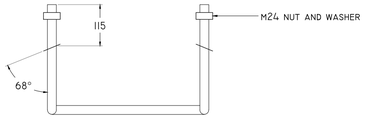
N.T.S

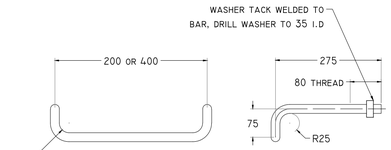
IF PREDRILLED LINER IS NOT AVAILABLE, REPAIR DRILLED HOLE WITH MORTAR



STEP IRON CONCRETE LINER PLAN

N.T.S





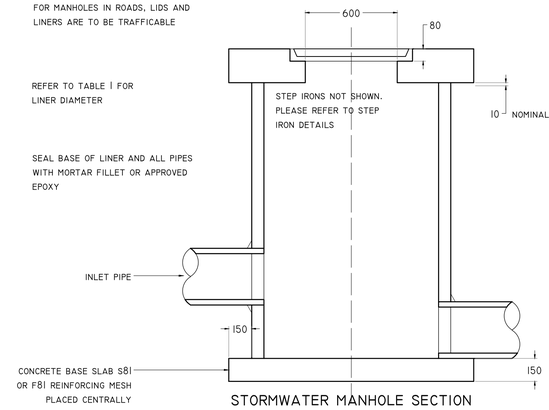
STEP IRONS PLAN

N.T.S

FOR MANHOLES IN ROADS, LIDS AND LINERS ARE TO BE TRAFFICABLE

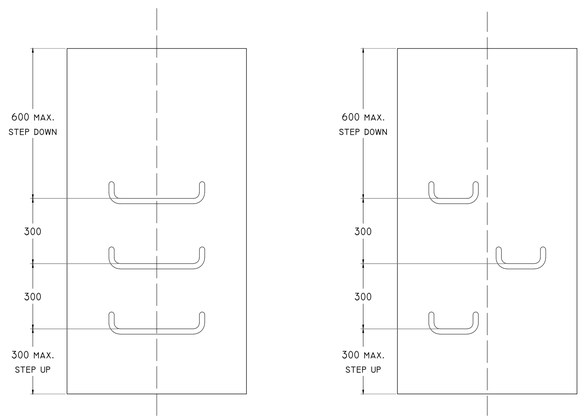
REFER TO TABLE 1 FOR LINER DIAMETER

SEAL BASE OF LINER AND ALL PIPES WITH MORTAR FILLET OR APPROVED EPOXY



STORMWATER MANHOLE SECTION

SCALE 1:20



STEP IRON CONCRETE LINER SECTION

1:20

TABLE 1

PIT DEPTH	LINER DIAMETER	MAX CONNECTING PIPE DIAMETER
600 - 1800 1800 - 3600	1050 1200	450 675

TABLE 2

PIT DEPTH	LINER
600 - 1200 > 1200	Ø900 Ø1050

GENERAL

1. INVERT LEVELS AND REFERENCE POINT DATA ARE SPECIFIED IN THE DESIGN DRAWINGS
2. INLET/OUTLET PIPES MAY JOIN STRUCTURE AT SKEW ANGLES

CONCRETE AND REINFORCEMENT

3. ALL INSITU CONCRETE SHALL BE CLASS N32 IN ACCORDANCE WITH AS1379
4. ALL INSITU CONCRETE CORNERS SHALL HAVE A 20MM CHAMFER UNLESS OTHERWISE NOTED
5. CEMENT MORTAR SHALL CONSIST OF ONE PART PORTLAND CEMENT (OR SIMILAR) AND THREE PARTS SAND
6. SL81 REINFORCEMENT SHALL CONFORM WITH HARD DRAWN FABRIC TO AS4671
7. MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 50MM

LINER

8. THE LINER SHALL BE REINFORCED CONCRETE SPUN TO AS4058
9. THE MAXIMUM INLET/OUTLET PIPE INTERNAL DIAMETER MUST BE LESS THAN 60% OF THE LINER INTERNAL DIAMETER
10. MINIMUM SPACE OF 200MM BETWEEN HOLES IN LINER
11. MINIMUM 40% OF LINER SHALL REMAIN IN ANY HORIZONTAL PLANE
12. HOLES TO BE PUNCHED/CUT IN ACCORDANCE WITH MANUFACTURER'S SPACIFICATION
13. THE LINER SHALL HAVE RELEVANT PROPERTIES AND REINFORCEMENT OF CLASS 2 RCP EXCEPT THAT REINFORCEMENT SHALL BE CIRCULAR
14. BRICK MANHOLES ARE TO BE IN ACCORDANCE WITH MRWA STANDARD DRAWING 200231-086 AND 200231-089

STEP IRONS

15. DRAINAGE STRUCTURES DEEPER THAN 1200MM SHALL BE FITTED WITH STEP IRONS IN ACCORDANCE WITH AS1657
16. STEP IRONS SHALL BE LOCATED:
    - 16.1. DIRECTLY BELOW THE OPENING IN THE COVER
    - 16.2. DESIRABLY ON A WALL WITHOUT PIPE OPENINGS
17. ORIENTATE STEP IRONS OR LADDER TO ENABLE EASY ACCESS AND TO FACE ONCOMING TRAFFIC
18. MATERIAL FOR STEP IRONS SHALL BE N24 DEFORMED BAR (MICRO ALLOY DEFORMED BAR SHALL NOT BE USED)
19. APPROVED PREFABRICATED GALVANISED STEEL LADDER MAY BE USED IN DEEP DRAINAGE STRUCTURES IN ACCORDANCE WITH AS1657 AND FIXED WITH STAINLESS MASONRY ANCHORS
20. ALL THREADED PORTION OF BAR AND NUTS SHALL BE DRILLED AND TAPPED OVERSIZE IN ACCORDANCE WITH AS1214 TO SUIT GALVANISING
21. STEP IRONS SHALL BE HOT DIP GALVANISED IN ACCORDANCE WITH AS4680

Shire of Serpentine Jarrahdale

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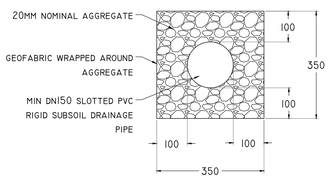
DRAWING TITLE

MANHOLE & CONNECTION PITS

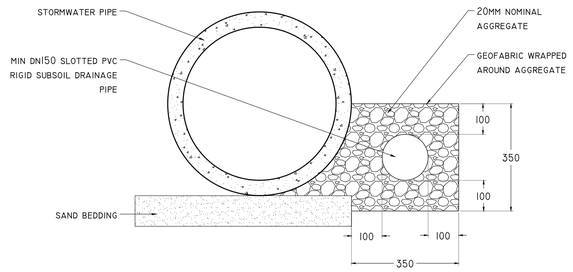
DRAWING NUMBER

SD.04



SUBSOIL DRAINAGE DETAIL

SCALE 1:10



SUBSOIL DRAINAGE TYPICAL SECTION

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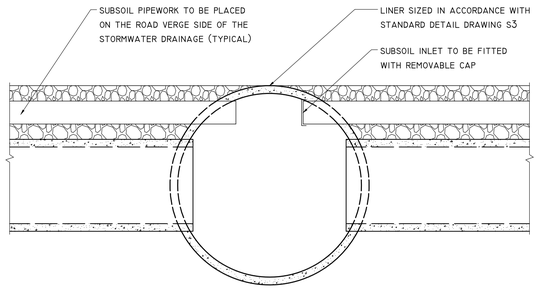

SUBSOIL DRAINAGE PIPE PLAN

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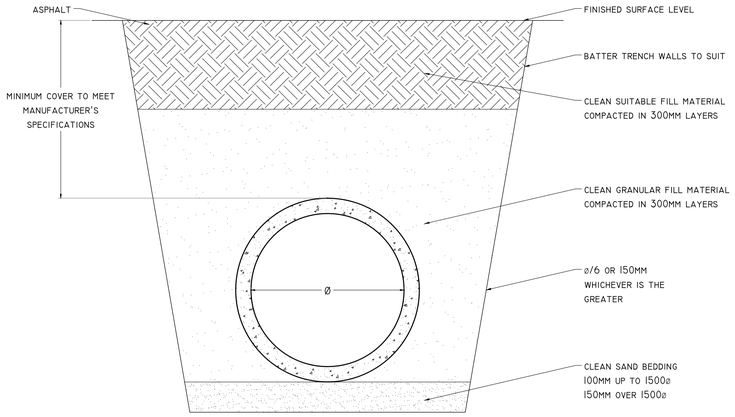

VERGE BEDDING TYPICAL SECTION

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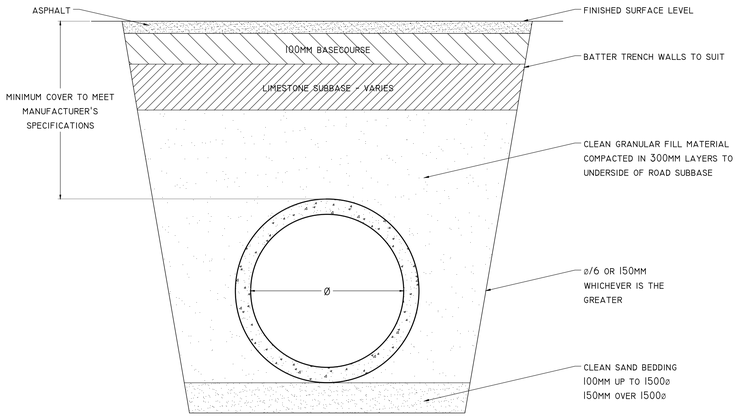


ROAD BEDDING TYPICAL SECTION

SCALE 1:10

Shire of Serpentine Jarrahdale

STANDARD DETAILS

NO.	ISSUE & REVISION	DATE
1	INFORMATION	12.12.16

ISSUED FOR

INFORMATION

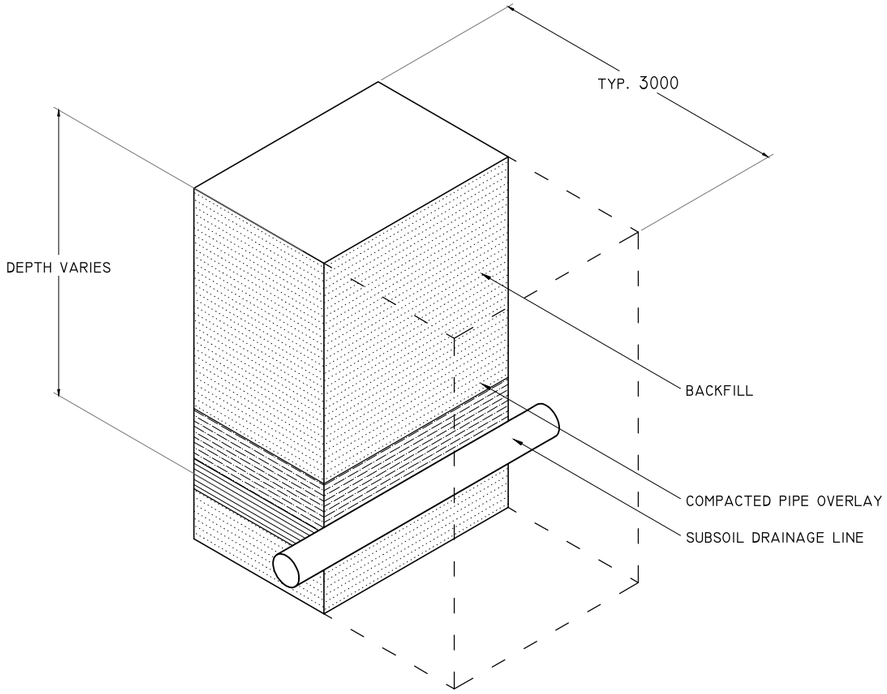
PROJECT CODE	001
SCALE	100% AT A1
DATE	12.12.16
DRAWN	PS
CHECKED	AR
APPROVED	AR

DRAWING TITLE

PIPE BEDDING & SUBSOIL DRAINAGE

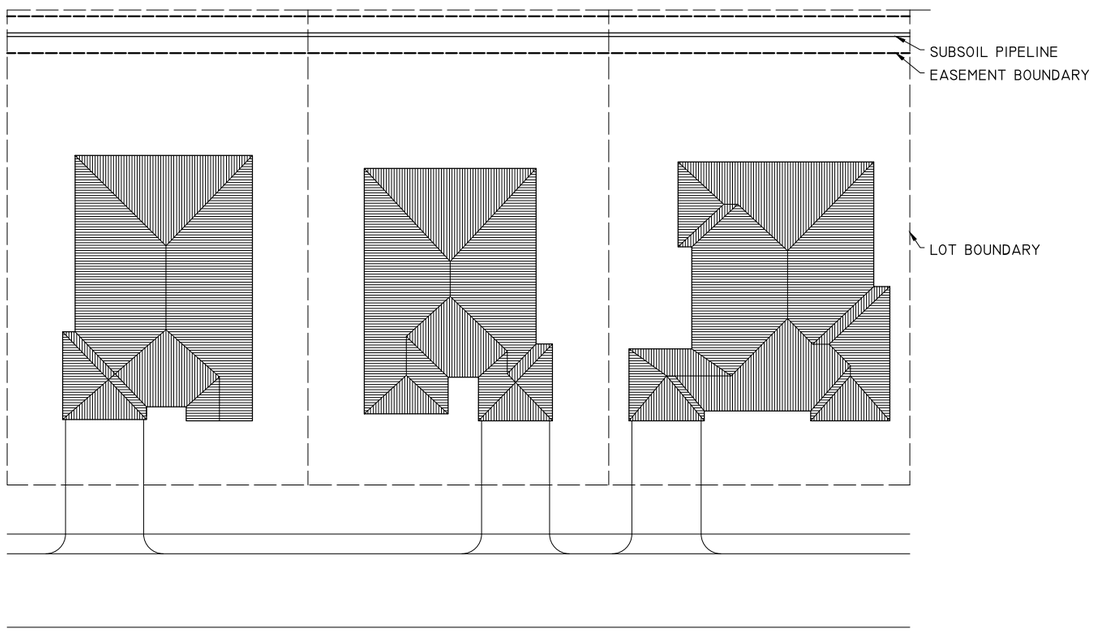
DRAWING NUMBER

SD.05



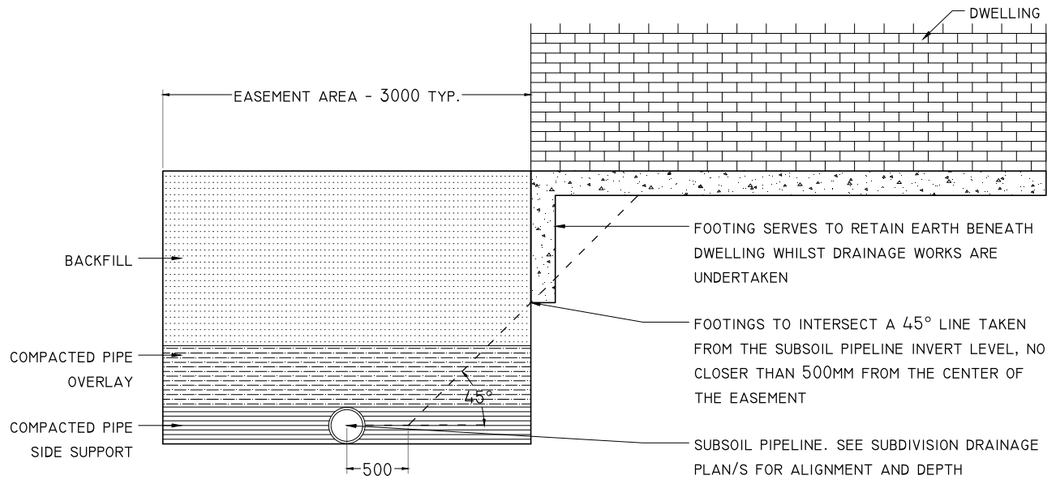
COMPOSITION ISOMETRIC

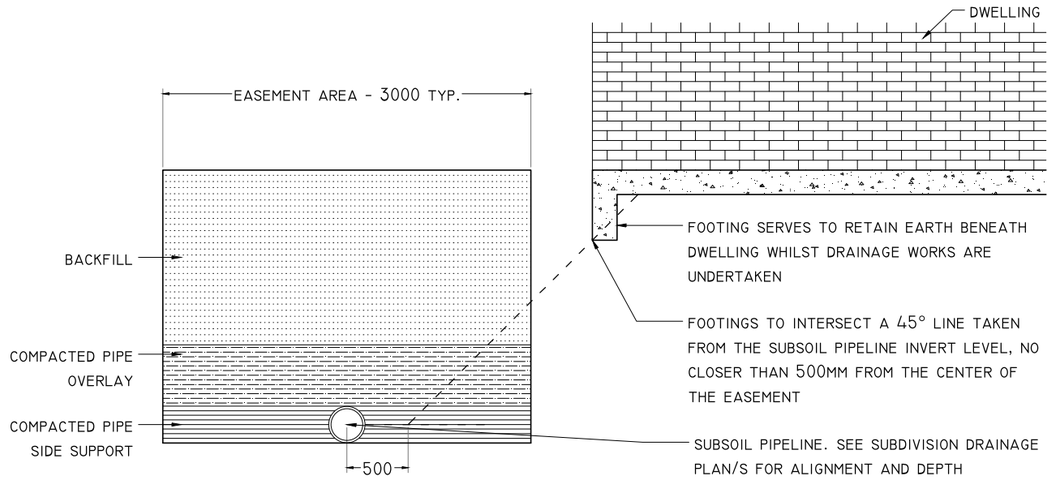
SCALE 1:50

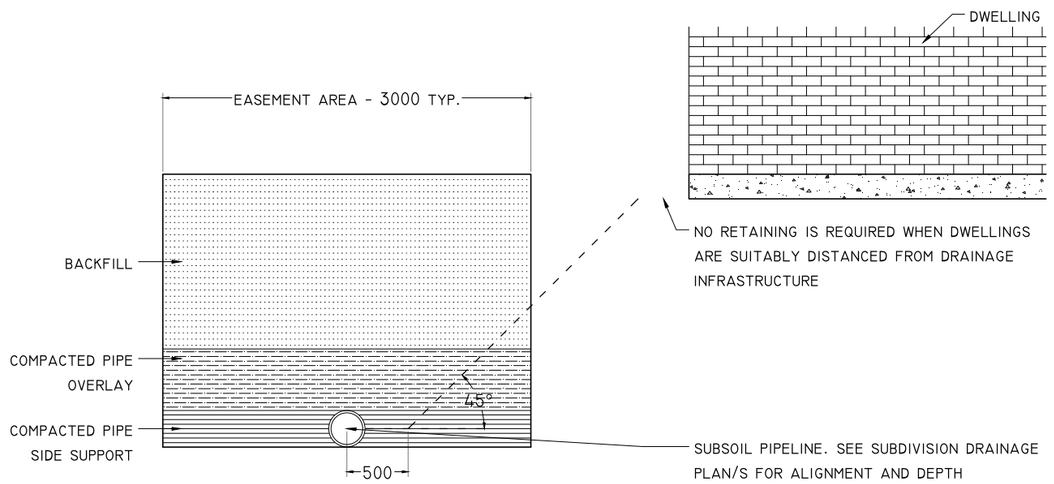


INDICATIVE LAYOUT PLAN

SCALE 1:500







FOOTING REQUIREMENTS

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Shire of Serpentine Jarrahdale

STANDARD DETAILS

NOTES

STRUCTURAL INTEGRITY AND CERTIFICATION REMAIN THE RESPONSIBILITY OF THE PROPERTY HOLDER.

NO.	ISSUE & REVISION	DATE
1	INFORMATION	21.12.16

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PROJECT CODE	001
SCALE	100% AT A3
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CHECKED	AR
APPROVED	AR

DRAWING TITLE

CONSTRUCTION NEAR DRAINAGE

DRAWING NUMBER

SD.06