

APPENDIX A

RELEVANT DOCUMENTATION

A.1 RELEVANT REFERENCE MATERIAL, LEGISLATION AND REGULATIONS

All documents in this appendix are subject to amendment being superseded. Any designer installer shall be responsible for insuring he is work to the most recent version of any relevant document.

Road Traffic Signs Regulations

Pelican Crossing Regulations - Ireland

Traffic Signs Manual, Department of the Environment, Ireland

BSEN 12368: 2000 (Traffic Control Equipment - Signal Heads), formerly UK BS 505 (1971)

UK DETR Design Manual for Roads and Bridges

Transport in the Urban Environment as published by the UK IHT

European Directives:

- Low voltage
- EMC
- Telecomm Terminal Equipment
- Machinery Directive
- Safety Directive
- CE Marketing Procedure
- Product Liability

A.2 TAs

TA12/81 Traffic Signals on High Speed Roads

TA15/81 Pedestrian Facilities at Traffic Signal Installations

TA16/81 General Principles for Control by Traffic Signals

TA67 Providing for Cyclists

TA68 The Assessment and Design of Pedestrian Crossings

A.3 TDs

TD7 Type Approval of Traffic Control Equipment

TD24 All Purpose Trunk Roads: Maintenance of Traffic Signals

TD33 Use of VMS on all Purpose and Motorway Trunk Roads

TD35 MOVA System of Traffic Control at Signals

TD50 The geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts

A.4 TRs AND TRGs

TR100, 'Inductive Loop Vehicle Detection Equipment'

TR108, 'Siting of vehicle Loops for Vehicle detecting Equipment at Permanent Road Traffic Signals'

TR 0100A Inductive Loop Detection Systems

TR123, 'Above Ground vehicle Detection Systems for use at Permanent Traffic Signal Junctions'

TR 2123A Above Ground Detection Systems

TR 2147A Microwave Vehicle Detection

TR 2210 (formerly TR 0141) Microprocessor Based Traffic Signal Controller for Isolated and Linked Urban Traffic Control Installations

TRG 0500 Statutory Type Approval of Equipment and Systems for the Control of Vehicular and Pedestrian Traffic on Roads Other than Motorways

A.5 TRAFFIC ADVISORY LEAFLETS

TAL4/91 Audible and Tactile Signals at Pelican Crossings
TAL5/91 Audible and Tactile Signals at Signal Controlled Junctions
TAL10/93 'Toucan', a non-segregated crossing for pedestrians and cyclists
TAL5/96 Further development of advanced stop lines
TAL4/98 Toucan crossing development

A.6 LOCAL TRANSPORT NOTES

LTN1/95 The assessment of Pedestrian Crossings
LTN2/95 The Design of Pedestrian Crossings
LTN1/98 The Installation of Traffic Signal and Associated Equipment

A.8 DISABLED, CYCLISTS AND PEDESTRIANS

UK Department of Transport Local Transport Notes 1/86, 'Cyclists at Road Crossings and Junctions'
UK Department of Transport Local Transport Notes 1/89, 'Making Way for Cyclists'
UK Department of Transport Local Transport Notes 2/87, 'Signs for Cycle Facilities'
UK Department of Transport Departmental Circular 1/91 'The use of Dropped Kerbs and Tactile Surfaces at Pedestrian Crossing Points'
UK Department of Transport, TA 8/93 'Advanced Step Lines for Cyclist'
UK IHT Guidelines 'Priority for People with a Mobility Handicap'
UK IHT, 'Cycle Friendly Infrastructure'
Ove Arup/SUSTRANS 'National Cycle Network – Guidelines and Practical Details'

A.9 OTHER DOCUMENTS

British Standard BS7671 - formerly UK IEE Wiring Regulations
HSE Avoiding Danger from Underground Services
Institution of Electrical Engineers; Safety Related systems
IEC 61508 Functional Safety of Electrical, electronic and Programmable systems
The Traffic Signs Manual
Specifications for Highway Works
Guidelines for the Safety Audit of Highways published by the UK IHT

The above list shall be deemed to include any revisions or Amendments issued by the UK Highways Agency.

APPENDIX B

STANDARD DETAILS

Reference**Title**

SD/001	Pelicans
SD/002	Toucans
SD/003	Textured paving for use at controlled pedestrian crossings
SD/004	Permitted head configuration Superseded By the Traffic Signs manual
SD/005	Controller installation
SD/006	CCTV Masts
SD/007	Access Chambers
SD/008	Setting Out

APPENDIX C

TECHNICAL SPECIFICATIONS

Reference	Title
TS/01	Traffic Signal Controllers
TS/02	Inductive Loops and Above Ground Detection
TS/03	Signal Furniture and Equipment
TS/04	Traffic Signal Installation Requirements
TS/05	Procedures for the Design and Installation of Traffic Control Equipment

Copies of the Council technical specifications may be obtained from:

Traffic Management Centre
Roads (Traffic) Department
South Dublin County Council
County Hall,
Town Centre,
Tallaght,
Dublin 24

Tel: + 353 (0) 1 4626826

Fax: + 353 (0) 1 4626826

Email: tmc@sdublincoco.ie

APPENDIX D

PROFORMAS



**South Dublin County Council
Roads & Traffic Department
Controller Schedule Proforma (SDCC/PF/01)**

SCHEME TITLE												
DATE AND ISSUE												
Type	Phases	Loop detectors	Tuned loop bus detector	Inputs			UTC Interface	OMCU	Moni-Interface	Streams	Comments	
				MVD (vehicle)	PB	Pedestrian presence detection						
Traffic Signal												
Notes:												



**South Dublin County Council
Roads & Traffic Department
Equipment Schedule Proforma (SDCC/PF/02)**

SCHEME TITLE		
DATE AND ISSUE		
	Description	Quantity
1	Controllers (as controller specification)	
2	Traffic signal poles (4m) with pole caps	
3	Short traffic signal poles with pole caps	
4	Wide based traffic signal poles (6.5m)	
5	Mast arms	
6	Pedestrian heads (2 aspect)	
7	Pedestrian heads (3 aspect)	
8	Pedestrian heads (3 aspect) with 'green cycle'	
9	PRISMA TF push button with tactile device and audible	
10	PRISMA TF push button with tactile device	
11	RAG head with primary/secondary hoods, backing boards and bracketry	
12	RAG +G/A head with primary/secondary hoods, backing boards and bracketry	
13	RAG/A head with primary/secondary hoods, backing boards and bracketry	
14	RAG/A + G/A head with primary/secondary hoods, backing boards and bracketry	
15	RAG + G/A +amber aspect head (5 aspect) with primary/secondary hoods, backing boards and bracktry	
16	LED RAG heads with primary/secondary hoods, backing boards and bracktry	
17	Louvres to RAG head (amber and green aspects only)	
18	Additional regulatory signs as part of heads - LED or standard	
19	Detection: X/Y/Z loop installed across 1 lane	
20	Detection: X/Y/Z loop installed across 2 lanes	
21	Detection: Call/cancel or queue loop or stopline presence loop – 1 lane	
22	Detection: Call/cancel or queue loop or stopline presence loop – 2 lanes	
23	Detection: Speed discrimination pair	
24	Detection - traffic count loop	
25	Tuned loop for bus detection	
26	MVD's	
27	15m CCTV mast (install only)	
28	Illuminated bollards	
29	15m CCTV mast (install only)	
30	LV and ELV cabling	Item
31	FAT, SAT, commissioning and documentation	Item

SDCC/PF/02

Add other items as required



**South Dublin County Council
Roads & Traffic Department
Site Equipment Proforma (SDCC/PF/03)**

SITE	
WORKS	

Existing Street Furniture		Returned	
Description	Number	To SDCC store	Scrapped
1 Traffic signal controller (Type			
2 Pedestrian/pelican controller (Type			
3 Traffic signal poles (4/5m)			
4 Wide based traffic signal poles (6m)			
5 Short traffic signal poles (to carry pushbuttons)			
6 Pedestrian heads (2 aspect)			
7 Pedestrian heads (3 aspect)			
8 Pedestrian heads (3 aspect) with 'green cycle'			
9 Cycle heads (3 aspect) with red/amber/green cycle			
10 PRISMA TF push button with tactile device and audible			
11 PRISMA TF push button with tactile device			
12 UK push button with tactile device and audible			
13 UK push button with tactile device			
14 RAG head			
15 RAG +G/A			
16 RAG/A			
17 RAG/A + G/A			
18 RAG + G/A +amber aspect head (5 aspect)			
19 Louvres to RAG head			
20			
21			
22			
23			
24			
25			
Notes: a) SDCC to complete numbers prior to any works commencing; b) Other equipment to be added as necessary (use additional sheets as required)	<i>To be completed by SDCC</i>	<i>To be completed by traffic signal subcontractor</i>	

For SDCC by (Print name)..... Date
For Contractor(Print name)..... Date

PROFORMA FOR GREEN CONFLICT TESTS

DELETED



**South Dublin County Council
Roads & Traffic Department
Annual Inspection Proforma (SDCC/PF/05)**

SITE NAME & RE

SITE DESCRIPTIO

Inpections			
Controller	Comments		
Case Condition ✓			
State of Pitch ✓			
Voltages ✓			
Test Lamps ✓			
F.M. Lamp ✓			
Relays ✓			
Operation ✓			
Drawings ✗			
UTC Interface ✓			
Earthing ✓			
Detector	Comments		
Loops ✓			
Detector Packs ✓			
MVDs ✓			
Signals	Comments	Pelican Timings	
Signal Heads ✓		Flashing Amb/ Fl Grn	
Background ✓		Flashing Amb/Red Man	
Backing boards ✓		Vehicle Period	
Poles / Caps ✓		Amber/ Red Man	
Box Signs ✓		All Red	
Solar Switches ✓		All Red (Max)	
Push Buttons ✓		Red/Green Man	
Traffic Lamps ✓		Extension	
Pedestrian Lamps ✓		Maximum	
		Minimum	
Fault Log Download			
Fault Log Cleared			

ENGINEERS REMARKS:

For Contractor.....(Print name)..... **Date**

APPENDIX E

PERFORMANCE REQUIREMENTS FOR MAINTENANCE

E.1 General Requirements

- E.1.1 This appendix defines the requirements for the maintenance of traffic signal installations, both new and existing within the scope of the works, and all associated equipment, until the Council assumes responsibility for maintenance.
- E.1.2 The Contractor shall assume responsibility for the maintenance of existing traffic signals upon taking possession of the site unless otherwise agreed with South Dublin County Council Traffic Section.
The contractor shall in any event become responsible for the maintenance of the signals as soon as any works (including traffic management works) commence within the area (including adjacent footpaths and verges) controlled by the signals (including detector loops).
- E.1.3 The contractor shall ensure that the signals are inspected not less than weekly for faults and defects including lamps not lit and lenses/push buttons damaged and or dirty. Any faults or defects discovered shall be dealt with within the time scale for fault repairs.
Other inspections (Bi-monthly, annual inspections) shall be carried out in accordance with the current maintenance requirements of South Dublin County Council
- E.1.4 Urgent faults are deemed to be:
- a) all signals unlit;
 - b) flashing failure mode;
 - c) signals failing to change;
 - d) lamp failure of one traffic red;
 - e) lamp failure of two traffic greens;
 - f) conflicting signals;
 - g) twisted heads, in such a way as to show conflicting signals to a stream of traffic;
 - h) controllers out of link; and
 - i) accident, crash damage or equipment in a dangerous condition.
- E.1.6 All other faults are deemed to be non-urgent.
- E.1.5 Prior to switch on, procedures shall be agreed for:
- a) fault notification and clearance;
 - b) necessary paperwork; and
 - c) other procedures as required.
- E.1.7 The Contractor shall provide all necessary facilities to provide the defined maintenance services, including:
- a) suitably trained personnel;
 - b) all necessary equipment, consumables, spares, test sets etc; and
 - c) appropriate transport.

E.2 The Maintenance Service

E.2.1 The Contractor shall:

- a) keep and maintain the equipment in good and proper working order and shall repair and make good faults as they arise within the agreed timescales;
- b) if required, re-set the controller clocks in accordance with Summer time and Winter time as appropriate. This work shall be carried out between 19.30 on the Friday and 06.00 on the Monday of the weekend when the changeover from Summer time to Winter time and Winter time to Summer time occurs; and
- c) provide details of all faults and associated reporting/clearance times to the Council in an agreed manner within the agreed timescales.

E.2.2 The response time shall be from the time the Contractor is notified of a fault to the time the Contractor notifies the Council that the fault is cleared.

E.2.3 The maximum response times for urgent faults and non-urgent faults shall be agreed with the Council prior to switch on but shall be consistent with existing maintenance arrangements in South Dublin County

E.2.4 Full fault repair shall whenever possible be achieved as soon as possible and within the agreed response time. If this is impossible a temporary repair shall be made making the equipment safe and also as efficient as possible. The Council shall be notified immediately and full repair shall then be implemented as soon as possible.

E.2.5 An adequate supply of spare parts shall be held in weatherproof stores in or near to South Dublin County Council's administrative area.

E.2.6 All work shall be carried out by competent persons skilled in the maintenance of the equipment and shall comply with any regulation issued by:

- a) the Electricity Supply Board;
- b) the Electro-Technical Council of Ireland; and
- c) the current guidelines issued by the Institute of Electrical Engineers.

E2.7 The contractor, prior to the commencement of any works, shall inform South Dublin County Council Traffic Section of the identity of the Traffic Signal Maintenance Contractor (if any) complete with contact details (including 24 hour details) and confirmation that the said contractor is aware of and in acceptance of the maintenance requirements of South Dublin County Council.

E2.8 The contractor shall, if required, demonstrate the maintenance contractor's ability to provide both technical ability and spares parts for after hours cover.

APPENDIX F

DETAILS OF PRISMA PUSH BUTTON UNITS

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