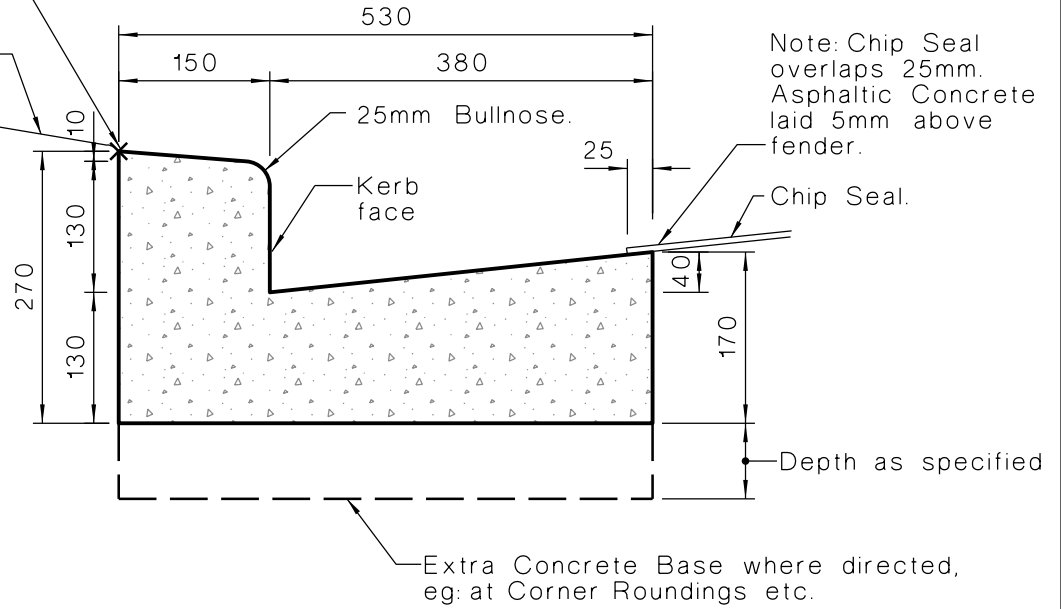


Top of Kerb sloped 10mm.
Kerb Levels on Plan given to this Point

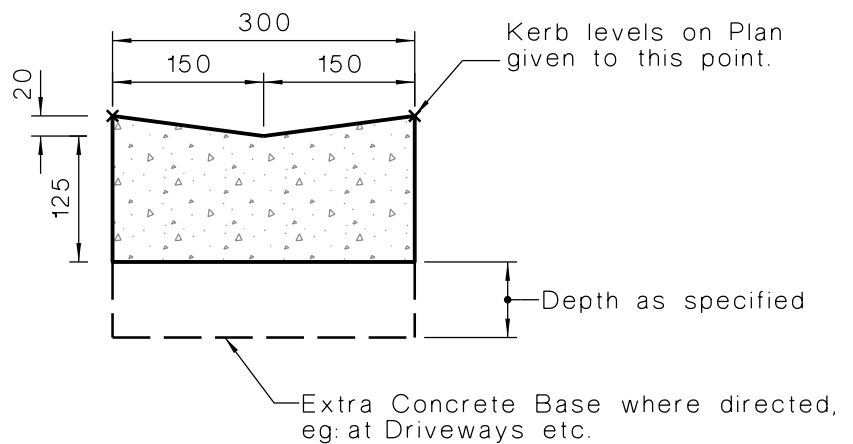
Asphaltic Concrete Path, Grass Berm or Landscape area.



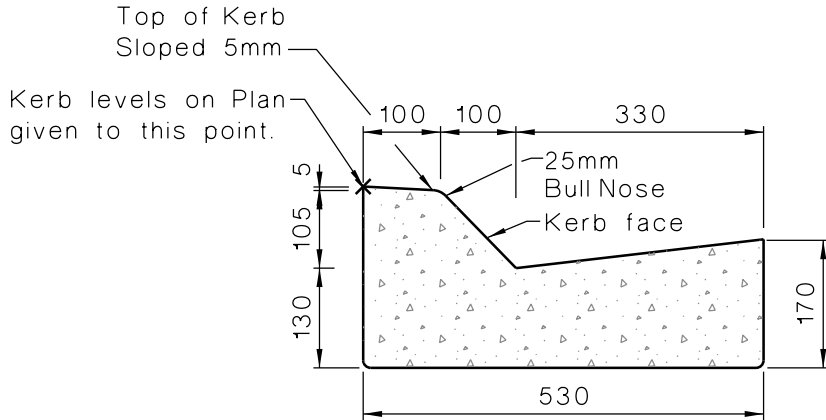
KERB AND FLAT CHANNEL

NOTES:

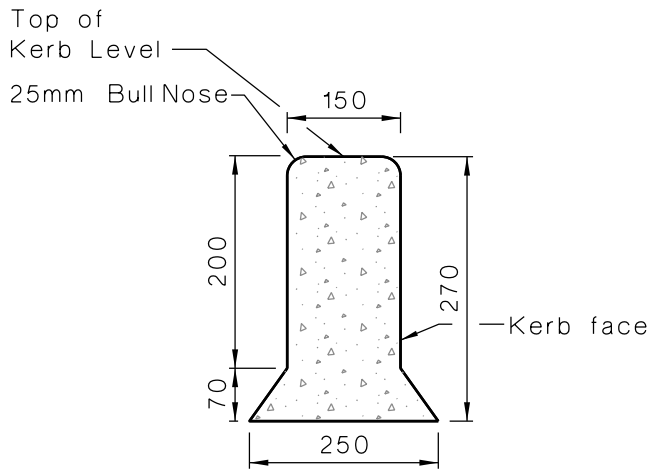
1. Concrete strength to be 20MPa at 28 days.
2. Concrete Finish to conform with Class U3 of NZS3114.
3. Limits of excavation to be sawcut if path and/or carriageway is not to be reconstructed.



BACK OF PATH AND INTERPATH CHANNEL



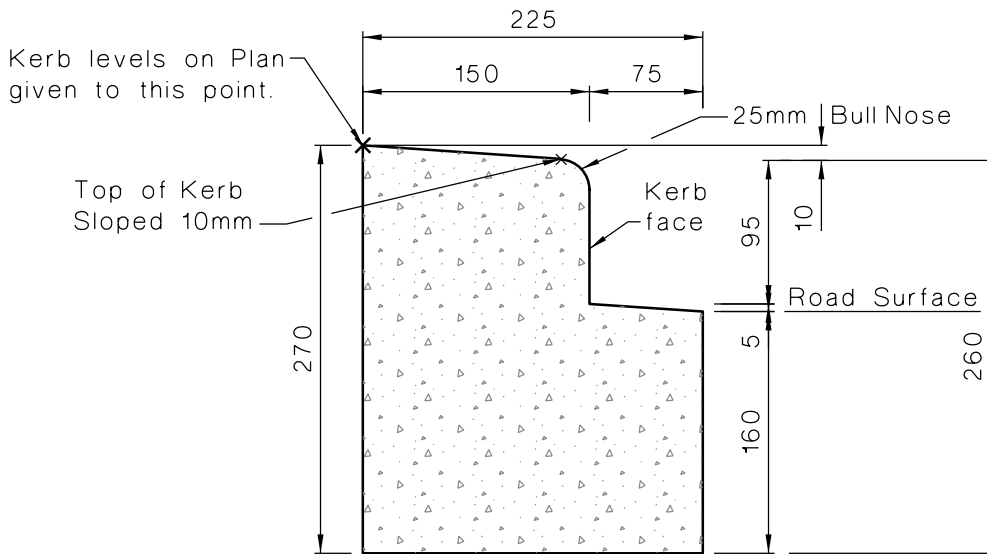
LOW PROFILE
KERB AND FLAT CHANNEL



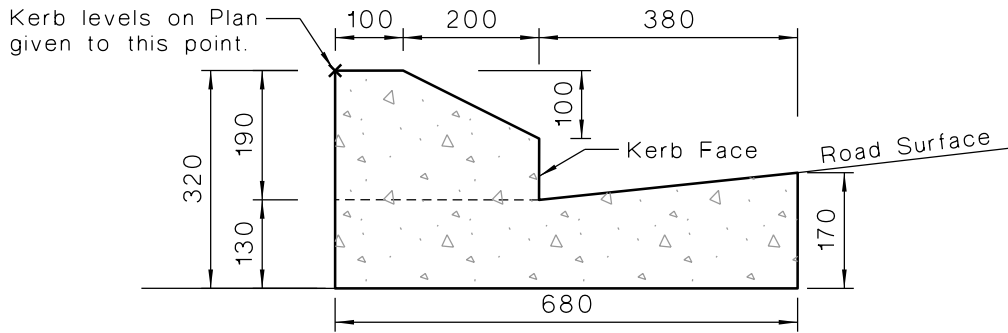
KERB ONLY

NOTES:

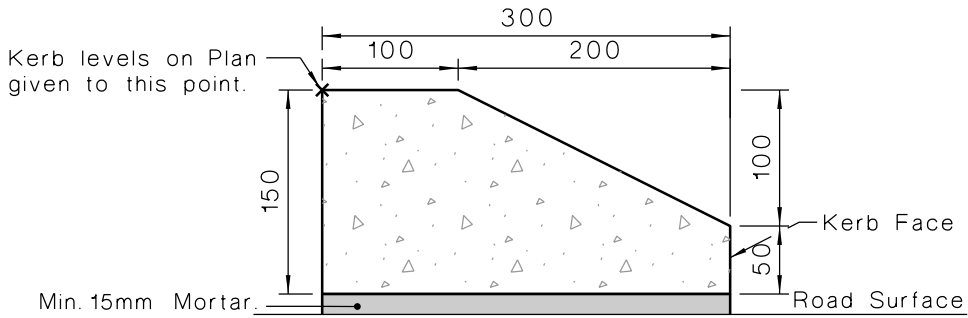
1. Concrete strength to be 20MPa at 28 days.
2. Concrete Finish to conform with Class U3 of NZS3114.
3. Limits of excavation to be sawcut if path and/or carriageway is not to be reconstructed.
4. Kerb entry adaptors shall not to be installed in low profile Kerb & Channel.



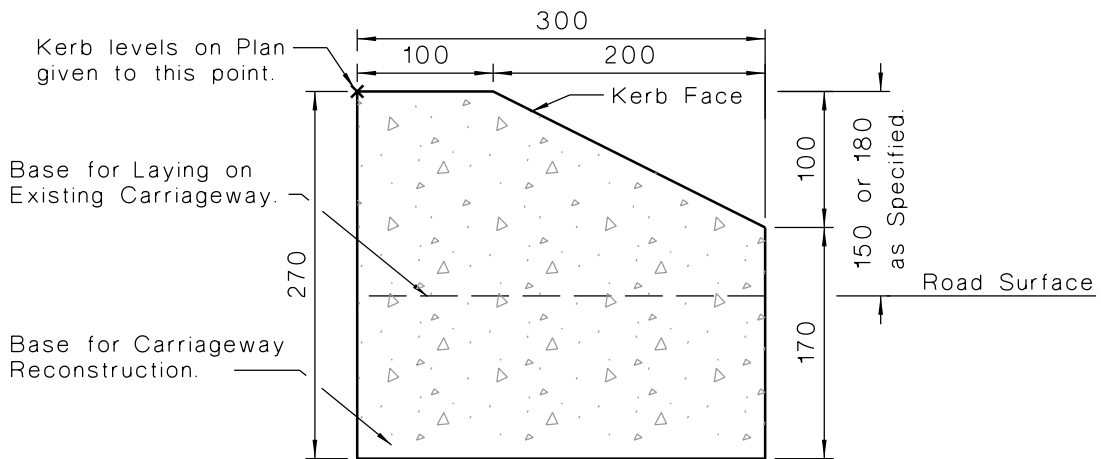
KERB AND NIB



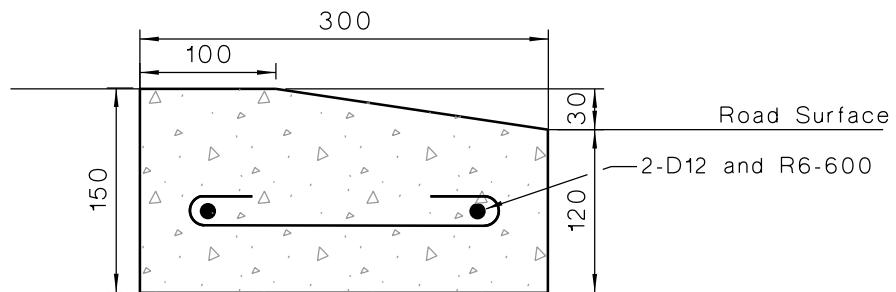
MOUNTABLE MEDIAN KERB AND FLAT CHANNEL



PRECAST MOUNTABLE MEDIAN KERB BLOCKS



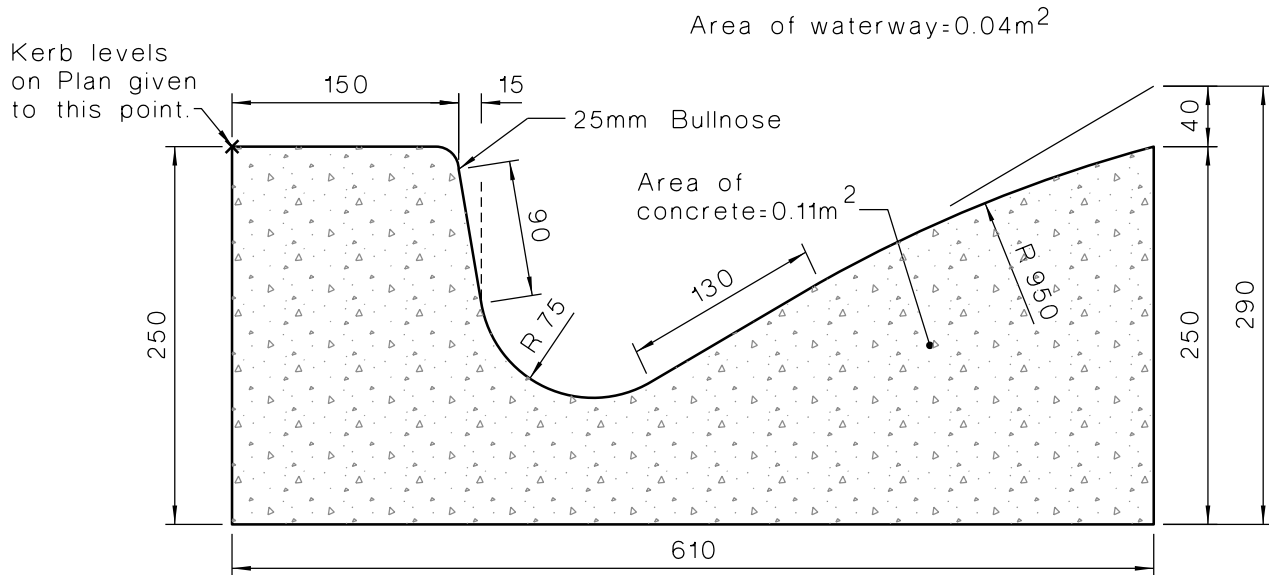
IN SITU MOUNTABLE MEDIAN KERB



LOW MOUNTABLE KERB

NOTES:

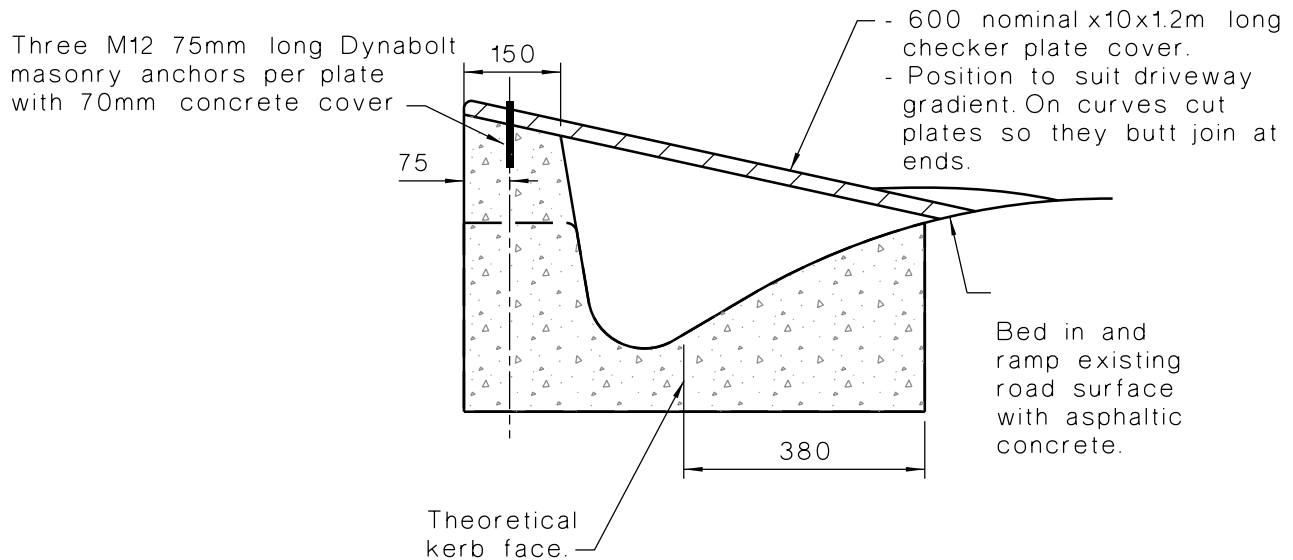
1. Concrete Strength to be 20MPa at 28 days.
2. Concrete Finish to Conform with Class U3 of NZS3114.
3. Length of Precast Block 600mm.



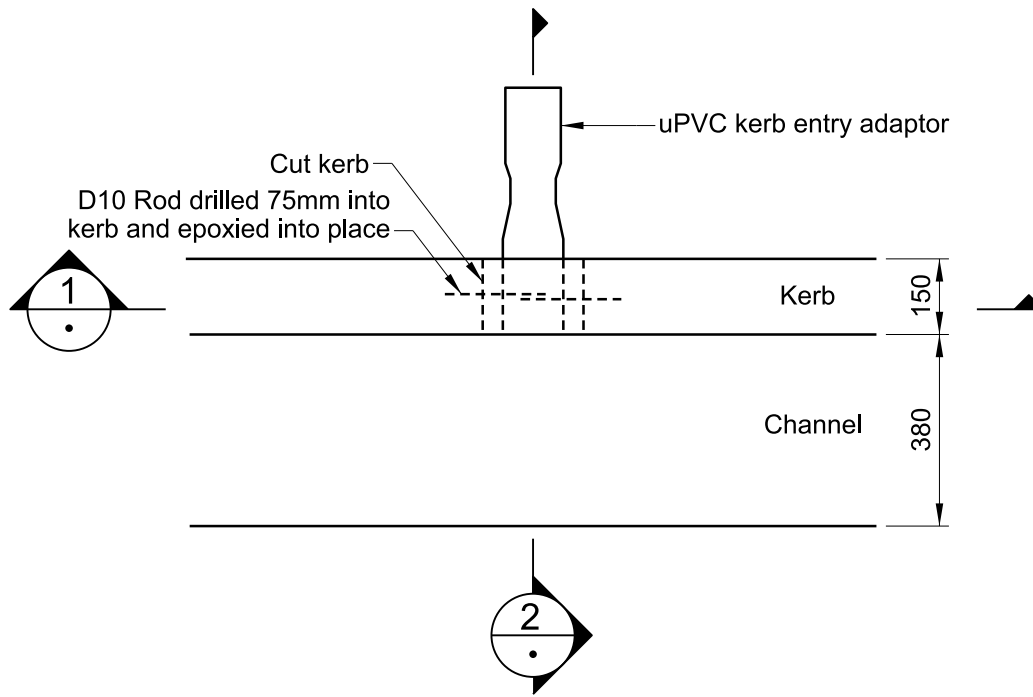
HILLSIDE CHANNEL

NOTES:

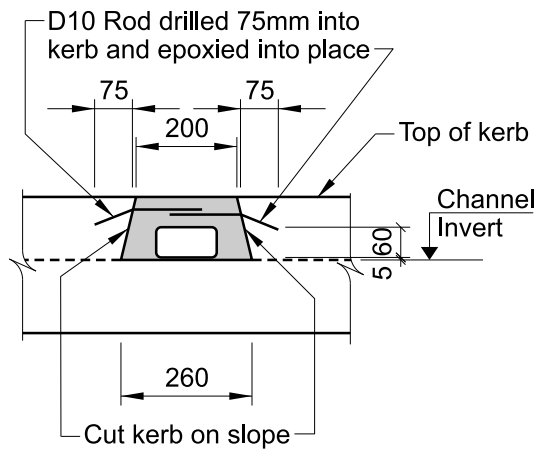
1. Concrete strength to be 20MPa at 28 days.
2. Concrete Finish to conform with Class U3 of NZS3114.



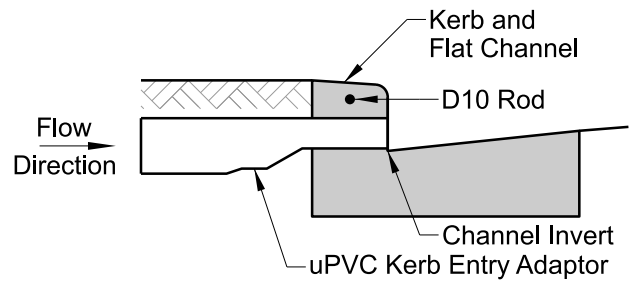
VEHICLE CROSSING FOR HILLSIDE CHANNEL



PLAN



DETAIL 1

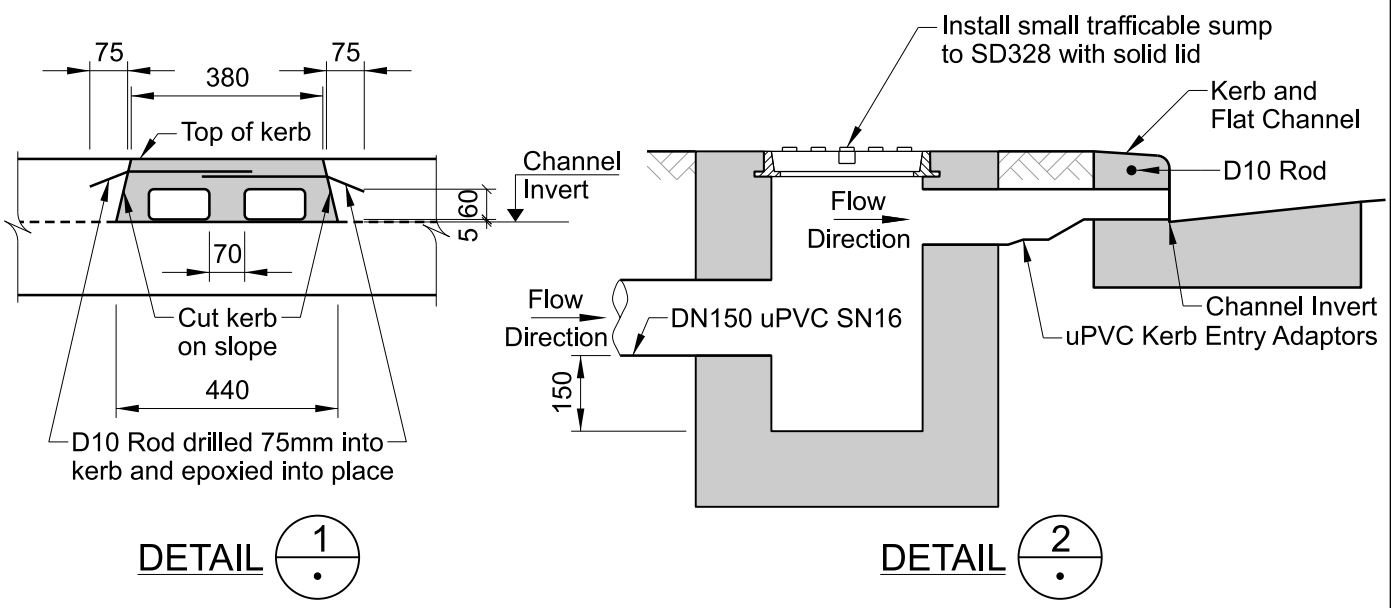
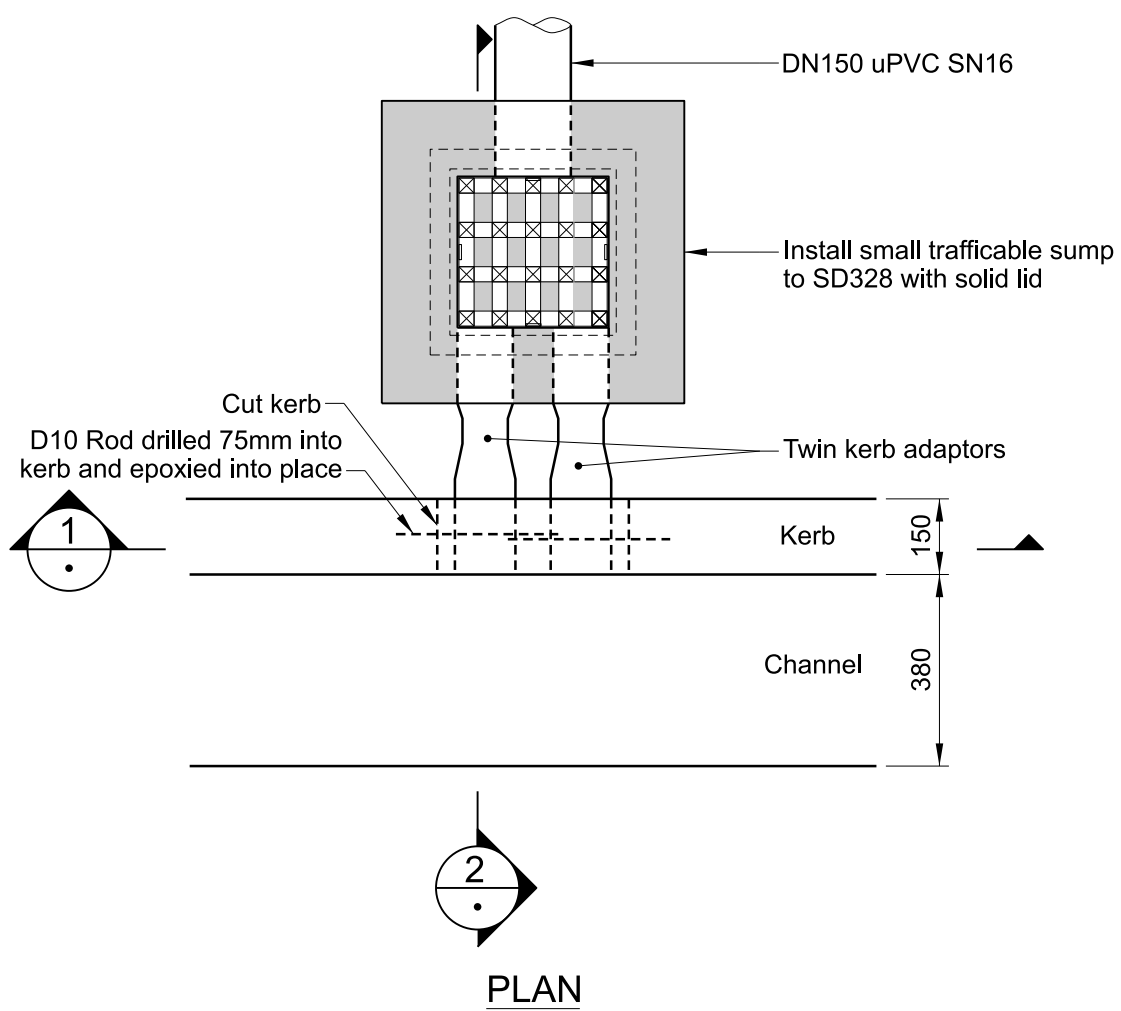


DETAIL 2

KERB ENTRY

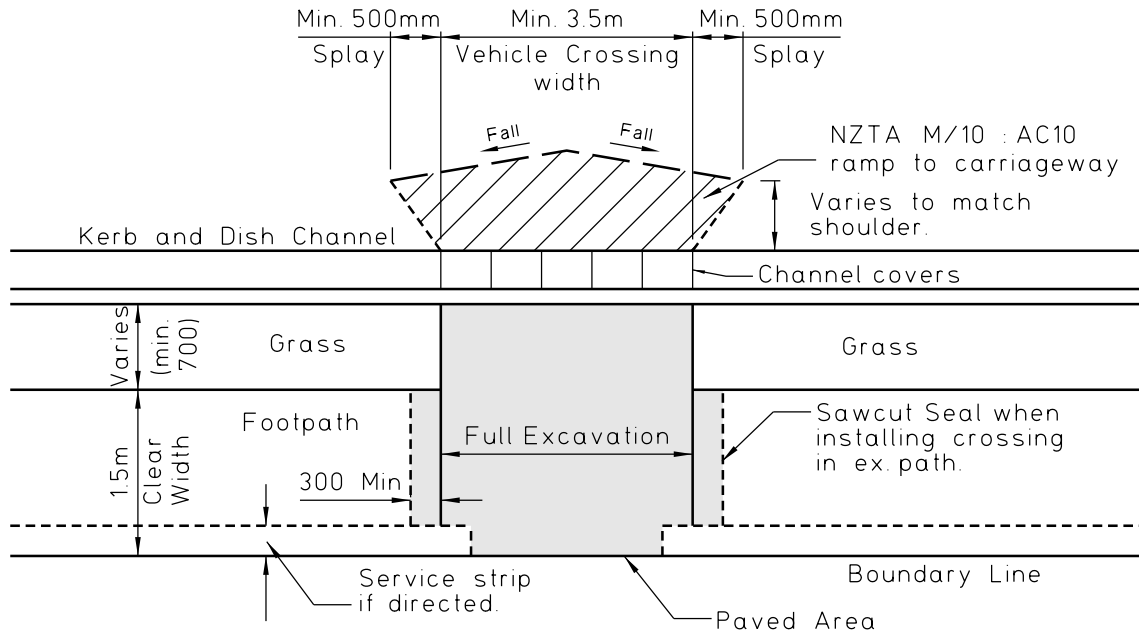
NOTES:

1. Stormwater Outlets in kerbs to be at 200mm centres minimum.
2. Kerb entry adaptor to be installed in conjunction with the pouring of the kerb and channel.
3. If kerb entry adaptor is installed after concrete has hardened then kerb is to be cut on slope as shown in detail 1 above.



NOTES:

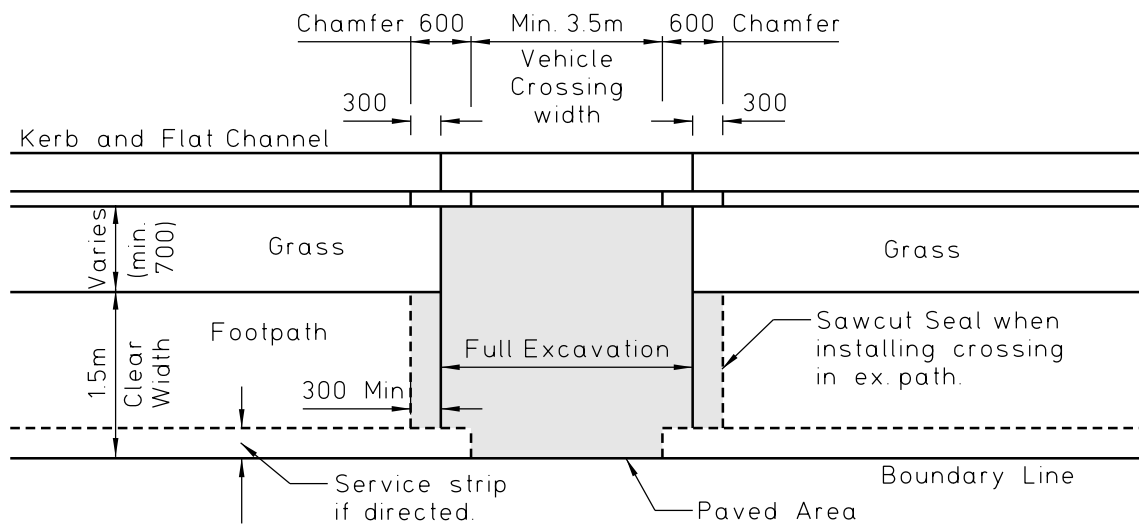
1. If kerb entry adaptor is installed after concrete has hardened then kerb is to be cut on slope as shown in detail 1 above.
2. To be used in conjunction with a 150mm uPVC outlet lateral and Small Trafficable Sump to SD328 with solid lid.



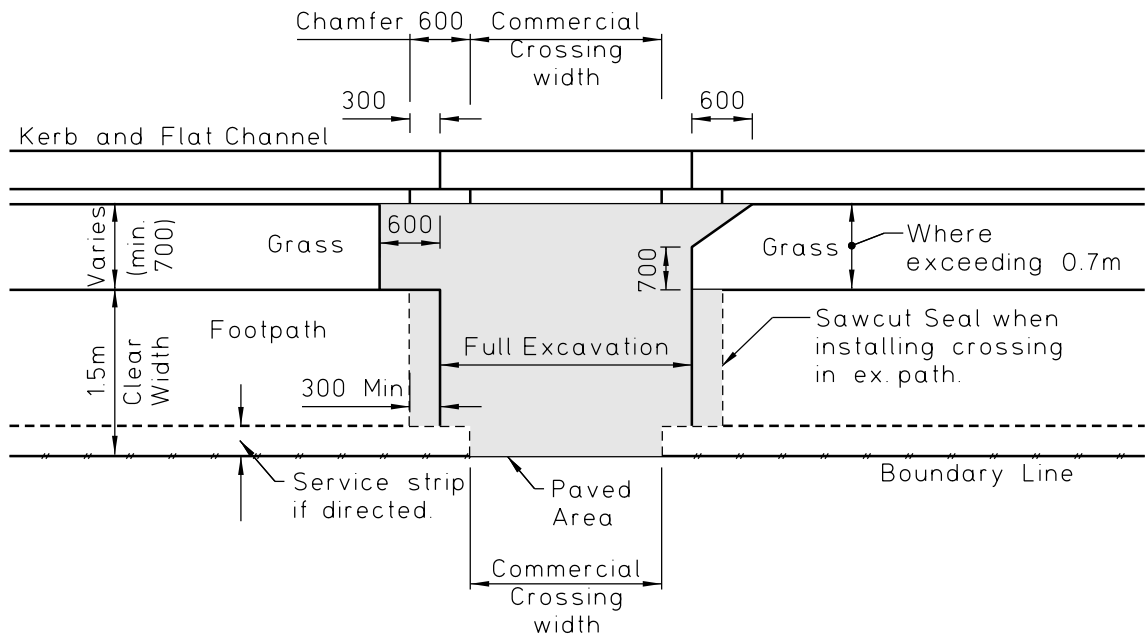
KERB AND DISH CHANNEL

NOTES:

1. Crossing locations and widths to comply with current District Plan.
2. Where two crossings in Kerb & Dish Channel are within 1m of each other they shall be joined to form one continuous crossing and a cleaning opening shall be installed centrally to the crossing.
3. Where two crossings in Kerb & Flat channel are separated by up to 1m of full height kerb, they shall be joined to form one continuous crossing.
4. Minimum residential Vehicle Crossing width to be 3.5m
5. Batten to be laid to top of chamfer when residential crossing is adjacent to landscaping or cobblestones.
6. Kerb entries to be installed no closer than 10m from top of chamfer.



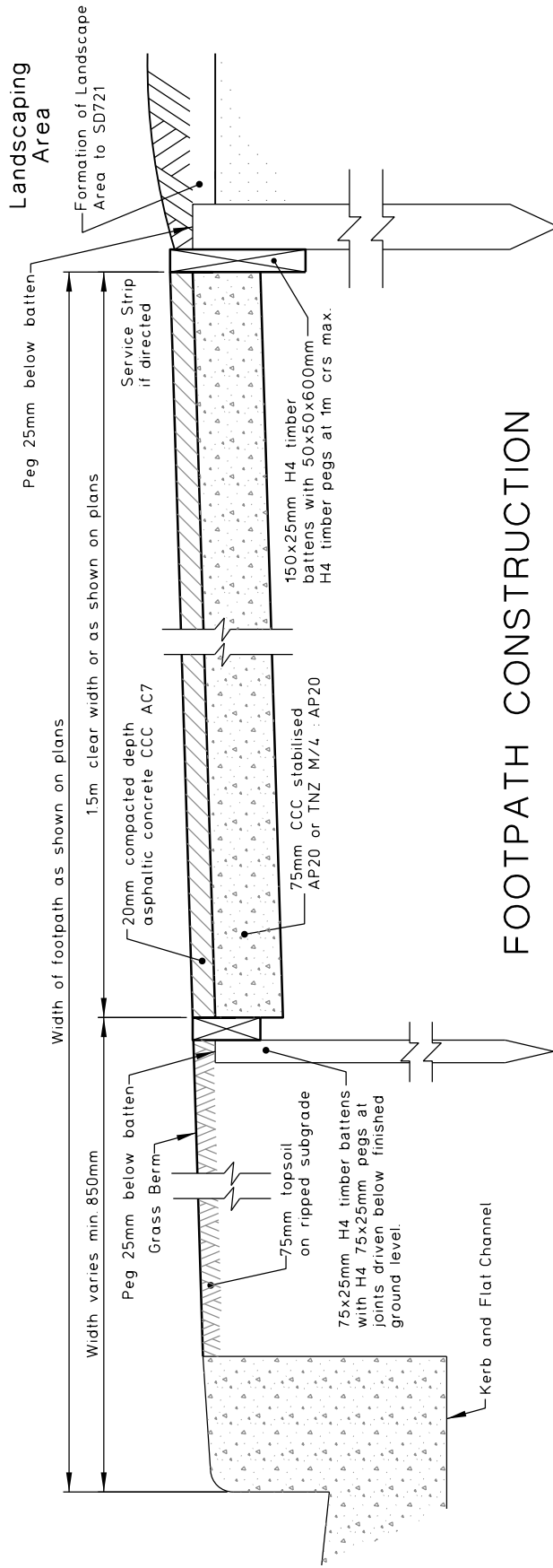
KERB AND FLAT CHANNEL



NOTES:

1. Maximum width of commercial crossing to be 9.0m

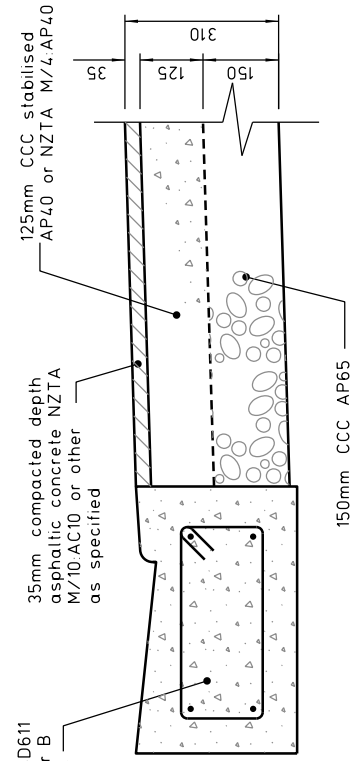




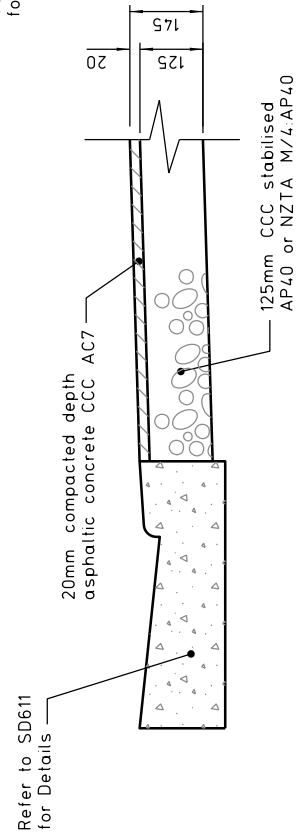
FOOTPATH CONSTRUCTION

NOTES:

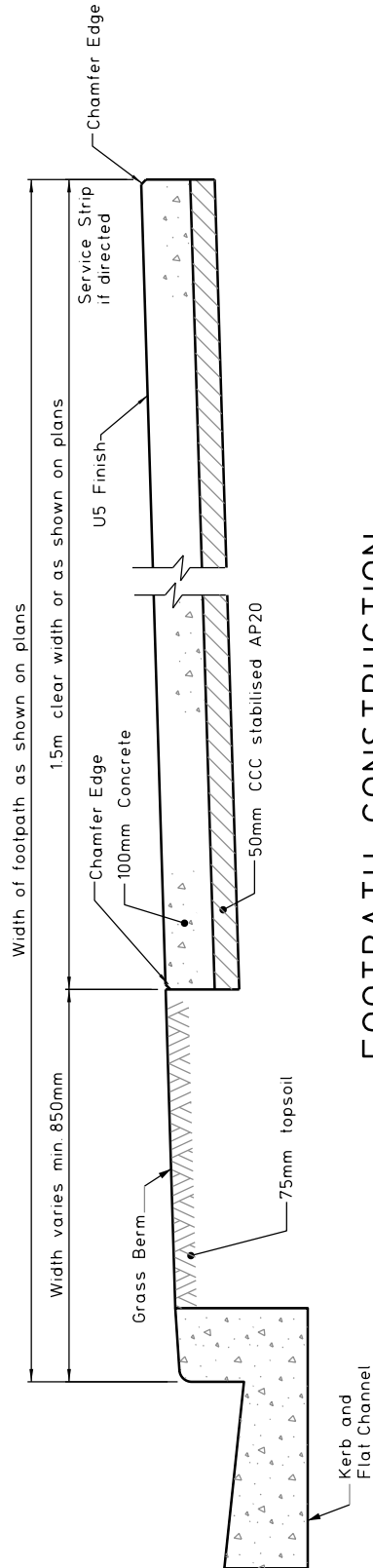
1. Crossfall to be nominally 2.0% (min 1.25%, max 3.0%) or as shown on the plans.
2. Battens not required where metalcourse contained by concrete kerbs or concrete foundations.
3. Battens retaining rights of way and commercial crossings to be 90 x 40mm H4 timber battens with H4 90 x 40mm pegs.
4. Subgrade and metalcourse to be treated with soil sterilant.
5. Existing sealed paths and drives to be sawcut at limits of new paths.
6. Crossings that provide access to 10 or more residential units / dwellings shall be constructed as a commercial crossing.



COMMERCIAL CROSSING



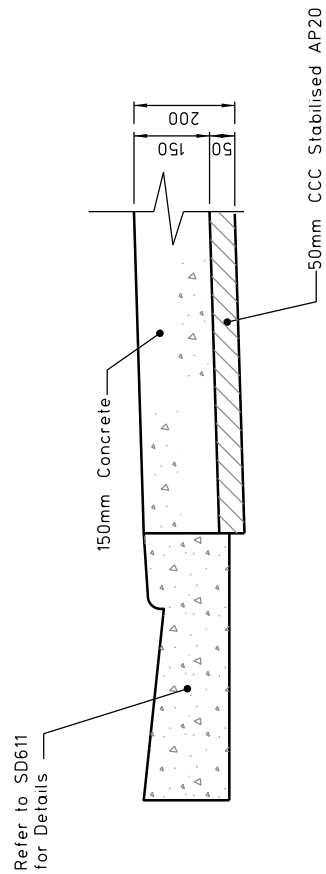
RESIDENTIAL CROSSING



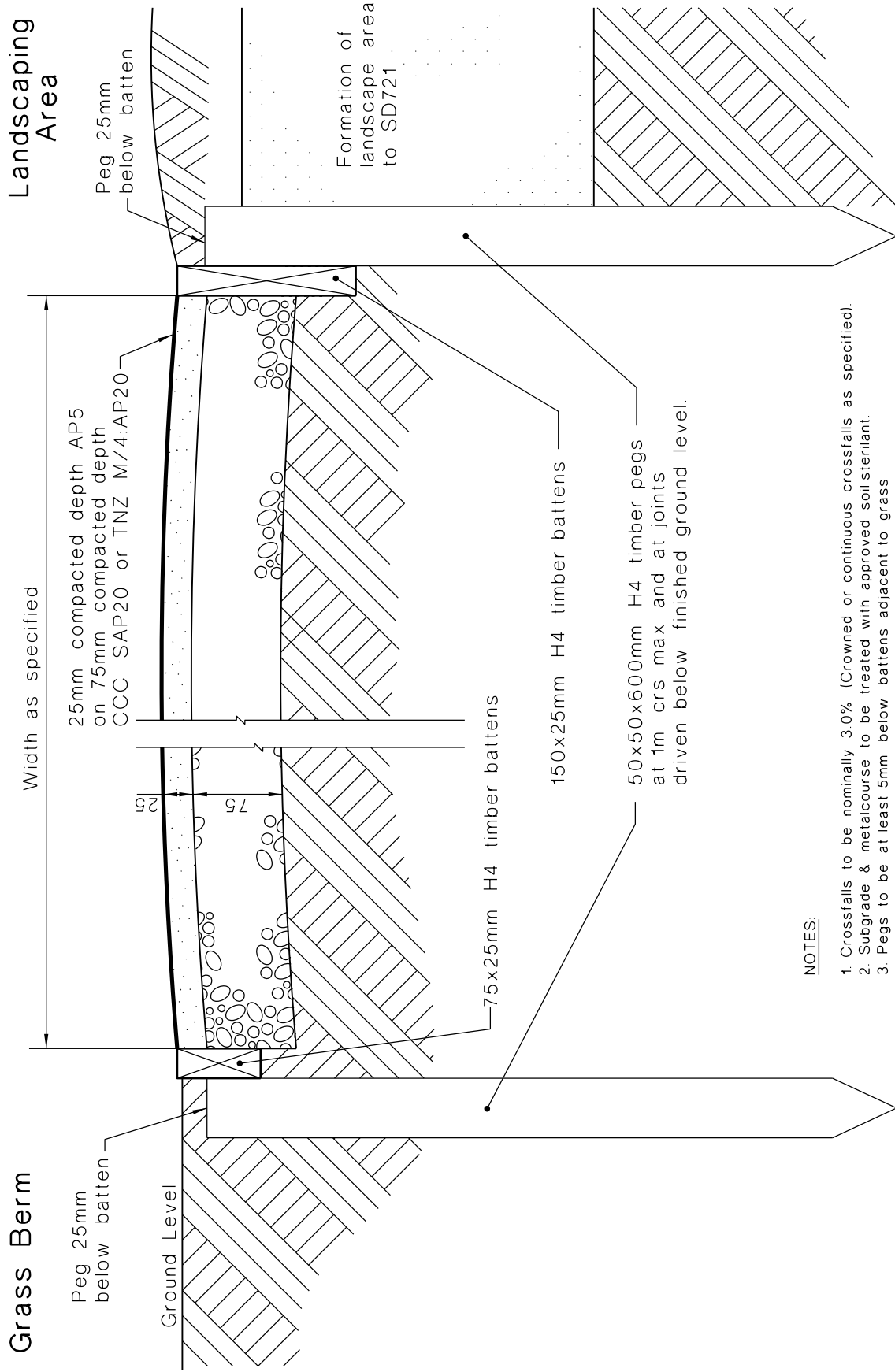
FOOTPATH CONSTRUCTION

NOTES:

1. Crossfall to be nominally 2.0% (min 1.25% max 3.0%) or as shown on the plans.
2. Existing sealed paths and drives to be sawcut at limits of new paths.
3. Construction Joints to be formed at maximum 3.0m centres.
4. All formwork to be removed.
5. Commercial crossings require site specific engineering design.

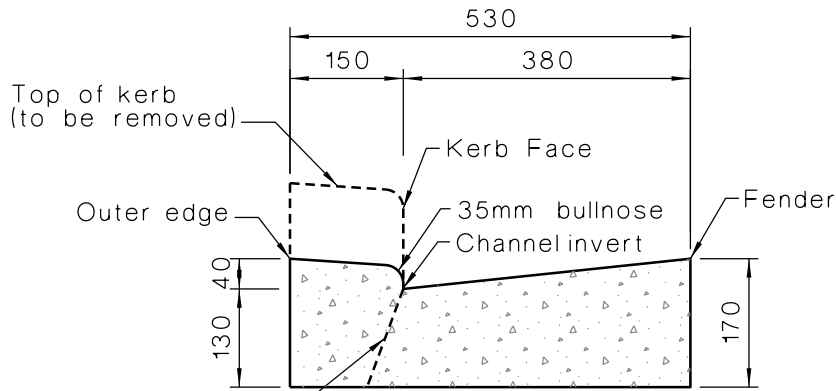


RESIDENTIAL CROSSING



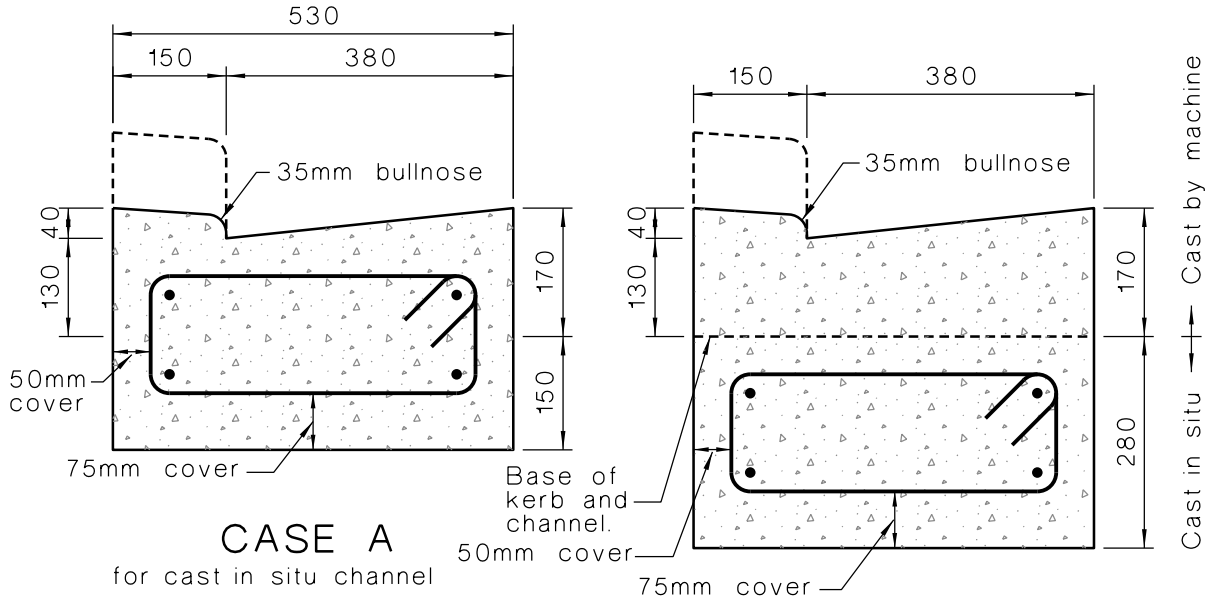
NOTES:

1. Crossfalls to be nominally 3.0% (Crowned or continuous crossfalls as specified).
2. Subgrade & metalcourse to be treated with approved soilsterilant.
3. Pegs to be at least 5mm below battens adjacent to grass and 25mm below battens adjacent to landscape areas.



Line of cut to form cut down in existing Kerb and Channel or when reinstating full height kerb

RESIDENTIAL



CASE A

for cast in situ channel

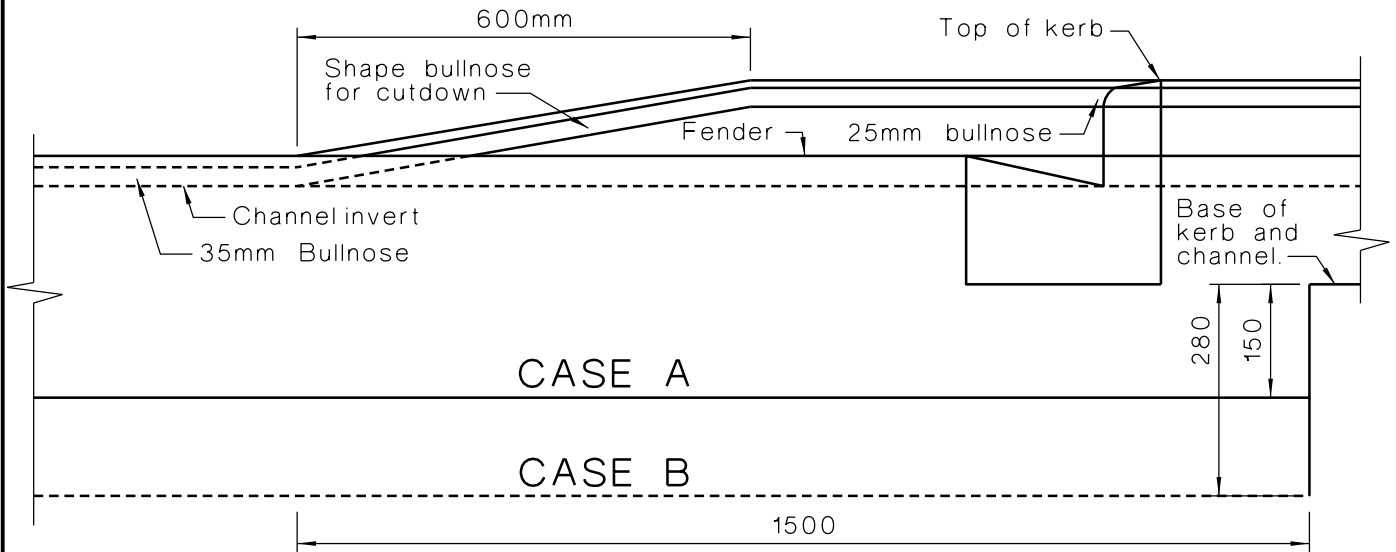
CASE B

for extrusion machine type channel

COMMERCIAL

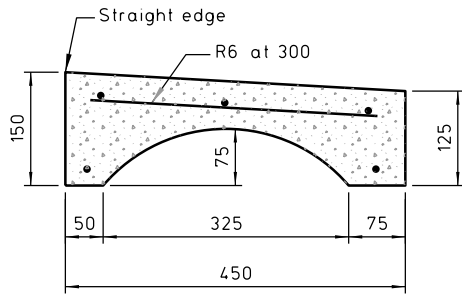
NOTES:

1. Reinforcement 4-D12 and R6-600
2. Reinforcement beam to extend 1.5m from base of cutdown at each end.
3. Concrete to be 20MPa at 28 days.
4. Concrete finish on exposed faces to conform with Class U3 of NZS3114.

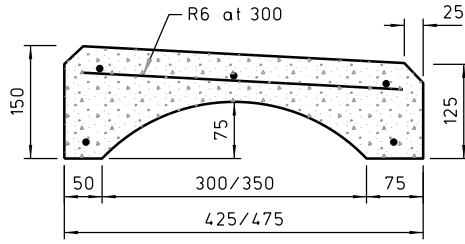


CASE A

CASE B



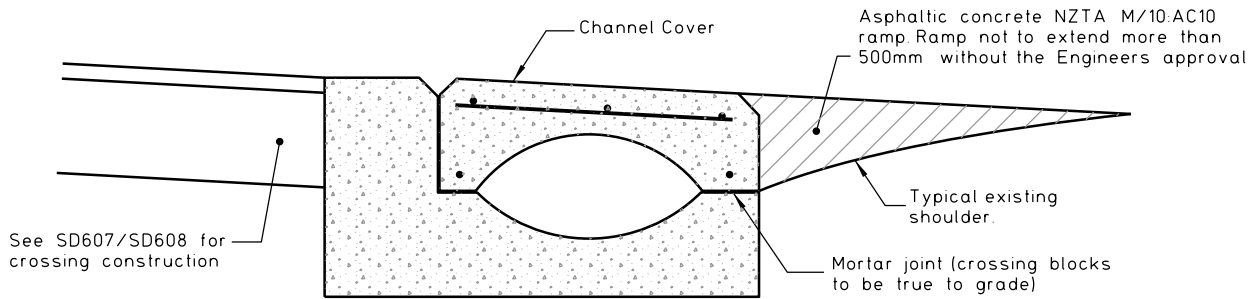
TYPE A



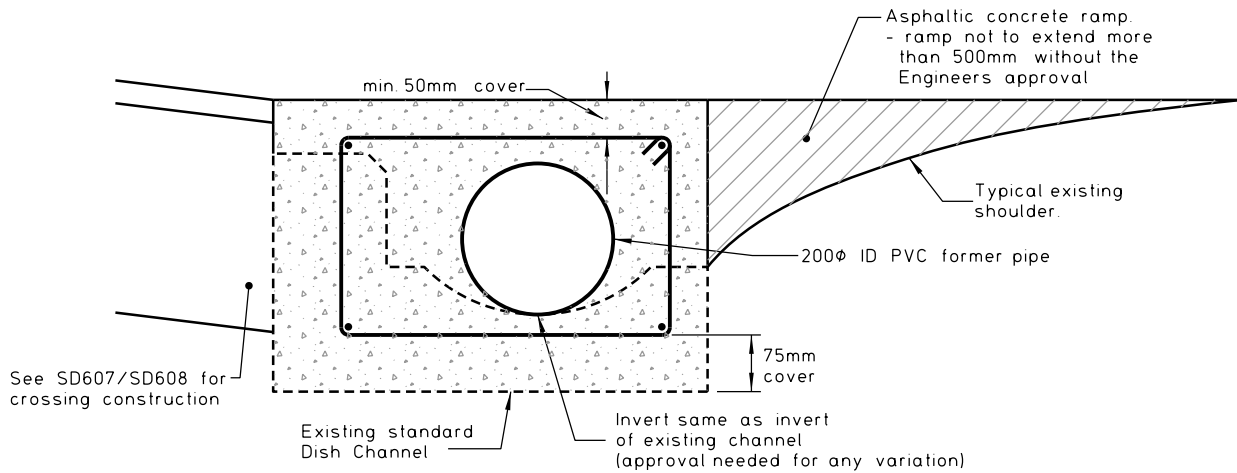
TYPE B

- NOTES:
1. All concrete 35 MPa.
 2. 5-D12 reinforcing bars and 2-R6 at 300.

STANDARD PRECAST CHANNEL COVERS 475mm x 500mm, 450mm x 500mm & 425mm x 500mm

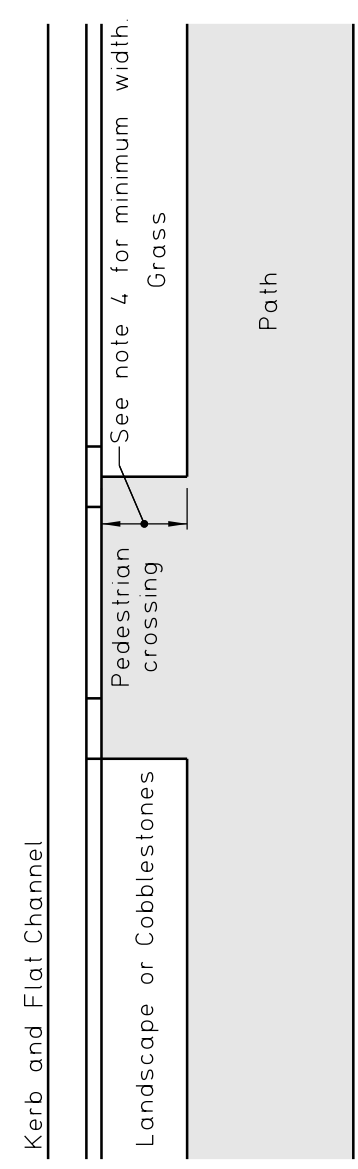
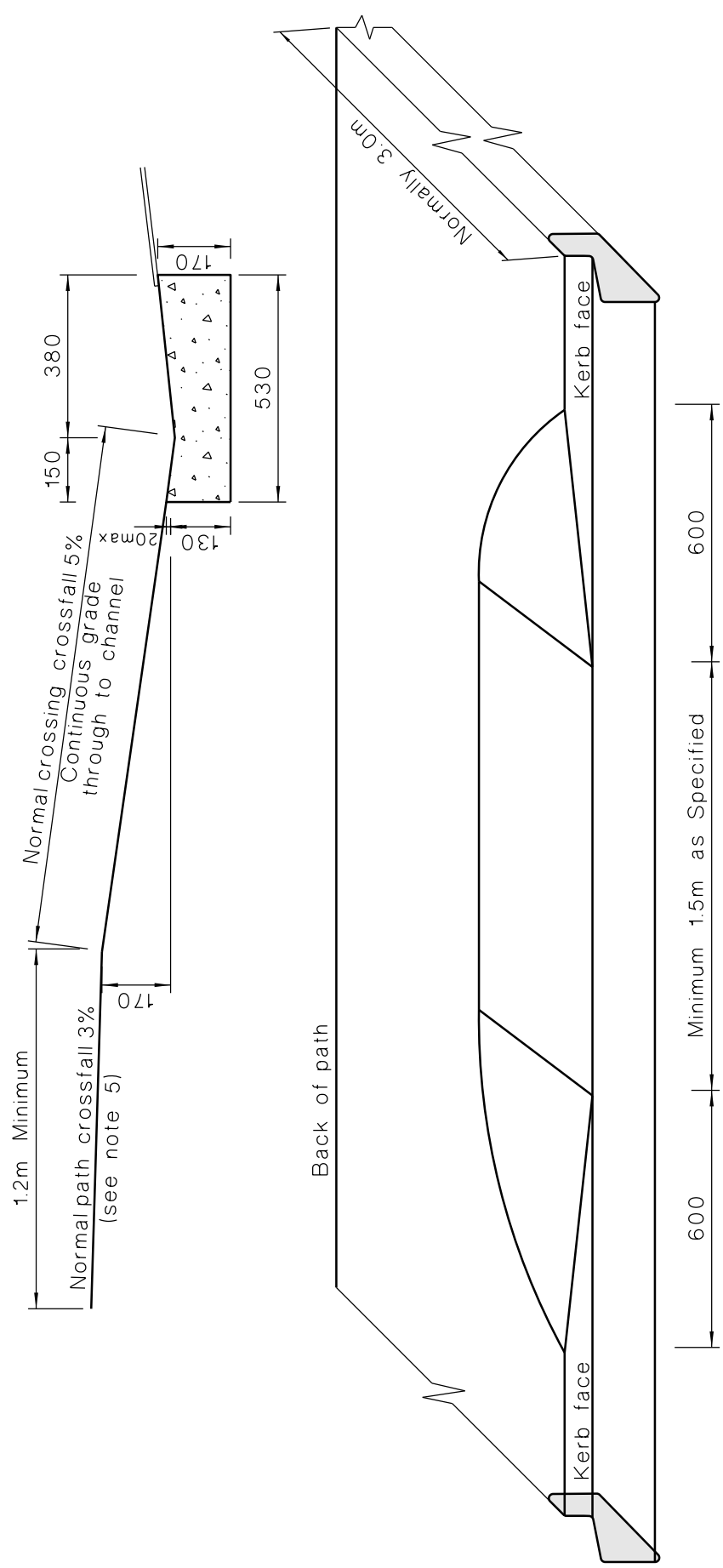


RESIDENTIAL



- NOTES:
1. All concrete 20 MPa at 28 days.
 2. Reinforcement 4-D12 R6-600
 3. NZTA M/10:AC10 is an acceptable alternative surfacing for the vehicle crossing.
 4. Refer to SD606 for ramp dimensions.

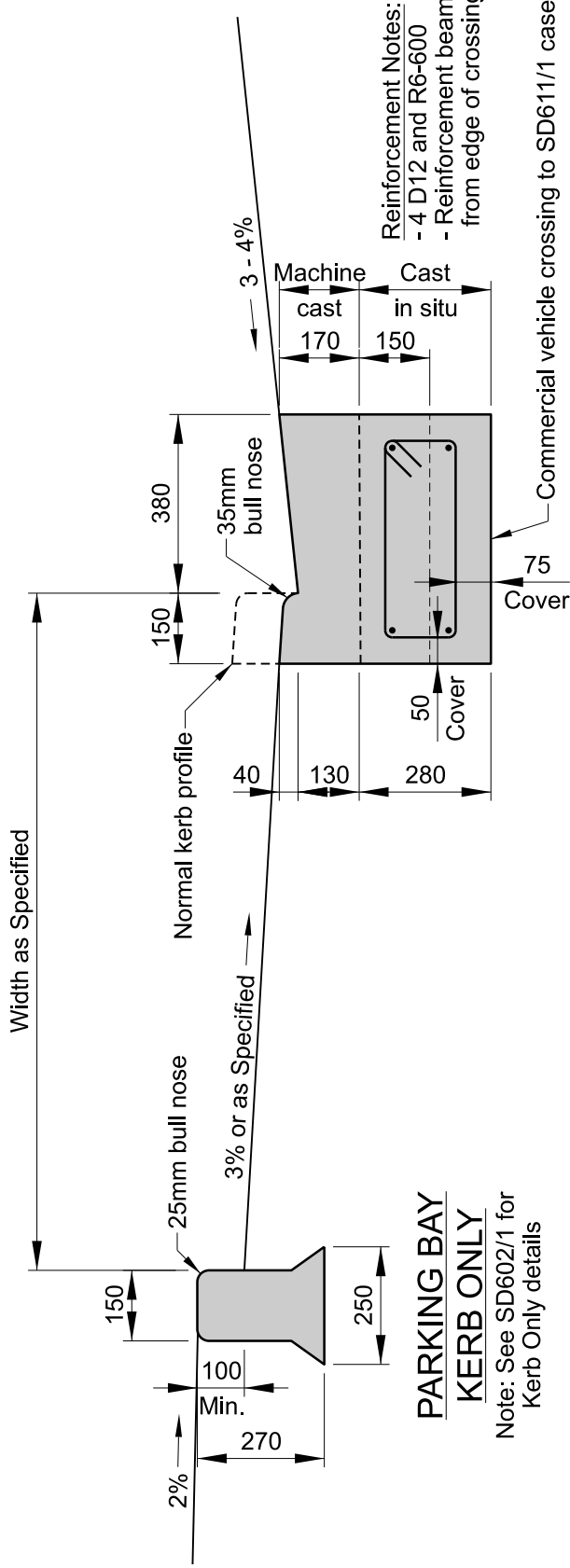
COMMERCIAL



NOTE:

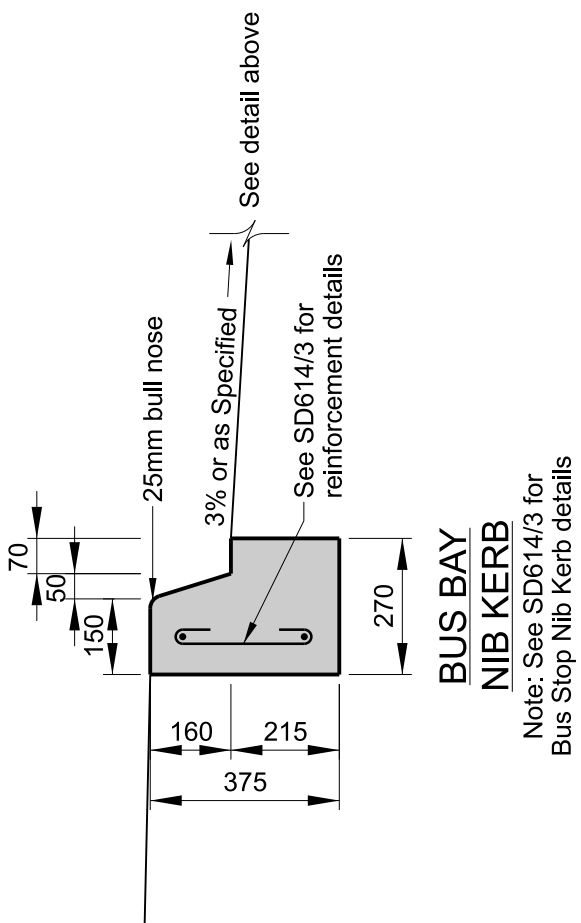
1. To be used for all pedestrian & cycle cutdowns.
2. Maximum gradient to be 8% in crossing area only.
3. Provide a holding rail to SD635/2 Detail C when utilising the maximum gradient.
4. Minimum width 700mm if berm or 1.5m if landscape.
5. Maintain normal crossfall over path length adjacent to crossing.

BATTEN LOCATION AT KERB



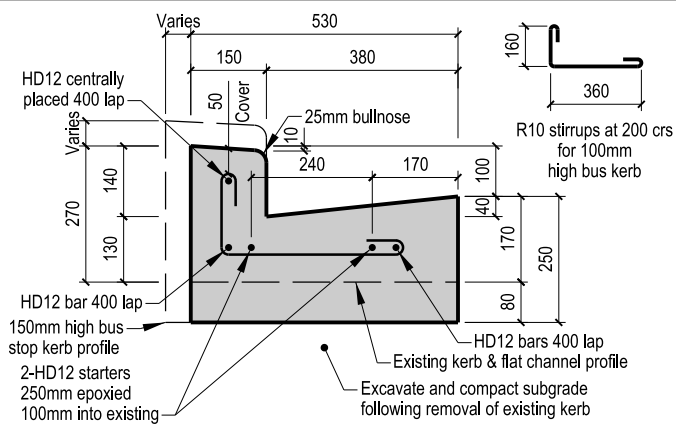
Reinforcement Notes:
 - 4 D12 and R6-600
 - Reinforcement beam to extend 1.5m from edge of crossing at each end.

**PARKING BAY
 KERB ONLY**
 Note: See SD602/1 for
 Kerb Only details

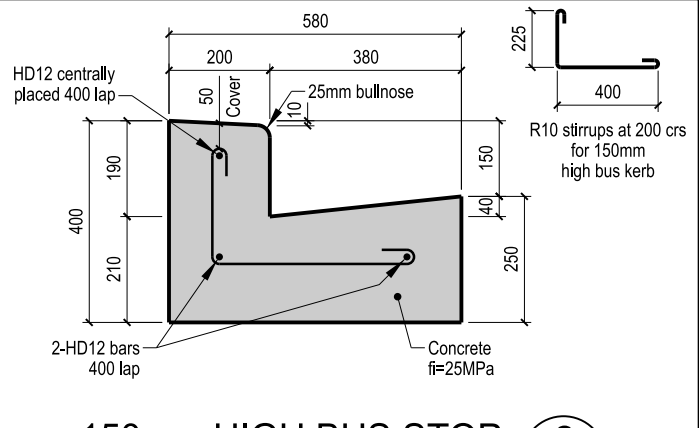


**BUS BAY
 NIB KERB**
 Note: See SD614/3 for
 Bus Stop Nib Kerb details

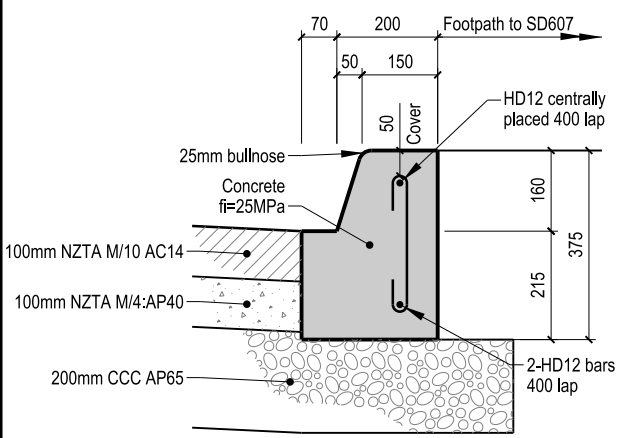
Commercial vehicle crossing to SD611/1 case A or case B



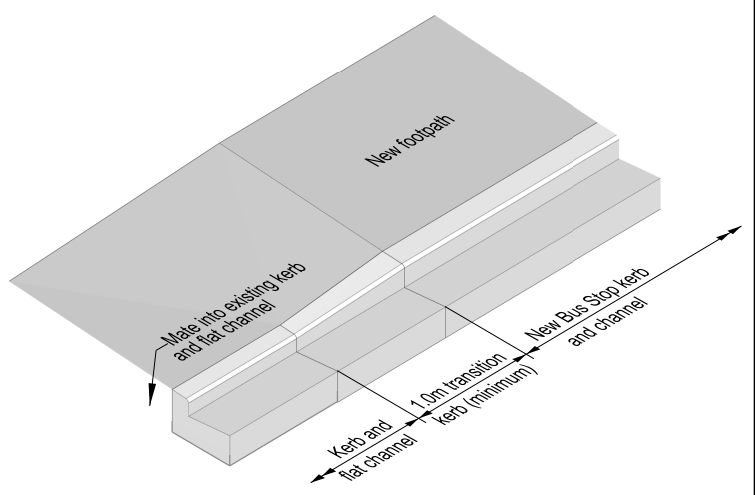
100mm HIGH BUS STOP KERB SECTION (1)



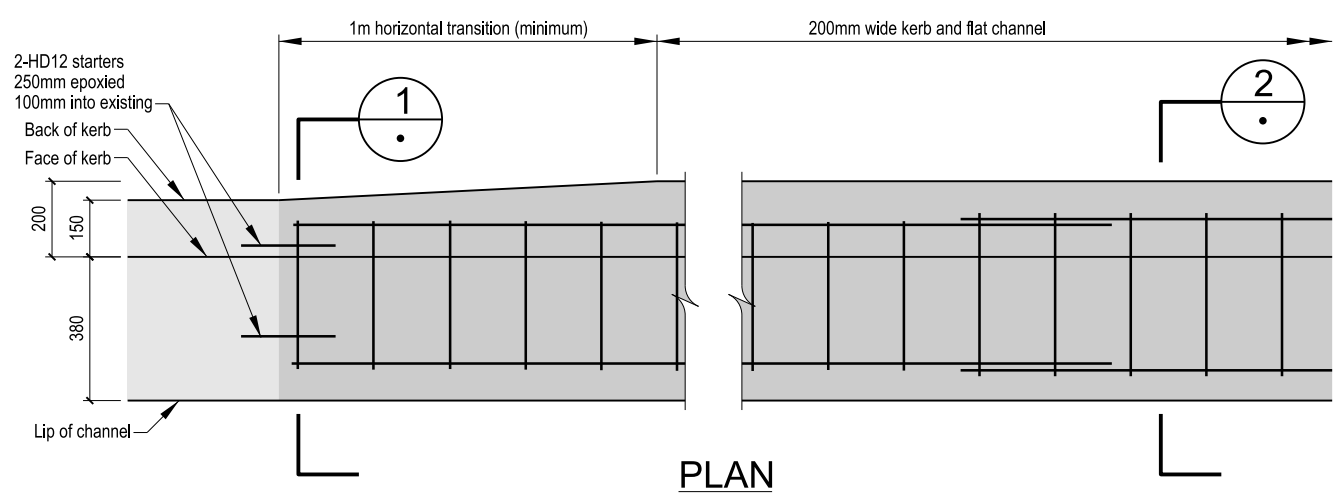
150mm HIGH BUS STOP KERB SECTION (2)



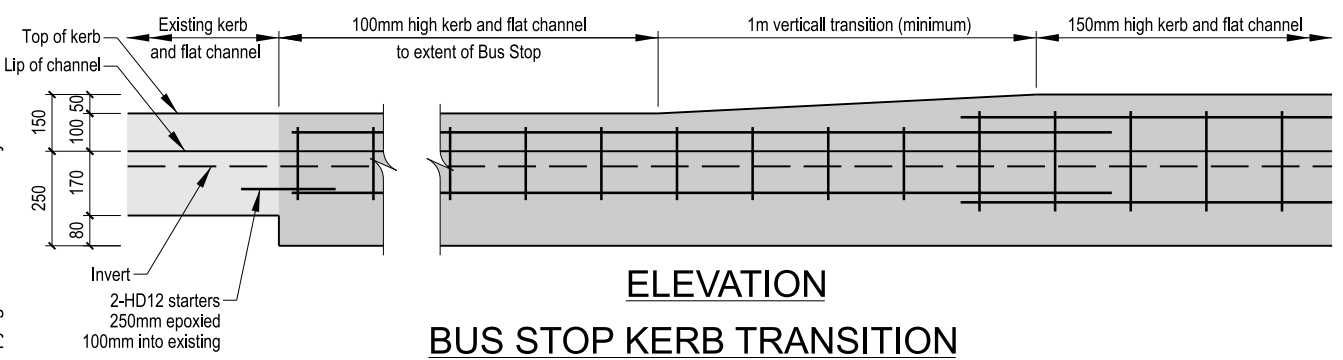
BUS STOP NIB KERB



BUS STOP KERB PICTORIAL VIEW

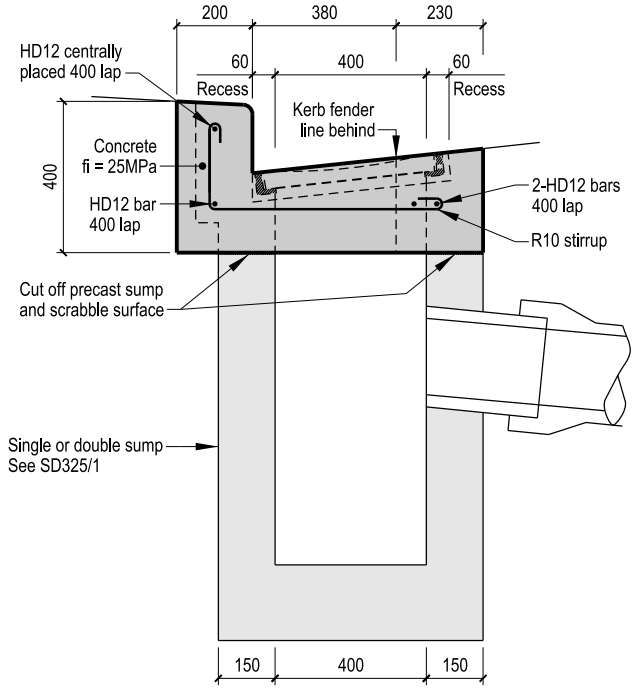


PLAN

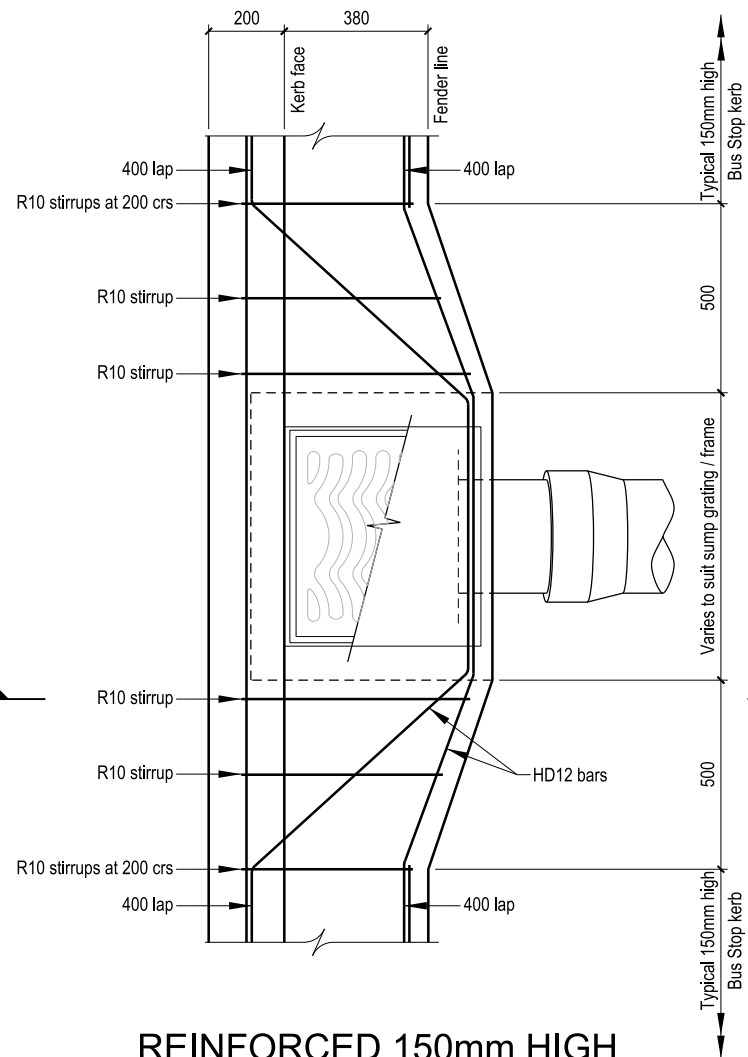


ELEVATION

BUS STOP KERB TRANSITION



SECTION 1

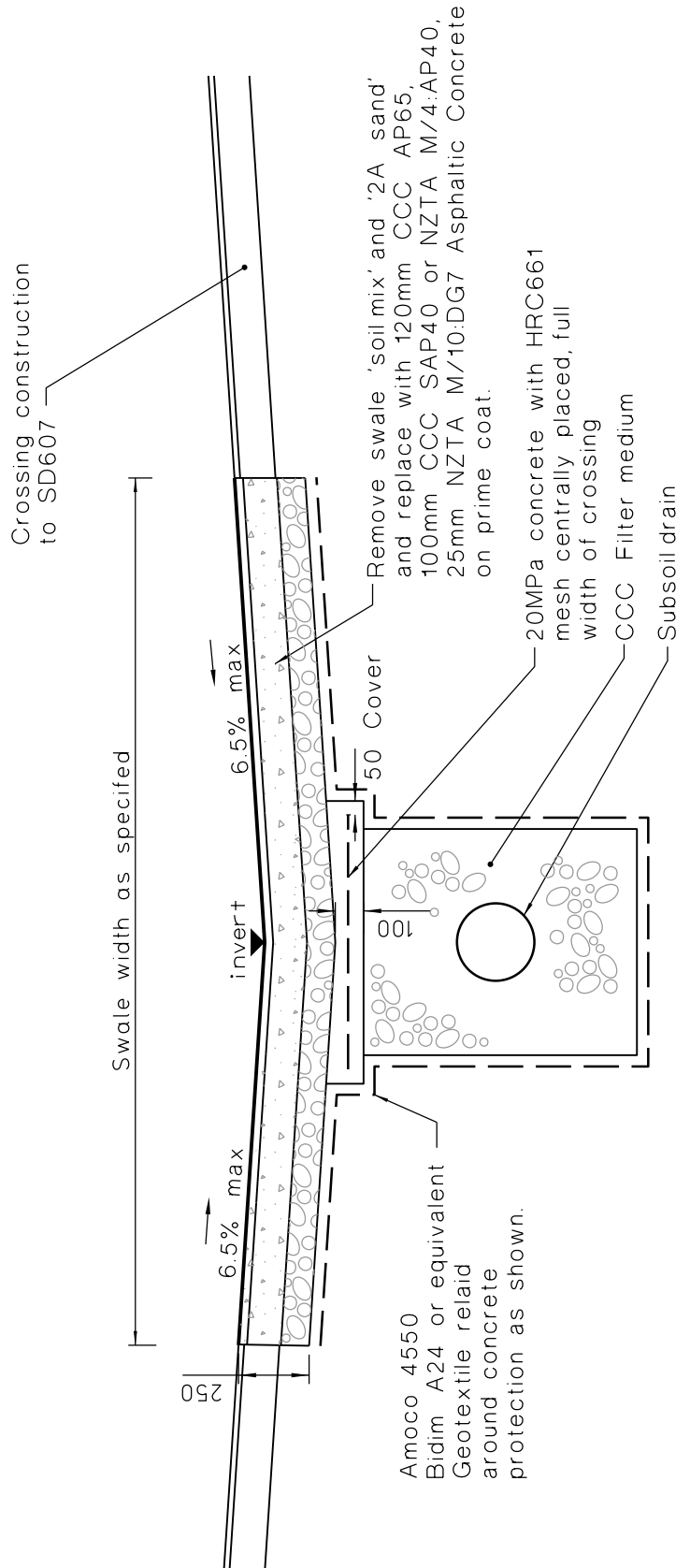


REINFORCED 150mm HIGH KERB AND CHANNEL AT SUMPS

NOTES:

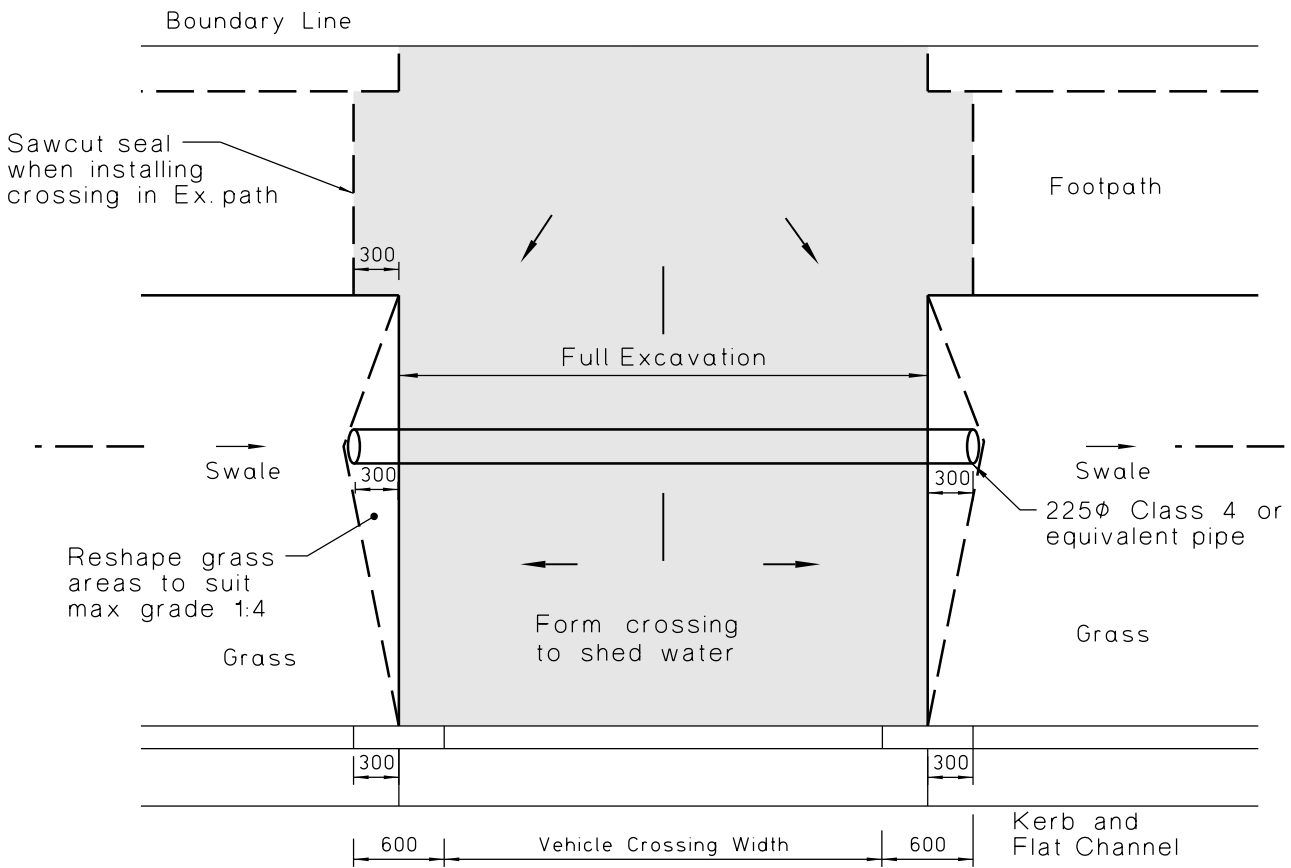
1) See SD614/2 for 150mm high kerb details.

	<p align="center">BUS STOP KERB AND CHANNEL REINFORCEMENT AT SUMPS</p>	ISSUE DATE NOV 2022
		SD614
		SHEET 3 OF 3



NOTES:

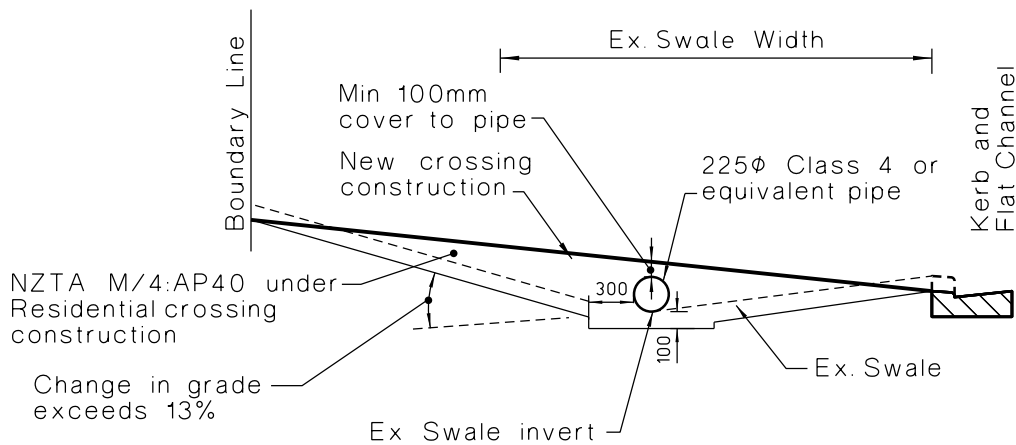
1. Cross sectional area of swale crossing to equal specified area of swale.
2. Invert of swale must not change from specified.



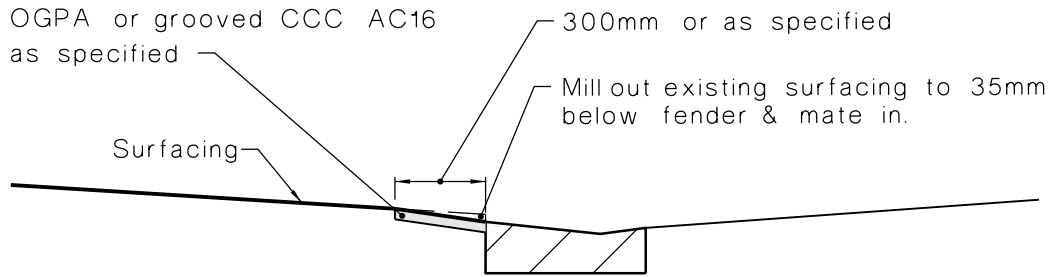
PLAN

NOTES:

1. Crossing locations and widths to comply with current District Plan.
2. Where two crossings are within 1m of each other they shall be joined to form one continuous crossing.
3. Vehicle Crossing Width to be minimum 3.5m.



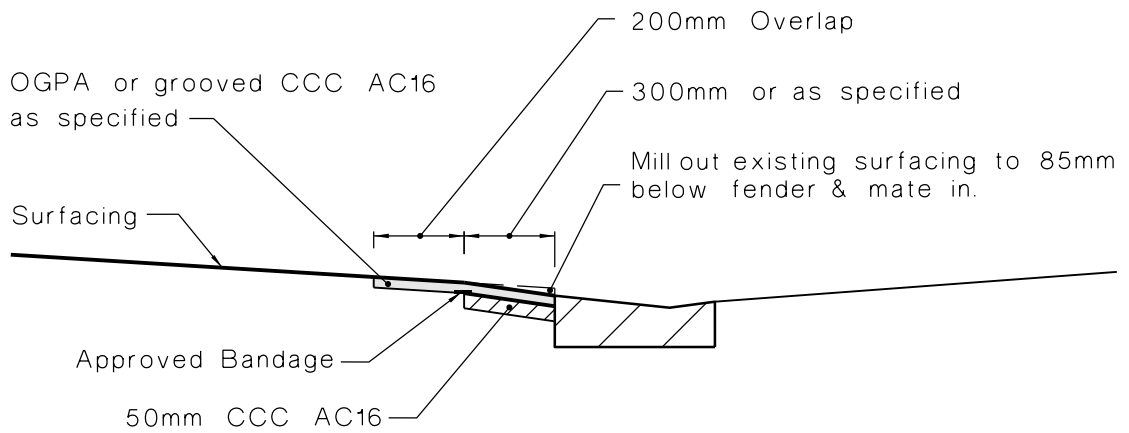
CROSS SECTION



TYPE A

Note:

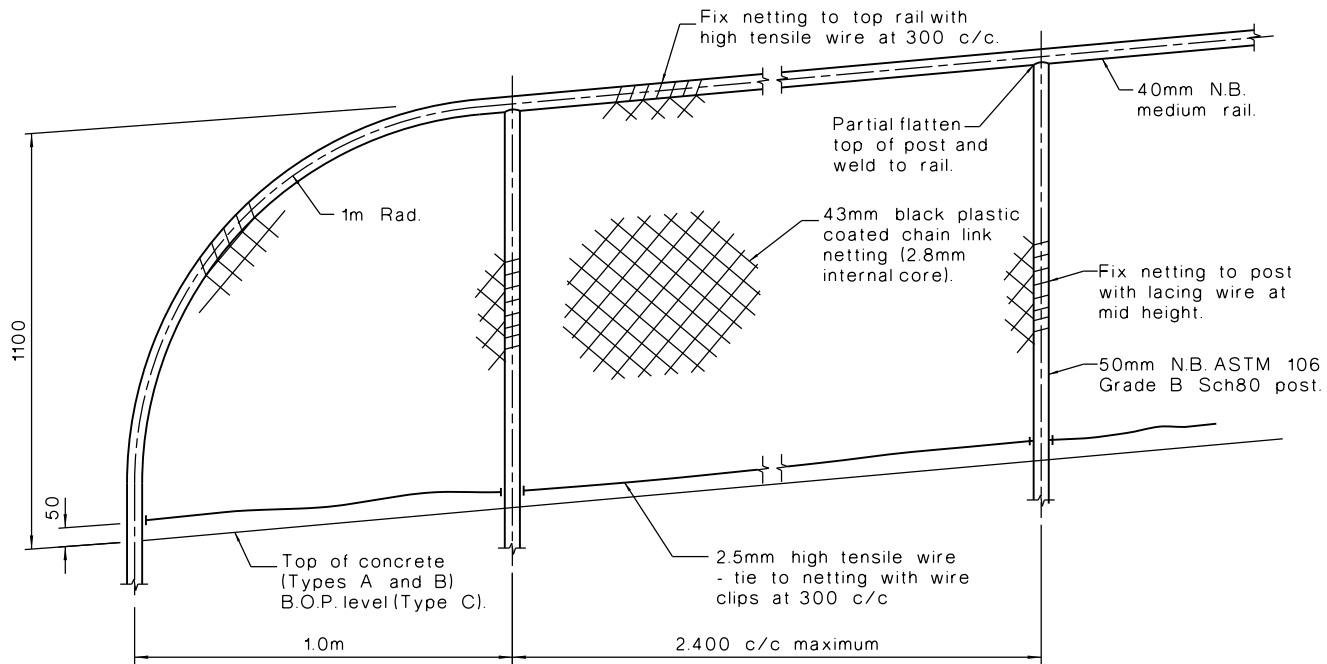
1. Where the existing underlying material is not granular.



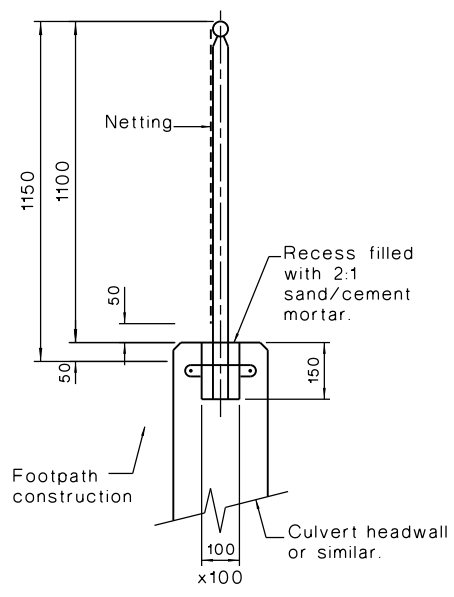
TYPE B

Note:

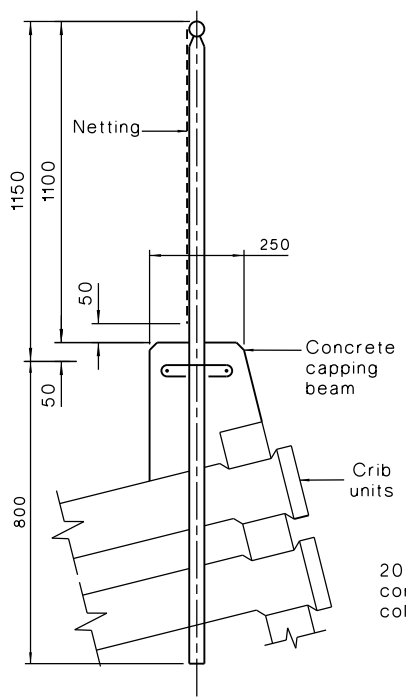
1. Where the existing underlying material is granular.



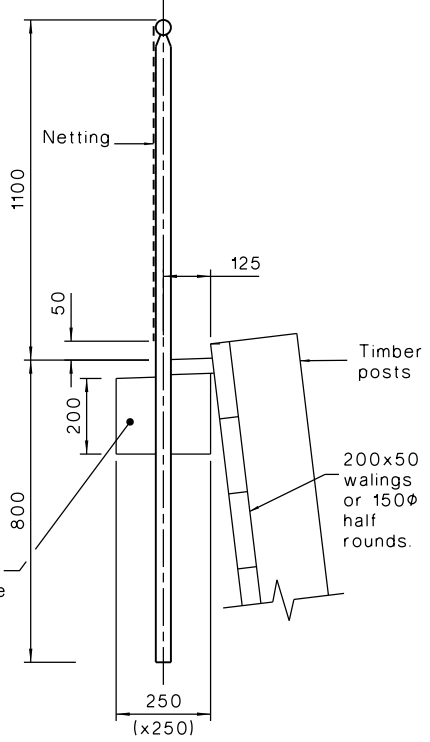
TYPICAL ELEVATION
NOT TO SCALE



**TYPE A
RECESSED**

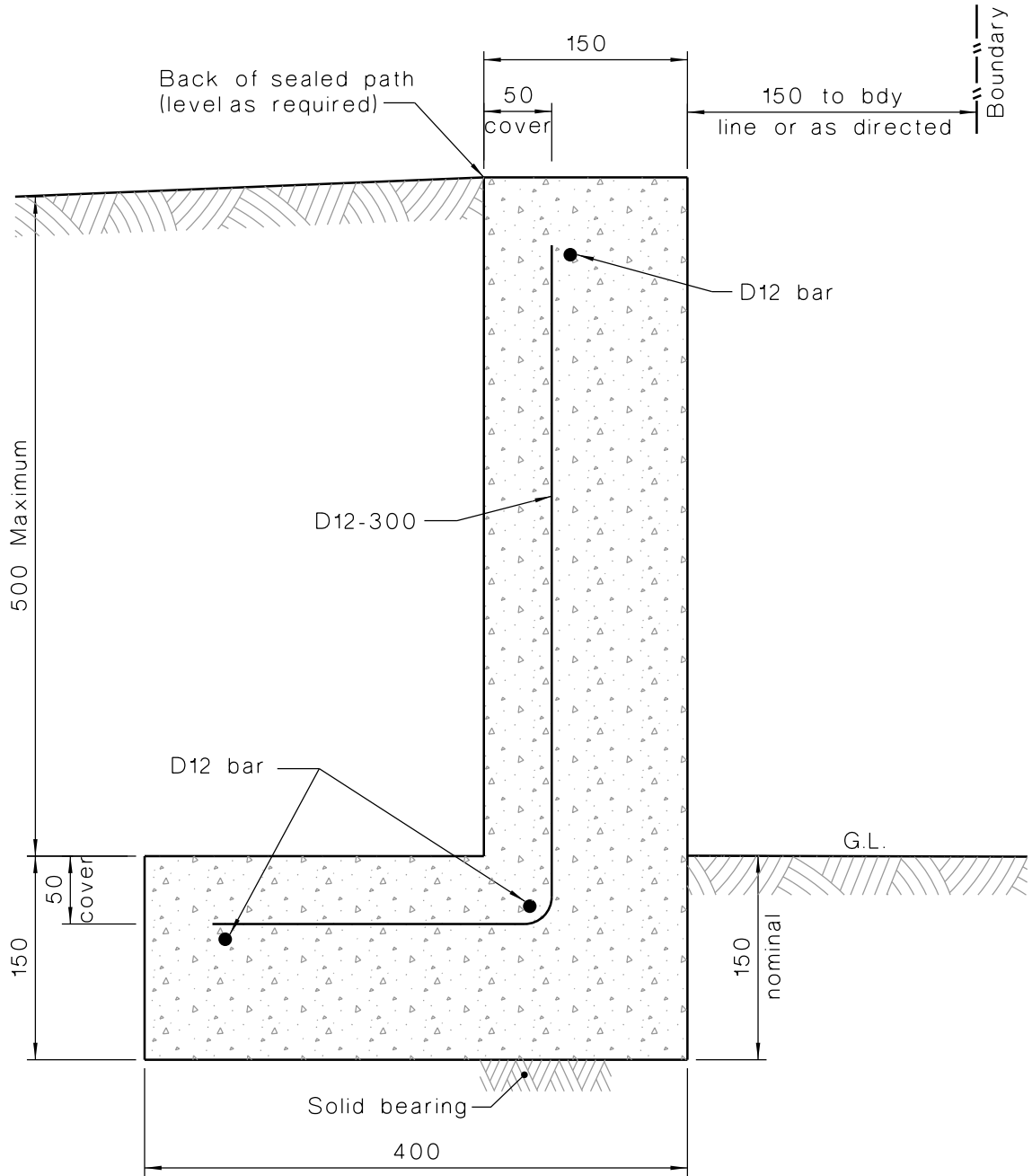


**TYPE B
CRIB WALL**



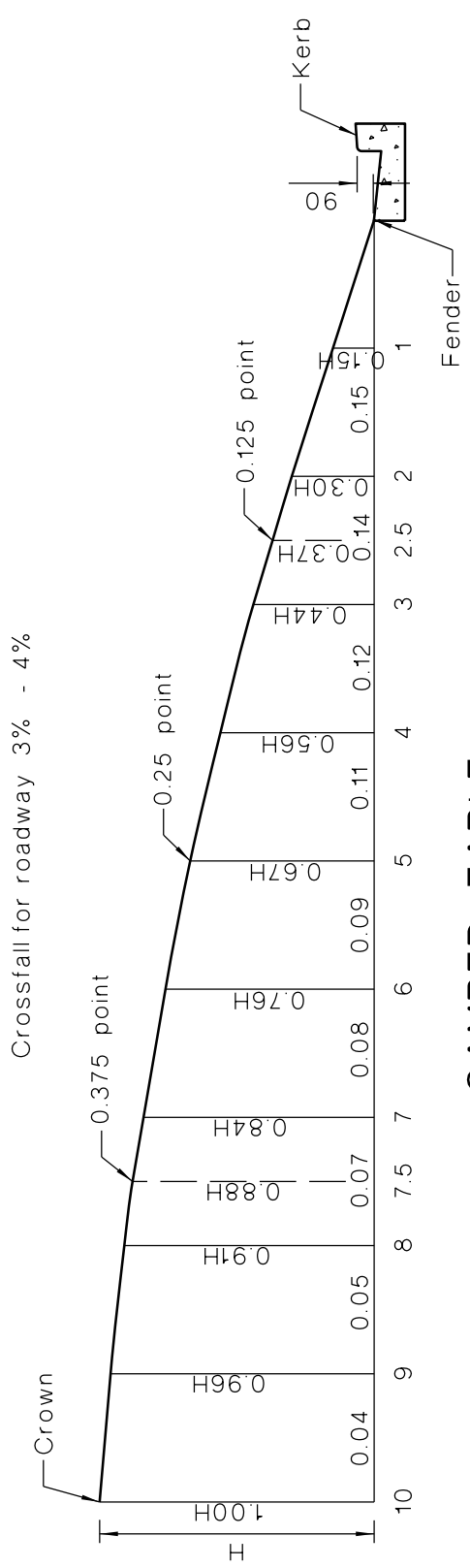
**TYPE C
TIMBER WALL**

- NOTES:**
1. All steelwork to be galvanised to AS/NZS 4680 after fabrication.
 2. Reinforcing details in concrete beam or headwall require specific design in all cases.
 3. Post may be fixed with 2 or 4 M16 bolts through 20mm base plate.

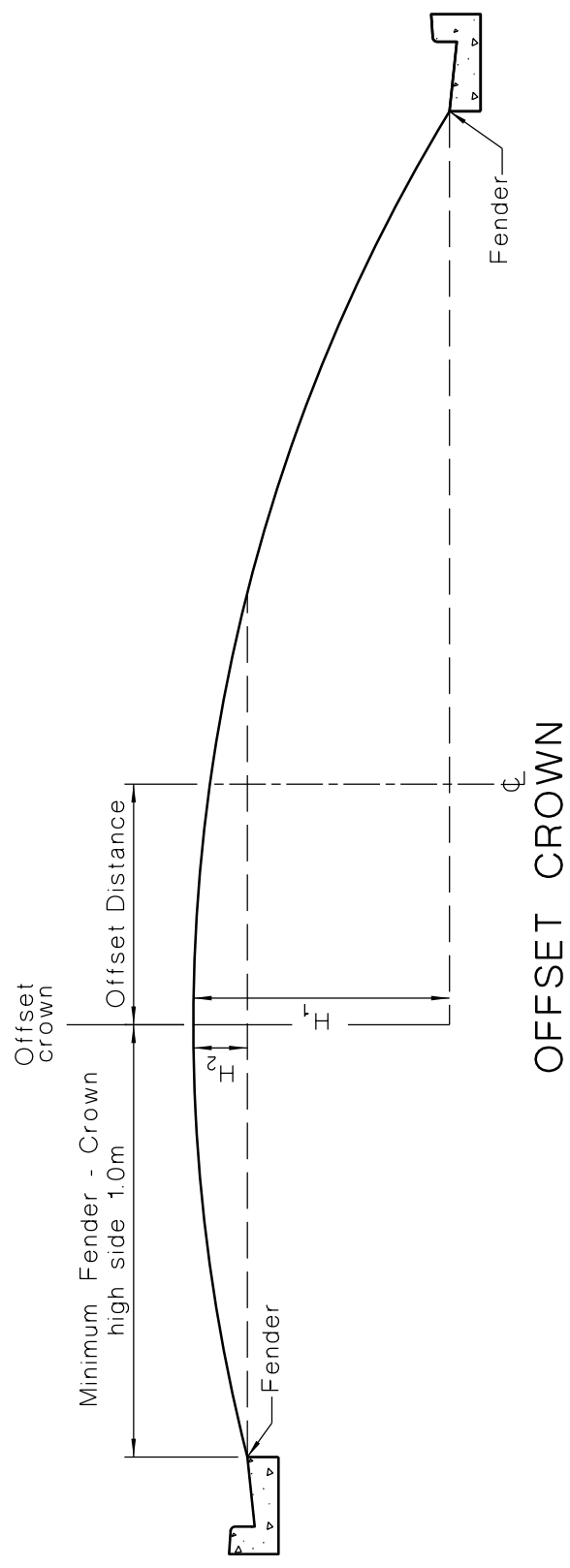


NOTE:

- 1. Concrete Strength to be 20 MPa at 28 days

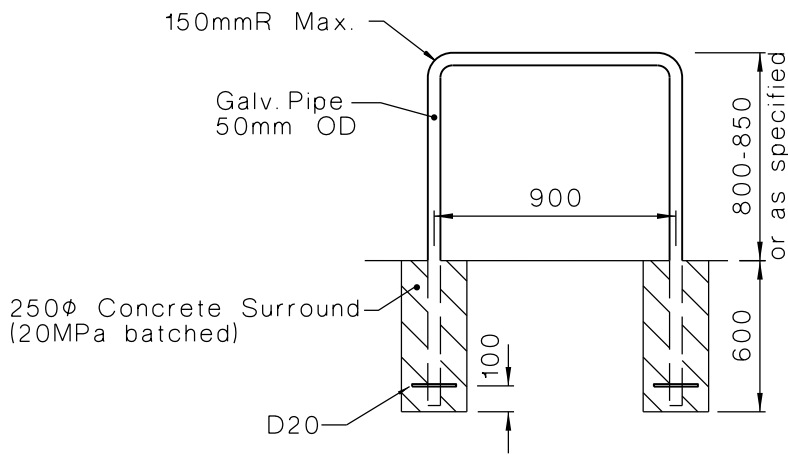


CAMBER TABLE

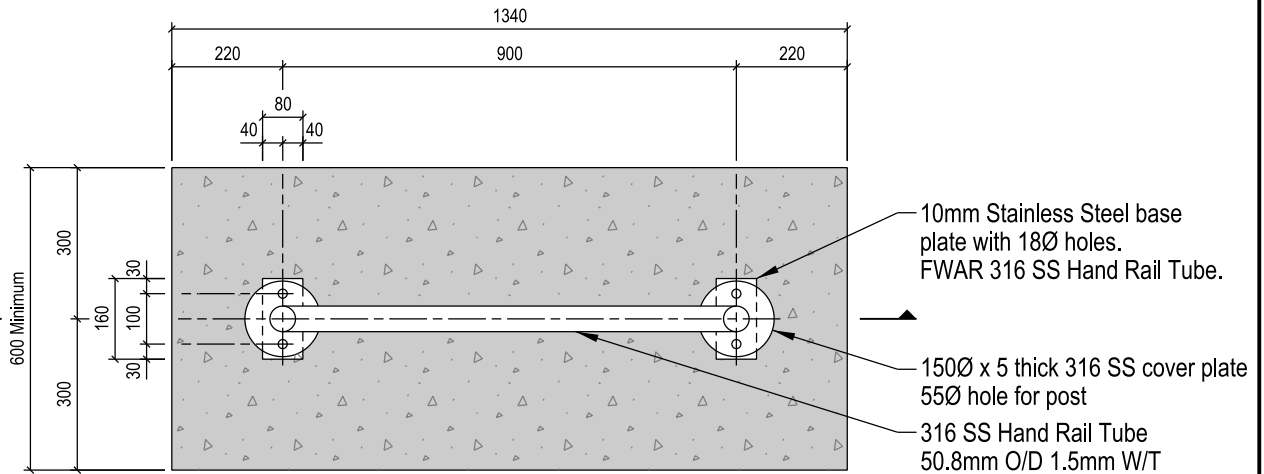
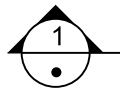


OFFSET CROWN

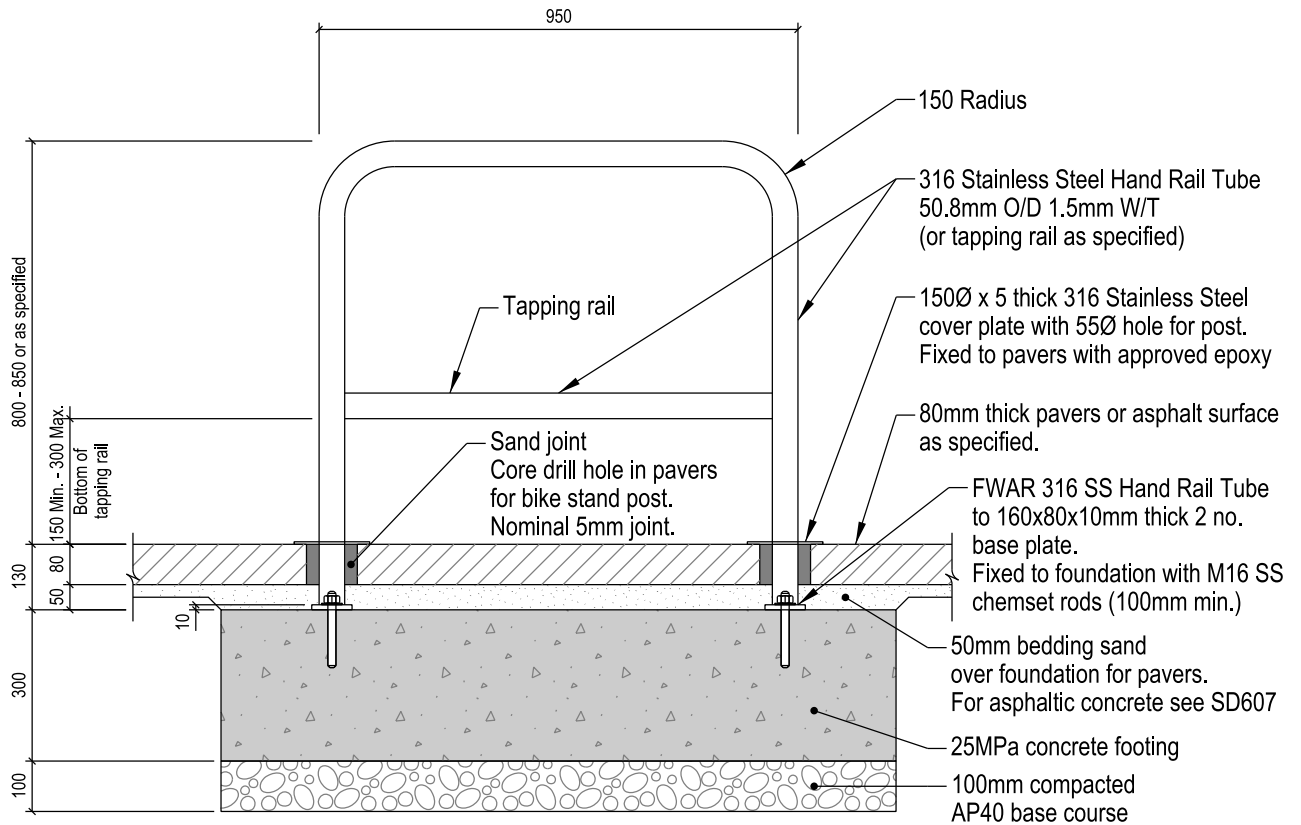
- NOTES:
1. Where the road width is between 6-9m, design with a (central) peak and straight grades falling to the fender.
 2. Where the road width is under 6m, design with a single crossfall and construct with a straight grade from fender to fender.
 3. Carriageway camber on either side of offset crown should be balanced in terms of the above camber tables.



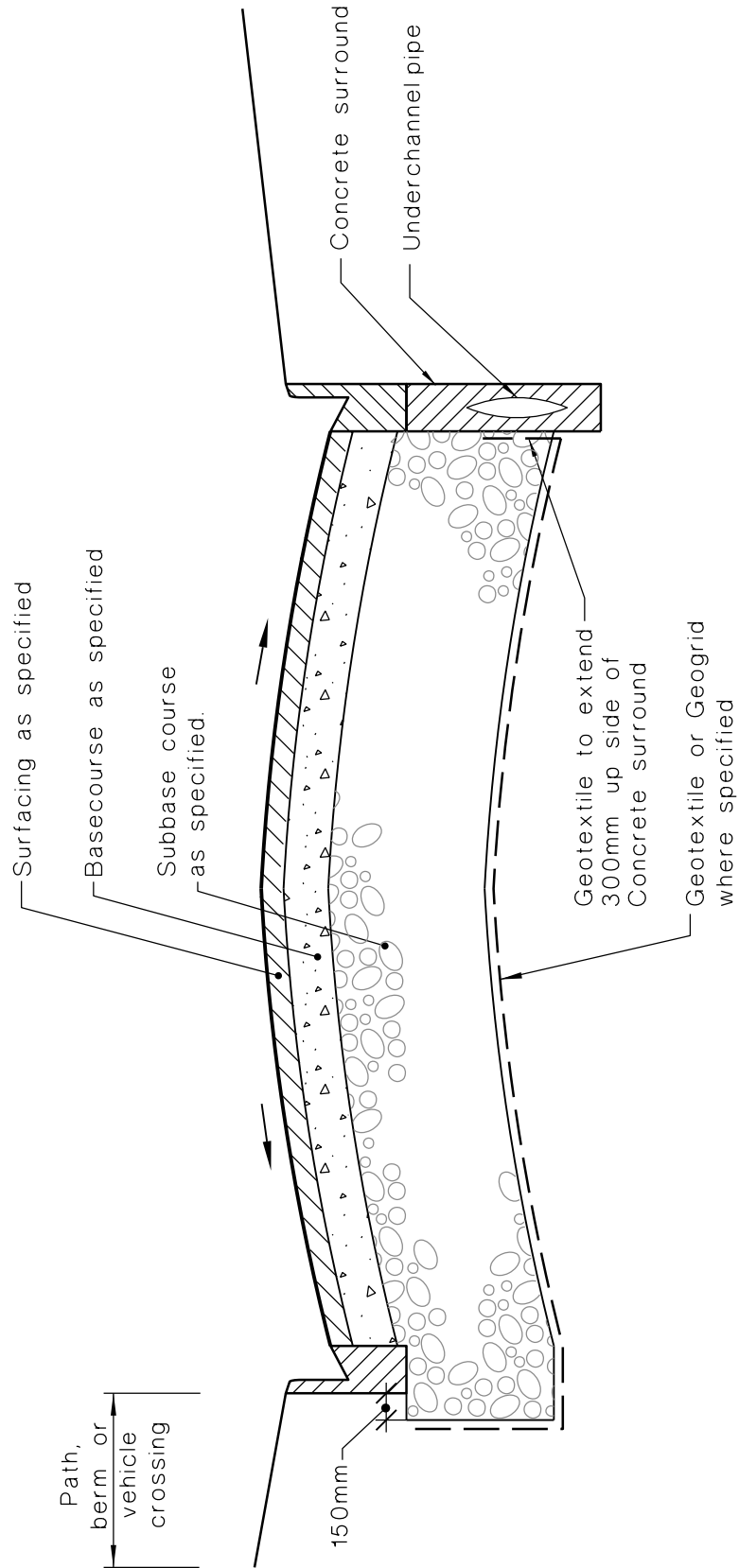
CYCLE STAND DETAIL - TYPE A

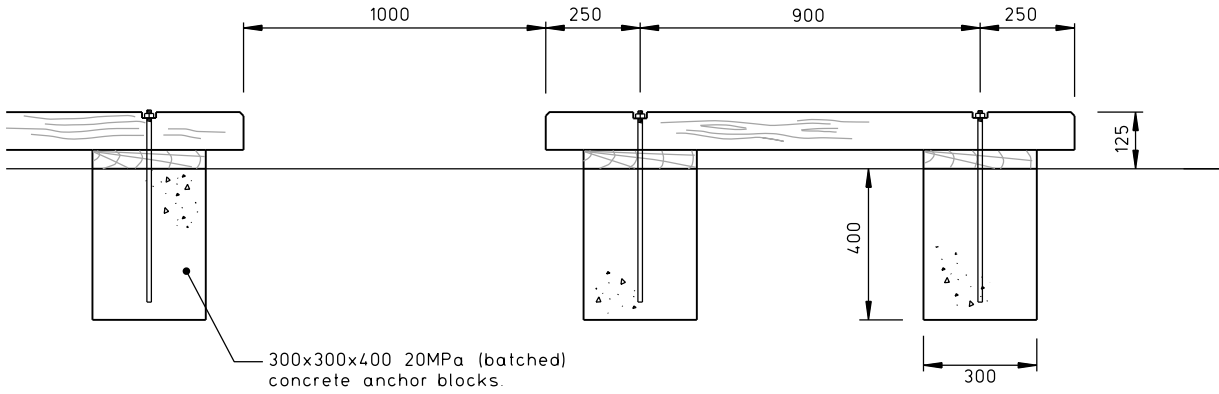


PLAN

**NOTES:**

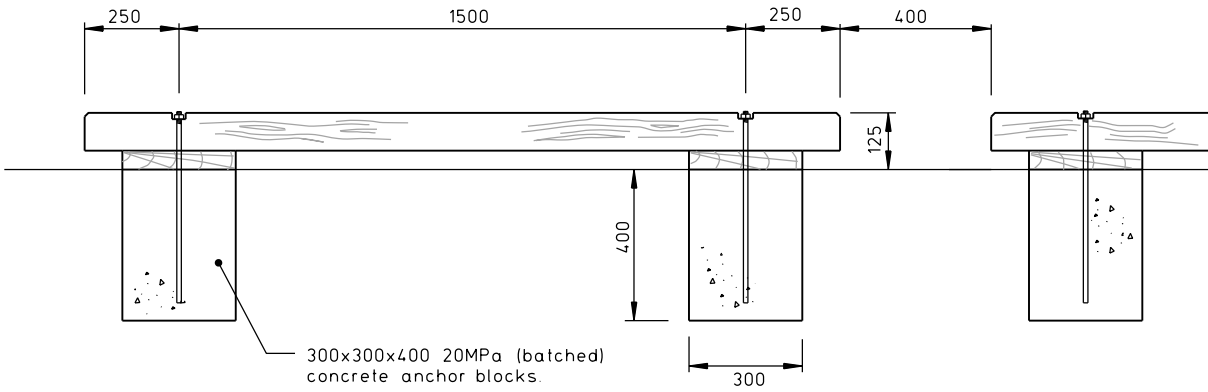
1. All components to be constructed from grade 316 stainless steel.
2. All welding to be full strength butt welds.
3. All surfaces to have 'BA' surface finish.
4. All fixings to be stainless steel.
5. Sample to be provided including cover plates.
6. Ensure cycle stand is vertical and level after fabrication and when installed.
7. Cycle stand spacing to be 1.1m centres minimum.





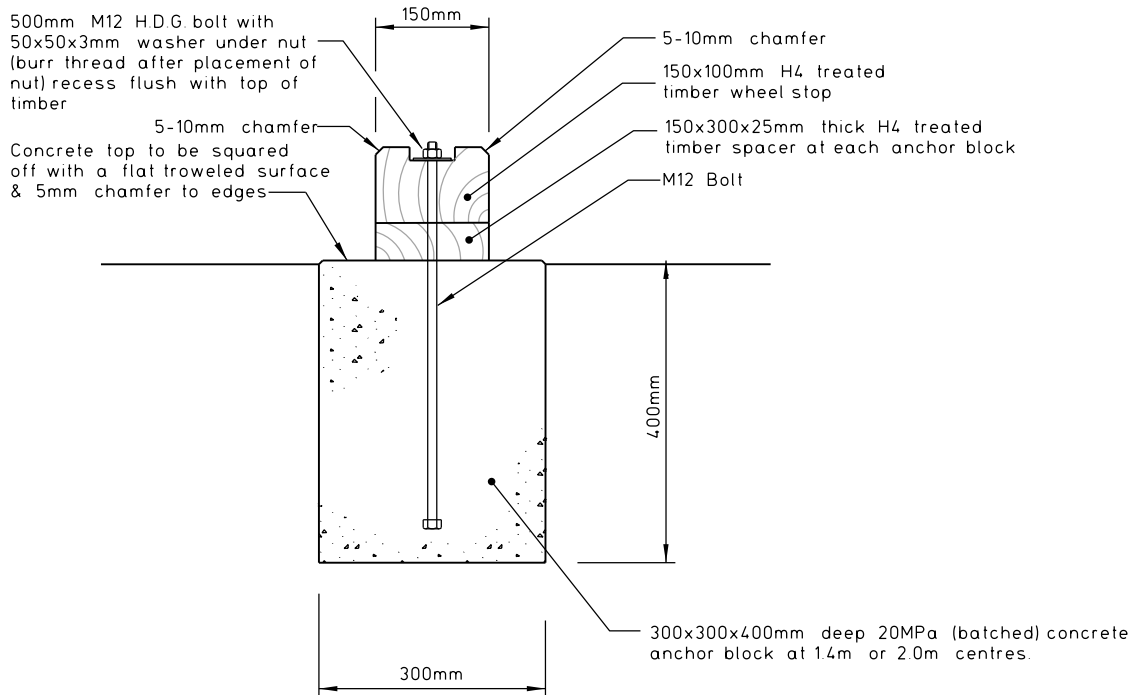
300x300x400 20MPa (batched) concrete anchor blocks.

1.4m WHEEL STOPS

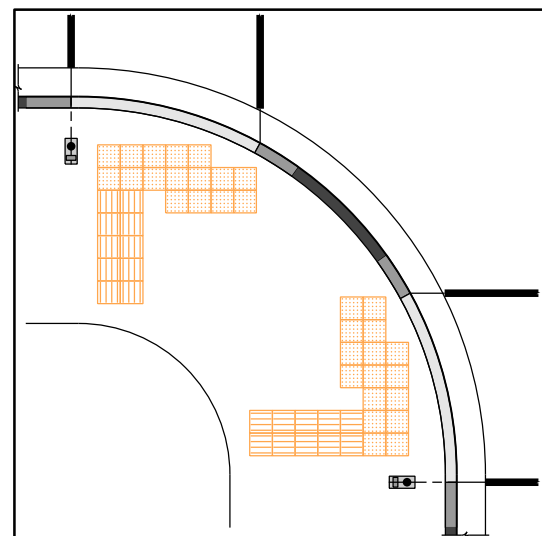
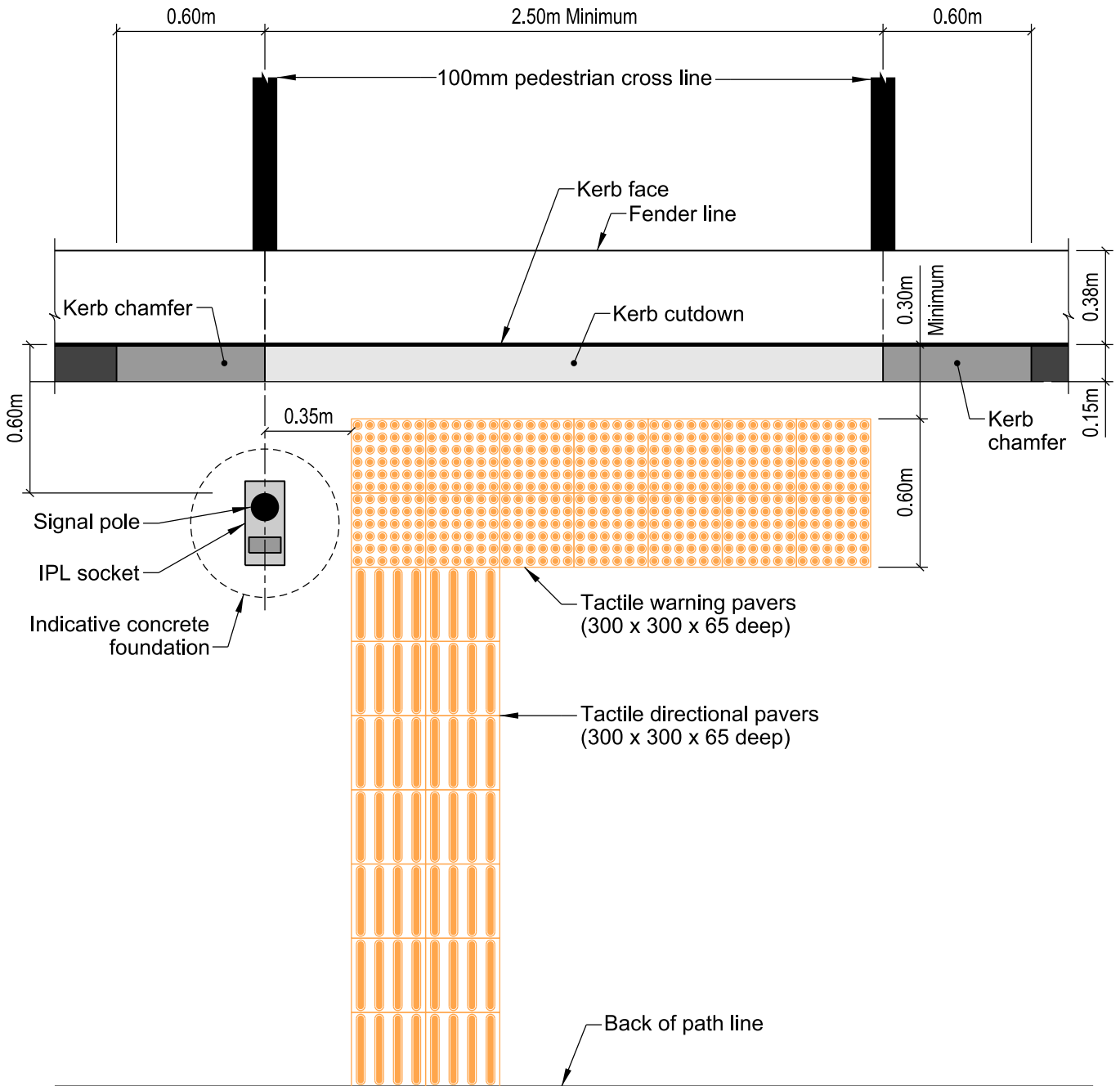


300x300x400 20MPa (batched) concrete anchor blocks.

2.0m WHEEL STOPS

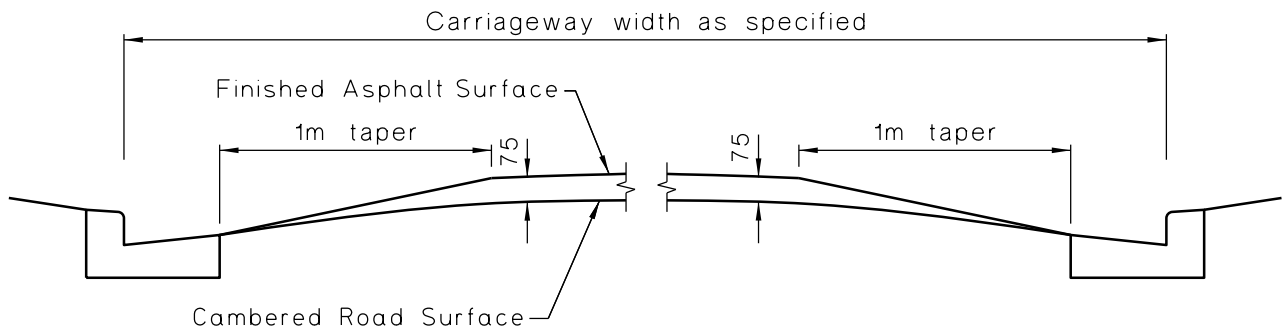


WHEEL STOP END ELEVATION

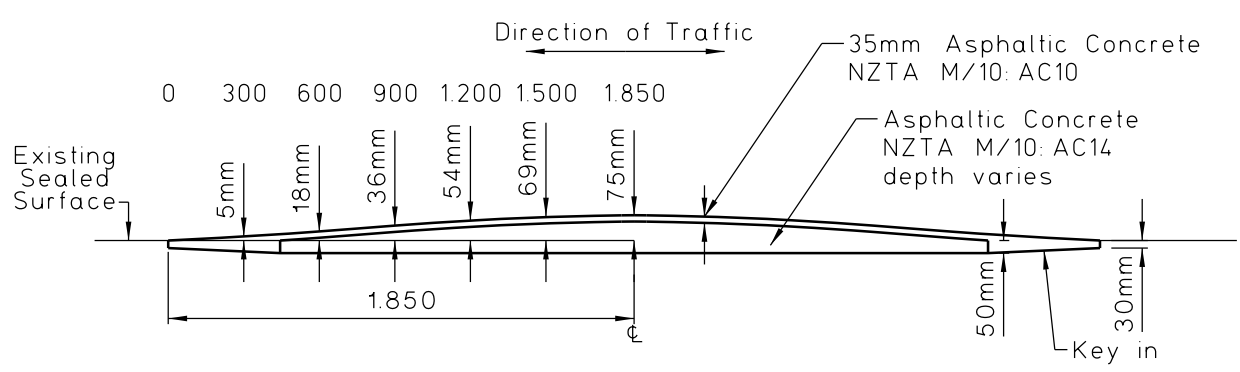


Corner Rounding Detail

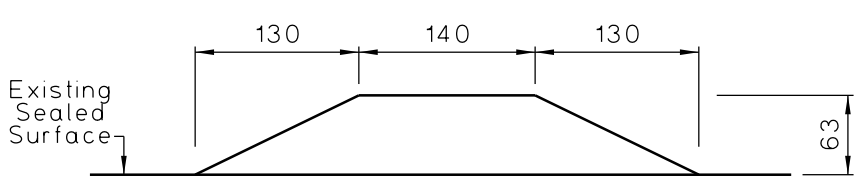
NOTE:
Tactile installations where there is no traffic signal pole are to be to RTS 14.



ROAD HUMP CROSS SECTION

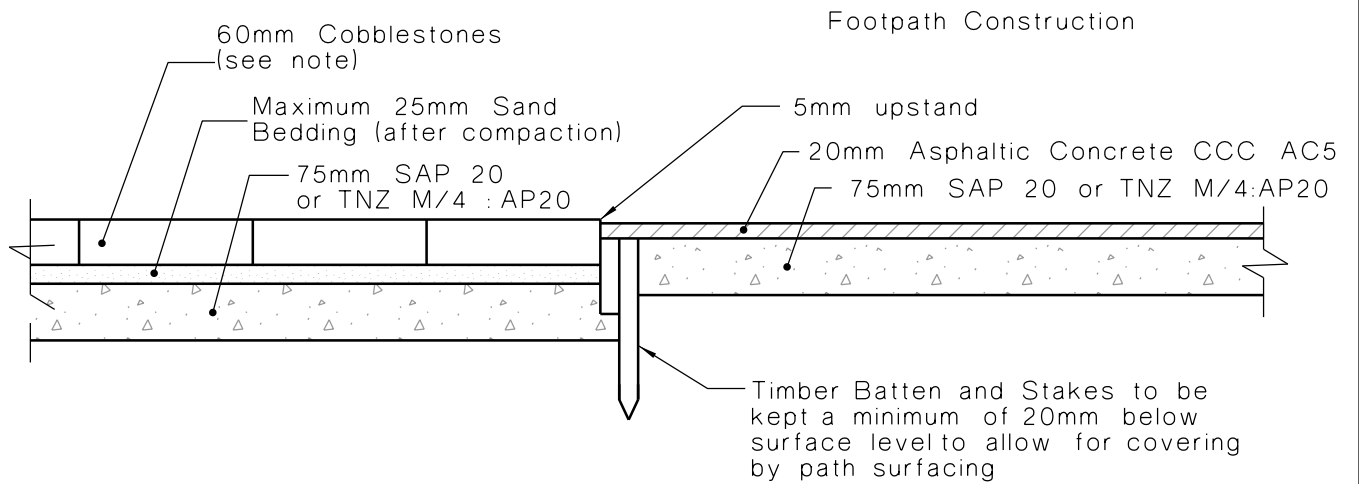


ROAD HUMP PROFILE
(3.70m WIDE)

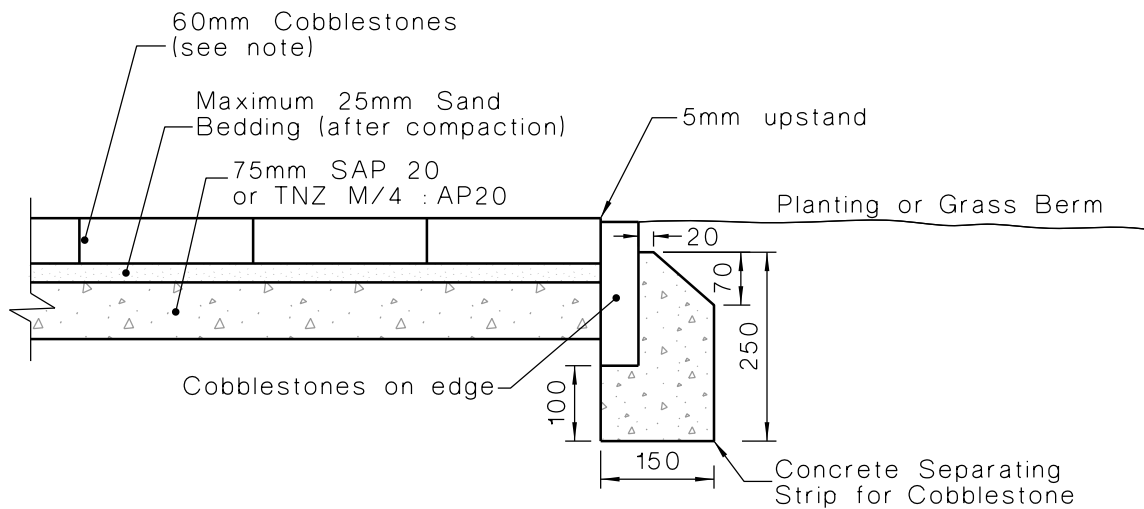


SMALL ROAD HUMP PROFILE

- Note:
1. The Surface of the Compacted Asphalt shall at no point vary more than 5mm from the Standard Profile laid Longitudinally over the Road Hump.
 2. Refer to SD641 for road marking details.



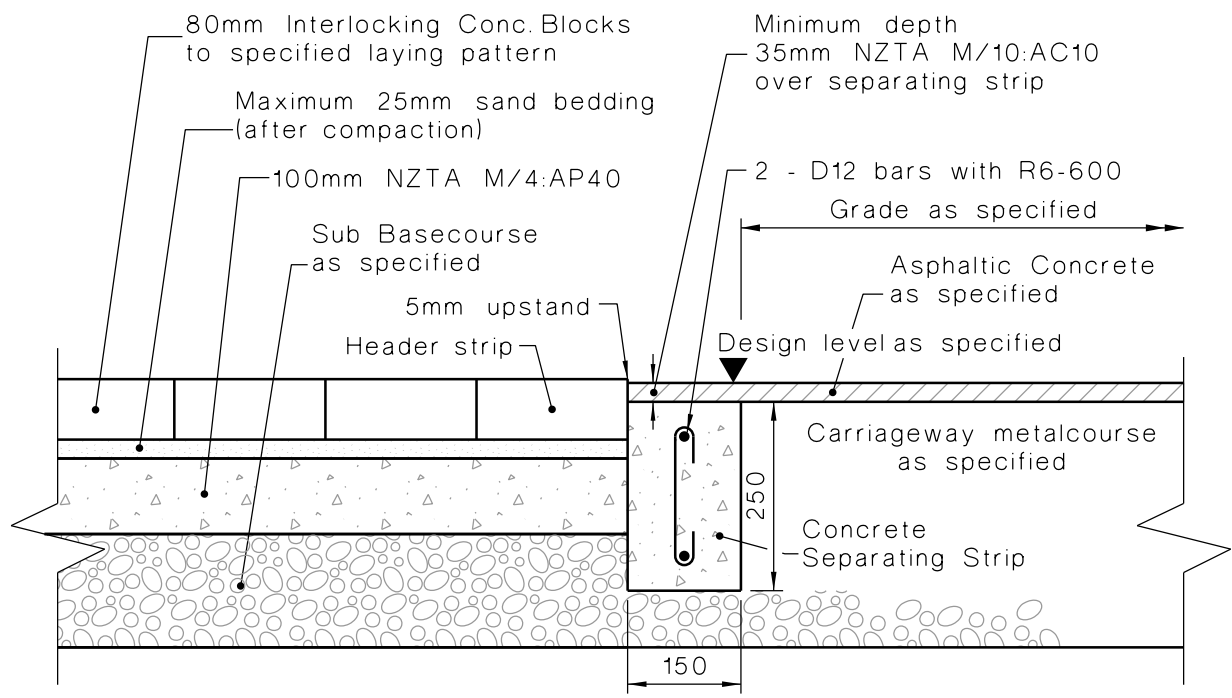
COBBLESTONES ADJACENT TO FOOTPATH



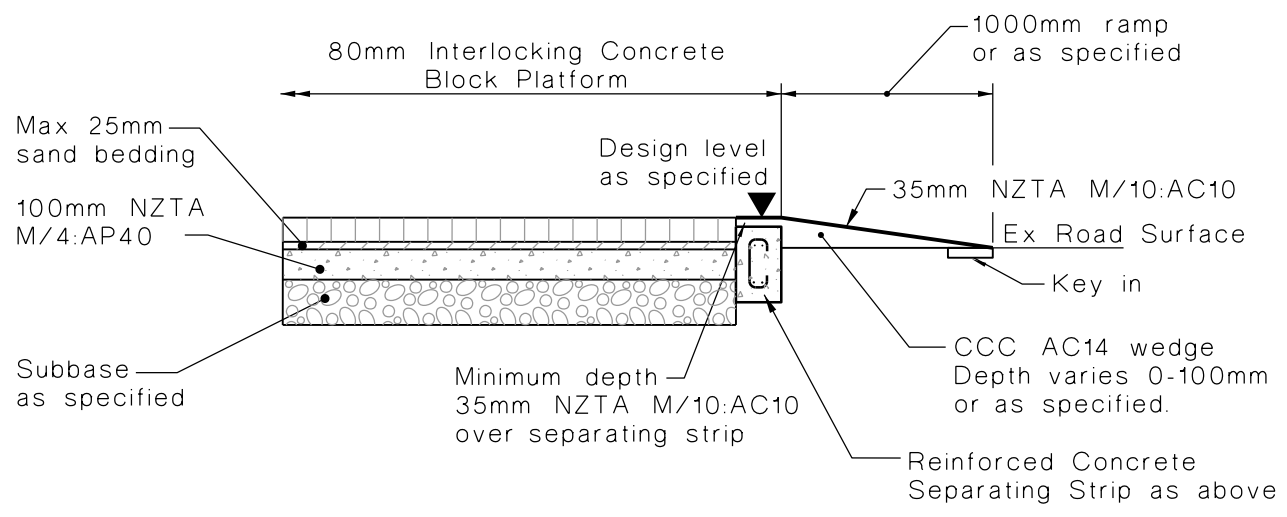
COBBLESTONES ADJACENT TO PLANTING/BERM

NOTES:

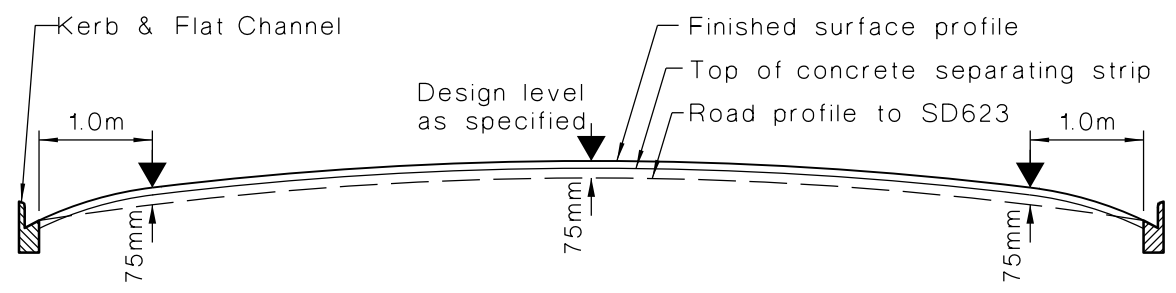
1. Colour of cobblestones to be as specified.
2. See SD 607 for footpath construction details.
3. Concrete Strength to be 20MPa at 28 days.



CARRIAGEWAY THRESHOLD (LONGITUDINAL SECTION)



PLATFORM RAMP DETAILS

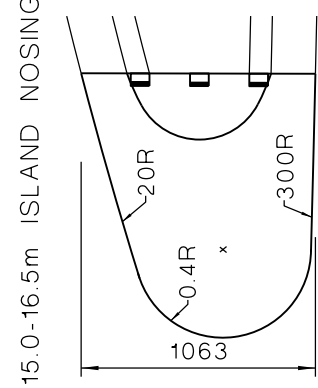
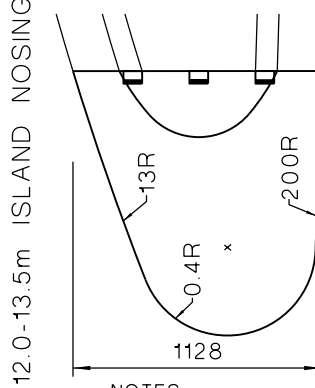
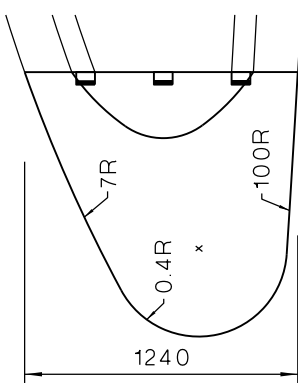
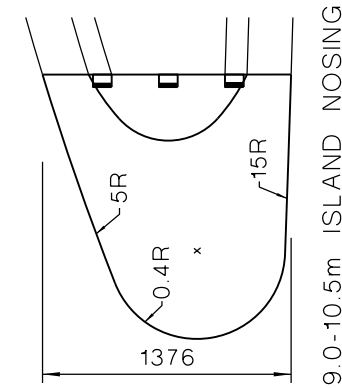
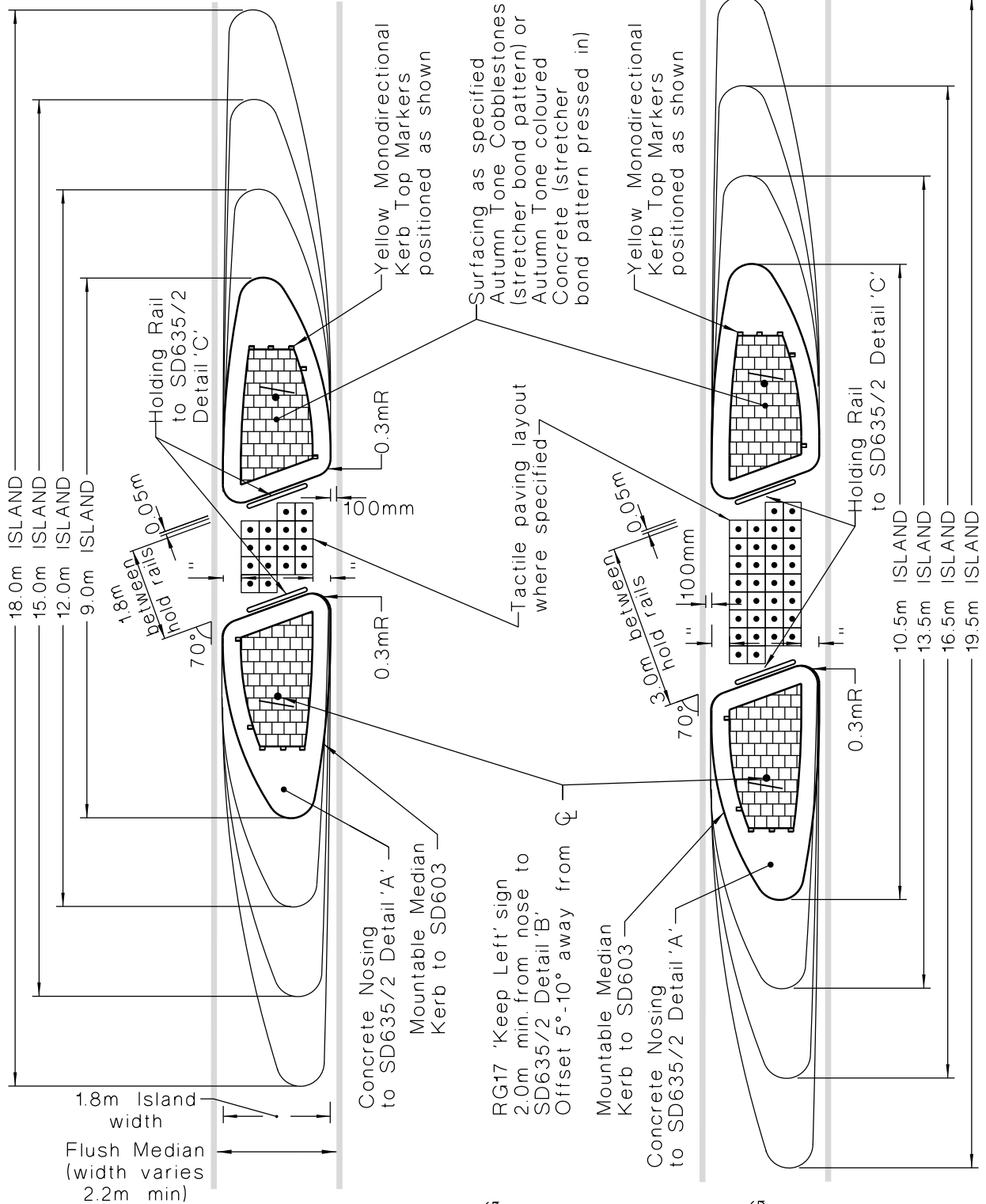


PLATFORM RAMP BEAM SECTION

NOTES:

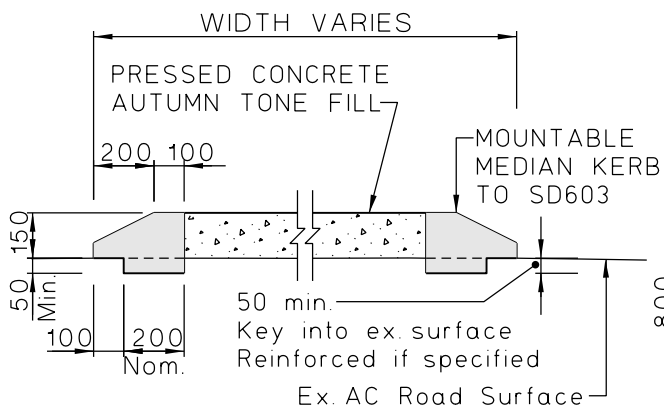
1. Colour of Interlocking Conc. Blocks to be as specified.
2. Concrete strength to be 20MPa at 28 days.
3. Exposed concrete finish to conform with class U3 NZS 3114.
4. Refer to SD641 for road marking details.

PEDESTRIAN ISLAND WITH 1.8m CROSSING

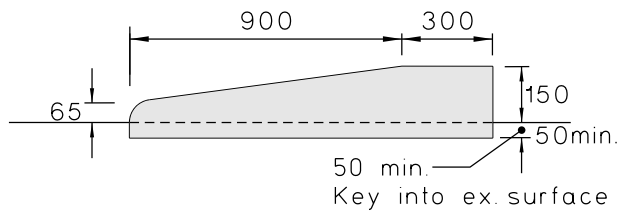


- NOTES:
1. Concrete strength to be 20MPa at 28 days.
 2. Concrete finish to conform with Class U3 of NZS3114.

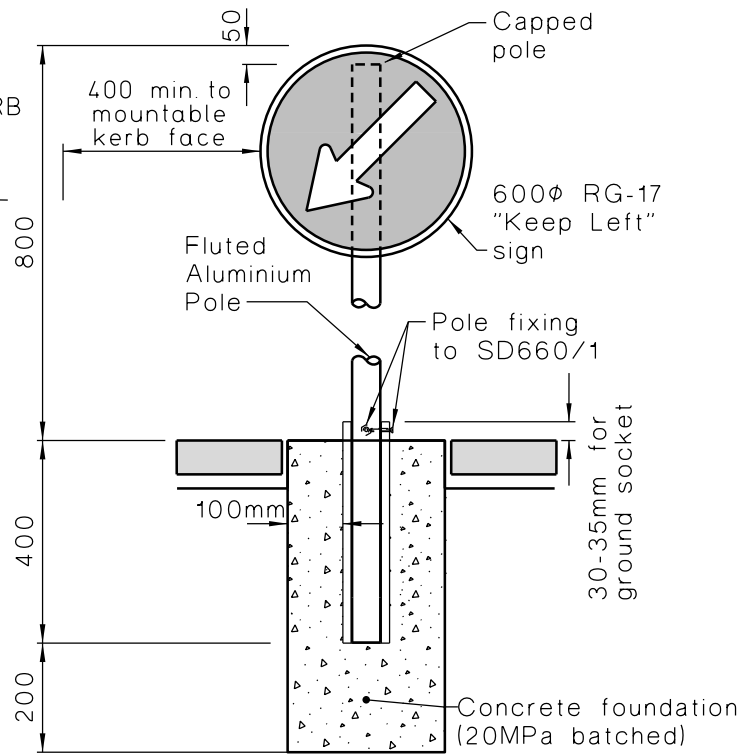
PEDESTRIAN ISLAND WITH 3.0m CROSSING



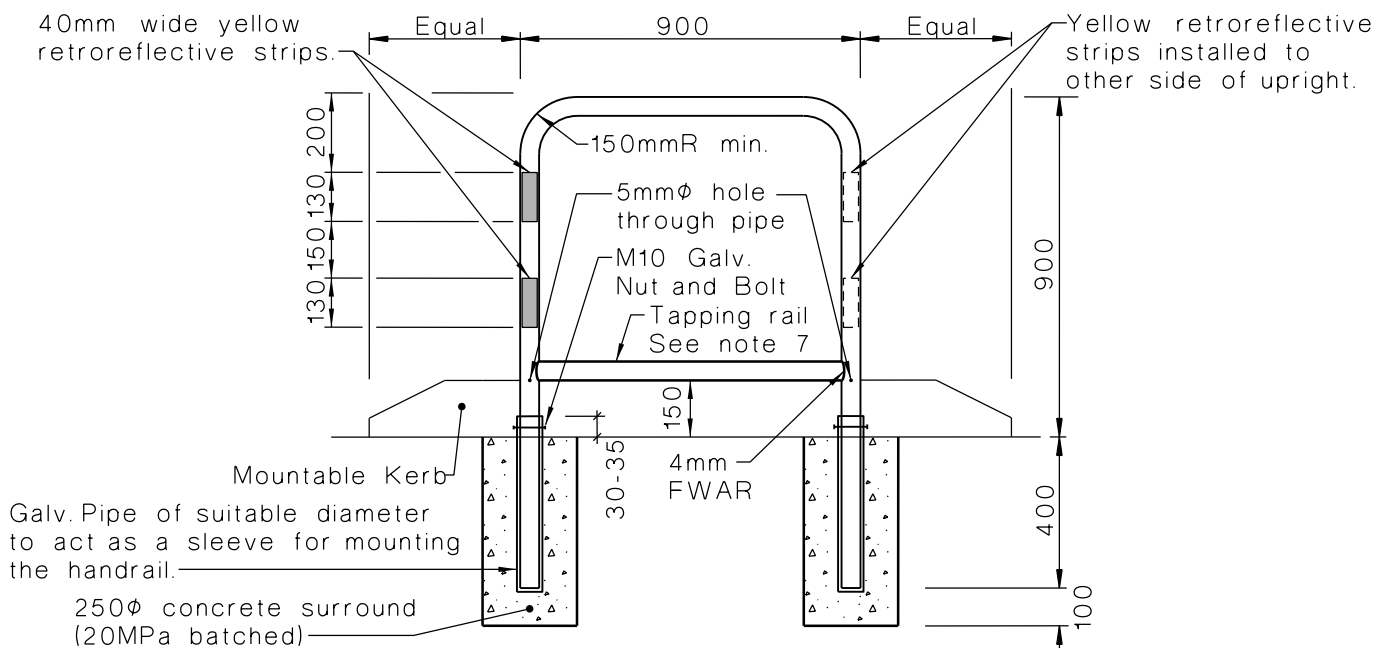
PEDESTRIAN ISLAND TYPICAL SECTION



PEDESTRIAN ISLAND NOSING ELEVATION DETAIL 'A'



RG.17 SIGN DETAIL 'B'



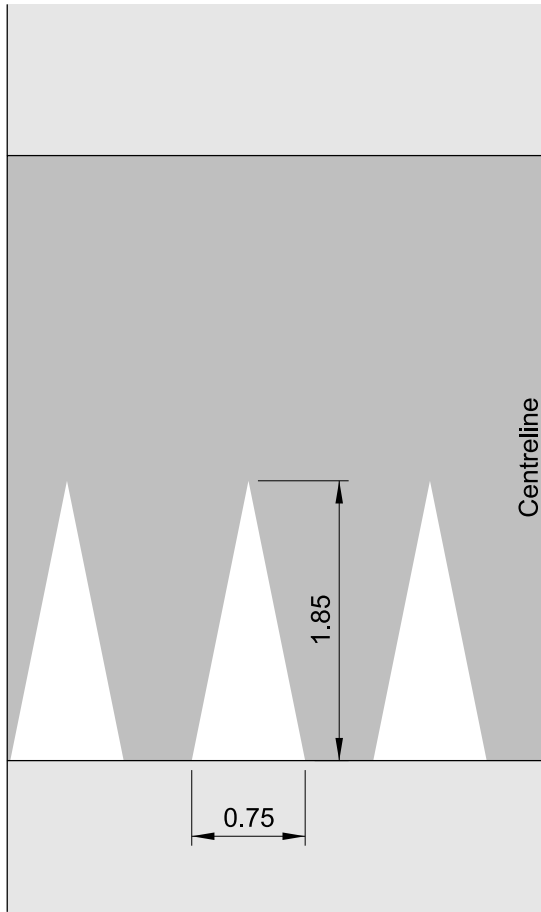
PEDESTRIAN HOLDING RAIL DETAIL 'C'

NOTES

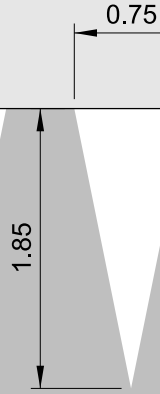
1. Where sign is installed in landscape areas, the concrete foundation depth shall be increased by 300mm.
2. Holding Rail and tapping rail to be made from 40 NB medium Galv. Pipe then powder coated with Orica 288 96905, Clough Safety Yellow.
3. Holding and tapping rail galvanising to be carried out after welding.
4. Yellow retroreflective strips required on holding rails within pedestrian islands only.
5. Yellow retroreflective strip to TNZ M/14 to be applied to holding rail on side closest to oncoming traffic.
6. Where holding rail installed in pairs, retroreflective strips are required on outside faces only.
7. Tapping rail not required at signalised crossings.

AC Surfacing

Kerb and Channel



Centreline



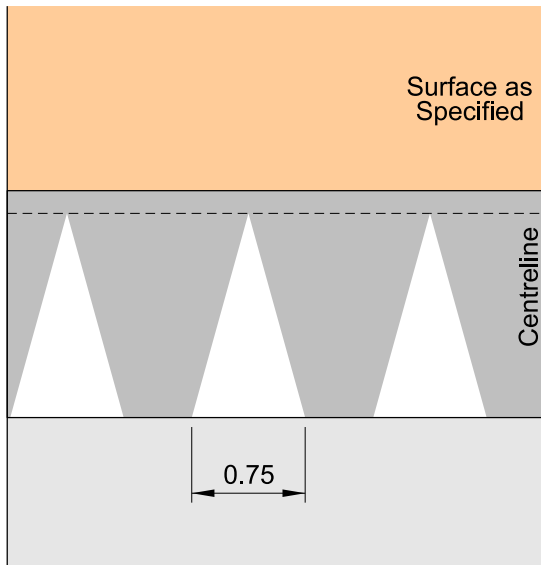
Kerb and Channel

ROAD HUMP

Platform width as specified

AC Surfacing
width as specified

Kerb and Channel



Surface as Specified

Centreline

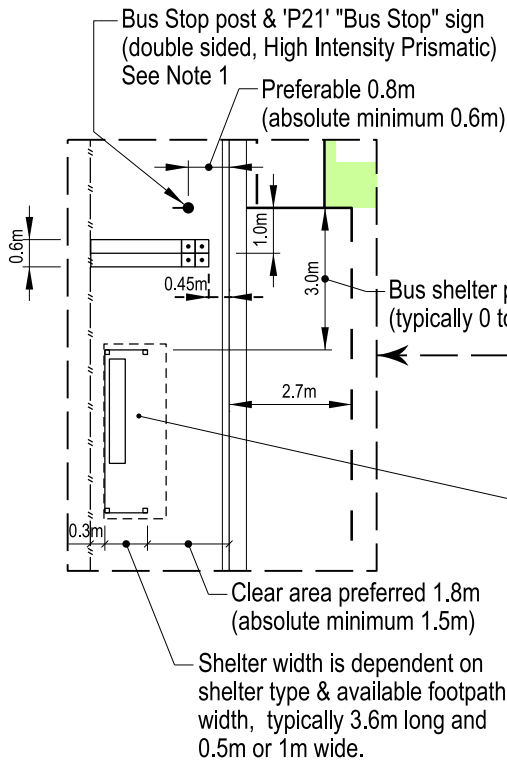
Reinforced concrete separating strip if required

Kerb and Channel

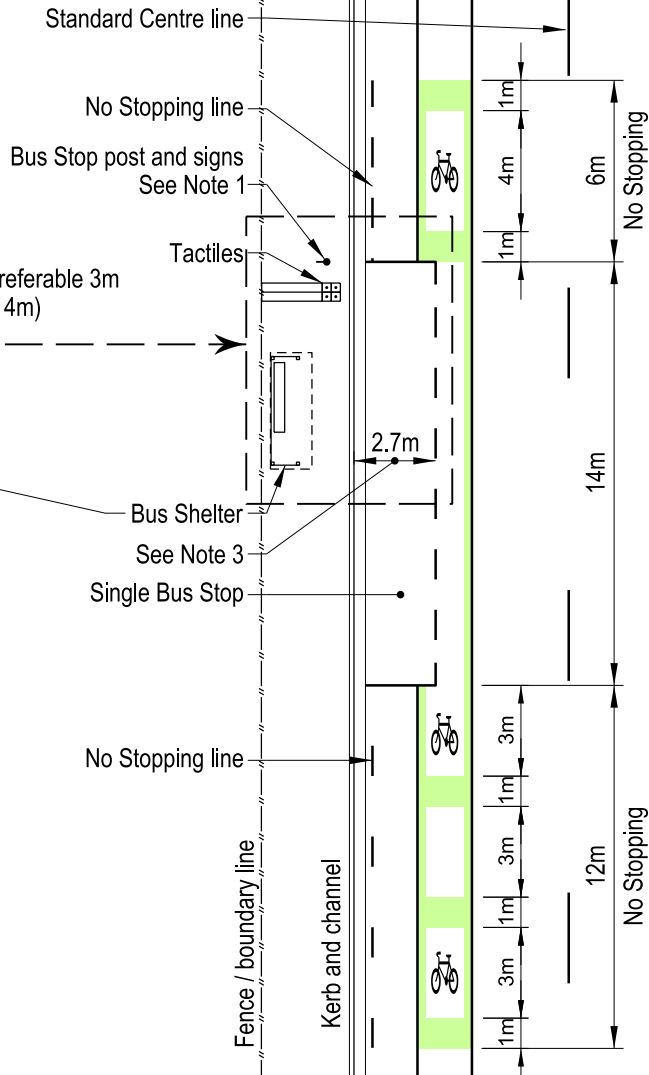
PLATFORM

NOTES:

1. Road hump / platform marking spacing to Traffic Control Devices Manual Part 5, Table 14-2.
2. Centreline to be marked only where specified.
3. Road marking product as specified.
4. Refer to SD631 for road hump construction details.
5. Refer to SD634 for platform construction details.



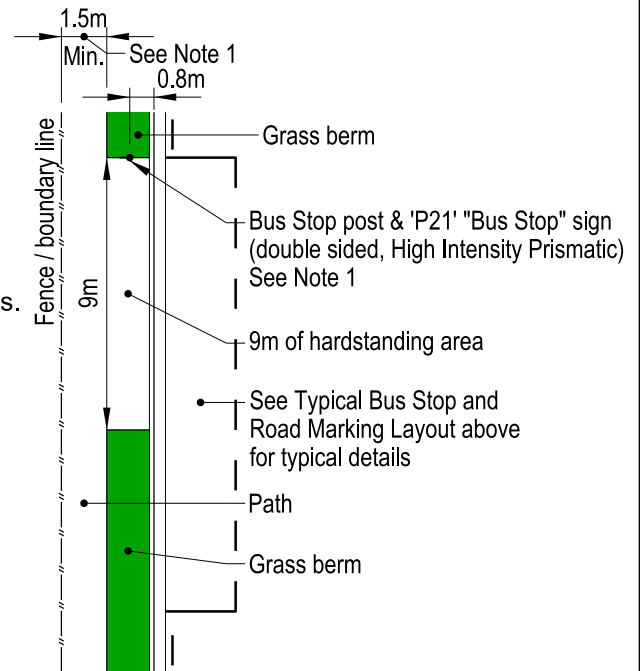
DETAIL



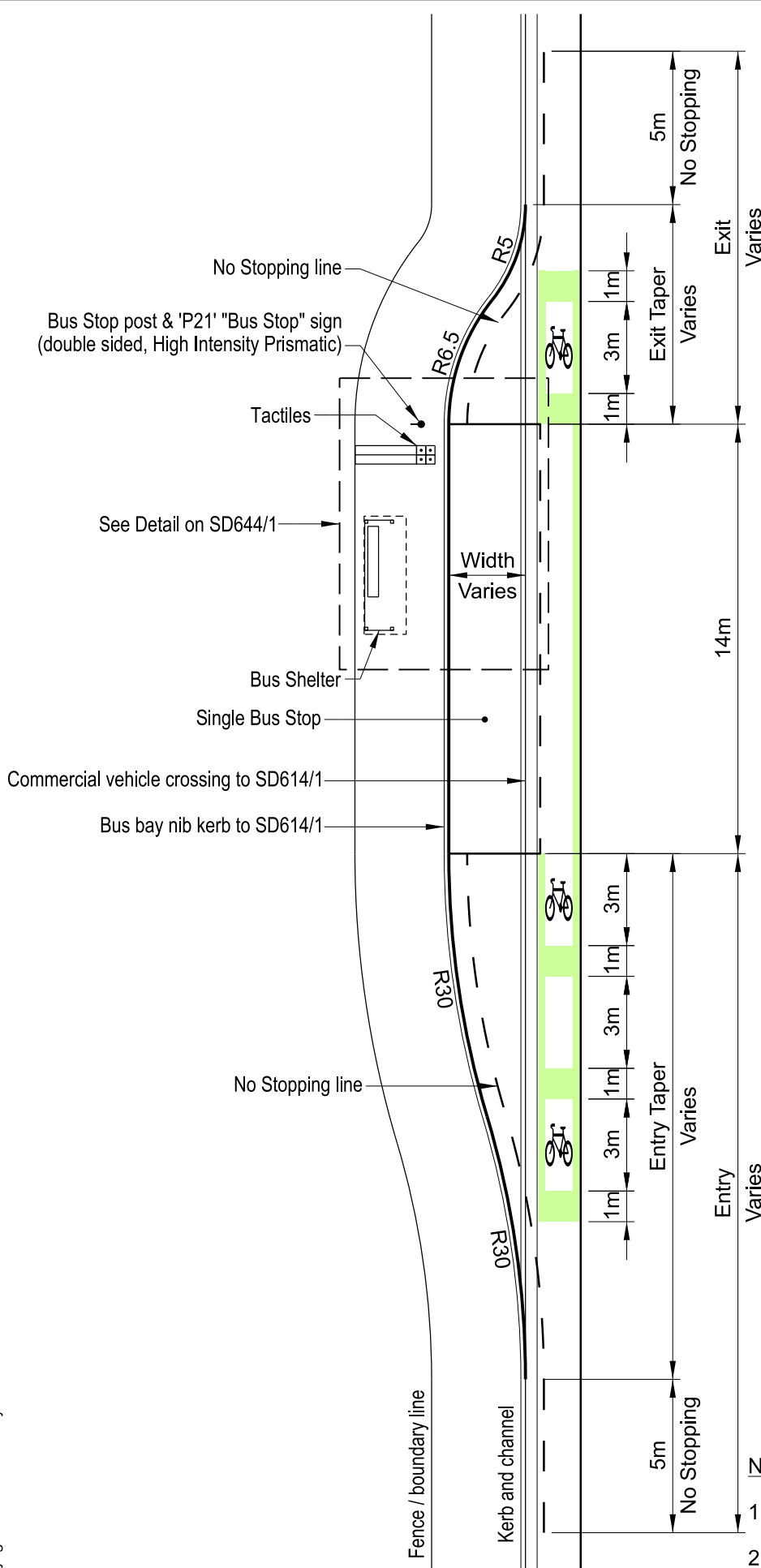
TYPICAL BUS STOP AND ROAD MARKING LAYOUT

NOTES:

1. The Bus Stop sign post is preferably aligned with the front line of the bus box. Ensure a minimum footpath width of 1.5m is maintained next to the bus stop sign. Otherwise install the bus stop sign at the back of the footpath or attached to the side of the shelter.
2. Bus Stop marking stripes 1.0m x 0.1m wide with 1.0m gaps.
3. A minimum cycle lane width of 1.2m should be maintained along side the bus box. This may be achieved by reducing the bus box width to 2.5m. In the case that a 1.2m width can not be achieved the bus box should be extended out to the cycle lane edge line.
4. The same design can be used for the installation of a seat instead of a shelter. The bus stop pole and sign is often installed in line with the seat closest to the front of the bus box.
5. If the back of the bus box coincides with a driveway, extend the bus box the full width of the driveway.



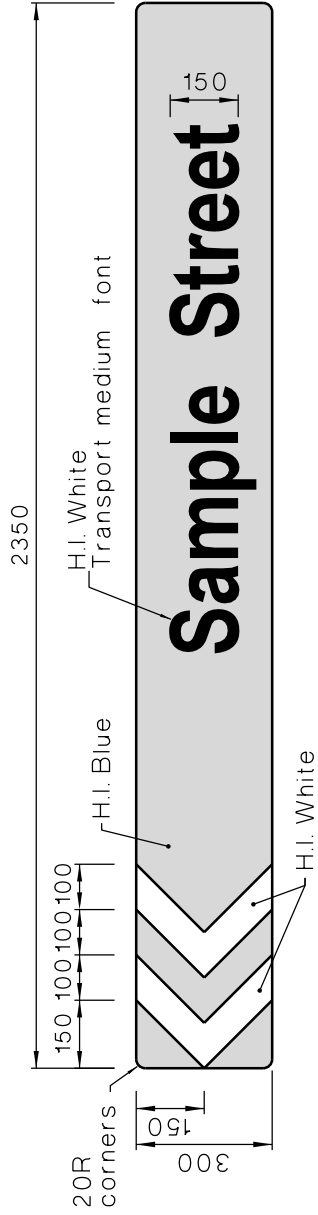
NO SEAT OR SHELTER LAYOUT



Indented Bus Bay		
Width (m)	Entry (m)	Exit (m)
1.0	16.0	10.0
1.5	18.5	11.0
2.0	20.5	11.5
2.5	22.0	12.0

NOTES:

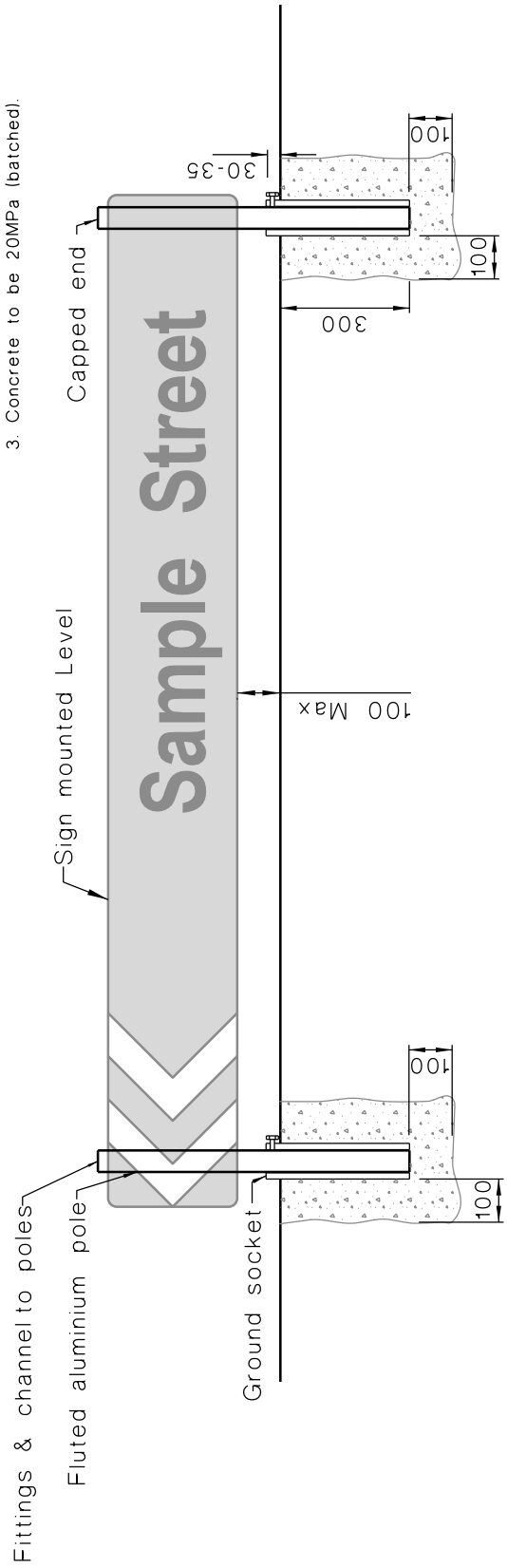
1. See SD644/1 for notes and details.
2. See SD614/1 for kerb and cross fall requirements.



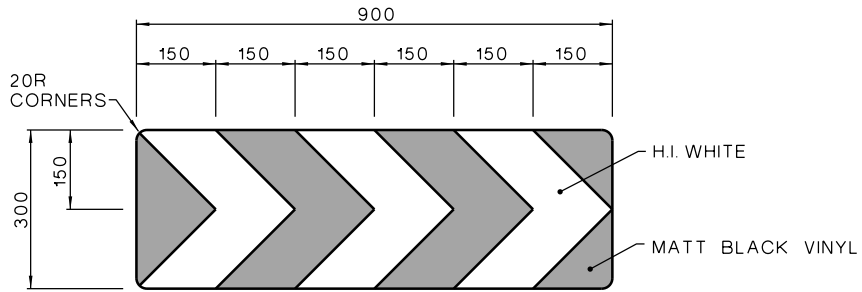
STANDARD CCC ROUNDABOUT CHEVRON / NAME BOARD

NOTE:

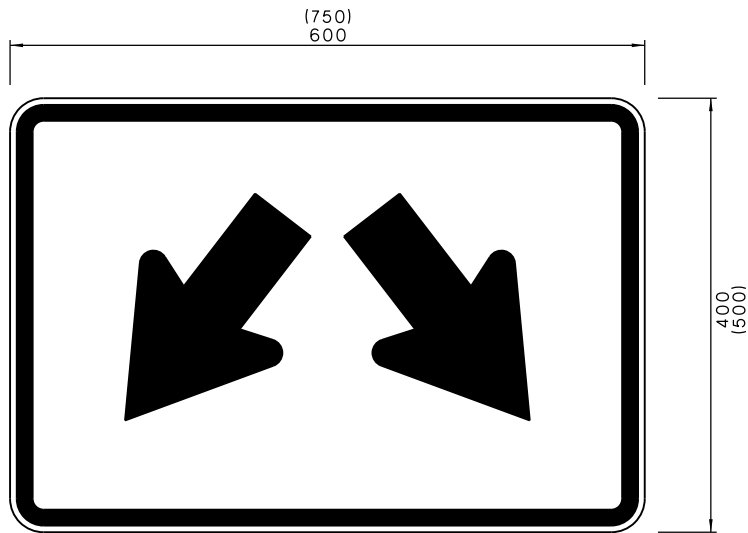
1. All dimensions are in millimetres (mm) unless otherwise stated.
2. No obstructions or landscaping in front of signs.
3. Concrete to be 20MPa (batched).



INSTALLATION DETAIL



STANDARD CCC CHEVRON BOARD

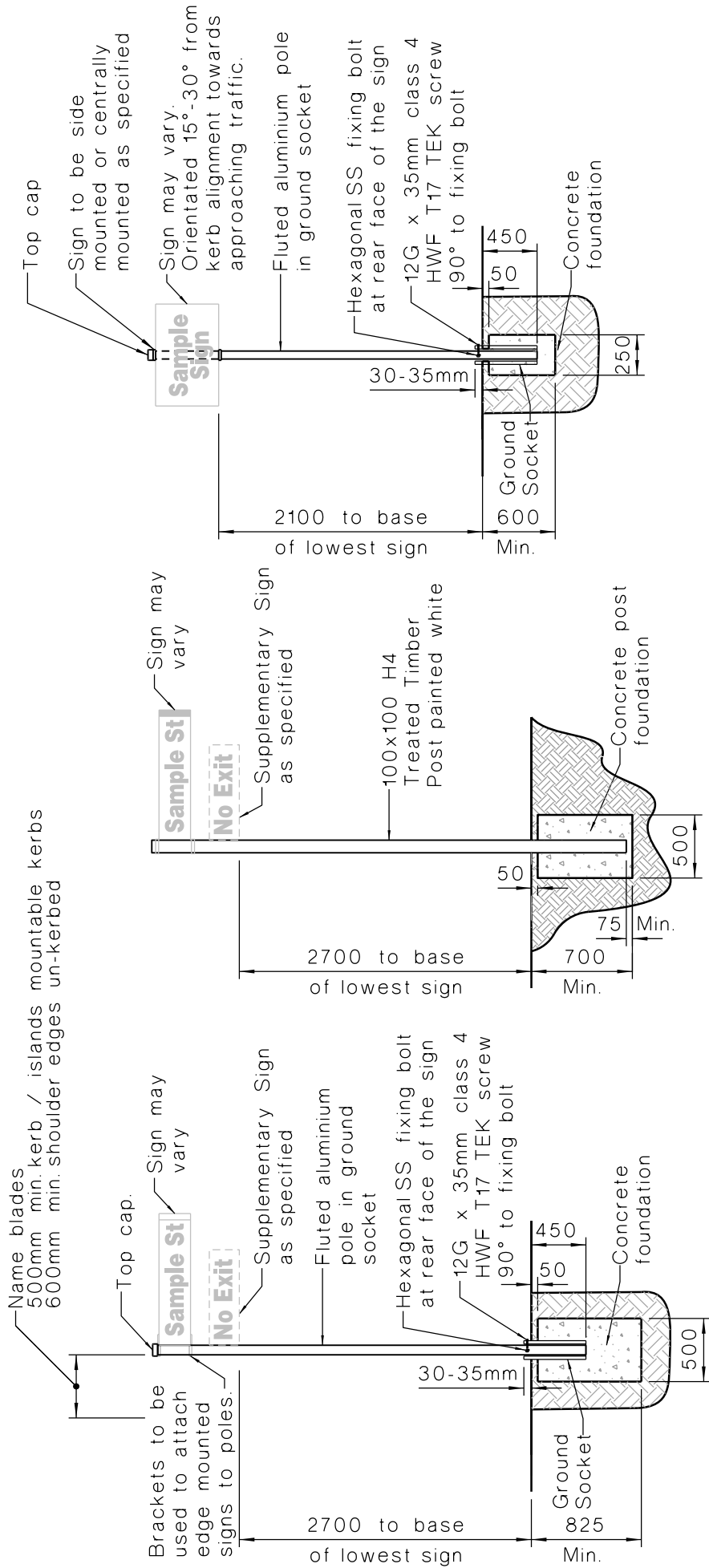


STANDARD CCC PW5 SIGN

NOTE:

1. All dimensions are in millimetres (mm) unless otherwise stated.





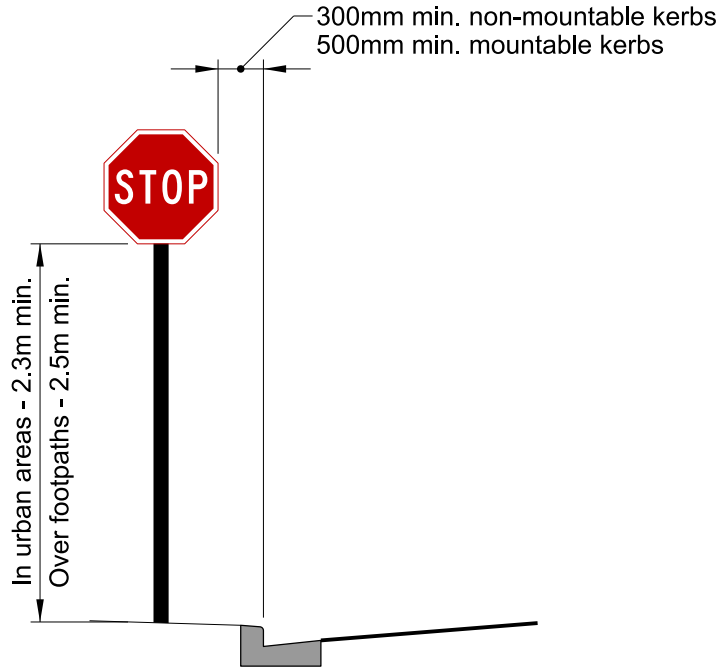
REGULATORY PARKING SIGNS DETAIL

WOODEN POST INSTALLATION DETAIL

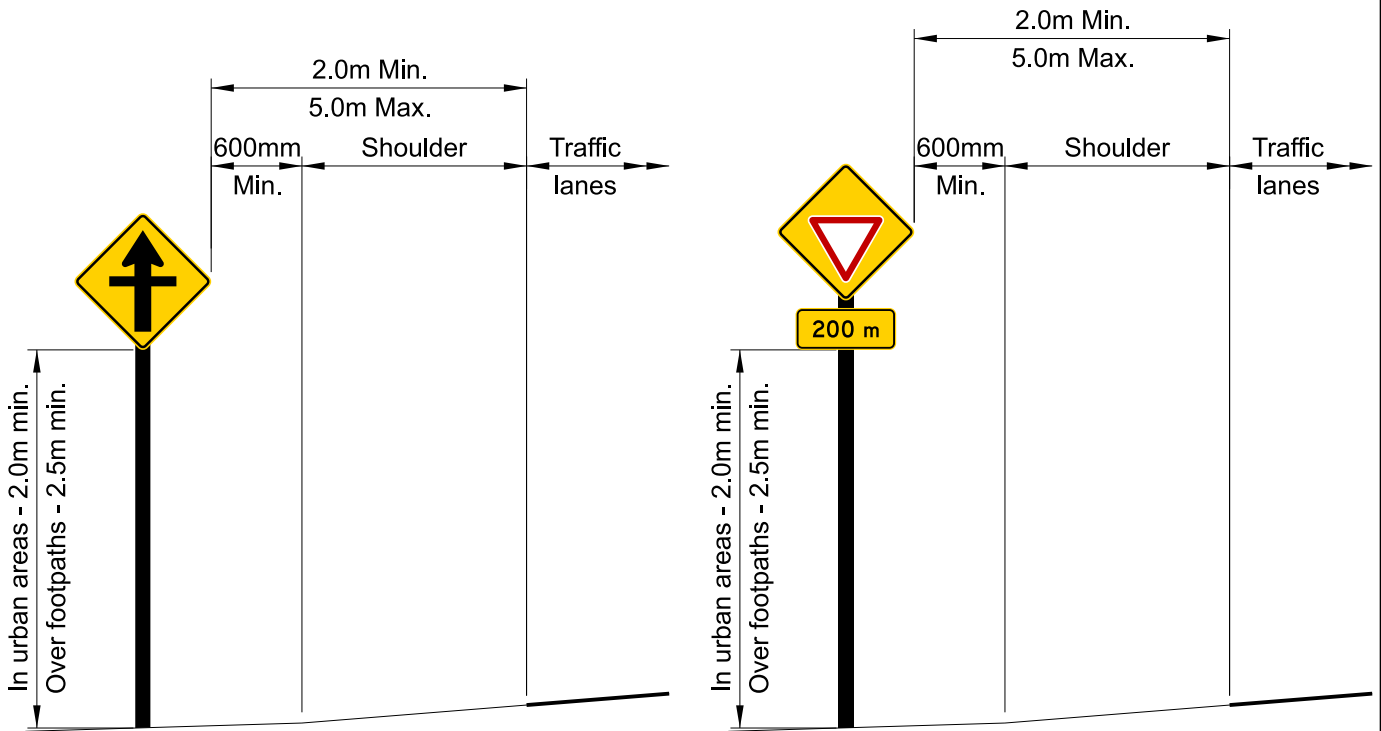
FLUTED ALUMINIUM POLE INSTALLATION DETAIL

NOTE:

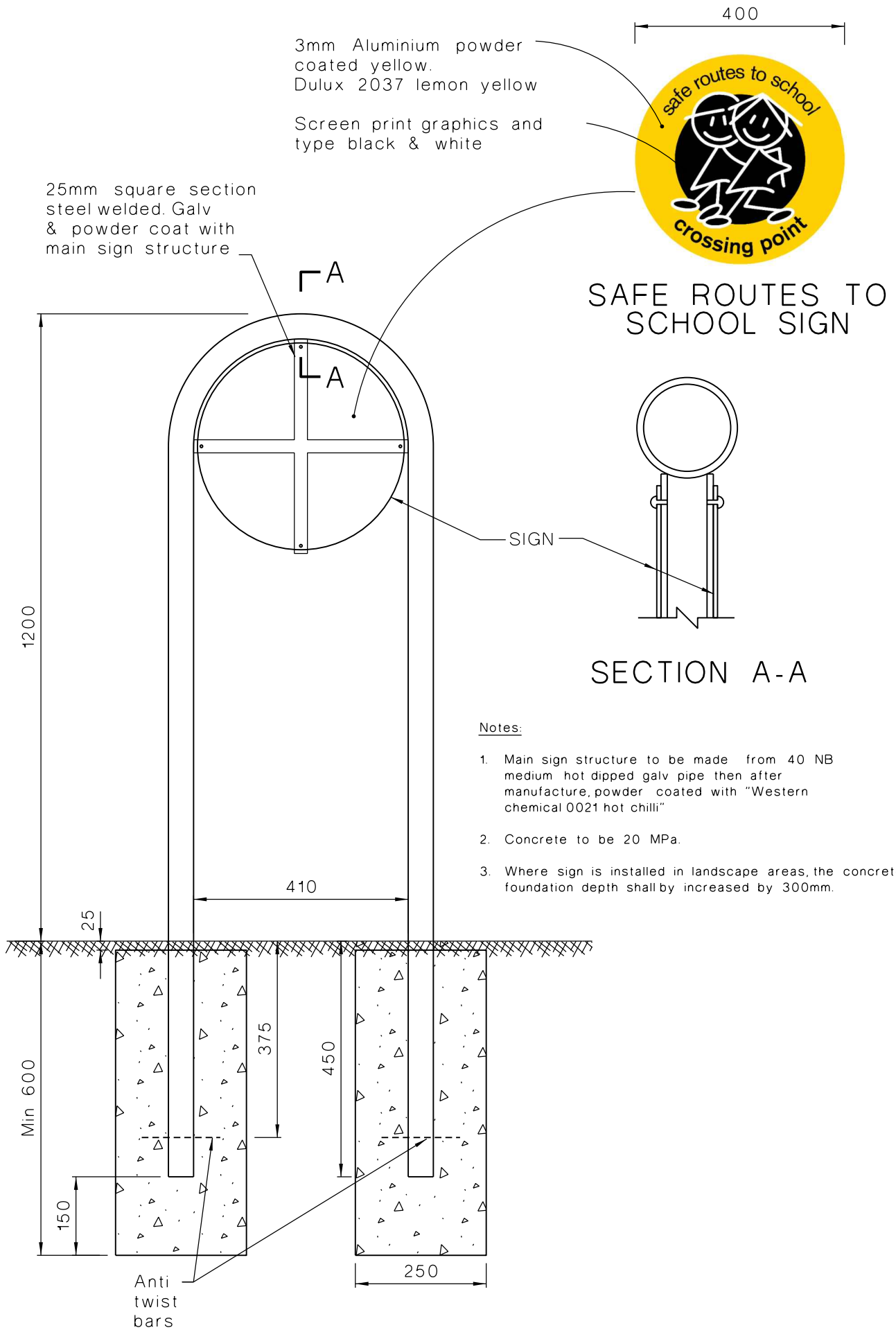
1. All dimensions are to underside of lowest sign unless otherwise stated.
2. Where parking signs exceed 450mm width increase height as specified.
3. Footings are only suitable for signage types shown.
4. Concrete to be 20MPa (batched).

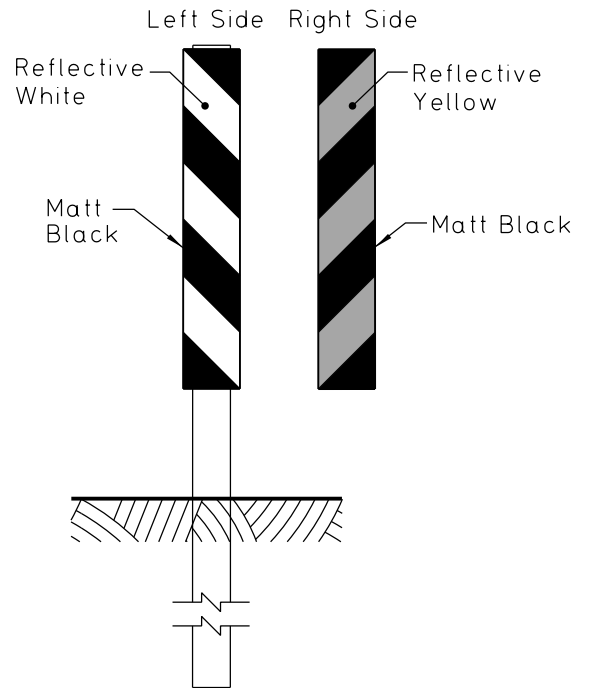
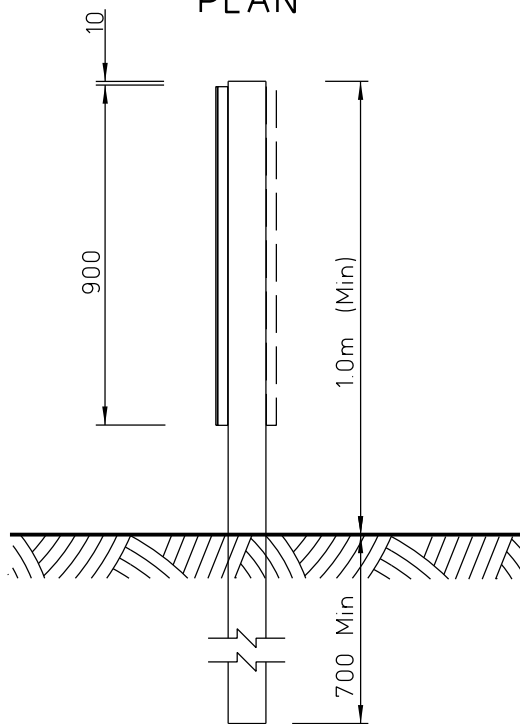
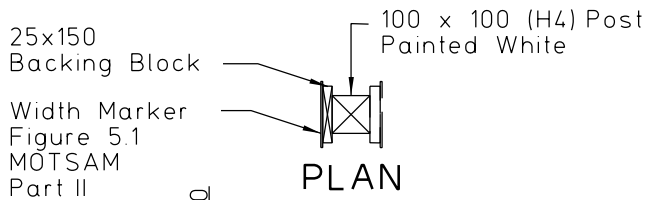


REGULATORY & WARNING SIGN CLEARANCES IN KERBED ROADWAYS

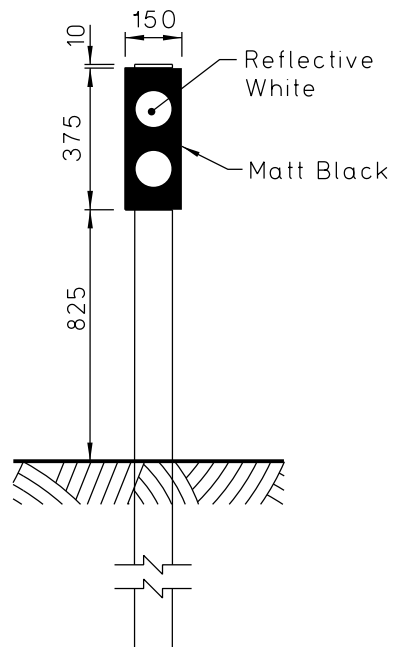
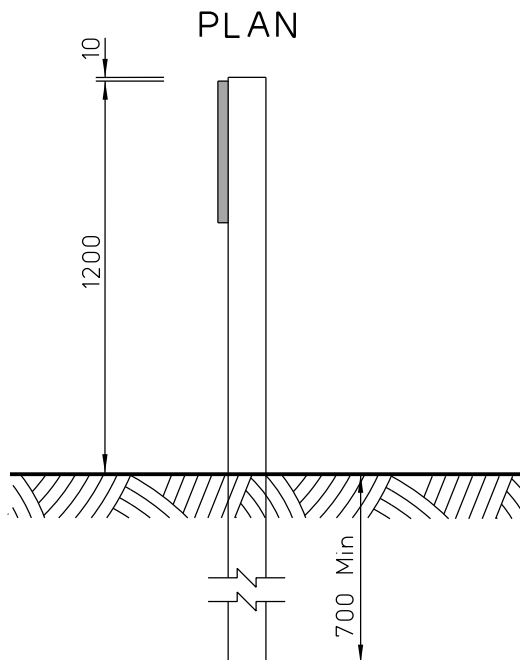
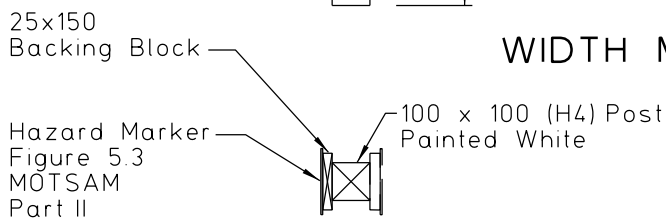


REGULATORY & WARNING SIGN CLEARANCES IN UN-KERBED ROADWAYS





WIDTH MARKER



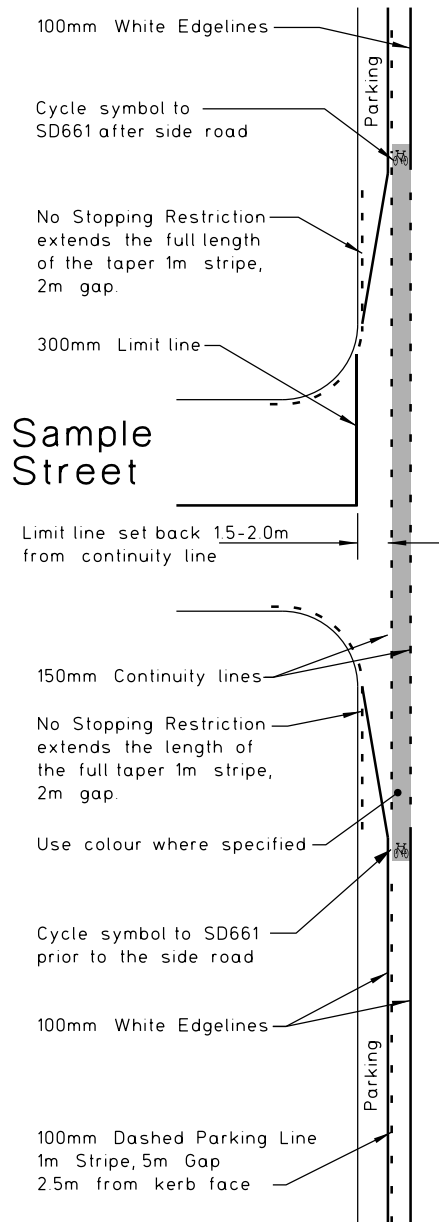
HAZARD MARKER

NOTES:

1. Ensure post is founded in solid bearing

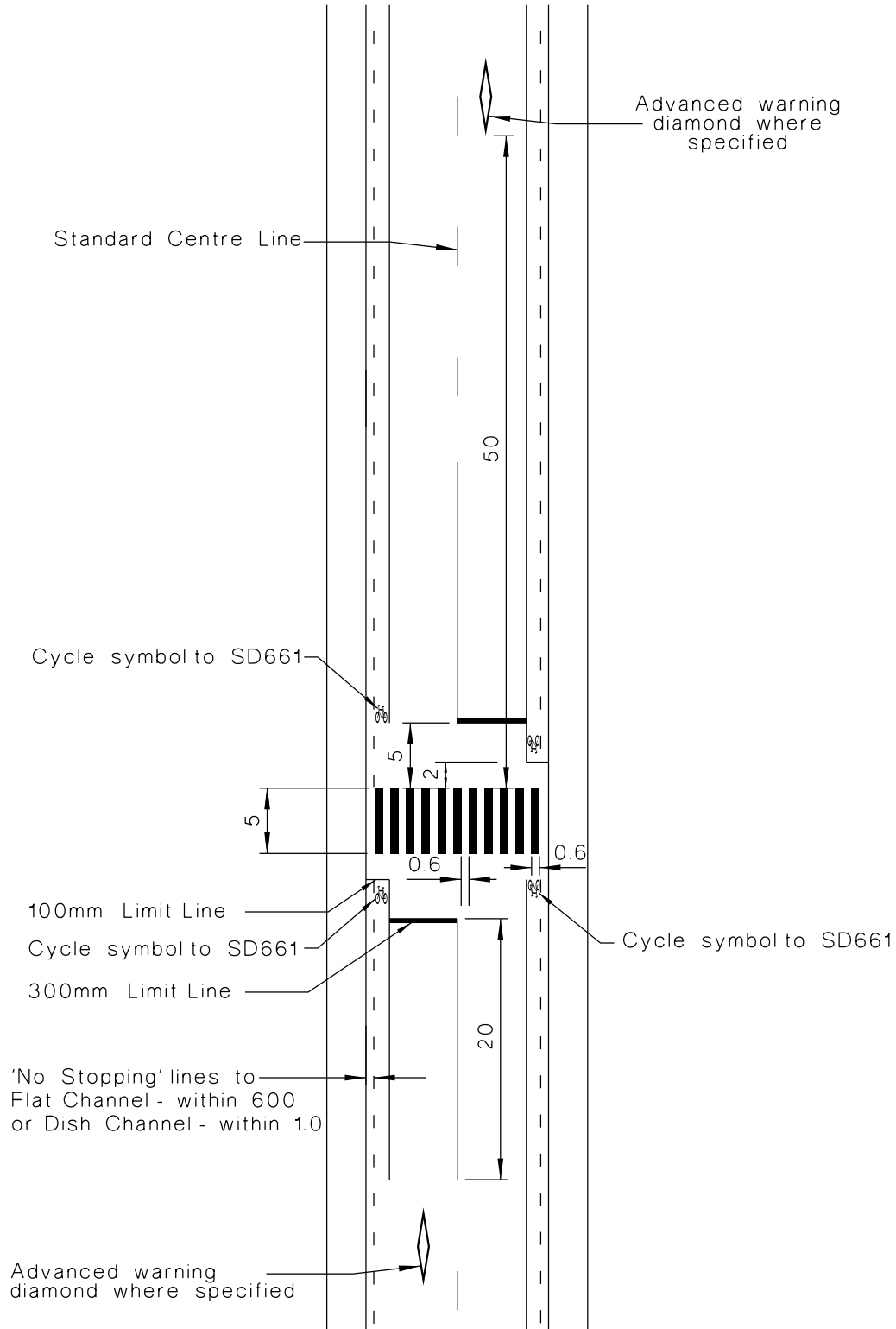
NOTES:

1. To be white on approach left hand side, and yellow on approach right hand side.
2. Ensure post is founded in solid bearing.
3. To be mounted back-to-back where specified.



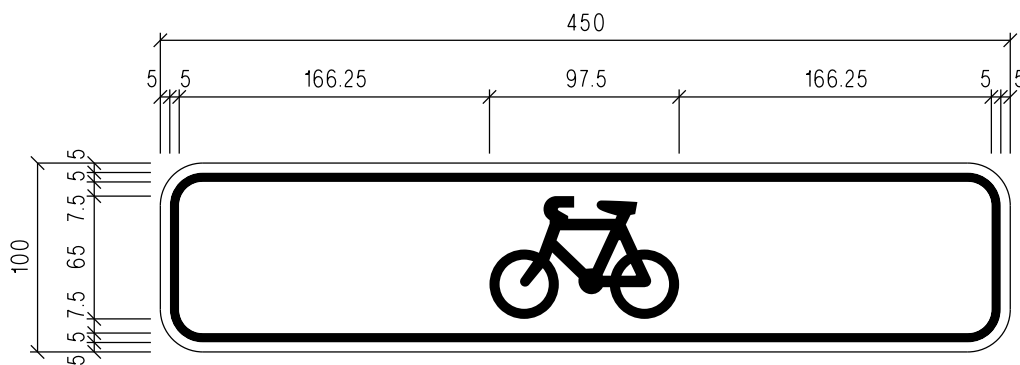
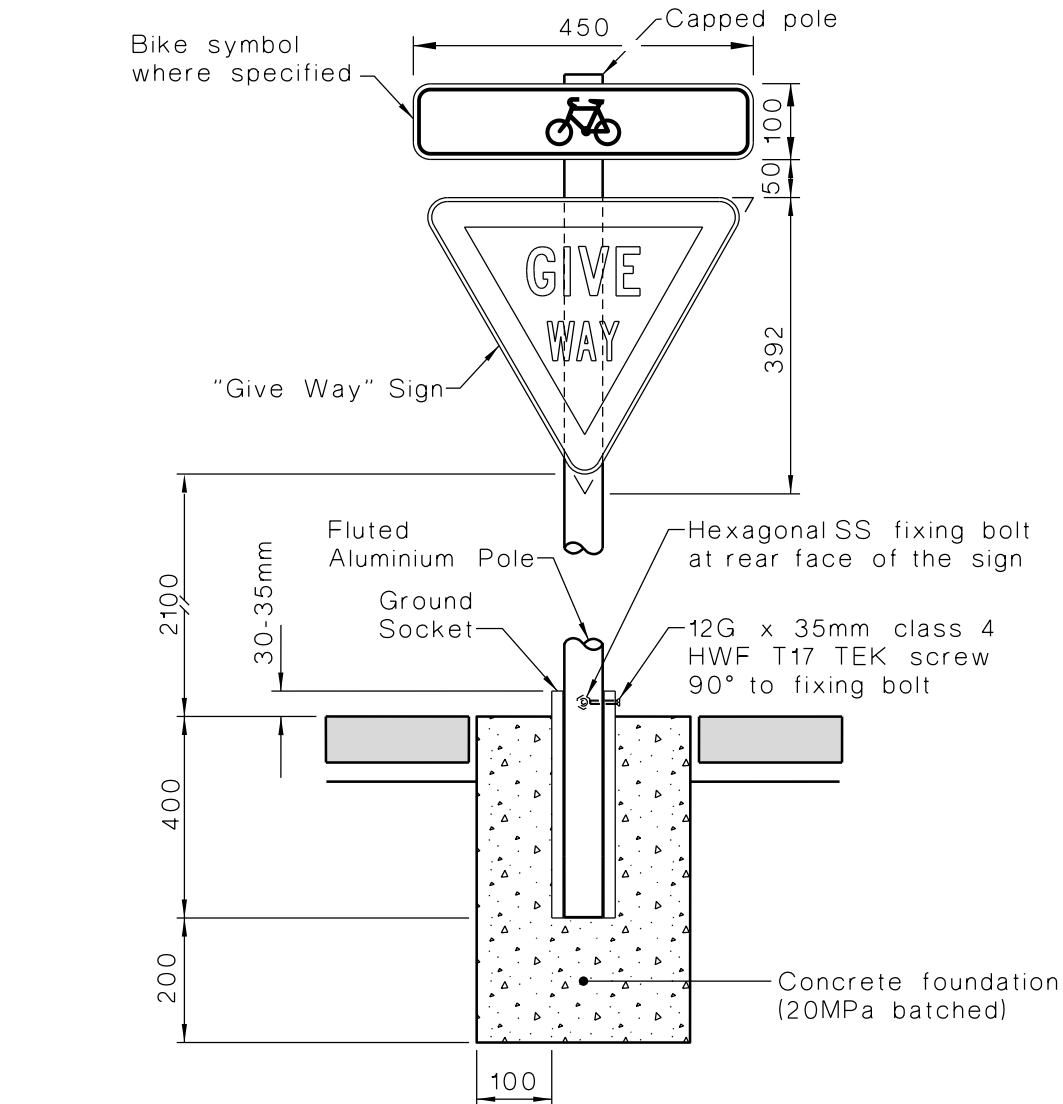
NOTES:

1. Absolute minimum of 1.7m for cycle lane next to parking lane. Desired minimum width 1.8m. (For 50 km/hr Speed Limit)
2. Cycle Logos to SD661 in locations as shown. All other mid-block cycle logos evenly spaced with maximum spacing of 100m.

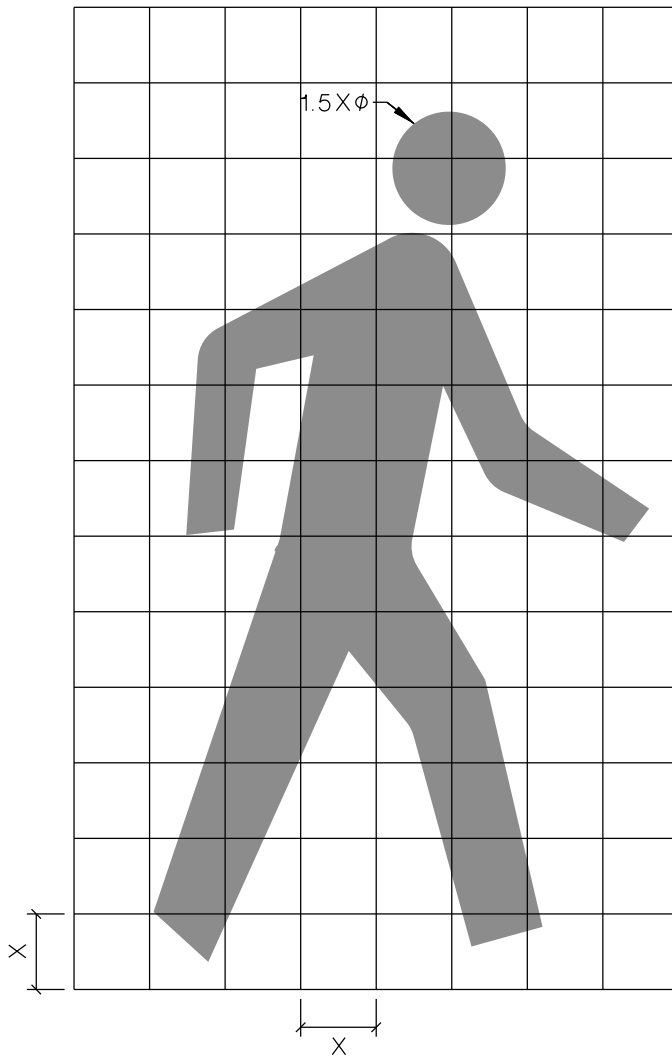


NOTES:

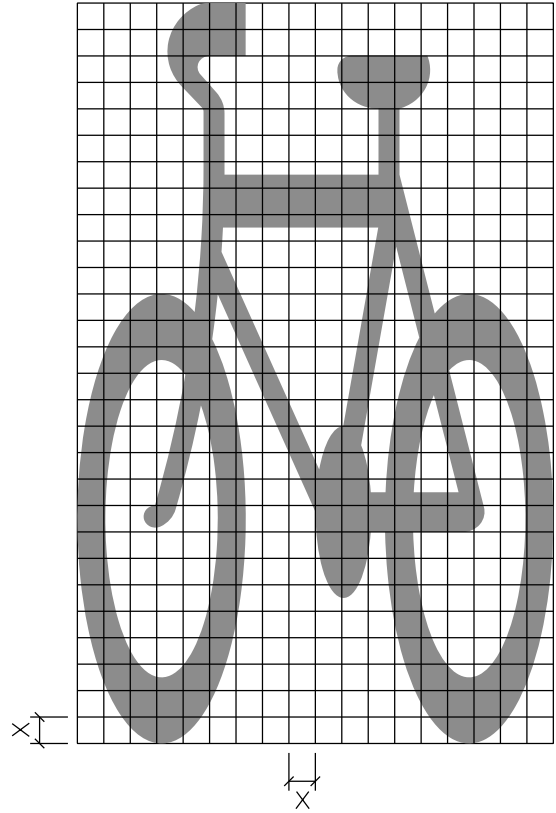
1. Without kerb build-outs, the minimum length of broken yellow "No Stopping" lines on the approaches to pedestrian crossings is 15m.
2. Christchurch City Council line dimension amendments to the 'Manual of Traffic Signs & Markings' issued by the NZTA.
3. Broken yellow No Stopping line stripes at 2.0 centres, 1.0 x 0.1 wide for lengths over 15m. Pedestrian crossing stripes at 1200 centres 5.0 x 0.6 wide



SUPPLEMENTARY SIGN LAYOUT



PEDESTRIAN SYMBOL

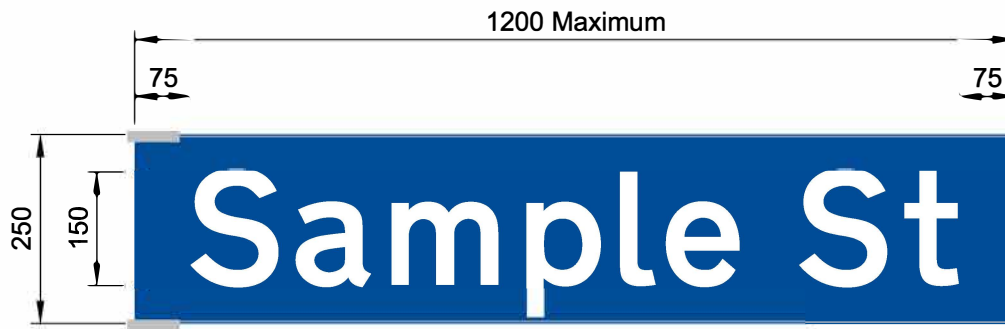


CYCLE SYMBOL

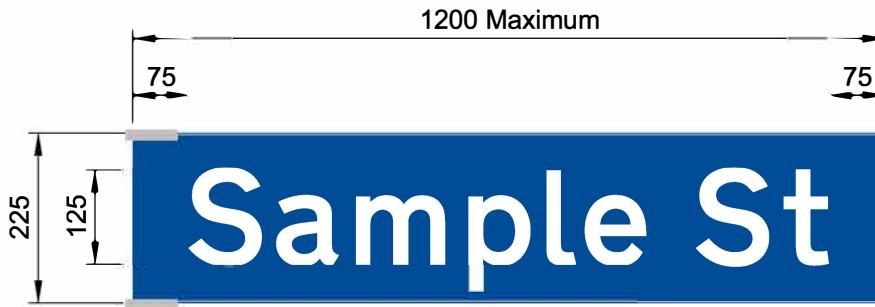
Spacing	
Intersections	As specified
Midblock - Typical	50m
Midblock - Low Conflict	100m

NOTE:

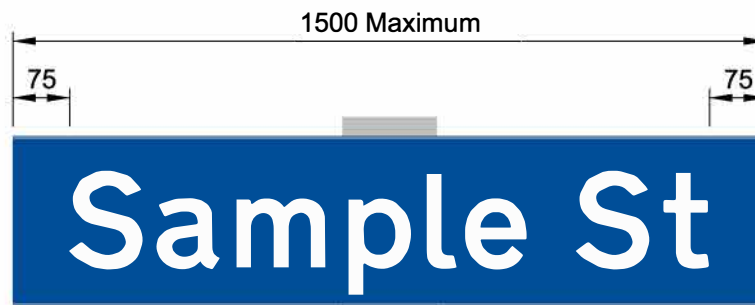
1. Road markings to be reflectorised white.
2. This is the Traffic Control Devices Manual Cycle Symbol.
 On shared paths use a scale factor of X=20mm, resulting in a cycle logo 360mm wide & 560mm high.
 On cycleways use a scale factor of X=35mm, resulting in a cycle logo 630mm wide & 980mm high.
 On roads use a scale factor of X=50mm, resulting in a cycle logo 900mm wide & 1400mm high.



MAJOR ARTERIAL ROADS
(End Mounted)



OTHER SIGNS
(End Mounted)



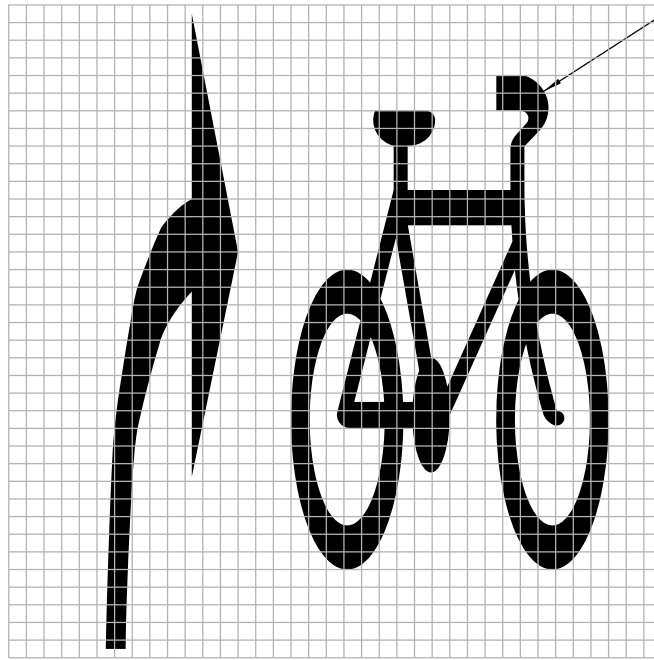
(Central Mounted)



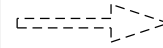
SUPPLEMENTARY SIGNS
(End Mounted)

NOTES:

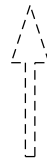
1. Refer to CSS Part 6 clause 25.4 Street Name Signs.
2. Font for signage lettering to be 'Modified Series E'.



Standard path size symbol
Refer to SD661

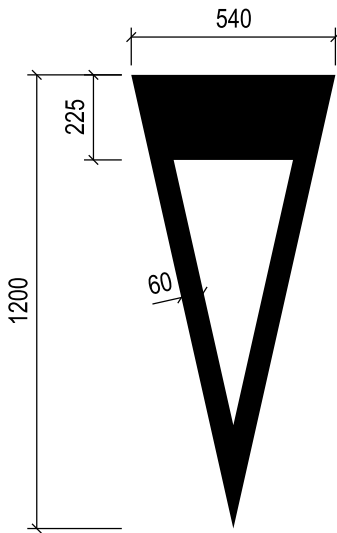


Direction of cyclists leaving hook turn box

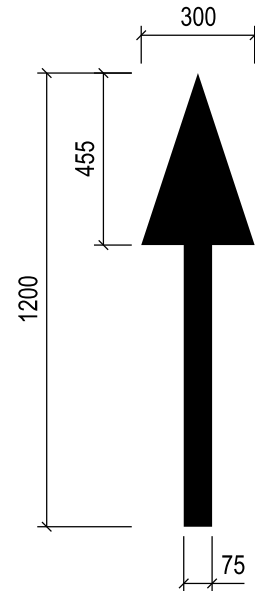


Direction of cyclists approaching hook turn box

HOOK TURN DETAIL



CYCLEWAY GIVE WAY



CYCLEWAY ARROW

NOTES:

1. Hook turn box sides to be at least 1.5m long.
2. Hook turn stencil to MOTSAM fig. 3.35a with 'x'=35mm

