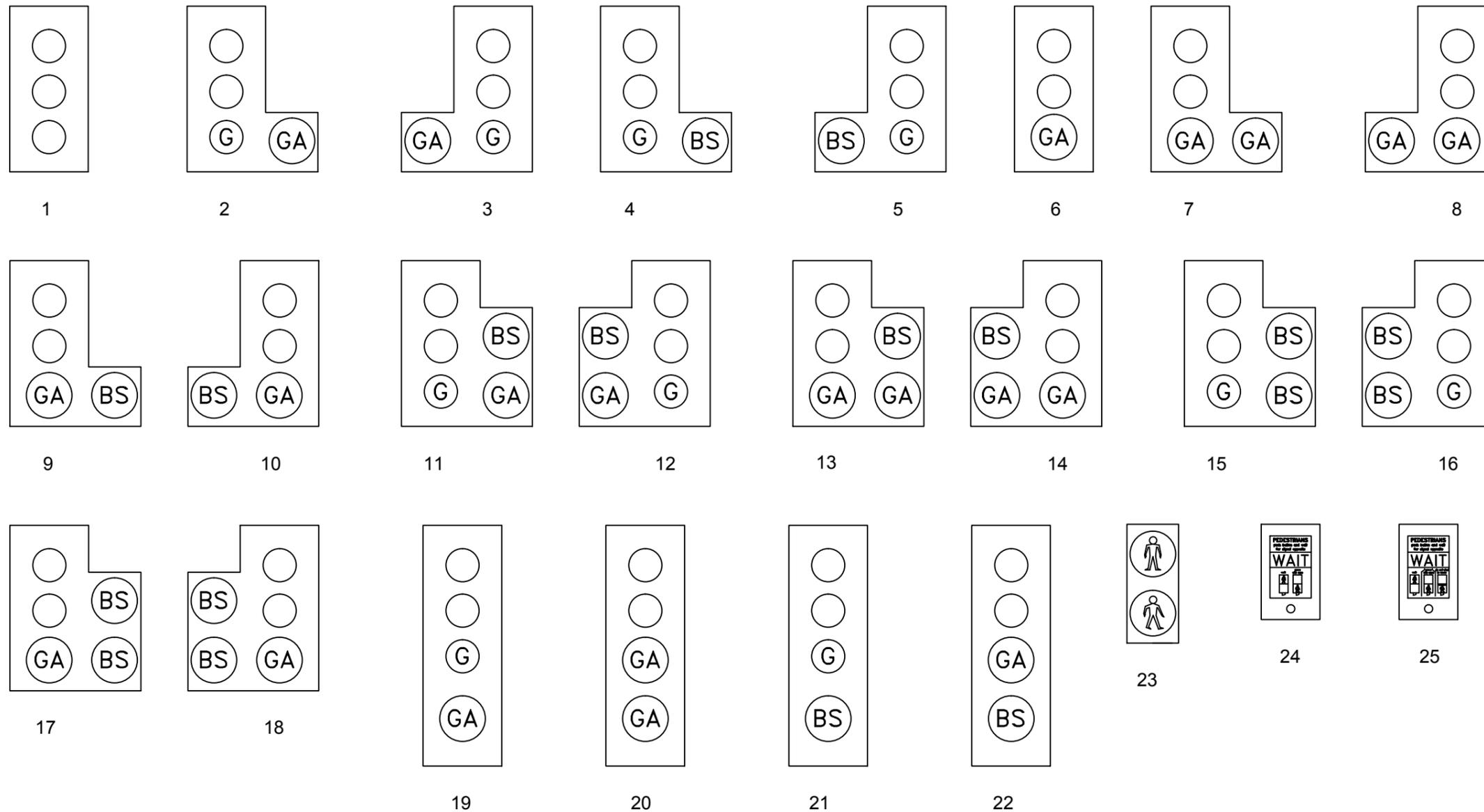


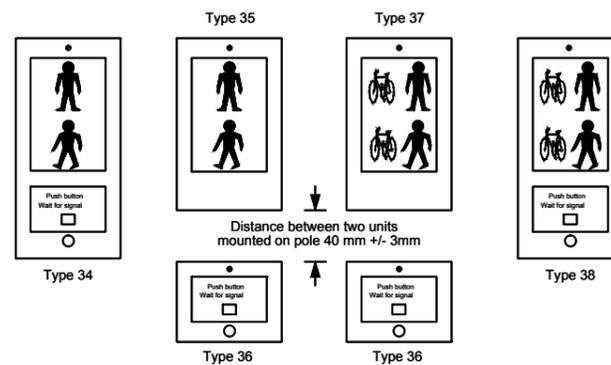
List of Standard Details

- TS-SD-1.2A Signal Head Type Numbers
- TS-SD-1.4B Minimum Clearances to Signal Heads, PBU/PDUs
- TS-SD-1.8C Bracket Layout for Single Pole Puffin
- TS-SD-2.5B Stop Lines – ASLs Stop Line Loops Setting Out Details
- TS-SD-3.15B 4M Traffic Signal Pole Detail with NAL Connector Unit
- TS-SD-5.1A Duct Details
- TS-SD-5.2 Modular Cable Boxes
- TS-SD-7.1B Loop Detector Configuration Detail
- TS-SD-7.2A Details of Detector Cable In Slot
- TS-SD-7.3B Additional Loop Setting Out Information
- TS-SD-7.5B N+1 Count (2+3 Lane Carriageway)



NOTES

1. All signal heads shall be fitted with appropriate heads and backing boards. The head type shall be indicated on the scheme drawing using the suffix P (primary) and S (secondary).
2. If louvres are required, these may be either HL (horizontal) or VL (vertical), they will be detailed on the scheme drawing.
3. If rotating tactile units are to be installed in a push button unit, this shall be indicated on the scheme drawing by the suffix T (tactile).



New drawing frame & head types 34 - 38 & PBU type 36 added.

A	Revision details	Chkd	Appd	Date

Designed: S.J.S Date: 09-12-15
 Drawn: S.J.S Date: 09-12-15
 Checked: K.D Date: 09-12-15
 Approved: S.M.T Date: 09-12-15

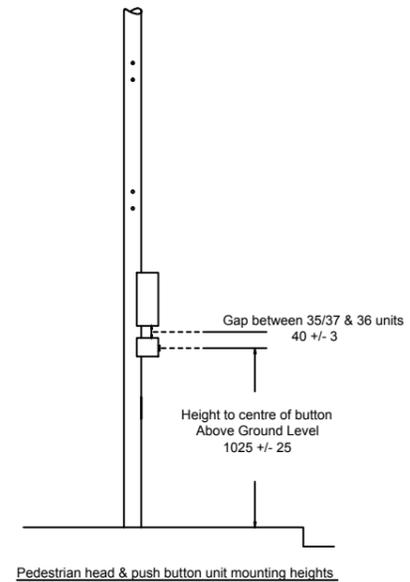
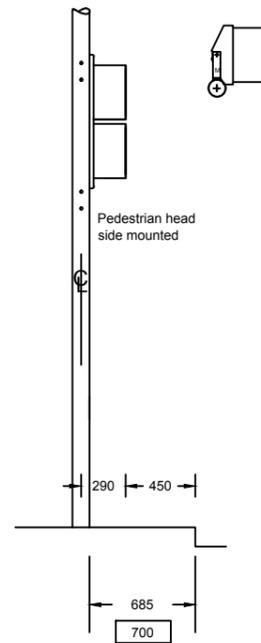
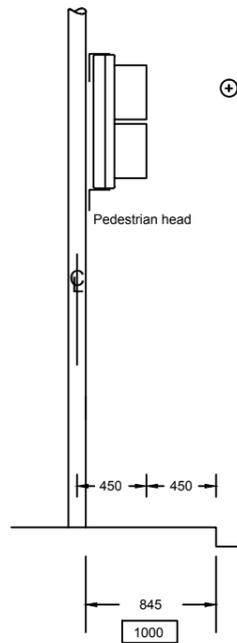
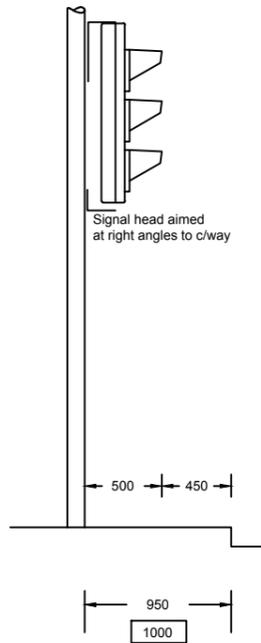
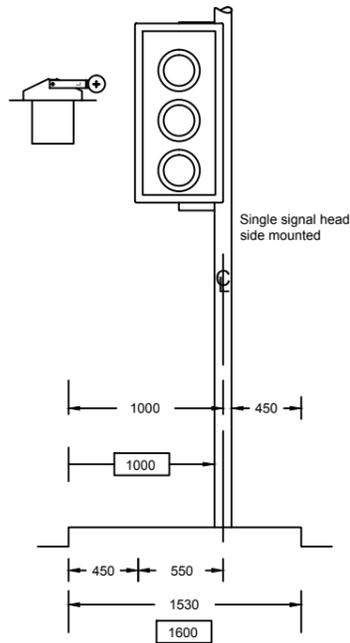
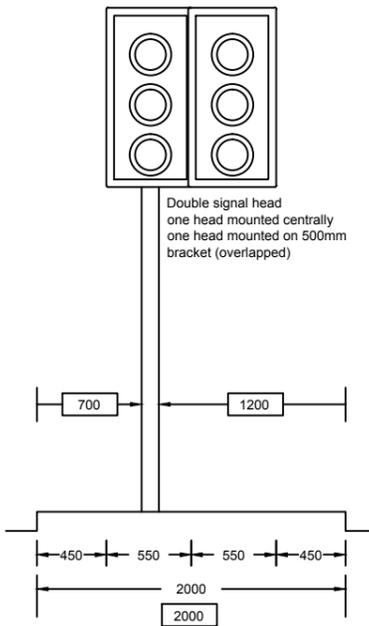
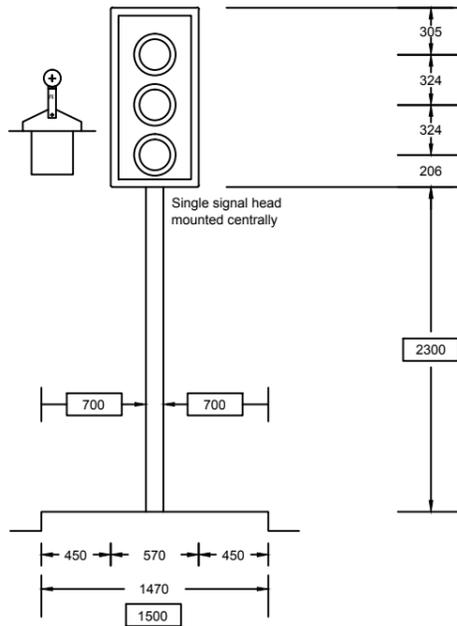
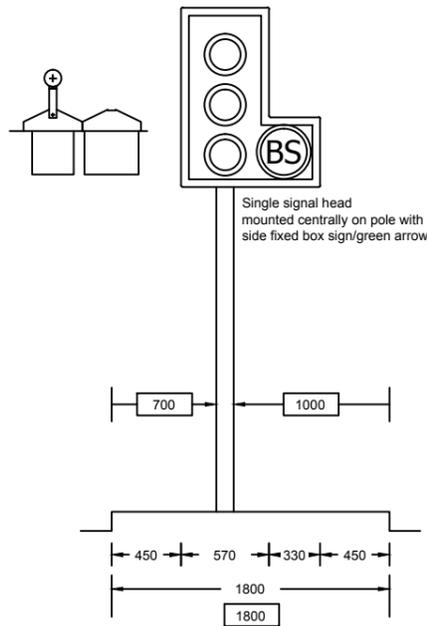


Client
 Project Name
Sheffield Streets Ahead

Drawing Title
Standard Detail
Signal Head Type Numbers

Original Drg Size : A3	Scale : NTS
Dimensions :	
Drawing Status	Suitability
Drawing No TS-SD-1.2	Revision A





xxxx - Recommended minimum due to tolerances

B	New drawing frame. Pedestrian & PBU mounting heights added.	KD	SMT	09-12-15
Rev	Revision details	Chkd	Appd	Date
Designed:	S.J.S	Date:	09-12-15	
Drawn:	S.J.S	Date:	09-12-15	
Checked:	K.D	Date:	09-12-15	
Approved:	S.M.T	Date:	09-12-15	

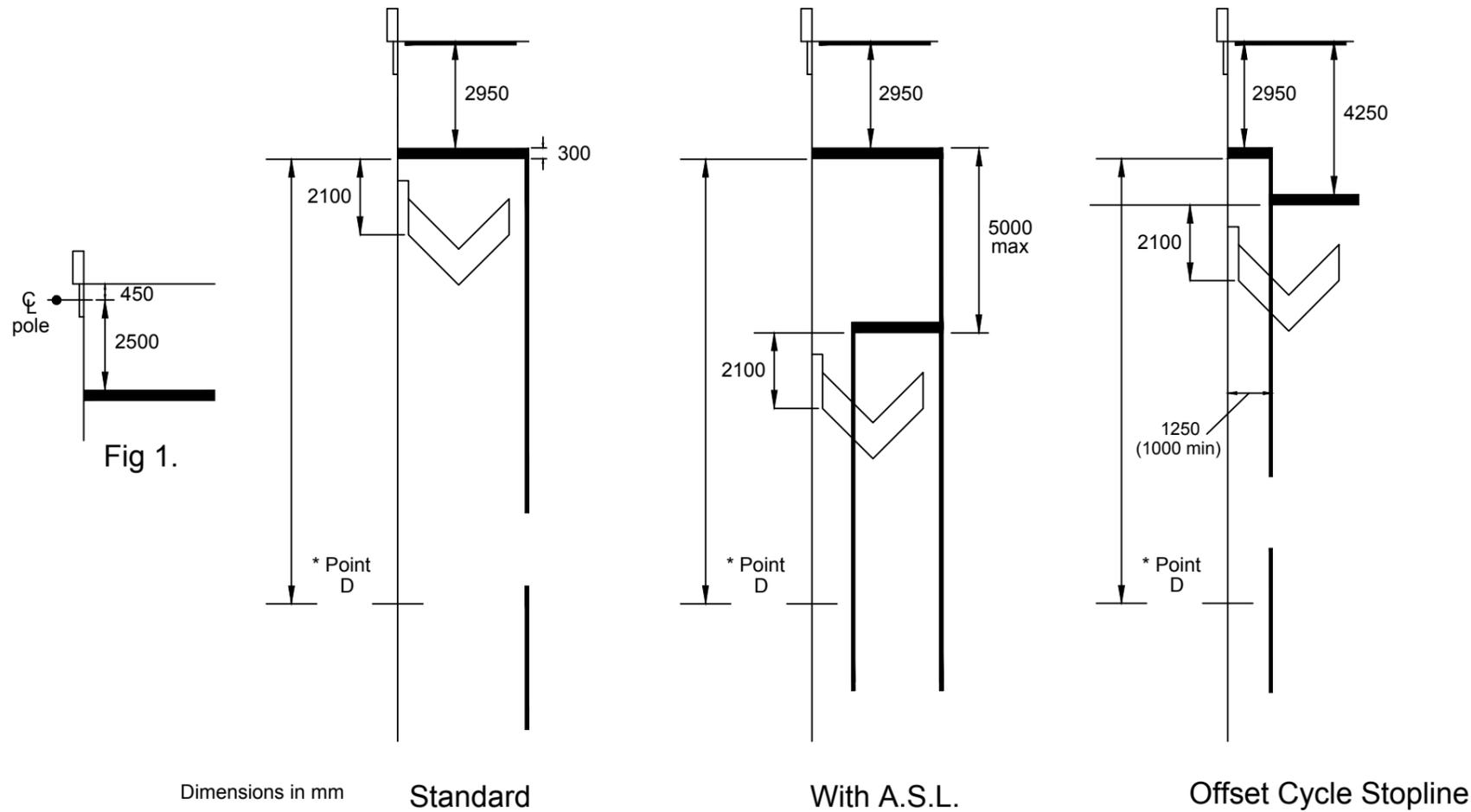
Client

www.amey.co.uk

Project Name
Sheffield Streets Ahead

Drawing Title
**Standard Detail
Minimum Clearances To
Signal Heads, PBU/PDUs**

Original Drg Size : A3	Scale : N.T.S
Dimensions :	
Drawing Status	Suitability
Drawing No TS-SD-1.4	Revision B



Notes.

1. In the absence of a stud / drop crossing line, the 2500 offset from the centre of the primary signal pole to the stopline should be used, in lieu of the offset (2950) shown - see fig 1.
2. Any variations due to skew alignments and / or existing ironworks within the carriageway should be agreed with the Traffic Signals Engineer prior to implementation.
3. * see also TS/SD/7.1/a for definition of point D on xyz loops in lieu of stopline loops.
4. Where necessary, by site restrictions, a stop line may be reduced to 1.5m from centre of the pole.

Dimensions in mm

Standard

With A.S.L.

Offset Cycle Stopline

B	New drawing frame.	KD	SMT	09-12-15
Rev	Revision details	Chkd	Appd	Date
Designed: S.J.S		Date: 09-12-15		
Drawn: S.J.S		Date: 09-12-15		
Checked: K.D		Date: 09-12-15		
Approved: S.M.T		Date: 09-12-15		

Client

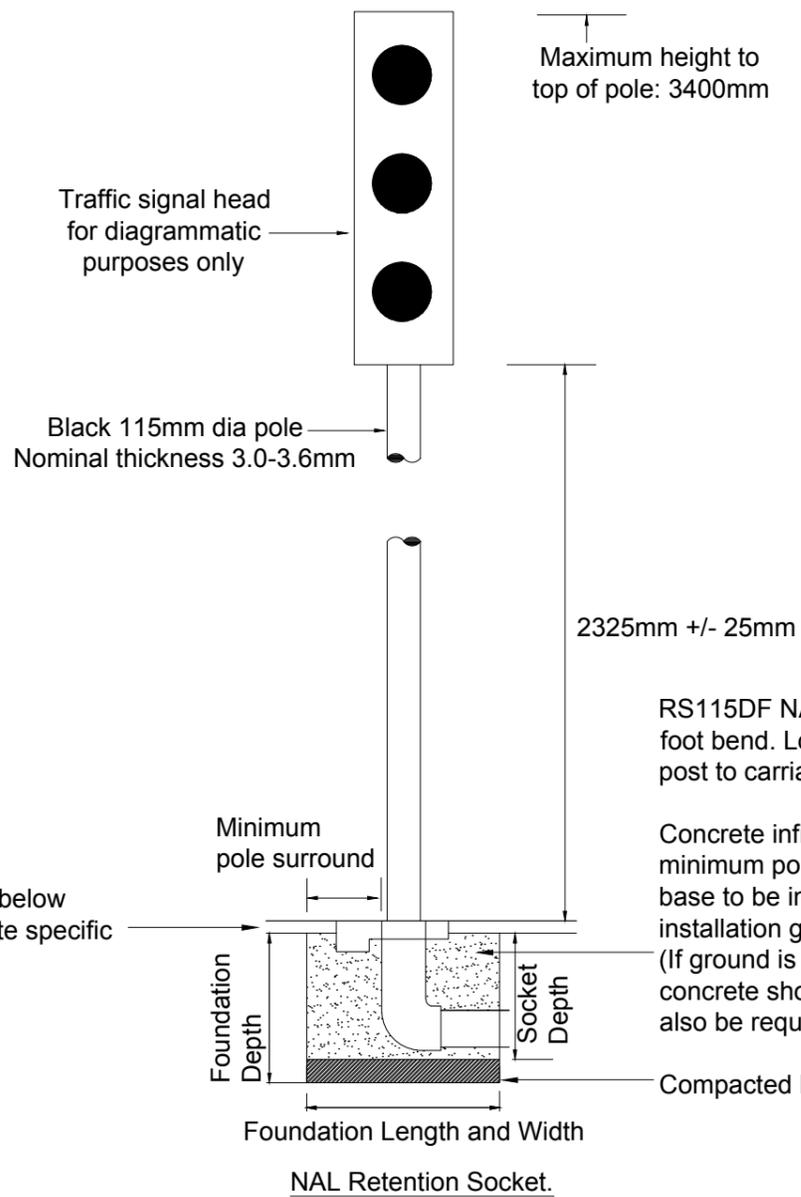
www.amey.co.uk Copyright © Amey

Project Name
Sheffield Streets Ahead

Drawing Title
**Standard Detail
Stoptines-ASLs- Stop Line
Loops Setting Out Details**

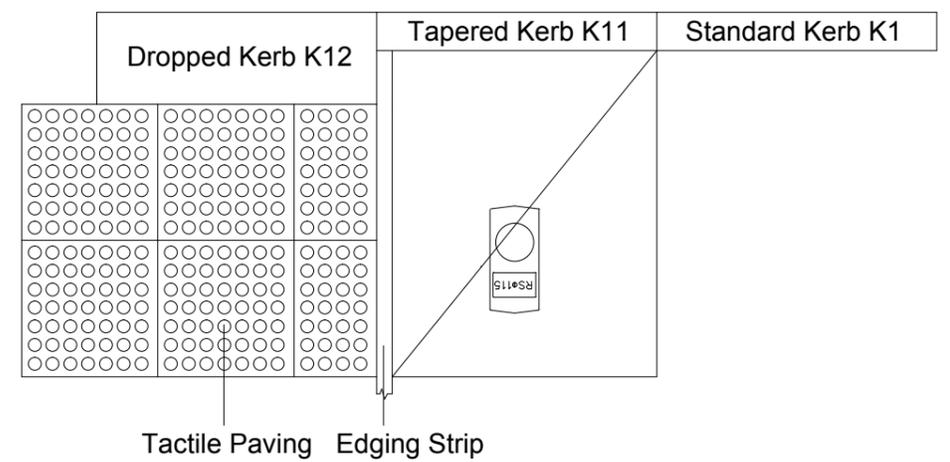
Original Drg Size : A3	Scale :
Dimensions :	
Drawing Status	Suitability
Drawing No TS-SD-2.5	Revision B

Refer to manufacturers method statement for construction requirements



RS115DF NAL Limited Retention socket with duck foot bend. Locking cover to be opposite side of post to carriageway.

Concrete infill (ST4/C25 mix or stronger) with minimum pole surround. All dimensions for the base to be in accordance with the manufacturers installation guide within the PCI Pack. (If ground is uncompacted a wider, deeper base of concrete should be used). Reinforcing mesh may also be required.



B	Section revised. PBU removed. Notes amended.	KD	SMT	06-01-16
A	New drawing frame. Height to centre of button revised.	KD	SMT	09-12-15

Rev	Revision details	Chkd	Appd	Date
	Designed: S.J.S			Date: 09-12-15
	Drawn: S.J.S			Date: 09-12-15
	Checked: K.D			Date: 09-12-15
	Approved: S.M.T			Date: 09-12-15

Client

www.amey.co.uk

Project Name
Sheffield Streets Ahead

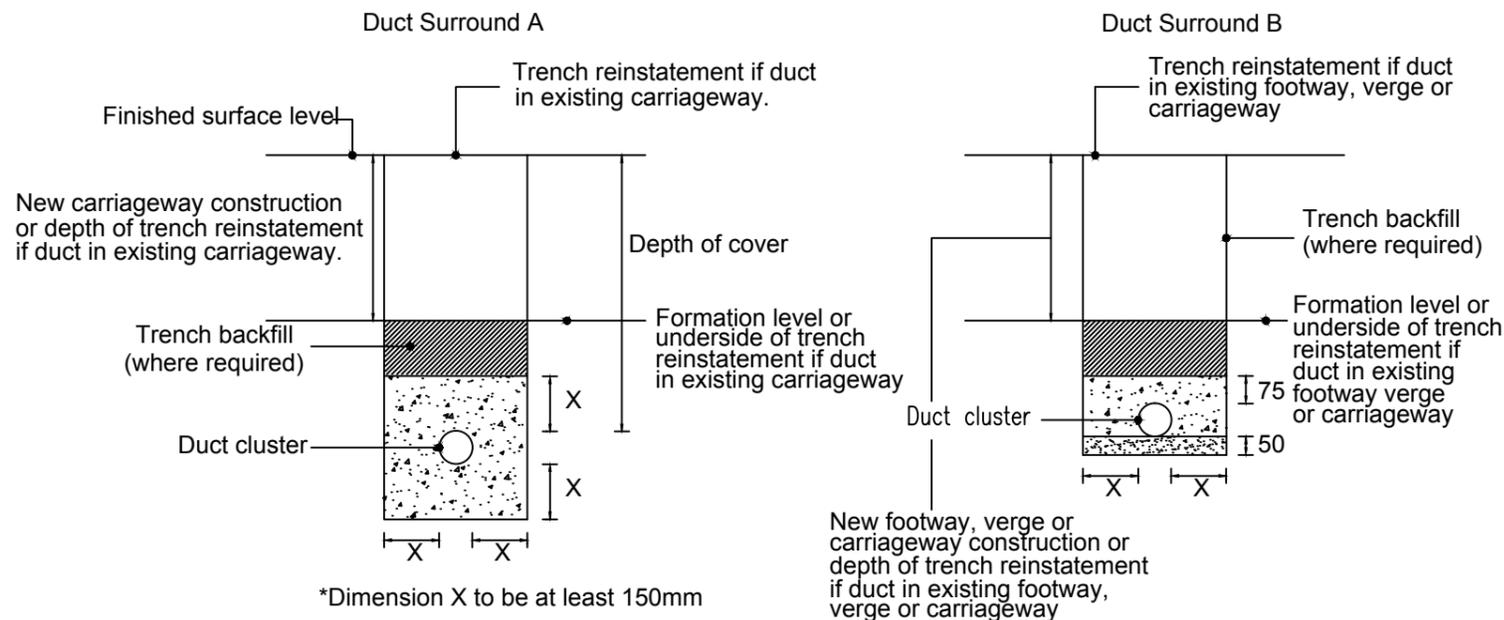
Drawing Title
**Standard Detail
4m Traffic Signal Pole
Detail with NAL
Connector Unit**

Original Drg Size : A3 Scale : NTS
Dimensions :

Drawing Status Suitability

Drawing No
TS-SD-3.15 Revision
B





*Dimension X to be at least 150mm

SERVICE DUCTS SPECIFIED ON SCHEME DRAWINGS THUS

SD/No. WAYS/PIPE DIAMETER/DUCT SURROUND/
PIPE MATERIAL/DEPTH OF COVER/SUFFICES

- Pipe Diameter: Nominal internal bore in millimetres
- Duct Surround: A or B
- Pipe Material: EW Earthenware
- U Thermoplastic (unplasticised polyvinylchloride)
- S Steel
- I Ductile iron
- MP Thermoplastic (medium density polyethylene)

Depth of cover in millimetres

Suffices if specified: P-split ducts shall be used which shall be bound together 150mm from the ends of each duct with bending clips.

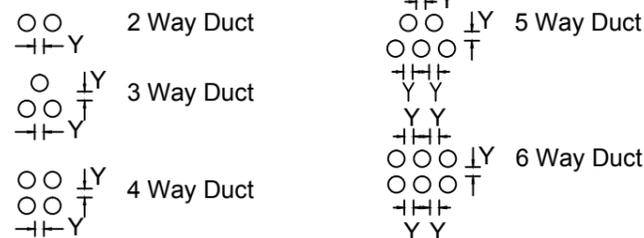
S-sulphate resisting cement shall be used in the manufacture of the concrete surround. V-ducts for Statutory Undertakers who will provide and deliver ducts to the site free of charge to the contractor and who will also provide specialist supervision.

W-ducts for Statutory Undertakers who will provide the ducts free of charge to the contractor. Contractor to collect the ducts from the Statutory Undertakers store as specified. Statutory Undertaker will also provide specialist supervision.

KEY

- Trench backfill
- Sand (compacted)
- Selected backfill *Z*Z Shall be sand (compacted) to 25mm above the top of uppermost duct when thermoplastic ducts are used
- Class E concrete

TYPICAL MULTIPLE WAY DUCT ARRANGEMENTS



* Dimension Y at least 50mm

NOTES

1. All dimensions in millimetres unless otherwise stated.
2. The requirements of Clause 503 Para 6 (compressible board at joints) shall apply to rigid duct pipes in accordance with clause 514 read in conjunction with clause 501. The compressible board shall be fibre building board to BS 1142 Type LME-18mm thick.
3. For duct crossings in:
 - (i) existing carriageways the full length of the trench shall be excavated and approved before ducts are laid. The contractor shall take the necessary measures to maintain traffic flows as required in the contract or as agreed with the Engineer.
4. Where new ducting crosses existing underground equipment a clearance of 150mm shall be maintained.
5. Acceptable earthworks material for selected backfill in duct surround B for all ducts under carriageway shall be class 6N to table 6/1 except that 100% of the material shall pass the 37.5mm sieve. BUT ALSO KEY NOTE *Z
6. Trench backfill when required in footways and/or verges shall be selected backfill.
7. Slag shall not be used as fill material.
8. If duct surround A encroaches into the sub-base of trench reinstatement the sub-base thickness shall be reduced accordingly except that where the resulting sub-base thickness is 100mm or less the sub-base shall be replaced with Class E concrete.
9. If duct surround A encroaches into the road-base course of trench reinstatement the roadbase thickness shall be reduced accordingly except that where the resulting roadbase thickness is 75mm or less the roadbase shall be replaced with class E concrete.
10. If the depth to the top of the duct surround is less than that required for trench reinstatement the sub-base thickness is reduced accordingly.
11. A marker strip shall be laid 150mm above the top of the duct(s) or, for duct surround A, immediately on top of the concrete.
12. Thermoplastic ducts for use in conjunction with street lighting and traffic signal/sign installation shall be 80mm Nom. Id 6m, Nom Wall thickness, colour orange in medium density polyethylene unless otherwise specified fittings shall be compatible with ducts used.
13. Service duct marker blocks shall be located at the ends of each duct run on the centre line of each trench where necessary.

A	New drawing frame	KD	SMT	09-12-15
Rev	Revision details	Chkd	Appd	Date
Designed: S.J.S		Date: 09-12-15		
Drawn: S.J.S		Date: 09-12-15		
Checked: K.D		Date: 09-12-15		
Approved: S.M.T		Date: 09-12-15		

Client

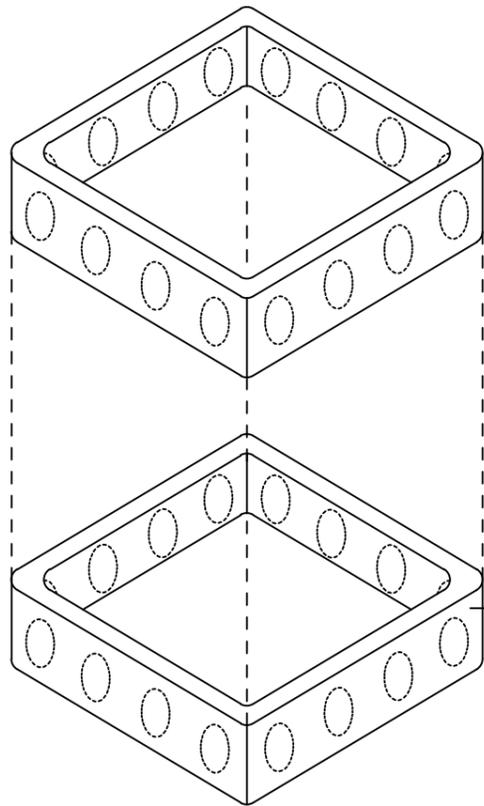
www.amey.co.uk Copyright © Amey

Project Name	Sheffield Streets Ahead
Drawing Title	Standard Detail
Duct Details	

Original Drg Size : A3	Scale : N.T.S
Dimensions :	
Drawing Status	Suitability
Drawing No	Revision
TS-SD-5.1	A

NOTES

- i. Sides of boxes NOT to be made up from different size panels (i.e. a 750 box NOT to be made from a 300 and 450 sections).
- ii. All dimensions in millimetres
- iii. The number of incoming carriageway and footway ducts will be shown on the scheme drawings.
- iv. Step irons to be placed in accordance with BS 1917 and manufactured in accordance with BS 13101 (on chambers exceeding 1m in depth)
- v. Frames and covers are to comply with BS EN124 and be suitable for the environment in which they are to be used. (Class B125 for footpaths and Class C250/D400 for carriageways depending on proposed loading)
- vi. Bracing to be used during construction of the chamber where required.
- vii. Ducts entering the chambers are to be cut flush with the side of the chamber.
- viii. Any gaps surrounding the duct and chamber wall are to be filled with mortar or expanding foam, if expanding foam is used this is to be cut flush with the side of the chamber.



Sections of boxes connected by corner sections / lugs around box edges (see manufacturer's specifications for more information)

Typical side panel (approx 750 x 160)



Cut outs / knock outs either located in set positions or can be drilled to suit.

Typical side panel (approx 600 x 160)



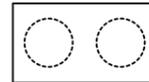
Panels to construct boxes manufactured in a variety of sizes to suit required internal dimensions.

Please refer to manufacturer's specifications for exact dimensions.

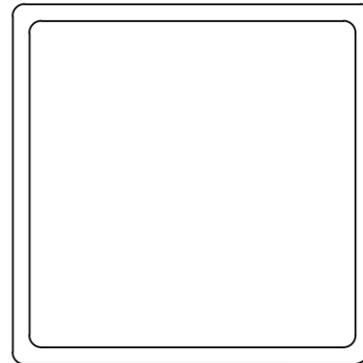
Typical side panel (approx 450 x 160)



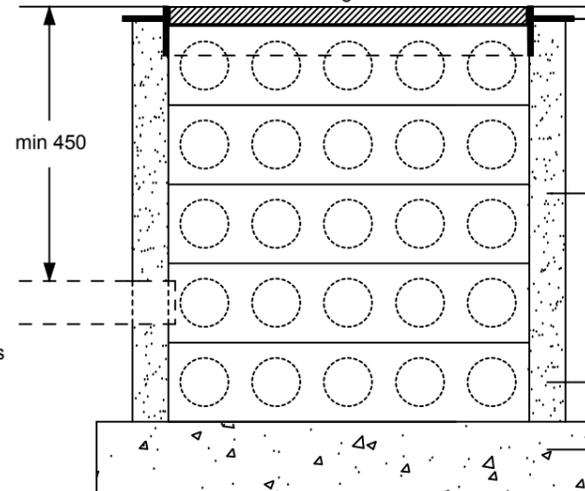
Typical end panel (approx 300 x 160)



Plan view of box section



Cross section through box



Cover and frame to be manufacturer's specifications to be submitted for approval.

Concrete or backfill, refer to manufacturer's specifications for type and dimensions

Single section of chamber to be installed below the lowest section containing a duct entry.

All boxes to have a concrete base min 150

Rev	Revision details	Chkd	Appd	Date

Client

www.amey.co.uk Copyright © Amey

Project Name
Standard Detail

Drawing Title
Modular Cable Boxes

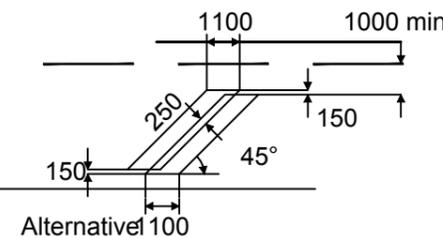
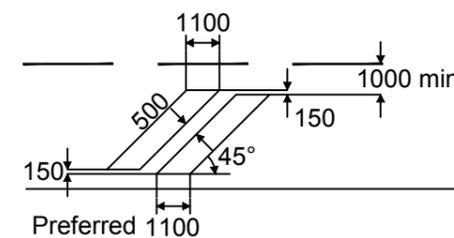
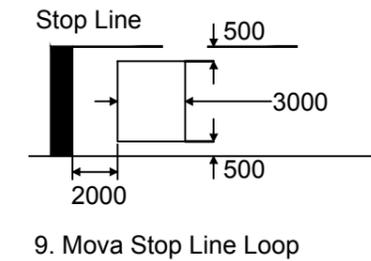
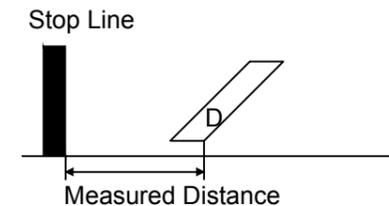
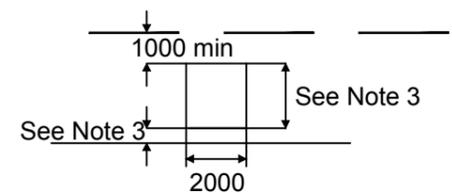
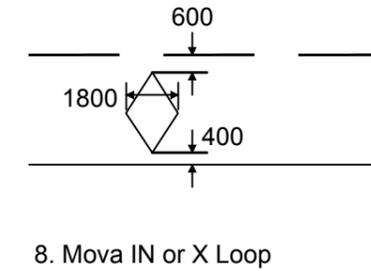
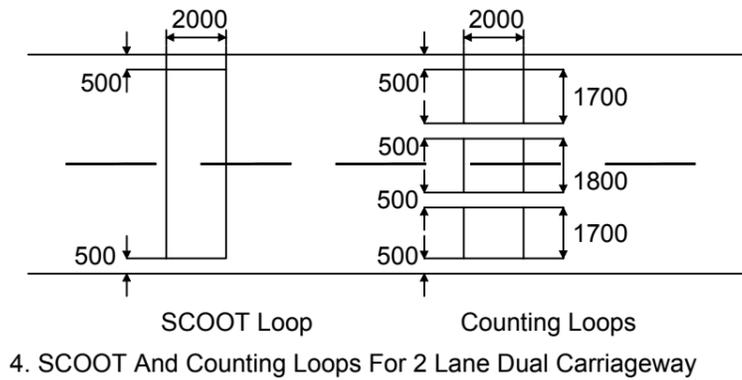
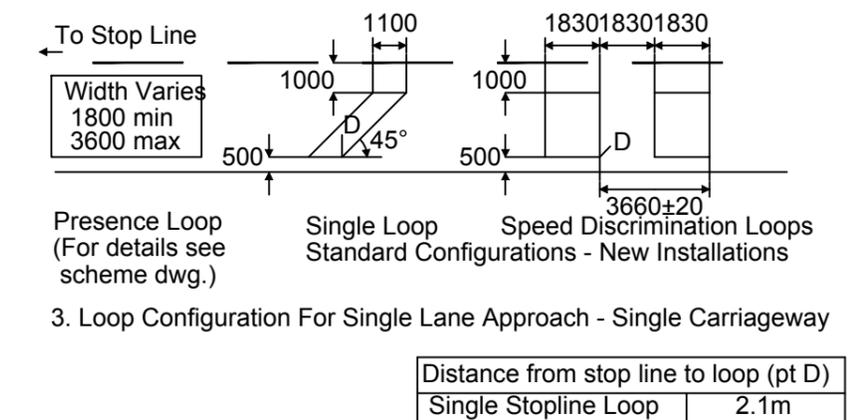
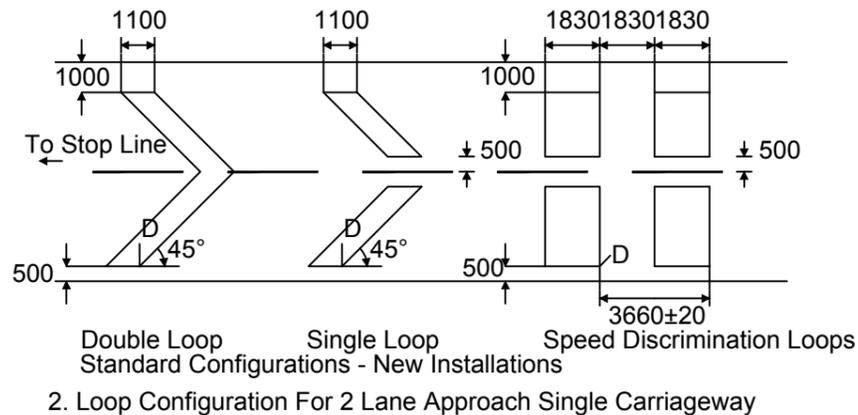
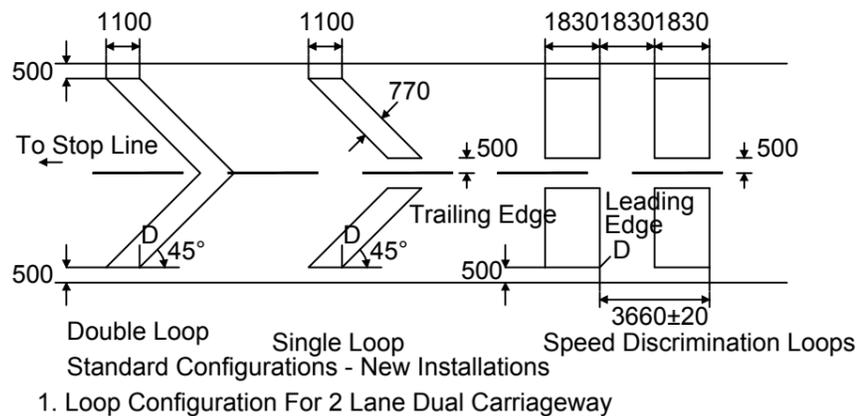
Original Drg Size : A3 Scale : NTS
Dimensions : -

Drawing Status
Standard Detail

Drawing No
TS\SD\5.2

Suitability

Revision



- NOTES
1. All dimensions in millimetres
 2. All Dimensions ± 20mm

Distance from stop line to loop (pt D)			
Z	Y	X	Speed Discrimination
12m	25m	39m	79m
7m	18m	30m	-
6m	-	18m	-

Standard Config		Speed Disc		Presence Loop	
Loop Perimeter	No. of Turns	Loop Perimeter	No. of Turns	Loop Perimeter	No. of Turns
< 8m	3	all	3	< 8m	3
> 8m	2	-	-	> 8m	2

B	New drawing frame	KD	SMT	09-12-15
Rev	Revision details	Chkd	Appd	Date
Designed:	S.J.S	Date:	09-12-15	
Drawn:	S.J.S	Date:	09-12-15	
Checked:	K.D	Date:	09-12-15	
Approved:	S.M.T	Date:	09-12-15	

Client

www.amey.co.uk Copyright © Amey

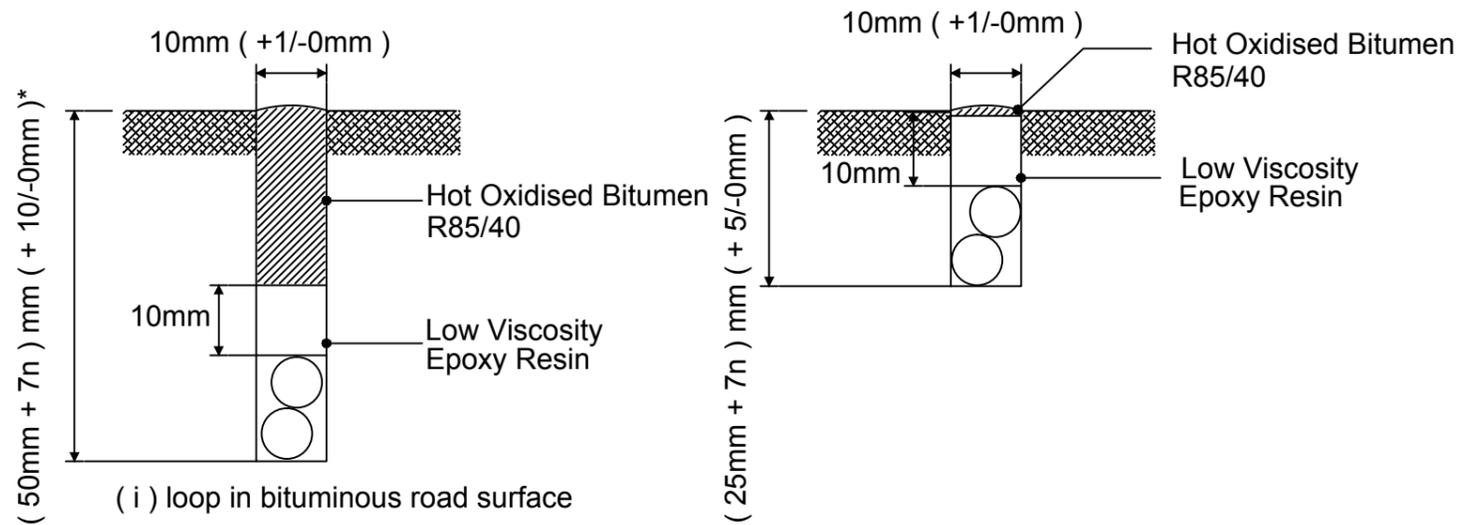
Project Name
Sheffield Streets Ahead

Drawing Title
**Standard Details
Loop Detector
Configuration Detail**

Original Drg Size : A3	Scale : NTS
Dimensions :	
Drawing Status	Suitability
Drawing No TS-SD-7.1	Revision B

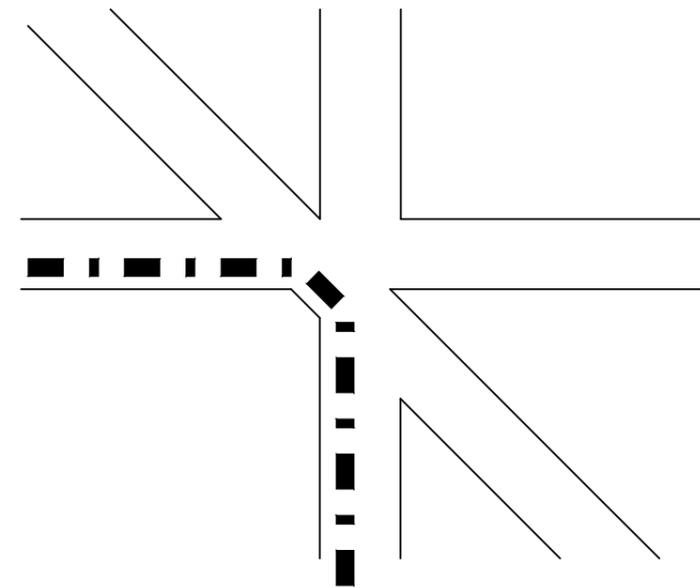


DETAIL OF LOOP CABLE SLOT

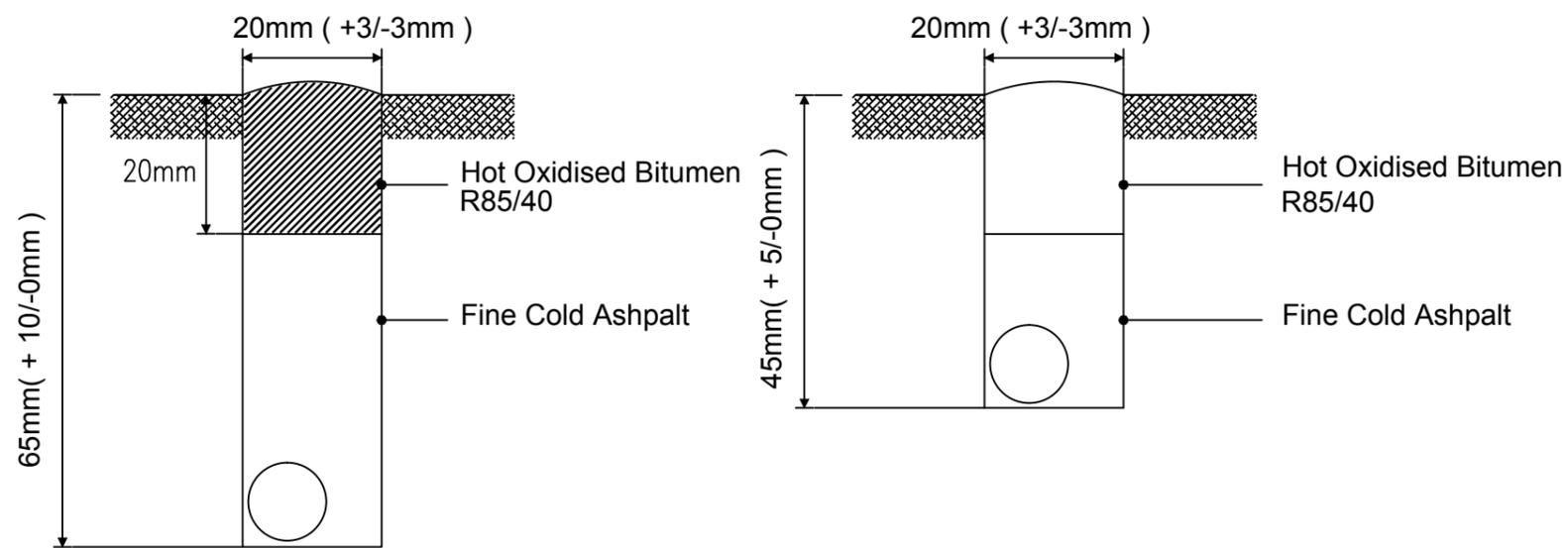


(i) loop slot in bituminous road surface

(ii) loop slot in concrete road surface



DETAIL OF FEEDER CABLE SLOT



(iii) modification of slot corners showing cable route

A	New drawing frame	KD	SMT	09-12-15
Rev	Revision details	Chkd	Appd	Date
	Designed: S.J.S			Date: 09-12-15
	Drawn: S.J.S			Date: 09-12-15
	Checked: K.D			Date: 09-12-15
	Approved: S.M.T			Date: 09-12-15

Client

www.amey.co.uk

Project Name
Sheffield Streets Ahead

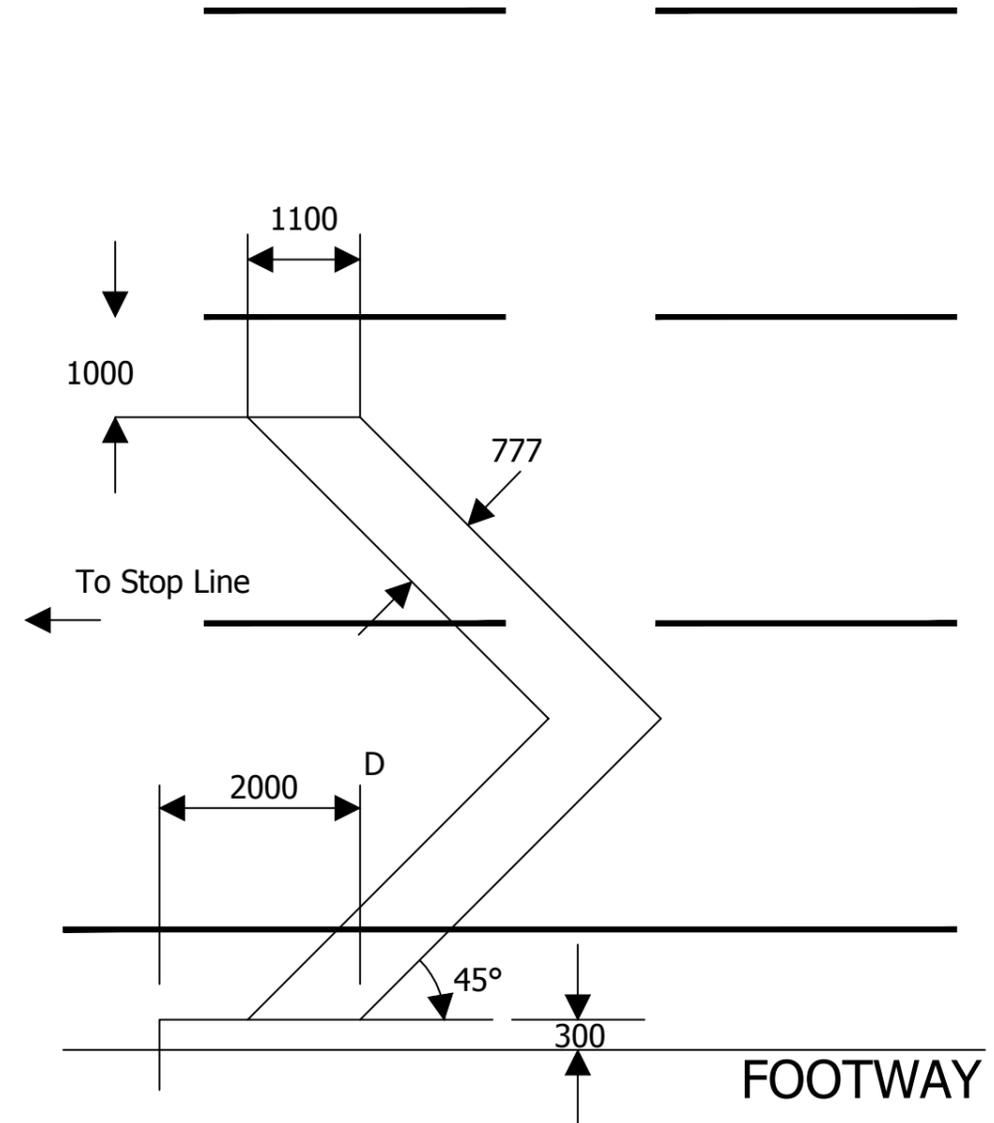
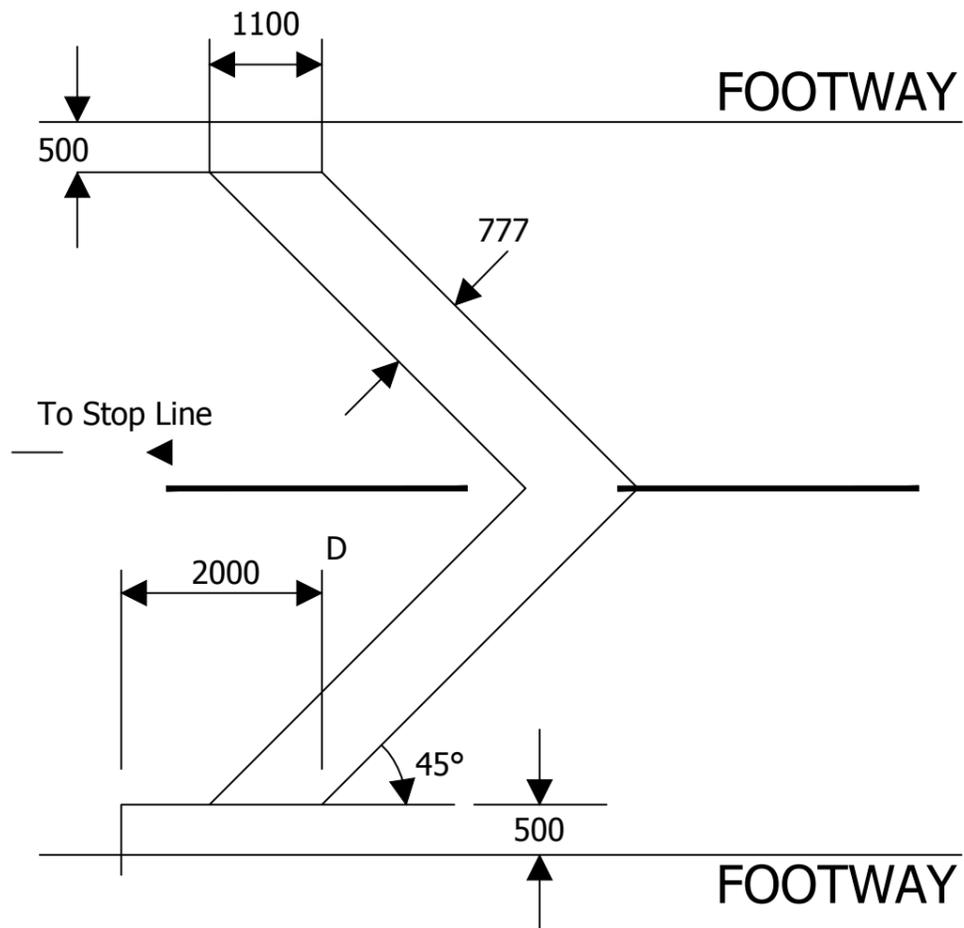
Drawing Title
**Standard Details
Details Of Detector
Cable In Slot**

Original Drg Size : A3 Scale : N.T.S

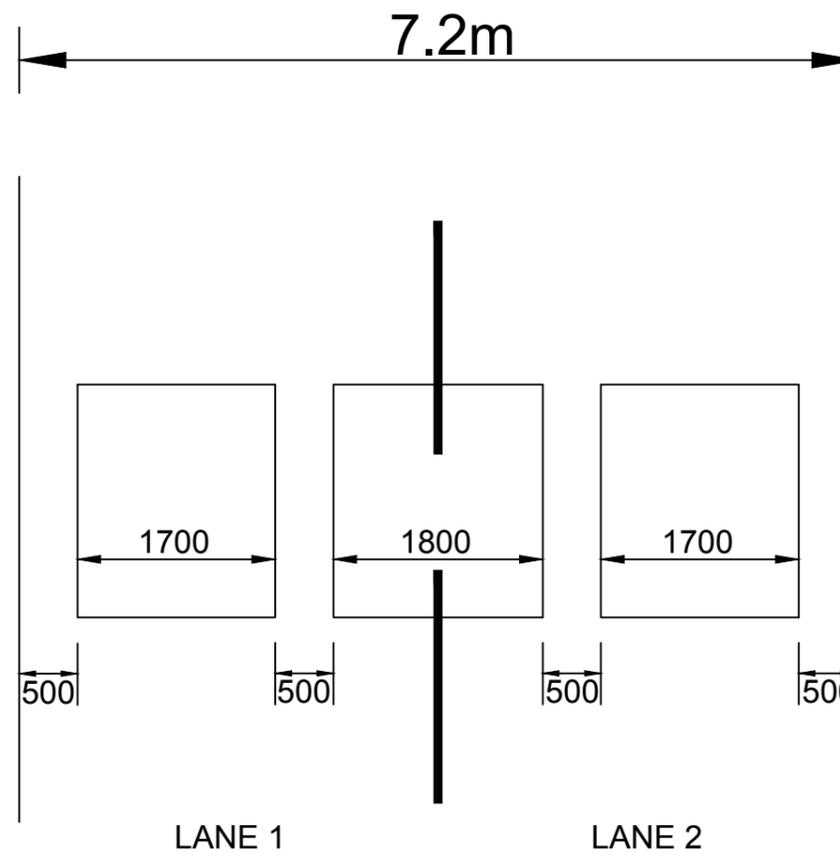
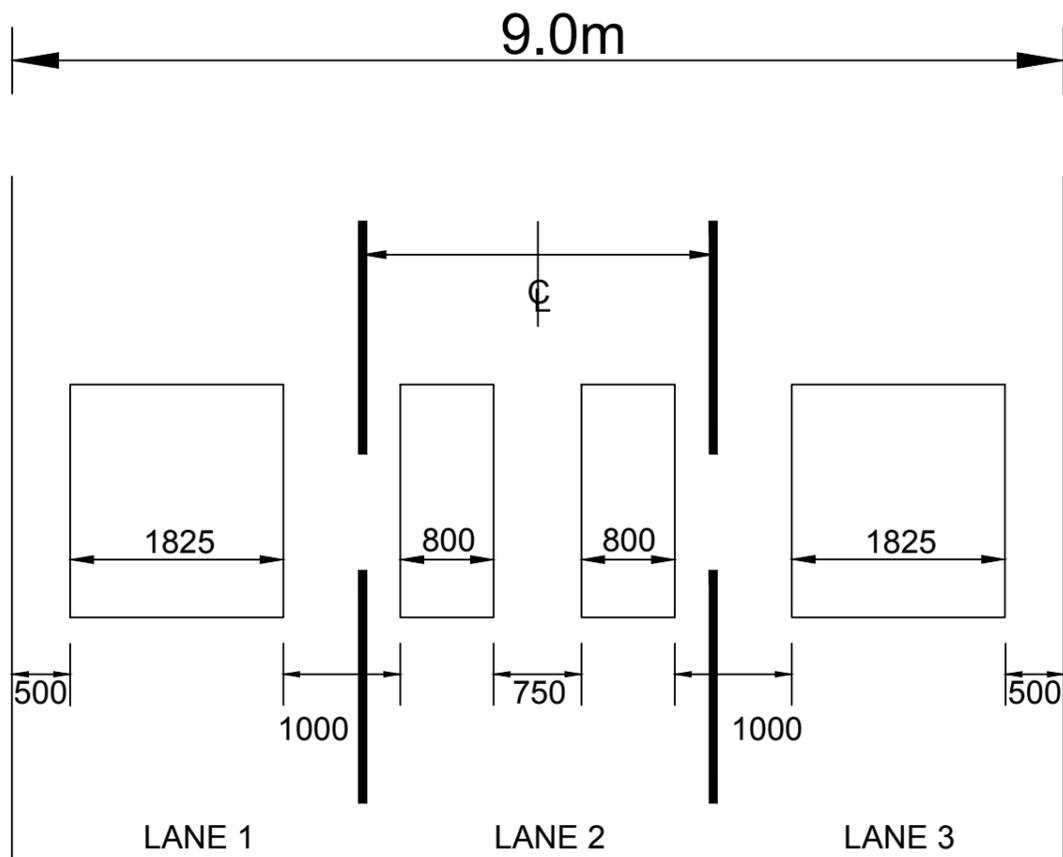
Drawing Status Suitability

Drawing No
TS-SD-7.2 Revision
A





B	New drawing frame	KD	SMT	09-12-15
Rev	Revision details	Chkd	Appd	Date
Designed:	S.J.S	Date:	09-12-15	
Drawn:	S.J.S	Date:	09-12-15	
Checked:	K.D	Date:	09-12-15	
Approved:	S.M.T	Date:	09-12-15	
Client				
				
Project Name				
Sheffield Streets Ahead				
Drawing Title				
Standard Details Additional Loop Setting Out Information				
Original Drg Size : A3		Scale :		
Dimensions :				
Drawing Status				Suitability
Drawing No				Revision
TS-SD-7.3				B



Loops setout from centre line of lane 2, with loops in lanes 1 & 3 being adjusted independantly for carriageway lane width

Between 7.2m to 8.7m, increase all three loops equally. Above 8.7m only increase the centre loop. Below 7.2m reduce the outer loops equally.

New drawing frame & combined with TS-SD-7.4

Rev	Revision details	Chkd	Appd	Date
Designed: S.J.S		Date: 09-12-15		
Drawn: S.J.S		Date: 09-12-15		
Checked: K.D		Date: 09-12-15		
Approved: S.M.T		Date: 09-12-15		

Client

www.amey.co.uk Copyright © Amey

Project Name	Sheffield Streets Ahead
Drawing Title	Standard Details N+1 Count (2 & 3 Lane Carriageway)

Original Drg Size : A3	Scale : NTS
Dimensions :	
Drawing Status	Suitability
Drawing No	Revision
TS-SD-7.5	B