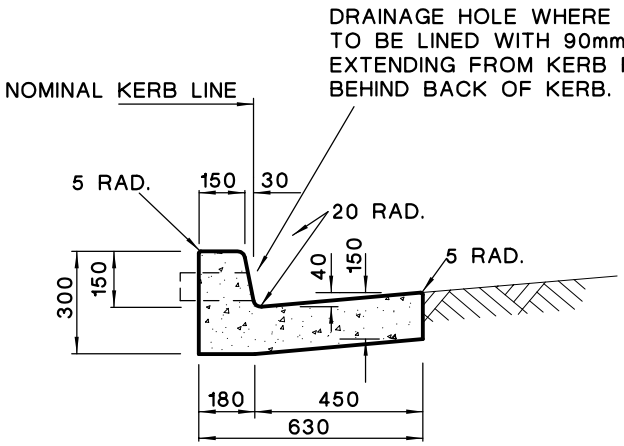
HORNSBY SHIRE COUNCIL

STANDARD DRAWINGS & STRUCTURES

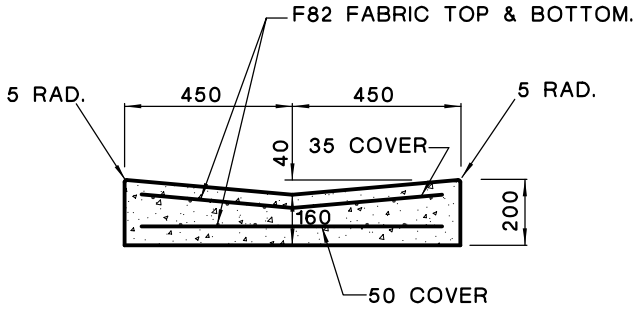
PREPARED BY

DESIGN & CONSTRUCTION BRANCH

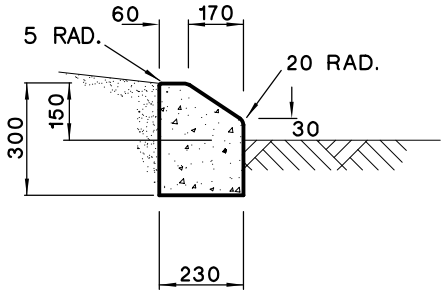
Drawing Number	Revision Number	Drawing Title
1	4/05	Standard Kerbs and Gutters.
2	4/05	Standard Concrete Headwalls.
3	4/05	Mass concrete Retaining Wall.
4	4/05	Standard Layback.
5	4/05	Standard Junction Pit.
6	4/05	Bandage Joints and Connection Details.
7	4/05	Standard Pathway Steps.
8	4/05	Standard Surcharge Pit.
9	4/05	Rock Retaining Wall.
10	4/05	Standard Kerb Ramp Crossings.
11A	4/05	Standard Street Name Sign.
11B	4/05	Not In Use
12	4/05	Standard Surface Inlet Pit.
13	4/05	Standard DGGP with Extended Kerb Inlet.
14	4/05	Subsoil Drains.
15	4/05	Details of Silt Fencing.
16A	4/05	Standard Crossing.
16B	4/05	Standard Crossing.
16C	4/05	Standard Pipe Crossing.
17	4/05	Not In Use
18	4/05	Not In Use
19	4/05	Not In Use
20	4/05	Standard Rural Layback.
21	4/05	Standard Crossing - Roll Top Kerb.
22A	4/05	Standard Crossing - Max. up with kerbside footpath.
22B	4/05	Standard Crossing - Max. down with kerbside footpath.
23	4/05	Standard Square Post and Rail Fencing.
24	4/05	Standard Sandbag Kerb Sediment Trap.
25	4/05	Standard Coarse Trash Rack.
26	4/05	Not In Use
27	4/05	Standard GPT Litter Basket
28	4/05	Standard Cut-Down Layback
29	4/05	Standard Angled Trash Rack.
30	4/05	Standard Trash Rack Details.



150mm INTEGRAL K & G

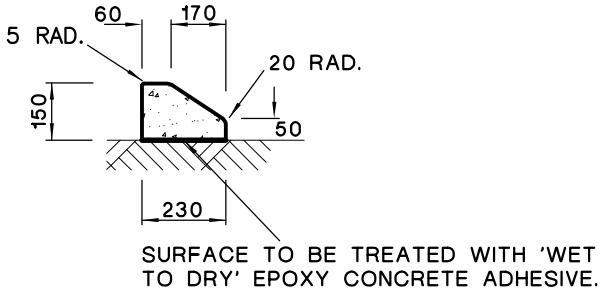


DISH CROSSING



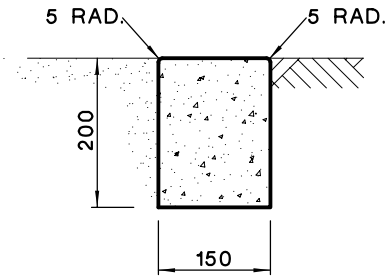
MOUNTABLE KERB (A)

(Type used for medians and traffic islands).

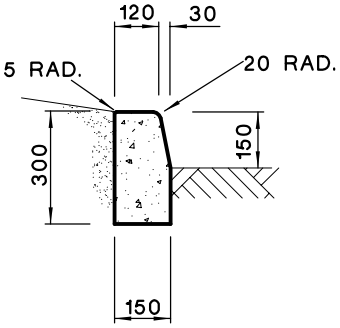


MOUNTABLE KERB (B)

(Type used on existing AC pavement surface for medians and traffic islands)



EDGE STRIP



KERB ONLY

NOTES:

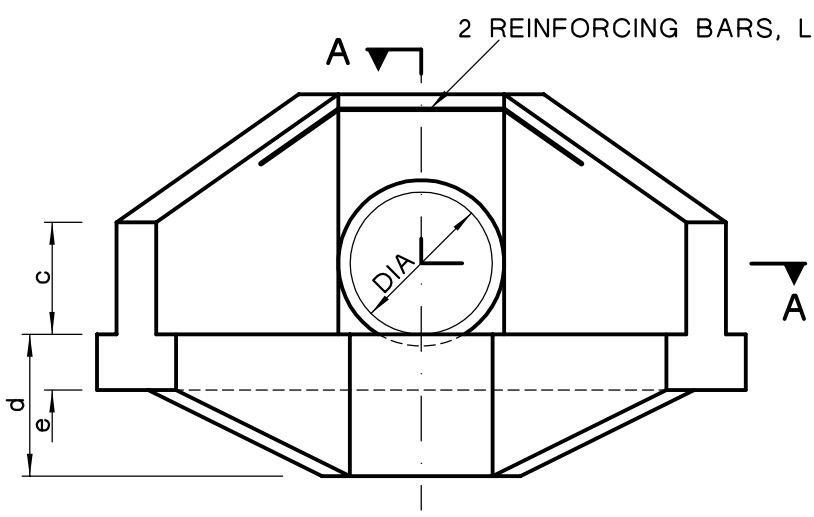
1. ROAD SUB-BASE TO BE EXTENDED BENEATH KERBS, GUTTERS, APRONS AND DISH CROSSINGS.
2. CONCRETE TO BE OF 20MPa COMPRESSIVE STRENGTH AT 28 DAYS FOR KERBING AND GUTTERING AND MISCELLANEOUS KERBING AND EDGE STRIP.
3. CONCRETE TO BE OF 25MPa COMPRESSIVE STRENGTH AT 28 DAYS FOR DISH CROSSINGS.
4. REINFORCING FABRIC TO AUSTRAILAN STANDARD 1304-1991 (WELDED WIRE REINFORCING FABRIC FOR CONCRETE).
5. ROOF WATER OUTLETS 90mm DIA. TO BE PROVIDED OPPOSITE LOW SIDE OF EVERY LOT. INVERT OF OUTLET TO BE LEVEL WITH INVERT OF GUTTER.
6. EXPANSION JOINTS OF APPROVED BITUMINOUS FILLER 10mm THICK AT MAXIMUM SPACING OF 6.0m INTERVALS SHALL BE PROVIDED.
7. CONTRACTION JOINTS SHALL BE PROVIDED AT 3.0m INTERVALS.

STD DWG No.1

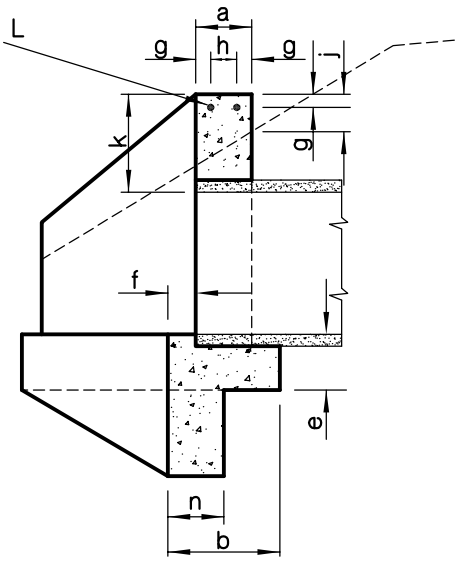
HORNSBY COUNCIL

STANDARD KERBS & GUTTERS

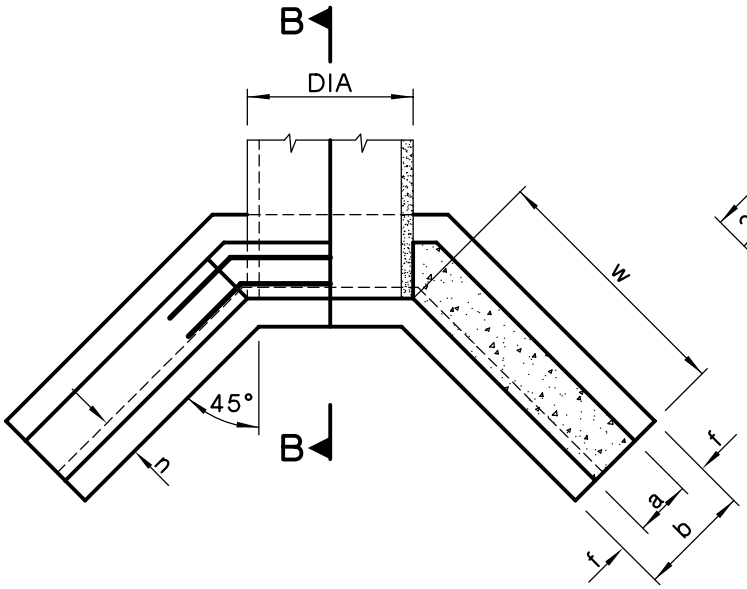
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



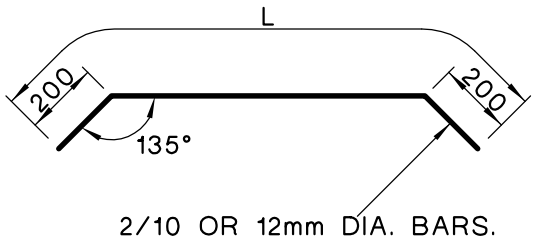
ELEVATION



SECTION B-B



PLAN SECTION A-A



2/10 OR 12mm DIA. BARS.

NOTES:

1. ALL QUANTITIES ARE FOR ONE HEADWALL ONLY.
2. ALL EXPOSED SURFACES TO HAVE 12mm CHAMFER.
3. REINFORCING BARS TO BE STRUCTURAL GRADE DEFORMED.
4. CONCRETE COMPRESSIVE STRENGTH (F'c) 20MPa AT 28 DAYS.

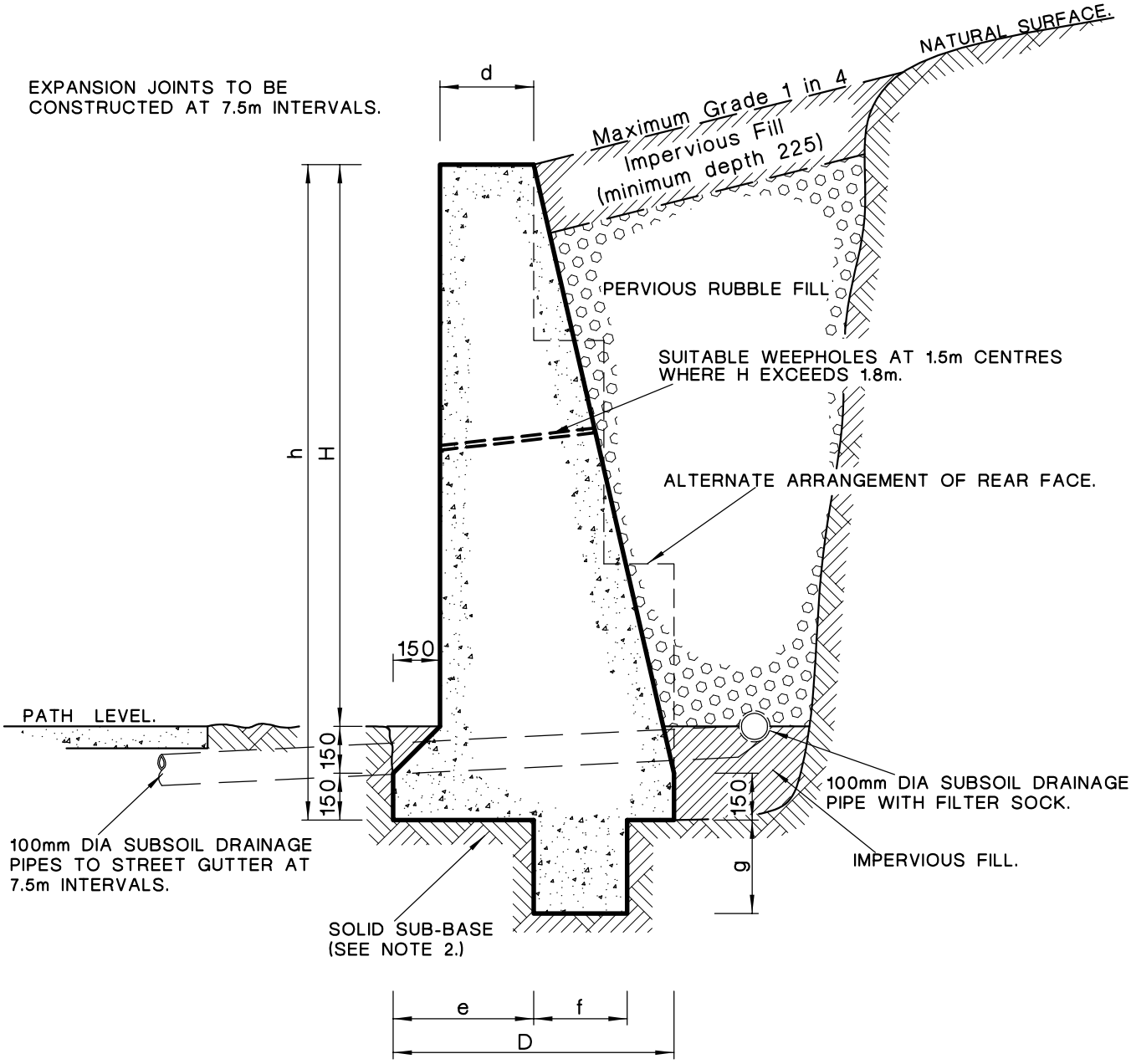
PIPE DIAMETER: DIA.	375	450	525	600	675	750	825	900
a	150	150	150	180	190	205	215	230
b	300	300	300	450	450	450	450	450
c	300	300	300	380	380	380	380	380
d	380	380	380	530	530	530	530	530
e	150	150	150	180	190	205	215	230
f	75	75	75	110	110	110	110	110
g	40	40	40	50	50	50	50	50
h	70	70	70	80	90	105	115	130
j	100	100	100	100	100	100	100	100
k	230	230	230	300	300	300	300	300
n	150	150	150	150	150	150	150	150
w	690	840	990	1120	1285	1450	1615	1780
L	840	915	950	1100	1200	1250	1350	1400
REINFORCEMENT DIA.	10	10	10	12	12	12	12	12
REINFORCEMENT LENGTH	1680	1830	1845	2200	2400	2500	2700	2800
REINFORCEMENT, Kg.MASS	1.10	1.20	1.30	2.00	2.30	2.60	2.775	2.95
VOLUME OF CONCRETE m^3	0.27	0.33	0.38	0.67	0.85	1.02	1.21	1.40

STD DWG No.2

HORNSBY COUNCIL

STANDARD CONCRETE HEADWALLS

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



CONCRETE RETAINING WALL DIMENSIONS							
H	h	D	d	e	f	g	m^3/m. run (approx)
900	1200	600	150	-	-	-	0.50
1050	1350	675	150	-	-	-	0.60
1200	1500	675	225	-	-	-	0.73
1350	1650	725	225	-	-	-	0.83
1500	1800	750	225	300	225	225	1.00
1650	1950	800	225	375	225	225	1.15
1800	2100	900	300	450	300	300	1.48
2100	2400	1050	300	450	300	300	1.86
2400	2700	1200	300	450	300	300	2.28
2700	3000	1350	300	450	300	300	2.76

NOTES:

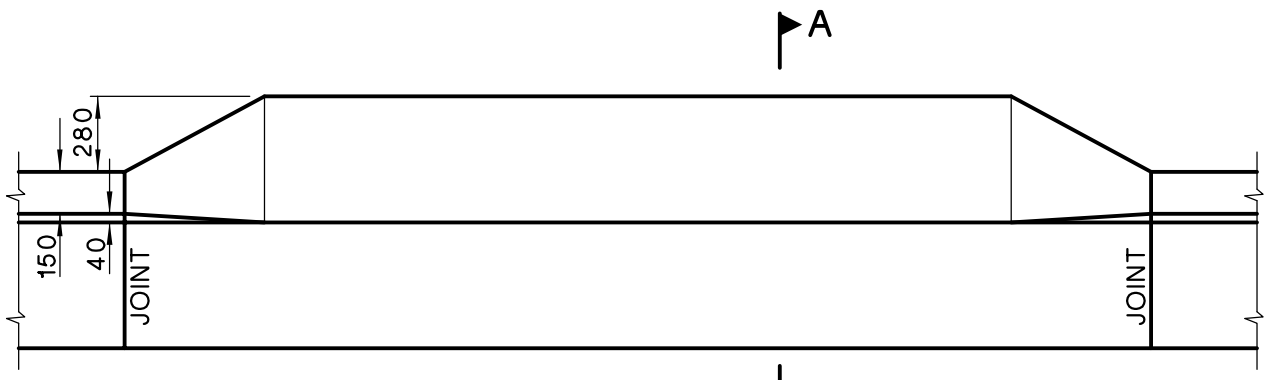
1. THIS PLAN IS THE MINIMUM REQUIREMENT OF COUNCIL AND NO RESPONSIBILTY IS ACCEPTED FOR THE STABILITY OF RETAINING WALL.
2. IF THE WALL RESTS ON SILT OR SOFT CLAY IMMEDIATELY BEFORE FORMING THE FOOTING, A 100mm OF SOIL IS TO BE REMOVED AND REPLACED WITH 100mm OF WELL COMPACTED GRANULAR MATERIAL.

STD DWG No.3

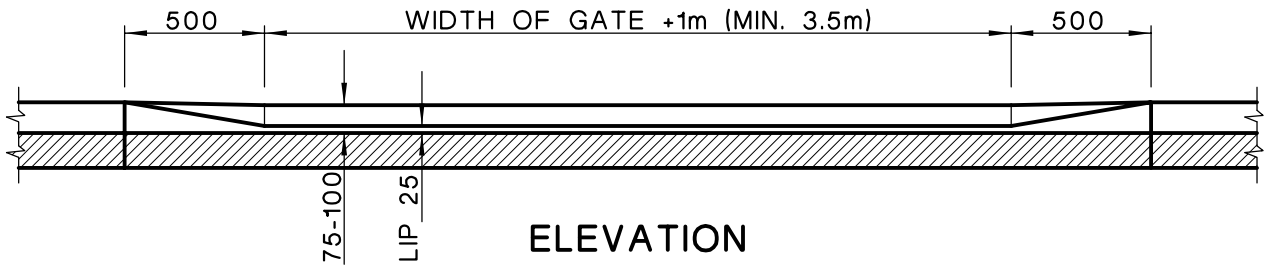
HORNSBY COUNCIL

MASS CONCRETE RETAINING WALL

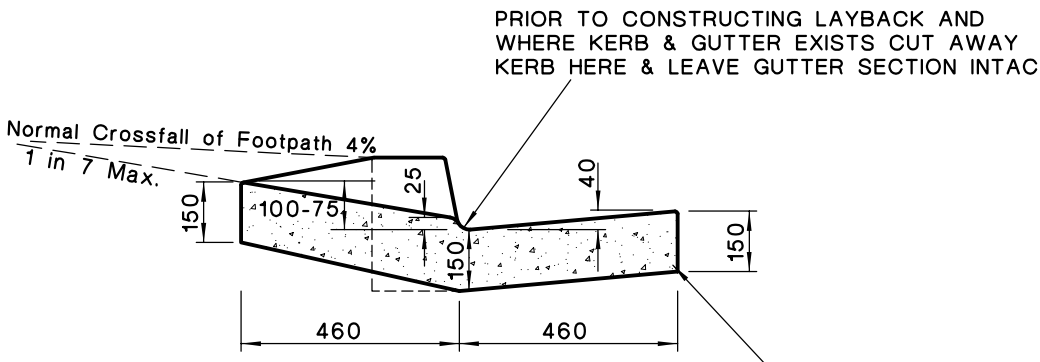
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



PLAN



ELEVATION



SECTION A-A
LAYBACK AND GUTTER SECTION

NOTES:

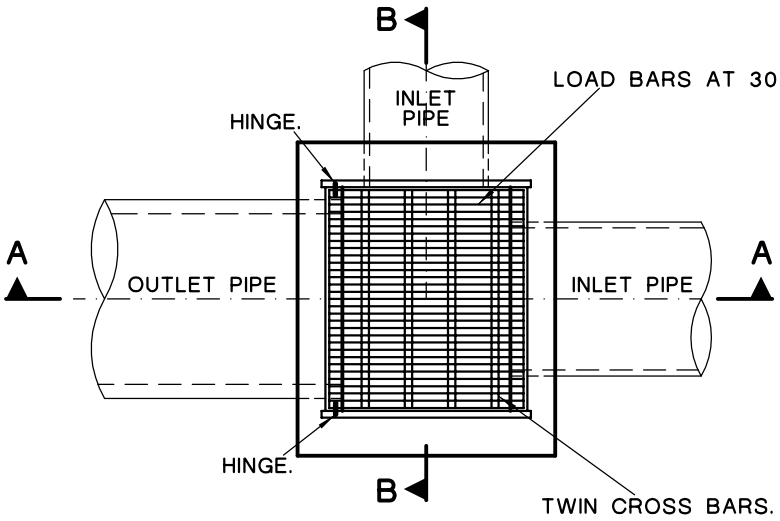
1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. THE ROAD BASE COURSE IS TO BE EXTENDED BENEATH THE KERB AND GUTTER.
4. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m AND NOT LESS THAN 4.0m INTERVALS.

D'WAY TYPE	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	150mm
RESIDENTIAL H.D.	150mm, F72
COMMERCIAL	200mm, 2×F72

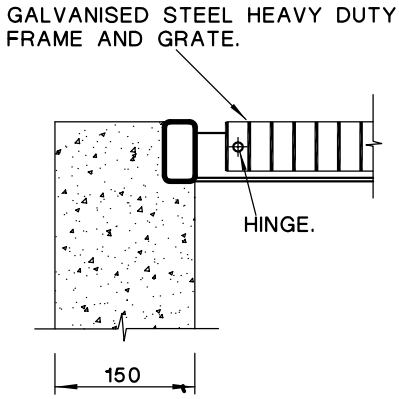
STD DWG No.4

HORNSBY COUNCIL

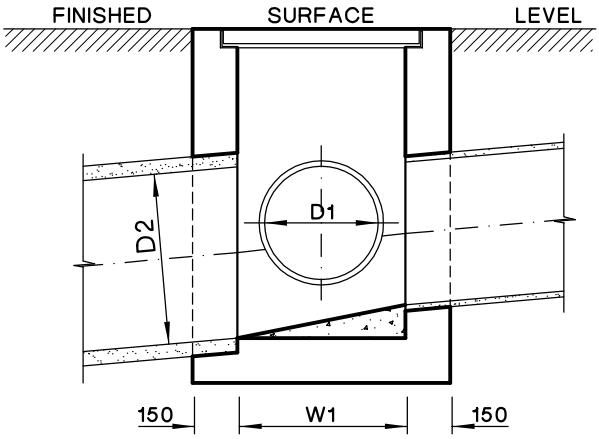
STANDARD LAYBACK



PLAN



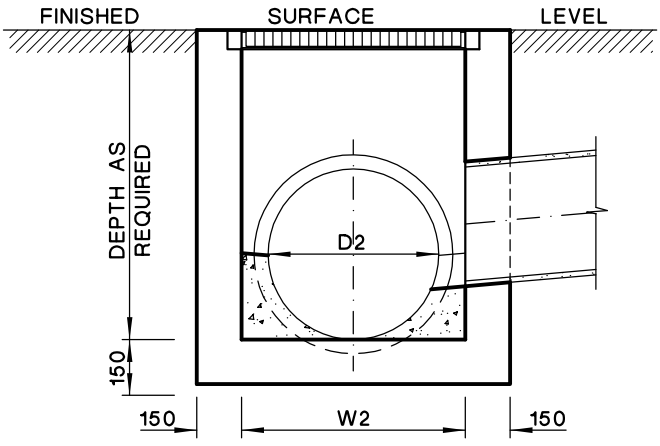
DETAIL X'



SECTION A-A

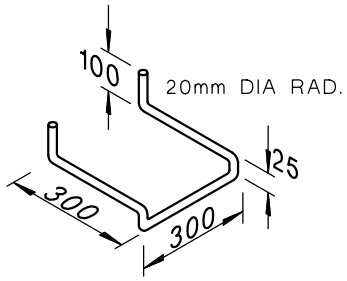
NOTES:

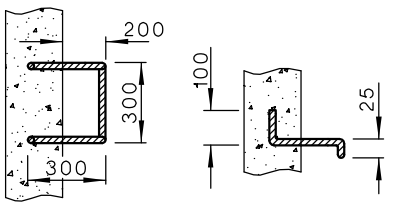
1. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE 20MPa.
2. TOP OF BENCHING TO BE 1/2 OF OUTLET PIPE DIAMETER.
3. 100 DIA. SUBSOIL DRAINAGE PIPE 3m LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED AT INVERT LEVEL EITHER SIDE OF INLET PIPES.
4. PROVIDE STEP IRONS WHERE PIT IS DEEPER THAN 1.0m AT 450 CENTRES.
5. PITS OVER 1.5m IN DEPTH TO BE REINFORCED WITH F82 MESH RETURNED 300mm INTO BASE WITH WALLS 200mm THICK.



SECTION B-B

DIAMETER OF INLET PIPE D1	WIDTH OF PIT W1	DIAMETER OF OUTLET PIPE D2	WIDTH OF PIT W2
300	450	300	450
375	530	375	530
450	600	450	600
525	680	525	680
600	760	600	760
675	830	675	830
750	900	750	900
825	990	825	990
900	1050	900	1050
1050	1200	1050	1200
1200	1370	1200	1370





STEP IRON DETAIL

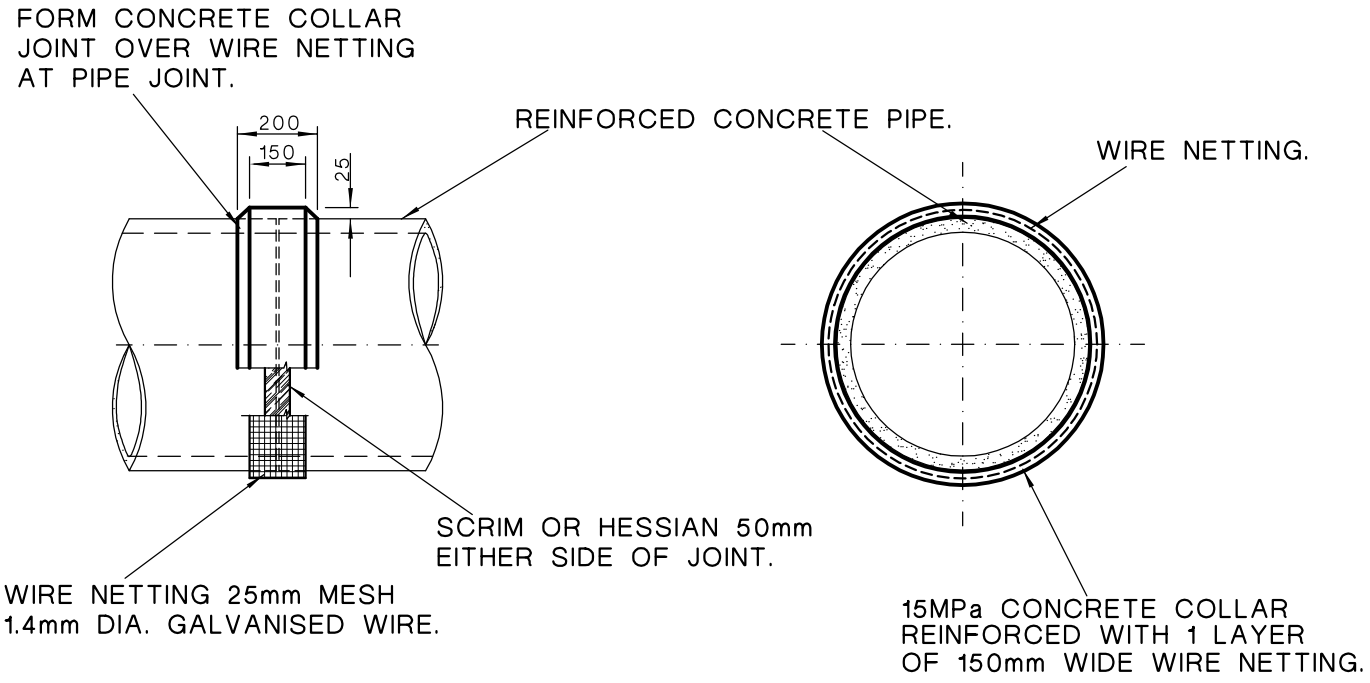
STEP IRON OF 20mm GALVANISED STEEL MADE TO SHAPE AND DIMENSIONS SHOWN AND PLACED AT 450 CENTRES AND STAGGERD HORIZONTALLY FOR PITS DEEPER THAN 1.0m.

STD DWG No.5

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

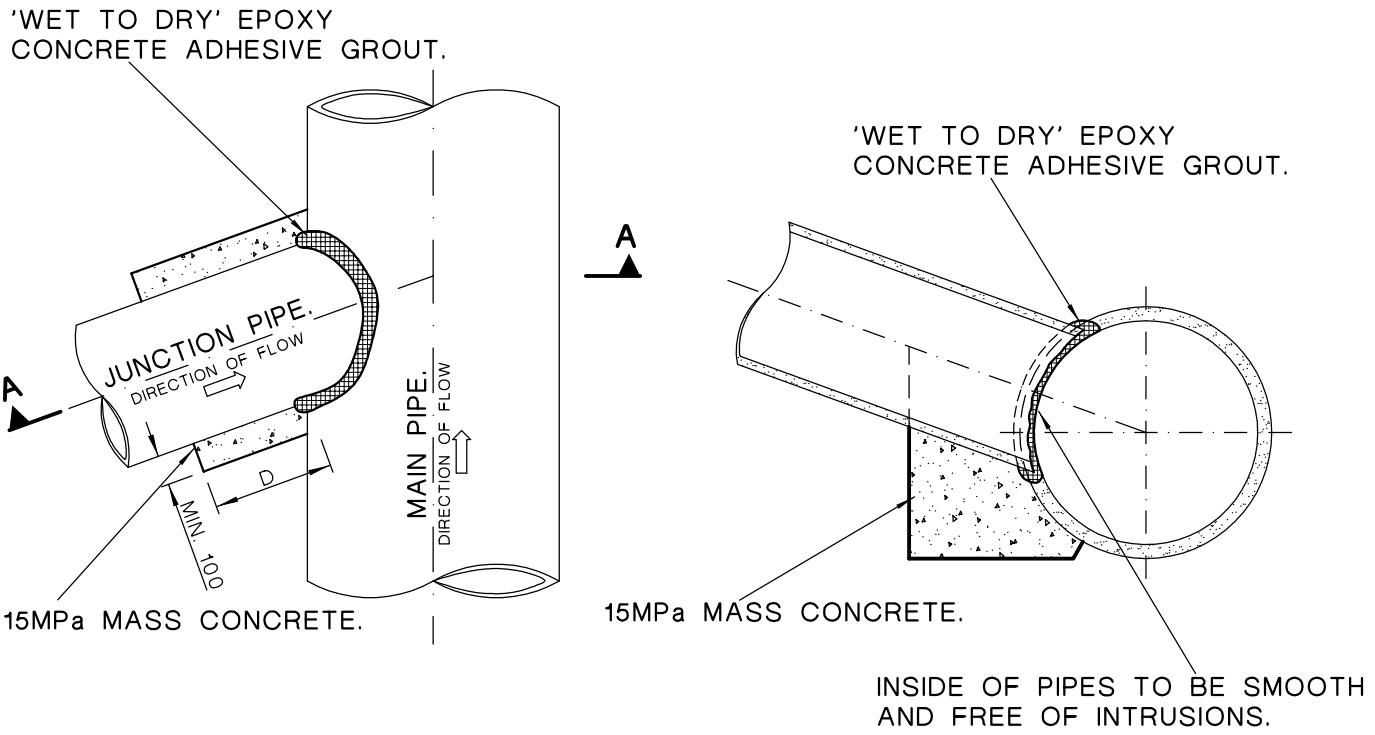
HORNSBY COUNCIL

STANDARD JUNCTION PIT



PLAN SECTION

BANDAGE JOINT



PLAN SECTION A-A

DIRECT PIPE CONNECTION

NOTES:

1. IMMEDIATELY PRIOR TO APPLICATION OF CONCRETE, AFFECTED SURFACES TO BE PAINTED WITH 'WET TO DRY' EPOXY.

STD DWG No.6

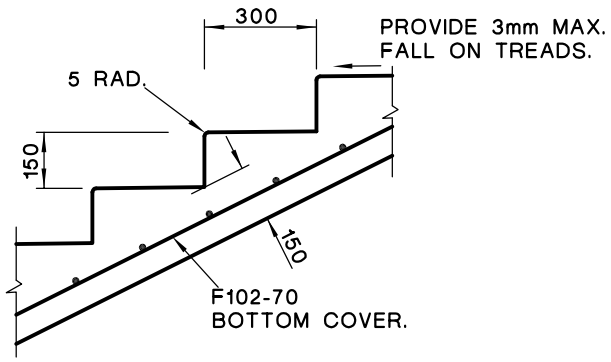
HORNSBY COUNCIL

BANDAGE JOINTS & CONNECTION DETAILS

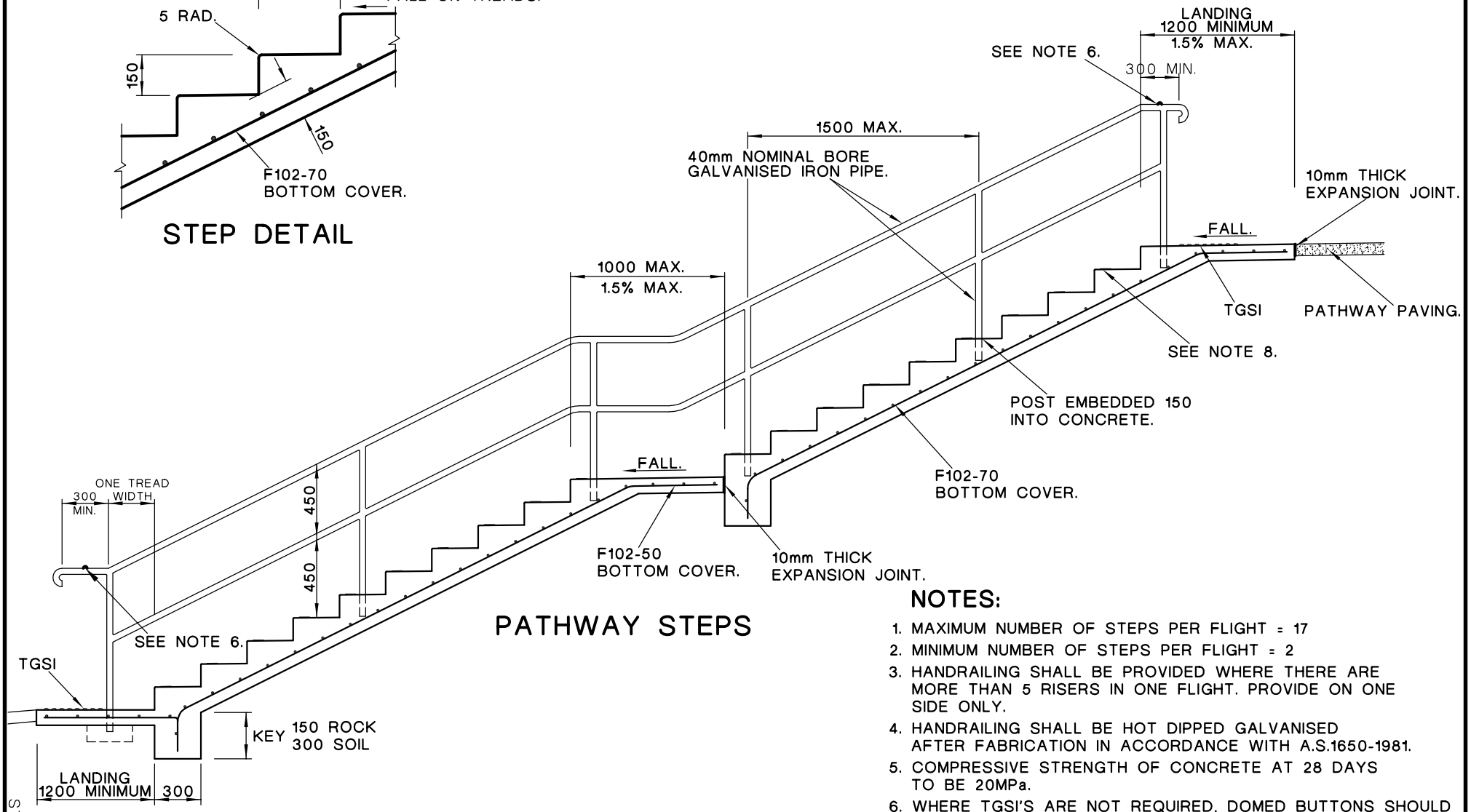
HORNSBY COUNCIL

STANDARD PATHWAY STEPS

STD DWG No.7



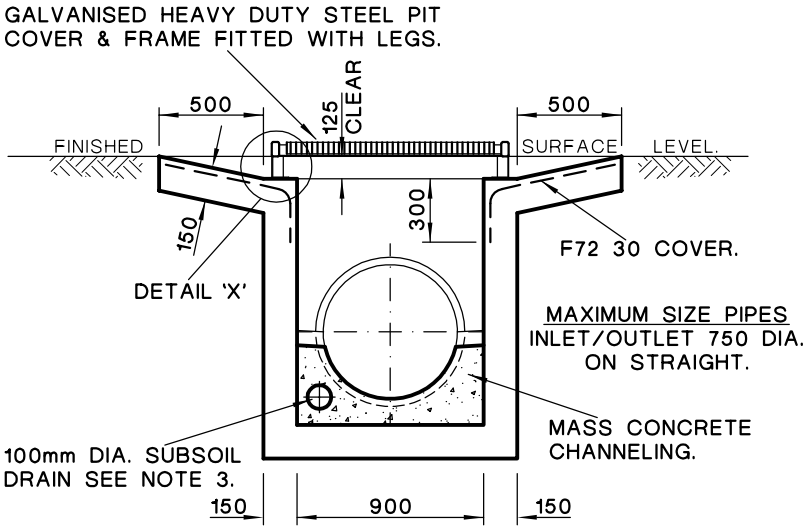
STEP DETAIL



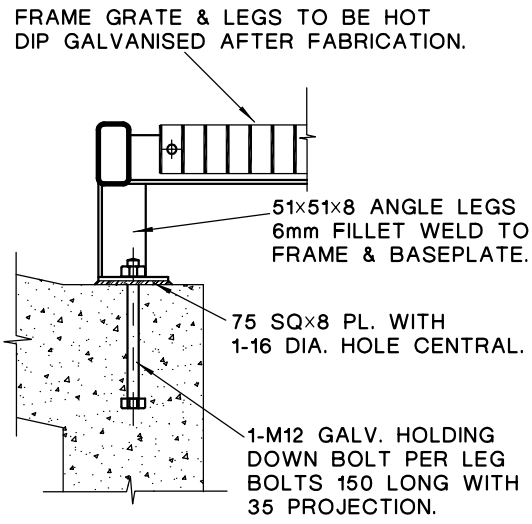
PATHWAY STEPS

NOTES:

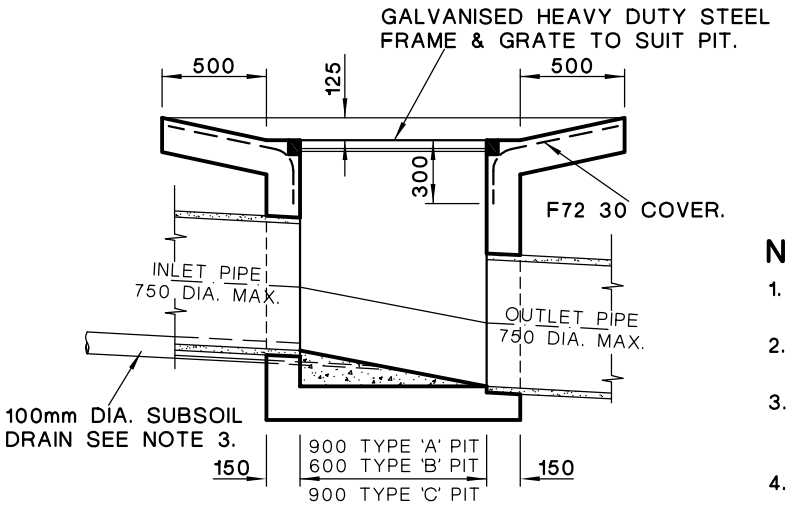
1. MAXIMUM NUMBER OF STEPS PER FLIGHT = 17
2. MINIMUM NUMBER OF STEPS PER FLIGHT = 2
3. HANDRAILING SHALL BE PROVIDED WHERE THERE ARE MORE THAN 5 RISERS IN ONE FLIGHT. PROVIDE ON ONE SIDE ONLY.
4. HANDRAILING SHALL BE HOT DIPPED GALVANISED AFTER FABRICATION IN ACCORDANCE WITH A.S.1650-1981.
5. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE 20MPa.
6. WHERE TGSI'S ARE NOT REQUIRED, DOMED BUTTONS SHOULD BE USED IN ACCORDANCE WITH A.S. 1428.1.
7. SEE A.S.1428.4 FOR GUIDANCE ON INSTALLATION OF TGSI'S.
8. A STRIP, NOT LESS THAN 50mm & NOT GREATER THAN 75mm, SHALL BE PROVIDED ON THE TREAD AT THE NOSING WITH A MINIMUM LUMINANCE CONTRAST OF 30% TO BACKGROUND.



SECTION A-A
INLET PIT TYPE A



DETAIL 'X'

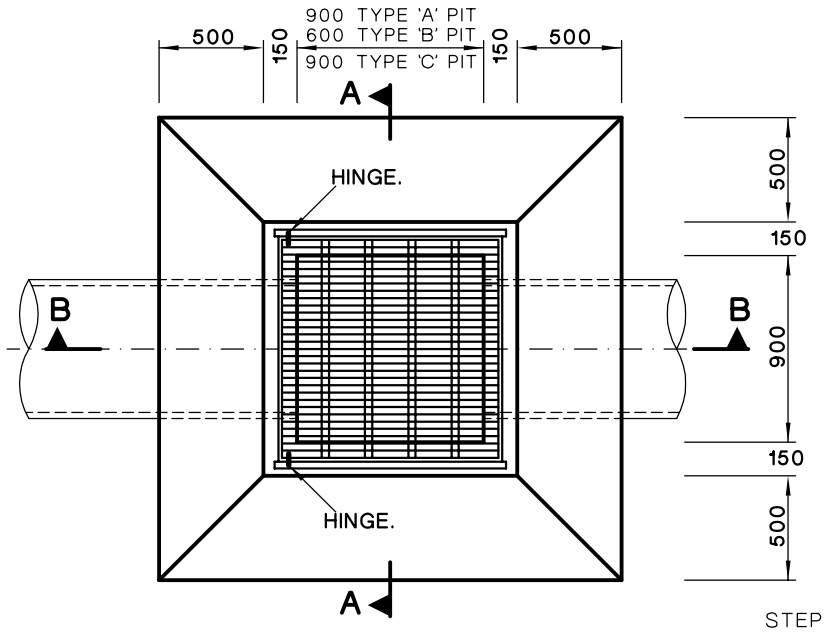


SECTION B-B
INLET PIT TYPES B & C

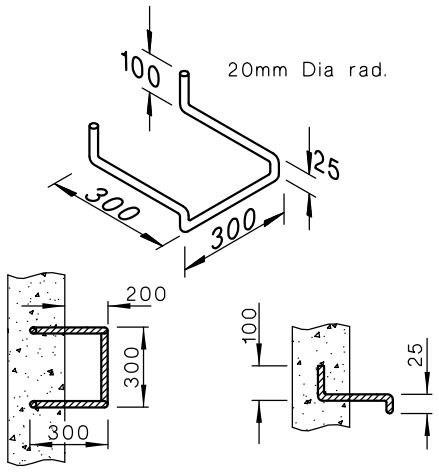
INLET PIT SIZES TABLE	
PIT	OPENING SIZE
TYPE A	900x900
TYPE B	600x900
TYPE C	900x900

NOTES:

1. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE 20MPa.
2. TOP OF BENCHING TO BE 1/2 OF OUTLET PIPE DIAMETER.
3. 100 DIA. SUBSOIL DRAINAGE PIPE 3m LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES.
4. PROVIDE STEP IRONS WHERE PIT IS DEEPER THAN 1.0m AT 450 CENTRES.
5. PITS OVER 1.5m IN DEPTH TO BE REINFORCED WITH F82 MESH RETURNED 300mm INTO BASE WITH WALLS 200mm THICK.



PLAN
INLET PIT TYPES A,B & C



STEP IRON DETAIL

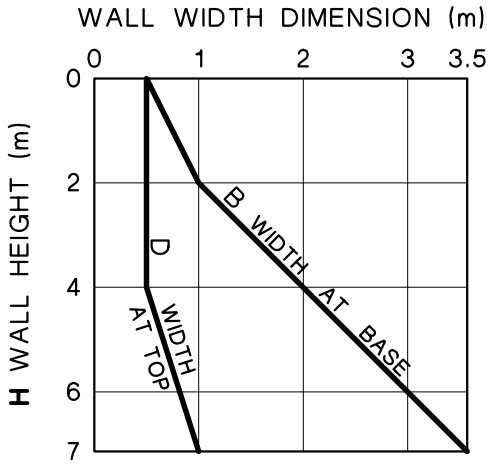
STEP IRON OF 20mm GALVANISED STEEL MADE TO SHAPE AND DIMENSIONS SHOWN AND PLACED AT 450 CENTRES AND STAGGERD HORIZONTALLY FOR PITS DEEPER THAN 1.0m.

STD DWG No.8

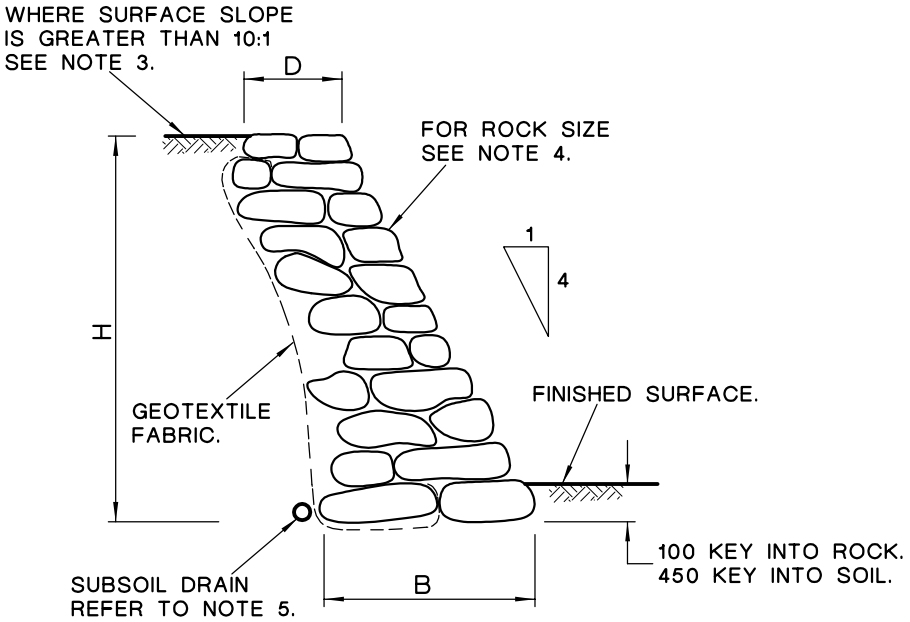
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

HORNSBY COUNCIL

STANDARD SURCHARGE PIT



ROCK WALL DESIGN CHART



TYPICAL ROCK WALL GEOMETRY

NOTES:

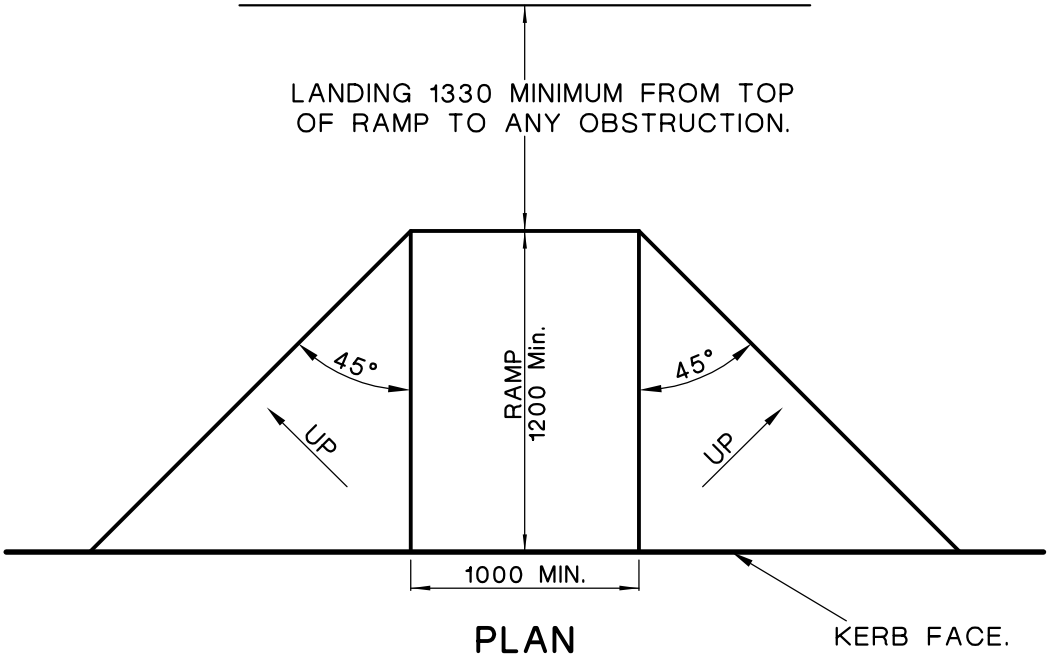
1. BACK FILL TO BE GRANULAR, FREE DRAINING AND COMPACTED.
2. FOUNDATION TO BE APPROVED FOR A SAFE BEARING CAPACITY OF 200KPa PRIOR TO CONSTRUCTION.
3. WHERE THE SURFACE SLOPE OF RETAINED MATERIAL IS BETWEEN 10:1 AND 4:1 THE WALL BASE DIMENSION IS TO BE INCREASED BY 0.5 METRES.
4. ROCK IS TO BE SOUND DURABLE SANDSTONE OR OTHER APPROVED MATERIAL AND AT LEAST 0.5 SQUARE METRES PLAN AREA.
5. A CONTINUOUS 100mm DIA. SUBSOIL DRAIN IS TO BE INSTALLED AT THE REAR OF THE WALL WHERE THE WALL HEIGHT EXCEEDS 3.0m OR WHERE THE WALL FOUNDATION CONSISTS OF OTHER THAN ROCK.
6. ROCKS SHALL BE PLACED IN SUCH A MANNER THAT THEY ARE STABLE AND INTERLOCKING AND LAID ROUGHLY COURSED AND BEDDED ON THEIR BROADEST BASE.

STD DWG No.9

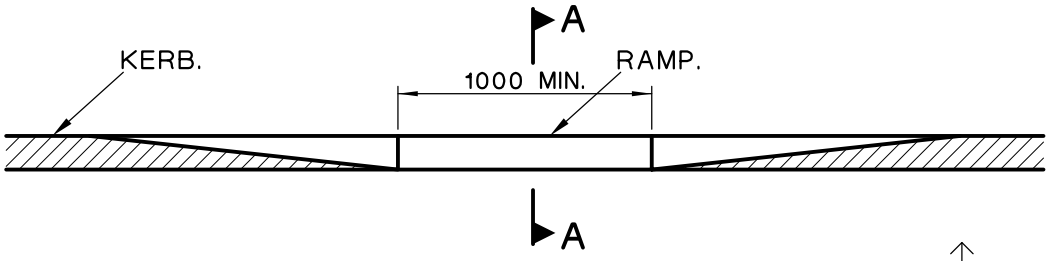
HORNSBY COUNCIL

ROCK RETAINING WALL

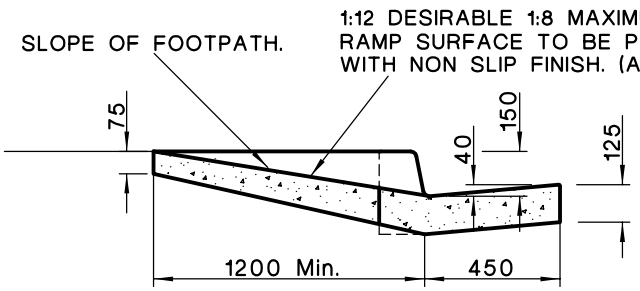
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



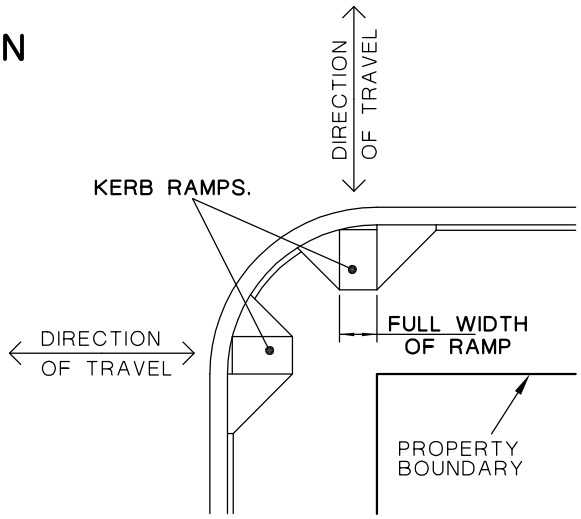
PLAN



ELEVATION



SECTION A-A



LOCATION OF RAMPS

NOTES:

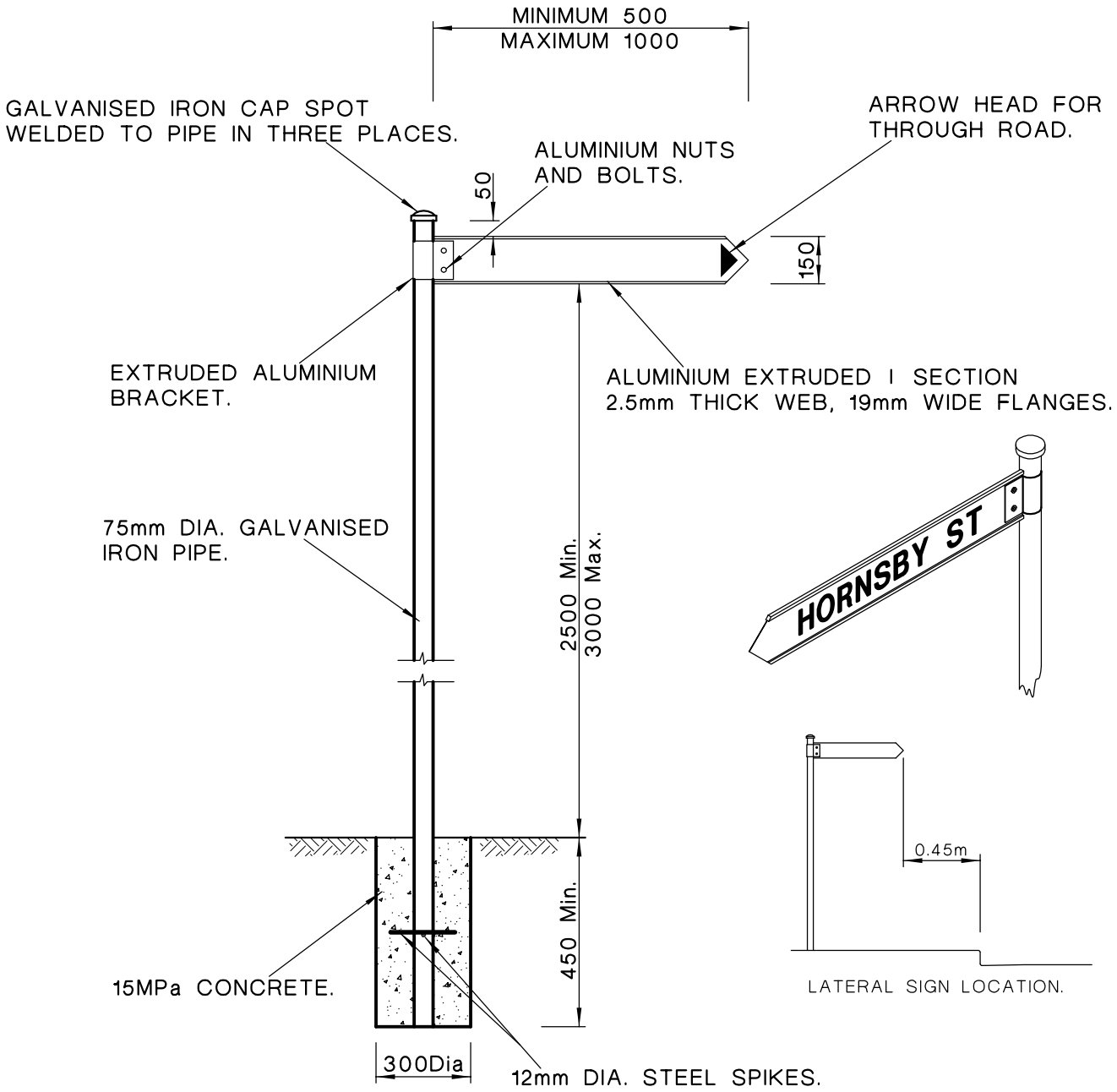
1. KERB RAMPS SHOULD BE PROVIDED AT APPROVED SITES ON CORNERS OF STREET INTERSECTIONS AND AT ESTABLISHED PEDESTRIAN CROSSINGS BETWEEN STREET INTERSECTIONS.
2. THE NUMBER AND POSITION OF RAMPS IS TO BE DETERMINED AFTER CONSIDERATION OF THE GENERAL MOVEMENT OF PEDESTRIANS, THE LOCATION OF MARKED FOOT CROSSINGS, AND THE POSITION OF ANY EXISTING OBSTACLES SUCH AS TRAFFIC SIGNALS, GULLY PITS, ETC. THE LOCATION OF PRAM RAMPS SHOULD BE CAREFULLY PLANNED TO ENSURE THAT USERS ARE NOT PUT AT RISK FROM TRAFFIC OF ANY KIND, BEARING IN MIND THAT A DISABLED PERSON'S REACTION TIME MAY BE GREATER THAN THAT OF PERSONS HAVING FULL MOBILITY.
3. KERB RAMPS SHOULD BE INSTALLED IN THE KERB IN A MANNER WHICH WILL DIRECT THE USER ACROSS THE ADJACENT ROADWAY BY THE MOST DIRECT ROUTE.
4. KERB RAMPS TO BE LAID ON WELL COMPACTED FINE CRUSHED ROCK BASE MINIMUM THICKNESS 50mm.
5. CONCRETE TO BE OF 20MPa COMPRESSIVE STRENGTH AT 28 DAYS.
6. FOR GUIDANCE ON INSTALLATION OF WARNING TGSI'S REFER TO A.S. 1428.4

STD DWG No.10

HORNSBY COUNCIL

STANDARD KERB RAMP CROSSINGS

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



STREET NAME SIGN

NOTES:

1. THE LETTERING SHALL BE OF BLOCK TYPE (SERIES B AS1744- FORMS OF LETTERS AND NUMERALS FOR ROAD SIGNS) 100mm HIGH, BLACK IN COLOUR.
2. THE RETRO-REFLECTIVE SHEETING FOR THE BACKGROUND SHALL COMPLY WITH AS1906.1 - RETROREFLECTIVE MATERIALS AND DEVICES FOR ROAD TRAFFIC CONTROL PURPOSES
3. SIGNS TO BE LOCATED OPPOSITE INTERSECTION.
4. PERMITTED ABBREVIATIONS ARE AS FOLLOWS:

AVENUE . . . . . AVE.	PARADE . . . . . PDE.
BOULEVARDE . BLVD.	PLACE . . . . . PL.
CRESCENT . . . CRES.	ROAD . . . . . RD.
DRIVE . . . . . DR.	STREET . . . . . ST.
LANE . . . . . L.	

5. REFER TO STANDARD DRAWING NUMBER 11B FOR CBD & CORPORATE SIGNAGE.

STD DWG No.11A

HORNSBY COUNCIL

STANDARD STREET NAME SIGN

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

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STD DWG No.11B

HORNSBY COUNCIL

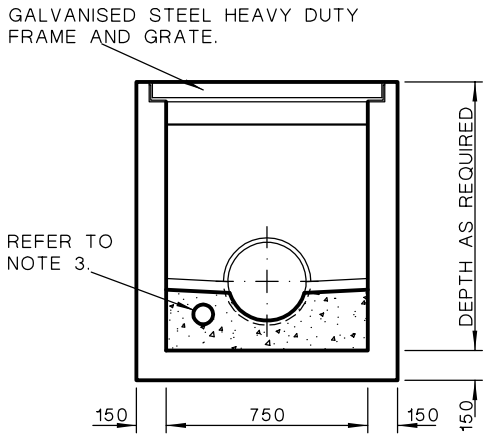
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

MAXIMUM PIPE SIZES - TYPE A PIT

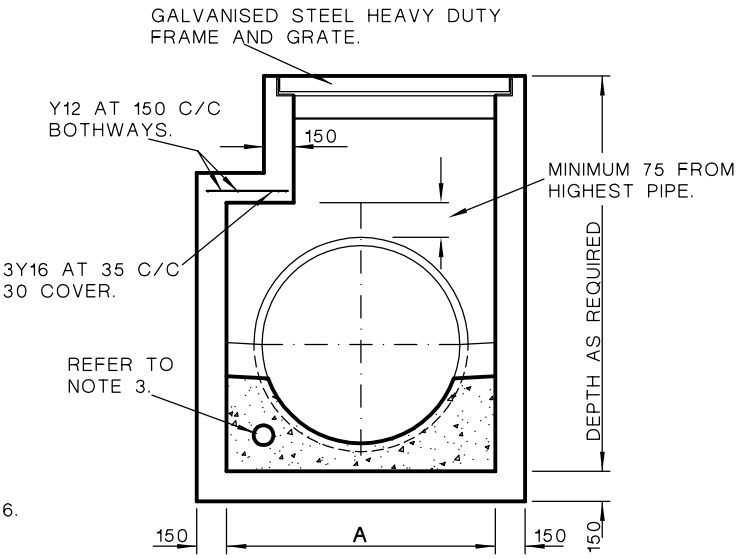
INLET/OUTLET PIPE ON STRAIGHT	- 825 DIA.
INLET/OULET PIPE AT 45° SKEW	- 525 DIA.
SIDE ENTRY/OUTLET PIPE ON STRAIGHT	- 600 DIA.
SIDE ENTRY/OUTLET PIPE AT 45° SKEW	- 375 DIA.

MAXIMUM PIPE SIZES - TYPE B PIT

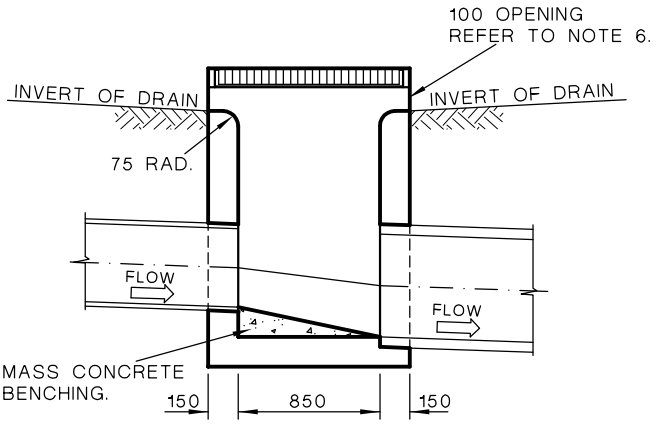
INLET/OUTLET PIPE ON STRAIGHT	- 1800 DIA.
INLET/OULET PIPE AT 45° SKEW	- 1200 DIA.
SIDE ENTRY/OUTLET PIPE ON STRAIGHT	- 1050 DIA.
SIDE ENTRY/OUTLET PIPE AT 45° SKEW	- 750 DIA.



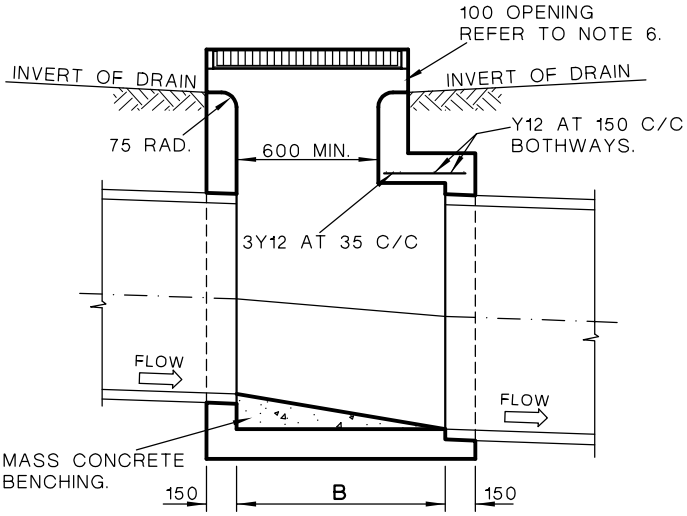
SECTION C-C



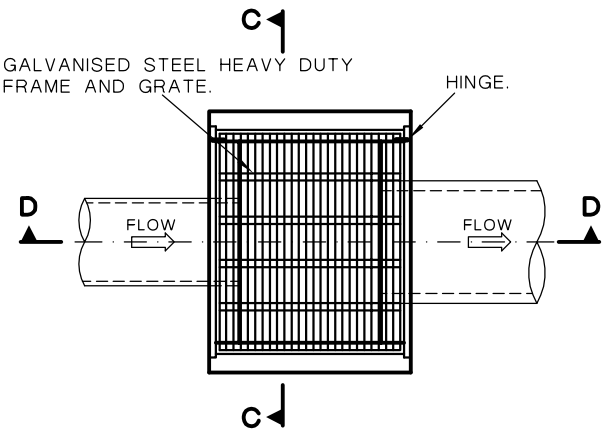
SECTION A-A



SECTION D-D

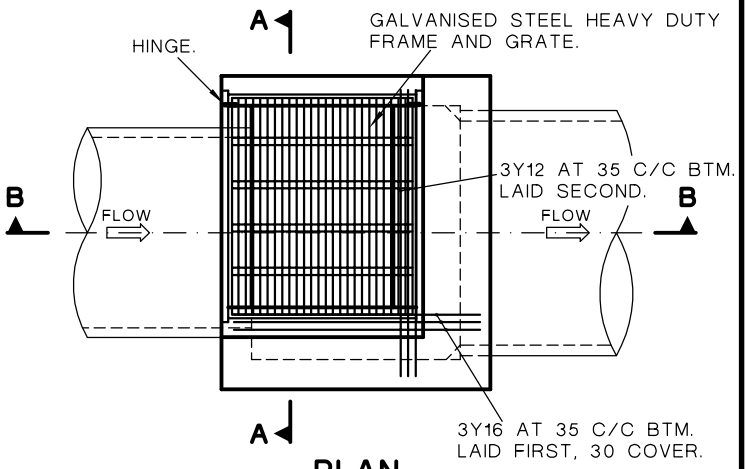


SECTION B-B



PLAN
SURFACE INLET PIT TYPE A

DIAMETER OF OUTLET ON STRAIGHT	A	B	DIAMETER OF OUTLET ON STRAIGHT	A	B
900	1050	900	1500	1650	1200
1050	1200	900	1650	1800	1200
1200	1350	900	1800	1950	1200
1350	1500	1050			



PLAN
SURFACE INLET PIT TYPE B

NOTES:

1. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE 20MPa.
2. TOP OF BENCHING TO BE 1/2 OF OUTLET PIPE DIAMETER.
3. 100 DIA. SUBSOIL DRAINAGE PIPE 3.0m LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED AT INVERT LEVEL EITHER SIDE OF INLET PIPES.
4. PROVIDE STEP IRONS WHERE PIT IS DEEPER THAN 1.0m AT 450 CENTRES.
5. PITS OVER 1.5m IN DEPTH TO BE REINFORCED WITH F82 MESH RETURNED 300mm INTO BASE WITH WALLS 200mm THICK.
6. WHERE INLET OPENING GREATER THAN 100mm IS REQUIRED A R20 DIA. GALVANISED BAR SHALL BE PLACED HORIZONTALLY ACROSS THE OPENING AT MID HEIGHT.

STD DWG No.12

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

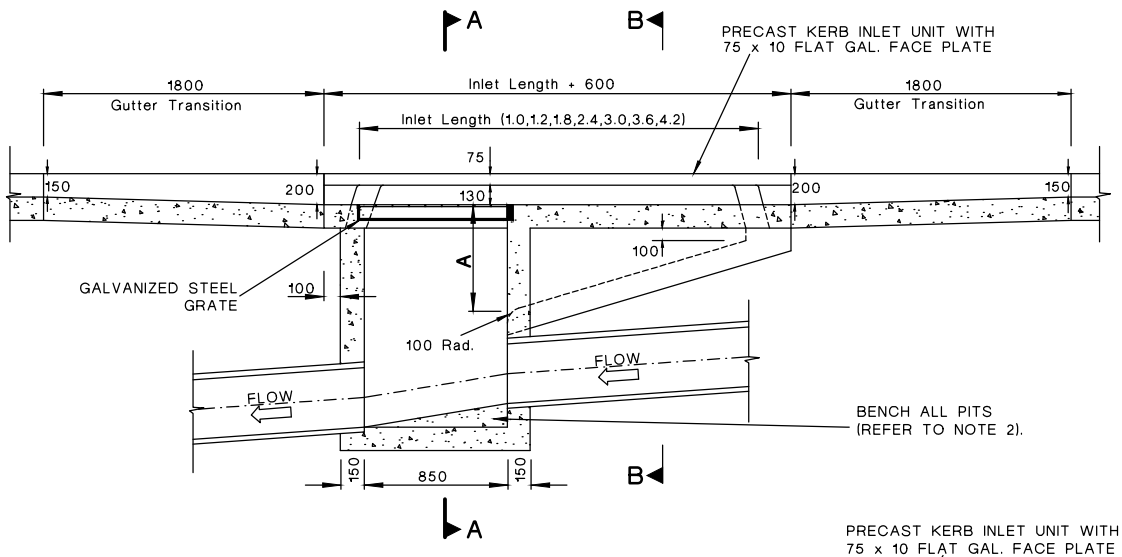
HORNSBY COUNCIL

STANDARD SURFACE INLET PITS

HORNSBY COUNCIL

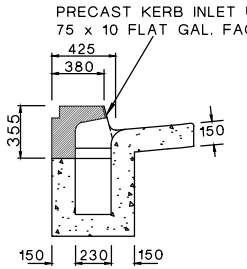
STANDARD GP WITH EXTENDED KERB INLET

STD DWG No.13

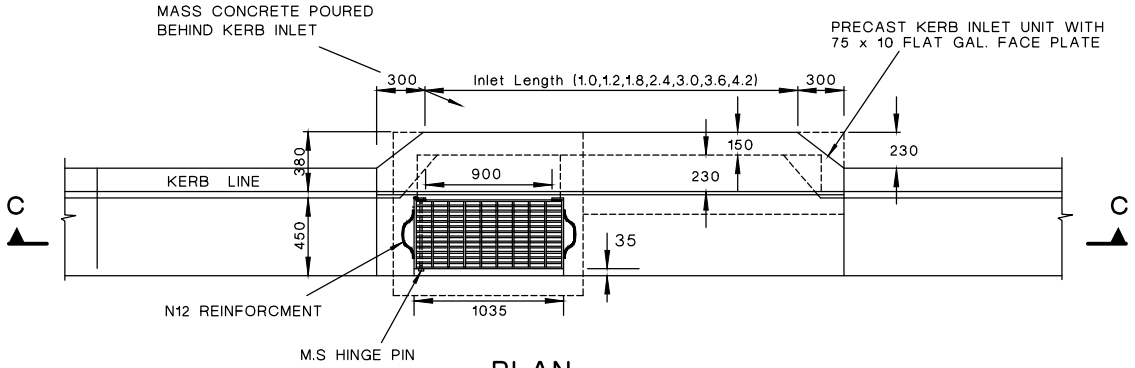


SECTION C-C

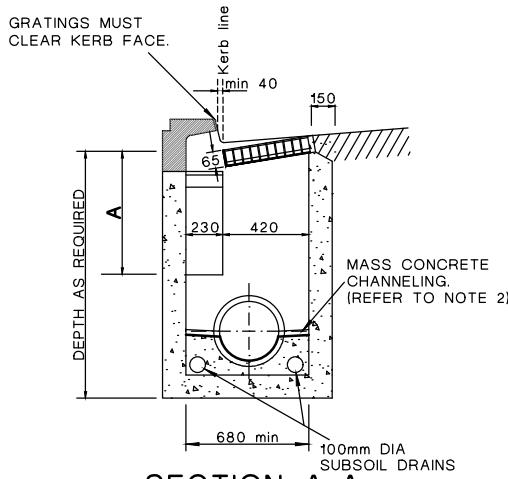
DIMENSION A (mm)	INLET LENGTH (m)
250	UP TO 1.8
300	2.4
350	3.0
400	3.6
450	4.2



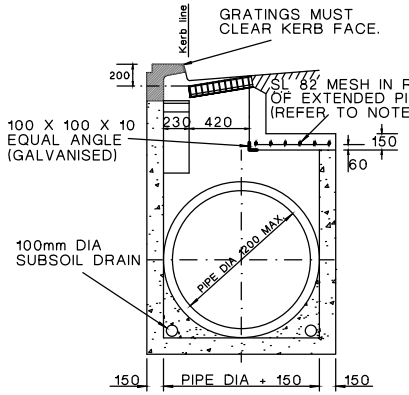
SECTION B-B



PLAN



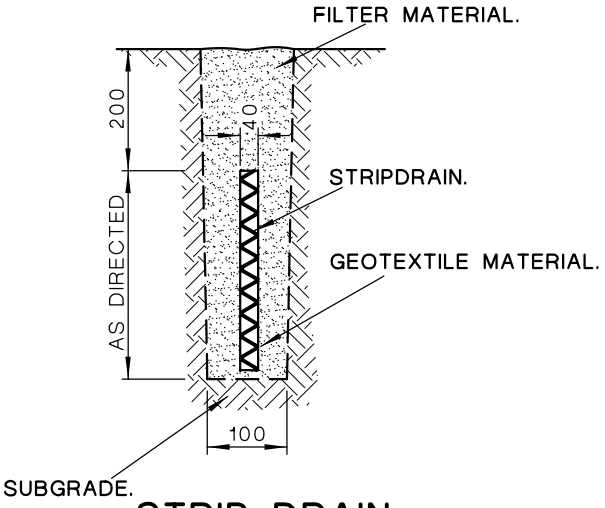
SECTION A-A
(PIPES UP TO 525)



SECTION A-A
(PIPES > 525)

NOTES:

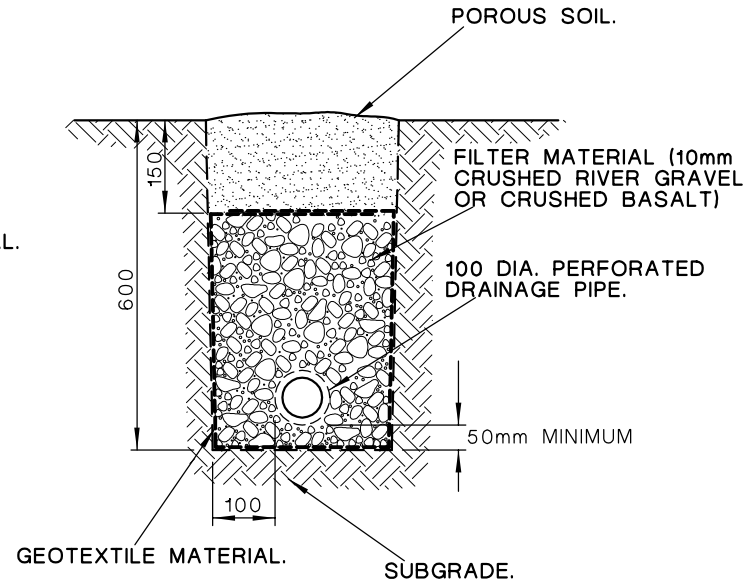
1. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE 20MPa.
2. TOP OF BENCHING TO BE 1/2 OF OUTLET PIPE DIAMETER.
3. 100 DIA. SUBSOIL DRAINAGE PIPE 3m LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED AT INVERT LEVEL EITHER SIDE OF INLET PIPES.
4. PROVIDE STEP IRONS WHERE PIT IS DEEPER THAN 1.0m AT 450 CENTRES.
5. FOR PIT DEPTHS GREATER THAN 3.0m SEPARATE DESIGN IS REQUIRED.
6. PROVIDE HOT DIPPED GALVANIZED FABRICATED STEEL GULLY GRATE AND FRAME OF CLASS D. GRATE AND FRAME MUST COMPLY WITH AS3996-2006. OUTSIDE EDGE OF THE FRAME TO BE FLUSH WITH THE LIP OF THE GUTTER.
7. ALL GRATES TO HAVE LOCKING CLIP.
8. WHERE CHAMBER WIDTH EXCEEDS 1.2m, ROOF REINFORCEMENT TO BE DESIGNED BY A CHARTERED PROFESSIONAL.



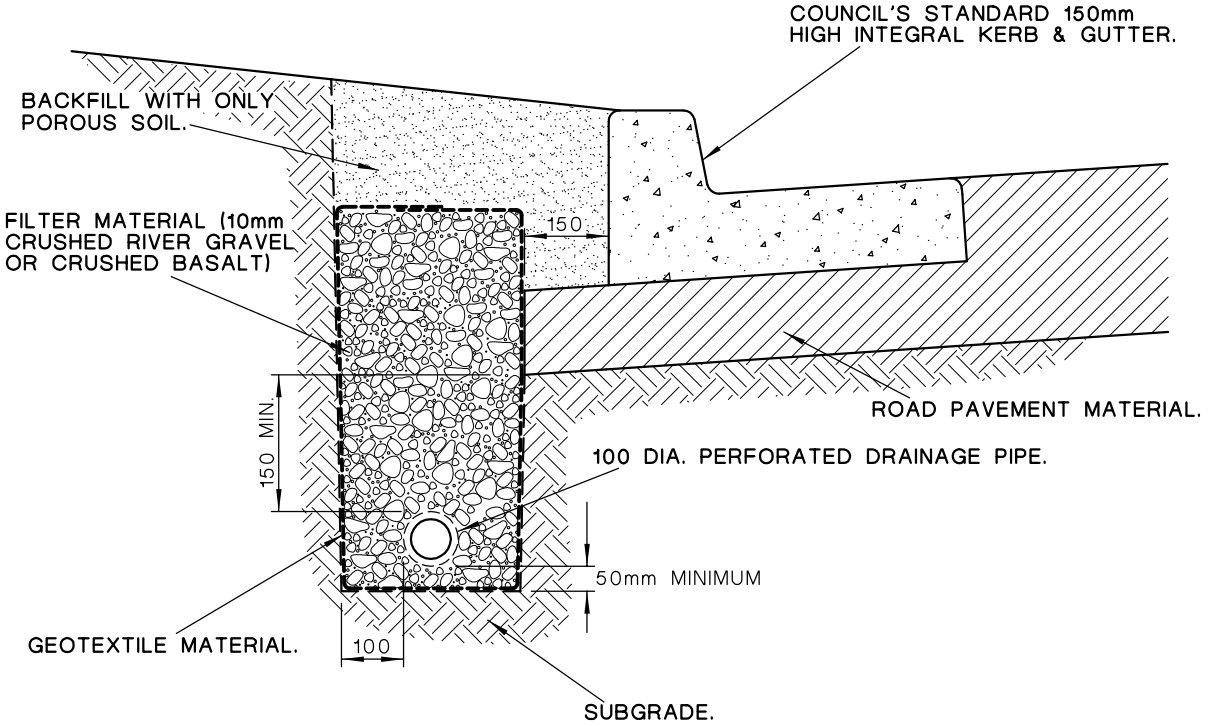
STRIP DRAIN

(SAND AS FILTER MATERIAL)

SAND FILTER MATERIAL GRADING	
AS. SIEVE SIZE mm	% PASSING
4.750	100
2.360	95-100
0.425	20-80
0.300	0-30
0.150	0-2
0.075	0-0.1



TYPICAL INSTALLATION



TYPICAL INSTALLATION WITH KERB & GUTTER

NOTES:

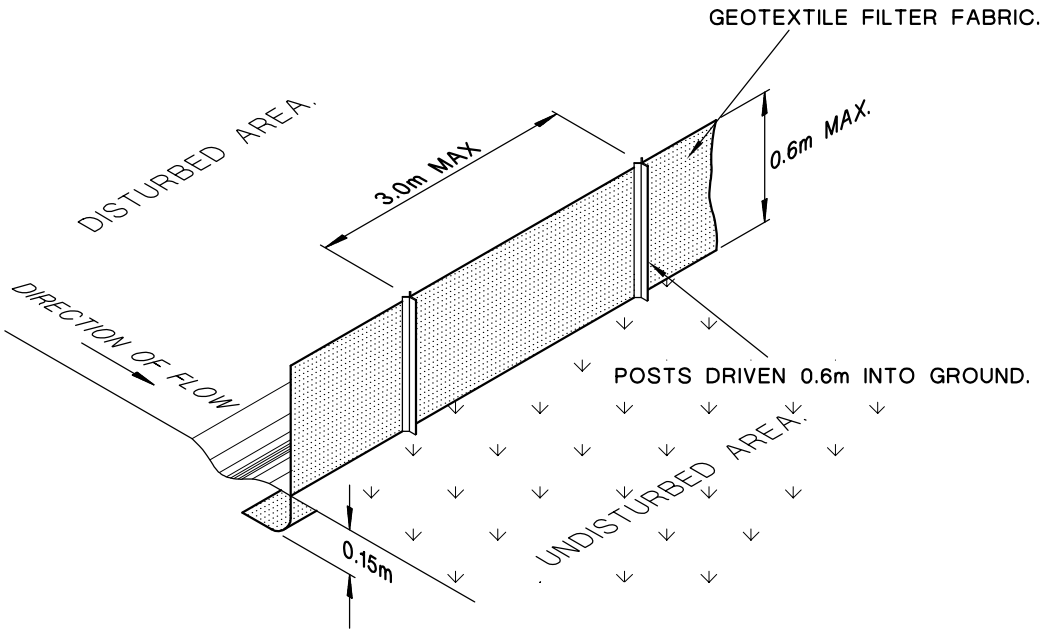
1. THE MINIMUM GRADE OF THE LINE TO BE 1 IN 200. THE GRADE SHALL FALL CONTINUOUSLY TO PREVENT SILTING UP AND BLOCKAGES.
2. TRENCHES SHOULD HAVE CLEARLY CUT SIDES TO AVOID CONTAMINATION OF THE FILTER DURING CONSTRUCTION.
3. ENSURE THAT THE PIPE IS LOCATED WITH ONLY POROUS SOIL ABOVE, AVOID HEAVY CLAY BACKFILL WHICH RESTRICTS THE FLOW OF WATER TO THE PIPE.
4. ENSURE THAT AN APPROPRIATE FLITER MATERIAL IS USED. A MAXIMUM FILTER AGGREGATE SIZE OF 10mm TO BE USED TO AVOID PUNCTURING THE PIPE.
5. A MINIMUM 50mm LAYER OF FILTER MATERIAL TO BE FIRST PLACED IN THE TRENCH TO PROVIDE A DRAINAGE PATH UNDERNEATH THE PLASTIC PIPE.
6. THE PIPE IS TO BE KEPT IN THE CENTRE OF THE TRENCH AND THE FILTER MATERIAL COMPACTED UNDER THE HAUNCHES, AROUND THE SIDES AND ABOVE THE PIPE.

STD DWG No.14

HORNSBY COUNCIL

SUBSOIL DRAINS

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



ISOMETRIC VIEW

NOTES:

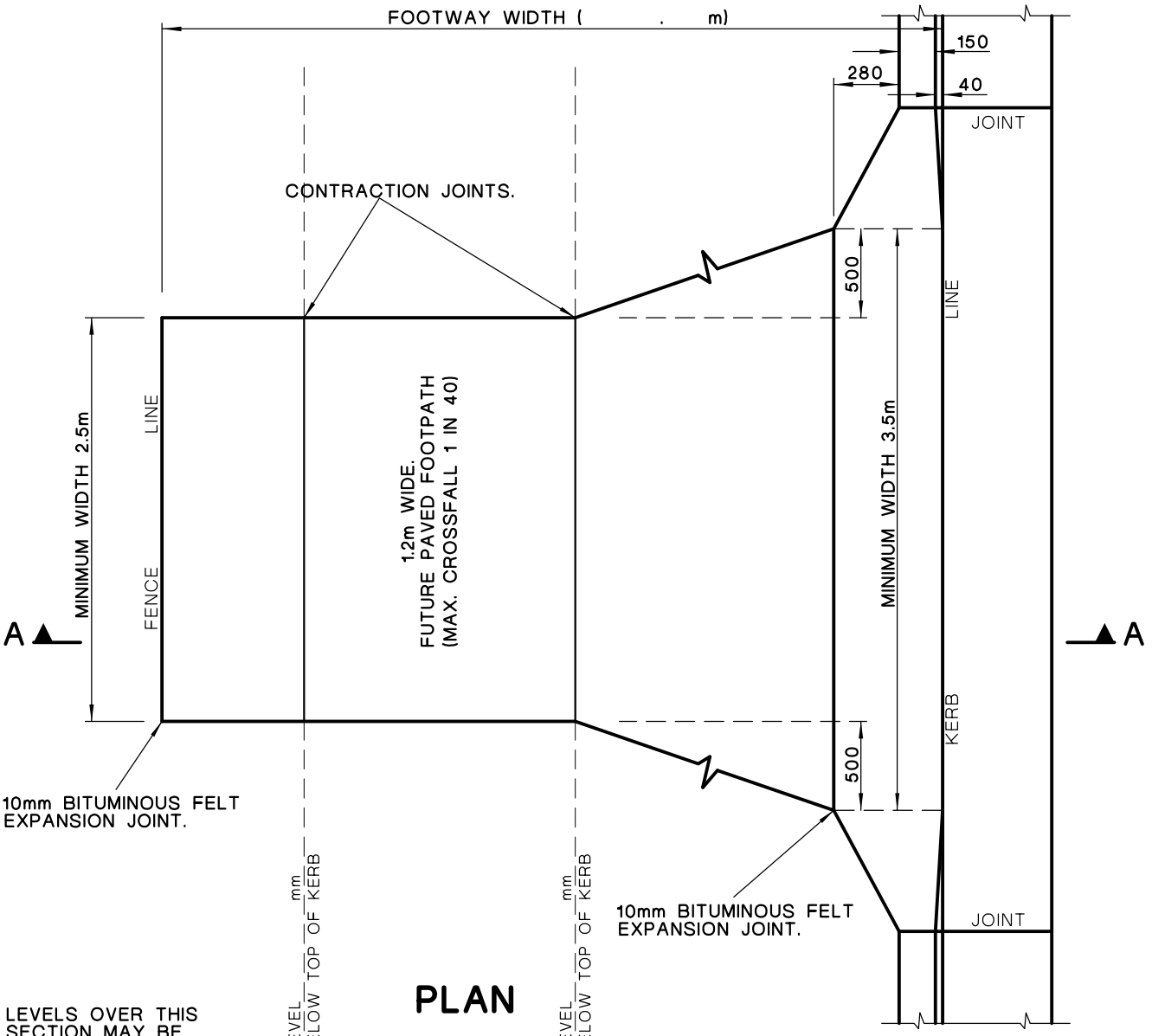
1. SILT FENCE TO BE CONSTRUCTED BY STRETCHING A FILTER FABRIC APPROVED BY THE SUPERINTENDENT BETWEEN POSTS AT 3.0m CENTRES. FABRIC TO BE BURIED A MINIMUM OF 150mm ALONG IT'S LOWER EDGE.
2. SILT FENCE IS TO BE INSTALLED AND APPROVED BY COUNCIL'S SUPERVISING ENGINEER BEFORE OVERBURDEN IS REMOVED. THIS FENCE MAY REQUIRES REPLACEMENT AT TIMES IF LOCATED WITHIN OR NEARBY CONSTRUCTION ZONES.
3. CLEAN BEHIND FENCE AFTER EACH MAJOR STORM OR OTHERWISE AS DIRECTED AND REMOVE ALL SILT FROM THE SITE. SITE DISPOSAL WILL ONLY BE APPROVED WHERE IT CAN BE ESTABLISHED THAT NO FURTHER EROSION OF THE MATERIAL CAN OCCUR.

STD DWG No.15

HORNSBY COUNCIL

DETAIL OF SILT FENCING

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



SECTION A-A

NOTES:

1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. THE ROAD BASE COURSE IS TO BE EXTENDED BENEATH THE KERB AND GUTTER.
4. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m AND NOT LESS THAN 4.0m INTERVALS.
5. ALL REINFORCEMENT TO HAVE MINIMUM 40mm COVER.
6. ADJUST NATURESTRIP TO SUIT NEW CROSSING (MAX. SLOPE 1 IN 8)

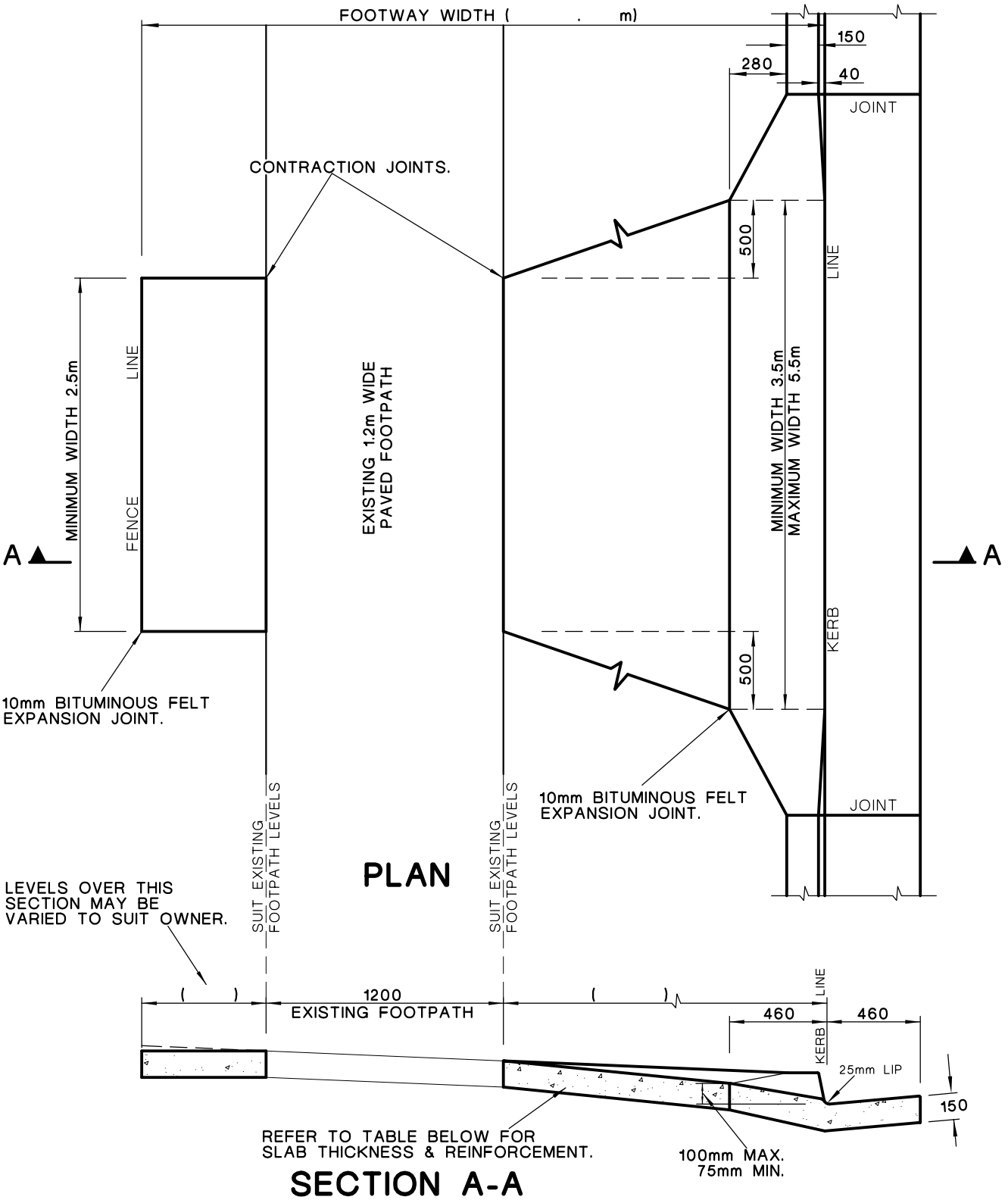
CROSSING TYPE	SLAB THICKNESS & REINFORCEMENT	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	125mm, F62	150mm
RESIDENTIAL H.D.	150mm, F72,	150mm, F72
COMMERCIAL	200mm, 2×F72	200mm, 2×F72

STD DWG No.16A

HORNSBY COUNCIL

STANDARD CROSSING

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



SECTION A-A

NOTES:

1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. THE ROAD BASE COURSE IS TO BE EXTENDED BENEATH THE KERB AND GUTTER.
4. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m AND NOT LESS THAN 4.0m INTERVALS.
5. ALL REINFORCEMENT TO HAVE MINIMUM 40mm COVER.
6. ADJUST NATURESTRIP TO SUIT NEW CROSSING (MAX. SLOPE 1 IN 8)

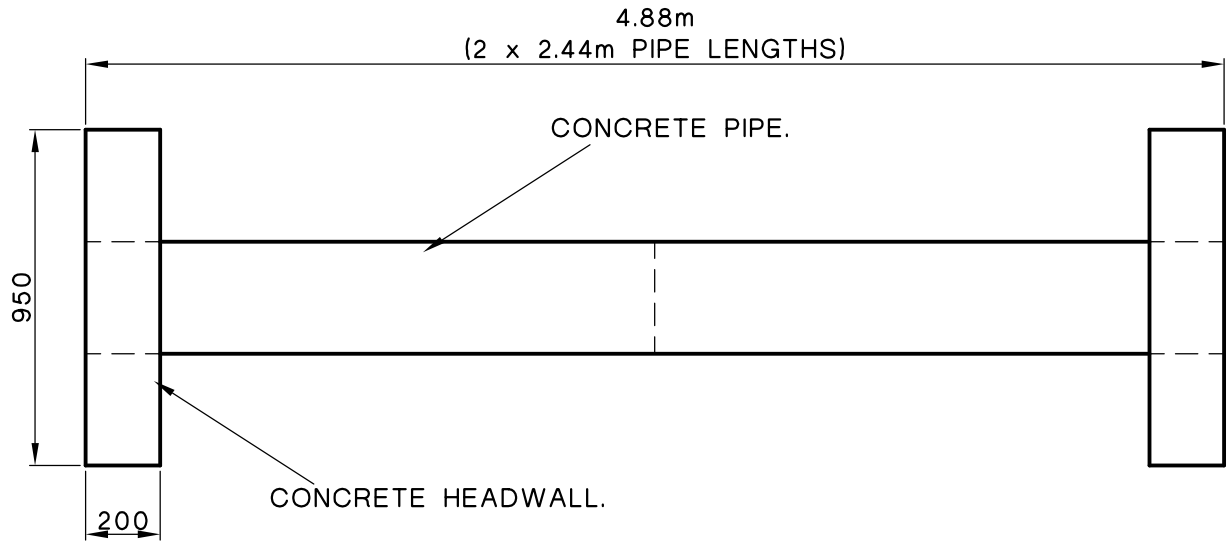
CROSSING TYPE	SLAB THICKNESS & REINFORCEMENT	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	125mm, F62	150mm
RESIDENTIAL H.D.	150mm, F72,	150mm, F72
COMMERCIAL	200mm, 2×F72	200mm, 2×F72

STD DWG No.16B

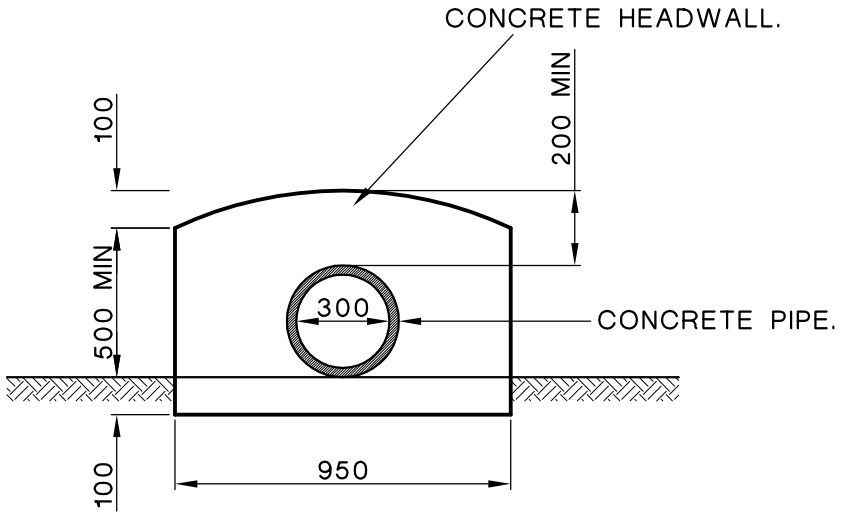
HORNSBY COUNCIL

STANDARD CROSSING

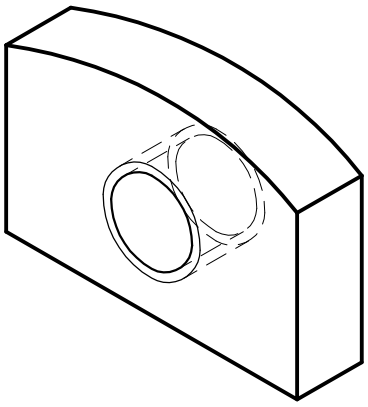
HORNSBY COUNCIL DESIGN BRANCH JANUARY 2001 DIAGRAMMATIC ONLY



PLAN



END ELEVATION



ISOMETRIC VIEW

NOTES:

1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (10mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.

STD DWG No.16C

HORNSBY COUNCIL

STANDARD PIPE CROSSING

INTENTIONALLY LEFT BLANK

STD DWG No.17

HORNSBY COUNCIL

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

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STD DWG No.18

HORNSBY COUNCIL

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

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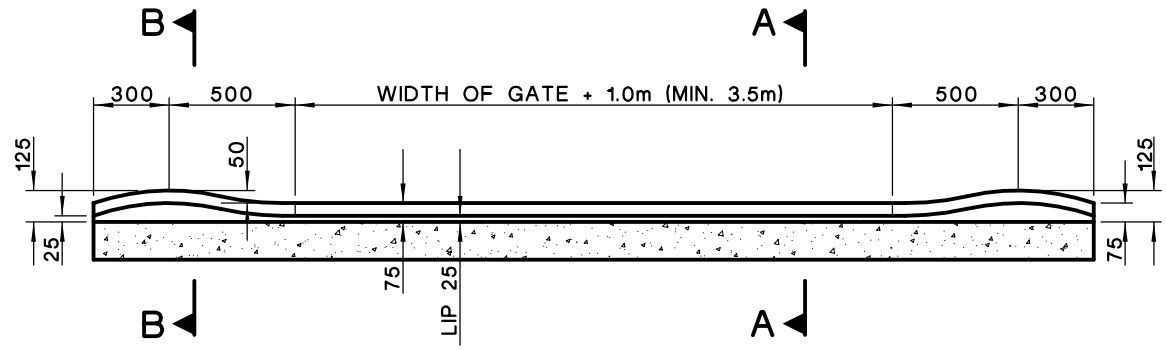
STD DWG No.19

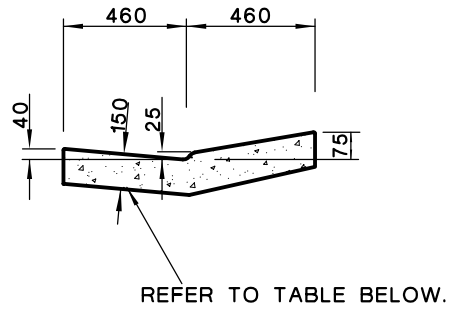
HORNSBY COUNCIL

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

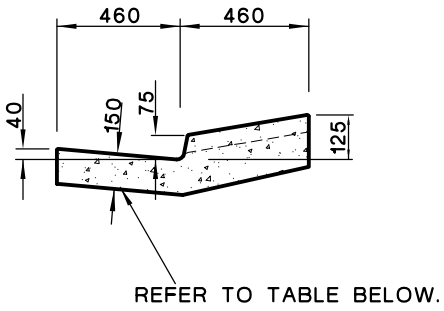
PLAN



ELEVATION



SECTION A-A AND END SECTION



SECTION B-B

NOTES:

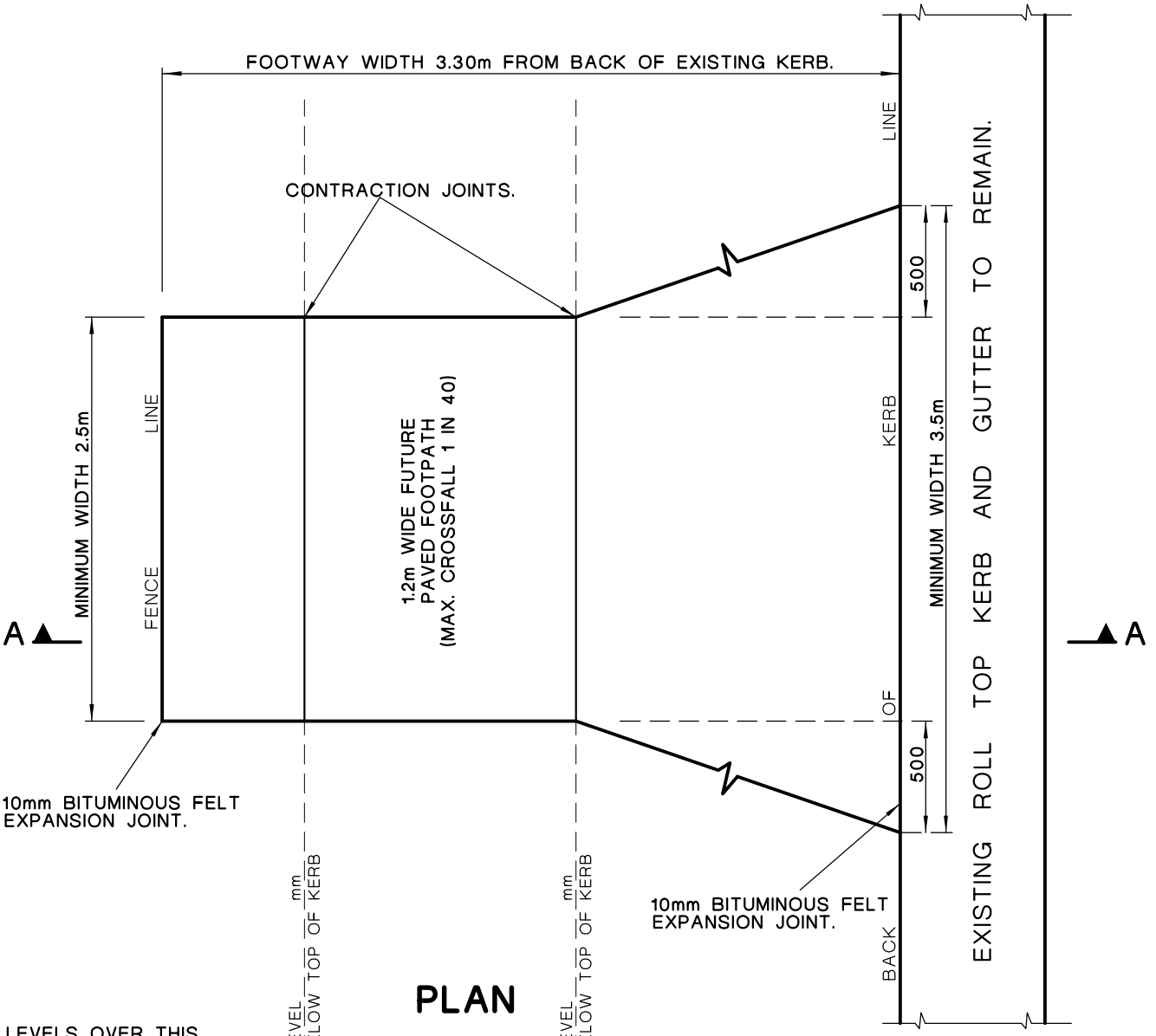
1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. THE ROAD BASE COURSE IS TO BE EXTENDED BENEATH THE KERB AND GUTTER.
4. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m AND NOT LESS THAN 4.0m INTERVALS.
5. ALL REINFORCEMENT TO HAVE MINIMUM 40mm COVER.

CROSSING TYPE	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	150mm
RESIDENTIAL H.D.	150mm, F72
COMMERCIAL	200mm, 2×F72

STD DWG No.20

HORNSBY COUNCIL

STANDARD RURAL LAYBACK



SECTION A-A

NOTES:

1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m INTERVALS.
4. ALL REINFORCEMENT TO HAVE MINIMUM 40mm COVER.
5. ADJUST NATURESTRIP TO SUIT NEW CROSSING. (MAX. SLOPE 1 IN 8)

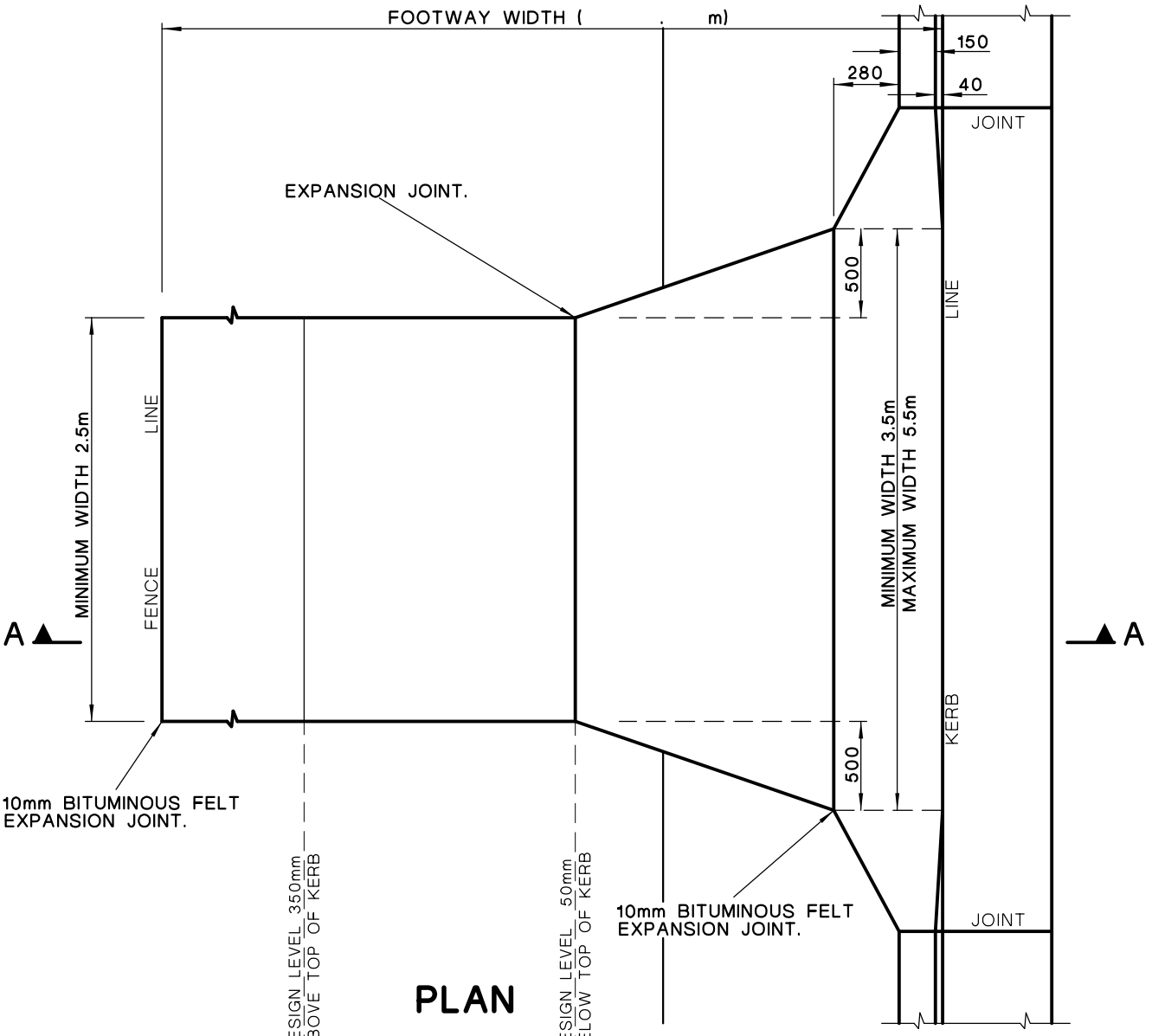
CROSSING TYPE	SLAB THICKNESS & REINFORCEMENT	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	125mm, F62	150mm
RESIDENTIAL H.D.	150mm, F72,	150mm, F72
COMMERCIAL	200mm, 2×F72	200mm, 2×F72

STD DWG No.21

HORNSBY COUNCIL

STANDARD CROSSING - ROLL TOP KERB

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



SECTION A-A

NOTES:

1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. THE ROAD BASE COURSE IS TO BE EXTENDED BENEATH THE KERB & GUTTER.
4. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m AND NOT LESS THAN 4.0m INTERVALS.
5. ALL REINFORCEMENT TO HAVE MINIMUM 40mm COVER.
6. ADJUST NATURESTRIP TO SUIT NEW CROSSING. (MAX. SLOPE 1 IN 8)

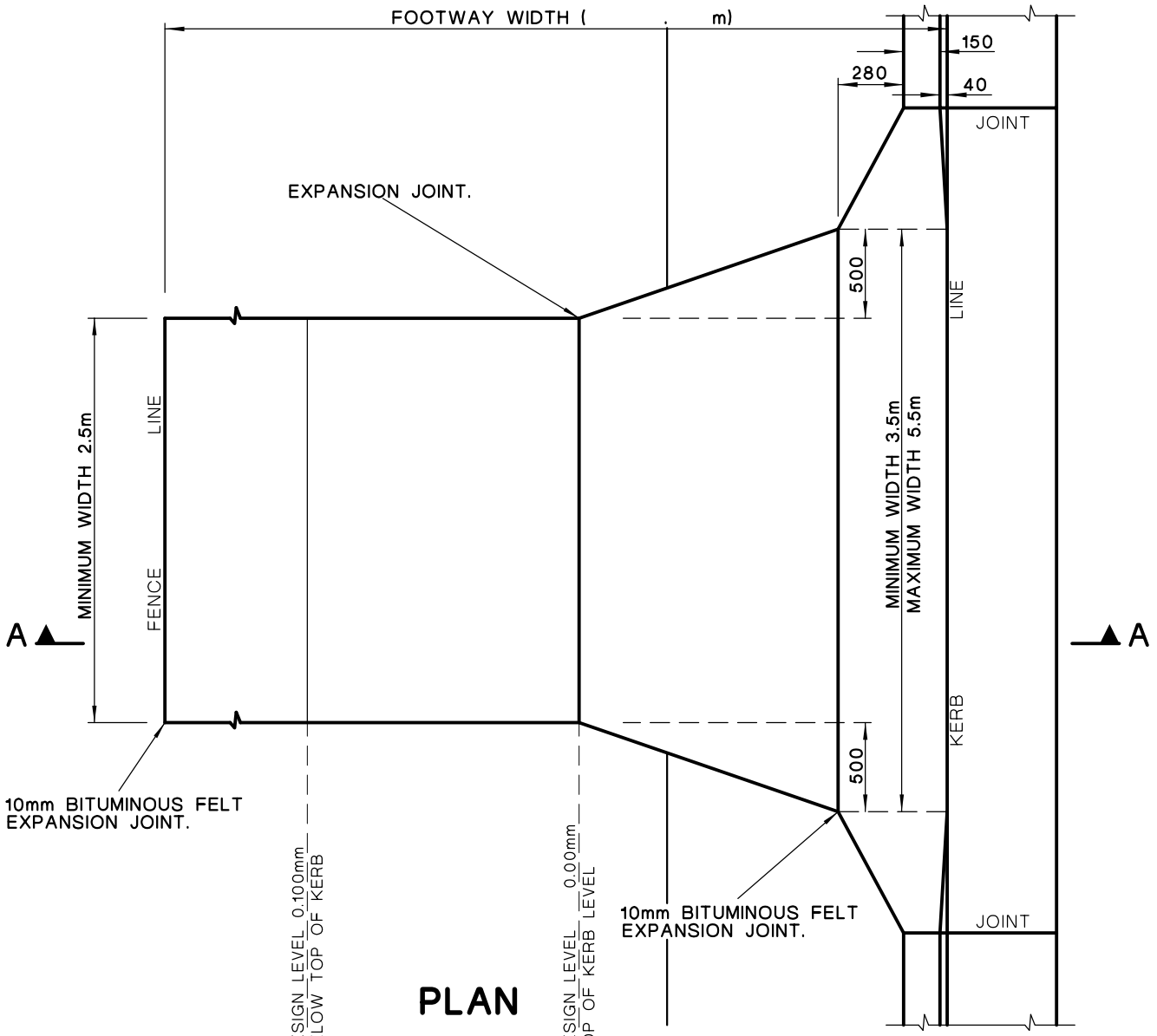
CROSSING TYPE	SLAB THICKNESS & REINFORCEMENT	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	125mm, F62	150mm
RESIDENTIAL H.D.	150mm, F72,	150mm, F72
COMMERCIAL	200mm, 2×F72	200mm, 2×F72

STD DWG No.22A

HORNSBY COUNCIL

MAX. UP CROSSING WITH KERBSIDE F'PATH

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



SECTION A-A

NOTES:

1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. THE ROAD BASE COURSE IS TO BE EXTENDED BENEATH THE KERB & GUTTER.
4. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m AND NOT LESS THAN 4.0m INTERVALS.
5. ALL REINFORCEMENT TO HAVE MINIMUM 40mm COVER.
6. ADJUST NATURESTRIP TO SUIT NEW CROSSING (MAX. SLOPE 1 IN 8)

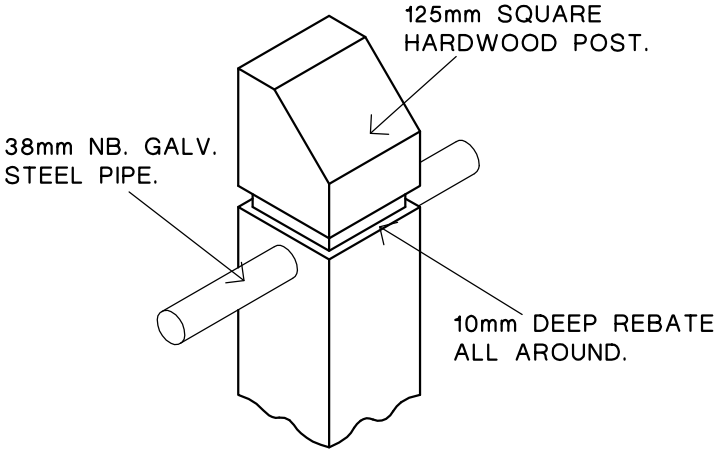
CROSSING TYPE	SLAB THICKNESS & REINFORCEMENT	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	125mm, F62	150mm
RESIDENTIAL H.D.	150mm, F72,	150mm, F72
COMMERCIAL	200mm, 2×F72	200mm, 2×F72

STD DWG No.22B

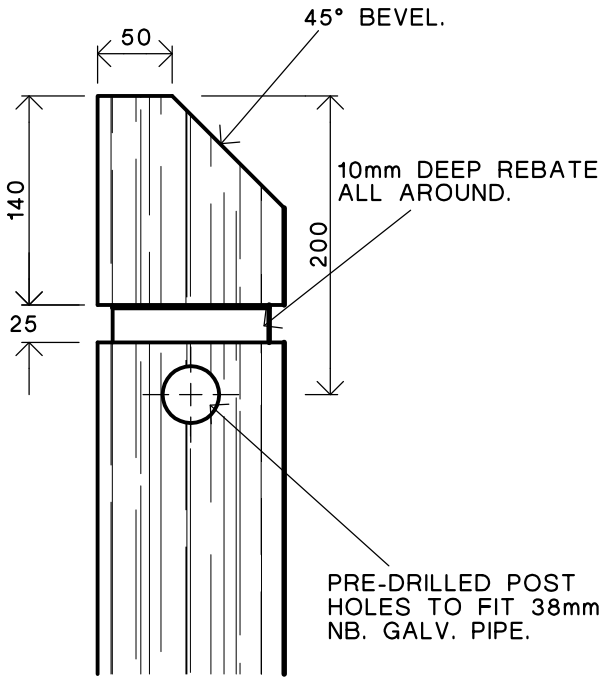
HORNSBY COUNCIL

MAX DOWN CROSSING WITH KERBSIDE F'PATH

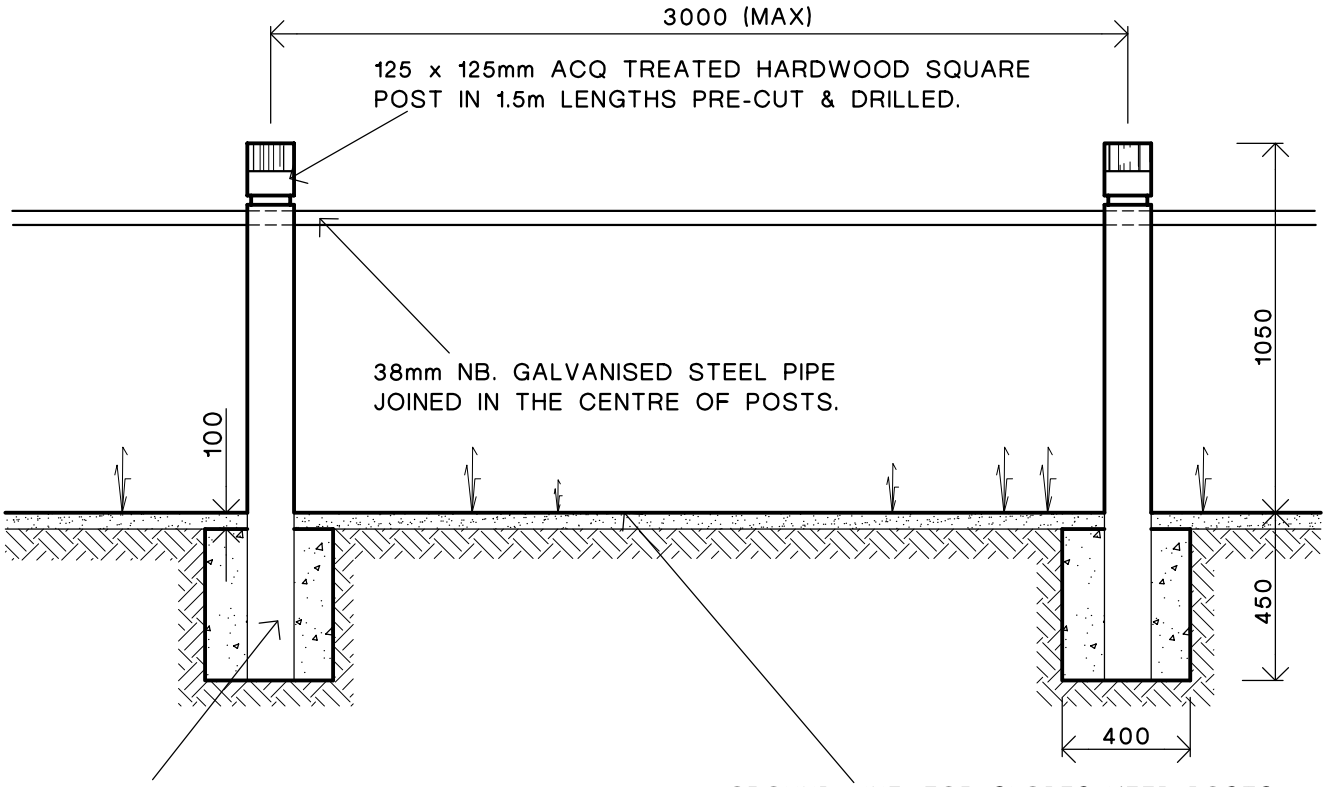
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



ISOMETRIC VIEW



DETAIL



SET POSTS 450mm INTO GROUND IN 400mm DIA. AUGER DRILLED HOLES, FILLED WITH 20mPA CONCRETE TO WITHIN 100mm OF FINISHED SURFACE LEVEL.

GROUND LINE. FOR SLOPES KEEP POSTS VERTICAL & ADJUST PIPE TO BE PARALLEL WITH THE GROUND.

ELEVATION

NOTES

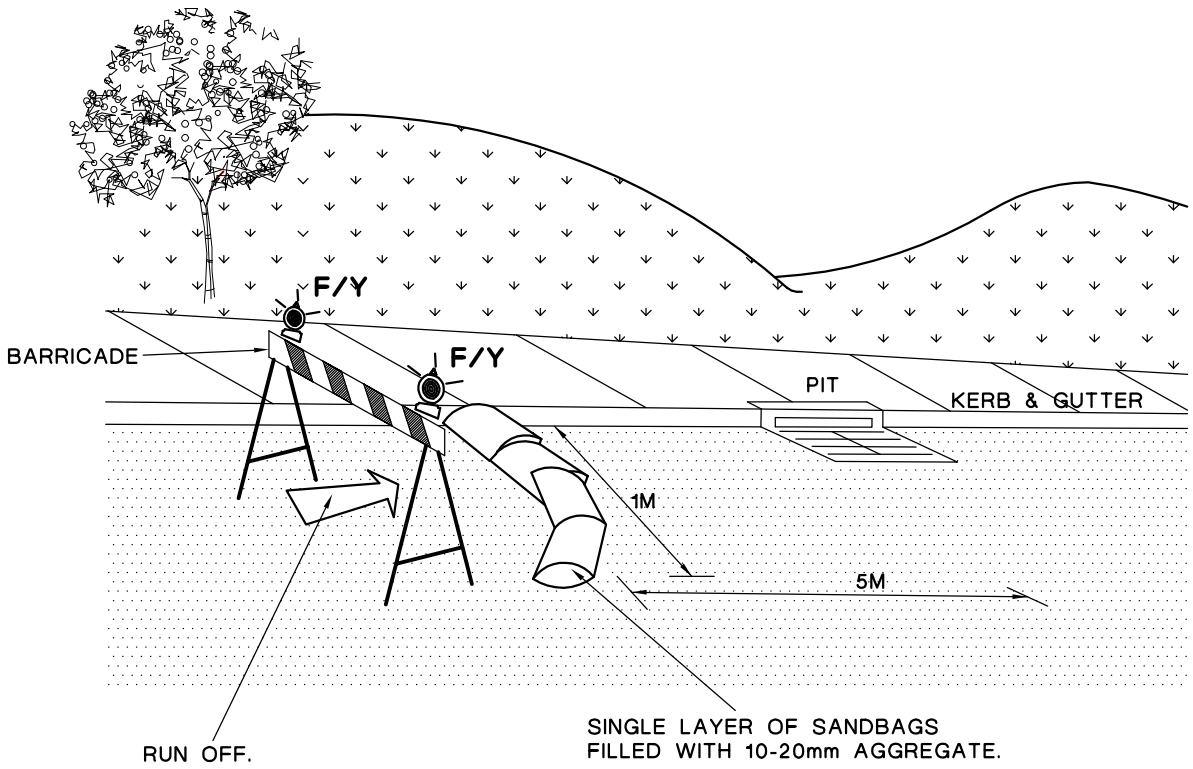
1. ALL TIMBER TO BE ACQ TREATED PINE HAVING A HAZARD LEVEL OF H4 IN ACCORDANCE WITH AS1720 & AS1604.
2. ALL TIMBER OFF-CUTS TO BE REMOVED FROM CONSTRUCTION SITE & DISPOSED OF APPROPRIATELY.
3. WHERE POSSIBLE MANUFACTURE SHALL STAMP OR MARK TIMBER SO AS IT CAN BE IDENTIFIED AS NOT BEING CCA TREATED.

STD DWG No.23

HORNSBY COUNCIL

STANDARD SQUARE POST & RAIL FENCING

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

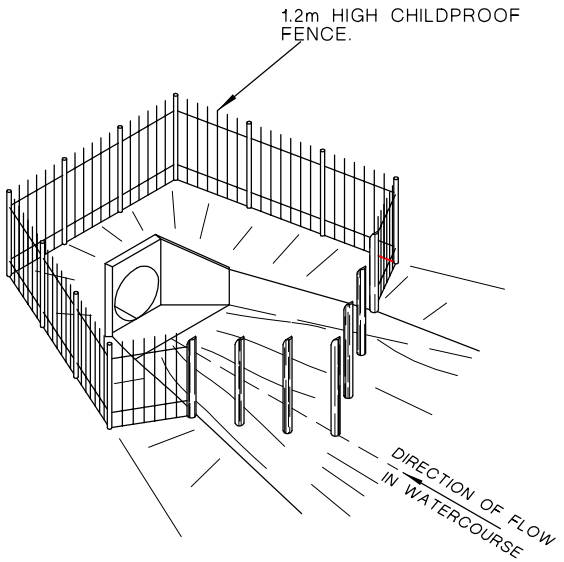


HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

STD DWG No.24

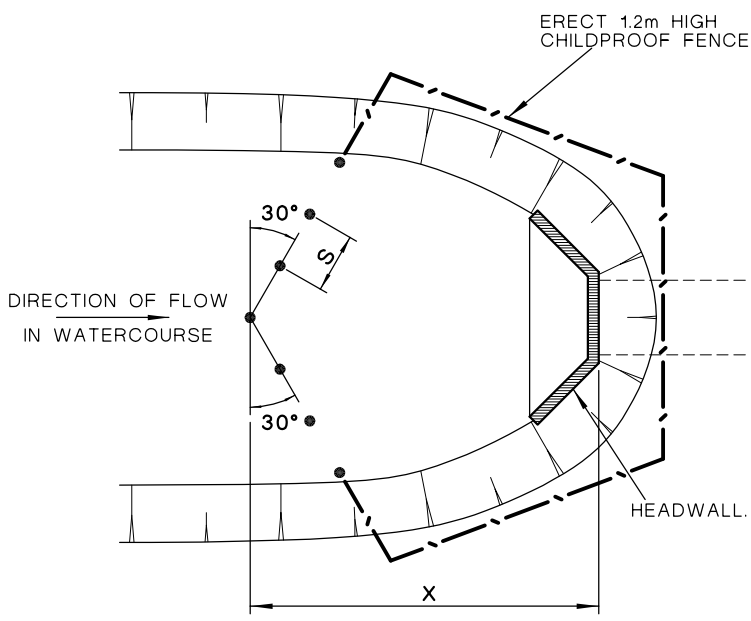
HORNSBY COUNCIL

STANDARD SANDBAG KERB SEDIMENT TRAP.



REFER TO NOTES FOR LEVEL OF TOP OF POSTS. TOPS TO BE BEVELED AT 45° ON DOWNSTREAM SIDE.

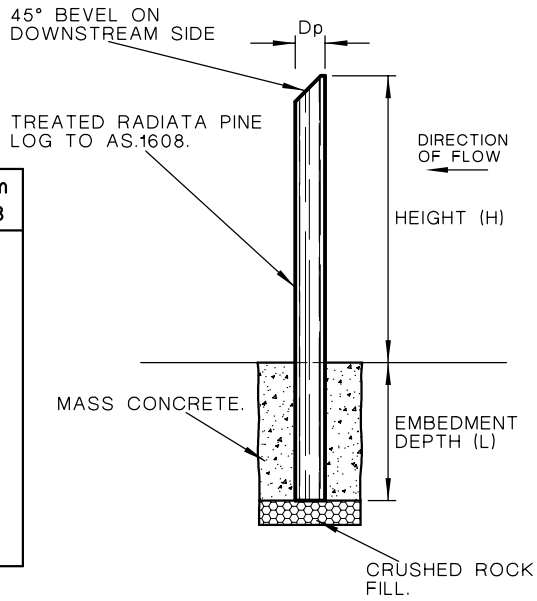
ISOMETRIC VIEW



PLAN

DESIGN TABLE

HEIGHT (H) m	POLE SPACING (S) m	MIN. POLE DIA. (Dp) mm	EMBEDMENT LENGTH (L) m TYPE 1	TYPE 2	TYPE 3
< 1.0	<0.6	150	1.3	1.0	TWICE THE POLE DIAMETER MIN. 400mm BELOW SOUND ROCK
< 1.0	0.6 - 0.8	150	1.5	1.0	
< 1.0	0.8 - 1.0	150	1.7	1.1	
1.0 - 1.5	< 0.6	150	2.0	1.3	
1.0 - 1.5	0.6 - 0.8	200	2.3	1.4	
1.0 - 1.5	0.8 - 1.0	200	2.5	1.5	
1.5 - 2.0	< 0.6	200	2.7	1.6	
1.5 - 2.0	0.6 - 0.8	200	3.1	1.8	
1.5 - 2.0	0.8 - 1.0	200	3.4	1.9	
2.0 - 2.5	< 0.6	200	3.4	2.0	
2.0 - 2.5	0.6 - 0.8	250	3.8	2.2	
2.0 - 2.5	0.8 - 1.0	250	4.2	2.5	
2.5 - 3.0	< 0.6	250	4.0	2.4	
2.5 - 3.0	0.6 - 0.8	250	4.6	2.7	
2.5 - 3.0	0.8 - 1.0	300	5.1	2.9	



POST & HOLE DETAIL

POST HOLE DIAMETERS:
UP TO & INCLUDING 250mmϕ POST -400mmϕ HOLES
ABOVE 250mmϕ POST -500mmϕ HOLES

FOUNDATION ASSUMPTIONS

TYPE 1. COHESIVE SOIL: FIRM TO STIFF CLAY
Cu = 50KPa.

TYPE 2. COHESIONLESS SOIL: SAND, ϕ = 30°, Is = 7KN/m (BELOW WATER TABLE)

TYPE 3. ROCK: HARD SOUND ROCK, FREE OF WEATHERED PLANES.

NOTES:

D = DIAMETER OF CULVERT.
S = CENTRELINE SPACING OF POLES (1.0m MAX) = 0.7D
H = HEIGHT OF POLE (3.0m MAX).

1. LENGTH 'X' TO BE DETERMINED BY THE ENGINEER. MINIMUM 5.0m, PREFERABLY 10D TO 20D. TRASH RACK TO BE LOCATED SUCH THAT IF THE RACK BECOMES BLOCKED WITH RUBBISH AND FLOODING OCCURS, THE FLOODING WOULD NOT BE EXACERBATED BEYOND THAT WHICH WOULD HAVE OCCURED PREVIOUSLY IF THE CULVERT HEADWALL HAD BECOME BLOCKED.
2. LEVEL OF THE TOP OF POLES TO BE SET BY THE ENGINEER. NORMALLY THIS LEVEL WOULD BE SET EQUAL TO THE DESIGN FLOOD LEVEL OF THE CHANNEL OR CREEK AT THE RACK LOCATION.
3. POLES SHALL BE BRACED PRIOR TO FILLING WITH CONCRETE.
4. SOIL PROPERTIES ASSUMED IN THE ABOVE TABLE ARE TYPICAL. IF SITE PROPERTIES DIFFER SIGNIFICANTLY FROM THESE, THE ENGINEER SHALL ADVISE AMENDED EMBEDMENT LENGTHS.
5. MAXIMUM POLE SPACING SHALL BE 1.0m (CENTRES).
6. MAXIMUM POLE HEIGHT SHALL BE 3.0m.
7. POLE ASSUMED TO BE RADIATA PINE S7 (AS.1720), STRESS GRADE F8.

STD DWG No.25

HORNSBY COUNCIL

STANDARD COARSE TRASH RACK

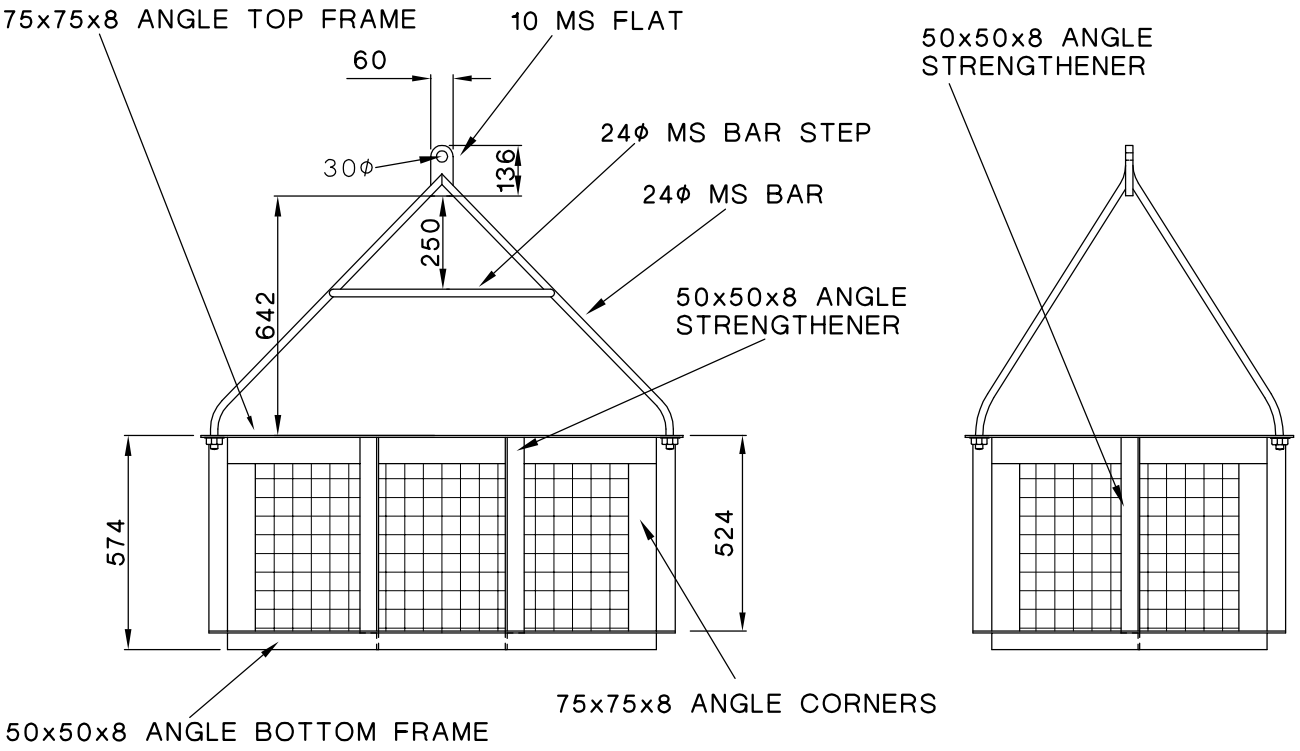
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

INTENTIONALLY LEFT BLANK

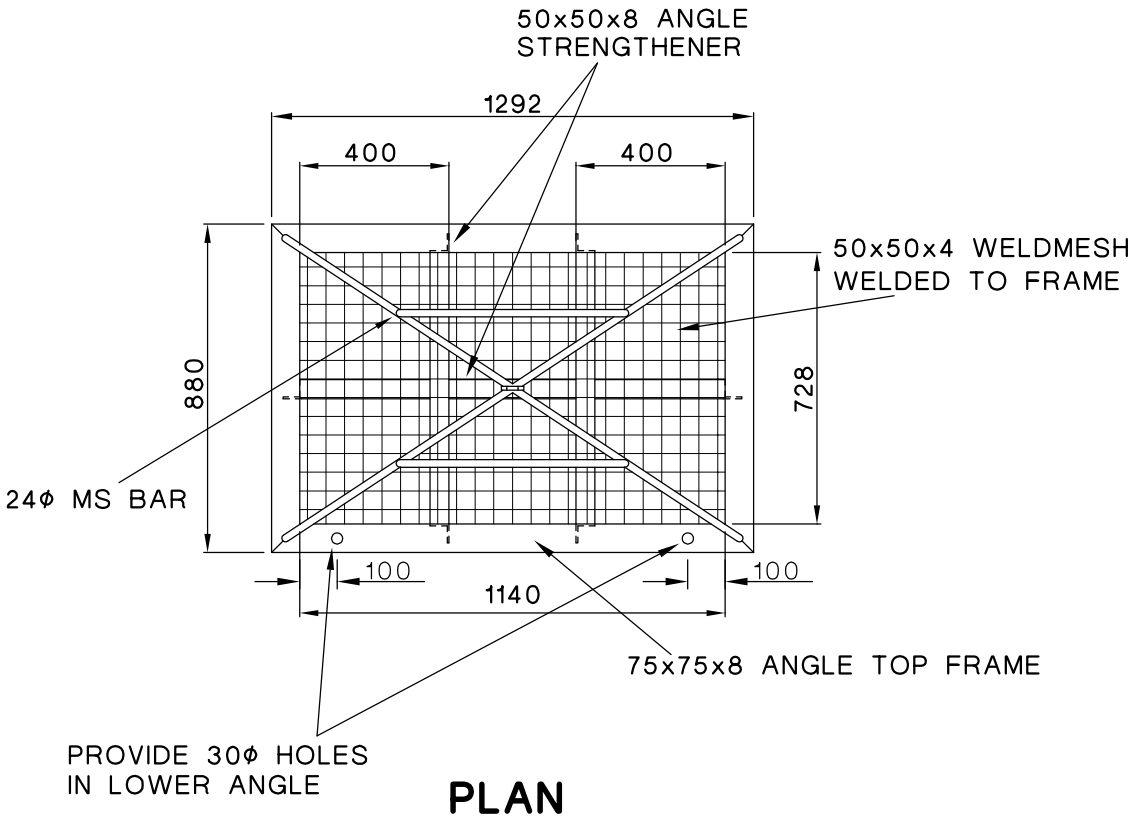
STD DWG No.26

HORNSBY COUNCIL

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



END ELEVATION **SIDE ELEVATION**



PLAN

NOTES:

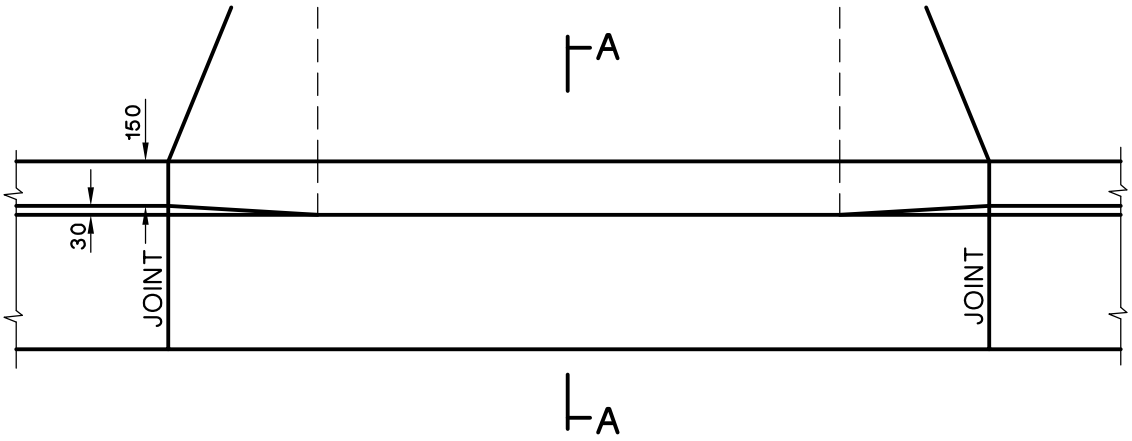
COMPLETED BASKET TO BE HOT DIP GALVANISED

STD DWG No.27

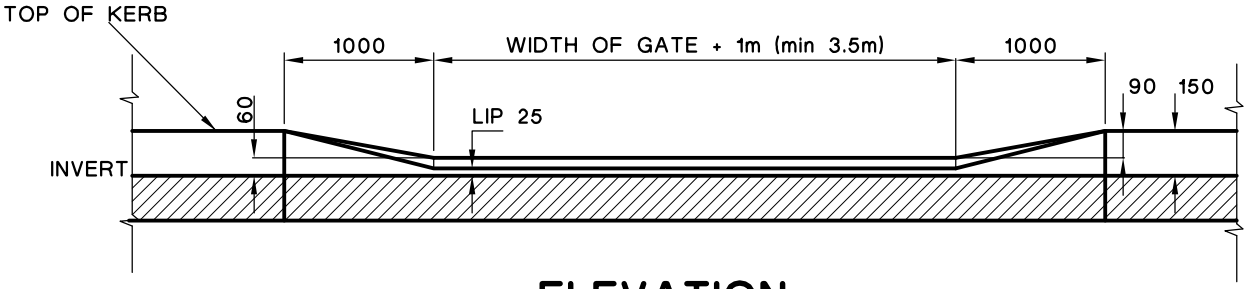
HORNSBY COUNCIL

STANDARD GPT LITTER BASKET

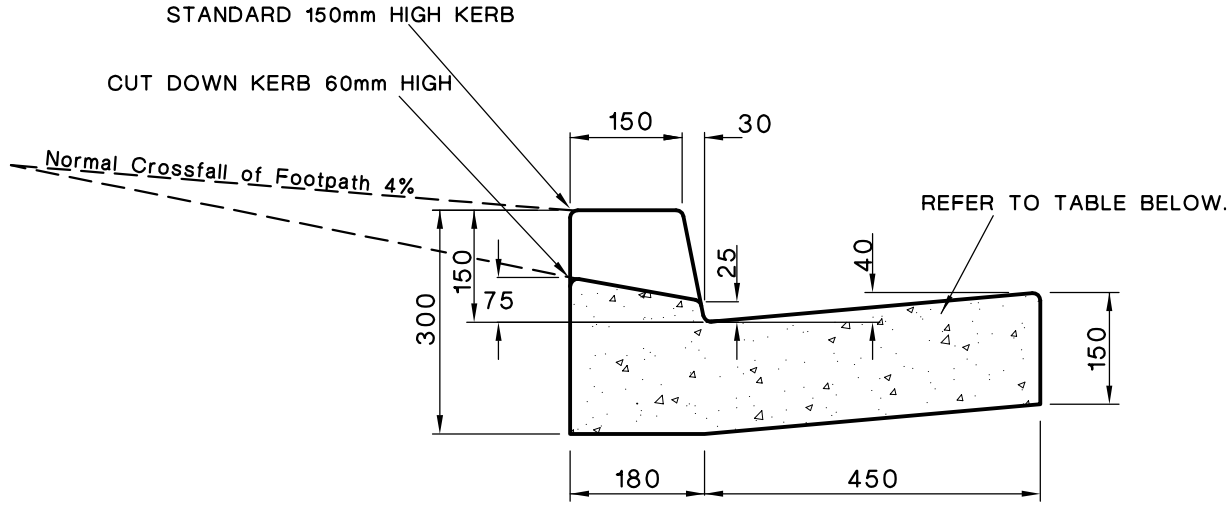
HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY



PLAN



ELEVATION



SECTION A-A

CUT DOWN KERB & GUTTER SECTION

NOTES:

1. ALL EDGES TO BE SHAPED WITH AN EDGING TOOL (25mm RADIUS).
2. COMPRESSIVE STRENGTH OF CONCRETE TO BE NOT LESS THAN 20MPa AT 28 DAYS.
3. THE ROAD BASE COURSE IS TO BE EXTENDED BENEATH THE KERB AND GUTTER.
4. MASTIC JOINTS TO BE PLACED NO MORE THAN 6.0m AND NOT LESS THAN 4.0m INTERVALS.
5. CUT-DOWN LAYBACKS ONLY TO BE USED IN RESIDENTIAL AREAS WHERE THEY ARE CONSTRUCTED IN CONJUCTION WITH KERB & GUTTER WORKS
6. ADJUST NATURESTRIP TO SUIT NEW CROSSING. (MAX. SLOPE 1 IN 8)

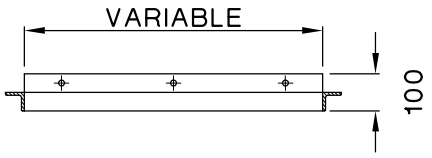
CROSSING TYPE	LAYBACK THICKNESS & REINFORCEMENT
RESIDENTIAL	150mm
RESIDENTIAL H.D.	150mm, F72
COMMERCIAL	200mm, 2×F72

STD DWG No.28

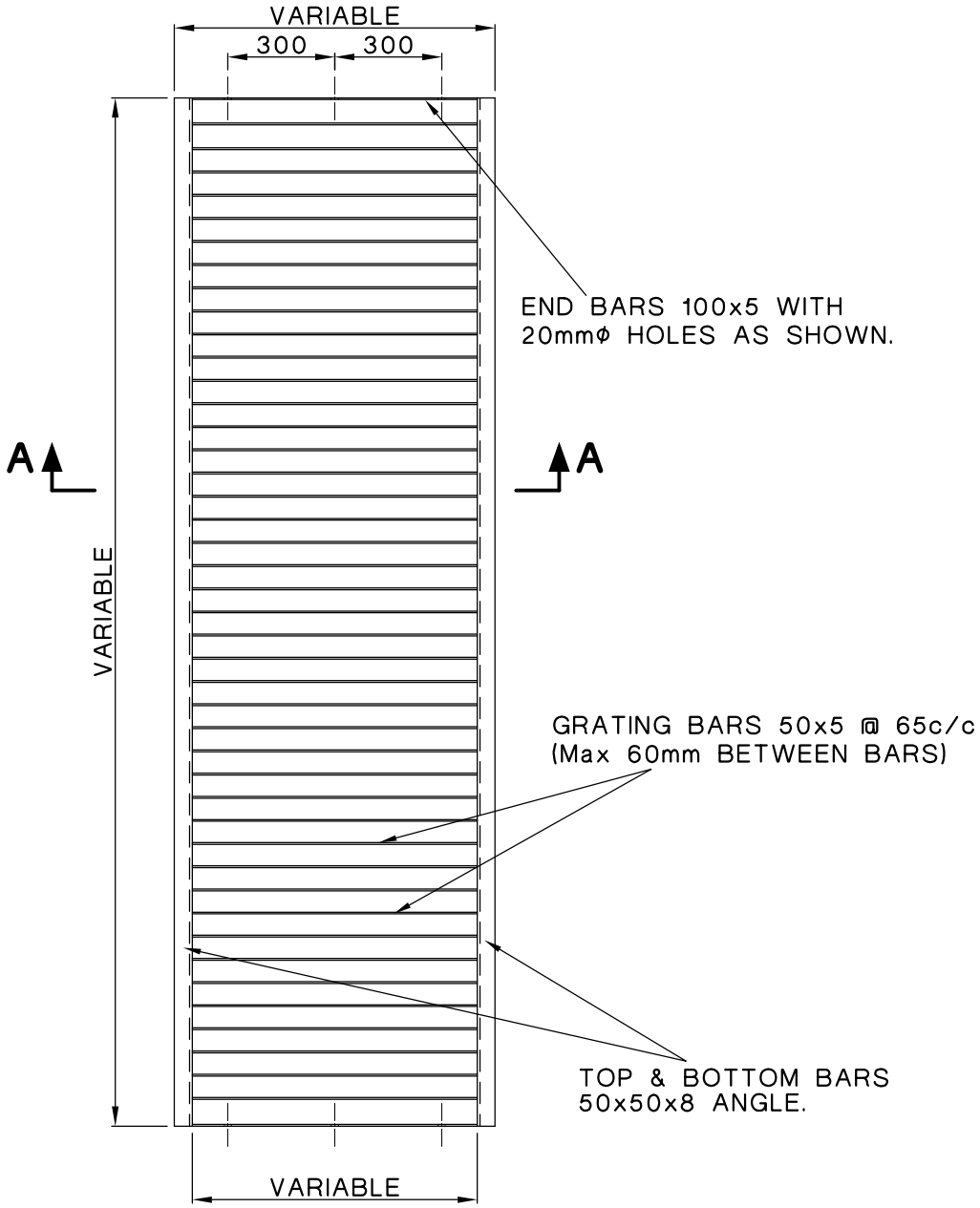
HORNSBY COUNCIL

STANDARD CUT-DOWN LAYBACK

HORNSBY COUNCIL DESIGN BRANCH DECEMBER 1998 DIAGRAMMATIC ONLY



SECTION A-A



PLAN

NOTE:
RACK TO BE HOT-DIP GALVANISED
AFTER FABRICATION.

STD DWG No.29

HORNSBY COUNCIL

STANDARD ANGLED TRASH RACK

HORNSBY COUNCIL DESIGN BRANCH APRIL 2005 DIAGRAMMATIC ONLY

HORNSBY COUNCIL

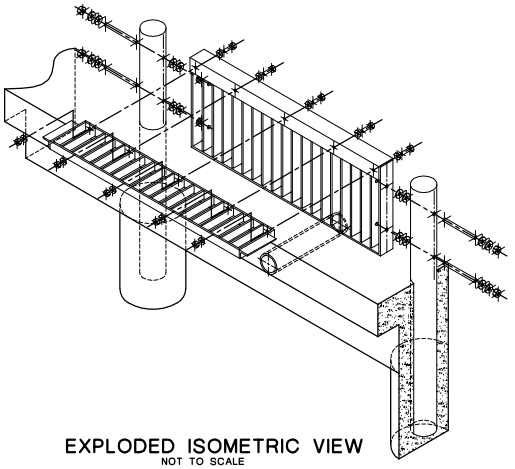
STANDARD TRASH RACK DETAILS

STD DWG No.30

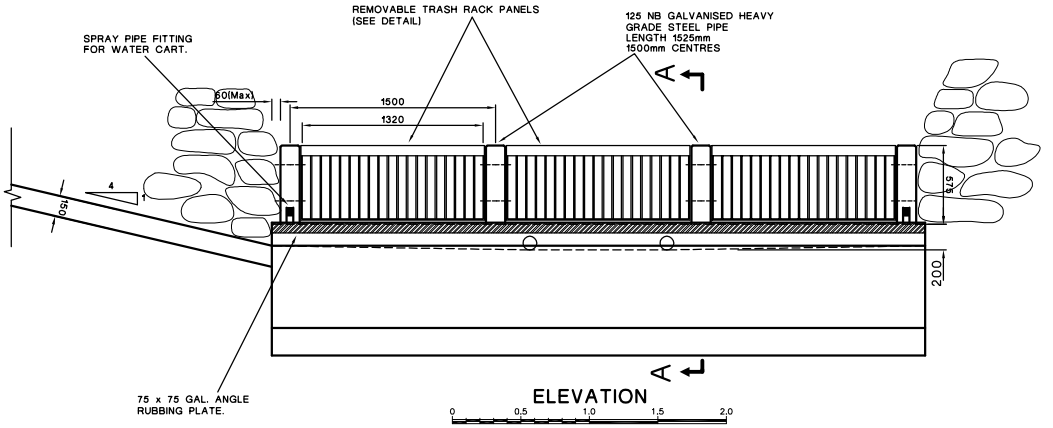
NOTE: ALL STEEL WORK TO BE HOTDIP GALVANISED

FABRICATED PARTS REQUIRED

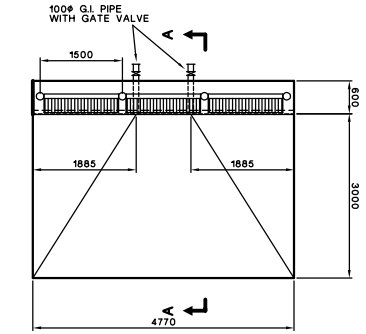
DESCRIPTION	No.OFF
HORIZONTAL RACK 1340x250, GALVANISED	3
VERTICAL RACK 1340x545 GALVANISED	3
GALVANISED ANGLE 75x75x10x4770 LONG	1
M16 GAL BOLT,NUT & WASHERS 60 LONG	15
20ϕ x 250 LONG GAL THREADED ROD WITH 2 NUTS & WASHERS	8
125NB HEAVY GRADE GAL PIPE 1425 LONG WITH GAL CAP.	4



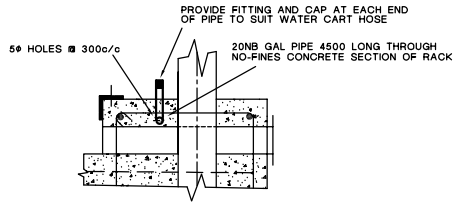
EXPLODED ISOMETRIC VIEW
NOT TO SCALE



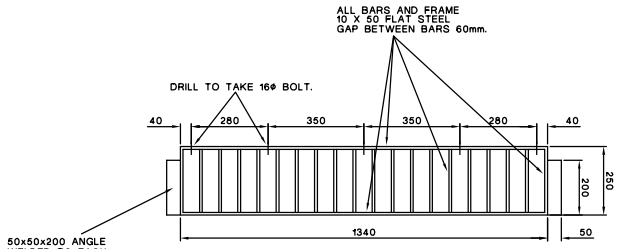
ELEVATION



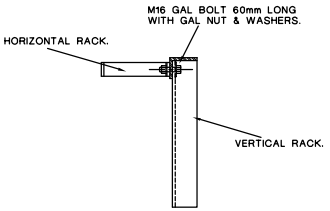
PLAN VIEW



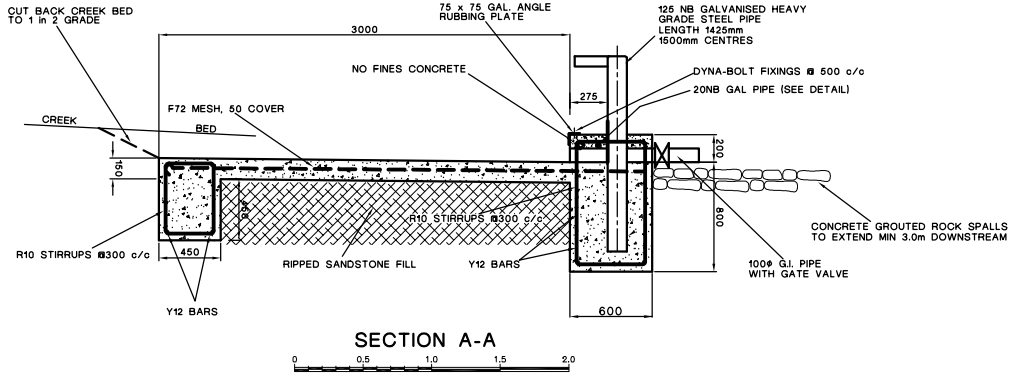
DETAIL
NOT TO SCALE



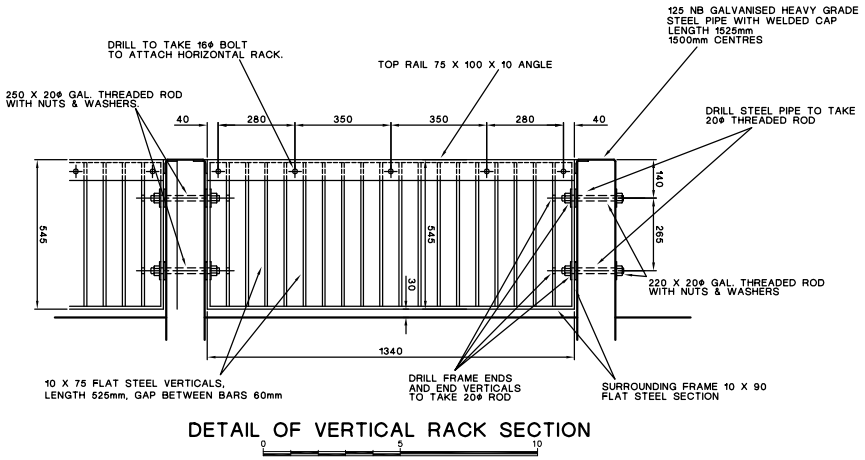
DETAIL OF HORIZONTAL RACK SECTION



DETAIL FOR FIXING HORIZONTAL AND VERTICAL RACK SECTIONS
NOT TO SCALE



SECTION A-A



DETAIL OF VERTICAL RACK SECTION