

Drawings for Traffic Signal and Street Lighting (STS)

Volume 3 of the Ontario Provincial Standard Drawings (OPSD), and the current City of London Standard Drawings, are amended as follows:

Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
Duct Installation at Utility Crossing	1/22/2009	STS-1.01	-	-
Duct Installation in Existing Paved Area	1/16/2009	STS-1.02	-	-
Underground Rigid Duct Connection at Concrete Structure	1/22/2009	STS-1.03	-	-
Electrical Vaults Entry of Encased Ducts	1/22/2009	STS-1.04	-	-
Electrical Handholes General Installation Requirements	1/22/2009	STS-1.05	-	-
Electrical Handholes Entry of Direct Buried and Encased Ducts	1/22/2009	STS-1.06	-	-
Prefabricated Service Box Assemblies	8/12/2019	STS-1.07	8/18/2014	Prefabricated Service Box Assemblies
Typical Loop and Street Lighting Junction Box	8/12/2019	STS-1.08	9/7/2010	Typical Loop and Street Lighting Junction Box
Electrical Handhole Precast Concrete – 600 x 600 mm	1/22/2009	STS-1.09	-	-
Typical Traffic Island Handhole / Service Box Installation	11/2/2017	STS-1.10	1/22/2009	Typical Traffic Island Handhole / Service Box Installation
Electrical Handhole Installation in Slope	1/22/2009	STS-1.11	-	-
Typical Duct Configuration	8/18/2014	STS-1.12	9/26/2011	Typical Duct Configuration

Supplemental Standards for Traffic Signal and Street Lighting (STS)

Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
Typical Traffic Signal Wiring Details Two to Eight Phase Systems	11/2/2017	STS-2.01	10/16/2009	Typical Traffic Signal Wiring Details Two to Eight Phase Systems
Cable Assignment for Traffic Signal Control	11/2/2017	STS-2.02	10/16/2009	Cable Assignment for Traffic Signal Control
Traffic Signal Equipment – Pole Wiring Diagram	10/16/2009	STS-2.03	-	-
Traffic Cabinet Layout	9/28/2011	STS-2.04	-	-
Supply Control Cabinet Installation Overhead Services Bottom Entry	11/2/2017	STS-3.01	8/18/2014	Supply Control Cabinet Installation Overhead Services Bottom Entry
Supply Control Cabinet Assembly Type 3S, MTO	1/22/2009	STS-3.02	-	-
Supply Control Cabinet Assembly Type 3S Equipment List	10/16/2009	STS-3.03	-	-
Supply Control Cabinet Assembly Type 3S Enclosure	9/7/2010	STS-3.04	-	-
Supply Control Cabinet Assembly Type 3S Dead Front Panel	1/22/2009	STS-3.05	-	-
Supply Control Cabinet Assembly Type 3S Door Latch	1/22/2009	STS-3.06	-	-

Supplemental Standards for Traffic Signal and Street Lighting (STS)

Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
Supply Control Cabinet Assembly Type 3S Instrument Layout	8/9/2012	STS-3.07	1/22/2009	Supply Control Cabinet Assembly Type 3S Instrument Layout
LS3M Supply Control Cabinet Assembly Type 3M 120/240V, 100A, 1 Phase, 3 Wire	1/22/2009	STS-3.08	-	-
LS3M Supply Control Cabinet Assembly Type 3M Equipment List	10/16/2009	STS-3.09	-	-
LS3M Supply Control Cabinet Assembly Type 3M Enclosure	9/7/2010	STS-3.10	-	-
LS3M Supply Control Cabinet Assembly Type 3M Dead Front Panel	1/22/2009	STS-3.11	-	-
LS3M Supply Control Cabinet Assembly Type 3M Door Latch	1/22/2009	STS-3.12	-	-
LS3M Supply Control Cabinet Assembly Type 3M Instrument Layout	1/22/2009	STS-3.13	-	-
Power Supply (27") Pedestal and Base Assembly	11/2/2017	STS-3.14	9/26/2011	Power Supply (27") Pedestal and Base Assembly
Power Supply (42") Pedestal and Base Assembly	11/2/2017	STS-3.15	9/7/2010	Power Supply (42") Pedestal and Base Assembly
Residential Street Light Power Disconnect Location	2/3/2015	STS-3.16	-	-

Supplemental Standards for Traffic Signal and Street Lighting (STS)

Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
Aluminum Traffic Signal Pole Base Mounted	8/12/2019	STS-4.01	1/22/2009	Aluminum Traffic Signal Pole Base Mounted
Aluminum Combination and Streetlight Pole Base Mounted	8/12/2019	STS-4.02	1/22/2009	Aluminum Combination and Streetlight Pole Base Mounted
Steel Pole, Base Mounted	1/22/2009	STS-4.03	-	-
Pedestrian Pushbutton Pole	8/18/2014	STS-4.04	1/22/2009	Pedestrian Pushbutton Pole
Pole Mounting Details for Base Mounted Metal Pole	11/3/2017	STS-4.05	1/22/2009	Pole Mounting Details for Base Mounted Metal Pole
Metal Lighting Pole Base Mounted	1/22/2009	STS-4.06	-	-
Concrete Footing for Base Mounted Pole	1/22/2009	STS-5.01	-	-
Concrete Footing for Base Mounted Pole	11/03/2017	STS-5.02	8/18/2014	Concrete Footing for Base Mounted Pole
Anchorage Assembly	9/7/2010	STS-5.03	-	-
Local Grading at Pole Foundations	8/18/2014	STS-5.04	1/22/2009	Local Grading at Pole Foundations
Installation of Direct Buried Poles in Slopes	1/22/2009	STS-5.05	-	-
M1 Controller Cabinet Base Detail	11/3/2017	STS-6.01	8/18/2014	M.1 Controller Cabinet Base Detail
M1 Controller Cabinet and UPS Cabinet Base Detail	11/3/2017	STS-6.02 Sheet 1	11/2/2015	M1 Controller Cabinet and UPS Cabinet Base Detail
M1 Controller Cabinet and UPS Cabinet Base Detail	11/3/2017	STS-6.02 sheet2	11/2/2015	M1 Controller Cabinet and UPS Cabinet Base Detail

Supplemental Standards for Traffic Signal and Street Lighting (STS)

Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
UPS Cabinet Base Detail	1/5/2016	STS-6.03	-	-
Traffic Signal Hanger Details	9/7/2010	STS-7.01	-	-
Adjustable Offset Plumbizer Signal Head Hanger (IPS Signals)	8/18/2014	STS-7.02	10/23/2008	Adjustable Offset Plumbizer Signal Head Hanger (IPS Signals)
Double Signal Mounting Bracket (IPS Signals)	8/18/2014	STS-7.03	10/23/2008	Double Signal Mounting Bracket (IPS Signals)
Traffic Signal Double Arm Bracket	1/22/2009	STS-7.04	-	-
Single Member Arm and Signal Head	1/22/2009	STS-7.05	-	-
Traffic Signal Pedestrian Head and Pushbutton Mounted on Pole	8/18/2014	STS-7.06	10/16/2009	Traffic Signal Pedestrian Head and Pushbutton Mounted on Pole
Flasher Beacon and Downlight for Roadway Sign and Wiring Diagram	8/18/2014	STS-8.01	1/22/2009	Flasher Beacon and Downlight for Roadway Sign and Wiring Diagram
Flasher Beacon for Roadway Sign and Wiring Diagram	8/18/2014	STS-8.02	1/22/2009	Flasher Beacon for Roadway Sign and Wiring Diagram
Flasher Beacon for Roadway Sign and Wiring Diagram	1/22/2009	STS-8.03	-	-
Typical Loop Layout	8/18/2014	STS-9.0	-	-
Prefabricated Detector Loop	1/22/2009	STS-9.01	-	-
Loop Detector Installation Details	1/22/2009	STS-9.02	-	-
Loop Detector Installation Details II	1/22/2009	STS-9.03	-	-

Supplemental Standards for Traffic Signal and Street Lighting (STS)

Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
Splice for Low and Extra Low Voltage Cables	8/18/2014	STS-9.04	9/26/2011	Splice for Low and Extra Low Voltage Cables
2 Wire Navigator Push Button Station (PBS)	8/18/2014	STS-9.05	9/26/2011	2 Wire Navigator Push Button Station (PBS)
Polara/Campbell Pushbutton with Latching LED	9/26/2011	STS-9.06	-	-
Pedestrian Crossing Information Sign	8/18/2014	STS-9.07 L/R	10/16/2009	Pedestrian Crossing Information Sign
Pedestrian Crossing Information Sign at Non-Actuated Signals	8/18/2014	STS-9.08	1/22/2009	Pedestrian Crossing Information Sign at Non-Actuated Signals
Pedestrian Crossing Information Sign for Countdown Signals	8/18/2014	STS-9.09 L/R	10/16/2009	Pedestrian Crossing Information Sign for Countdown Signals
Pedestrian Crossing Information Sign for Countdown Signals at Non-Actuated Locations	8/18/2014	STS-9.10	1/22/2009	Pedestrian Crossing Information Sign for Countdown Signals at Non-Actuated Locations
'3M' Optical Pre-Emption Detector Head	11/2/2017	STS-9.11	9/7/2010	'3M' Optical Pre-Emption Detector Head
Decorative Downtown Concrete Pedestrian Pole, Base Mounted (4.6m)	8/9/2012	STS-10.1	9/26/2011	Decorative Downtown Concrete Pedestrian Pole, Base Mounted (4.6m)

Supplemental Standards for Traffic Signal and Street Lighting (STS)

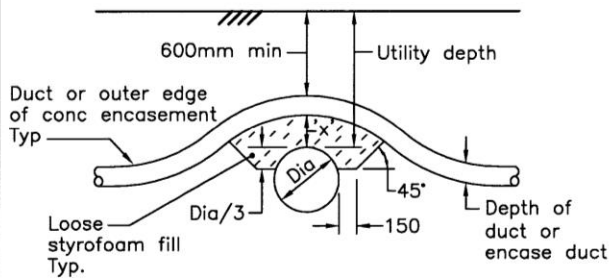
Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
Decorative Downtown Concrete Pedestrian Pole – Direct Buried (4.6m)	8/9/2012	STS-10.02	9/26/2011	Decorative Downtown Concrete Pedestrian Pole – Direct Buried (4.6m)
Decorative Downtown Concrete Pedestrian Pole	8/12/2019	STS-10.03	8/9/2012	Decorative Downtown Concrete Pedestrian Pole
Decorative Downtown Concrete Pole, Base Mounted (7.6m)	8/9/2012	STS-10.04	9/26/2011	Decorative Downtown Concrete Pole, Base Mounted (7.6m)
Decorative Downtown Concrete Pole, Direct Buried (7.6m)	8/9/2012	STS-10.05	9/26/2011	Decorative Downtown Concrete Pole, Direct Buried (7.6m)
Decorative Downtown Concrete Pole	8/23/2019	STS-10.06	8/9/2012	Decorative Downtown Concrete Pole
Decorative Downtown Concrete Pole in Centre Median Island	8/23/2019	STS-10.07	8/9/2012	Decorative Downtown Concrete Pole in Centre Median Island
Decorative Direct Buried Pole Layout (typ.)	1/22/2009	STS-10.08	-	-
Downtown Pole Wiring Diagram 120V System	1/22/2009	STS-10.09	-	-
Decorative Concrete Residential Pole	8/23/2019	STS-10.10	-	-
Residential Pole with Post Top Luminaire	8/23/2019	STS-10.11	-	-

Title of Drawing	Date of Drawing	City of London Drawing Classification	Date Drawing Superseded or Deleted	Old Drawing Title (if applicable)
Dundas Place Street Light Pole	7/12/2019	STS-10.12	-	-
Sidewalk Ramp Locations at New Signalized Intersections	8/14/2014	STS-11.01	8/23/2012	Sidewalk Ramp Locations at New Signalized Intersections
Sidewalk Ramp Locations at New Signalized Intersections	8/18/2014	STS-11.02	8/23/2012	Sidewalk Ramp Locations at New Signalized Intersections
Sidewalk Ramp Locations at New Signalized Intersections	8/18/2014	STS-11.03	8/23/2012	Sidewalk Ramp Locations at New Signalized Intersections
Sidewalk Ramp Locations at New Signalized Intersections	8/18/2014	STS-11.04	8/23/2012	Sidewalk Ramp Locations at New Signalized Intersections
Sidewalk Ramp Locations at New Signalized Intersections	8/18/2014	STS-11.05	8/23/2012	Sidewalk Ramp Locations at New Signalized Intersections
Tactile Plate Location Details and Cross Sections	8/23/2012	STS-11.06	8/23/2012	Tactile Plate Location Details and Cross Sections
Tactile Plate – Island Locations and Cross Sections	8/23/2012	STS-11.07	-	-
Tactile Plate Details and Sections	8/23/2019	STS-11.08	8/23/2012	Tactile Plate Details and Sections
Tactile Plate Layout	2/26/2015	STS-11.09	8/18/2014	Tactile Plate Layout
PXO Pole and Sign Configuration	1/11/2019	STS-12.0	-	-

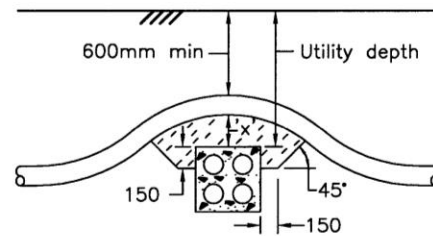


London
CANADA

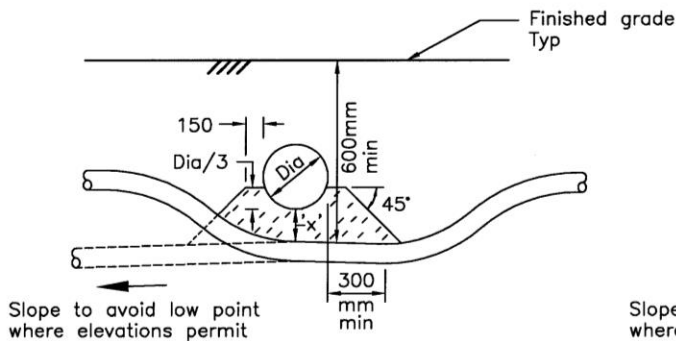
Supplemental Standards for Traffic Signal and Street Lighting (STS)



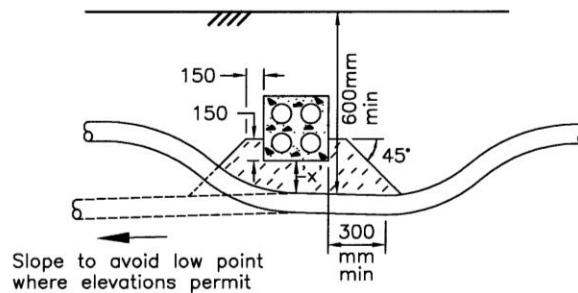
CROSSING OVER UTILITY



CROSSING OVER CONCRETE
ENCASED UTILITY



CROSSING UNDER UTILITY



CROSSING UNDER CONCRETE
ENCASED UTILITY

NOTES:

A The required clearance 'x' between the utility and the ducts or concrete encasement is:

UTILITY	'x' mm min
Ducts, Direct Buried or Encased	100
All other pipes	300
High Voltage cables	300
All other cables	300

B Trench widths shall be kept to the minimum required for working space. Manual excavation and backfill methods shall be used, with the utility supported in place where required, where crossing under a utility is necessary.

C All dimensions are in millimetres or metres unless otherwise shown.

CITY OF LONDON STANDARD DRAWING

DUCT INSTALLATION AT UTILITY CROSSING

DWG STS-1.01

DATE

2009-1-22

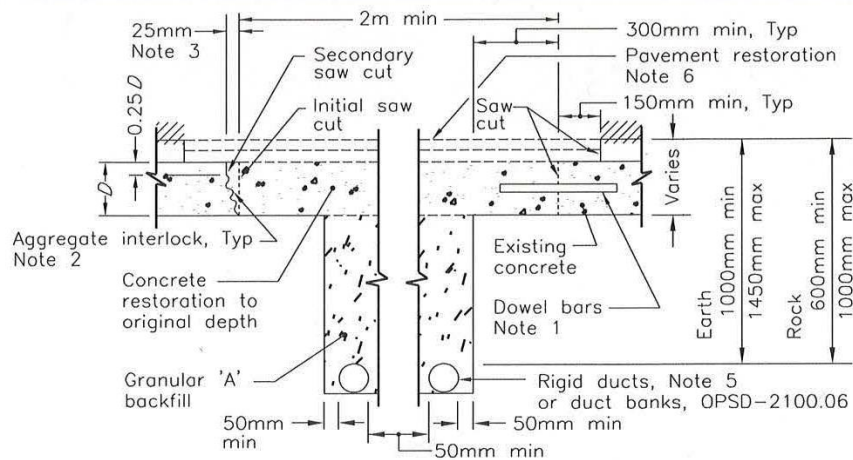
APPROVED BY
CITY ENGINEER

Shane Hager



London
CANADA

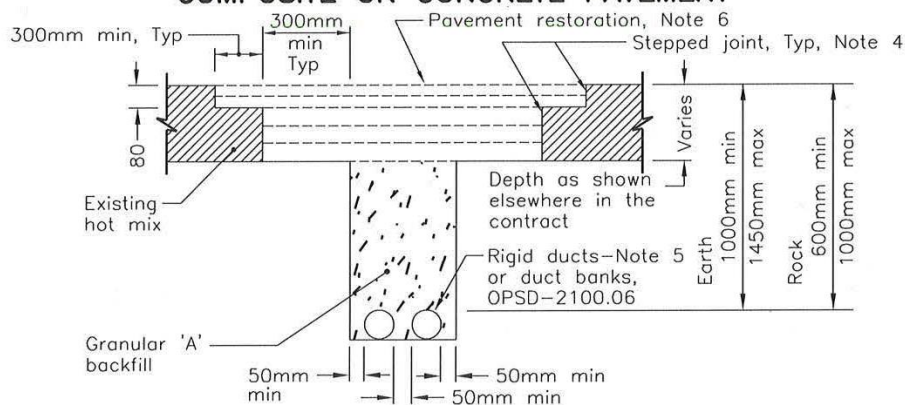
Supplemental Standards for Traffic Signal and Street Lighting (STS)



UNDOWELLED TREATMENT, Note 2

DOWELLED TREATMENT, Note 1

COMPOSITE OR CONCRETE PAVEMENT



NOTES:

BITUMINOUS PAVEMENT

- 1 Dowelled treatment is only required in existing concrete pavement or concrete base which contain load transfer devices. Dowels shall be 32mm dia, 450mm long, epoxy coated, installed at 300mm intervals at mid depth of the concrete slab, in plane to the pavement surface, parallel to the centre line of the road and set 225mm in 35mm holes with epoxy grout.
 - 2 Undowelled treatment is only required in existing concrete pavement or concrete base which is constructed without load transfer devices at joints. Aggregate interlock is created by chipping the vertical concrete face with a light 15kg maximum pneumatic hammer.
 - 3 The initial saw cut shall be full depth. The secondary saw cut shall be 1/4 of existing pavement depth with 25mm of chipping for aggregate interlock.
 - 4 Where existing pavement depth is between 80mm and 120mm the 300mm wide stepped joint shall be 40mm deep.
 - 5 In rock, the ducts shall be placed on 150mm sand bedding.
 - 6 Bituminous pavement restoration to match existing type unless otherwise specified. The surface and top binder courses shall be placed in 40mm lifts, with other lifts placed at 80mm maximum.
- A All voids below the pavement shall be filled with granular 'A' backfill.
B All dimensions are in millimetres unless otherwise shown.

CITY OF LONDON STANDARD DRAWING

DUCT INSTALLATION IN EXISTING PAVED AREA

DWG STS-1.02

DATE

2009-10-16

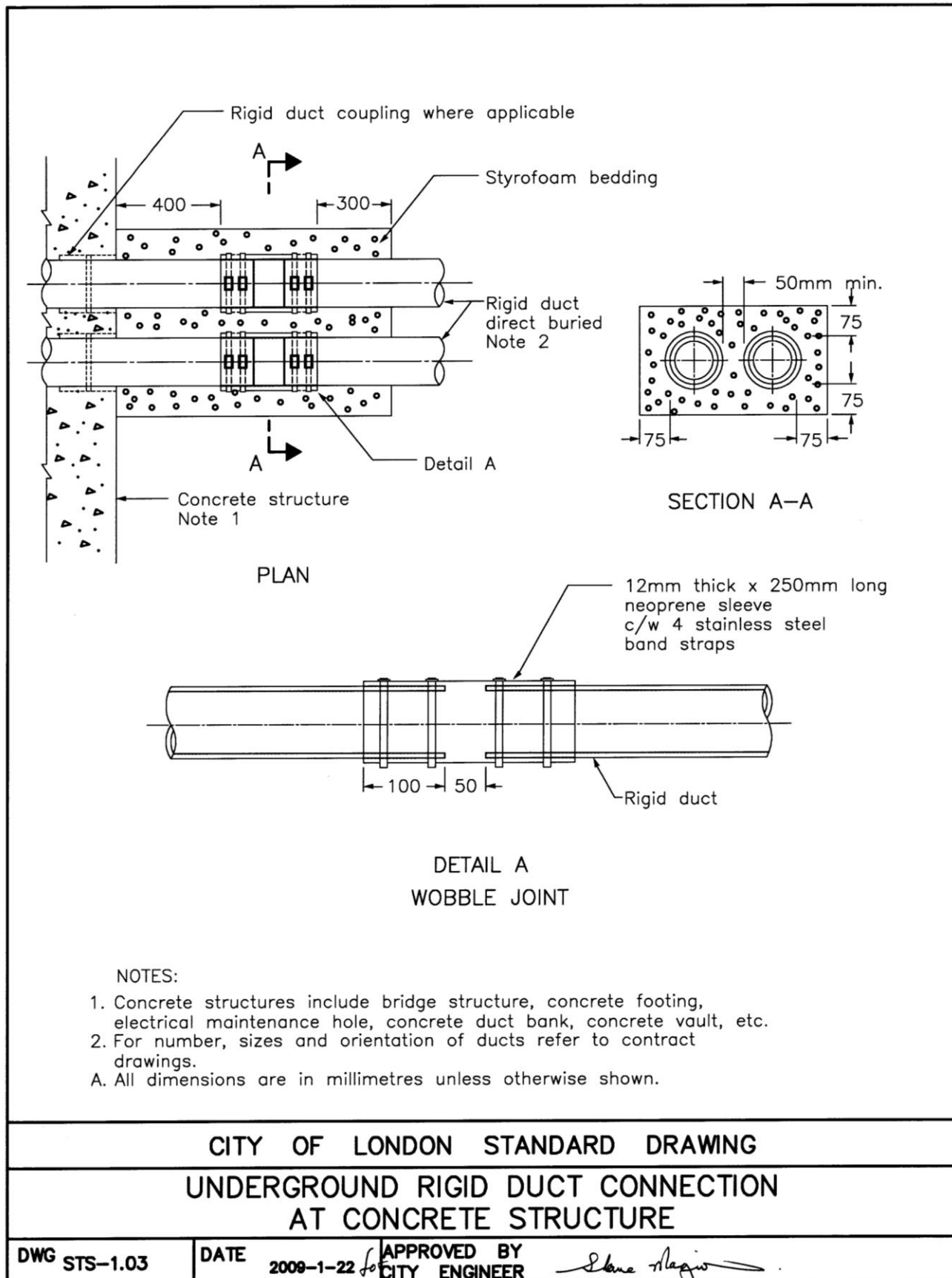
APPROVED BY
CITY ENGINEER

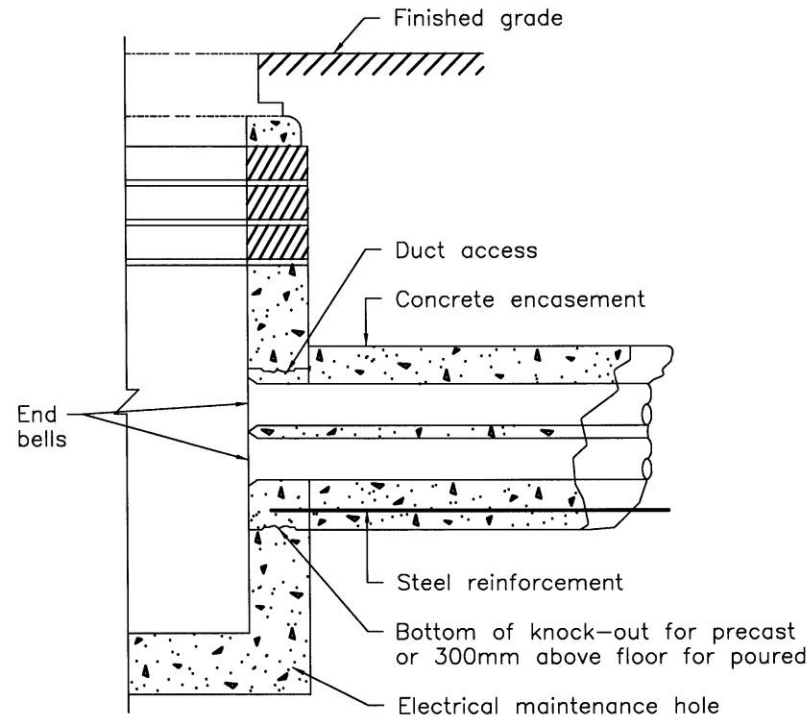
Shane Negro



London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)





RIGID DUCTS, CONCRETE ENCASED

NOTES:

- 1 Grout to be placed full depth, flush with both walls.
 - 2 Grout to be placed within steel pipe, around all ducts, to a minimum depth of 75mm.
- A All dimensions are in millimetres or metres unless otherwise shown

CITY OF LONDON STANDARD DRAWING

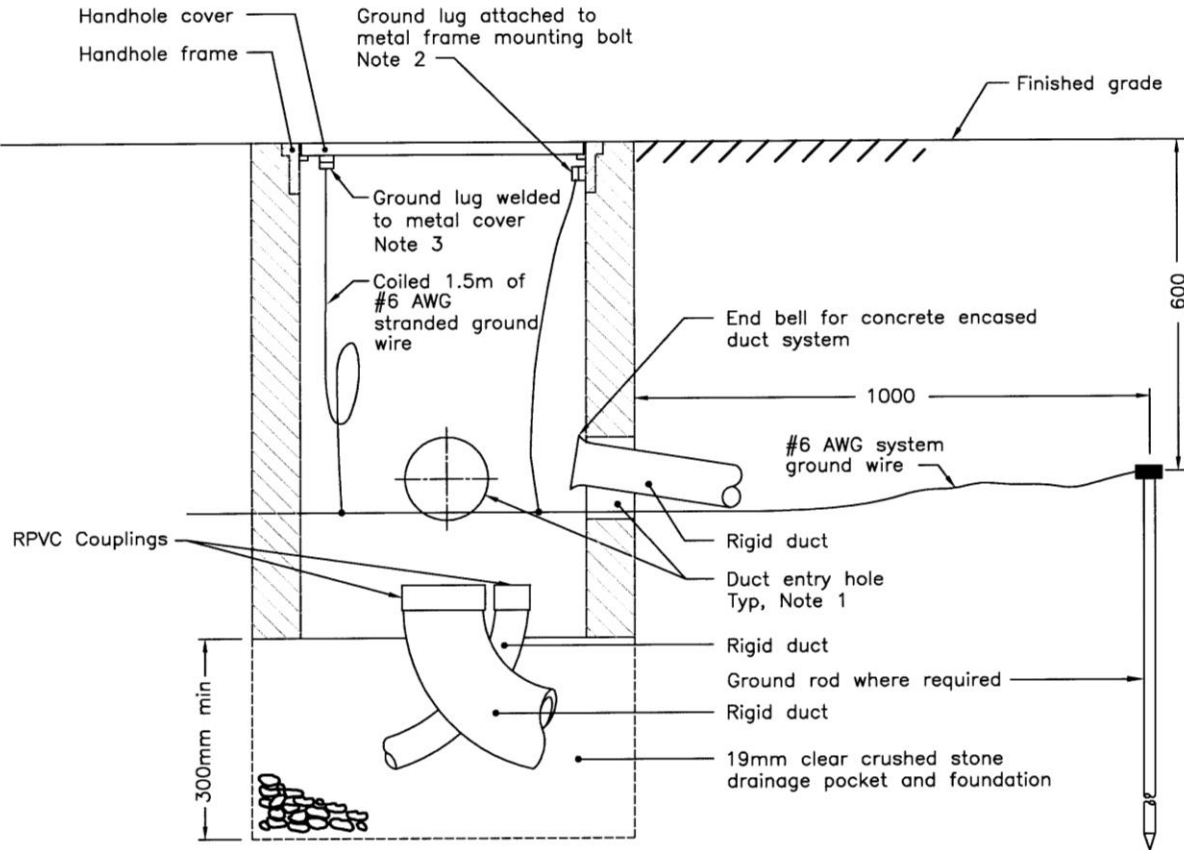
ELECTRICAL VAULTS
ENTRY OF ENCASED DUCTS

DWG STS-1.04

DATE 2009-1-22 for

APPROVED BY
CITY ENGINEER

Shane Maguire



NOTES:

- 1 For duct entry details see STS-1.06.
- 2 For handholes with metal frames, ground wire shall be attached to frame using a ground lug suitable for #6 AWG stranded copper wire.
- 3 For handholes with metal covers and non metallic frames, the ground wire shall be attached to the handhole cover using a ground lug suitable for #6 AWG copper wire.

A All dimensions are in millimetres unless otherwise shown.

CITY OF LONDON STANDARD DRAWING

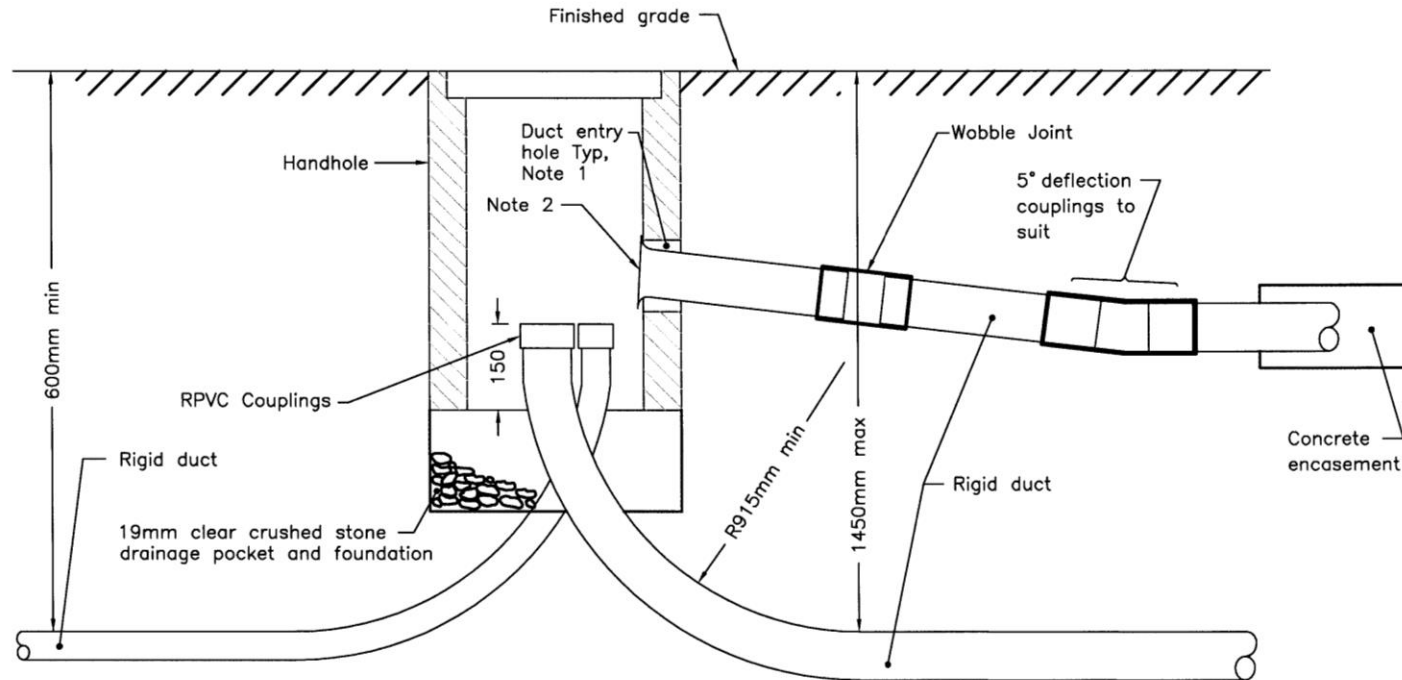
ELECTRICAL HANDHOLES
GENERAL INSTALLATION REQUIREMENTS

DWG STS-1.05

DATE 2009-1-22

APPROVED BY
CITY ENGINEER

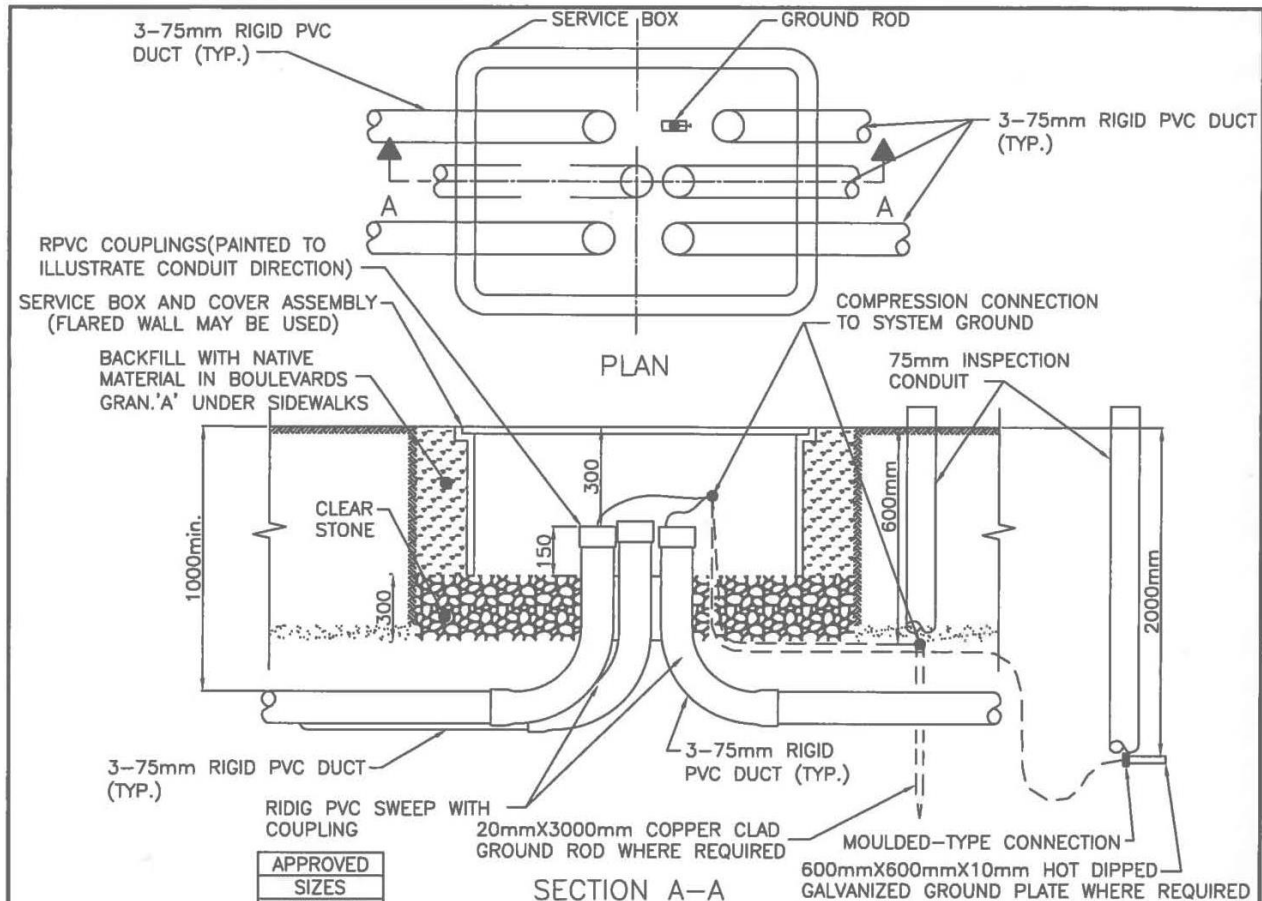
Shane Maguire



NOTES:

- 1 Duct entry holes to be filled with grout, full depth, flush with both walls.
 - 2 Rigid ducts terminating in maintenance holes, handholes, or other permanent openings of underground systems shall be provided with an end bell. Rigid ducts entering the bottom of handholes shall be fitted with RPVC coupling.
- A For installation details see STS-1.05.
B All dimensions are in millimetres unless otherwise shown.

CITY OF LONDON STANDARD DRAWING		
ELECTRICAL HANDHOLES		
ENTRY OF DIRECT BURIED AND ENCASED DUCTS		
DWG STS-1.06	DATE 2009-1-22	APPROVED BY CITY ENGINEER <i>Elaine Hagan</i>



NOTES:

1. TOP OF SERVICE BOX SHALL BE LEVEL TO CONFORM TO FINISHED GRADE.
2. ALL DUCTS USED IN OPEN CUT INSTALLATION TO BE RIGID PVC CONDUITS.
3. END OF ALL DUCTS MUST BE CAPPED UNTIL WIRES PULLED.
4. BACKFILL UNDER ROAD AND IN ISLAND TO BE GRANULAR.
5. BACKFILL IN BOULEVARD TO BE SELECTED EXCAVATED MATERIAL AS SPECIFIED IN SPECIFICATIONS.
6. ALL DUCTS MUST BE FREE AND CLEAR OF ALL DEBRIS AND OBSTRUCTIONS (DIRT, STONE, ETC.)
7. CONTRACTOR TO SUPPLY AND PLACE 5mm POLYPROPYLENE FISH ROPE IN ALL DUCTS.
8. CONTRACTOR TO SUPPLY AND INSTALL GROUND ROD/PLATE AND CONNECTOR IN ALL NEW SERVICE BOXES WHERE INDICATED IN CONTRACT.
9. END OF ALL DUCTS MUST HAVE RPVC COUPLINGS INSTALLED.
10. 75mm INSPECTION CONDUIT REQUIRED FOR GROUND ROD/PLATE CONNECTION OUTSIDE OF HANDHOLE.
11. SERVICE BOXES AND COVERS SHALL MEET ANSI/SCTE77-2007 TIER 15 LOAD RATING.
12. ALL SERVICE BOXES SHALL HAVE SELF TAPPING STAINLESS STEEL HEX BOLTS WITH WASHERS AND GROMMETS.
13. FOR APPROVED MANUFACTURES SEE APPROVED MANUFACTURES LIST IN SUPPLEMENTAL STANDARDS DOCUMENT.
14. THE SERVICE BOX LID LOGO SHALL STATE THE TYPE OF SERVICE I.E. TRAFFIC SIGNALS, STREET LIGHTING OR COMMUNICATIONS. LOGO SHALL BE ENGRAVED INTO THE LID AS PER STS 1.08

CITY OF LONDON STANDARD DRAWING

PREFABRICATED SERVICE BOX ASSEMBLIES

DWG STS-1.07

DATE

2019-08-12

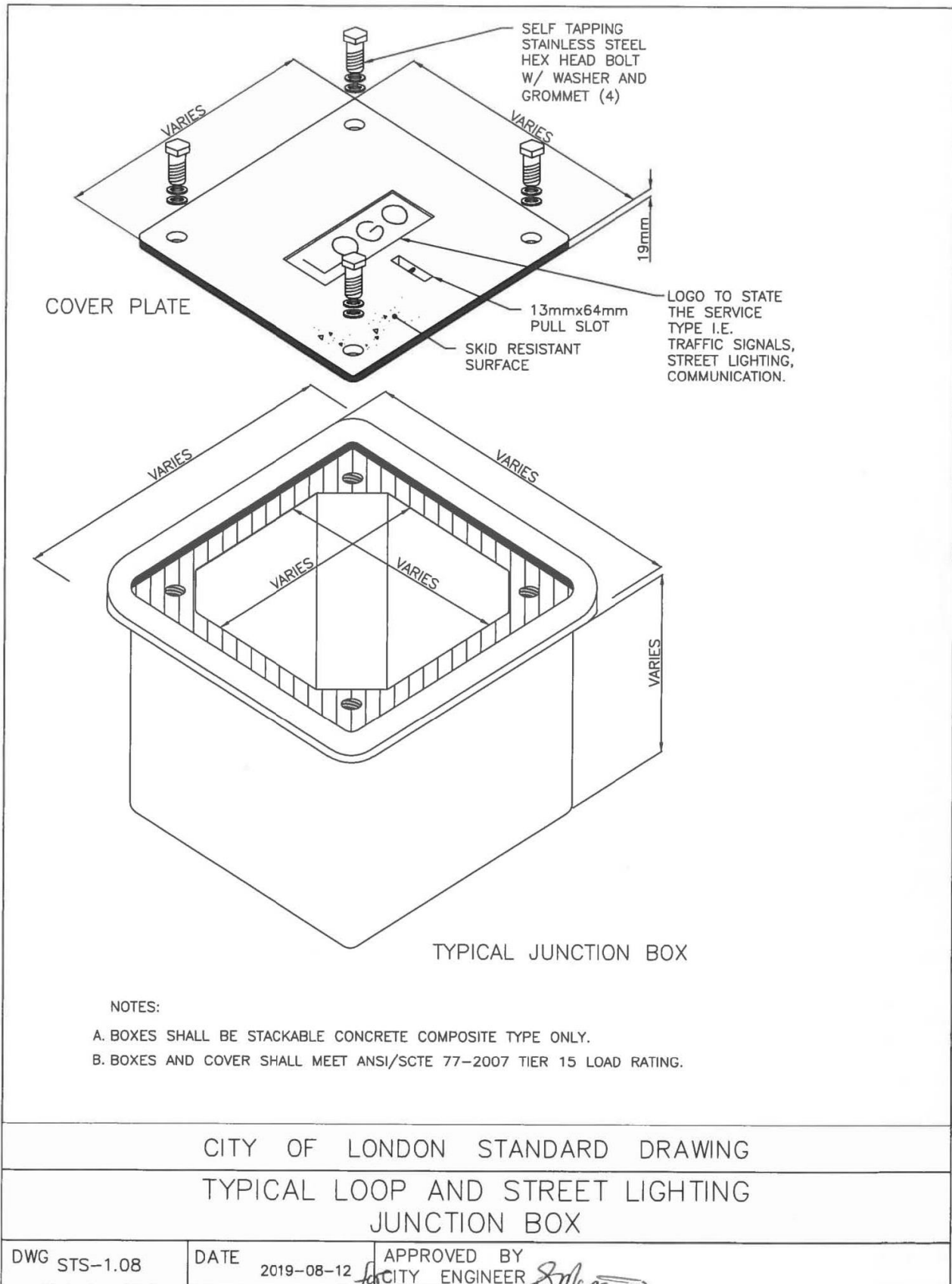
APPROVED BY

CITY ENGINEER



London
CANADA

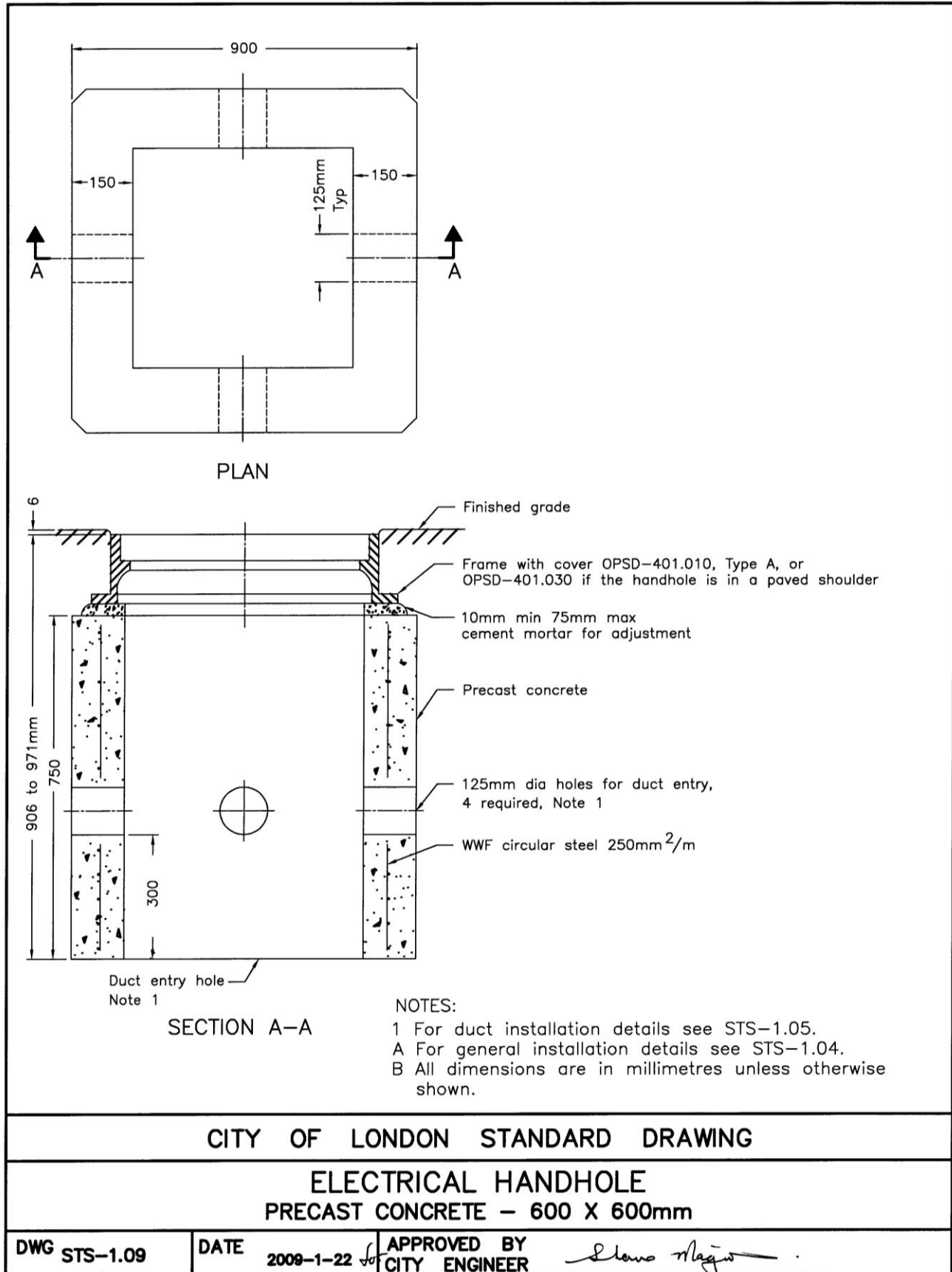
Supplemental Standards for Traffic Signal and Street Lighting (STS)

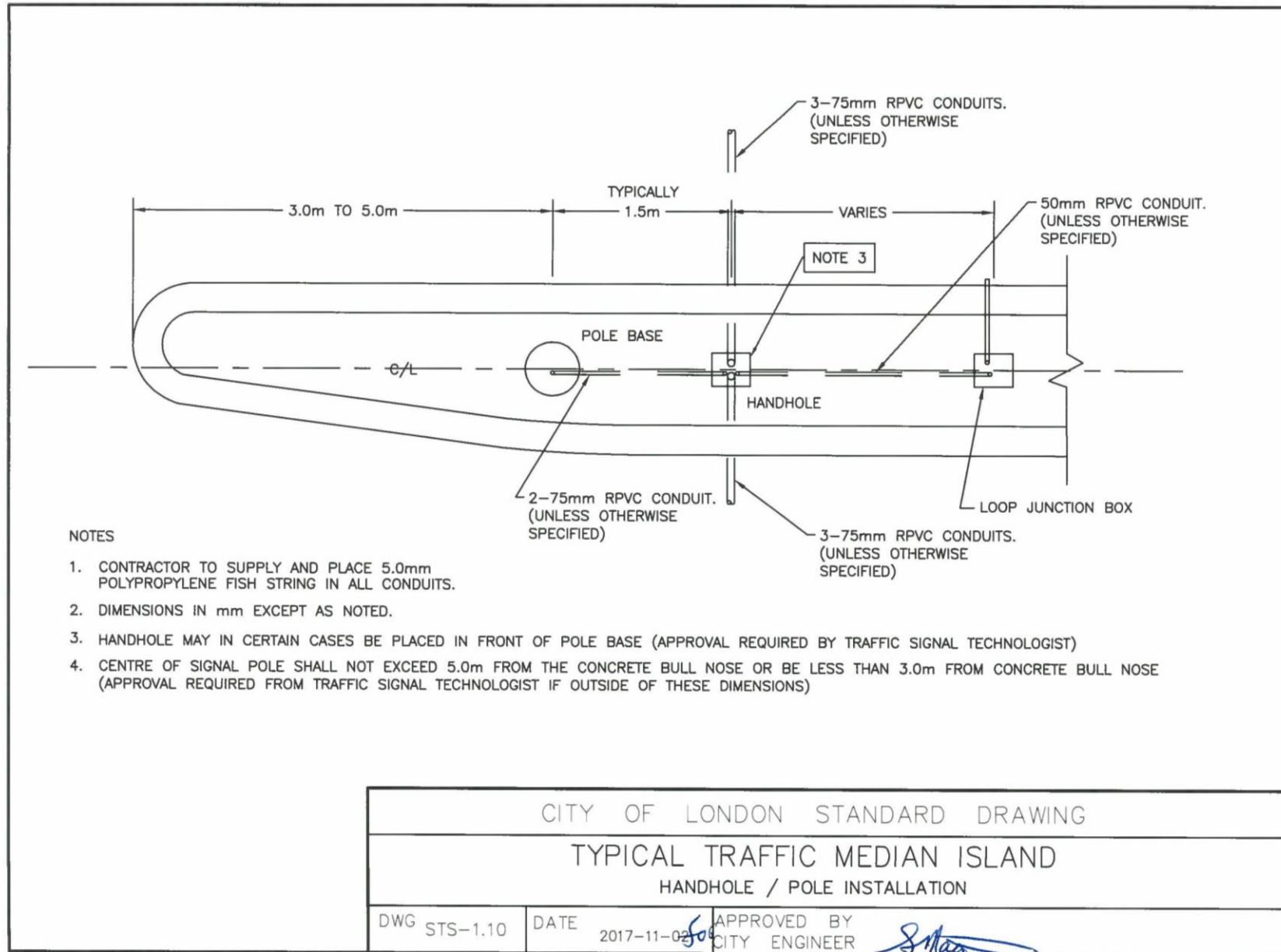




London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)

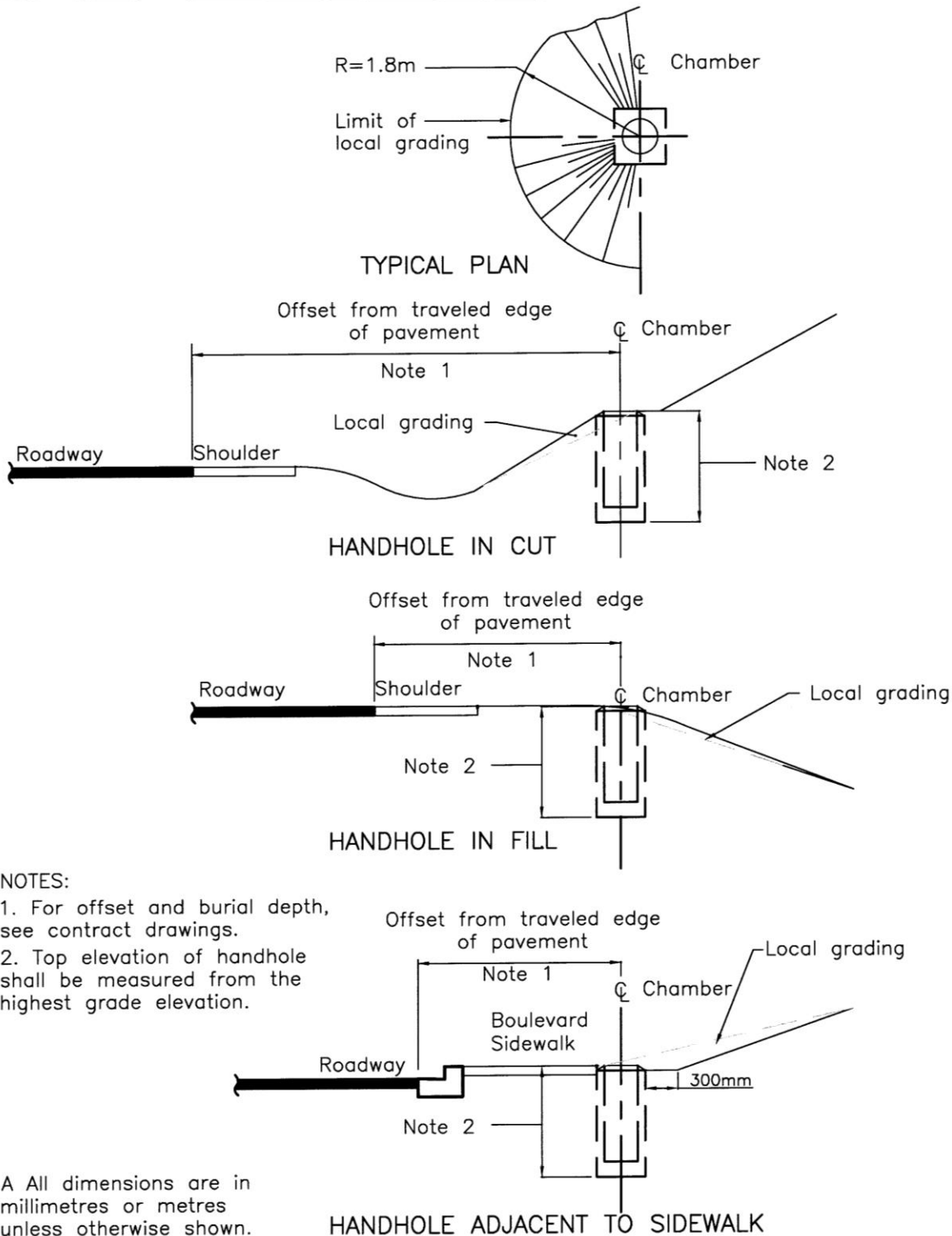






London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)



CITY OF LONDON STANDARD DRAWING

ELECTRICAL HANDHOLE INSTALLATION IN SLOPE

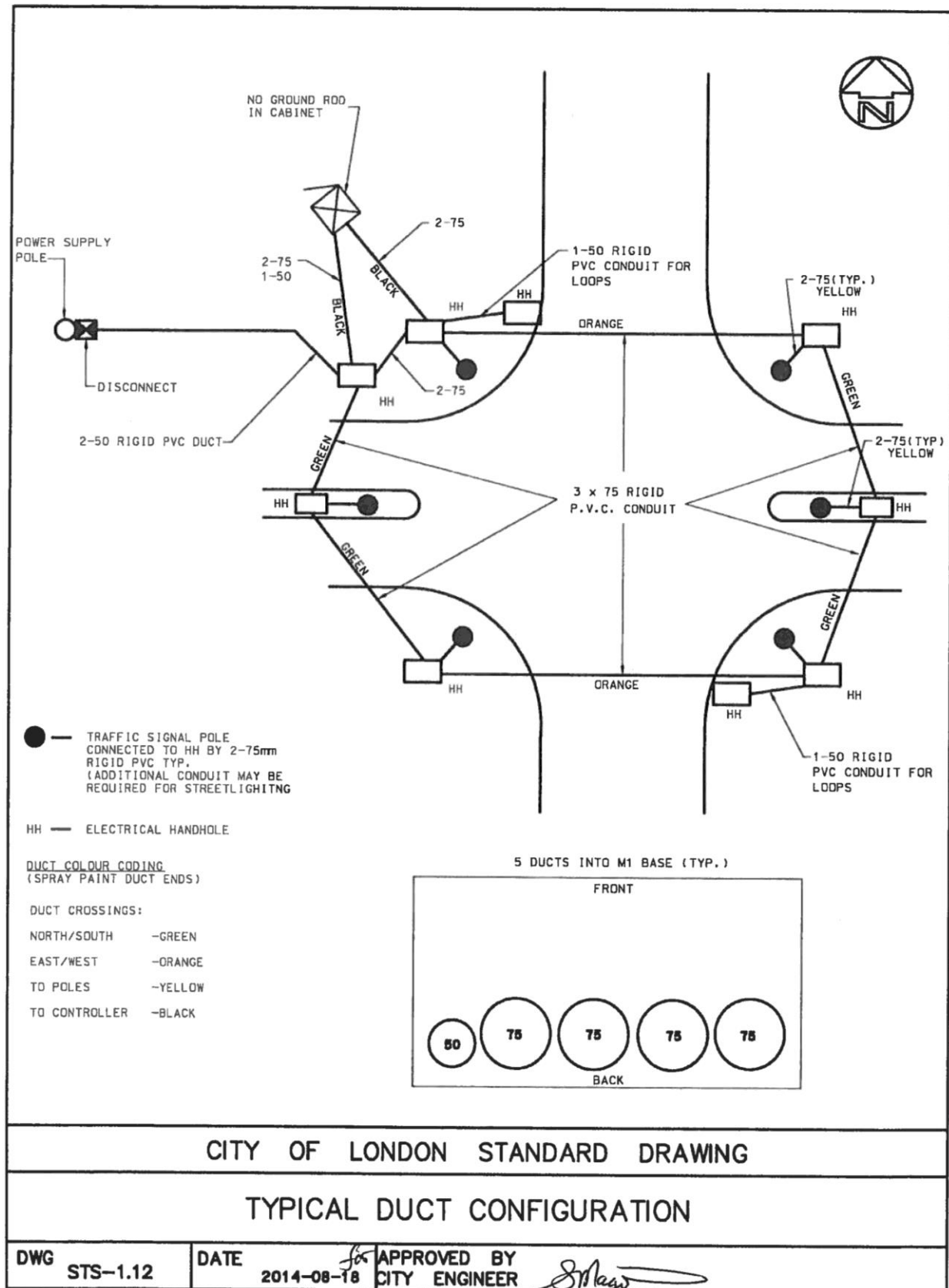
DWG STS-1.11

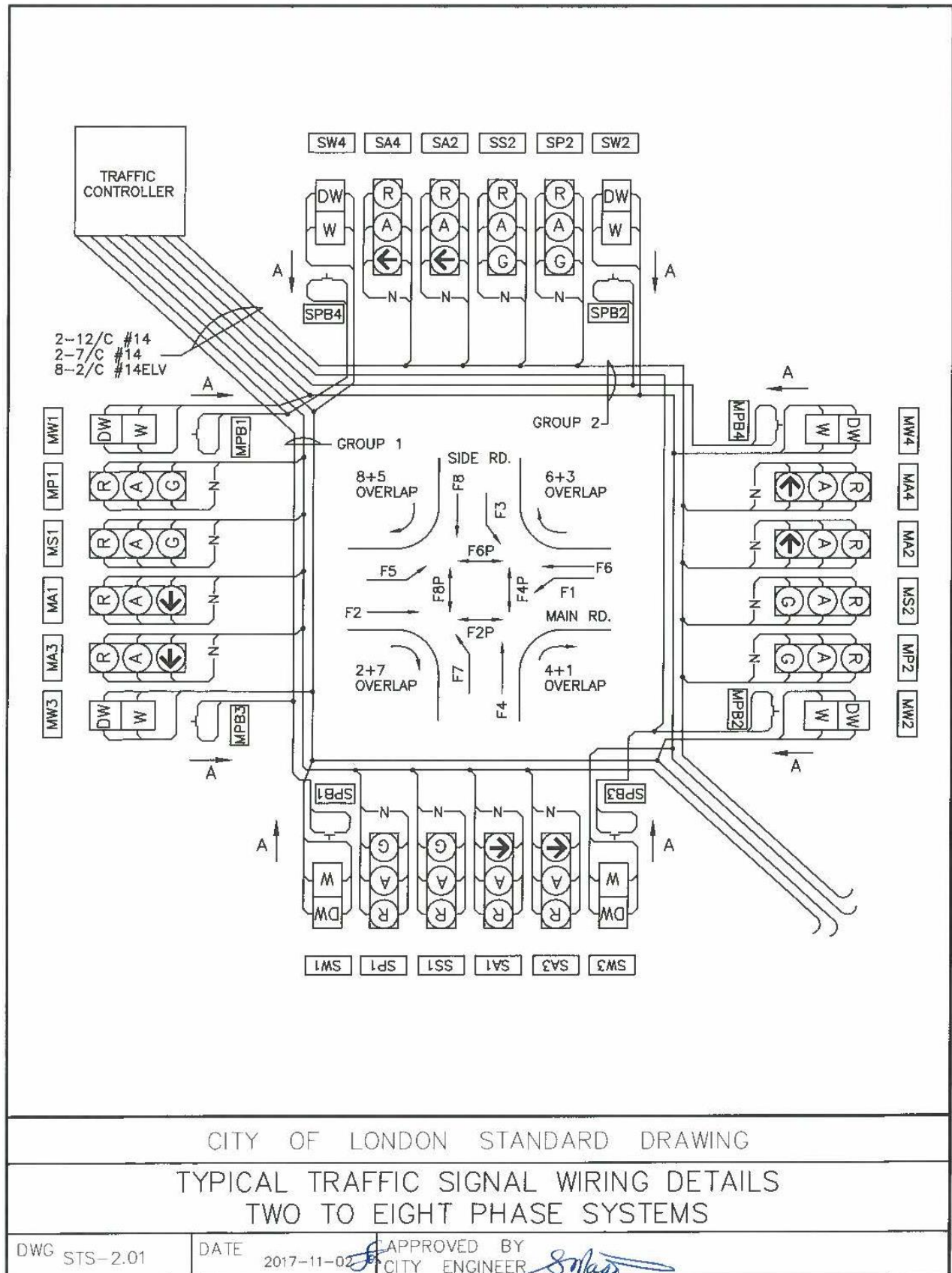
DATE

2009-1-22

APPROVED BY
CITY ENGINEER

Shane Mago





Supplemental Standards for Traffic Signal and Street Lighting (STS)

Cable	Cond #	Colour/Mark	Cable Group 1	Cable Group 2
12/C #14 AWG	1	White	Neutral	Neutral
	2	Black	Spare	Spare
	3	Orange	Spare	Spare
	4	Red/Red One	Main Rd. Red F2 or F6	Main Rd. Red F2 or F6
	5	Red/Red Two	Side Rd. Red F4 or F8	Side Rd. Red F4 or F8
	6	Red/Red Three	Left Turn Red F1,3,5 or 7	Left Turn Red F1,3,5 or 7
	7	Yellow/Amber One	Main Rd. Amber F2 or F6	Main Rd. Amber F2 or F6
	8	Yellow/Amber Two	Side Rd. Amber F4 or F8	Side Rd. Amber F4 or F8
	9	Yellow/Amber Three	Left Turn Amber F1,3,5 or 7	Left Turn Amber F1,3,5 or 7
	10	Blue/Green One	Main Rd. Green F2 or F6	Main Rd. Green F2 or F6
	11	Blue/Green Two	Side Rd. Green F4 or F8	Side Rd. Green F4 or F8
	12	Blue/Green Three	Left Turn Green F1,3,5 or 7	Left Turn Green F1,3,5 or 7
7/C #14 AWG	1	White	Neutral	Neutral
	2	Red/Red 1	Main Rd. DW F2P or F6P	Main Rd. DW F2P or F6P
	3	Red/Red 2	Side Rd. DW F4P or F8P	Side Rd. DW F4P or F8P
	4	Yellow/Amber 1	Spare	Spare
	5	Yellow/Amber 2	Spare	Spare
	6	Blue/Green 1	Main Rd. DW F2P or F6P	Main Rd. DW F2P or F6P
	7	Blue/Green 2	Side Rd. DW F4P or F8P	Side Rd. DW F4P or F8P
2/C #14 AWG	1	White	Main Rd. F2PB or F6PB	Main Rd. F2PB or F6PB
	2	Black	Main Rd. F2PB or F6PB	Main Rd. F2PB or F6PB
2/C #14 AWG	1	White	Side Rd. F4PB or F8PB	Side Rd. F4PB or F8PB
	2	Black	Side Rd. F4PB or F8PB	Side Rd. F4PB or F8PB
2/C #14 AWG	1	White	Main Rd. F2PB or F6PB	Main Rd. F2PB or F6PB
	2	Black	Main Rd. F2PB or F6PB	Main Rd. F2PB or F6PB
2/C #14 AWG	1	White	Side Rd. F4PB or F8PB	Side Rd. F4PB or F8PB
	2	Black	Side Rd. F4PB or F8PB	Side Rd. F4PB or F8PB

CITY OF LONDON STANDARD DRAWING

CABLE ASSIGNMENT FOR TRAFFIC SIGNAL CONTROL

DWG STS-2.02

DATE

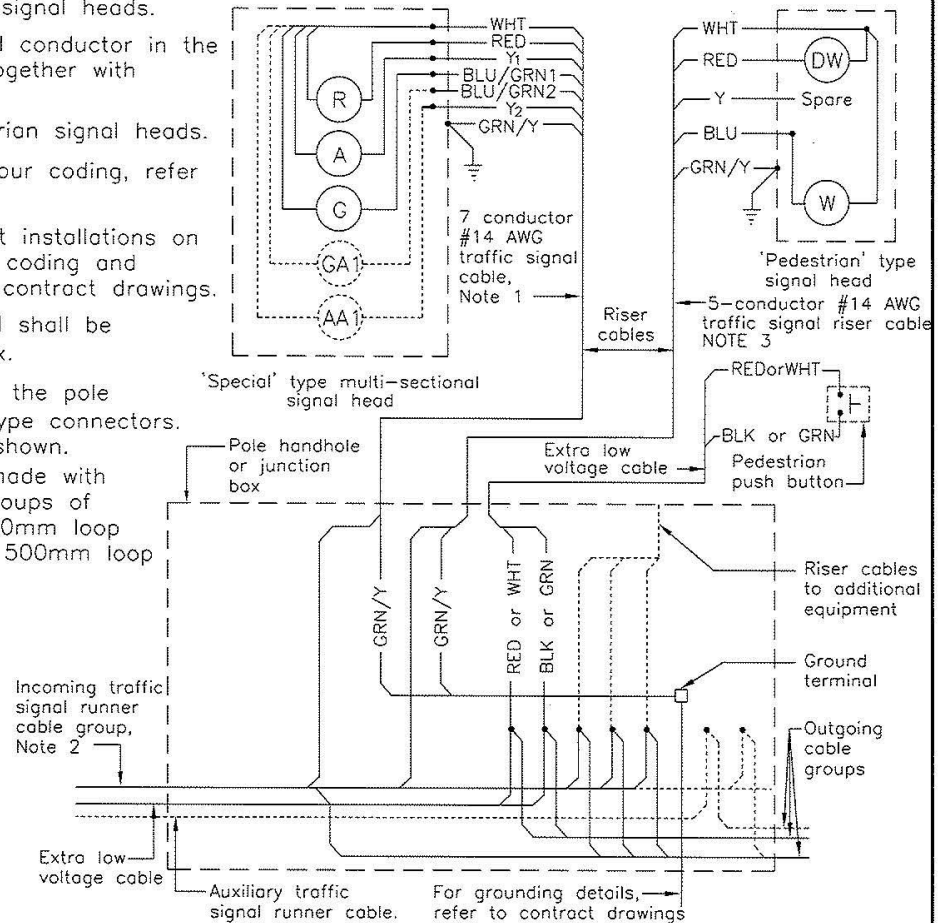
2017-11-02

APPROVED BY
CITY ENGINEER



NOTES:

1. 7 conductor riser cable to be installed to all traffic signal heads.
 2. Riser cable connection to be made to the designated conductor in the cable group as indicated in the contract drawings, together with connection to the outgoing conductor.
 3. 5-conductor riser cable to be installed to all pedestrian signal heads.
- A. For traffic signal cable groups, abbreviations and colour coding, refer to contract drawings.
- B. Details shown are typical only. For multiple equipment installations on the same pole, maintain riser cable type and colour coding and connect to the designated conductors shown on the contract drawings.
- C. Green conductors 'with yellow tracer' used as ground shall be tagged 'Ground' in the pole handhole or junction box.
- D. Unused conductors of signal head riser cables (from the pole handhole) shall be terminated with insulated spring type connectors. Use one spare conductor for ground connection as shown.
- E. All handhole connections and terminations shall be made with insulated spring type connectors. Bundle and tape groups of connectors neatly in the pole handhole. Leave a 1500mm loop of each cable coiled in the nearest handhole and a 500mm loop in each pole handhole.
- F. All conductors designed as ground shall be grounded in the signal head and at the pole ground stud. A #6 AWG type RWU (GREEN) system ground wire shall be run contiguously through the system and connected to each pole ground stud.



CITY OF LONDON STANDARD DRAWING

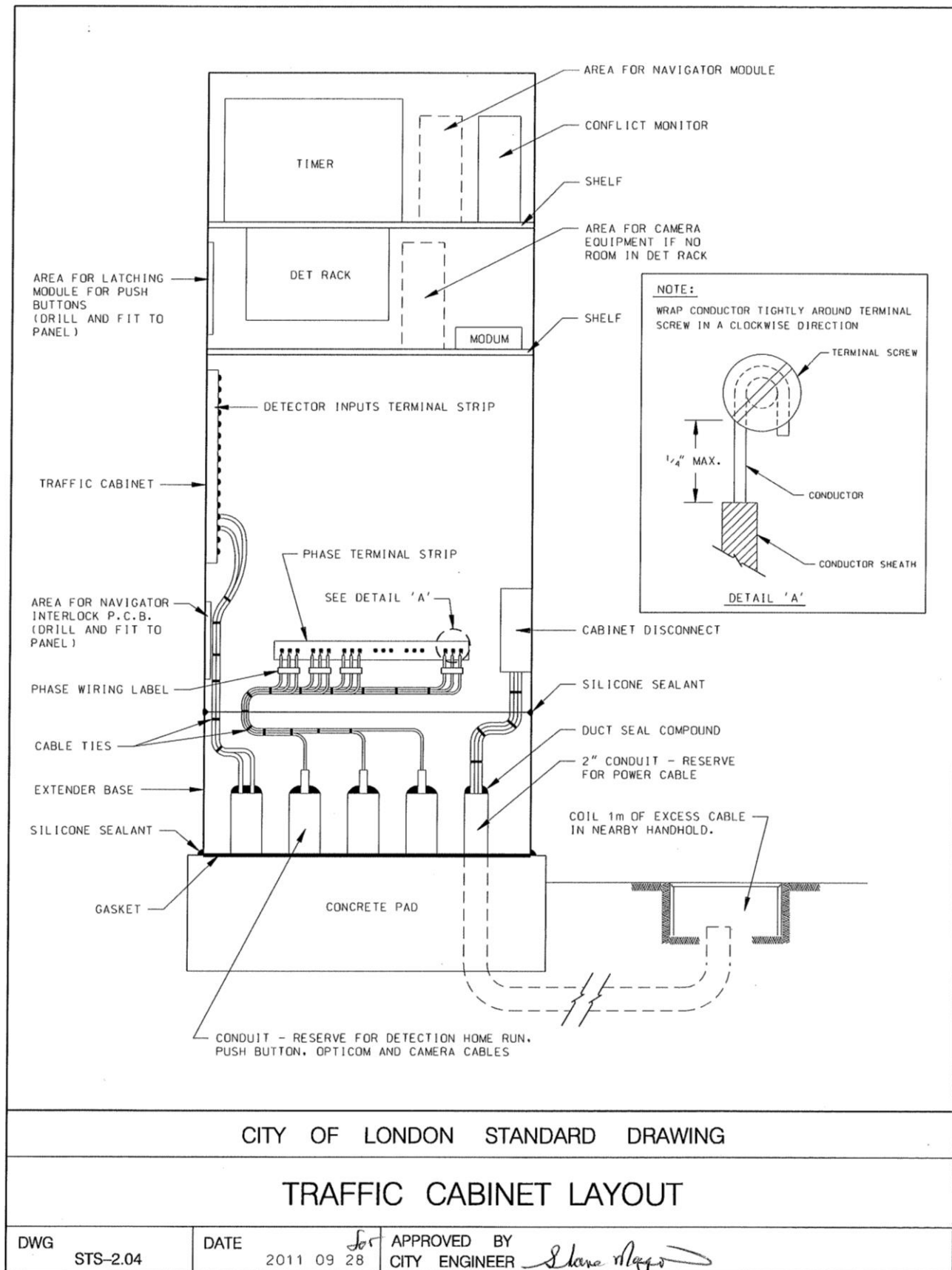
TRAFFIC SIGNAL EQUIPMENT – POLE WIRING DIAGRAM

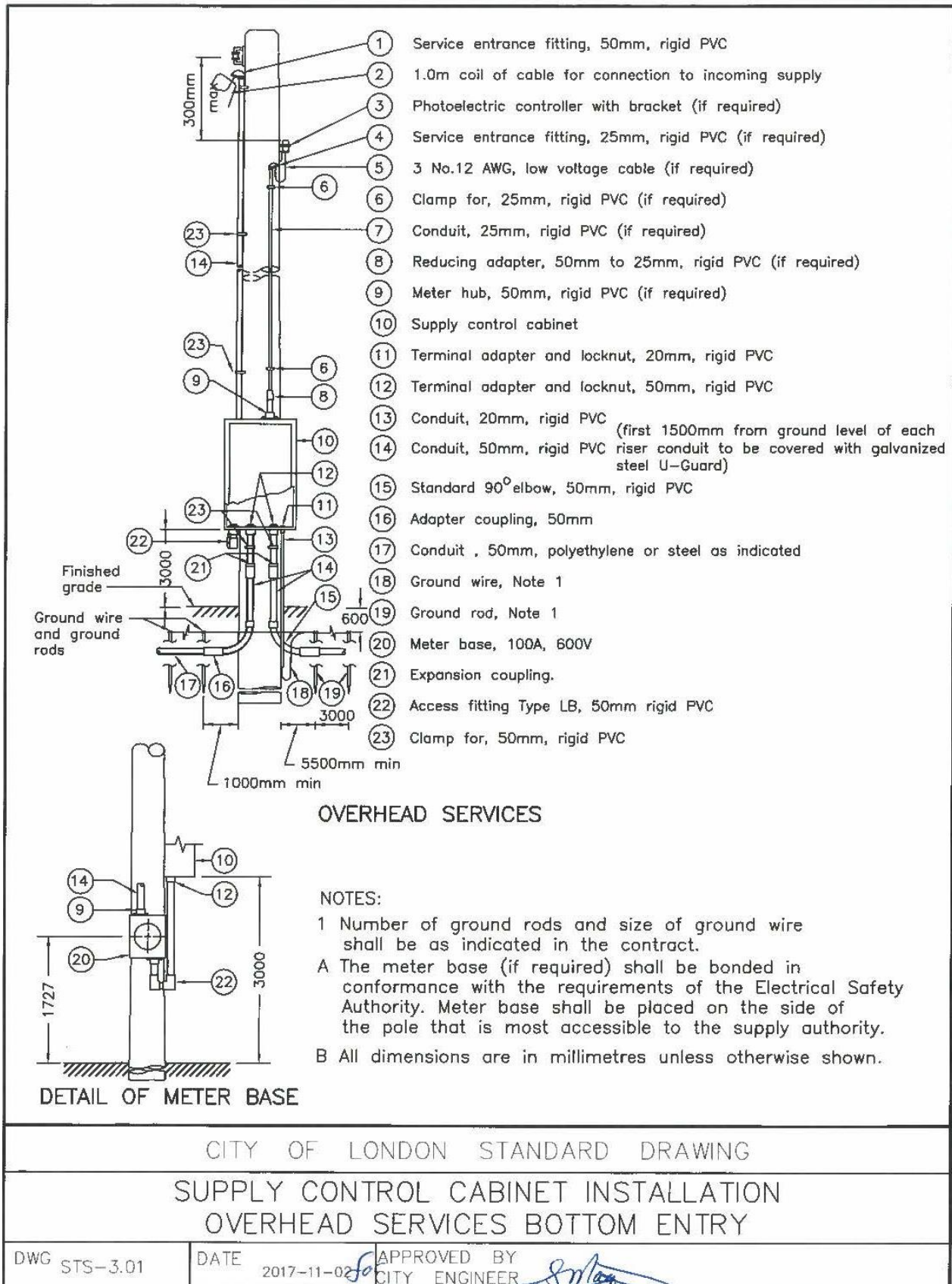
DWG STS-2.03

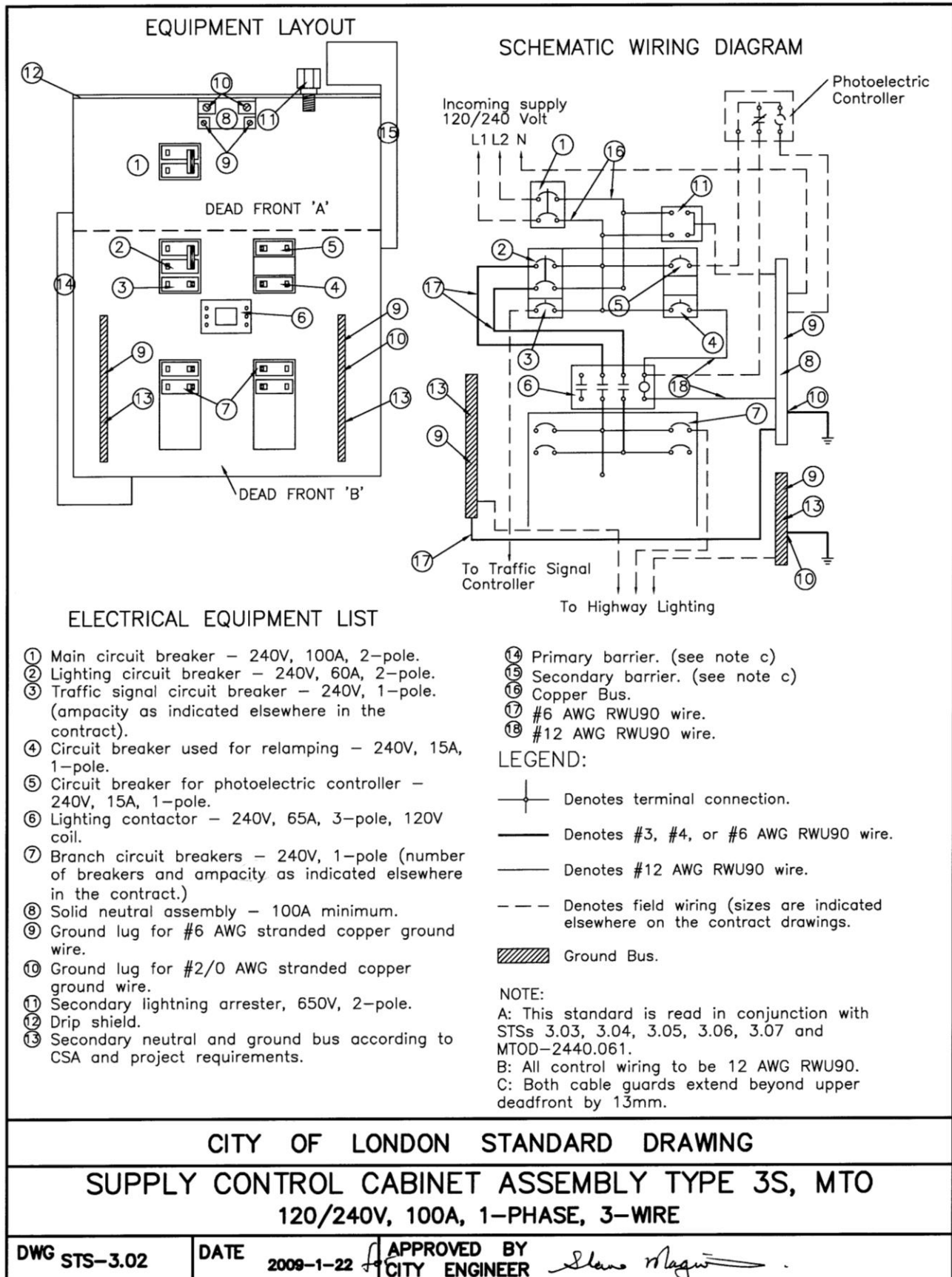
DATE 2009-10-16

APPROVED BY
CITY ENGINEER

Shane Maguire







BILL OF MATERIALS				
Item No.	QTY.	Description	Manufacturer	Part No.
1	1	Main Breaker 100A 2P	CH	BAB 2100
2	1	Lighting Breaker 60A 2P	CH	BAB 2060
3	1	Traffic Signal Brkr. 50A 1P	CH	BAB 1050
4	1	Relamping Breaker 15A 1P	CH	BAB 1015
5	1	Photo Electric Cont. Bkr. 15A 1P	CH	BAB 1015
6	1	Lighting Contactor 65A 3P	CH	XCTE065D00A
7	4	Branch Circuit Breakers 30A 1P	CH	BAB 1030
8	1	Solid Neutral Assembly 100A	CH	N100
9	1	Secondary Lightning Arrestor	GE	9L15ECB001

NOTES:

- A – This unit is available less contactor and with alternate breakers.
- B – Unit weight: 45 Kg
- C – Cabinet comes complete with lamicooid type 3S nameplate see details below (Located inside door)

(MANUFACTURER)

TYPE 3S
LONDON.
TBA
120/240 VOLT
100 AMP
(DATE OF MANUFACTURE)

CITY OF LONDON STANDARD DRAWING

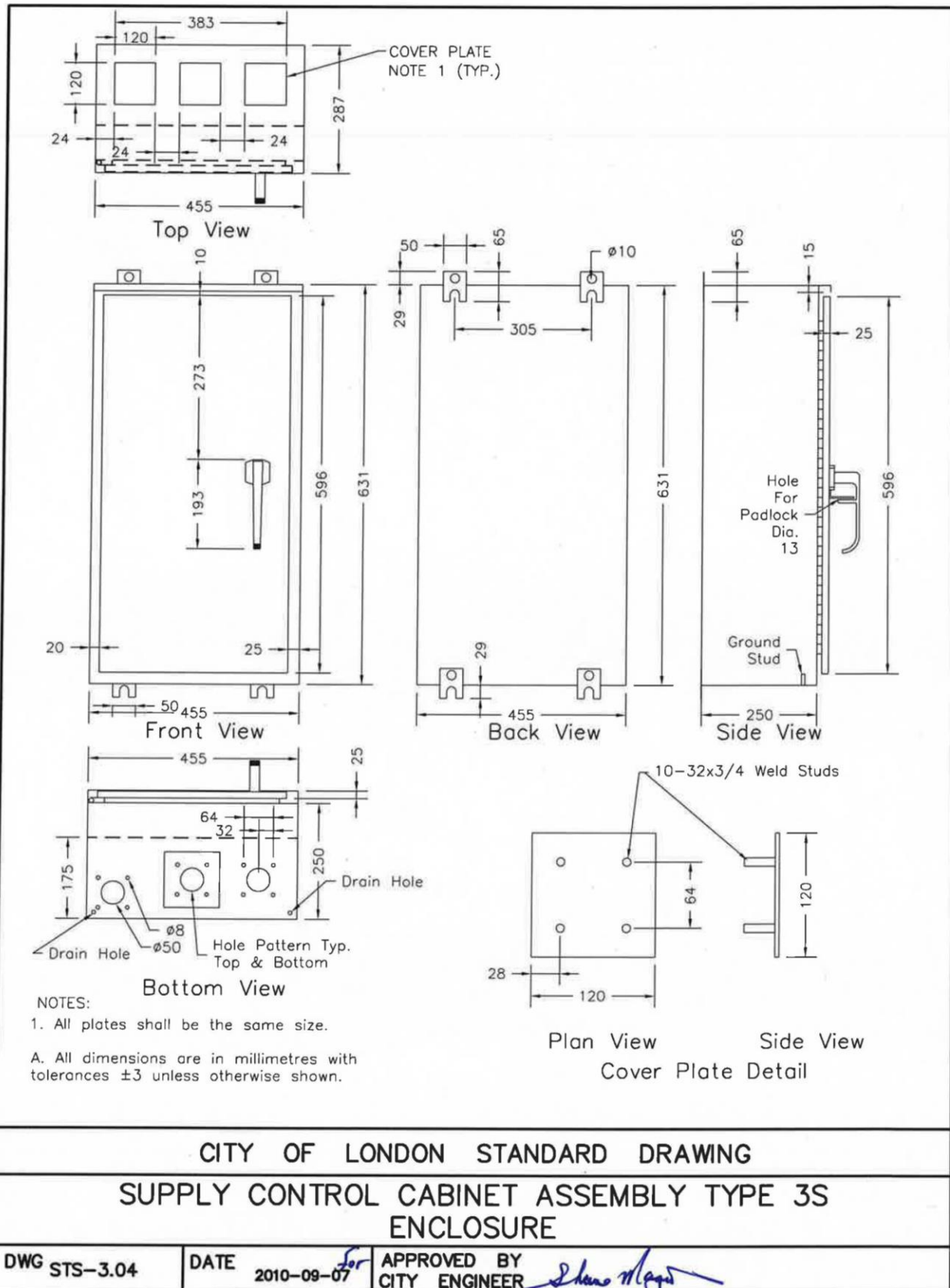
SUPPLY CONTROL CABINET ASSEMBLY TYPE 3S
EQUIPMENT LIST

DWG STS-3.03

DATE 2009-10-16

APPROVED BY
CITY ENGINEER

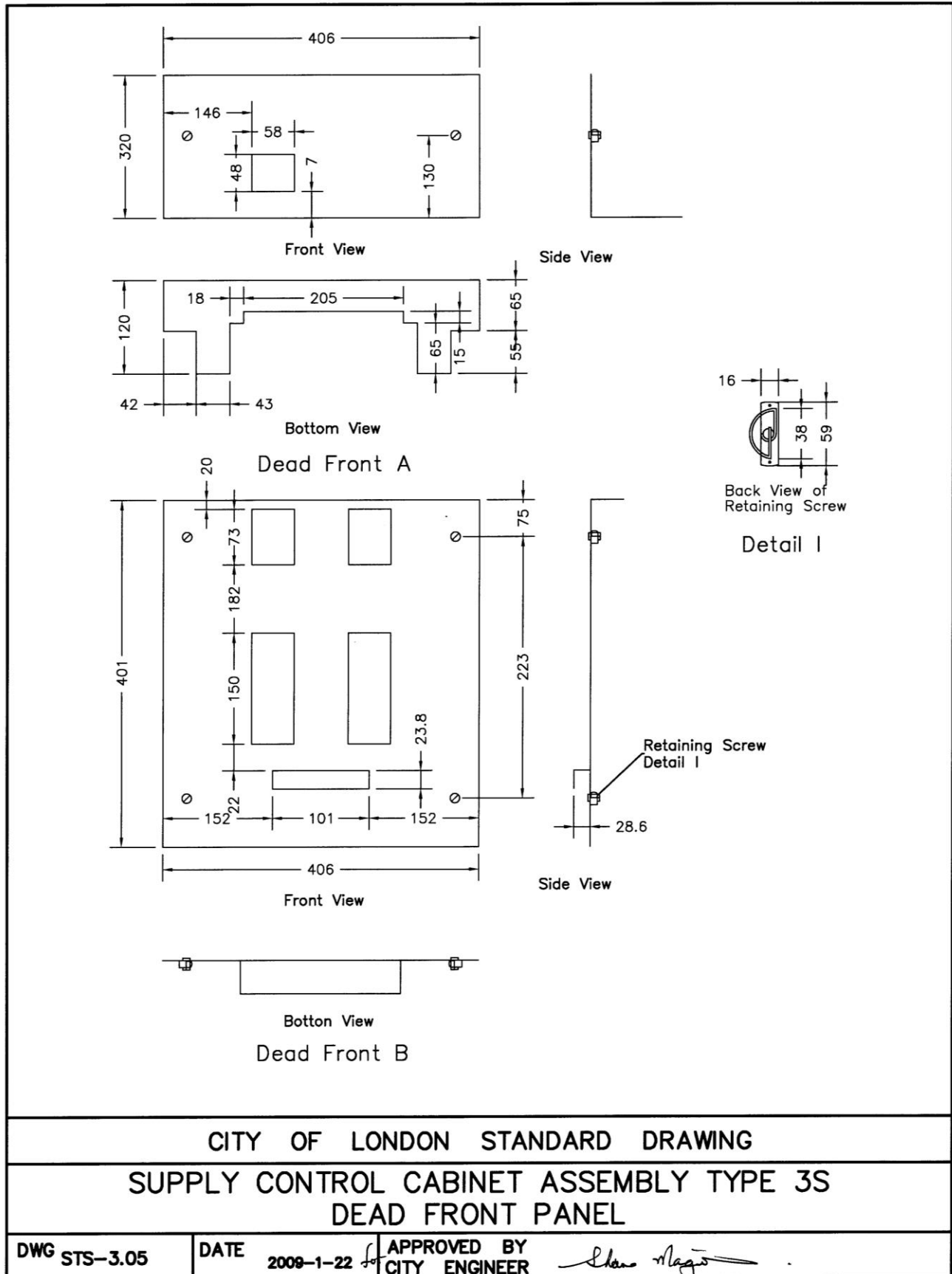
Shane Magaw





London
CANADA

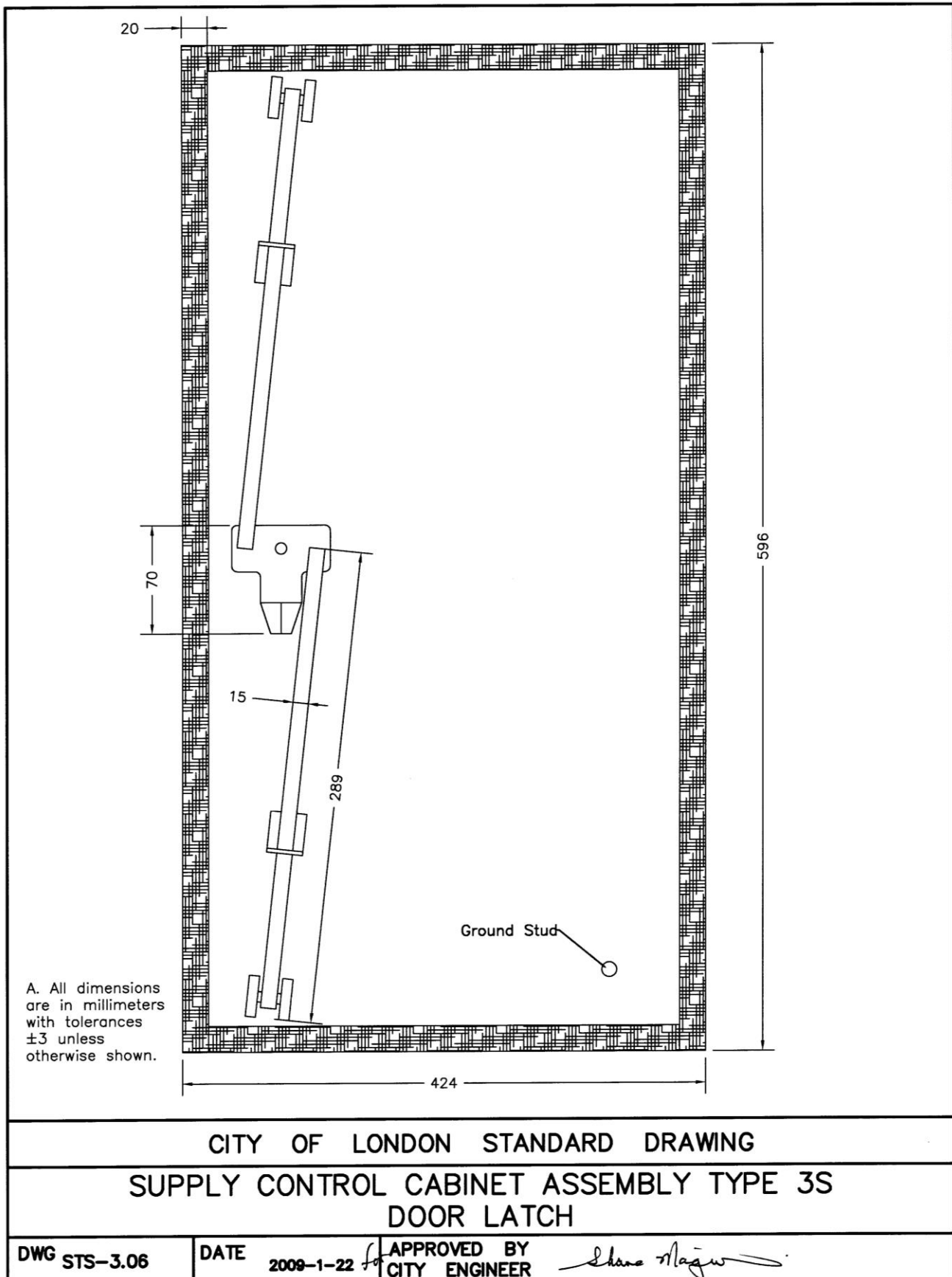
Supplemental Standards for Traffic Signal and Street Lighting (STS)





London
CANADA

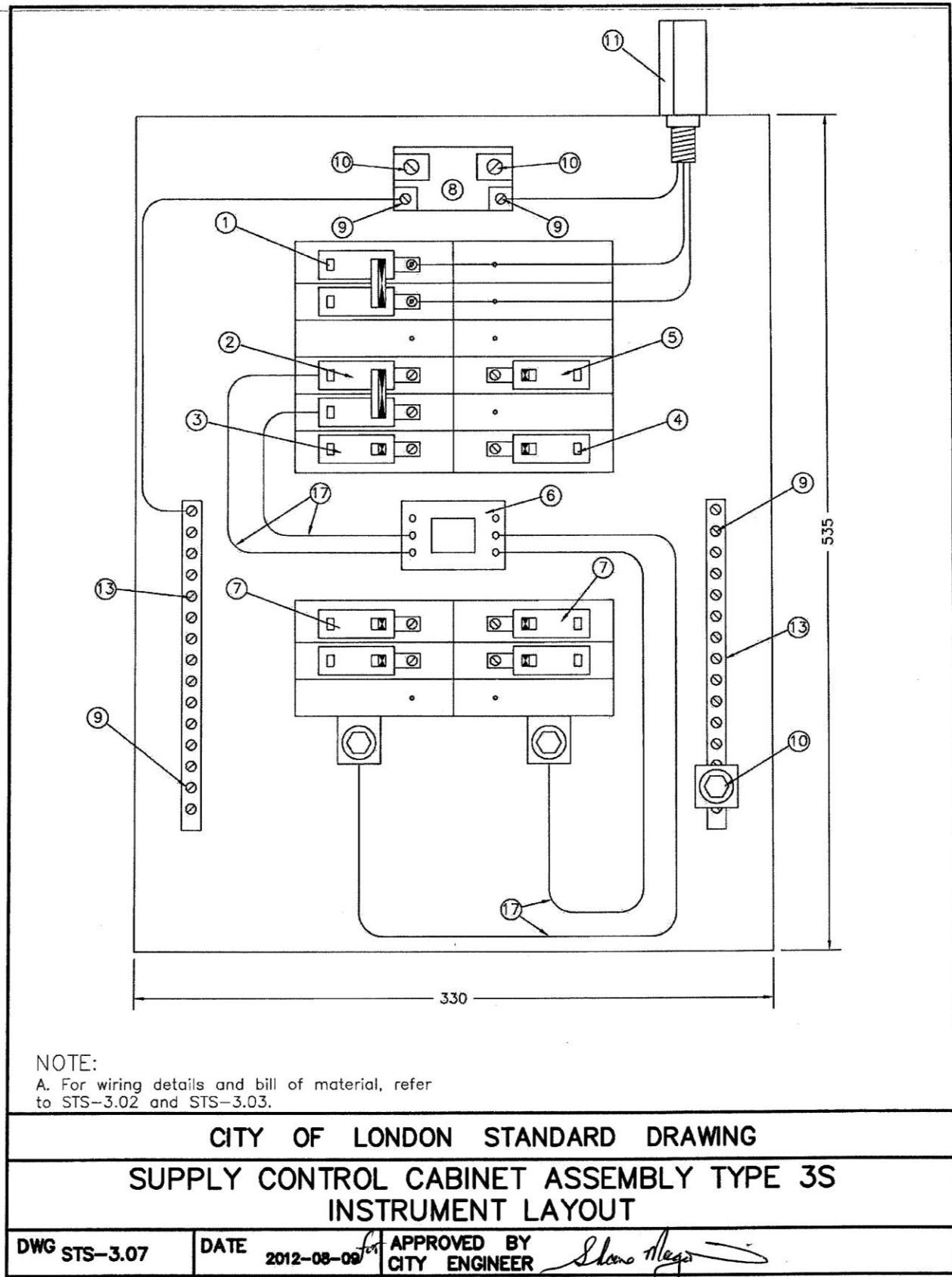
Supplemental Standards for Traffic Signal and Street Lighting (STS)

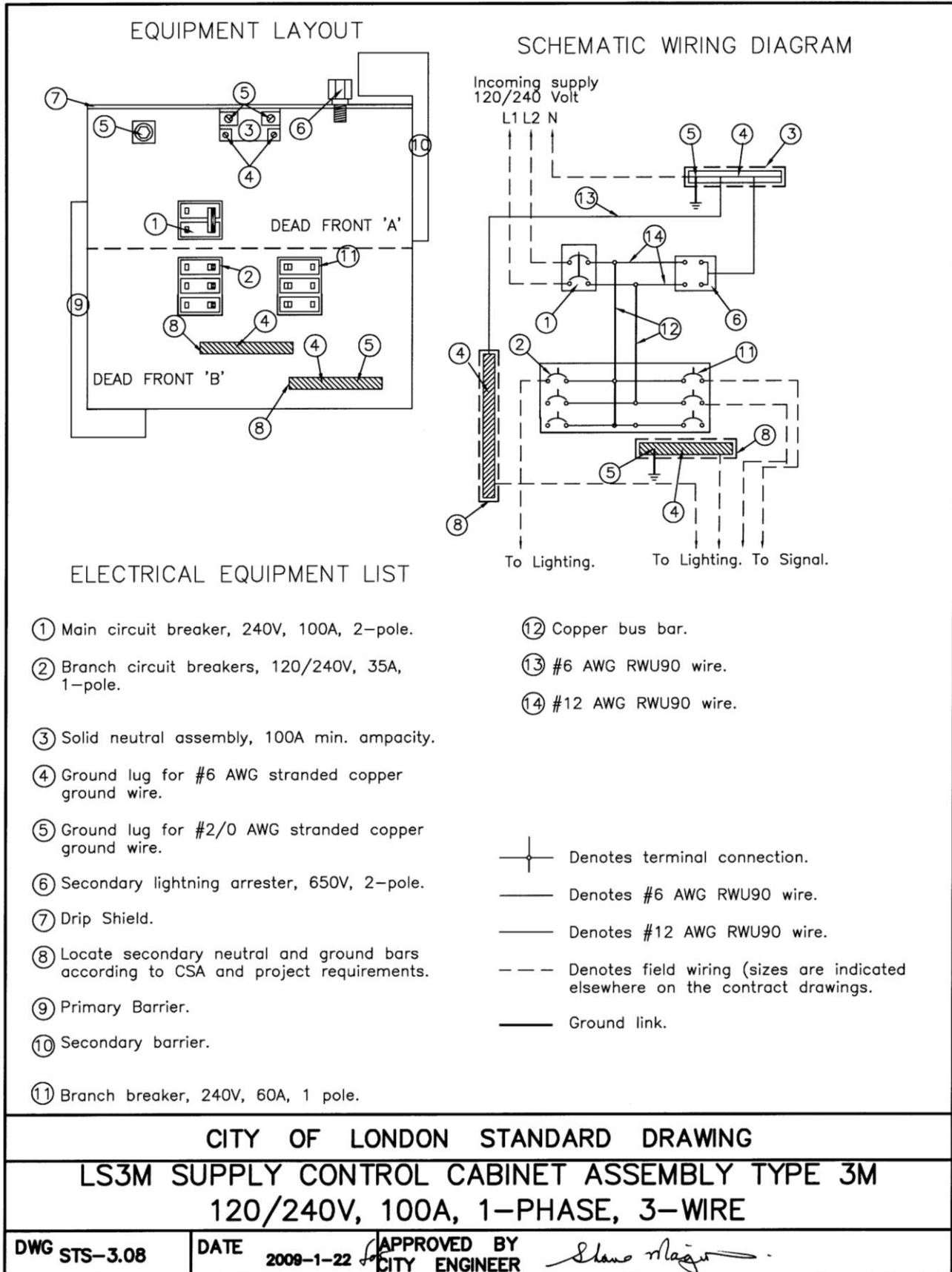




London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)





BILL OF MATERIALS				
Item No.	QTY.	Description	Manufacturer	Part No.
1	1	Main Breaker 100A 2P	SQ.D	Q02100
2	5	Branch Breakers 35A 1Pole	SQ.D	Q0135
11	1	Branch Breaker 60A 1 Pole	SQ.D	Q0160
3	1	Solid Neutral Assembly 100A min.	SQ.D	CH200SN
4	1	Ground Lug For #6 Copper Wire		
5	1	Ground Lug for #2/0 Copper	T&B	ADR 25-21
6	1	Secondary Lighting Arrester	GE	9L15ECB001
7	1	Drip Shield	B&M	Custom

NOTES:

A - TYPE 3M NAMEPLATE SEE DETAIL BELOW

B - PANEL IS SERVICE ENTRANCE READY

(MANUFACTURER)
TYPE 3M
LONDON LS3M
100 AMP 120/240 VOLT
(DATE OF MANUFACTURE)

CITY OF LONDON STANDARD DRAWING

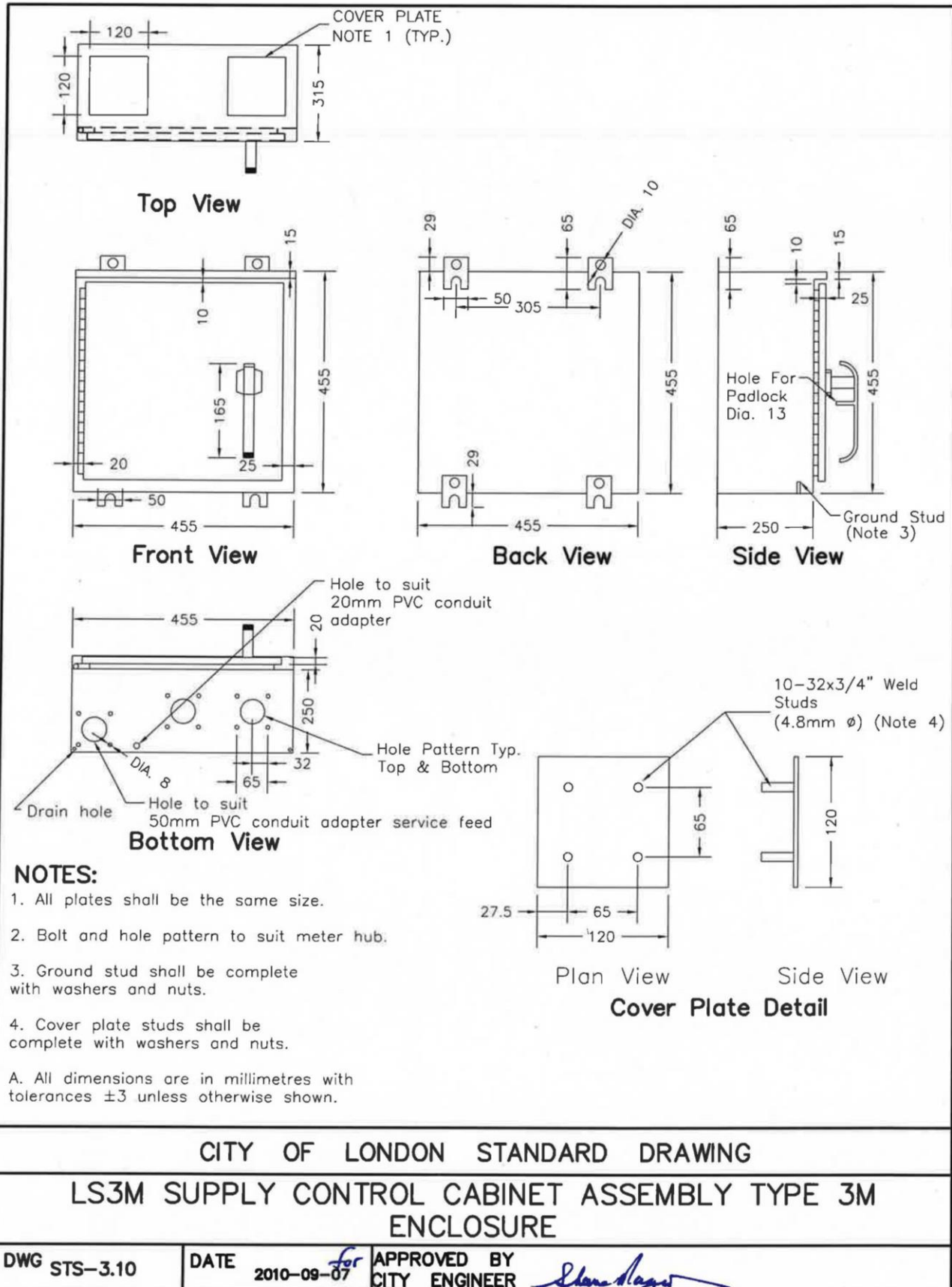
LS3M SUPPLY CONTROL CABINET ASSEMBLY TYPE 3M
EQUIPMENT LIST

DWG STS-3.09

DATE 2009-10-16

APPROVED BY
CITY ENGINEER

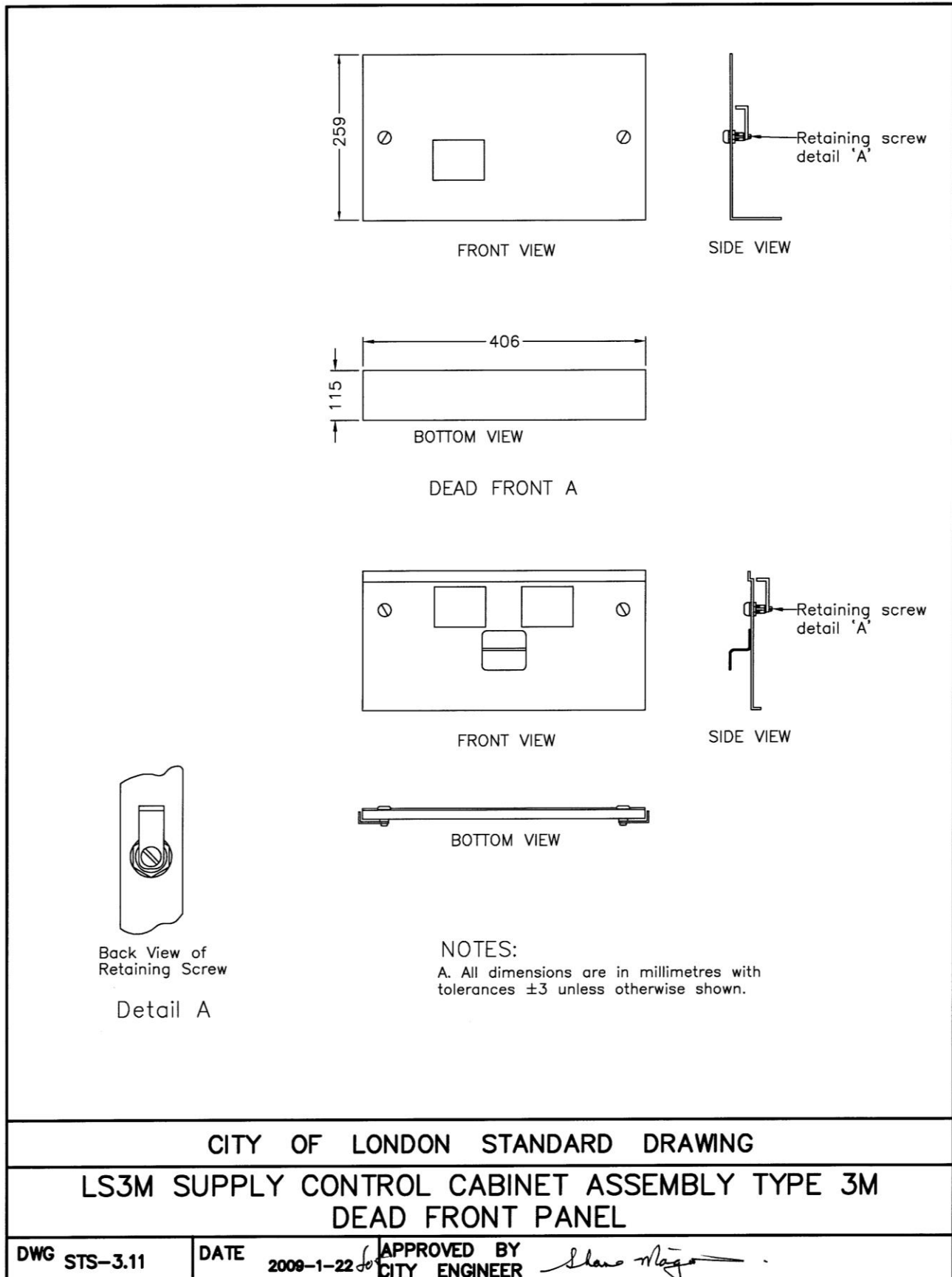
Shane Nagaw





London
CANADA

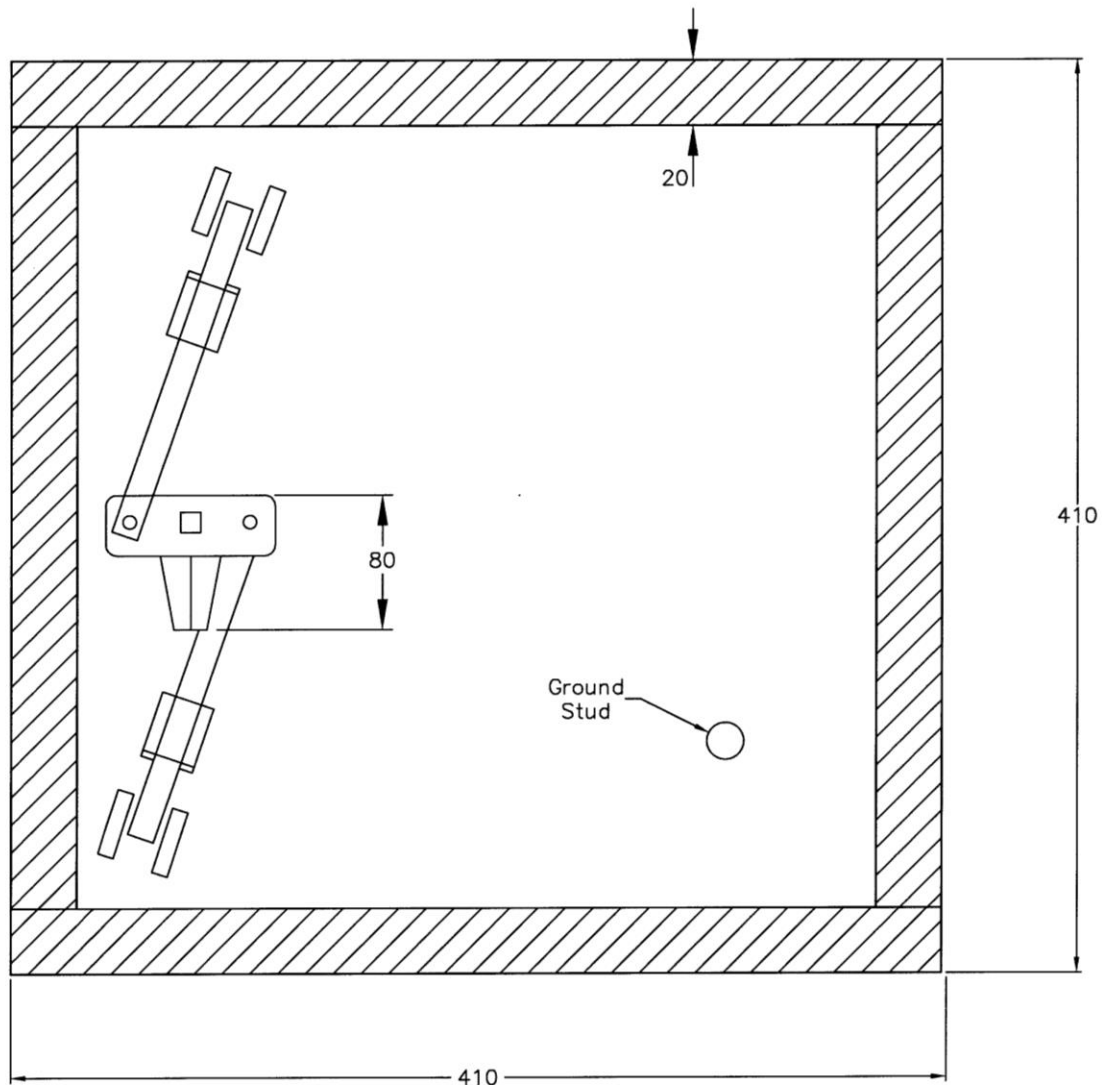
Supplemental Standards for Traffic Signal and Street Lighting (STS)





London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)



NOTES:

A. All dimensions are in millimetres with tolerances ± 3 unless otherwise shown.

CITY OF LONDON STANDARD DRAWING

LS3M SUPPLY CONTROL CABINET ASSEMBLY TYPE 3M
DOOR LATCH

DWG STS-3.12

DATE

2009-1-22

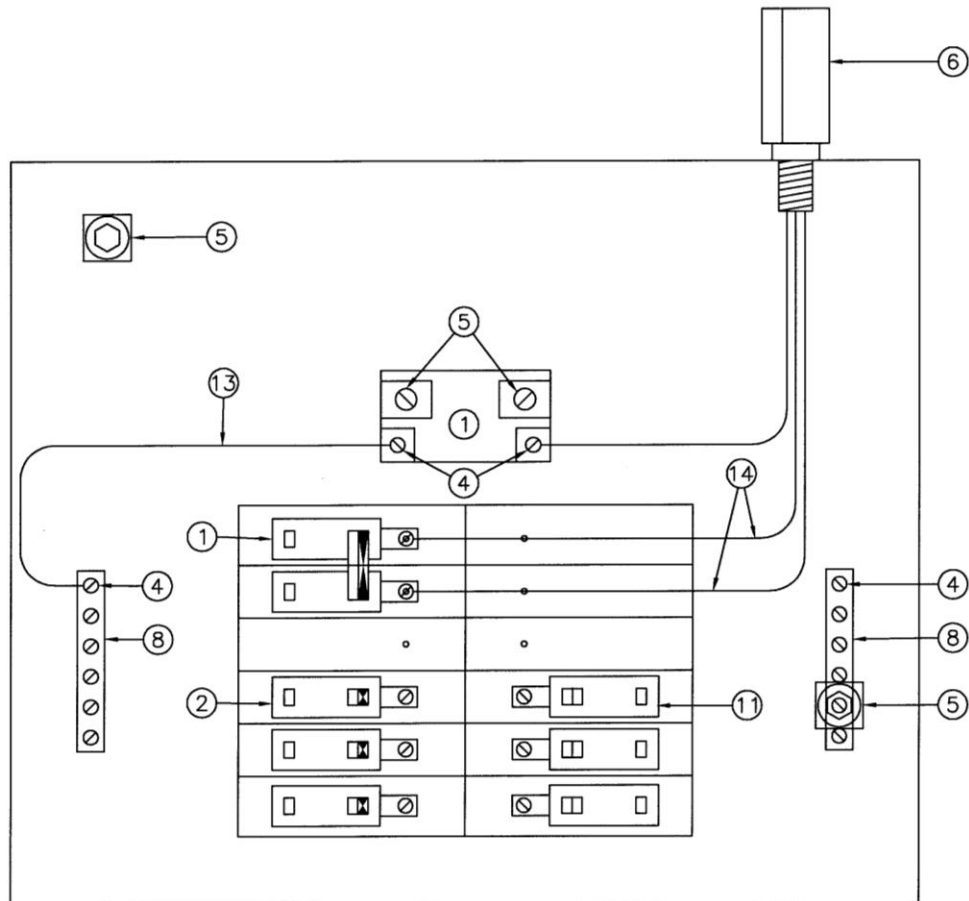
APPROVED BY
CITY ENGINEER

Shane Maguire



London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)



NOTES:

- A. For wiring details and list of materials, refer to STS-3.08 and STS-3.09.

CITY OF LONDON STANDARD DRAWING

LS3M SUPPLY CONTROL CABINET ASSEMBLY TYPE 3M
INSTRUMENT LAYOUT

DWG STS-3.13

DATE

2009-1-22

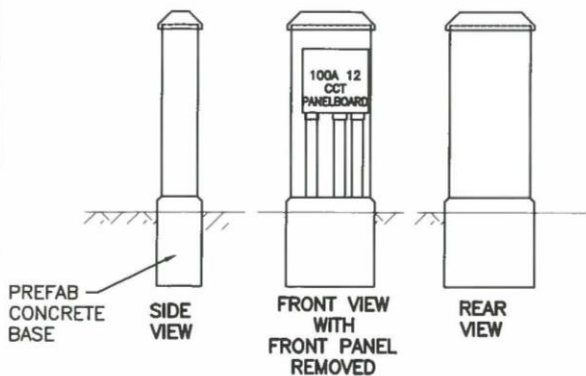
APPROVED BY
CITY ENGINEER

Shane Magno



London
CANADA

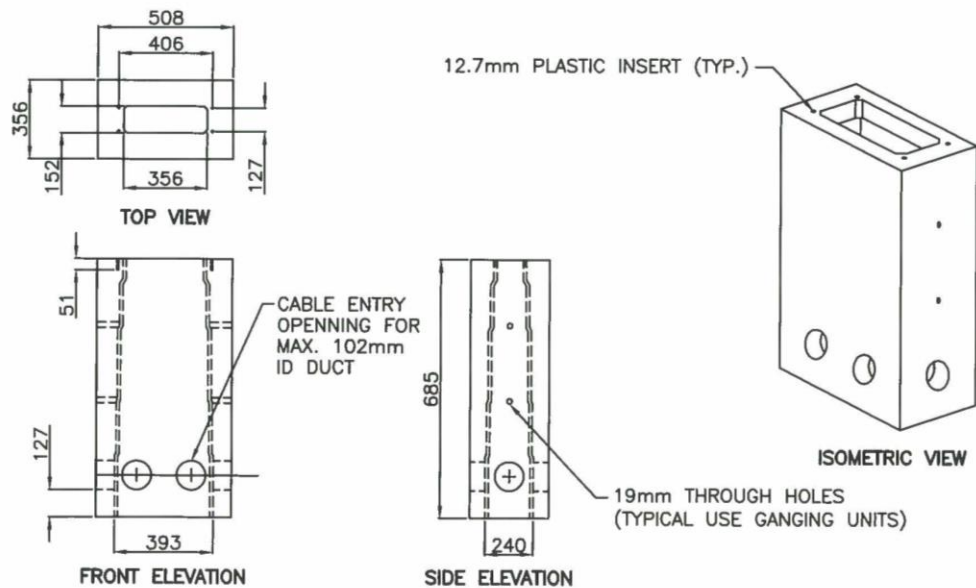
Supplemental Standards for Traffic Signal and Street Lighting (STS)



POWER SUPPLY PEDESTAL ASSEMBLY
(PEDESTAL SOLUTIONS INC. SL27 MODEL)

NOTES:

A. All dimensions are in millimetres unless otherwise shown.



PREFABED CONCRETE BASE (BY BROOKLIN CONCRETE,
MODEL BCP 20PED)

CITY OF LONDON STANDARD DRAWING

POWER SUPPLY (27") PEDESTAL AND BASE ASSEMBLY

DWG STS-3.14

DATE

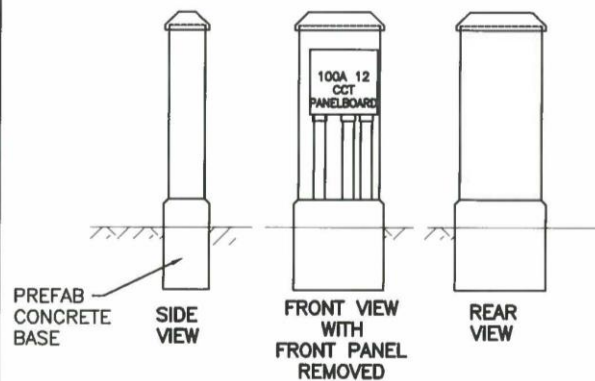
2017-11-02

APPROVED BY
CITY ENGINEER



London
CANADA

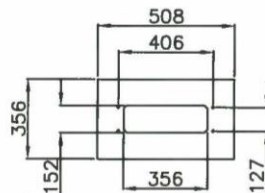
Supplemental Standards for Traffic Signal and Street Lighting (STS)



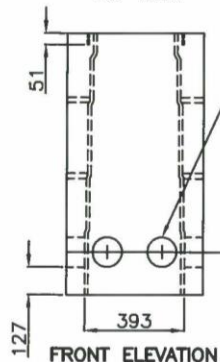
POWER SUPPLY PEDESTAL ASSEMBLY (PEDESTAL SOLUTIONS INC. SL42 MODEL)

NOTES:

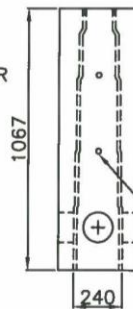
A. All dimensions are in millimetres unless otherwise shown.



TOP VIEW

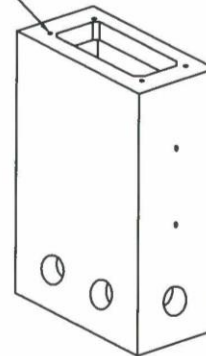


FRONT ELEVATION



SIDE ELEVATION

12.7mm PLASTIC
INSERT (TYP.)



ISOMETRIC VIEW

19mm THROUGH HOLES
(TYPICAL USE GANGING UNITS)

PREFAB CONCRETE BASE (BY BROOKLIN
CONCRETE, MODEL BCP 20PED)

CITY OF LONDON STANDARD DRAWING

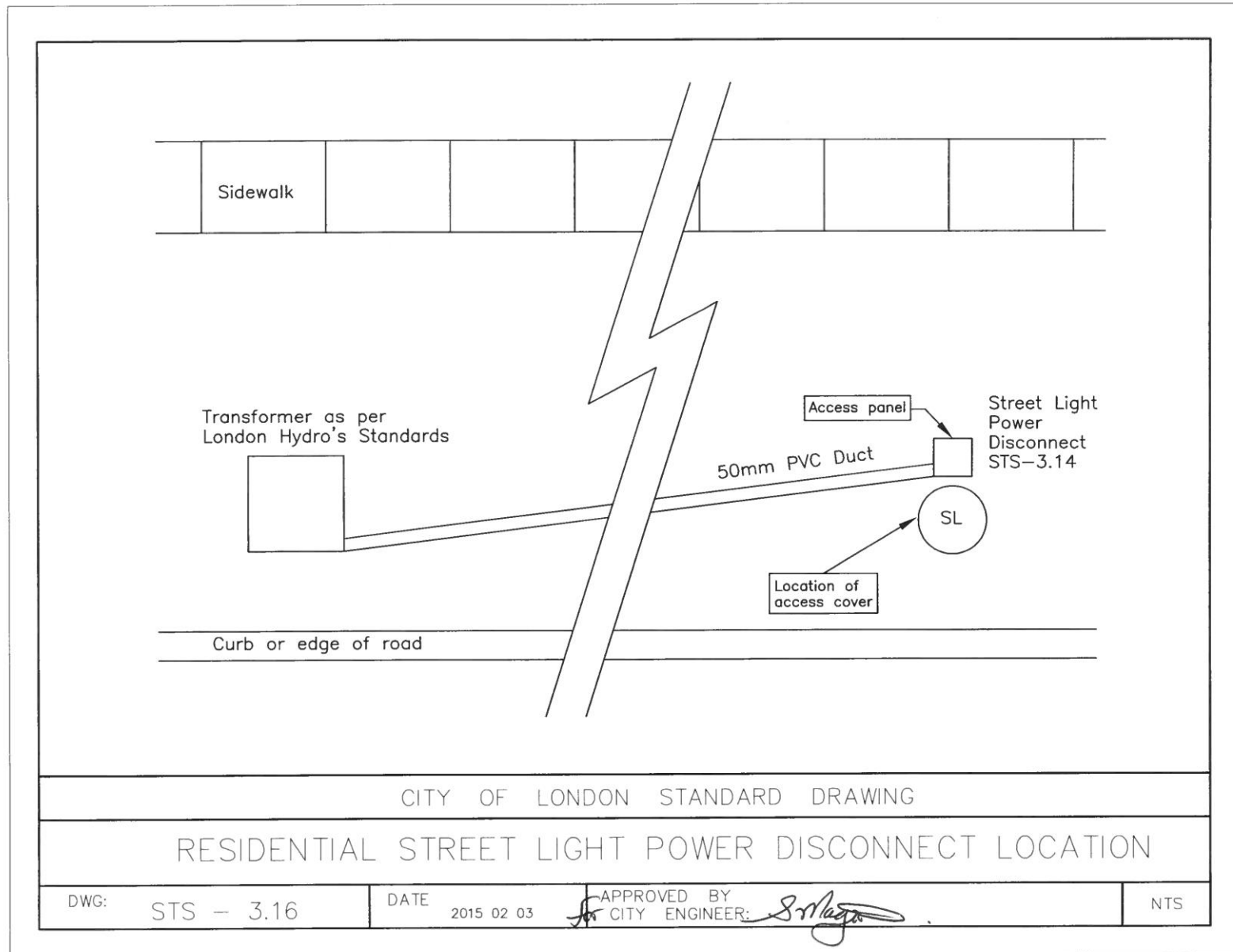
POWER SUPPLY (42") PEDESTAL AND BASE ASSEMBLY

DWG STS-3.15

DATE

2017-11-02

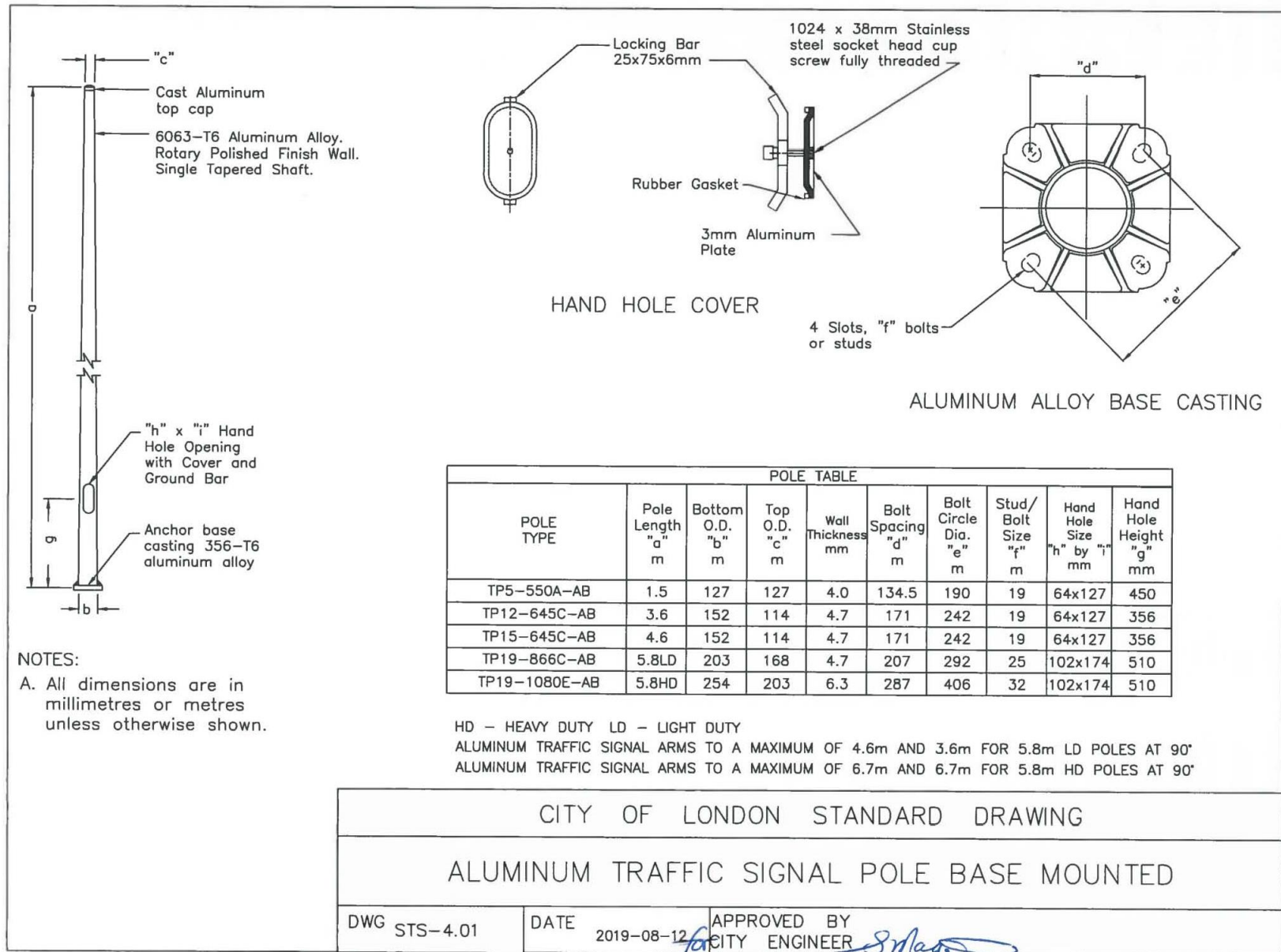
APPROVED BY
CITY ENGINEER





London
CANADA

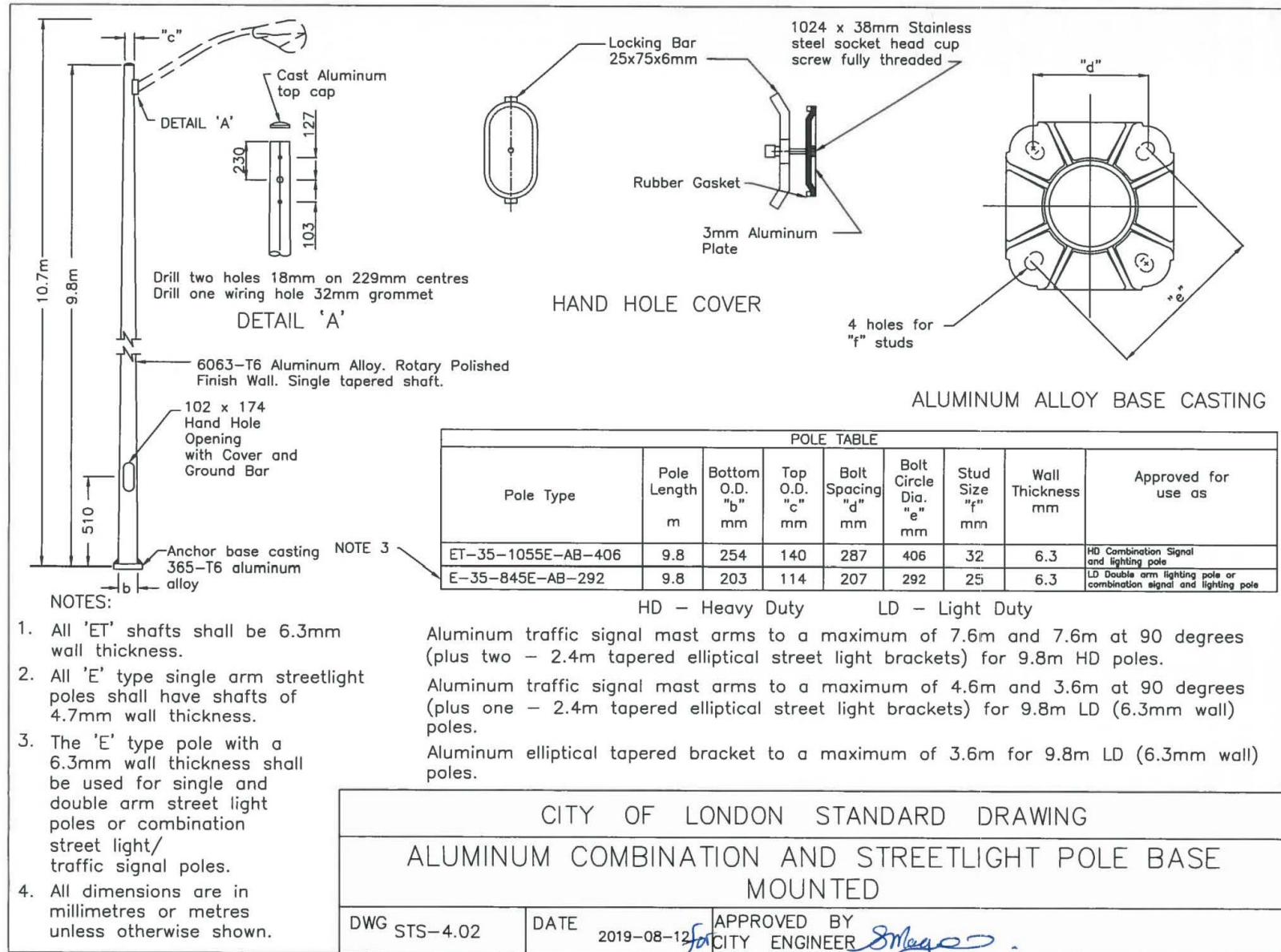
Supplemental Standards for Traffic Signal and Street Lighting (STS)



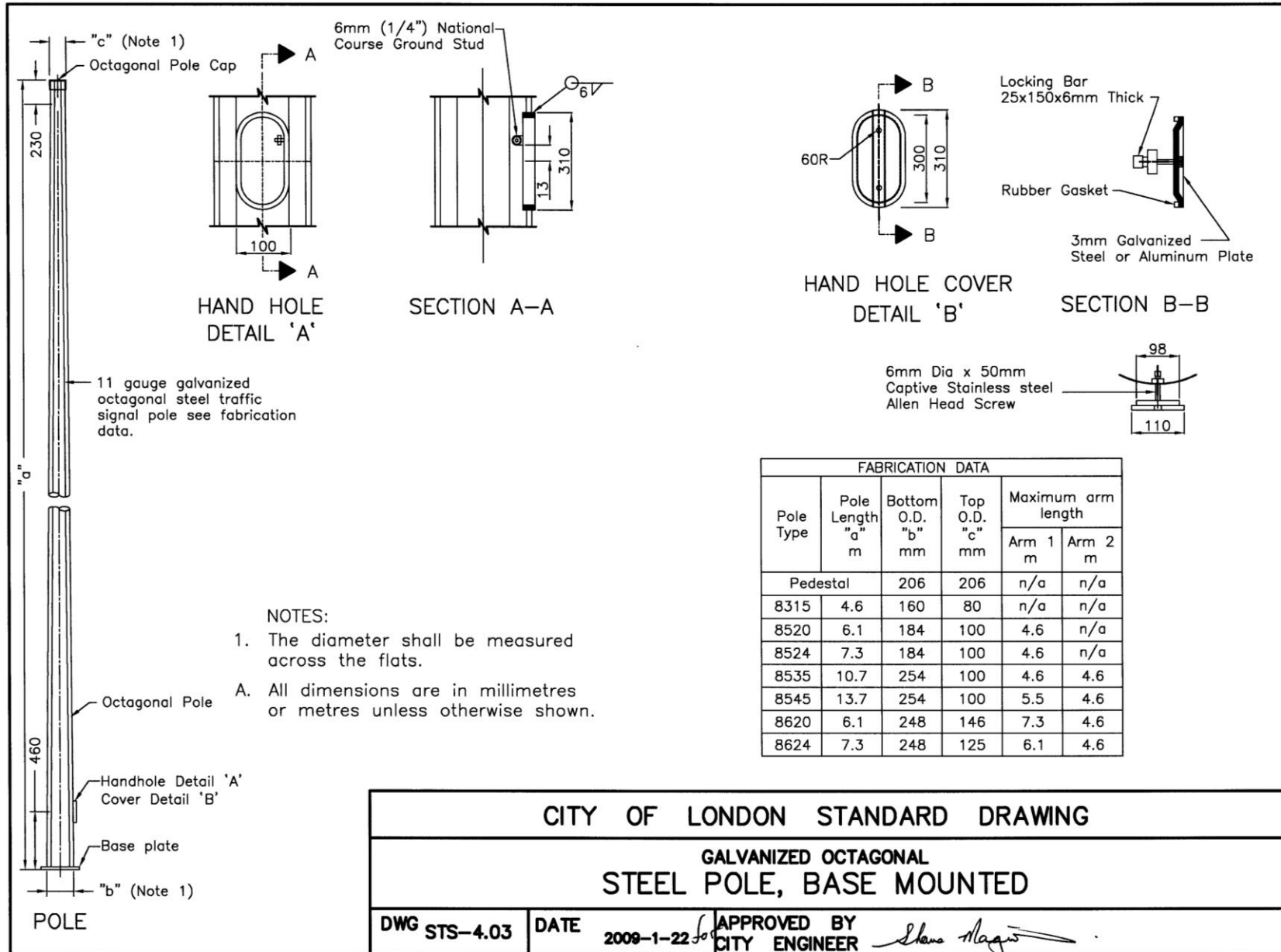


London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)



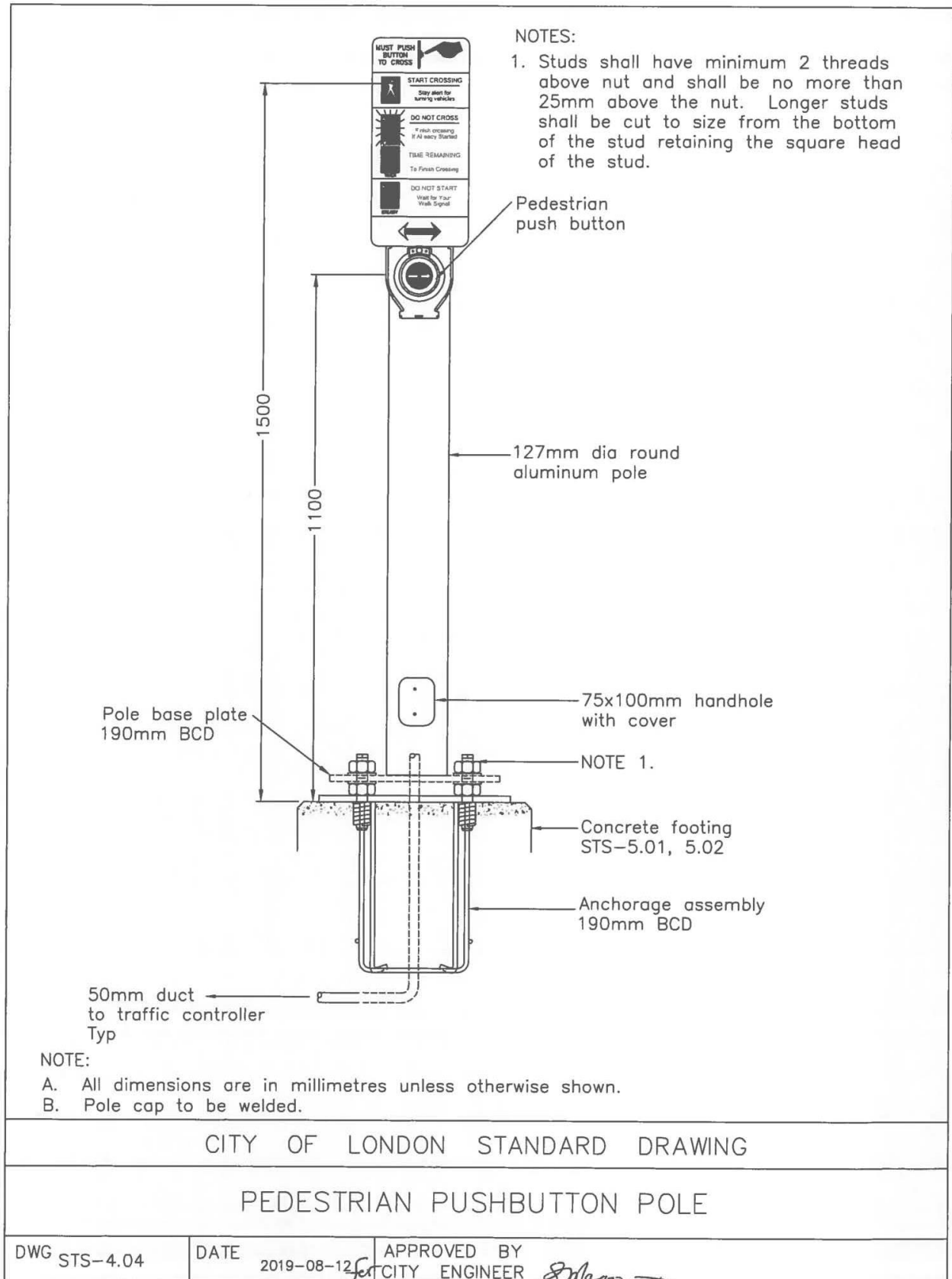
Supplemental Standards for Traffic Signal and Street Lighting (STS)

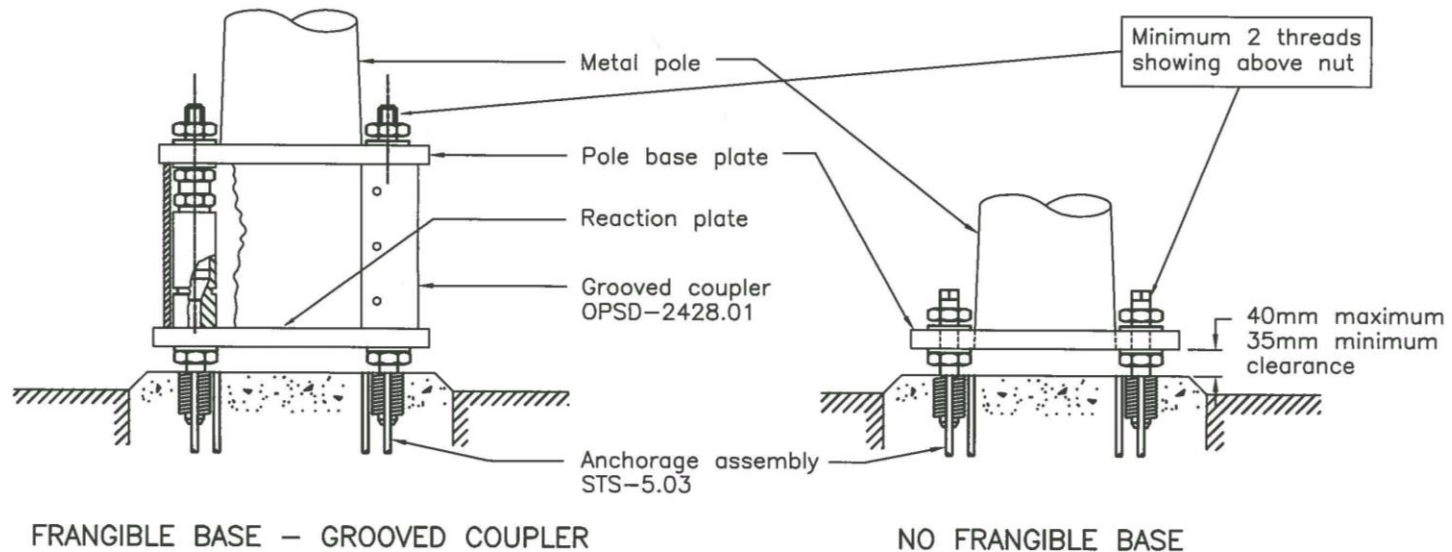




London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)





NOTE:

A All dimensions are in millimetres unless otherwise shown.

B Frangible base shall be installed according to the manufacturer's recommendations.

CITY OF LONDON STANDARD DRAWING

POLE MOUNTING DETAILS
FOR BASE MOUNTED METAL POLE

DWG STS-4.05

DATE 2017-11-03

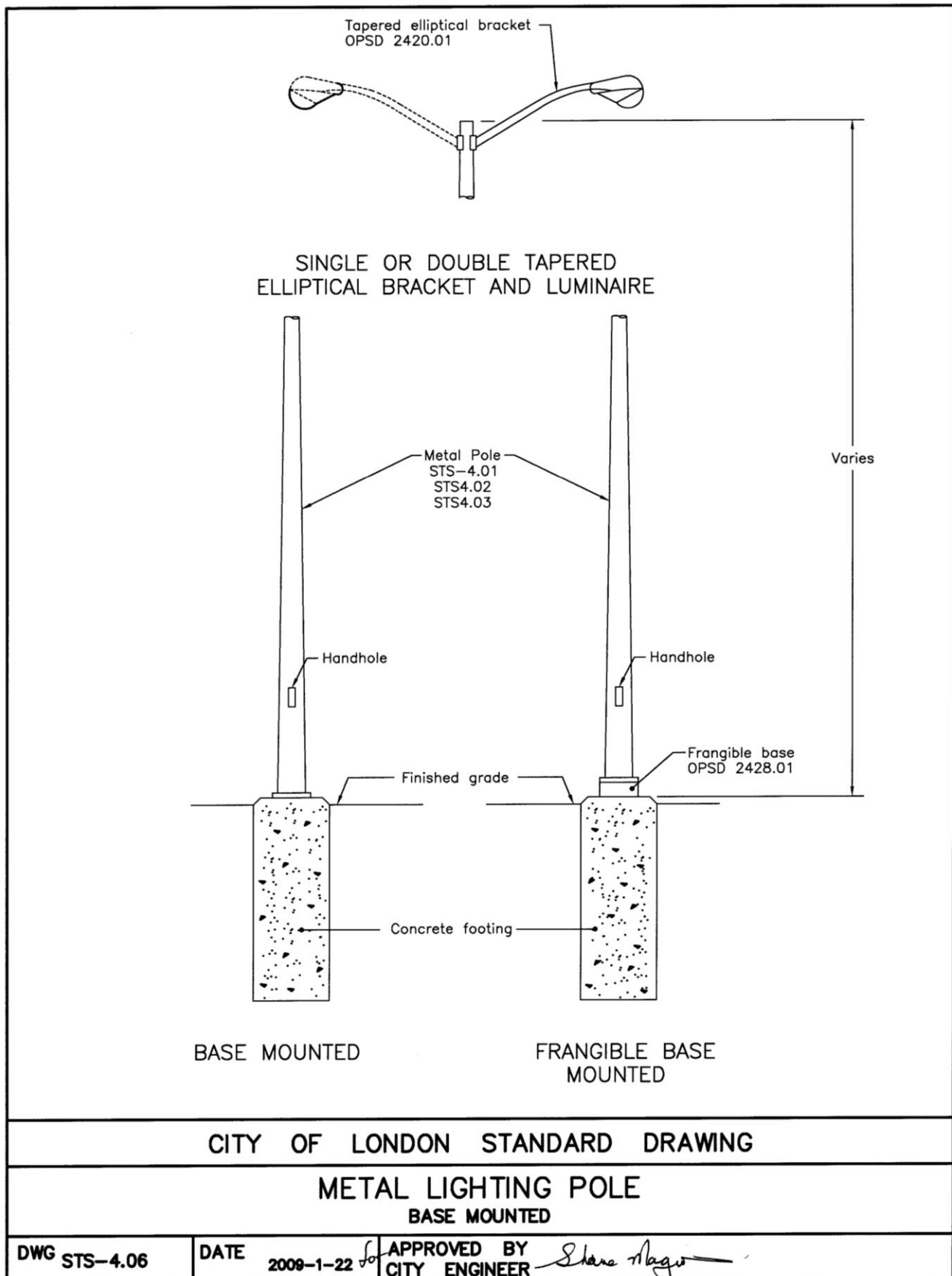
APPROVED BY
CITY ENGINEER

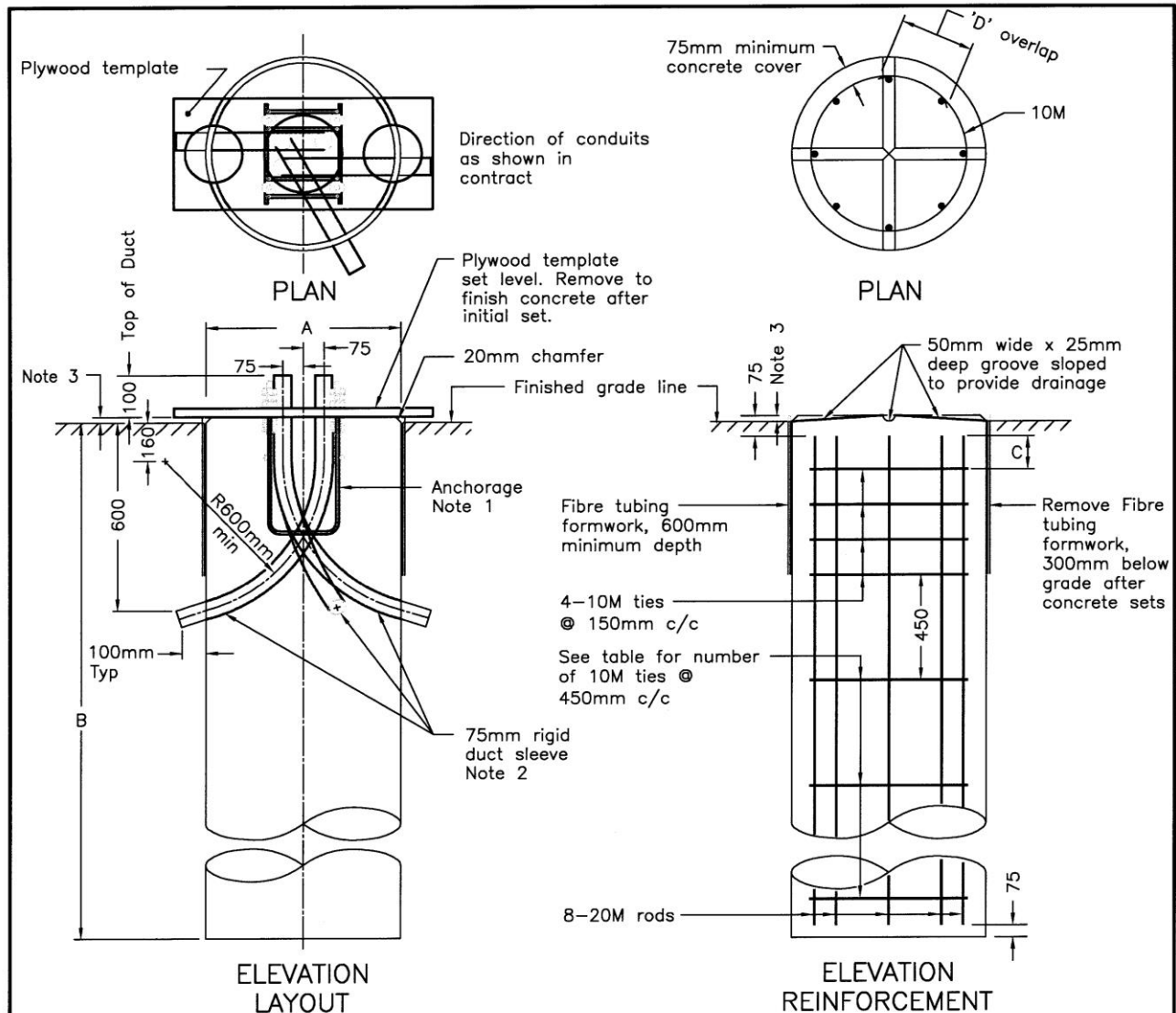




London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)





NOTES:

- 1 For anchorage assembly see STS-5.03.
- 2 Minimum of two sleeves required for each concrete footing. Three sleeves as specified.
- 3 Top of footing shall be installed flush with finished grade in paved or concrete areas and 75mm $\pm$ 15mm above finished grade in earth or granular areas.
- A For pole mounting details see STS-4.05.
- B All pole bases shall be constructed in accordance with OPSS 616.
- C Anchor assembly and conduits are to be placed in the centre of footing.
- D Concrete shall be poured as one monolithic slab and formed, placed, vibrated, cured, finished and protected in accordance with OPSS 904.
- E Direction of conduit sleeve entry to be marked with indentation on top of footing.
- F All dimensions are in millimetres unless otherwise shown.
- G To be read in conjunction with STS-5.02.

CITY OF LONDON STANDARD DRAWING

CONCRETE FOOTING FOR BASE
MOUNTED POLE

DWG STS-5.01

DATE

2009-1-22

APPROVED BY
CITY ENGINEER

Shane Maguire



London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)

POLE		FOUNDATION			CAGE					ANCHOR ASS.
TYPE S-STEEL AL-ALUMINUM C-CONCRETE		LENGTH	DIA.	DEPTH	ROD	NO. OF TIES		LAP	DIA.	BCD
			'A'	'B'	LENGTH	'C'	AT 150	AT 450	'D'	
		m	mm	mm	mm	mm	C/C	C/C	mm	
S	4515 (PATHWAY LIGHTING)	4.6	450	1500	N/A	N/A	N/A	N/A	N/A	254
S	8312	3.6	450	1400	1200	100	4	1	180	242
S	8315	4.6	600	1400	1200	100	4	1	180	242
S	8520	6.1LD	760	2150	2000	100	4	3	300	406
S	8620	6.1HD	760	2150	2000	100	4	3	300	406
S	8624	7.3HD	760	2400	2200	100	4	3	300	406
S	8535	10.7	760	2600	2450	100	4	4	300	406
S	8545	13.1	760	2900	2750	150	4	4	300	406
AL	TP5-550A-AB-190	1.5	300	1200	N/A	N/A	N/A	N/A	N/A	190
AL	TP12-645C-AB-242	3.6	450	1400	1200	100	4	1	180	242
AL	TP15-645C-AB-242	4.6	600	2150	2000	100	4	3	180	242
AL	TP19-866C-AB-292	5.8LD	760	2150	2000	100	4	3	300	292
AL	TP19-1080E-AB-406	5.8HD	760	2150	2000	100	4	3	300	406
AL	TP19-1080E-AB-406 *	5.8HD	600	2150	2000	100	4	3	220	406
AL	ET35-1055E-AB-406	9.8	760	2600	2450	100	4	4	300	406
AL	E35-845E-AB-292	9.8	760	2600	2450	100	4	4	300	292
C	KCH15 DECORATIVE CONCRETE POLE	4.6	760	1500	1200	100	4	1	180	300
C	KCH25 DECORATIVE CONCRETE POLE	7.6	760	2150	2000	100	4	3	300	362

* Maintenance replacement only for existing conditions

NOTES:

- For anchorage assembly see STS-5.03.
 - Minimum of two sleeves required for each concrete footing. Three sleeves as specified.
 - Top of footing shall be installed flush with finished grade in paved or concrete areas and 75mm $\pm$ 15mm above finished grade in earth or granular areas.
- A For pole mounting details see STS-4.05.
B All pole bases shall be constructed in accordance with OPSS 616.
C Anchor assembly and conduits are to be placed in the centre of footing.

D Concrete shall be poured as one monolithic slab and formed, placed, vibrated, cured, finished and protected in accordance with OPSS 904.

E Direction of conduit sleeve entry to be marked with indentation on top of footing.

F All dimensions are in millimetres unless otherwise shown.

G To be read in conjunction with STS-5.01.

CITY OF LONDON STANDARD DRAWING

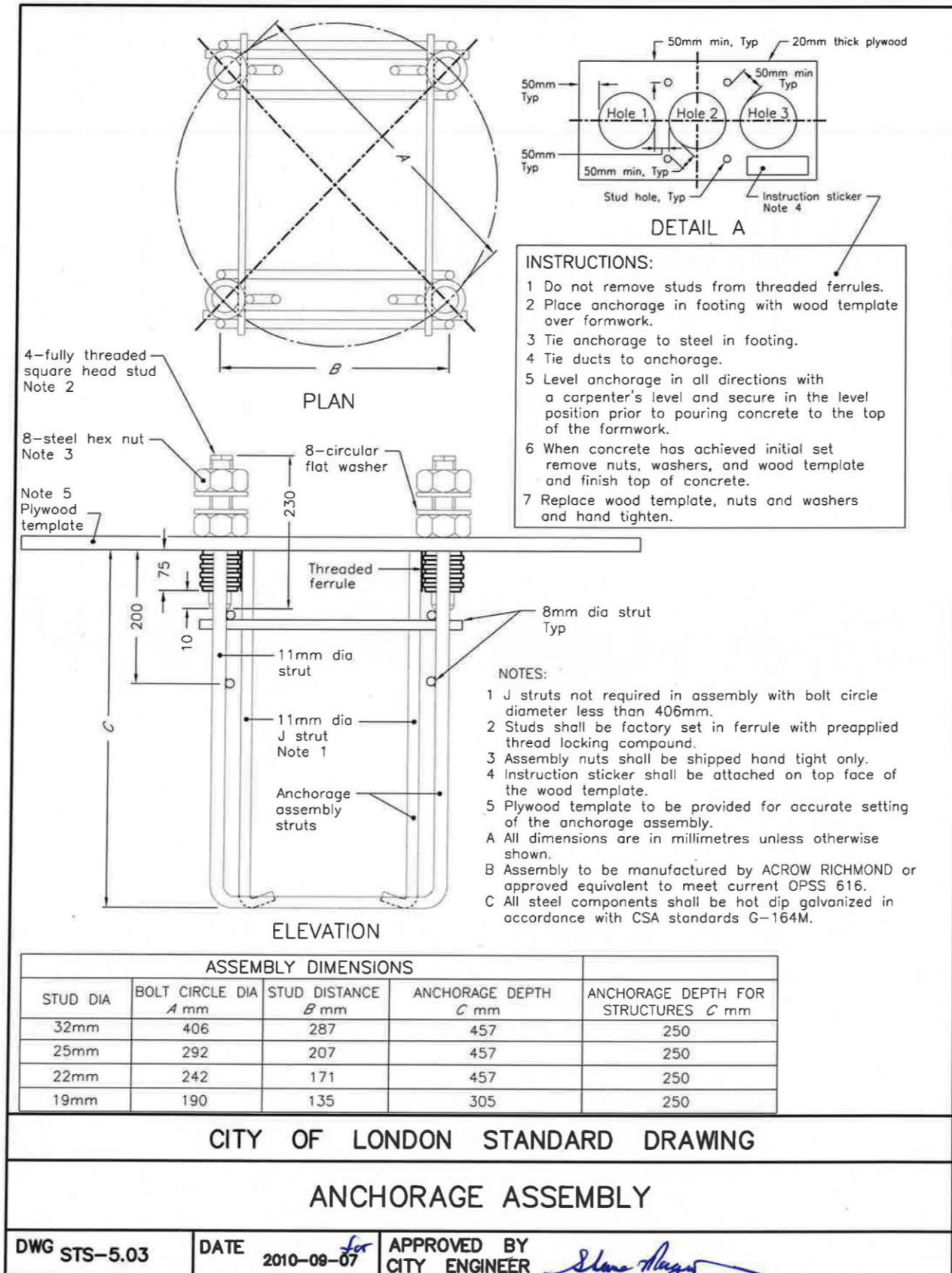
CONCRETE FOOTING FOR BASE MOUNTED POLE

DWG STS-5.02

DATE

2017-11-03

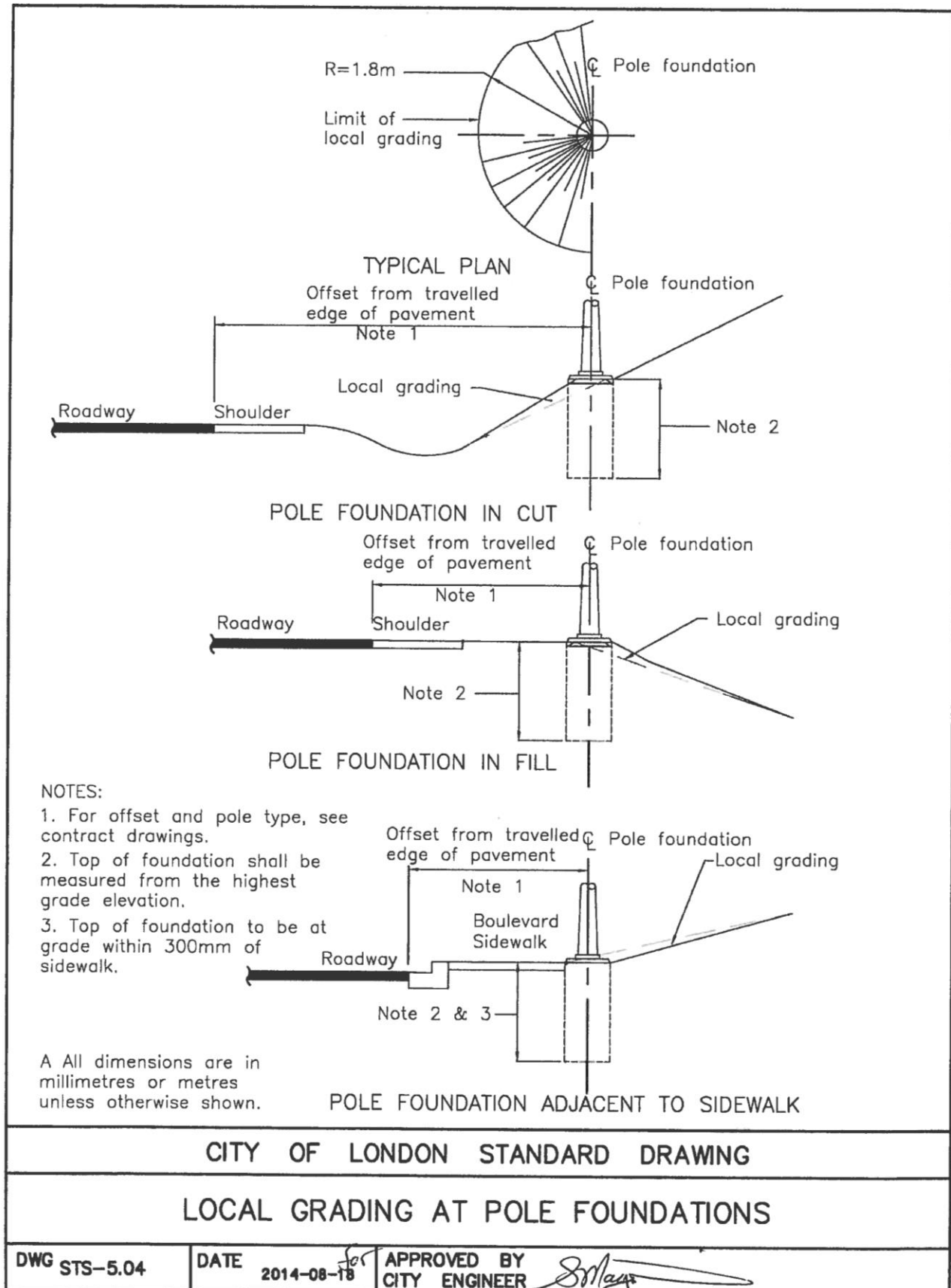
APPROVED BY
CITY ENGINEER





London
CANADA

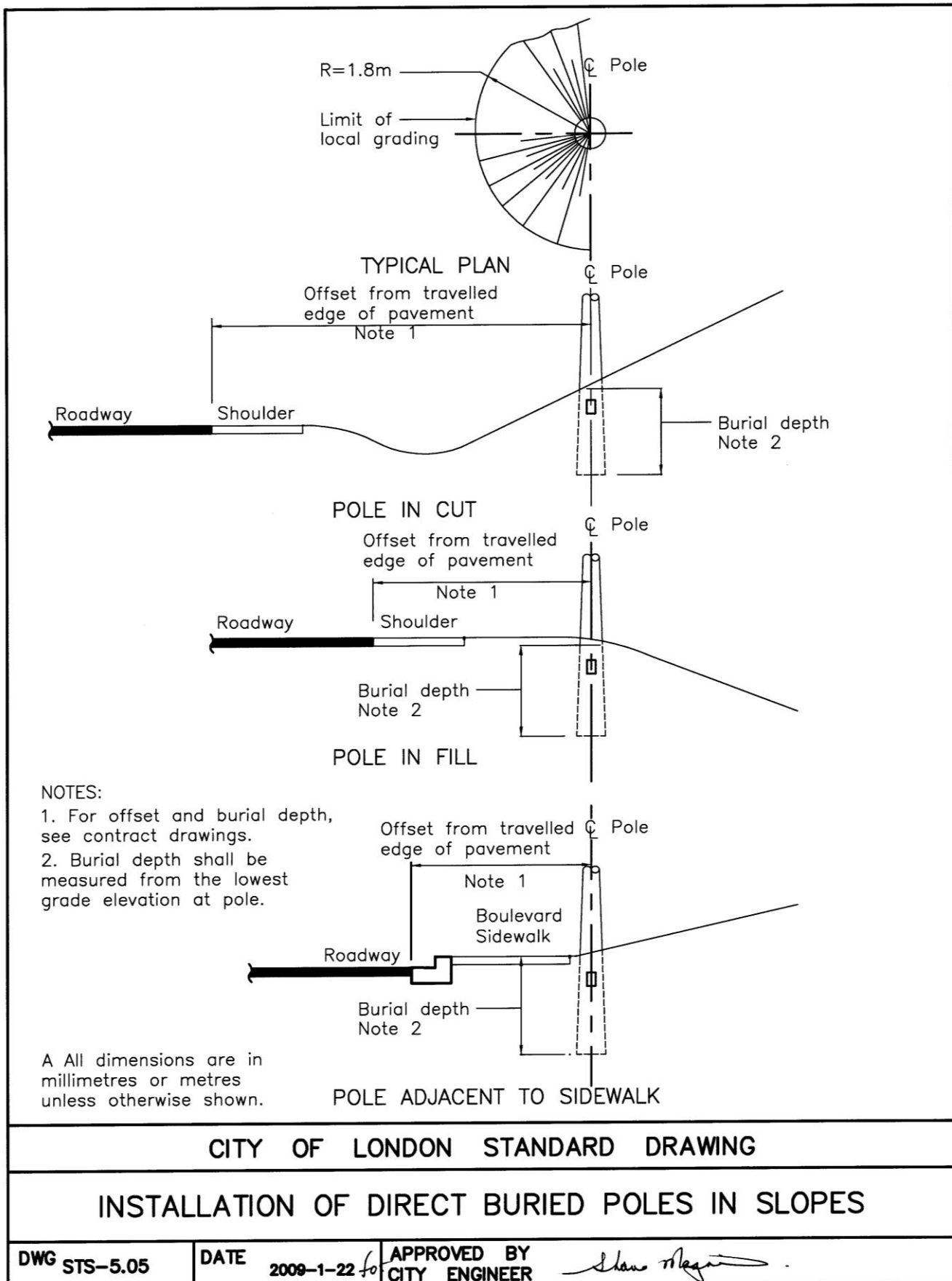
Supplemental Standards for Traffic Signal and Street Lighting (STS)





London
CANADA

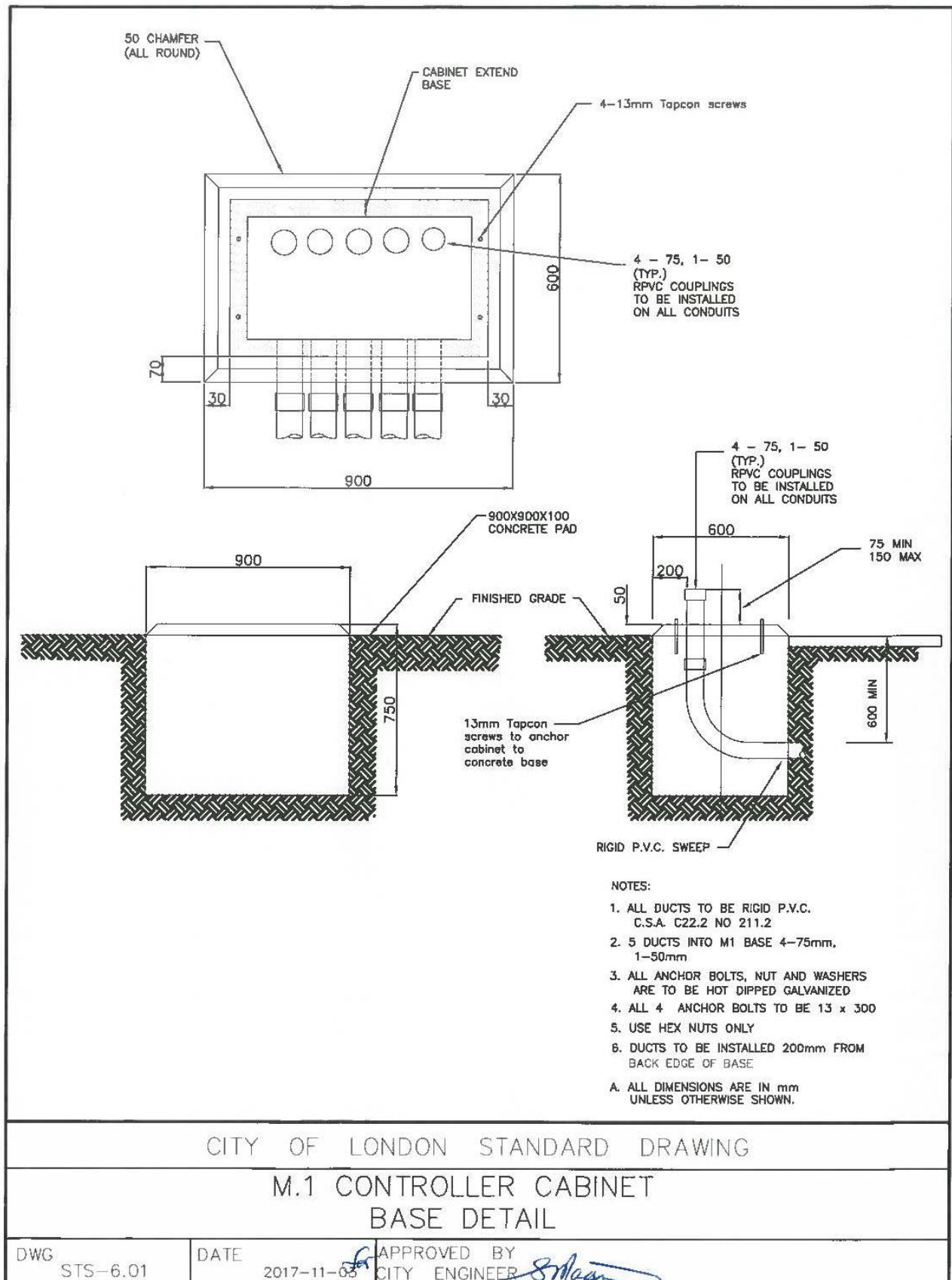
Supplemental Standards for Traffic Signal and Street Lighting (STS)

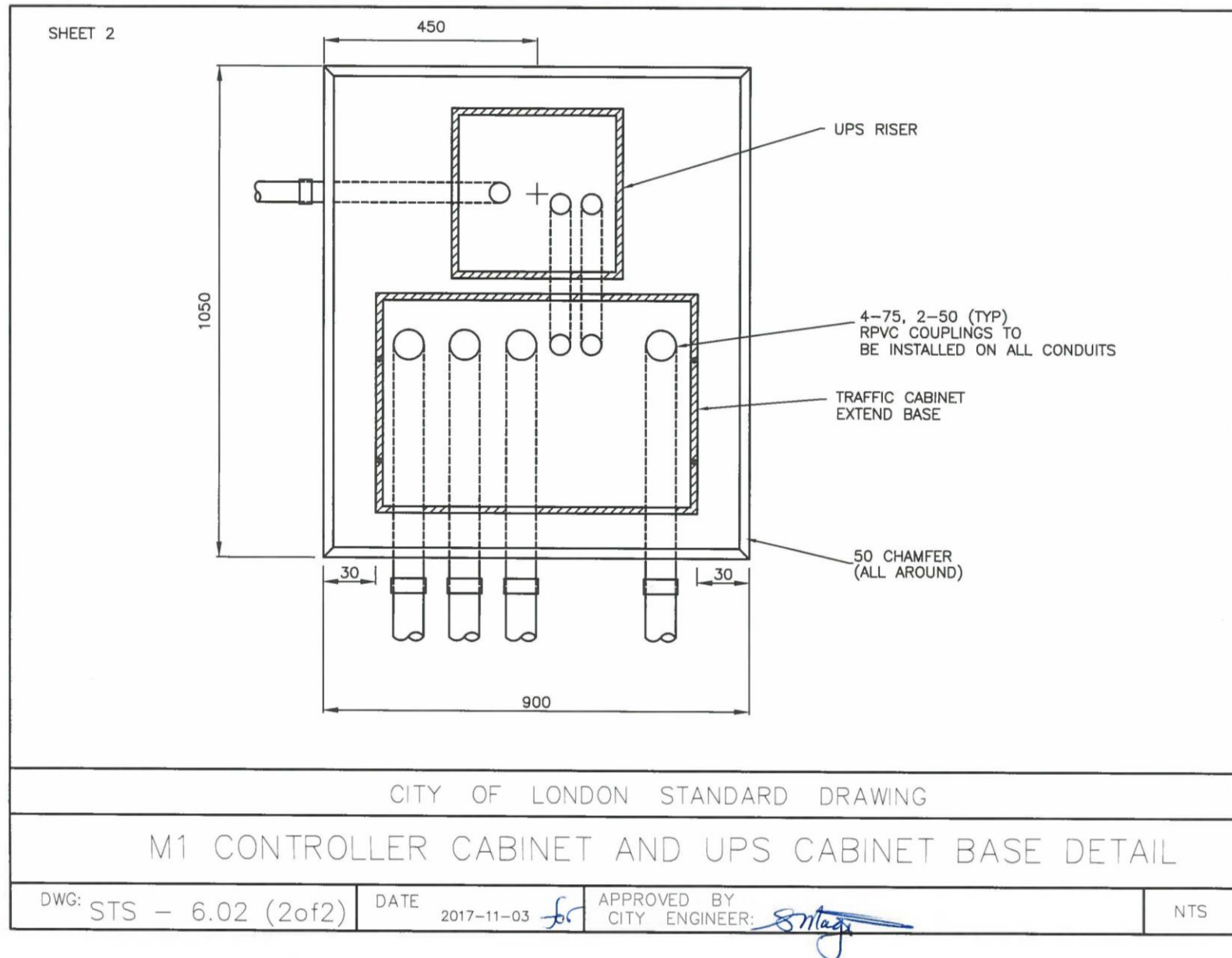


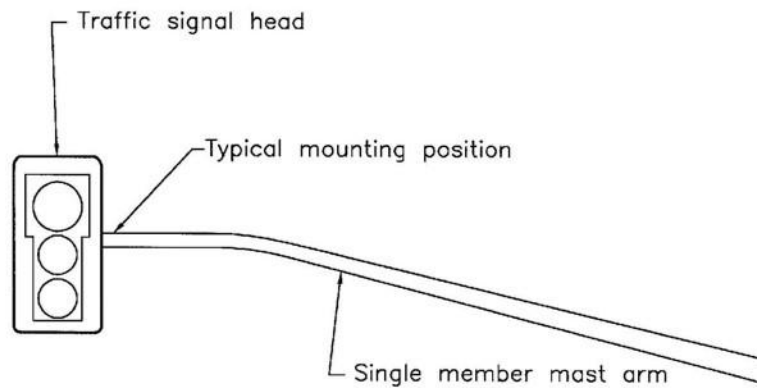


London
CANADA

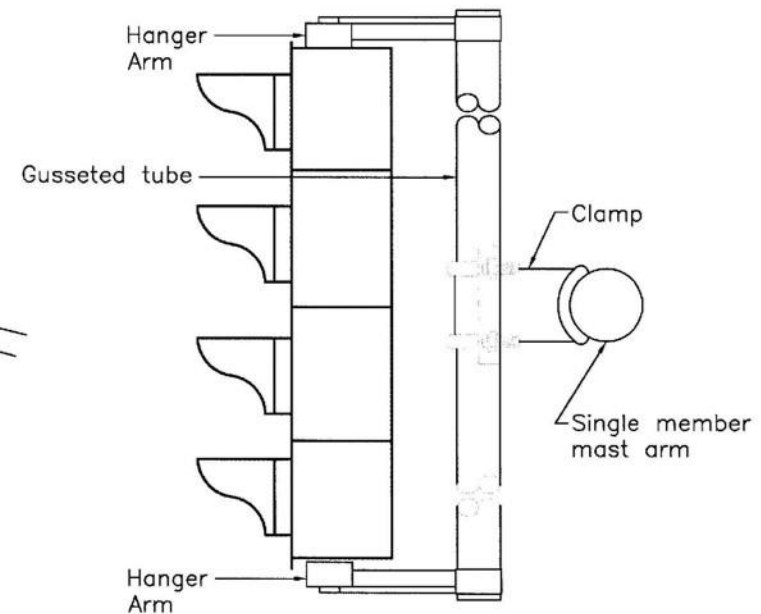
Supplemental Standards for Traffic Signal and Street Lighting (STS)







FRONT VIEW



DUAL-END HANGER

NOTE:

- A. This drawing should be read in conjunction with STS-7.05 and OPSD 2501.02

CITY OF LONDON STANDARD DRAWING

TRAFFIC SIGNAL
HANGER DETAILS

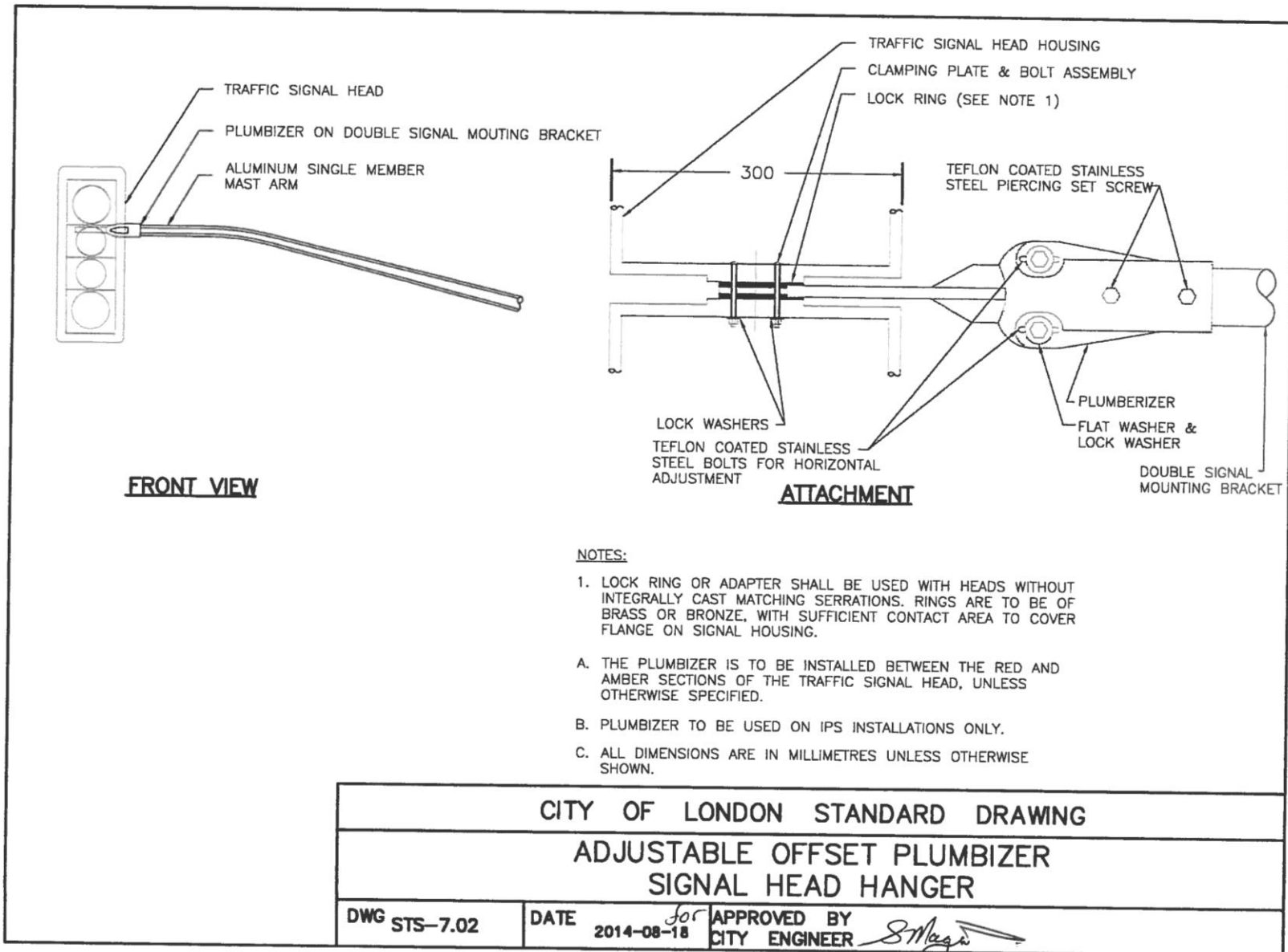
DWG STS-7.01

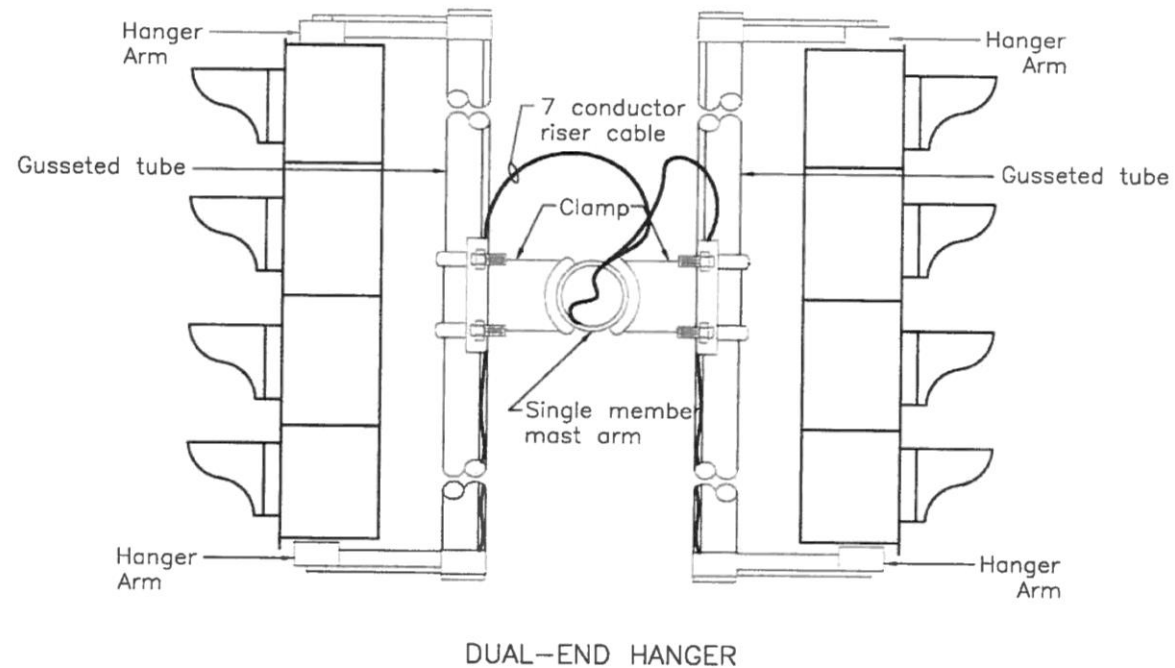
DATE

2009-1-22

APPROVED BY
CITY ENGINEER

Sharon Major





NOTE:

- A. This drawing should be read in conjunction with STS-7.05 and OPSD 2501.02

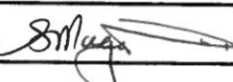
CITY OF LONDON STANDARD DRAWING

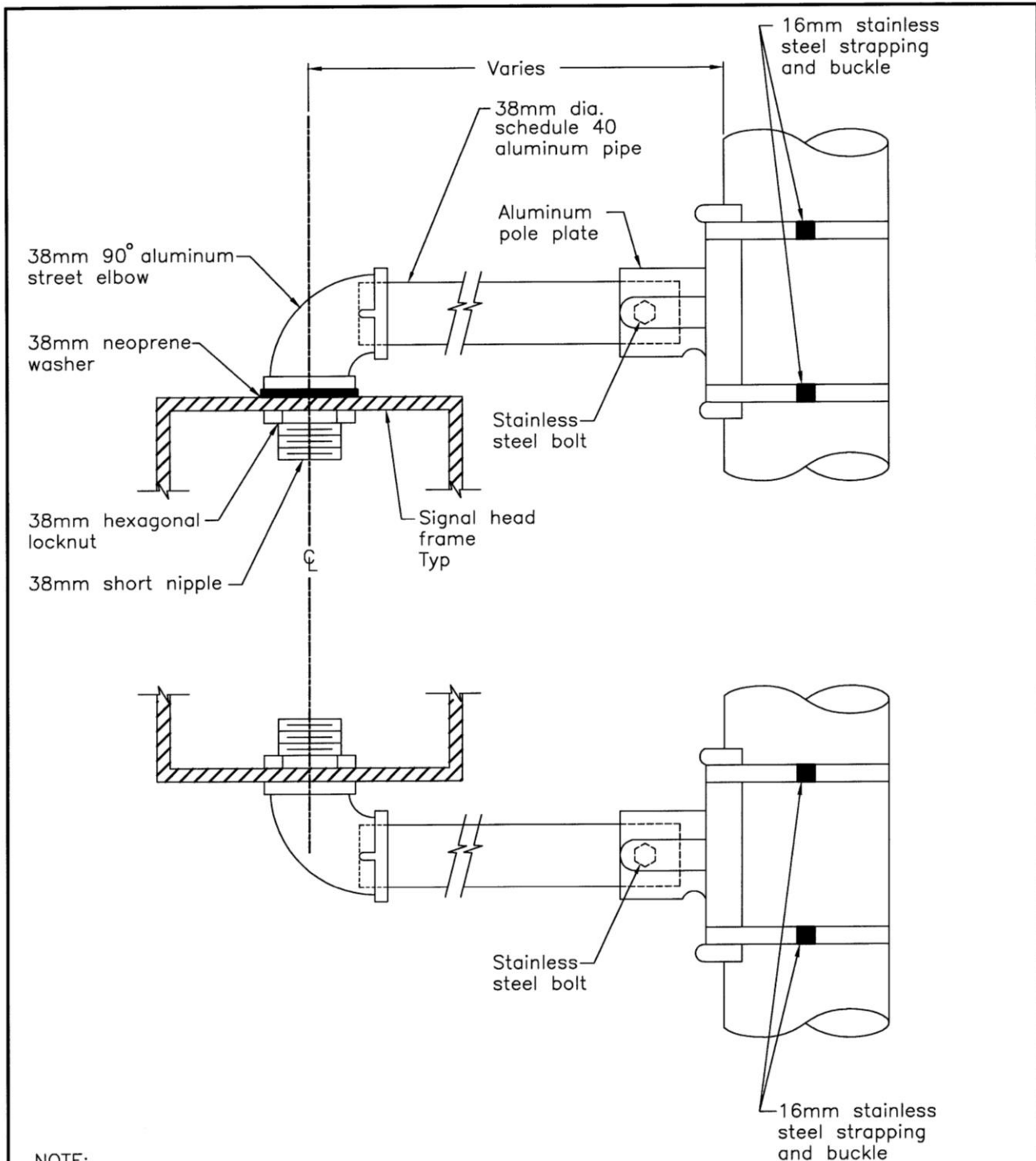
TRAFFIC SIGNAL (IPS)
DUAL BRACKET HANGER DETAILS

DWG STS-7.03

DATE 2014-08-18

APPROVED BY
CITY ENGINEER





NOTE:

A All dimensions are in millimetres unless otherwise shown.

CITY OF LONDON STANDARD DRAWING

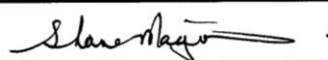
TRAFFIC SIGNAL
DOUBLE ARM BRACKET

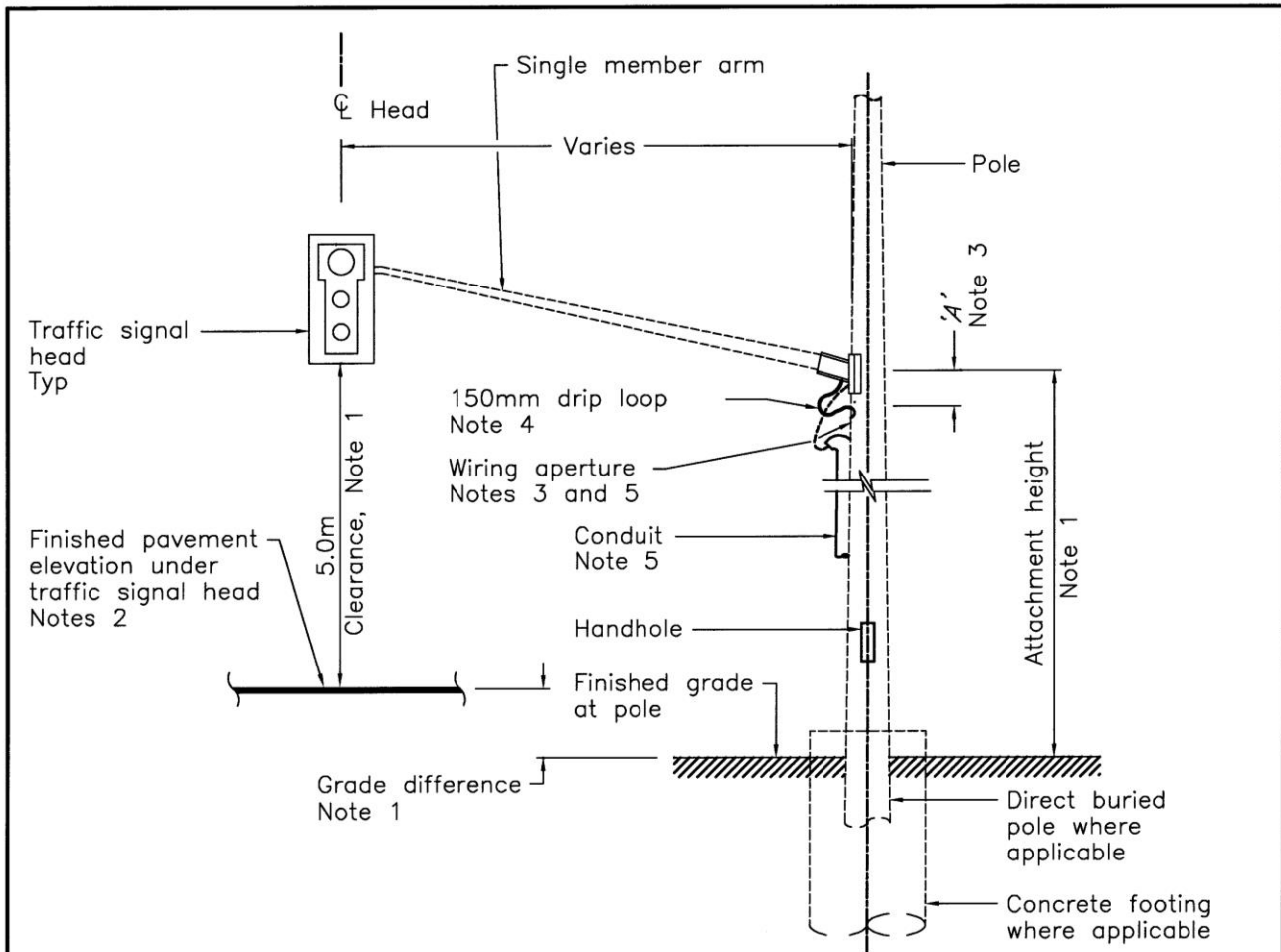
DWG STS-7.04

DATE

2009-1-22

APPROVED BY
CITY ENGINEER





NOTES:

- 1 Where a grade difference exists, the attachment height shall be adjusted so that the 5.0m signal head clearance is obtained.
- 2 Where the traffic signal head is not over the travelled portion of the pavement clearance shall be set using the elevation of the finished pavement at the edge of pavement directly in line with the arm.
- 3 Wiring aperture to be field drilled at a dimension 'A' equal to the pole diameter at the point of arm attachment or 25mm below overlapping sectional steel joints. The aperture to be 25mm dia, de-burred, protected with zinc rich paint and fitted with a 20mm ID rubber grommet.
- 4 Drip loops to be 450mm max. Loops between 300mm and 450mm in length to be banded to pole with 16mm stainless steel strapping.
- 5 For external conduit system on wood or concrete poles refer to OPSD-2552.01 or OPSD-2554.01.
- A For orientation and location of poles, arms and traffic signal heads refer to layout drawings.
- B For arm attachment details refer to OPSD-2501.02.
- C All dimensions are in millimetres or metres unless otherwise shown.

CITY OF LONDON STANDARD DRAWING

SINGLE MEMBER ARM AND SIGNAL HEAD

DWG STS-7.05

DATE

2009-1-22

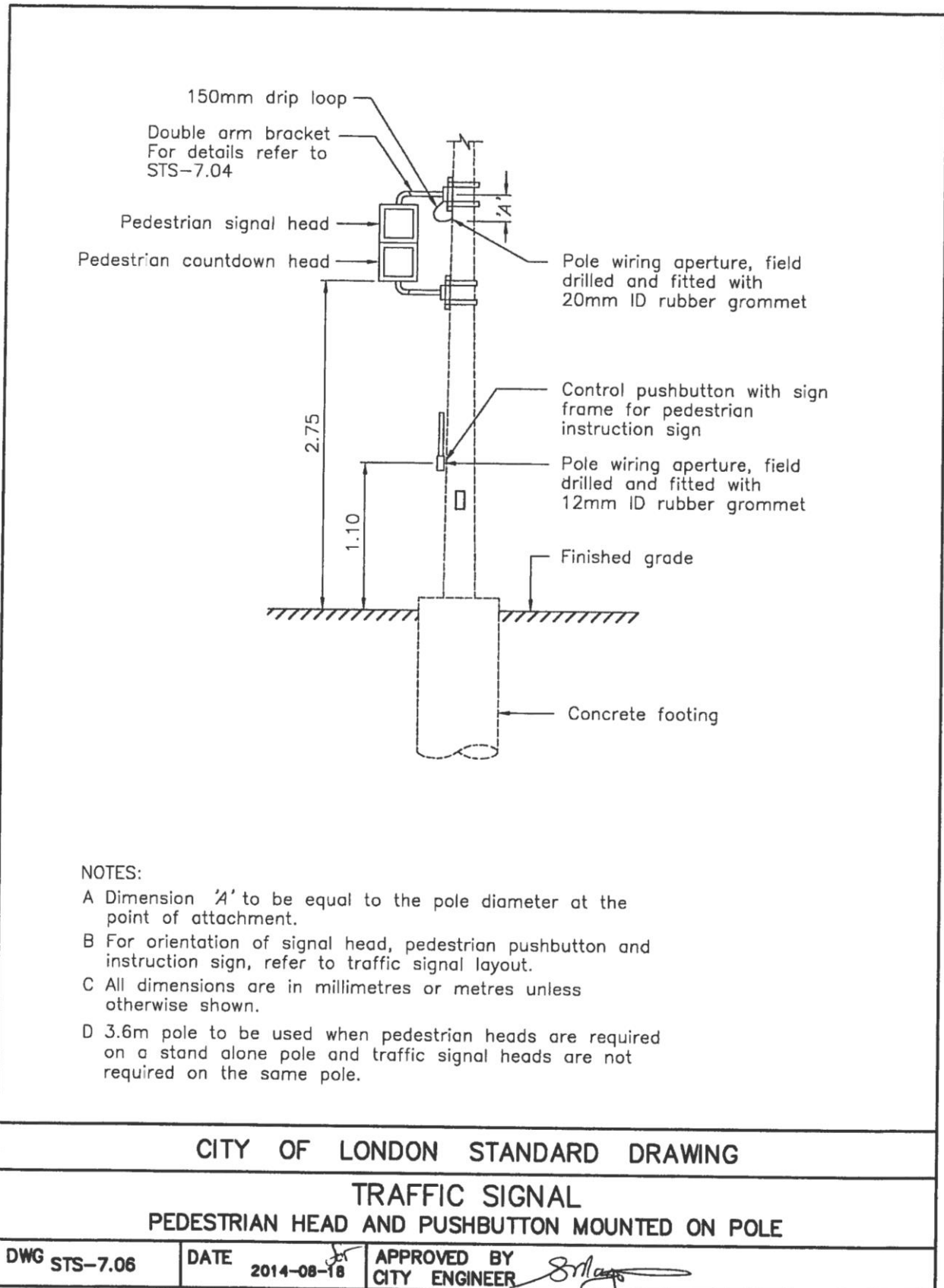
APPROVED BY
CITY ENGINEER

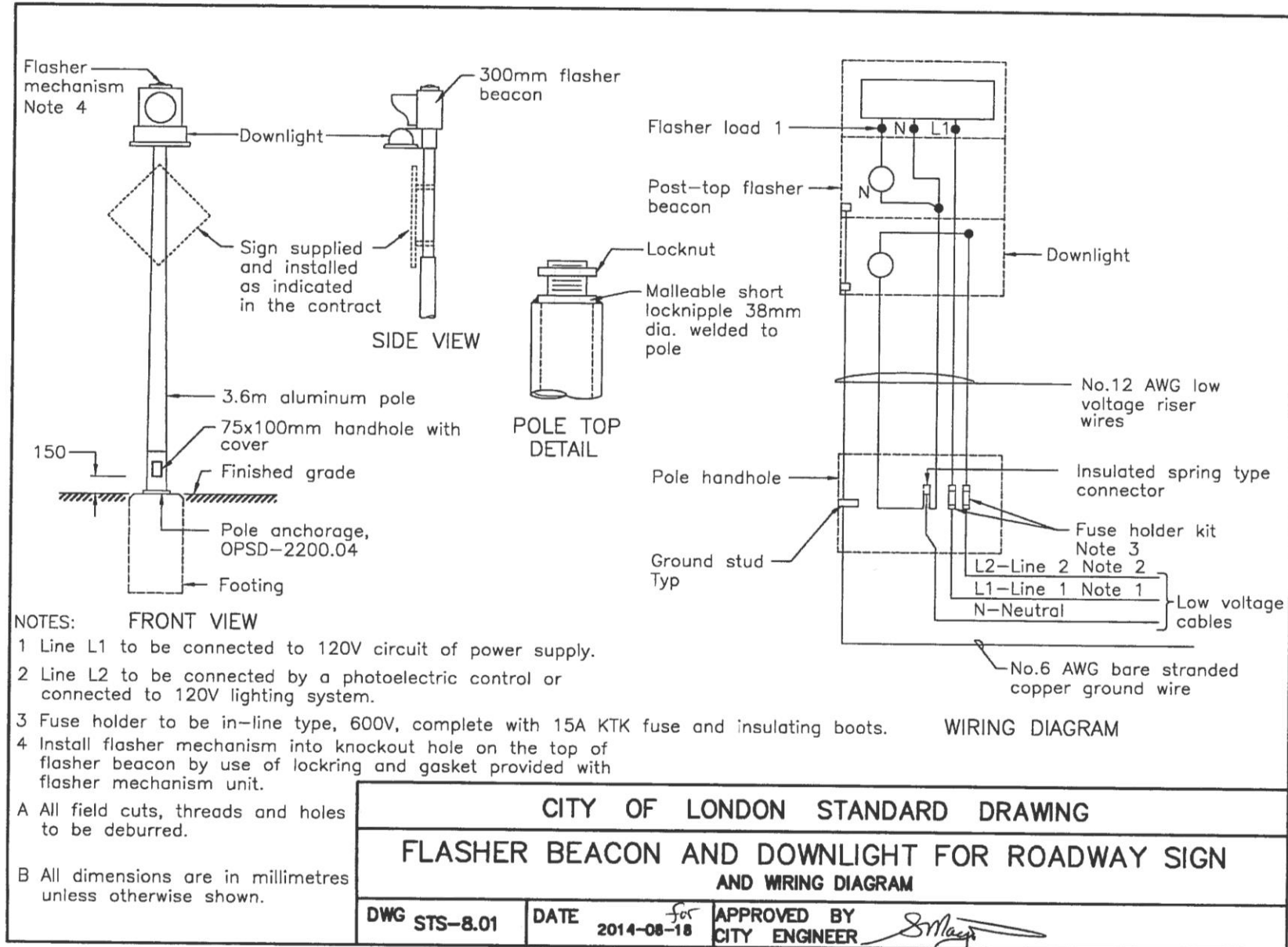
Steve Maguire

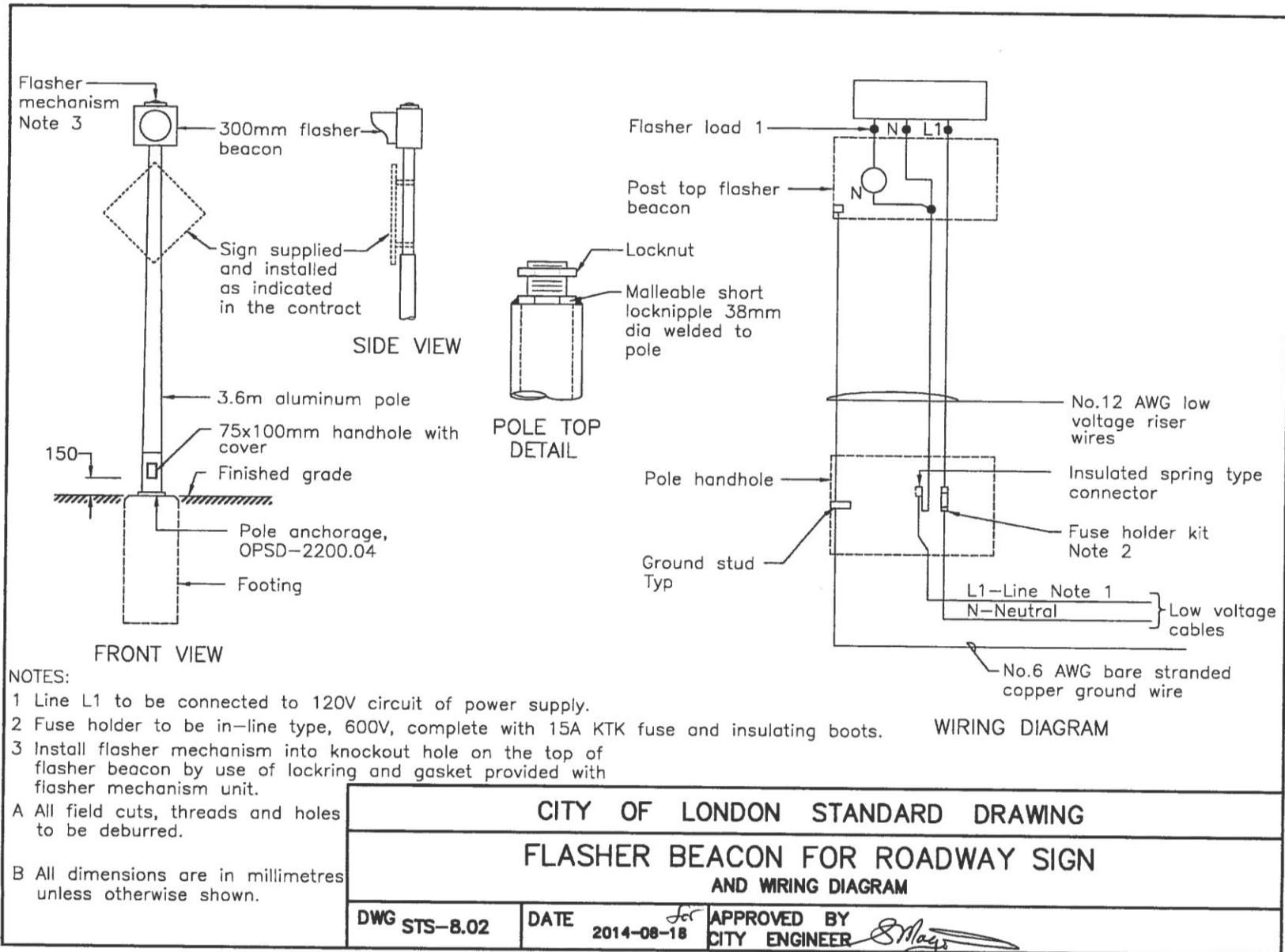


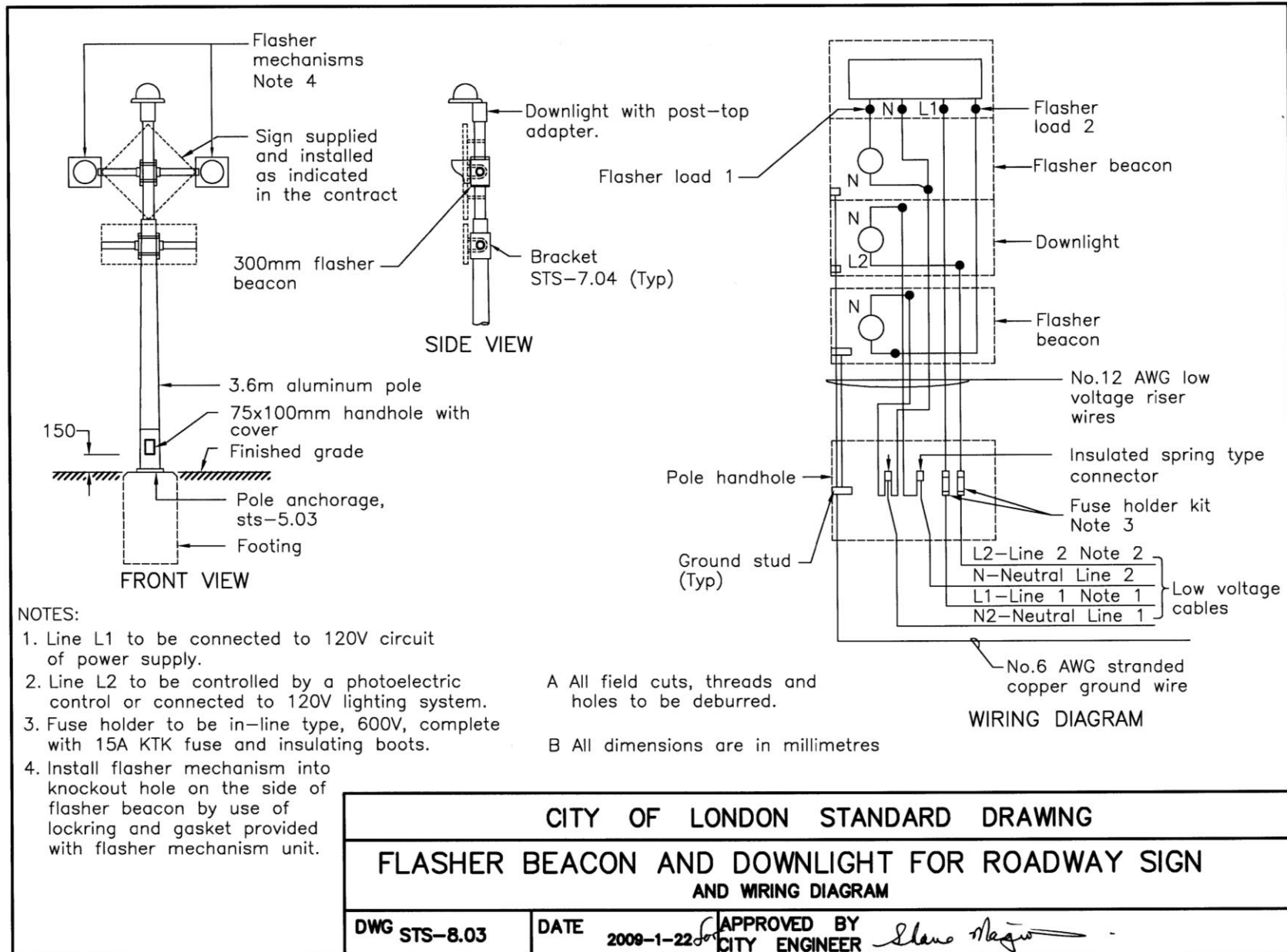
London
CANADA

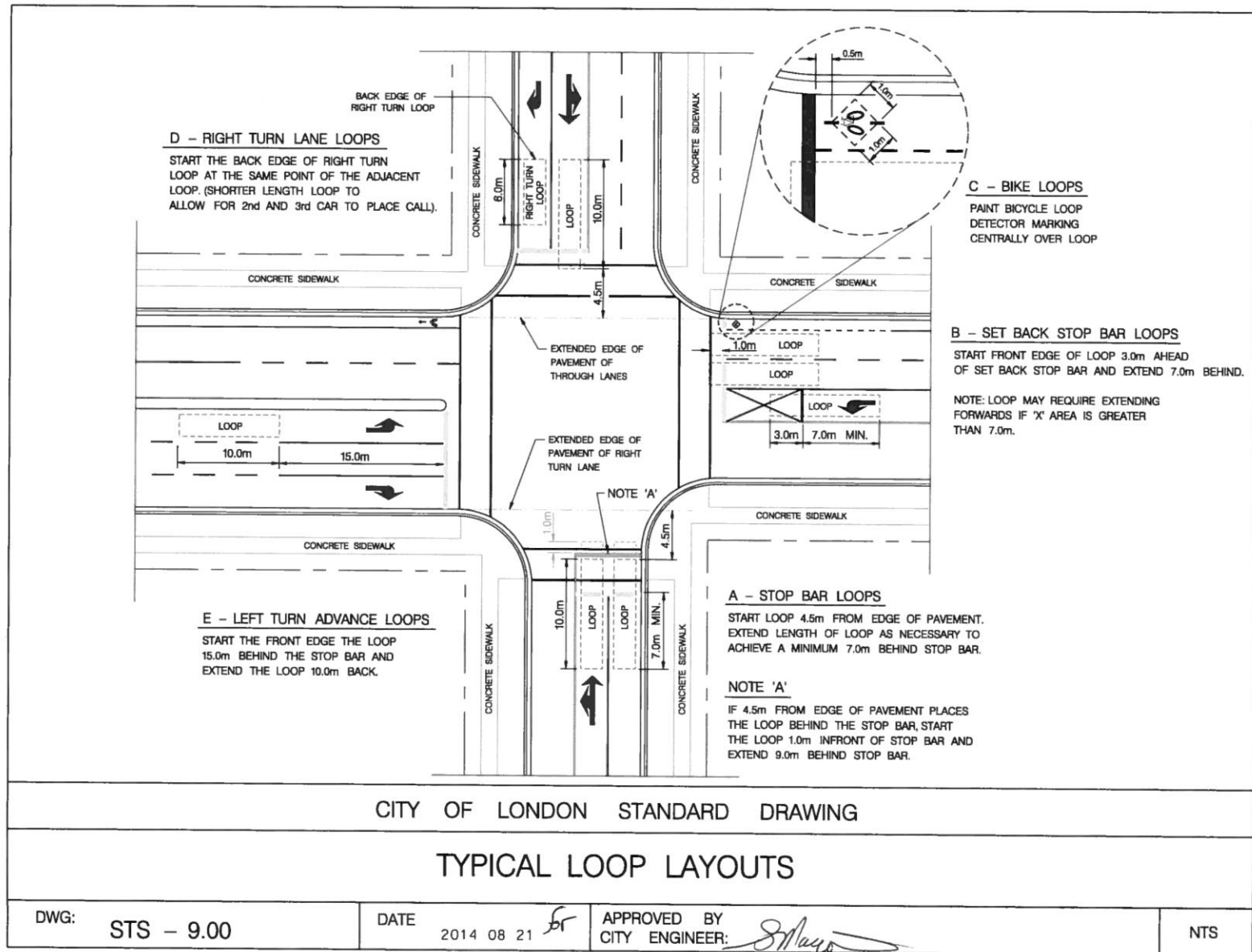
Supplemental Standards for Traffic Signal and Street Lighting (STS)

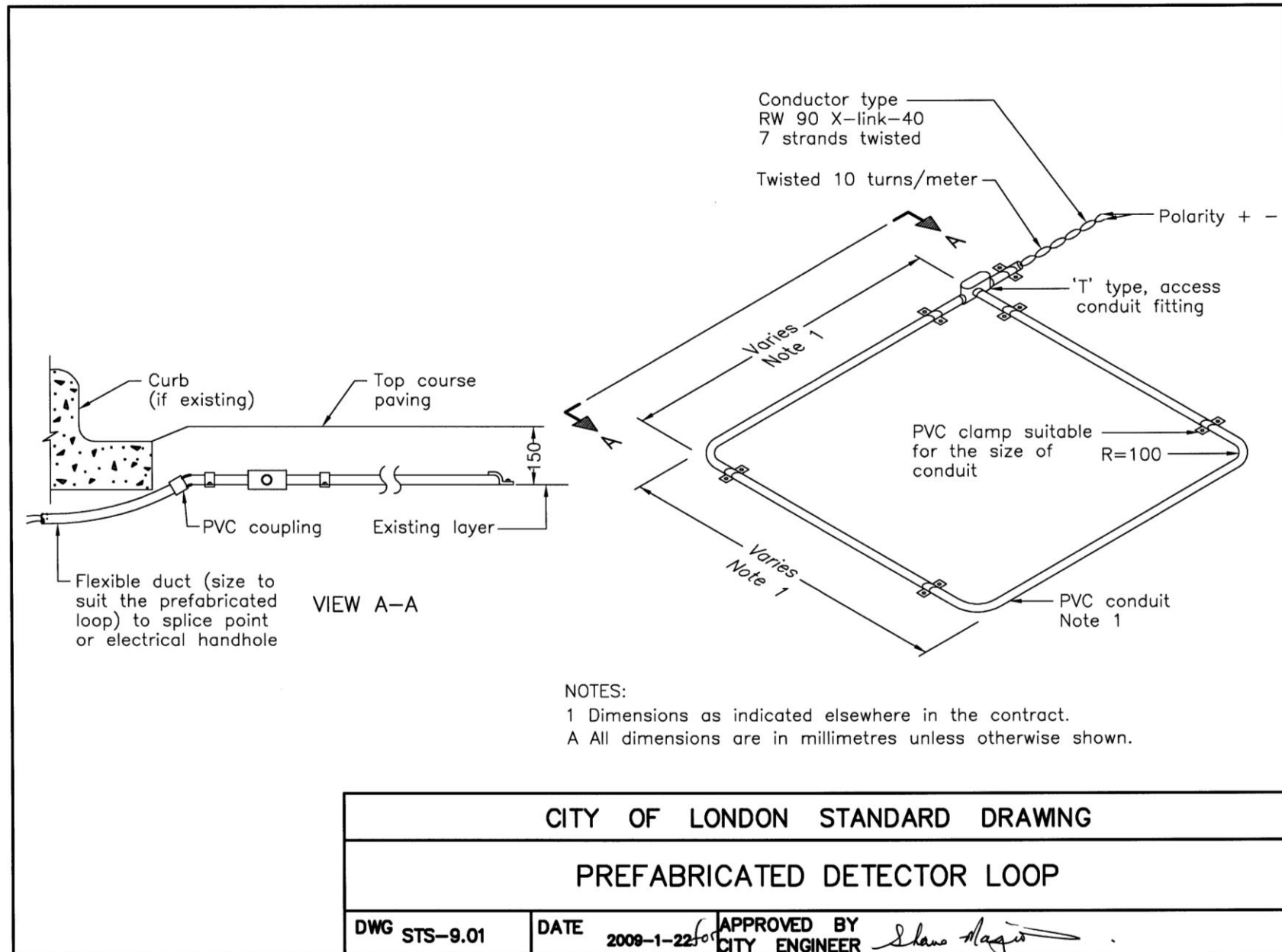








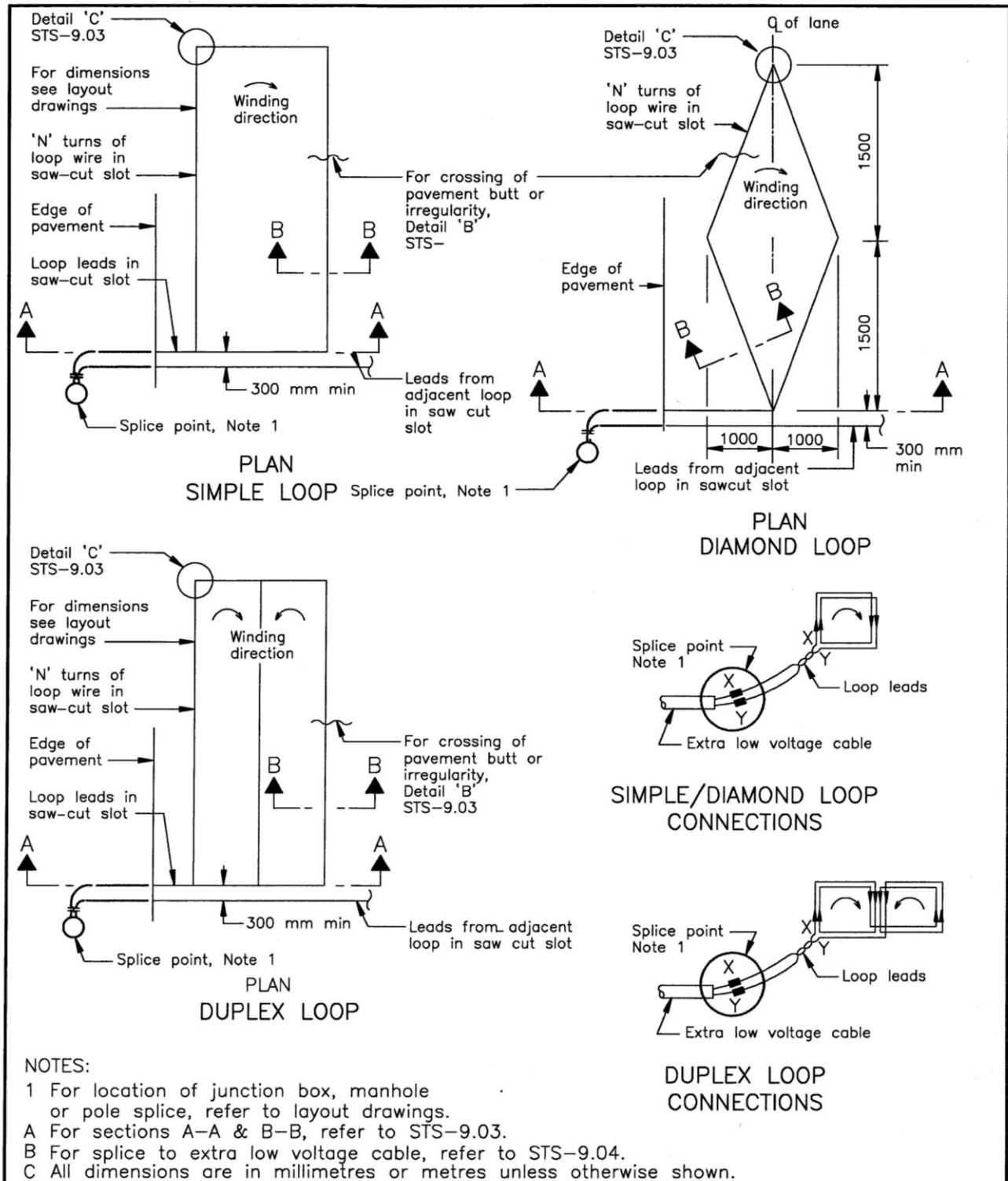






London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)



CITY OF LONDON STANDARD DRAWING

LOOP DETECTOR INSTALLATION DETAILS I

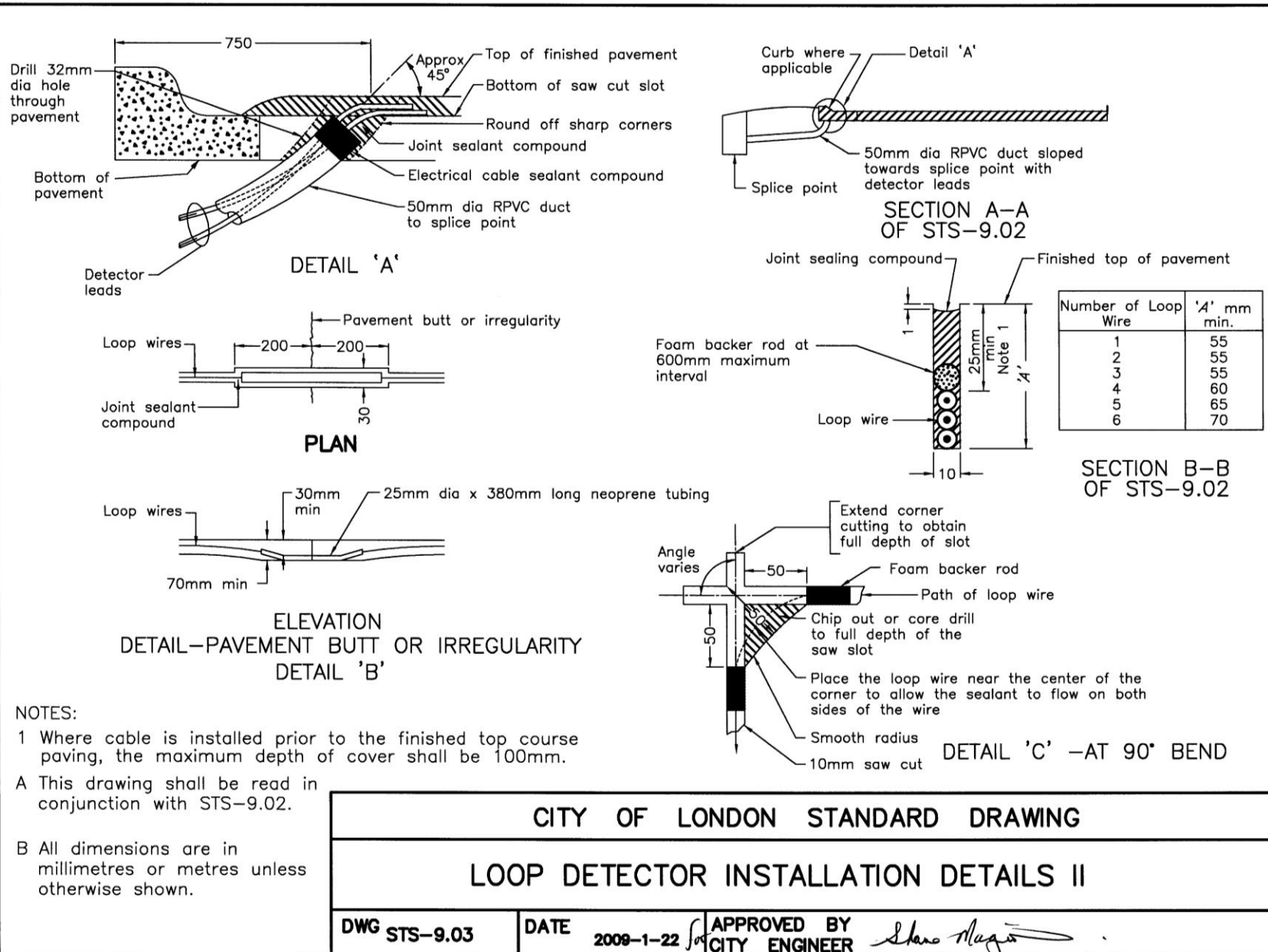
DWG STS-9.02

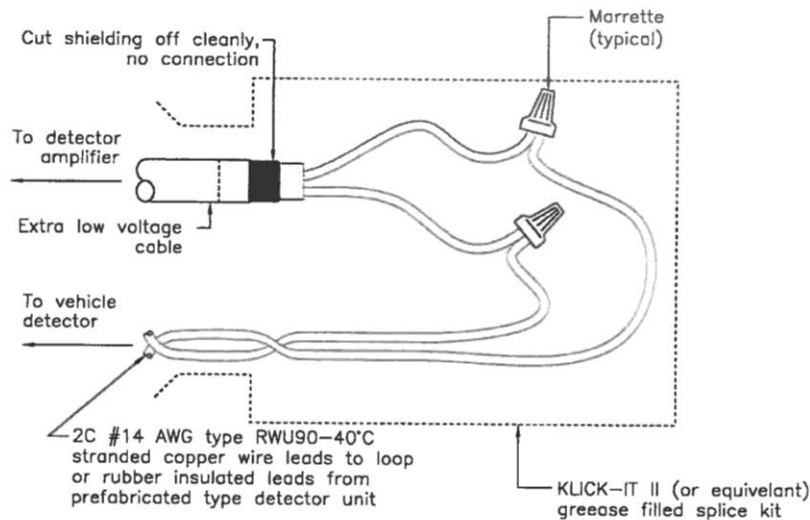
DATE

2009-1-22

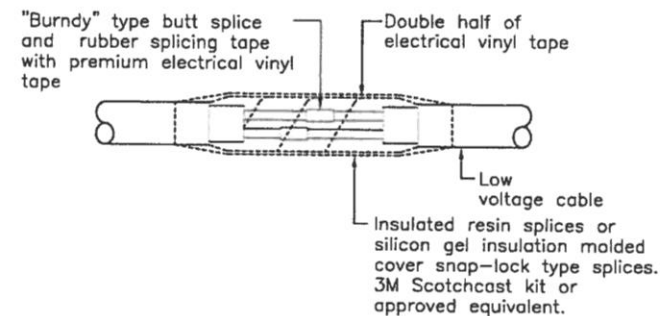
APPROVED BY
CITY ENGINEER

Shane M. [Signature]





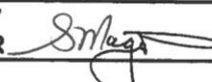
EXTRA LOW VOLTAGE CABLE TO
DETECTOR CABLE—SPlicing DETAIL

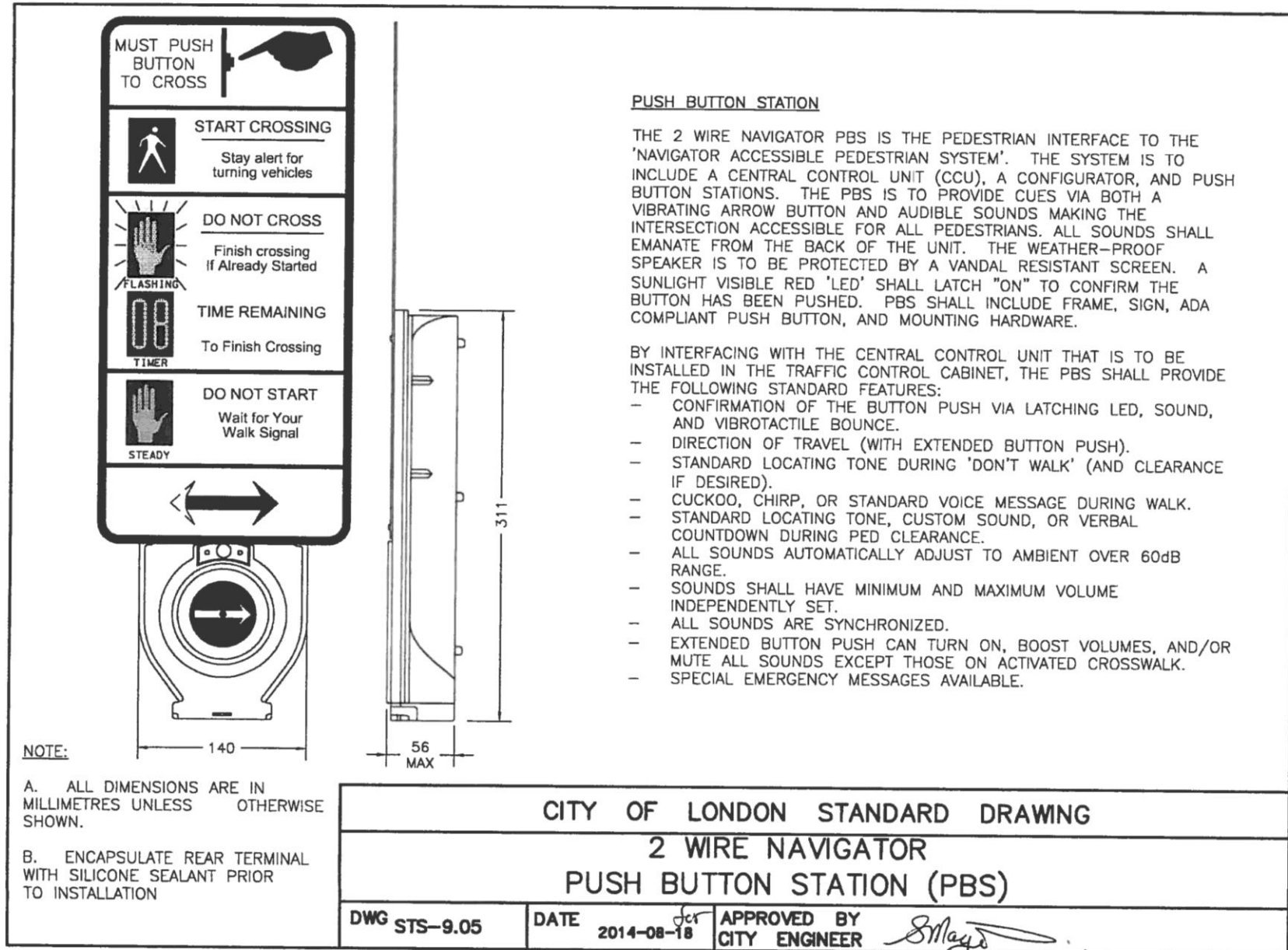


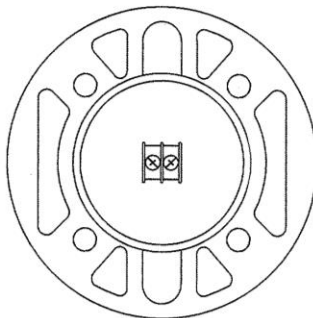
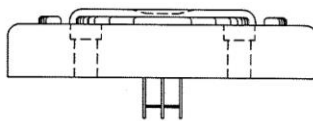
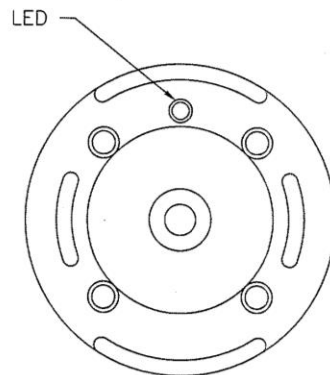
LOW VOLTAGE CABLE—SPlicing DETAIL

NOTES:

- A Splices shall not be used unless shown on the wiring diagrams, quantity sheets, layout drawings or approved by the Contract Administrator.
- B All dimensions are in millimetres unless otherwise shown.
- C. Connections for aluminum to copper conductors must be dual rated AL-CU or CU-AL connectors.

CITY OF LONDON STANDARD DRAWING		
SPlice FOR LOW AND EXTRA LOW VOLTAGE CABLE		
DWG STS-9.04	DATE 2014-08-18	APPROVED BY CITY ENGINEER 





SPECIFICATIONS

BODY MATERIAL: ALUMINUM, POWDER COATED
COLOUR: YELLOW

BUTTON MATERIAL: 316 STAINLESS STEEL

PIEZO DRIVEN SOLID STATE SWITCH:
OPERATING TEMPERATURE: -34°C TO 74°C
OPERATING VOLTAGE: 18 VDC NOMINAL
OPERATING LIFE: GREATER THAN 100 MILLION OPERATIONS.
SWITCH HOLD TIME: 6 SECONDS MINIMUM.

LED:
OPERATING MODE: LATCHING—ACTIVATES ONLY DURING
NON-WALK PHASES AND STAYS ON UNTIL THE BEGINNING OF
WALK PHASE.
REQUIRES "LATCHING PUSH BUTTON CONTROL UNIT" WHICH IS
INSTALLED IN THE INTERSECTION CONTROL CABINET.

BEEPER:
SOUNDS SIMULTANEOUSLY WITH 'LED' FLASH.
DIFFERENT TONES FOR PRESS AND RELEASE.

NOTE:

A. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS
OTHERWISE SHOWN.

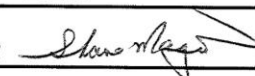
CITY OF LONDON STANDARD DRAWING

POLARA/CAMPBELL PUSHBUTTON
WITH LATCHING LED

DWG STS-9.06

DATE 2011-09-26

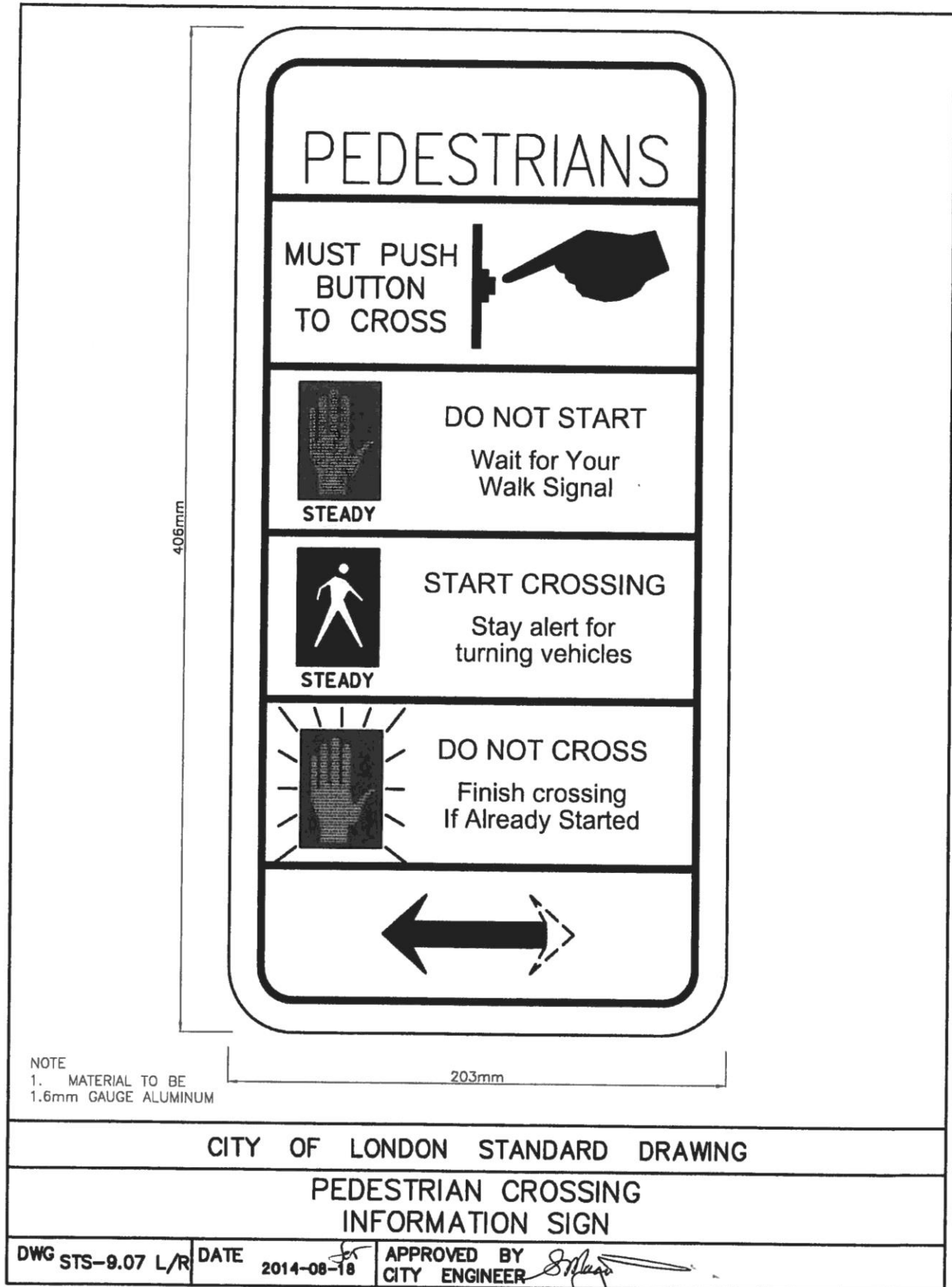
APPROVED BY
CITY ENGINEER





London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)





London
CANADA

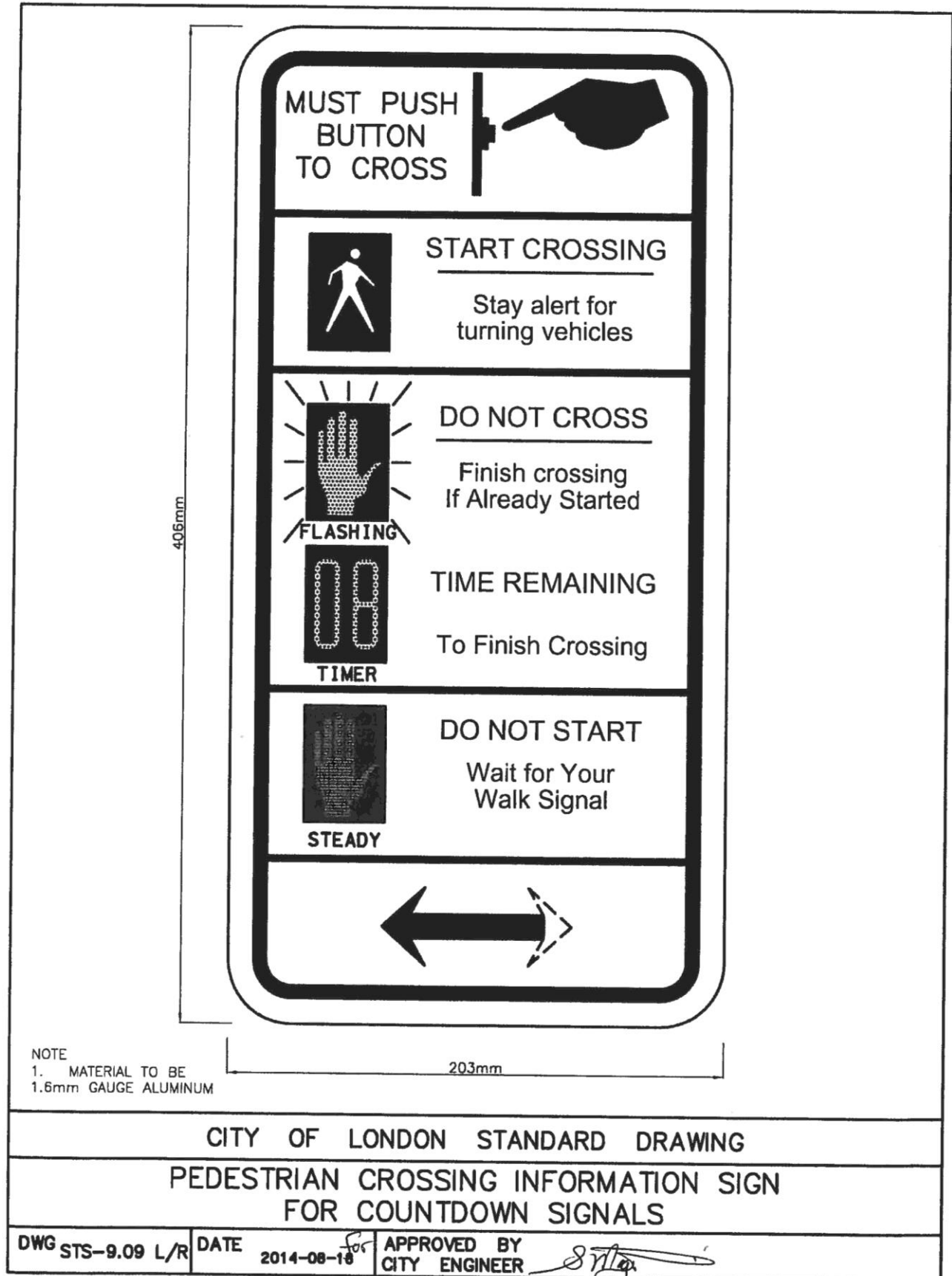
Supplemental Standards for Traffic Signal and Street Lighting (STS)

		NOTE	
		1. MATERIAL TO BE	
		1.6mm GAUGE ALUMINUM	
CITY OF LONDON STANDARD DRAWING			
PEDESTRIAN CROSSING			
INFORMATION SIGN AT NON-ACTUATED SIGNALS			
DWG STS-9.08	DATE 2014-08-18	APPROVED BY	
		CITY ENGINEER	



London
CANADA

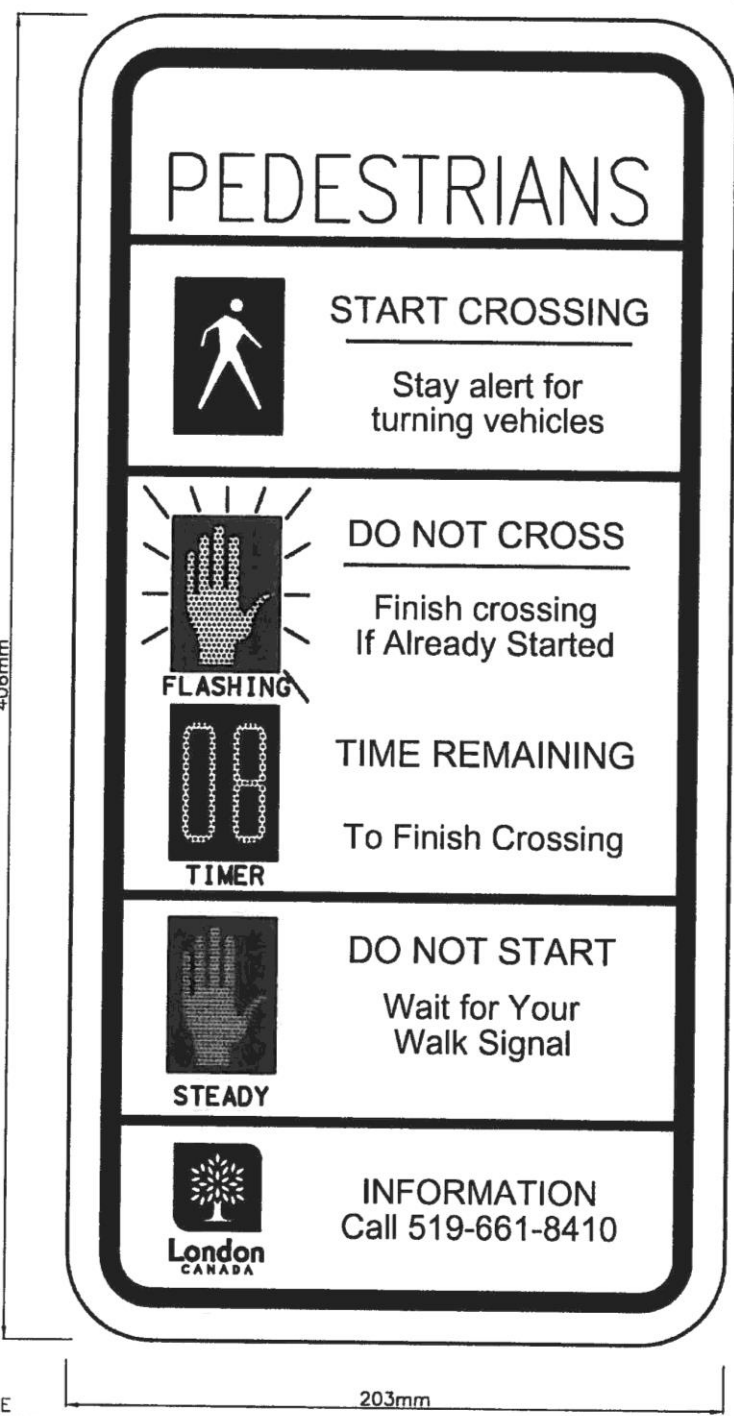
Supplemental Standards for Traffic Signal and Street Lighting (STS)





London
CANADA

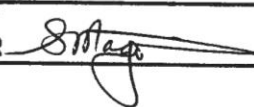
Supplemental Standards for Traffic Signal and Street Lighting (STS)

	PEDESTRIANS
	 START CROSSING Stay alert for turning vehicles
	 DO NOT CROSS Finish crossing If Already Started
	 TIME REMAINING To Finish Crossing
	 DO NOT START Wait for Your Walk Signal
 INFORMATION Call 519-661-8410	

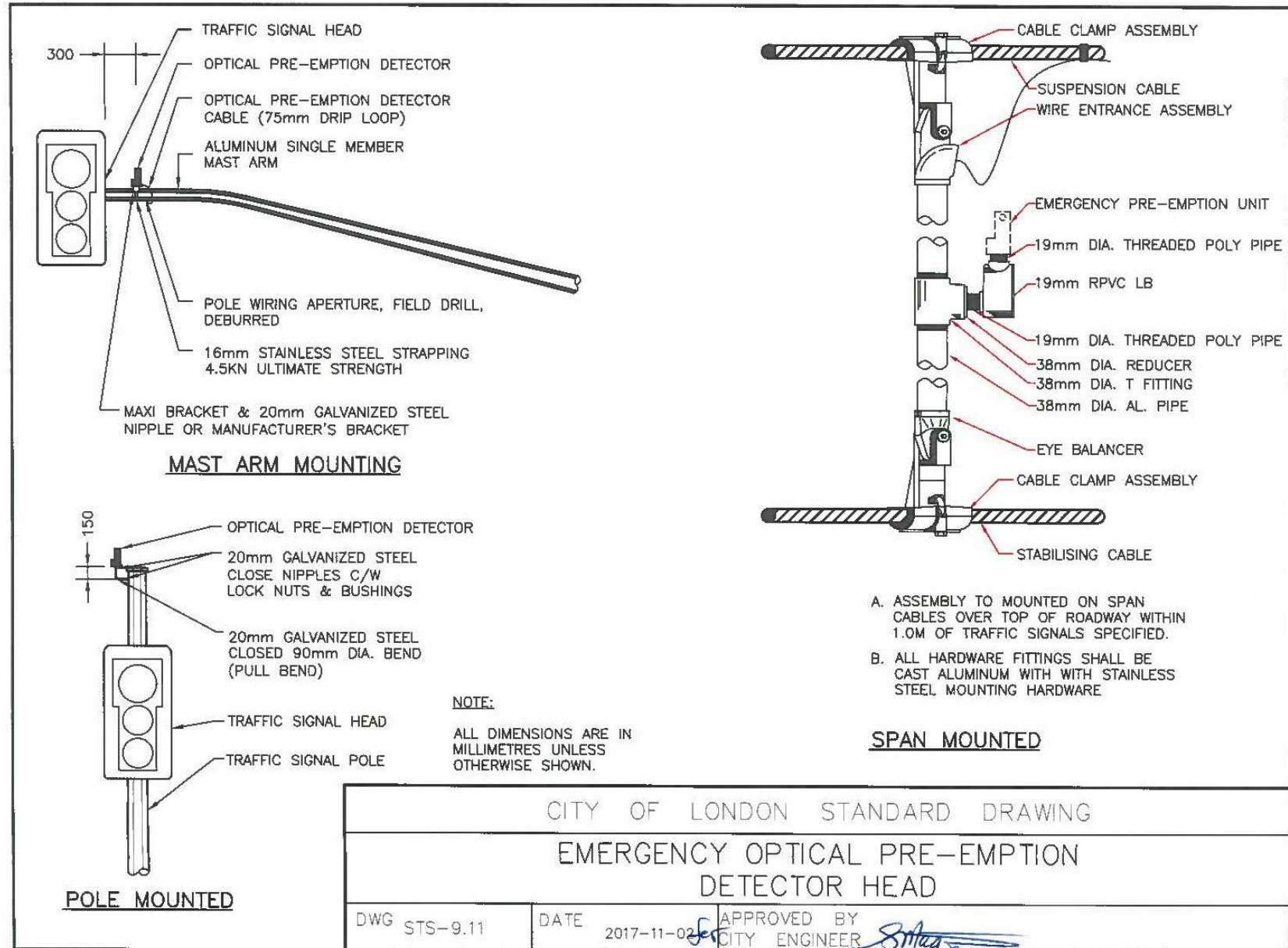
NOTE
1. MATERIAL TO BE
1.6mm GAUGE ALUMINUM

CITY OF LONDON STANDARD DRAWING

PEDESTRIAN CROSSING INFORMATION SIGN
FOR COUNTDOWN SIGNALS AT NON-ACTUATED LOCATIONS

DWG STS-9.10	DATE 2014-08-18	APPROVED BY CITY ENGINEER 
--------------	-----------------	---

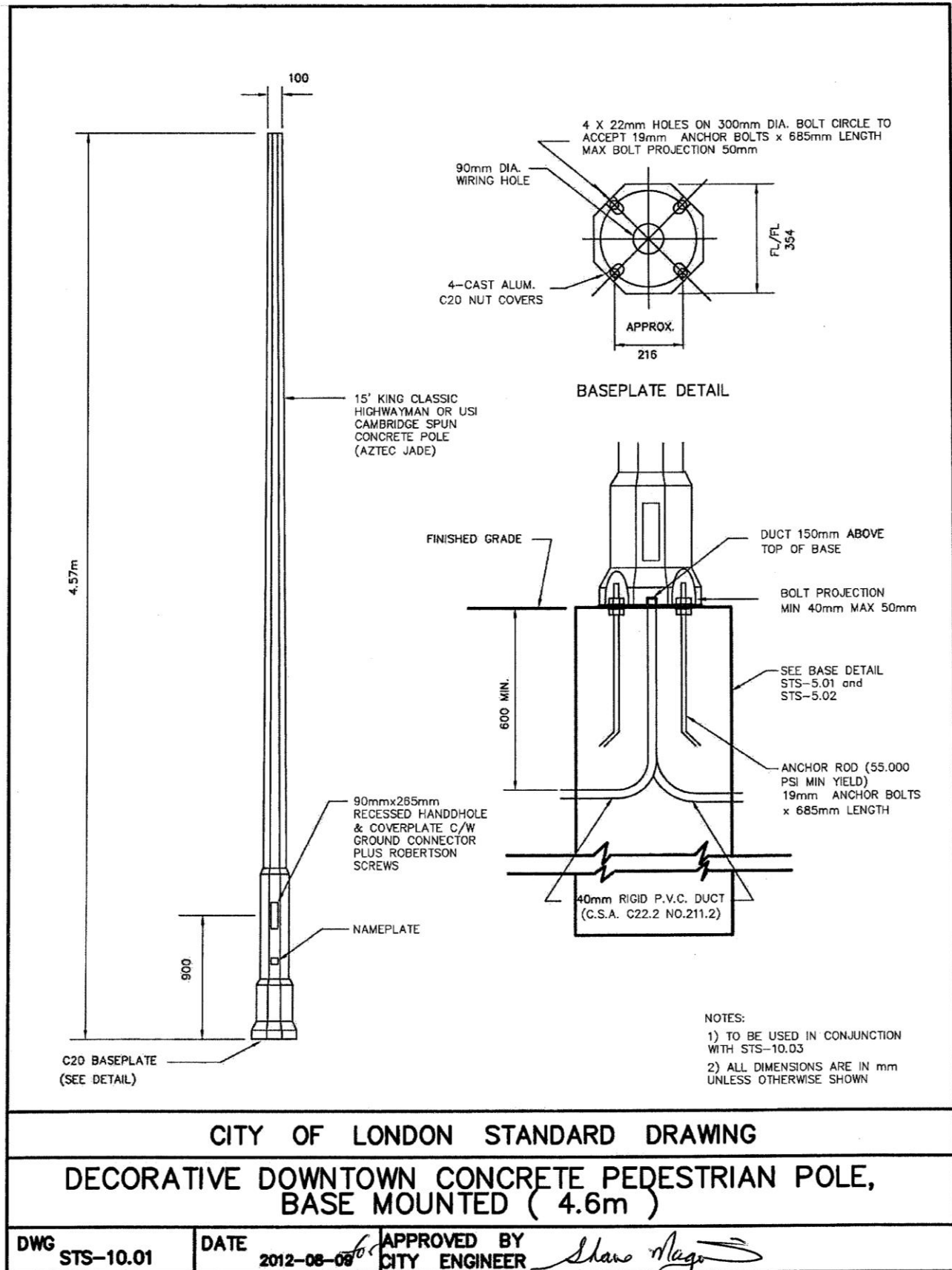
Supplemental Standards for Traffic Signal and Street Lighting (STS)

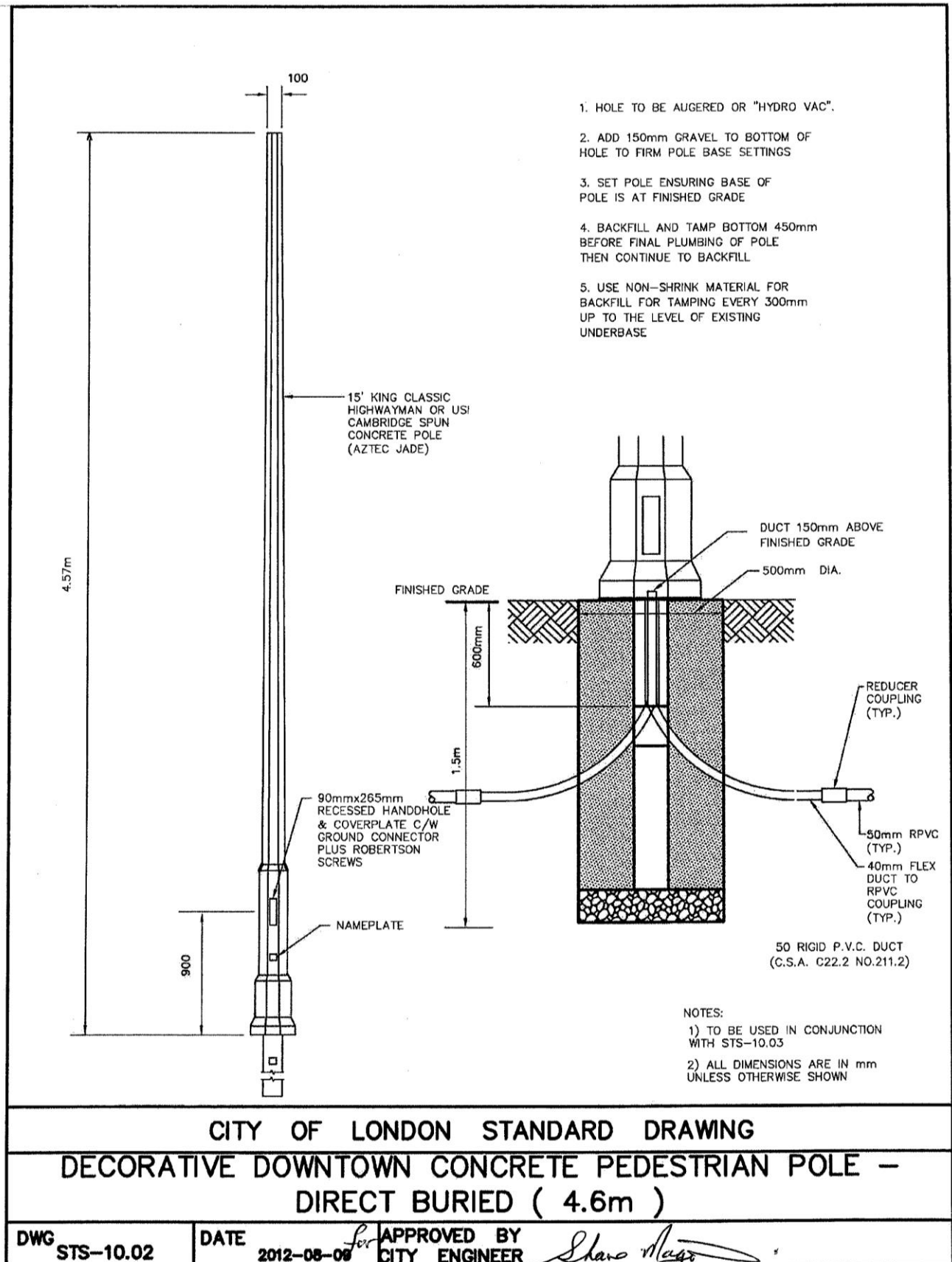




London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)

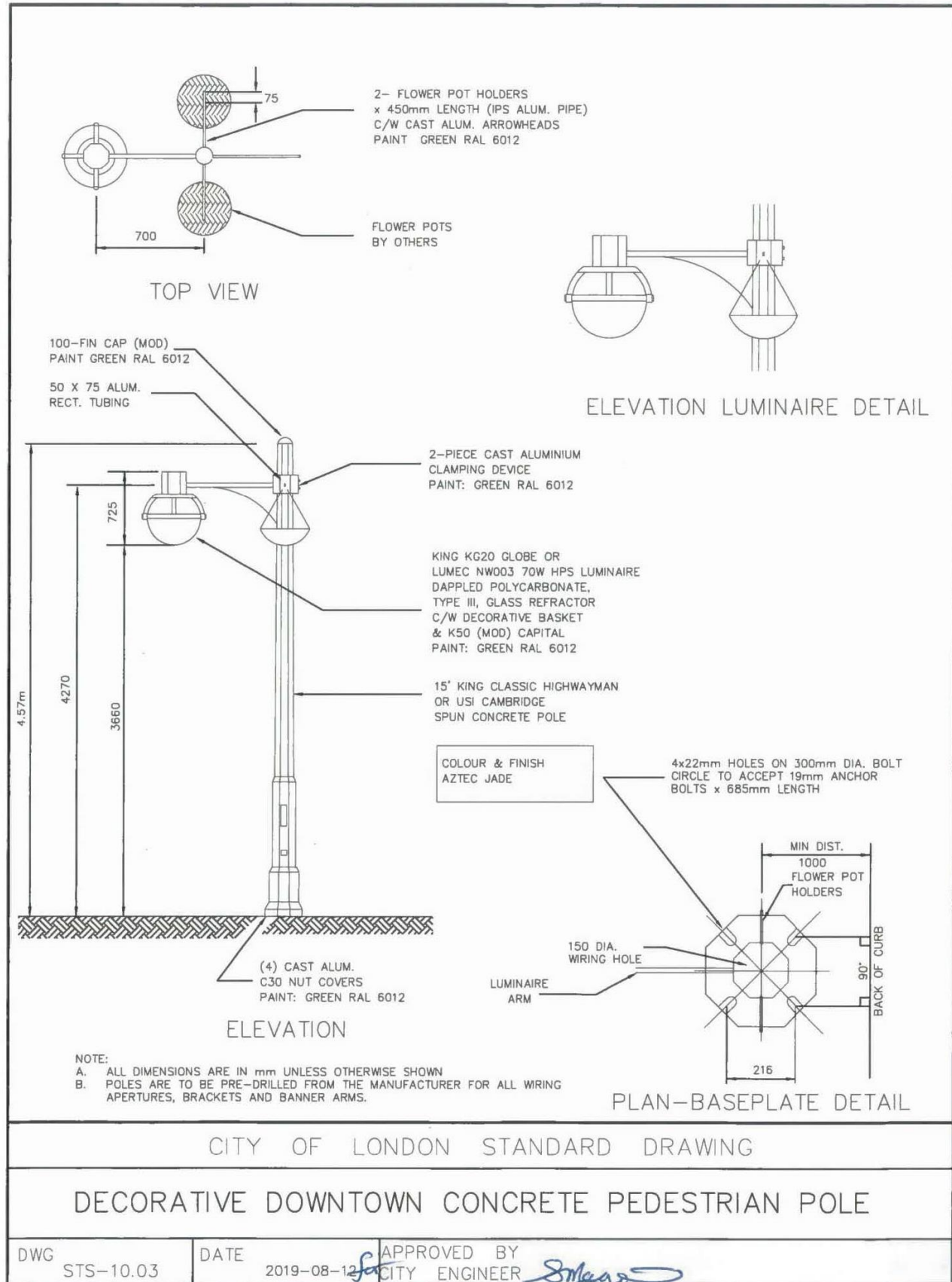


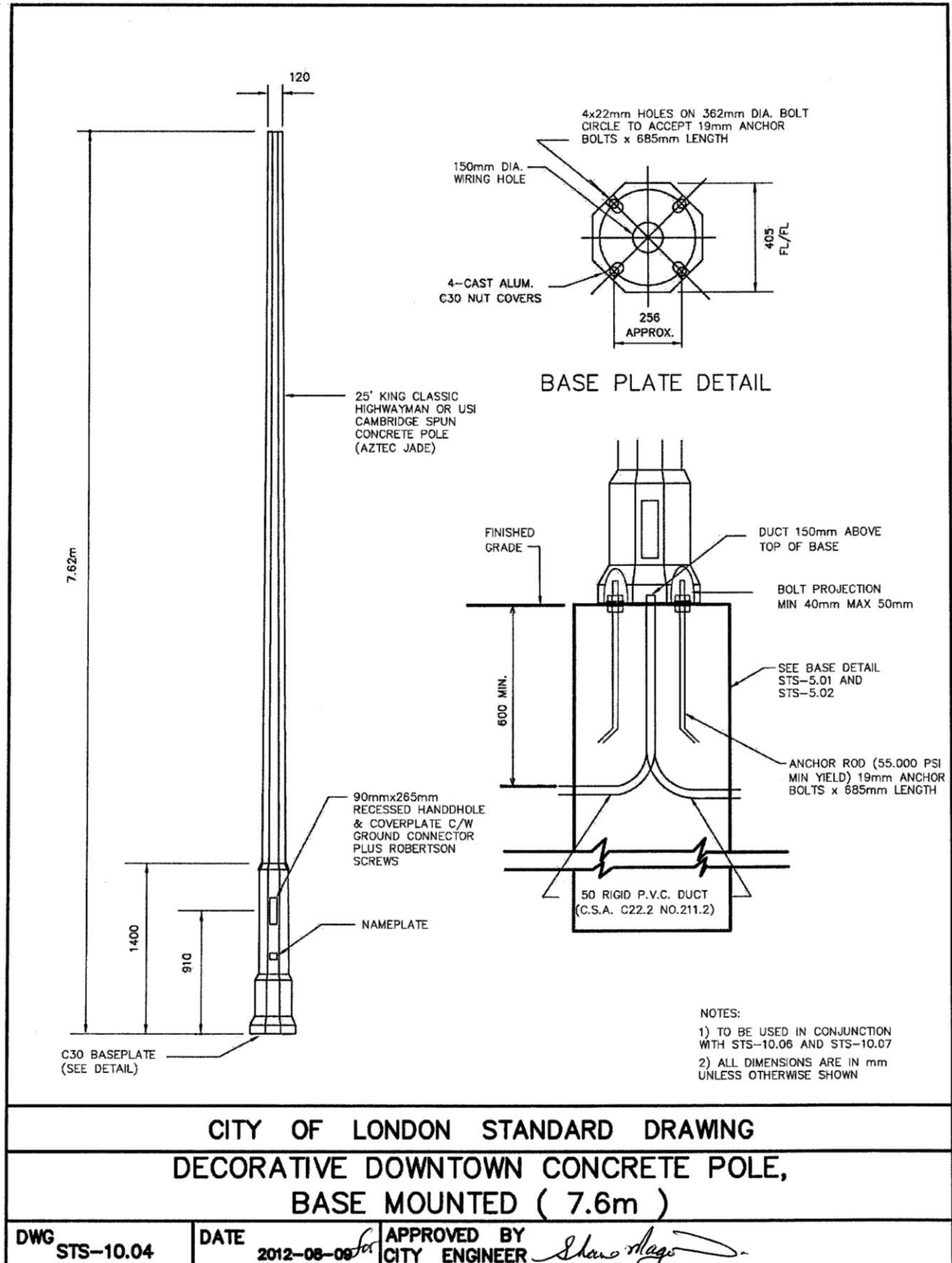


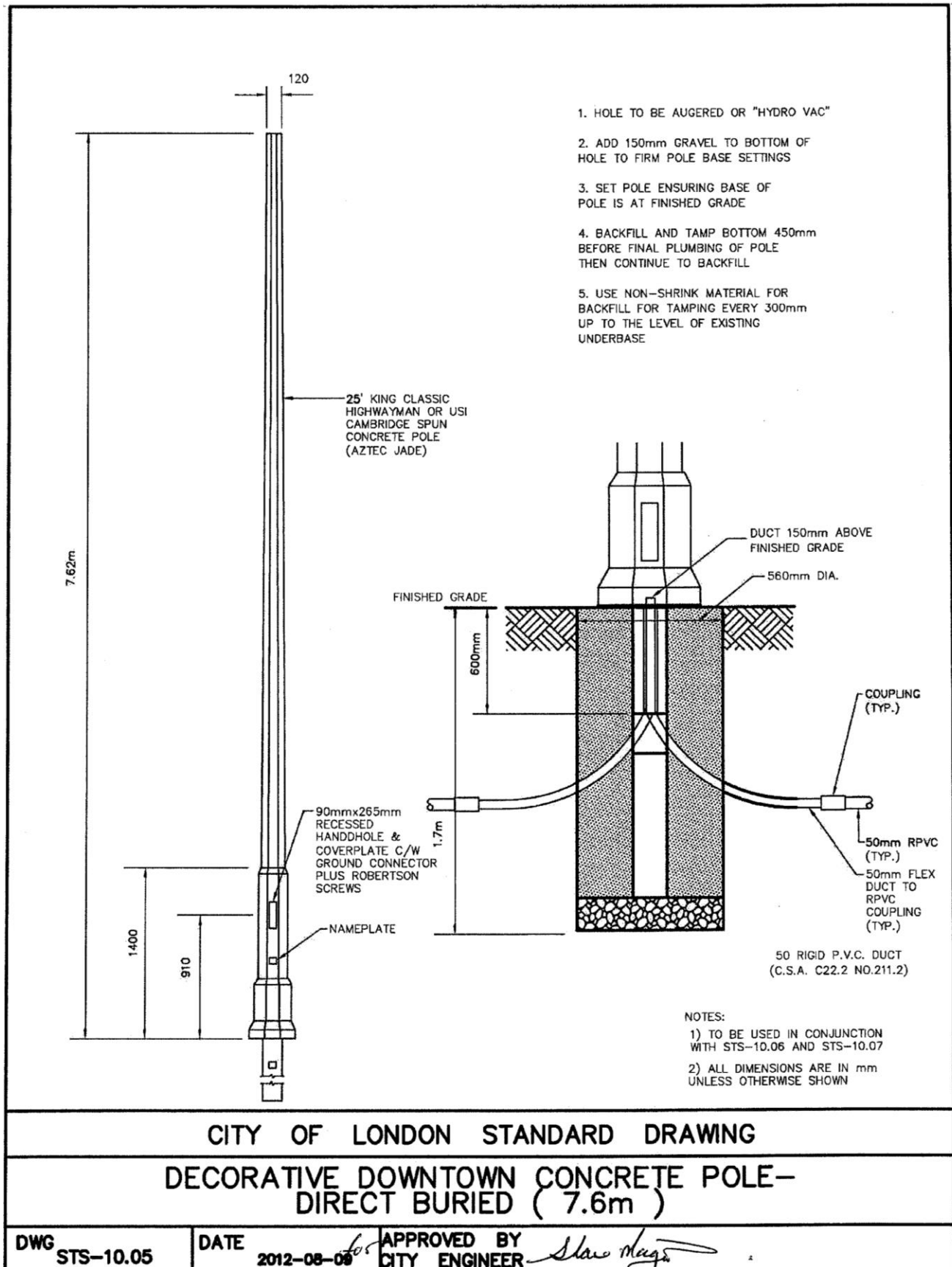


London
CANADA

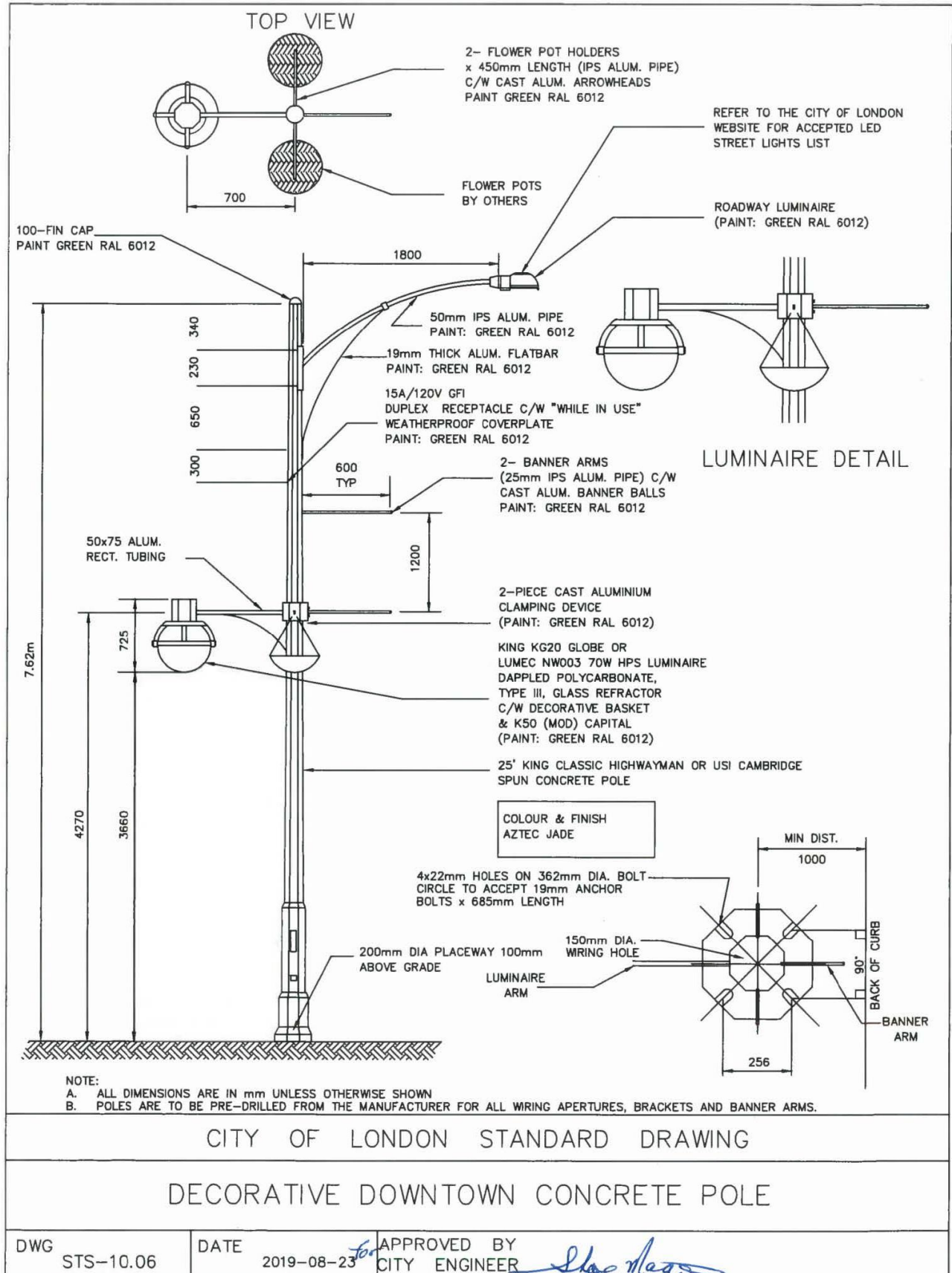
Supplemental Standards for Traffic Signal and Street Lighting (STS)

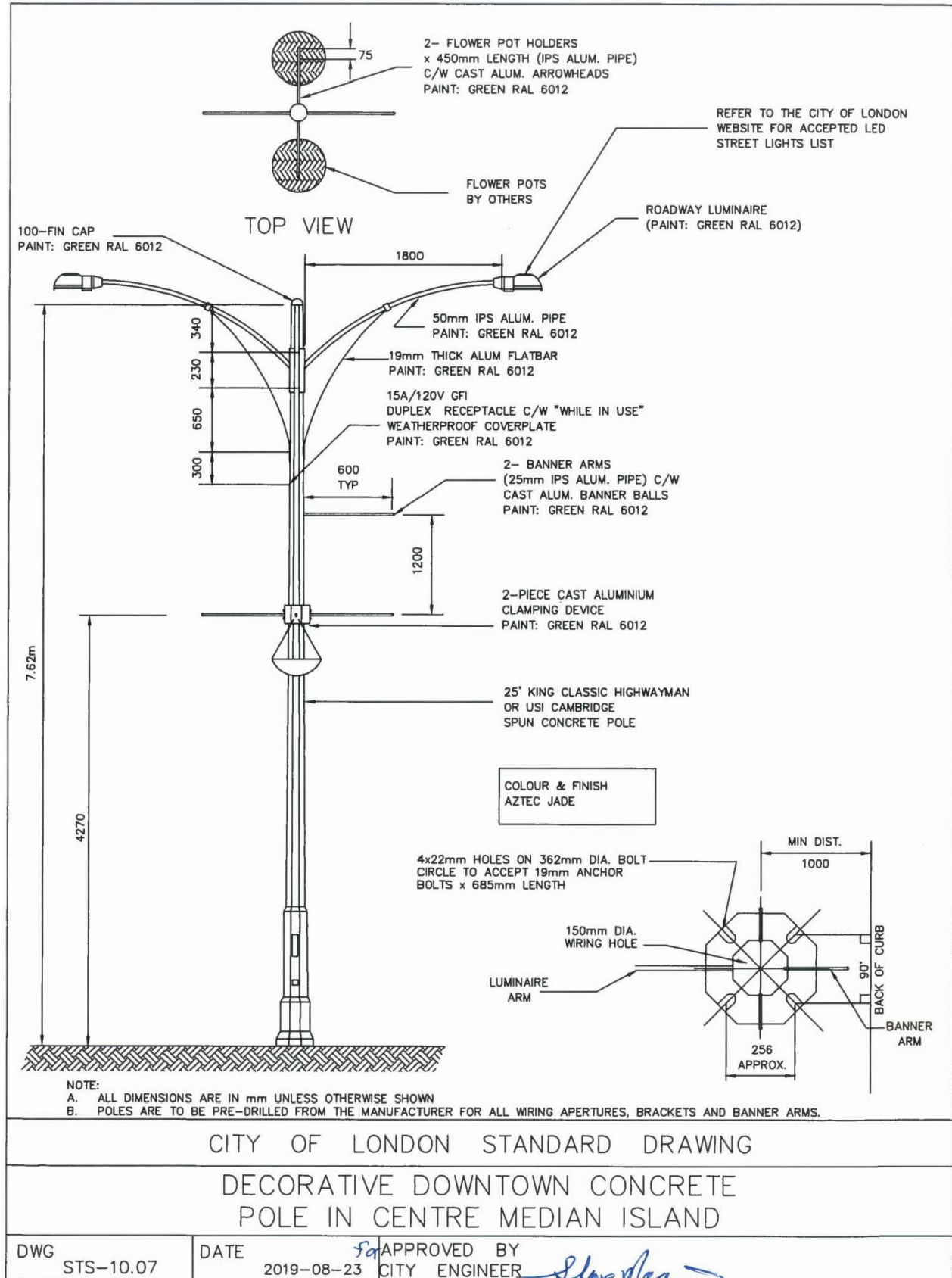


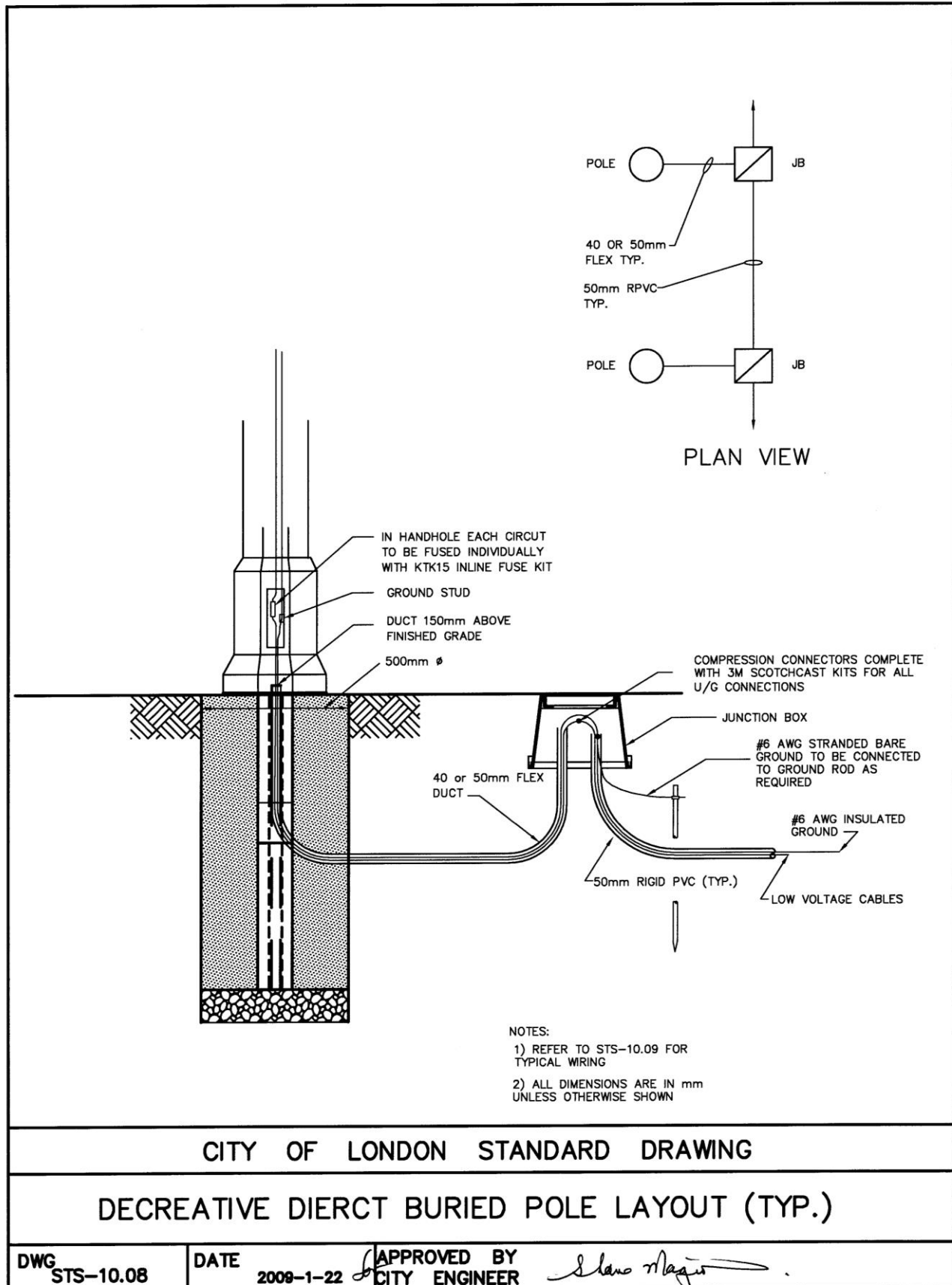




Supplemental Standards for Traffic Signal and Street Lighting (STS)



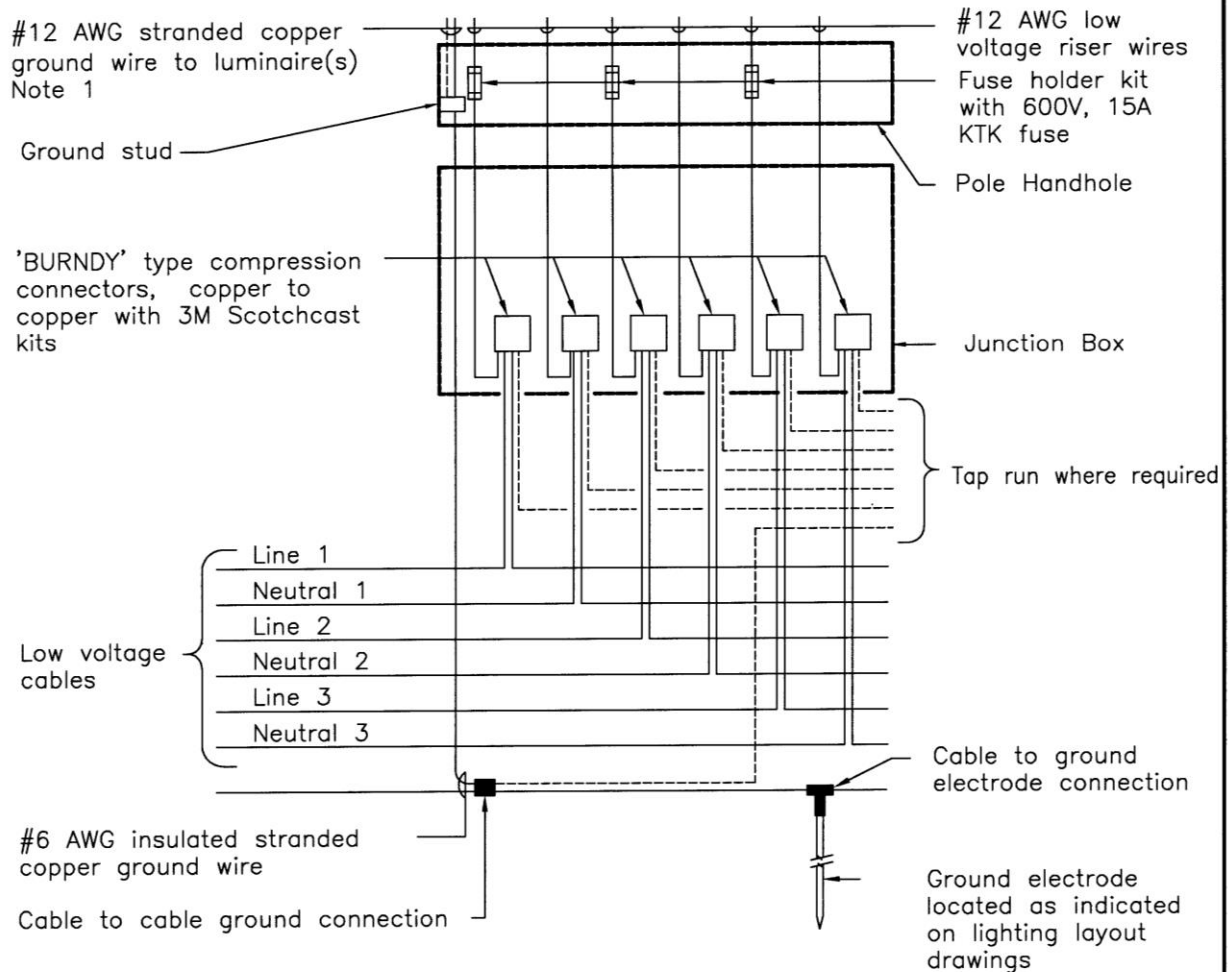






London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)



NOTES:

- A. Underground connections will only be permitted where 3 or more circuits are to be connected in a decorative concrete pole handhole otherwise OPSD 2255.020 shall apply.

CITY OF LONDON STANDARD DRAWING

DOWNTOWN POLE WIRING DIAGRAM
120V SYSTEM

DWG STS-10.09

DATE

2009-1-22

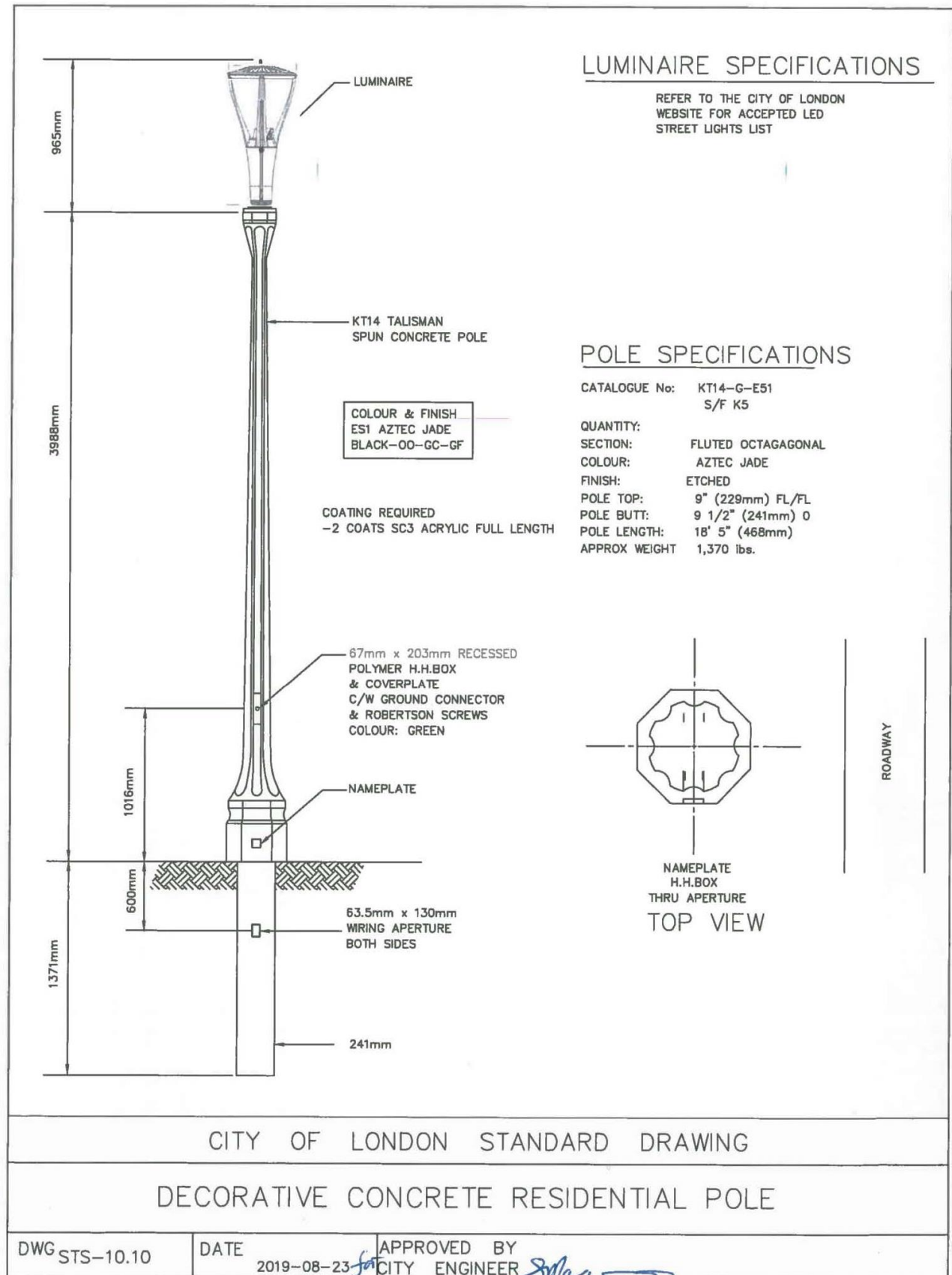
APPROVED BY
CITY ENGINEER

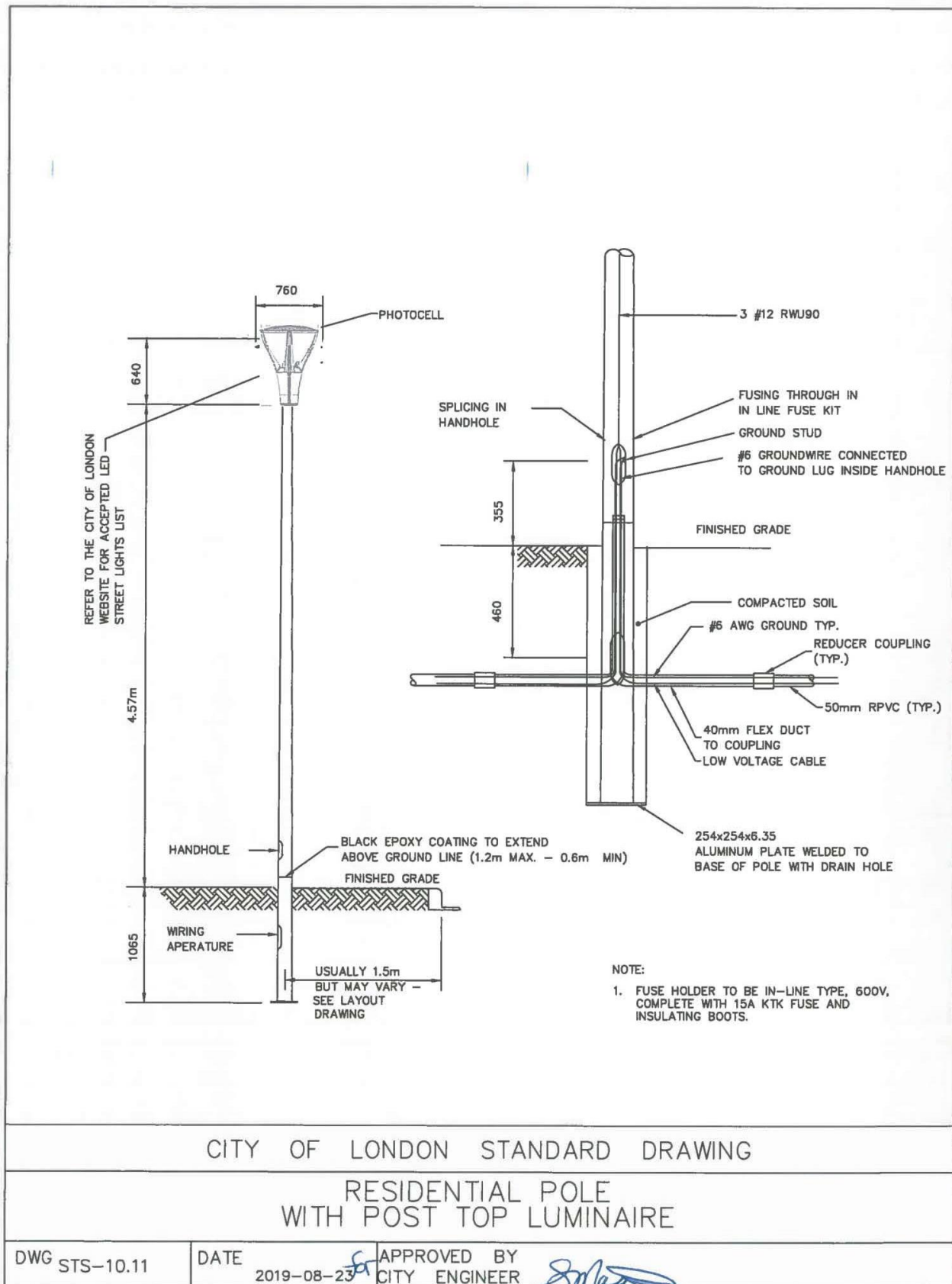
Shane Maguire

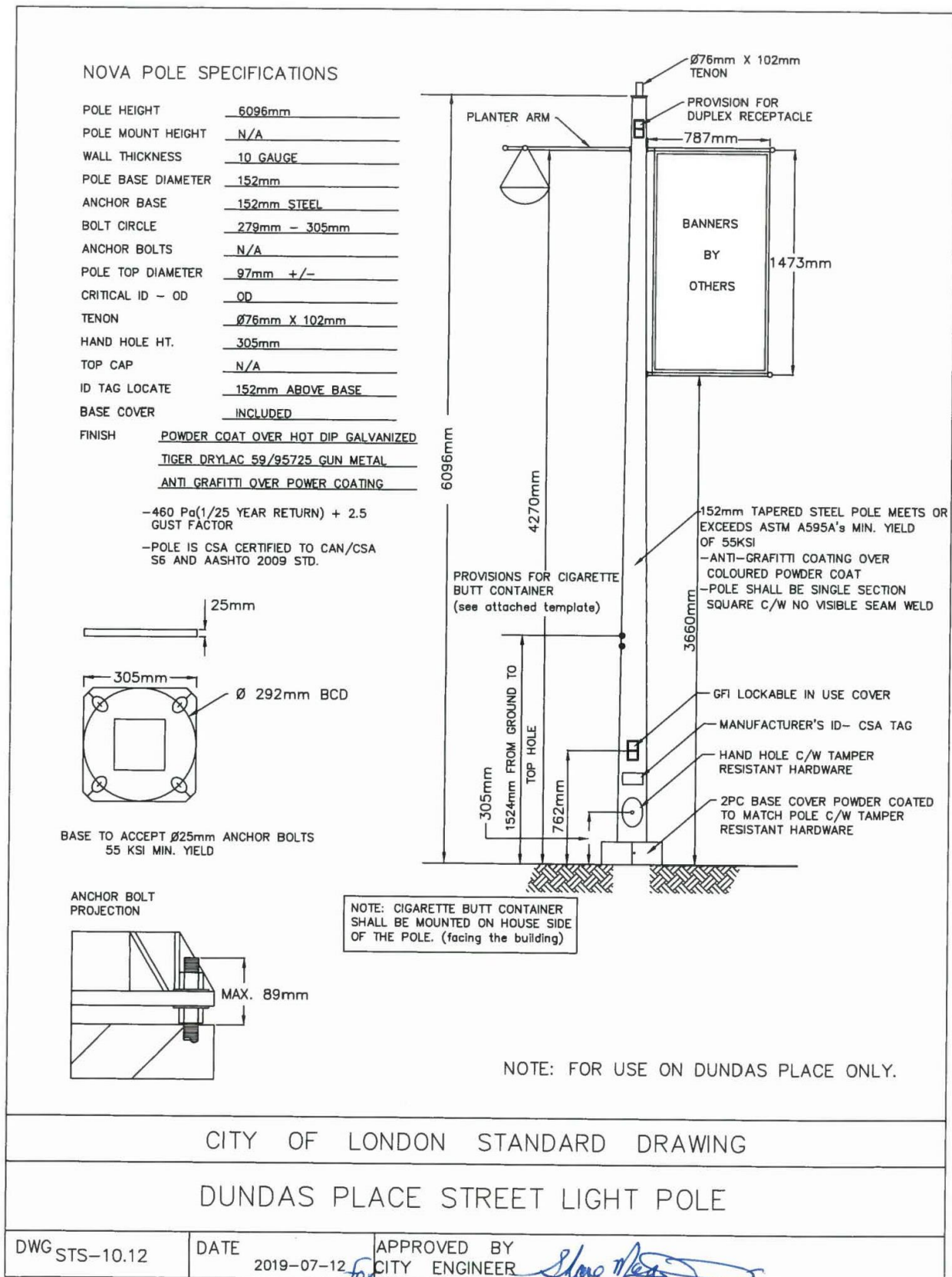


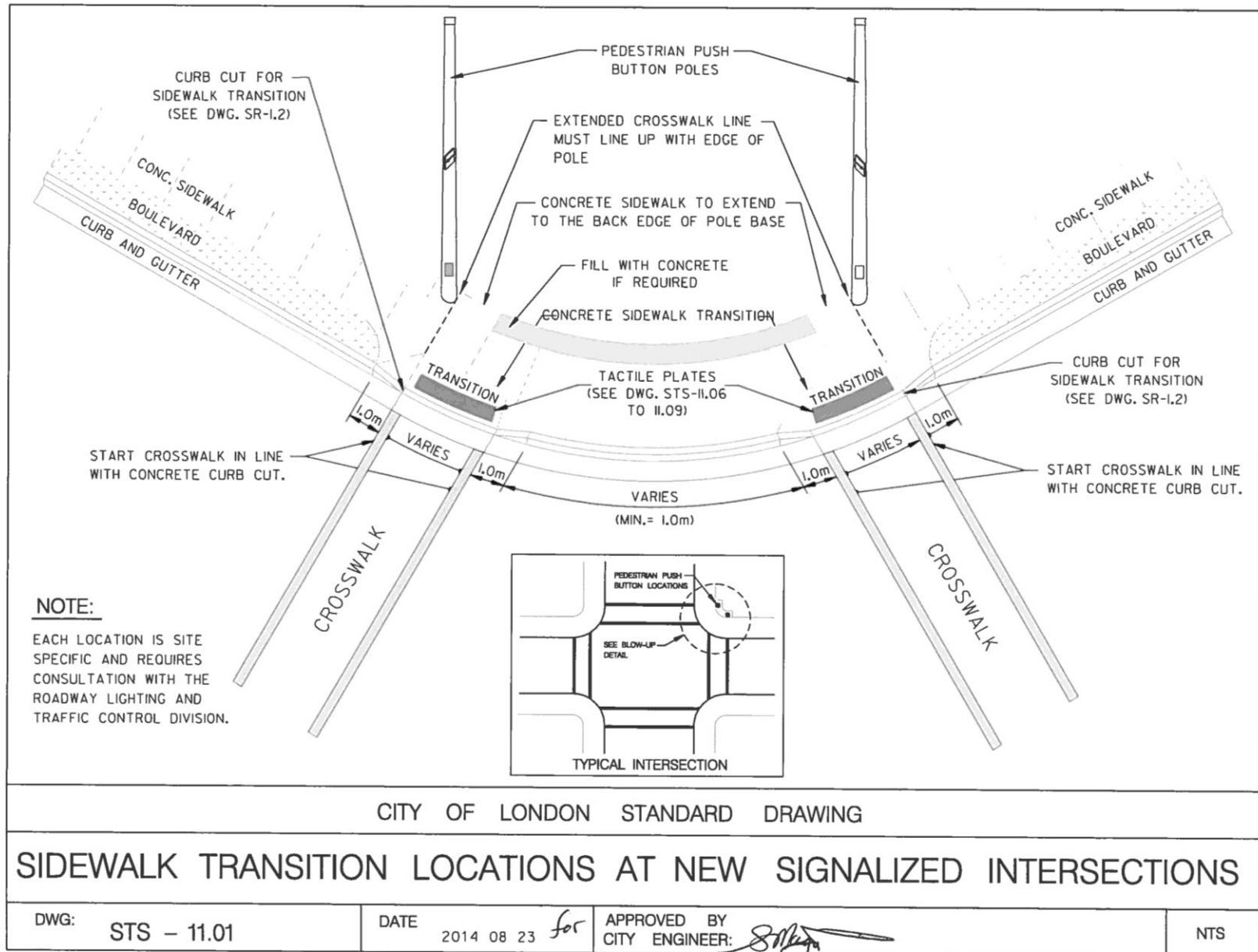
London
CANADA

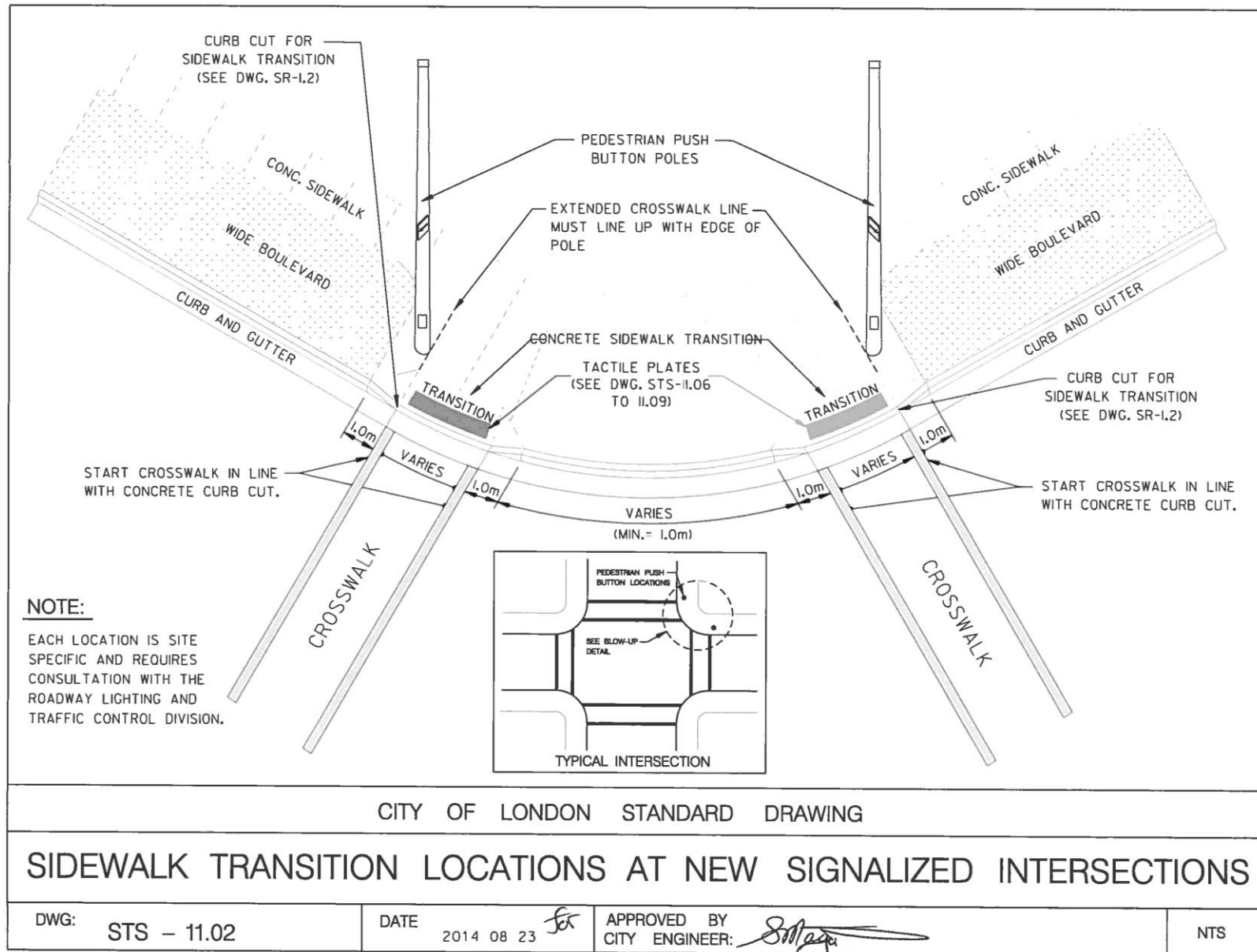
Supplemental Standards for Traffic Signal and Street Lighting (STS)

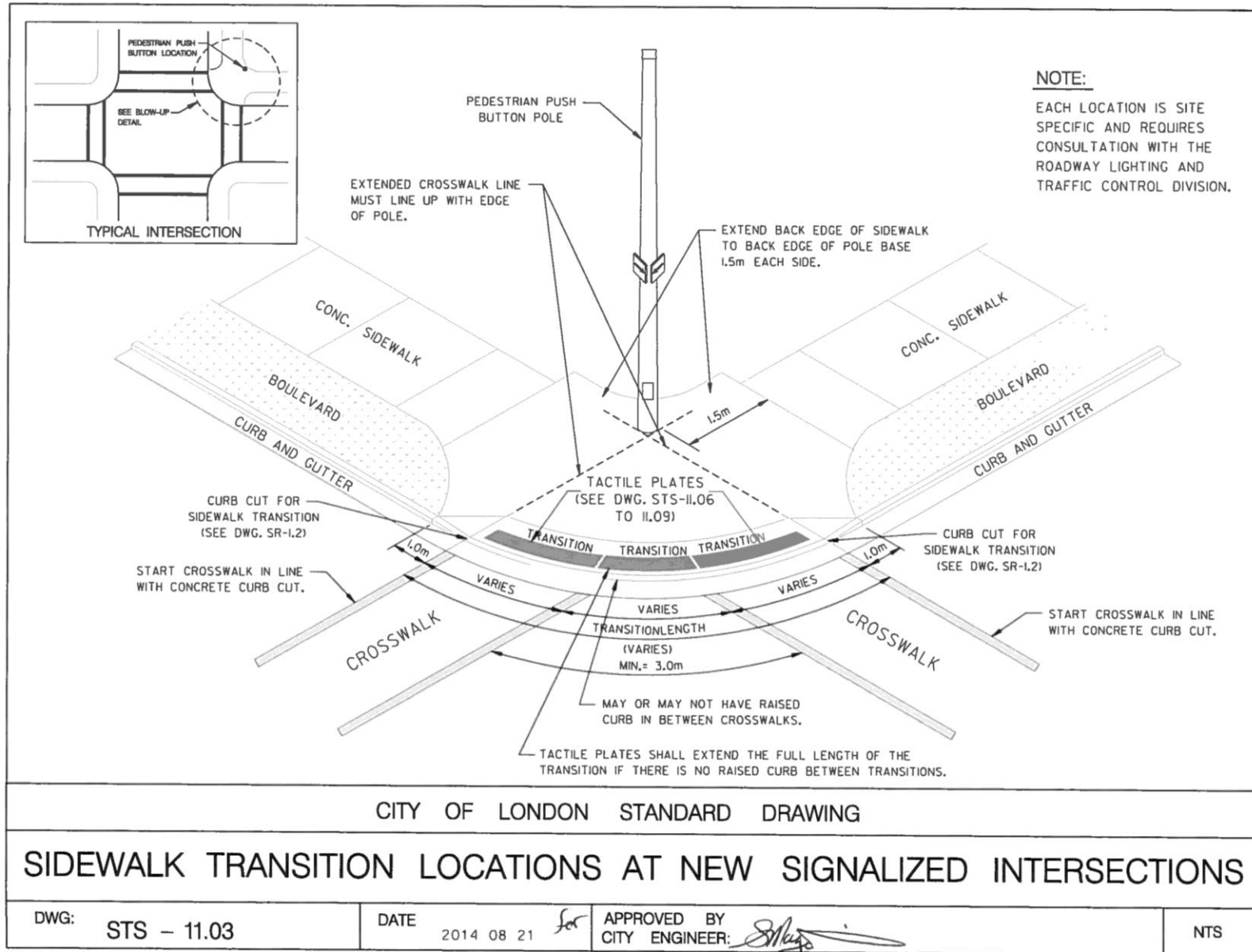


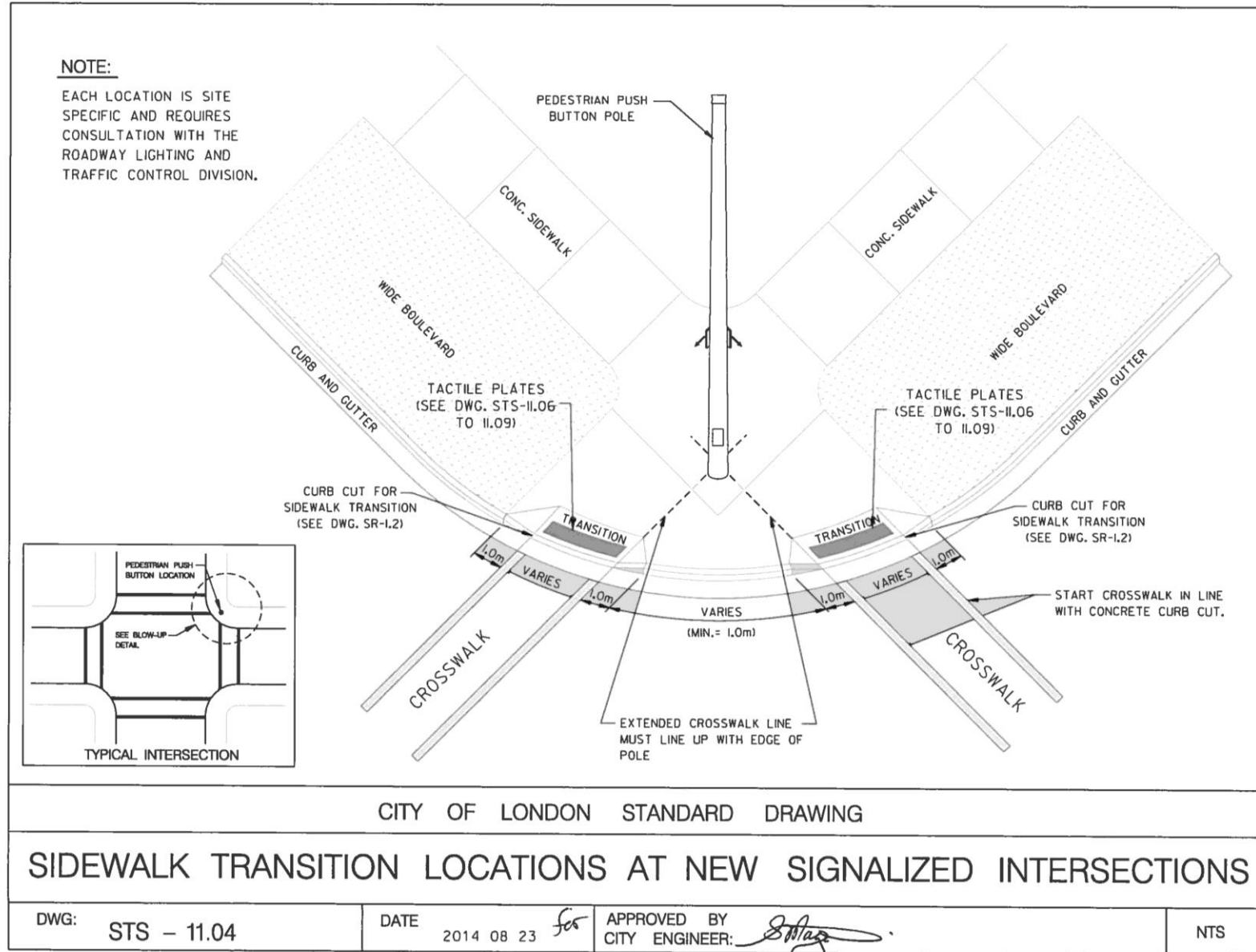


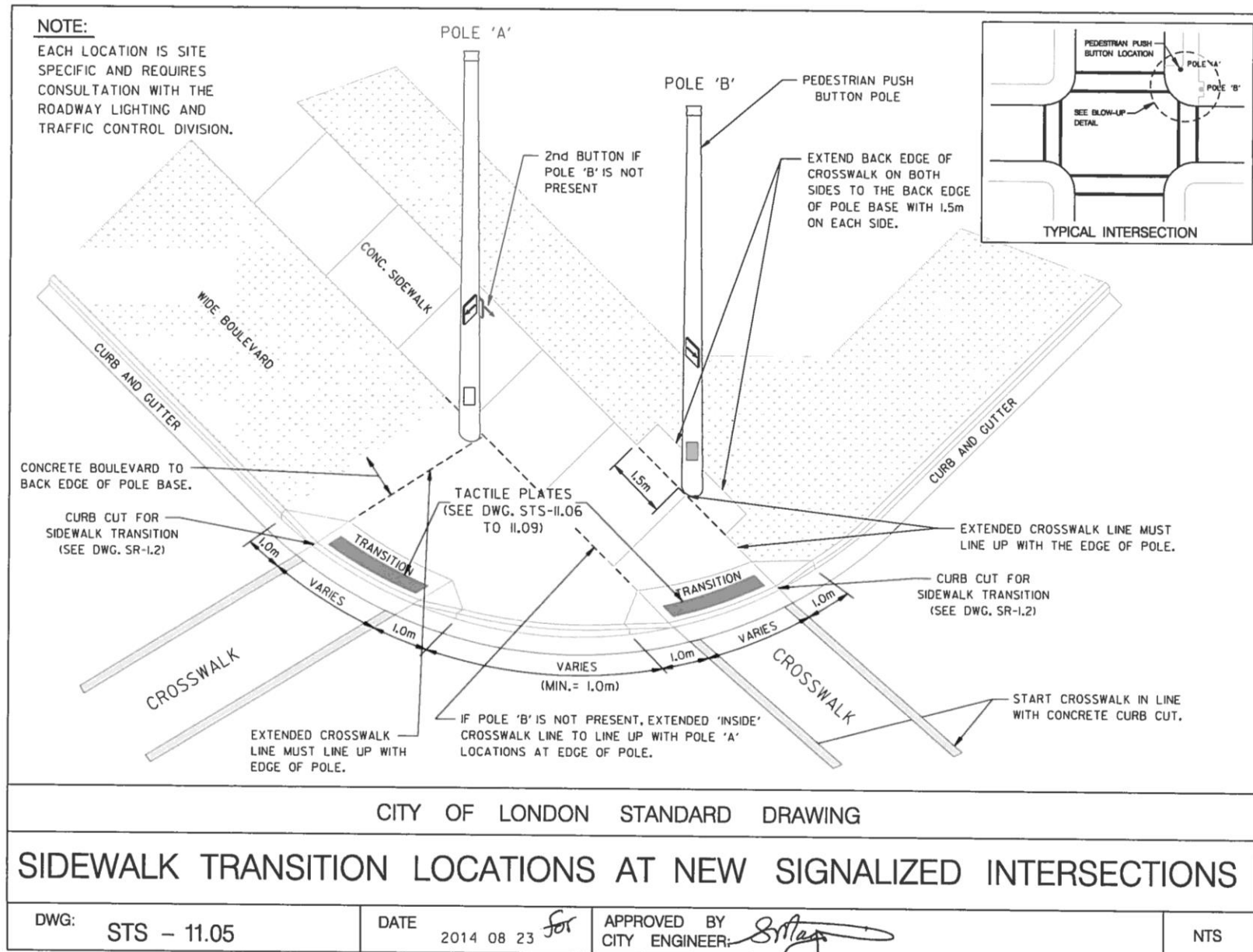








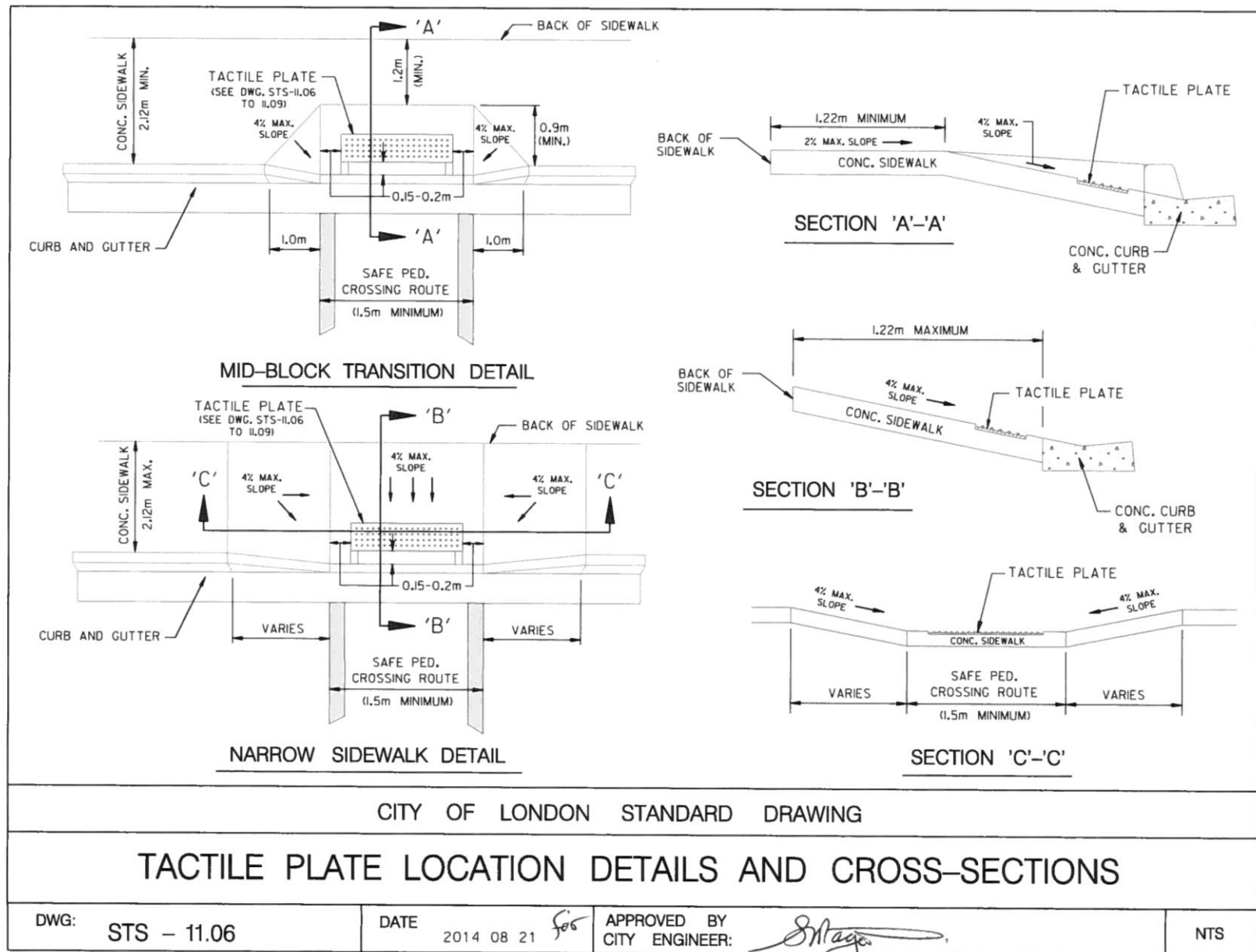


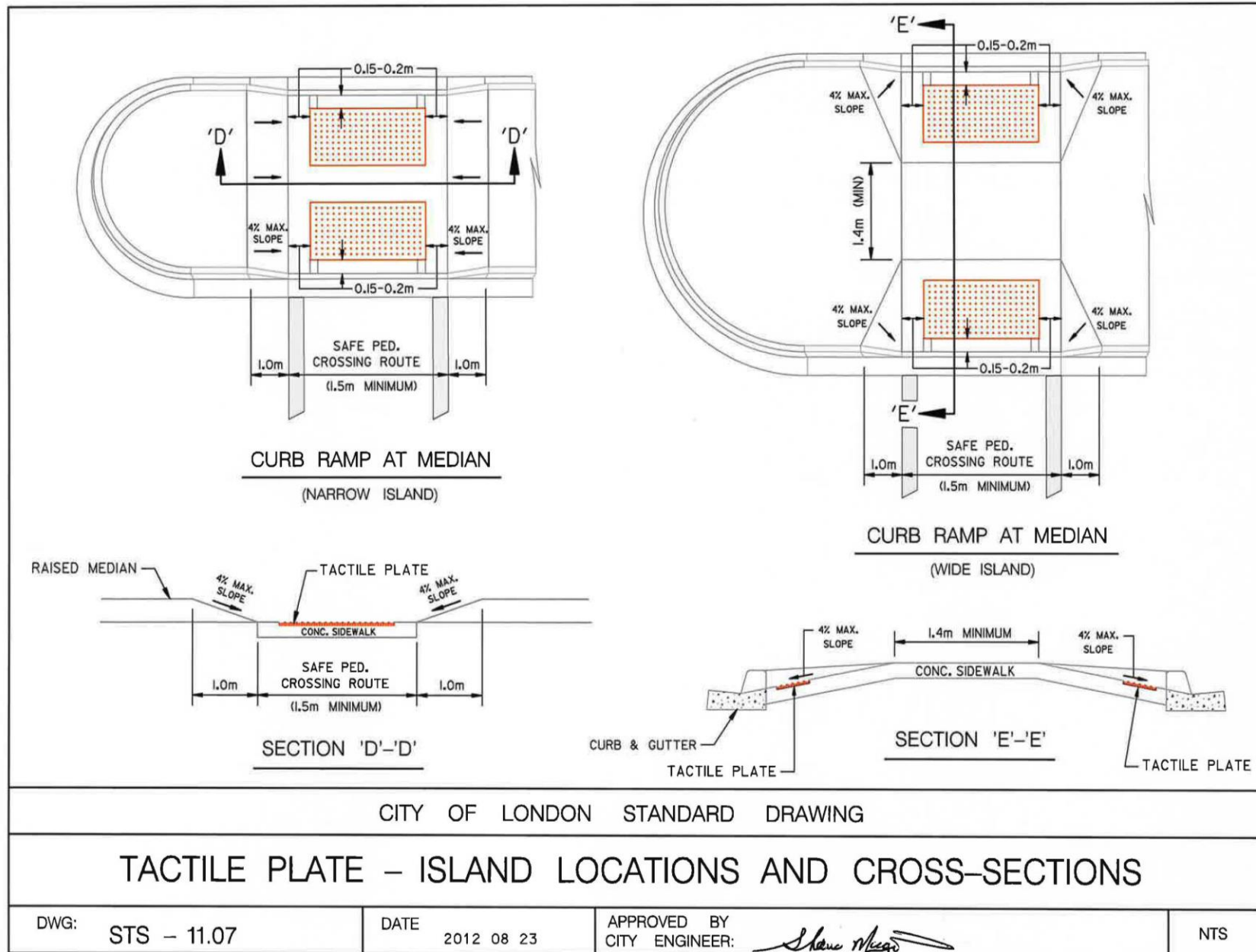




London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)

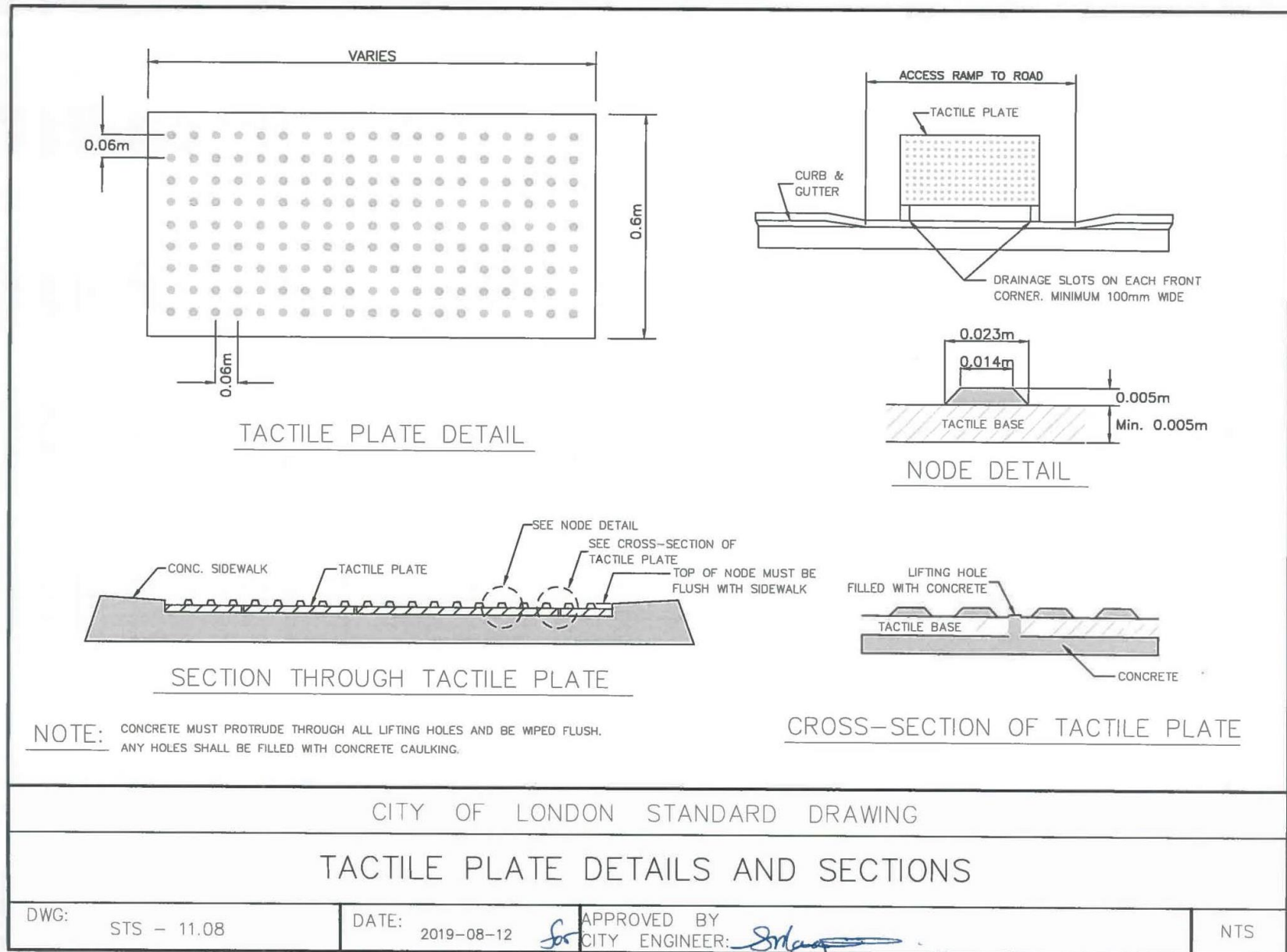


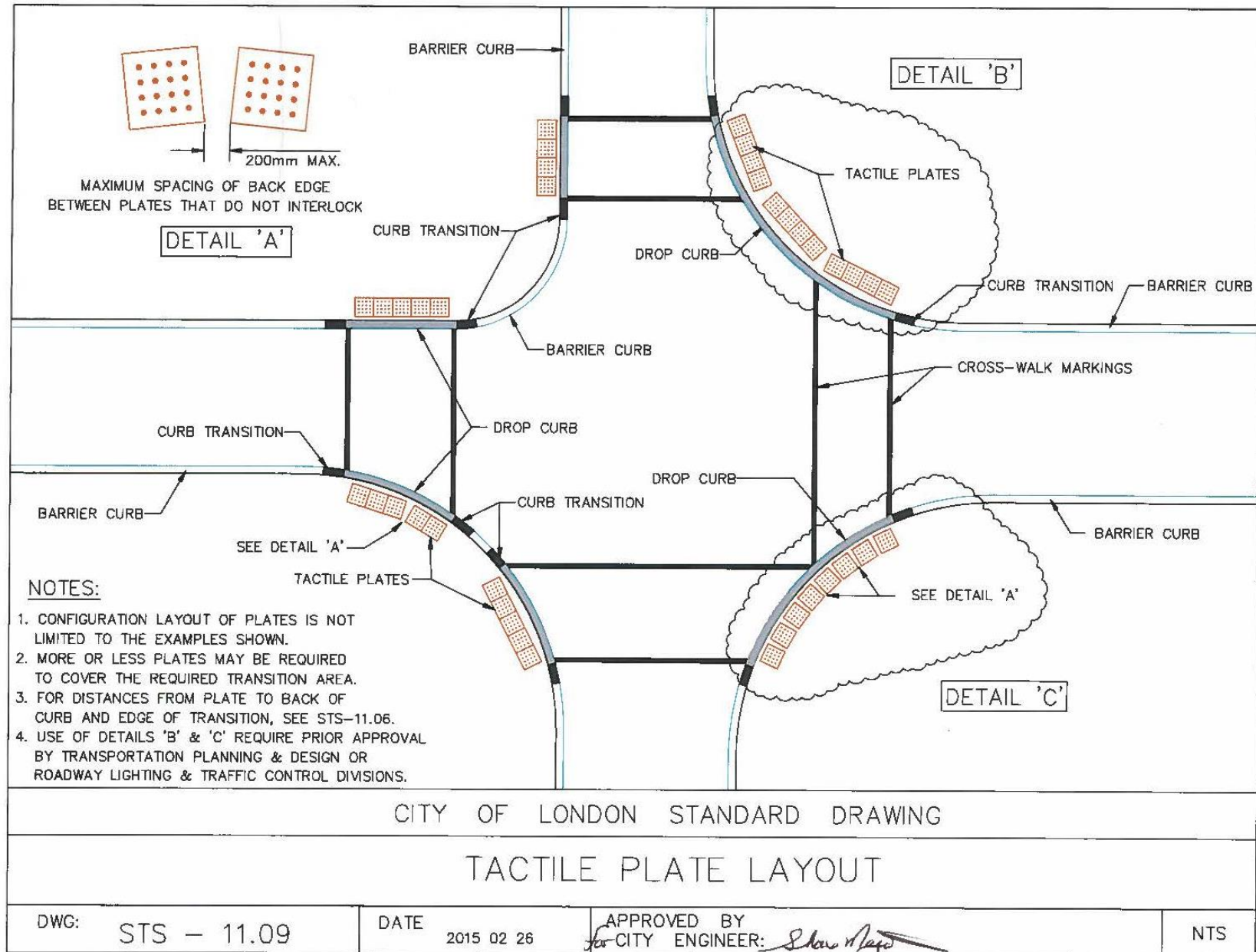




London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)

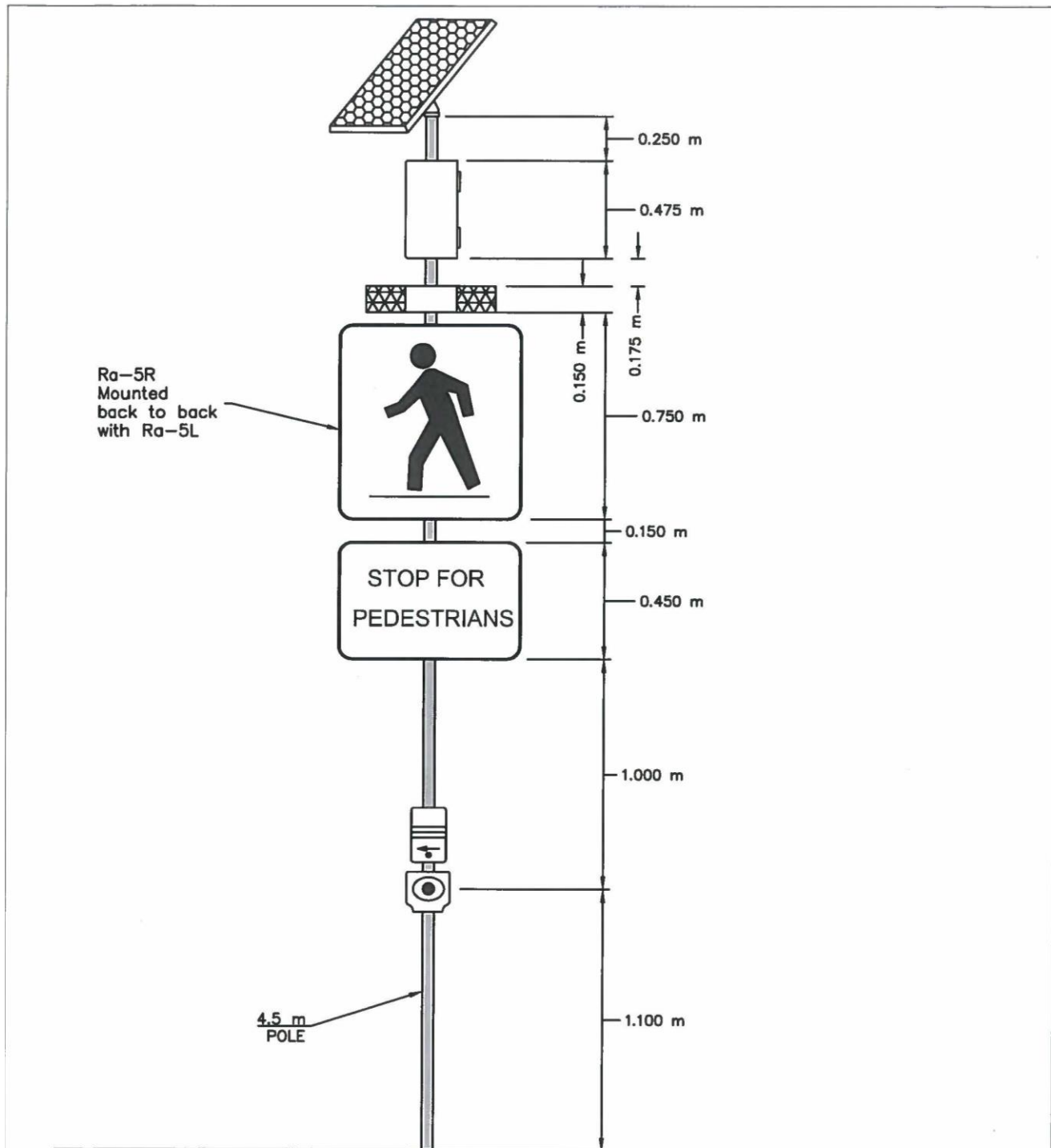






London
CANADA

Supplemental Standards for Traffic Signal and Street Lighting (STS)



CITY OF LONDON STANDARD DRAWING

PX0 POLE and SIGN CONFIGURATION

DWG STS-12

DATE 2019-01-11

APPROVED BY
CITY ENGINEER