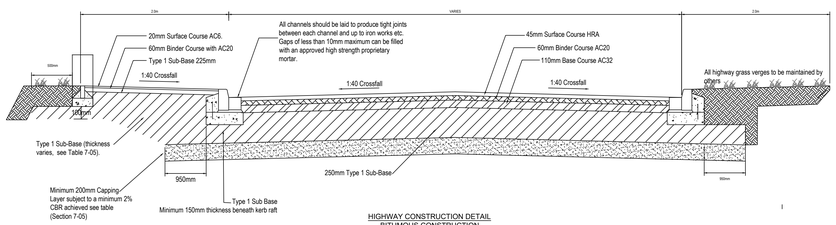
HIGHWAY CONSTRUCTION



HIGHWAY CONSTRUCTION DETAIL
BITUMOUS CONSTRUCTION

TABLE 7-05

MINIMUM LAYER THICKNESSES FOR MACADAM CARRIAGEWAY CONSTRUCTION

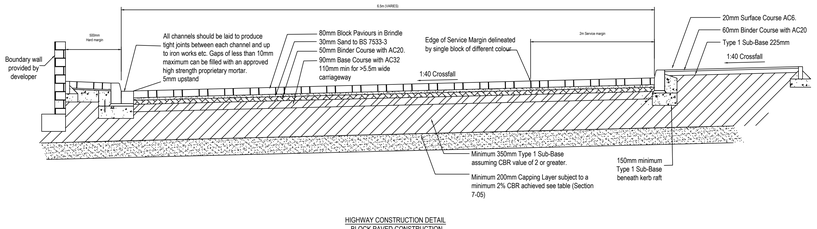
Carriageway Width	Capping Layer (mm)	Type 1 Sub-Base (mm)	Road-Base (mm)	Binder-Course (mm)	Surface – Coat (mm)	Road Type
Classified Roads	Designed to DMRB but no less than thicknesses below for the road-width					
Industrial Roads	Min. 200[1]	450	160	90	45	Industrial Estate Road
7.3 m +	Min. 200[1]	300	140	80	45	Unclassified Residential Estate Road
5.5m to 7.3 m	Min. 200[1]	250	110	60	45	Unclassified Residential Estate Road
Less than 5.5m	Min. 200[1]	255	90	60	45	Unclassified Residential Estate Road

MINIMUM LAYER THICKNESSES FOR BLOCK PAVED SHARED USE CARRIAGEWAY CONSTRUCTION

Carriageway Width	Capping Layer (mm)	Type 1 Sub-Base (mm)	Road-Base (mm)	Binder-Course (mm)	Sand / Blocks (mm)	Blocks (mm) Road Type
6.5 m	Min. 200[1]	350	90	50	30 / 80	Unclassified Shared Estate Roads

MINIMUM LAYER THICKNESSES FOR HRA SHARED USE CARRIAGEWAY CONSTRUCTION[1]

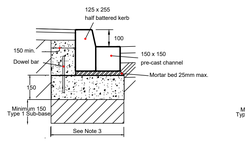
Carriageway Width	Capping Layer (mm)	Type 1 Sub-Base (mm)	Road-Base (mm)	Binder-Course (mm)	Surface Course (mm)	Road Type
6.5m	Min. 200[1]	350	90	50	45[1]	Unclassified Shared Estate Roads



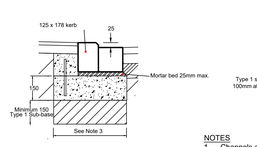
HIGHWAY CONSTRUCTION DETAIL
BLOCK PAVED CONSTRUCTION

NOTES:
1. All bitumous materials under block paviours shall be machine laid including any regulating which is required.
2. All recycled material is subject to the requirements in NYC' s 2025 Specification for Housing and Industrial Estate Roads and Private Street Works - Appendix H
3. See Section 7-05 of NYC' s 2025 Specification for Housing and Industrial Estate Roads and Private Street Works. Sub base should be minimum 150mm thickness beneath kerb raft on bitumous construction
4. Channels only required when gradients is less than 1:80
5. Channels only required on low side of cross fall
6. Footway construction to be in line with Standard Detail A5. That shown is for 'medium' construction where occasional HGV overrun is likely (i.e overrun might occur two or three times a year by delivery vehicles), where the footway/cycleway gives access to a vehicular private drive crossing.

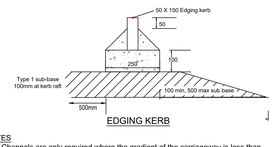
KERBS



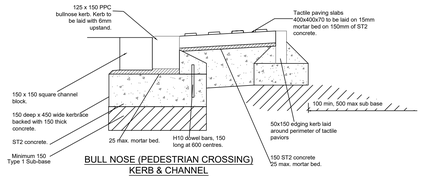
HALF BATTER KERB & CHANNEL



CENTRE (DROPPED) KERB & CHANNEL

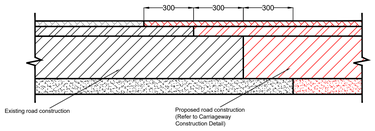


EDGING KERB



BULL NOSE (PEDESTRIAN CROSSING)
KERB & CHANNEL

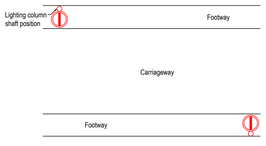
NOTES
1. Channels are only required where the gradient of the carriageway is less than 1:80 (1.25%) unless agreed otherwise in writing by the Engineer prior to kerbing works commencing.
2. Channels on high side may be omitted where road is on crossfall
3. Raft depth shall be 450mm for kerbs with channels, 300mm without channels
4. Centre (dropped) kerbs shall be used at vehicular driveway crossings from the footway and verges and cycle lanes joining the highway.
5. Proprietary transition kerb units shall be used at driveways and footway crossings. See detail E50 for driveway crossings
6. Where grass is used immediately behind a kerb, the kerb backing shall be lowered and chamfered to encourage grass growth.
7. The concrete foundation and kerb backing shall be Class ST2 concrete laid in accordance with Section 11.09 and of the Specification.
8. Mortar Bedding to be in line with Section 11-09 and Section 17 of Specification
9. Dowel bars shall be of mild steel, 150mm x 10mm diameter and placed at 0.6 metre intervals.
10. Hoops or dowels shall extend minimum of 75mm above concrete raft and shall be set minmum of 75mm into the concrete raft.
11. Type 1 sub-base to be a minimum of 150mm deep at kerb raft and 100mm deep at edging kerb raft.
12. Kerbs and channels shall be hydraulically pressed and comply in all respects to BS EN 1340.
13. Tactile paving slabs to be to BS7263.
14. Kerbs shall be laid true to line and level in a flowing alignment and shall not be backed up until inspected and approved by the Engineer.
15. All kerb radius should be to stock to avoid cutting of kerb units.
16. There shall be a minimum of 50mm of cover above the bottom of the raft.
17. Any gaps should be filled with colour matched granolithic concrete. The use of in-situ concrete infill is not acceptable.
18. All dimensions in millimetres



TYPICAL CARRIAGEWAY CONSTRUCTION TYING IN DETAIL

NOTES
1. Existing highway to be cut back as required to form steps 300mm long with sound vertical faces and tack coated prior to laying proposed layers of road construction
2. Prior to laying subsequent layers of bitumous material, the surface shall be thoroughly cleaned and a tack coat of bitumen emulsion class k1-40 to bs434 shall be applied at a rate of 0.4 to 0.6 litres per square metre to any bituminous surface that has been left uncovered for more than three days.
3. Tie-in shall extend to carriageway centreline or beyond the wheel track unless otherwise agreed. Surfacing layer extent to be discussed on site.
4. Refer to Standard Detail J5
5. All dimensions in millimetres

STREET LIGHTING

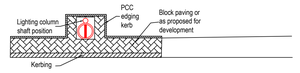


COLUMN POSITION - IN FOOTWAY

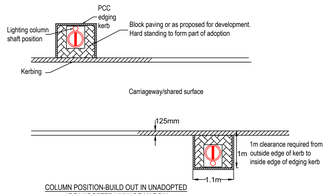
Design speed	Clearance from carriageway edge to front of column
30mph	0.8m
50mph	1.0m
60mph	1.5m
70mph	1.5m

Adjust build out to suit set back

NOTES:
1. 1m clearance required where columns are located adjacent to drives / entrances
2. Boundary walls / fences adjacent to build outs to be installed around their perimeter

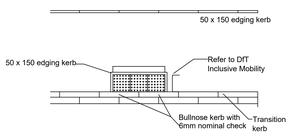


COLUMN POSITION-BUILD OUT IN ADOPTED SERVICE STRIP

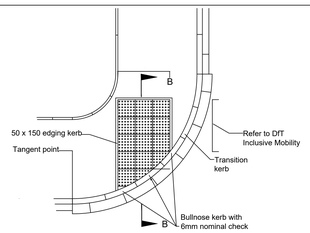


COLUMN POSITION-BUILD OUT IN UNADOPTED AREA/ADOPTED UNMADE MARGIN

TACTILE PAVING

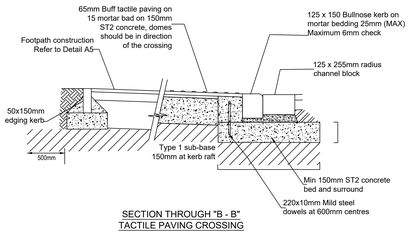


UNCONTROLLED INSET
CROSSING DETAIL



UNCONTROLLED INLINE
PEDESTRIAN CROSSING
DETAIL

NOTES:
1. Tactile paving shall be used at pedestrian crossing points to identify the existence of a dropped kerb and an appropriate place to cross.
2. The use of tactile and hazard paving shall be in accordance with the recommendations given in 'Guidance on the use of Tactile Paving Surfaces' and subsequent revisions, published by the Department for Transport. See also Section 11-13 of NYC Specification
3. Crossing points should be laid out directly opposite each other with domes aligned to the direction of the crossing.
4. At busy locations the developer may be required to take the tactile paving to the back of the footway.
5. The paving slabs to be bedded on a 15mm mortar bed of 3:1 sand and cement with a foundation of 150mm Class ST2 concrete.
6. No fragments of paviours of less than 1/3 original size shall be used.
7. Edging kerbs to the edge of the tactile paving slabs are not required in flagged footpaths.
8. All 400x400mm tactile paving slabs to be 65mm thick.
9. Tactiles in areas subject to potential overrun should be wet laid directly onto concrete (no mortar bed) and may be required to be 70mm.
10. Tactile and hazard paving location is to be in accordance with LTN 1/ 20 and inclusive mobility guidance, and discussed with the Engineer .
11. Tactile and hazard paving should be set out and viewed on site by the inspector before progressing.
12. All dimensions in millimetres unless otherwise stated.

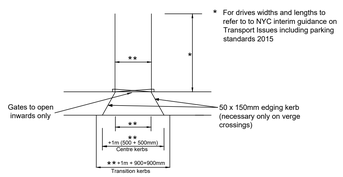


SECTION THROUGH "B - B"
TACTILE PAVING CROSSING

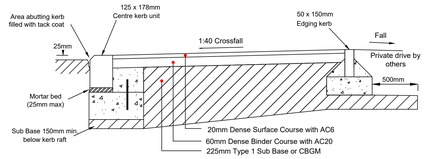
FOOTWAY CROSSINGS

NOTES:
1. Refer to standard details Series A for footway construction.
2. 500mm for Type 1 sub-base required beneath the back of the edging kerb only applicable on new footways / private drives. Not applicable to existing footways / private areas outside of existing public highway.
3. Edging kerb lowered by 75mm when considering pin kerb setting access out on new footways, not applicable for existing footways
4. Edging kerb to run straight across at access point and is to be dropped to follow kerb at the carriageway edge.
5. Edging kerb necessary where no boundary wall or concrete driveway exists.
6. Drop kerbs to span 0.50m beyond each side of drive crossings to prevent vehicles overunning and damaging transition kerbs.

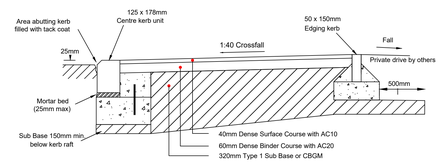
PLAN VIEWS

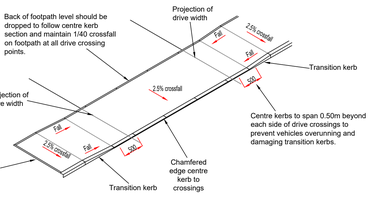


MEDIUM DUTY FOOTWAY CROSSING,
OFF MACADAM CARRIAGEWAY
(FOR UP TO 1 DWELLING)

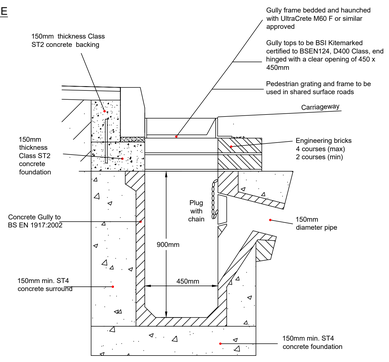


HEAVY DUTY FOOTWAY CROSSING, OFF
MACADAM CARRIAGEWAY
(FOR UP TO 5 DWELLINGS)

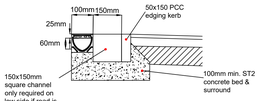




DRAINAGE



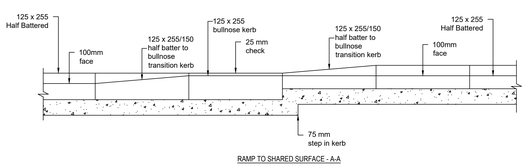
ROAD GULLY DETAIL



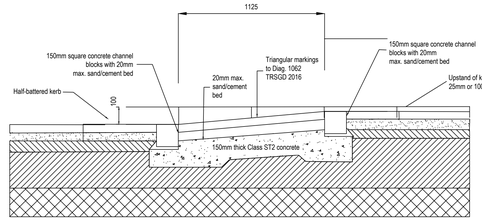
ACO CHANNEL DETAIL ON PRIVATE DRIVE
/ ADOPTED HIGHWAY INTERFACE

NOTE
1. DRAINAGE STRATEGY MUST ENSURE POSITIVE OUTFALL WITH NO PONDING, AND DETAILING WHEN CHANNELS AND GULLIES ARE REQUIRED.

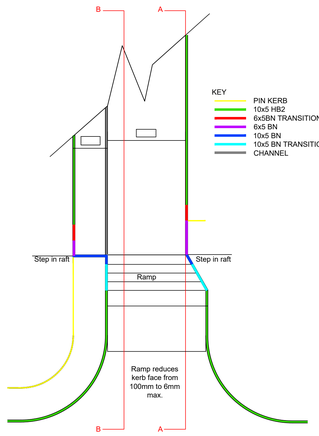
RAMPS



RAMP TO SHARED SURFACE - A-A

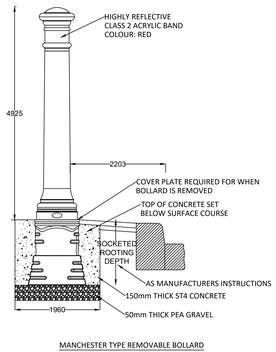


RAMP TO SPEED TABLE B-B

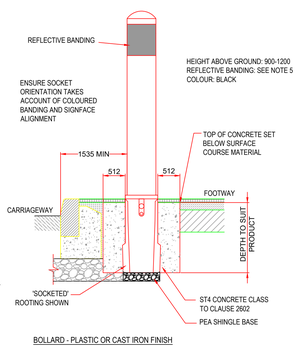


RAMP TO SHARED SURFACE - PLAN

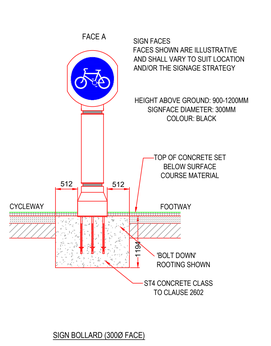
BOLLARDS



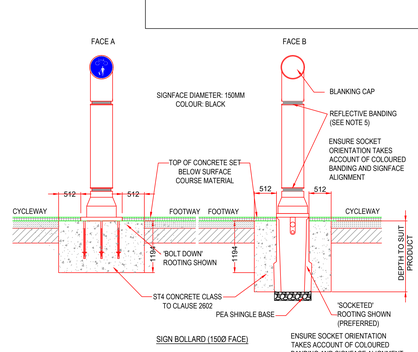
MANCHESTER TYPE REMOVABLE BOLLARD



BOLLARD - PLASTIC OR CAST IRON FINISH



SIGN BOLLARD (300Ø FACE)



SIGN BOLLARD (150Ø FACE)

ENSURE SOCKET ORIENTATION TAKES ACCOUNT OF COLOURED BANDING AND SIGNFACE ALIGNMENT

BOLLARD REQUIREMENTS:
1. BOLLARDS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATION.
2. BOLLARDS MAY BE INSTALLED AS EITHER 'SOCKETED' (PREFERRED) OR 'BOLT DOWN'.
3. SELECTION OF BOLLARD TYPE MAY BE DEPENDANT ON PLANNING REQUIREMENTS AND LOCATION AND SHALL BE AGREED BY NYC.
4. FOR PLASTIC OR CAST IRON BOLLARDS THE STANDARD COLOUR SHALL BE BLACK, UNLESS OTHERWISE AGREED BY NYC.
5. FIXED AND/OR REMOVABLE BOLLARD TYPES MUST BE CLEARLY ANNOTATED ON THE PLAN DRAWINGS.
6. FOR SIGN BOLLARDS,THIS DETAIL MUST BE USED IN CONJUNCTION WITH ENGINEERS SIGN/BOLLARD LOCATION PLAN AND SIGN FACE SCHEDULES. ALL UNUSED FACES MUST BE INSTALLED WITH A BLANKING CAP.
7. ALL BOLLARDS MUST BE INSTALLED WITH REFLECTIVE BANDING.
8. REFLECTIVE BANDING SHALL BE REFLECTIVE TO CLASS REF 2 REQUIREMENTS AND BE COLOURED RED ON THE LEFT HAND EDGE OF THE CARRIAGEWAY AS VIEWED BY THE DRIVERS OF APPROACHING VEHICLES. AND COLOURED WHITE ON THE RIGHT HAND EDGE OF THE CARRIAGEWAY WHEN SO VIEWED, EXCEPT WHERE THE EDGE IS THE EDGE OF A DUAL CARRIAGEWAY OR ONE WAY ROAD WHEREUPON THE COLOUR SHALL BE AMBER.
9. BOLLARDS SHALL BE PASSIVELY SAFE BOLLARDS, NAL RETENTION SOCKETS MAY BE REQUIRED.
10. IN SOME LOCATIONS STEEL BOLLARDS WILL BE USED IF INSTRUCTED BY THE ENGINEER.
11. BOLLARDS SHOULD NOT REDUCE EXISTING FOOTWAY WIDTH TO LESS THAN 1.5m.
12. REFER TO 26-01 NYC SPECIFICATION.

GENERAL NOTES
1. THIS DRAWING PROVIDES TYPICAL RESIDENTIAL HIGHWAY CONSTRUCTION DETAILS FOR USE AS A GENERAL GUIDE. IT IS NOT SITE-SPECIFIC AND DOES NOT REPLACE DETAILED DESIGN.
2. ALL LAYOUTS AND CONSTRUCTION DETAILS SHALL BE AGREED WITH THE HIGHWAY AUTHORITY.
3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE NYC SPECIFICATION FOR HOUSING AND INDUSTRIAL ESTATE ROADS AND PRIVATE STREET WORKS (2025).

NORTH YORKSHIRE COUNCIL
Environment Directorate

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REVISIONS		
ISSUES	DESCRIPTION	DATE
A	Revision A incorporates new NYC SPECIFICATION FOR HOUSING AND INDUSTRIAL ESTATE ROADS AND PRIVATE STREET WORKS (2025).	SEPTEMBER 2025

PROJECT: STANDARD DETAILS	DATE: SEPTEMBER 2025
DRAWING TITLE: A6 - STANDARD RESIDENTIAL DEVELOPMENT DETAILS	SCALE: Not to Scale
	Revision A
	ORIGINAL DRAWING SIZE A0