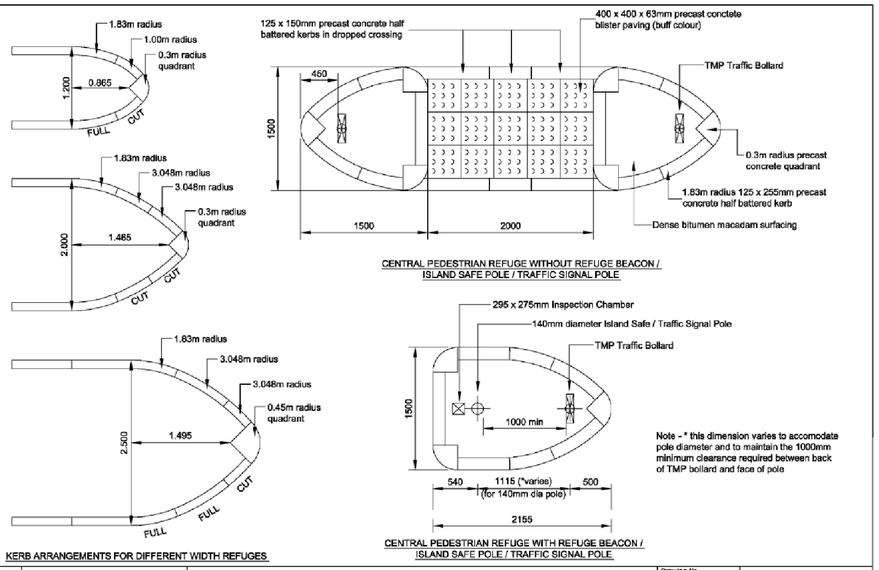


KERB ARRANGEMENTS FOR DIFFERENT WIDTH REFUGES

CENTRAL PEDESTRIAN REFUGE WITHOUT REFUGE BEACON / ISLAND SAFE POLE / TRAFFIC SIGNAL POLE

Note - * this dimension varies to accomodate pole diameter and to maintain the 1000mm minimum clearance required between back of TMP bollard and face of pole

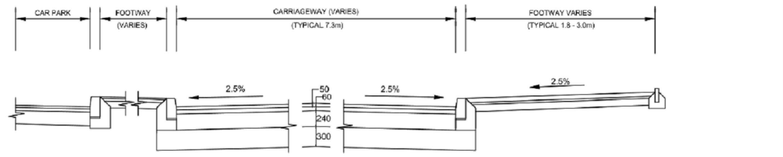
CENTRAL PEDESTRIAN REFUGE WITH REFUGE BEACON / ISLAND SAFE POLE / TRAFFIC SIGNAL POLE

Revision	Date	Description

CENTRAL PEDESTRIAN REFUGE

Drawing No. B309

Bury Council — Environment & Development Services — Engineering Consultancy



TYPICAL CARRIAGEWAY AND FOOTWAY CROSS SECTION

CAR PARK CONSTRUCTION

40mm	AC10 close surf 100/150 (Clause 912)
50mm	AC20 HDM bin 40 / 60 des (Clause 929)
200mm	Granular Type 1 Sub-Base
	OR
65mm	Thick concrete block paving
35mm	Sharp Sand
200mm	Granular Type 1 Sub-Base
	Joint sand stabiliser

CARRIAGEWAY CONSTRUCTION

Road Classification - A, B, C & Feeder Roads

50mm	HRA 35/14F Surf PMB perf WT1 / WT2 (Clause 943) with 14/20mm pre-coated chippings to BS EN 13043 (PSV=62min)
60mm	HRA 60/20 bin PMB perf WT1 / WT2 (Clause 943)
240mm	HRA 60/32 base 40 / 60 des (Clause 929)
300mm	Granular Type 1 Sub-Base
	OR
50mm	Thin Surface Course with 14 or 10mm nominal size aggregate (Clause 942) (PSV = 82 min)
60mm	AC20 HDM bin 40 / 60 des (Clause 929)
240mm	AC32 HDM base 40 / 60 des (Clause 929)
300mm	Granular Type 1 Sub-Base

Road Classification - Unclassified

50mm	Thin Surface Course with 14 or 10mm nominal size aggregate (Clause 942) (PSV = 55 min)
60mm	AC20 HDM bin 40 / 60 des (Clause 929)
240mm	AC32 HDM base 40 / 60 des (Clause 929)
300mm	Granular Type 1 Sub-Base
	OR
40mm	AC10 close surf 100/150 (Clause 912) (PSV = 55min)
60mm	AC20 HDM bin 40 / 60 des (Clause 929)
240mm	AC32 HDM base 40 / 60 des (Clause 929)
300mm	Granular Type 1 Sub-Base

NOTE
Carriageway construction is in accordance with Design Manual for Roads and Bridges, Volume 7, Section 2.

FOOTWAY CONSTRUCTION (VEHICLE OVER-RUN)

20mm	AC6 dense surf 100/150 (Clause 909)
100mm	AC20 dense bin 100/150 (Clause 906)
150mm	Granular Type 1 Sub-Base
	OR
70mm	450 x 450 standard Trafica precast concrete flags
35mm	Sharp Sand
100mm	AC20 dense bin 100/150 (Clause 906))
150mm	Granular Type 1 Sub-Base

FOOTWAY CONSTRUCTION (PEDESTRIAN ONLY)

20mm	AC6 dense surf 100/150 (Clause 909)
60mm	AC20 dense bin 100/150 (Clause 906)
150mm	Granular Type 1 Sub-Base
	OR
70mm	450 x 450 standard Trafica precast concrete flags
35mm	Sharp Sand
150mm	Granular Type 1 Sub-Base
	OR
100mm	Wet lean Concrete CBM4 as described in the contract

PROFILE
Although cross sections generally show straight gradients from crown to channel the finished profile shall be a continuous smooth curve and unless otherwise specified the amount of springing shall be as follows:-

AMOUNT OF SPRINGING

1. For Two Way road with camber - 0.25 x crown
2. For Two Way road with superelevation $\frac{1}{100}$ x carriageway width at centre (max 50mm)
 0.25x centre spring at quarter point

Revision	Date	Description

TYPICAL CARRIAGEWAY AND FOOTWAY DETAIL

Drawing No. B100

Bury Council — Environment & Development Services — Engineering Consultancy

NOTES

1. ALL ADOPTABLE SEWERS AND ASSOCIATED WORKS ARE TO COMPLY FULLY WITH "SEWERS FOR ADOPTION" 7TH EDITION. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ON-SITE DRAINAGE PRIOR TO UNDERTAKING ANY WORKS AND ANY DISCREPANCIES WITH BOUNDARIES, FENCELINES, EARTHWORKS OR OTHERWISE REPORTED IMMEDIATELY TO THE ENGINEER PRIOR TO WORKS COMMENCING.

2. ALL HIGHWAY AND DRAINAGE WORKS TO BE TO ADOPTABLE STANDARDS AND SHALL COMPLY FULLY WITH THE LOCAL AUTHORITY SPECIFICATION, APPROVED STANDARD DETAILS AND THE RELEVANT SECTIONS OF THE DESIGN MANUAL FOR ROADS AND BRIDGES, SPECIFICATION FOR HIGHWAY WORKS AND BRITISH STANDARDS. CONTRACTOR TO ENSURE POSITIVE DRAINAGE TO ALL GULLIES PRIOR TO UNDERTAKING ANY PAVEMENT WORKS.

3. ANY PRIVATE WORKS ARE TO COMPLY FULLY WITH THE LATEST EDITIONS OF THE BUILDING REGULATIONS

4. ALL EXISTING STATIONS, INVERT LEVELS AND DRAINAGE NETWORK TO BE CHECKED BY THE CONTRACTOR AT THE START OF WORKS AND ANY DISCREPANCIES NOTIFIED TO THE ENGINEER. ALL LEVELS ARE BASED ON TOPOGRAPHICAL SURVEY INFORMATION PROVIDED BY OTHERS. ANY DISCREPANCIES BETWEEN THIS AND OTHER DRAWINGS TO BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION

5. ALL MATERIALS TO BEAR THE RELEVANT B.S/KITEMARK AND COMPLY FULLY WITH THE SPECIFICATIONS. ALL MATERIALS TO BE AGREED WITH THE OVERSEEING LOCAL AUTHORITY REPRESENTATIVE PRIOR TO ORDERING. ALL CONCRETE & CONCRETE PRODUCTS MUST USE SULPHATE RESISTANT CEMENT (UNLESS THE SITE INVESTIGATION REPORT PROVES THAT SULPHATE ATTACK FROM SOILS AND GROUNDWATER WILL NOT OCCUR)

6. ALL STATUTORY CONSENTS, OPENING NOTICES ETC. AS REQUIRED UNDER HIGHWAYS ACTS AND WATER INDUSTRIES ACTS, ARE TO BE OBTAINED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF THE WORKS (UNLESS OTHERWISE STATED). ALL WORKS ARE TO BE INSPECTED BY L.A., NHBC OR STATUTORY AUTHORITY AS APPLICABLE.

7. CONTRACTOR TO MAKE ADVANCE ALLOWANCE FOR THE MANAGEMENT AND COORDINATION OF STATUTORY UNDERTAKERS EQUIPMENT AND DIVERSIONS. THE CONTRACTOR SHALL ENSURE THAT ALL STATUTORY UNDERTAKERS EQUIPMENT IN THE HIGHWAY SHOULD BE VERIFIED BY THE CONTRACTOR ON SITE PRIOR TO STARTING ANY WORKS. THE LOCATION OF STATUTORY PLANT SHOWN ON ANY PLANS IS INDICATIVE ONLY AND SHOULD NOT BE RELIED UPON FOR THE LOCATION OF ANY HYPEWON OR CABLING. THE CONTRACTOR SHOULD CONFIRM THE LOCATION OF ALL STATS PLANT BY HAND DUG TRIAL TRENCHES PRIOR TO COMMENCING ANY WORKS. CONTRACTOR TO ALLOW FOR THE COST OF ANY DIVERSIONS OR PROTECTION OF STATS EQUIPMENT (INCORPORATING SPLIT DUCT AND 150MM CONCRETE SURROUND OR SIMILAR STATUTORY APPROVED METHOD) IS TO BE PUT IN PLACE BY THE CONTRACTOR (UNLESS STATED OTHERWISE) WHERE STATS EQUIPMENT ARE FOUND TO BE WITHIN THE AREA OF HIGHWAY WORKS.

8. PRIOR TO ORDERING THE CONTRACTOR IS TO AGREE ALL SIGN POST/LIGHTING COLUMN MATERIALS AND FINISHES WITH THE LOCAL AUTHORITY. ALL SIGNS TO COMPLY WITH BS EN 12899:2007 AND ITS NATIONAL ANNEX. TYPE OF POSTS, FINISHES AND LIGHTING UNITS/COLUMNS TO BE AGREED WITH LA STREETLIGHTING ENGINEER PRIOR TO ORDERING. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE PROVISION OF ALL REQUIRED EQUIPMENT AND ELECTRICAL FEEDS TO LIGHTING AND ANY SIGNALS PRIOR TO WORKS COMMENCING. CONTRACTOR TO MAKE ALLOWANCE FOR ANY LEAD-INS WITHIN THEIR PROGRAMME.

9. ALL ROADMARKINGS TO BE LAID IN ACCORDANCE WITH THE REQUIREMENTS OF THE TRAFFIC SIGNS MANUAL, CHAPTER 5, TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS. ROADMARKING MATERIALS, LAYING AND APPLICATION RATES TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF BS EN 1436.ALL ACCESS COVERS WITHIN THE EXTENTS OF THE WORKS TO BE REPLACED/ADJUSTED ON COVERS AND AGREED WITH LA ENGINEER. PSV OF ALL LINING AND COVERS TO SUIT ADJACENT SURFACING

10. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ADVANCE NOTICES ARE IN PLACE AND TRAFFIC MANAGEMENT AGREED FOR THE WORKS PRIOR TO COMMENCING. THE CONTRACTOR IS TO MAKE ALLOWANCE FOR THE ADVANCE PROVISION OF ALL ELECTRICAL WORKS AND EQUIPMENT FOR SIGNALS AND STREETLIGHTING WITHIN THEIR PROGRAMME OF WORKS

C.D.M. REGULATIONS 2015

IN LINE WITH THE ABOVE REGULATIONS WE ARE OBLIGED TO INFORM THE CLIENT OF THE RISKS THAT MAY BE ENCOUNTERED IN THE CONSTRUCTION OF THESE WORKS. WHEREVER POSSIBLE RISKS HAVE BEEN ELIMINATED FROM THE DESIGN, HOWEVER DUE TO THE VERY NATURE OF THIS TYPE OF WORK IT IS NOT POSSIBLE TO REMOVE ALL RISKS. THE CONTRACTOR IS TO BE MADE AWARE OF THESE RISKS AND IT IS THE CONTRACTORS DUTY TO TAKE ALL REASONABLE STEPS IN ENSURING THAT ONLY COMPETENT CONTRACTORS WHO HAVE A VALID SAFETY POLICY AND EMPLOYED, THEY SHOULD ALSO PROVIDE SATISFACTORY RESPONSES AT TENDER STAGE AS TO THE MANNER IN WHICH THEY WILL DEAL WITH THE ELEMENTS OF RISK INVOLVED IN THIS TYPE OF WORK AND IN PARTICULAR THOSE HIGHLIGHTED BY CROFT BELOW:-

1. TRENCH EXCAVATIONS IN EXCESS OF 1.2M DEEP.
2. GUARDING TO EDGES OF EXCAVATIONS TO PREVENT PEOPLE, MATERIALS AND VEHICLES FALLING INTO EXCAVATIONS.
3. GUARDING OF EXCAVATIONS OUTSIDE WORKING HOURS TO PREVENT UNAUTHORISED ACCESS.
4. UNDERMINING TO ADJACENT FOOTWAYS OR STRUCTURES.
5. CONFINED SPACE OPERATIONS.
6. DEALING WITH EXISTING SERVICES.
7. TRAFFIC MANAGEMENT ON EXISTING HIGHWAYS AND PROTECTION OF SITE PERSONNEL AND MEMBERS OF THE PUBLIC.
8. PROCEDURE TO BE FOLLOWED IN EVENT OF ACCIDENT OR EMERGENCY.
9. METHOD OF WORKING WHERE CONTAMINATED GROUND IS PRESENT ON SITE.
10. CONFIRMATION WILL BE REQUIRED THAT ALL OPERATIVES ARE ADEQUATELY TRAINED, COPIES OF RELEVANT CERTIFICATES TO BE SUPPLIED.
11. ANY CONSTRUCTION PERSONNEL, INCLUDING OPERATIVES INTENDING TO CONSTRUCT THE DESIGNS SHOWN ON THIS DRAWING SHOULD ENSURE THAT THEY
HAVE BEEN REGULARLY AND THOROUGHLY BRIEFED BY THE PRINCIPAL CONTRACTOR ON ALL HEALTH AND SAFETY MATTERS AND HAVE HAD SIGHT OF:

I) THE FULL DESIGNERS AND CONTRACTORS RISK ASSESSMENTS AND RISK REGISTERS.
II) THE DEVELOPED CONSTRUCTION HEALTH AND SAFETY PLAN
III) THE CONTRACTORS CONSTRUCTION METHOD STATEMENTS.

THE ABOVE LIST IS BY NO MEANS EXHAUSTIVE BUT IT DOES HIGHLIGHT OPERATIONS THAT PRESENT A RISK TO CONTRACTORS AND THE GENERAL PUBLIC.

TRENCH REINSTATEMENT

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

2. PERMANENT REINSTATEMENT TO BE MEASURED SEPERATELY.

3. GRADE ST4 CONCRETE AS BACKFILL TO TRENCHES TO BE SEMI-DRY MIX COMPACTED, BY MEANS OF A VIBRATING PLATE COMPACTOR/TRENCH RAMMER IN LAYERS NOT GREATER THAN 200mm.

4. SELECTED BACKFILL TO BE COMPACTED BY MEANS OF A VIBRATING PLATE COMPACTOR/TRENCH RAMMER IN LAYERS NOT GREATER THAN 200mm.

5. THE EDGE OF ALL TRENCHES TO BE SAW CUT, MINIMUM DEPTH OF 40mm.

6. ALL DUCTS TO BE 100mm . AND ARE TO BE COMPLETE WITH 6mm POLYPROPELENE DRAWROPE SECURED AT BOTH ENDS.

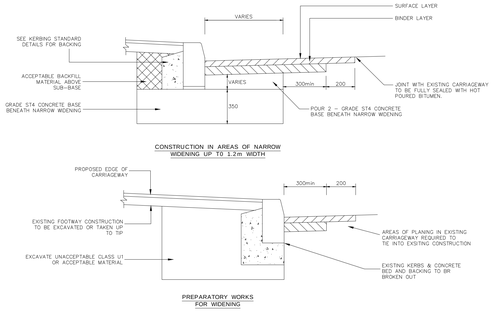
7. THE DUCTING SHALL BE H.D.P.E (5mm WALL THICKNESS) AND SHALL BE CLEARLY MARKED(STREET LIGHTING/TRAFFIC SIGNALS) AS APPROPRIATE; OR FLEXIBLE WITH A RIBBED M.D.P.E.OUTER PROFILE AND A SMOOTH L.D.P.E. INNER BORE.

8. THE DUCTING SHALL CONFORM TO A DENSITY OF 0.9/cm3 DIN53479 WITH A BREAKINGPOINT OF 23-30N/mm2 DIN53455. THE DUCTING SHALL BE COMPATIBLE WITH THE APPROVED ACCESS CHAMBERS PRE-TREPANED KNOCKOUT. WHERE THE DUCTS NEED TO BE JOINED A MANUFACTURER APPROVED CONNECTOR MUST BE USED AND APPROVED BY THE OVERSEEING ORGANISATION.

TYPE OF KERB AND THEIR DESIGNATIONS			
TYPE OF KERB	DESIGNATION	FIG Nr.	SIZE
Kerbs:			
Bullnosed	BN	K.1a	125 x 150
45° Splayed	SP	K.1b	125 x 255
Half Battered	HB 1	K.1c	150 x 305
Half Battered	HB 2	K.1d	125 x 255
Half Battered	HB 3	K.1e	125 x 150
Left Hand	TL	K.2a	Transition HB to SP
Right Hand	TR	K.2a	Transition HB to SP
Left Hand	DL1	K.2b	Dropper Type 1 : HB to BN
Right Hand	DR1	K.2b	Dropper Type 1 : HB to BN
Left Hand	DL2	K.2c	Dropper Type 2 : 45° to BN
Right Hand	DR2	K.2c	Dropper Type 2 : 45° to BN
Channels:			
Channel Square	CS1	K.1f	255 x 125
Channel Square	CS2	K.1g	150 x 125
Channel Dished	CD	K.1h	255 x 125
Edgings:			
Round Top Edging	ER	K.3a	50 x 150, 200 or 250
Flat Top Edging	EF	K.3b	50 x 150, 200 or 250
Bullnosed Edging	EBN	K.3c	50 x 150, 200 or 250
Quadrants:			
Quadrant	QBN	K.3d	305 or 455 x 150 or 255
Quadrant	QHB	K.3d	305 or 455 x 150 or 255
Quadrant	QSP	K.3d	305 or 455 x 150 or 255
Angles:			
Internal Angle	IA	K.3e	125 x 255, HB1 or SP
External Angle	XA	K.3f	125 x 255, HB1 or SP

MIN 1M STEPS WHERE TIE-INS ARE TRANSVERSE JOINTS
BOND COAT TO BE USED BETWEEN ALL BITMAC LAYERS

TIE IN CONSTRUCTION



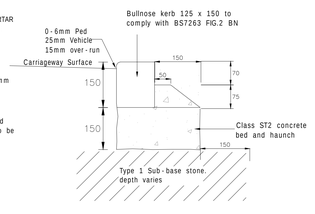
CARRIAGEWAY NARROW WIDENING

KERB CONSTRUCTION TYPE A

KERB BASE, KERB AND KERB BACKING LAID BEFORE CONCRETE SETS

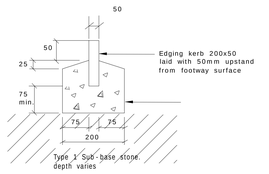
KERB CONSTRUCTION TYPE B

KERB BASE SET PRIOR TO LAYING KERB AND KERB BACKING

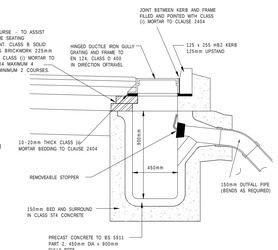


BN DROPPED KERB-A

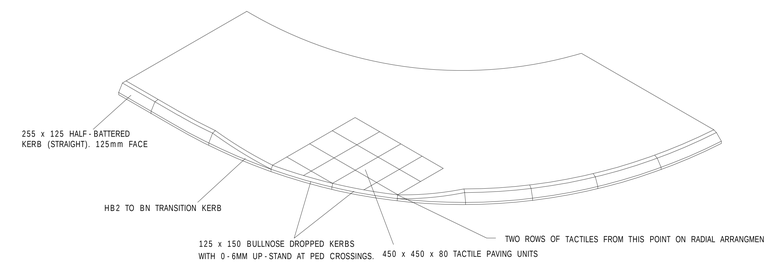
IF CONSTRUCTION B IS USED THE 16 DOWEL BARS ARE 150 LONG WITH 50 ABOVE KERB BASE



EF EDGING KERB



TYPICAL PRECAST CONCRETE GULLY DETAIL



RADIAL DROPPED KERB DETAIL
(NOTE : THE ABOVE DETAIL SHOULD BE USED AS A GUIDE FOR GENERAL LAYOUT PURPOSES)

KERB RENEWAL / CARRIAGEWAY REINSTATEMENT

REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT: AVID

PROJECT: JD CAMPUS, PILSWORTH ROAD, BURY

DRAWING TITLE: S278 STANDARD DETAILS

SCALES: NTS @ A0

DRAWN:	CHECKED:	DATE:
JC	MC	JUL 22

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DRAWING NUMBER: 3787-D004 REVISION: B

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