BASE INDEX		
TYPE	DRAWING	POLE TYPES
A	E-1.2	TYPE 4 SIGNAL POST
B	E-1.2	TYPE 4A & 5 SIGNAL POST & 4.5m TO 7.5m POST TOP LUMINAIRE POLES
C	E-1.3 & E-1.4	7.5m, 9.0m & 11.0m DAVIT LUMINAIRE POLES
C1	E-1.3 & E-1.4	6.6m, 8.1m & 10.1m LUMINAIRE POLES & 3.1m, 5.1m & 6.6m POST TOP LUMINAIRE ON 0.9m HIGH SERVICE BASE
~~E2~~	~~E-1.5 & E-1.6~~	~~TYPE 1 AND 3 SIGNAL POLES~~
S2 ~~F2~~	E-1.7 & E-1.8	~~TYPE 6 AND 7 SIGNAL POLES~~ TYPE S POLE
L2	E-1.7 & E-1.8	TYPE L SIGNAL POLE

Ed 15

Ed 15

NOTES:

1. REFER TO SECTION 10 FOR SPECIFICATIONS

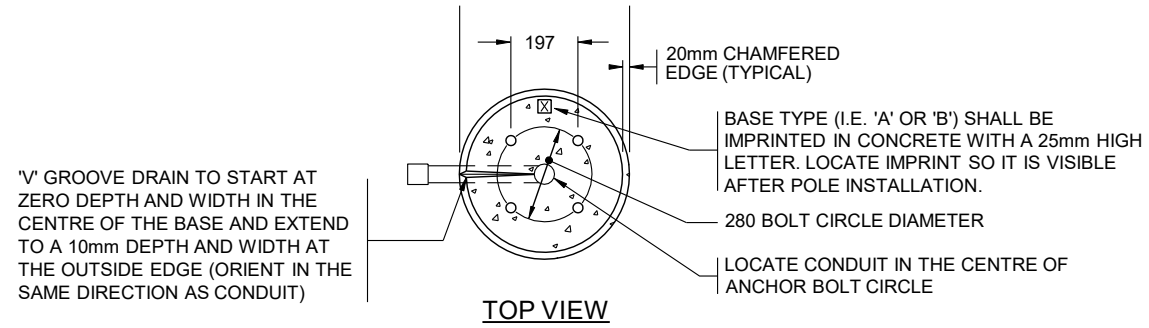
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO 13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWG\SE-1.1

2.28.2020

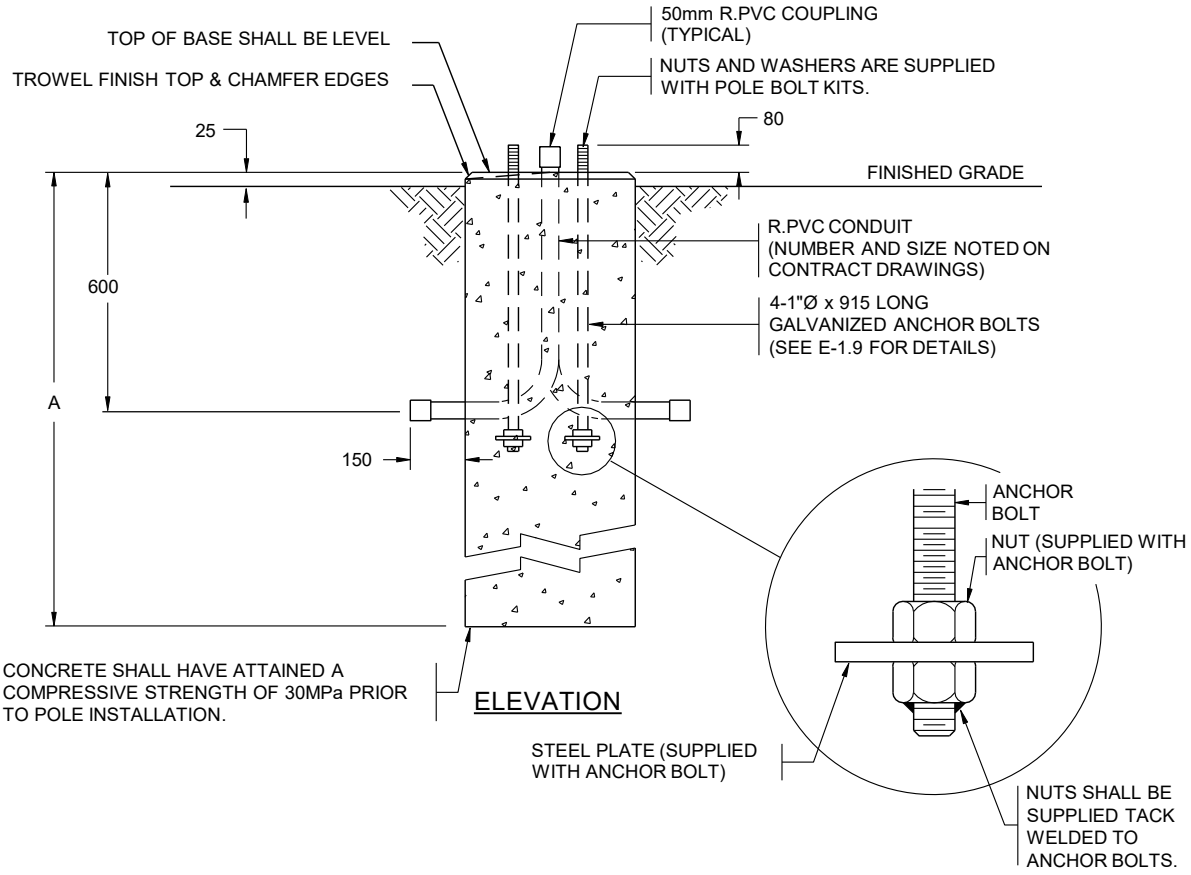
CITY OF NANAIMO
THE HARBOUR CITY

BASE INDEX

Scale: NTS
Created: MAY 2013
Rev Date: ~~MAY 2020~~
Dwg No: E-1.1



TOP VIEW



ELEVATION

BASE TYPE	POLE TYPE	APPROXIMATE MASS	VOLUME OF CONCRETE	DIM A
A	TYPE 4 SIGNAL POST (2.5m)	600 kg	0.24 m3	1200
B	TYPE 4A SHAFTS & 4.5m TO 7.5m POST TOP LUMINAIRE POLES	760 kg	0.30 m3	1500

NOTES:

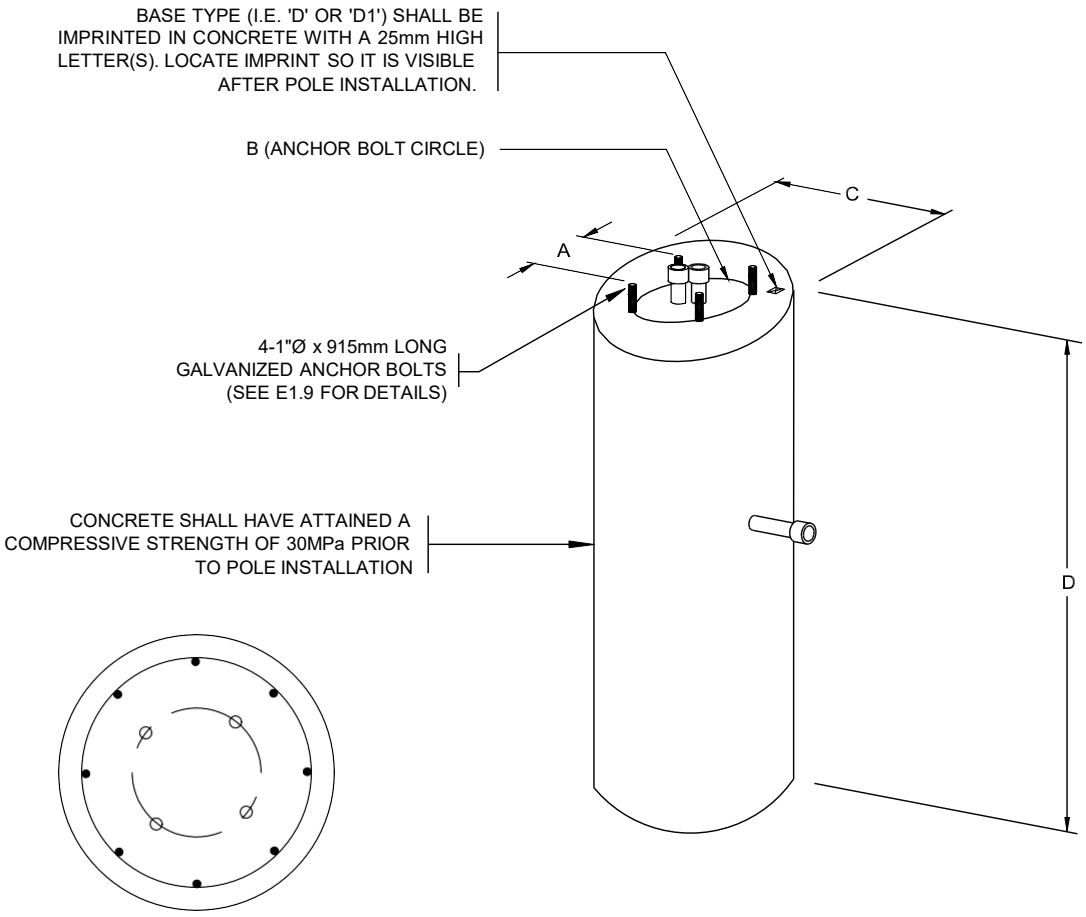
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. SEE DRAWINGS E-1.13 & E-1.14 FOR BACKFILL REQUIREMENTS.

CITY OF NANAIMO
THE HARBOUR CITY

TYPE A & B FORM TUBE CONCRETE BASES

Scale: NTS
Created: MAY 2006
Rev Date: MAY 2020
Dwg No: E-1.2

3.3.2020



PRECAST OR CAST IN PLACE CONCRETE BASES

BASE TYPE	POLE TYPE	APPROXIMATE MASS	VOLUME OF CONCRETE	A	B	C	D	REINFORCING
D	7.5m, SINGLE LUMINAIRE	2000 kg	0.39m3	197	250	500	2200	6-15M VERTS 10M SPIRAL @ 150
D1	9.1m, DOUBLE LUMINAIRE	2000 kg	0.62m3	269	380	600	2200	8-15M VERTS 10M SPIRAL @ 150

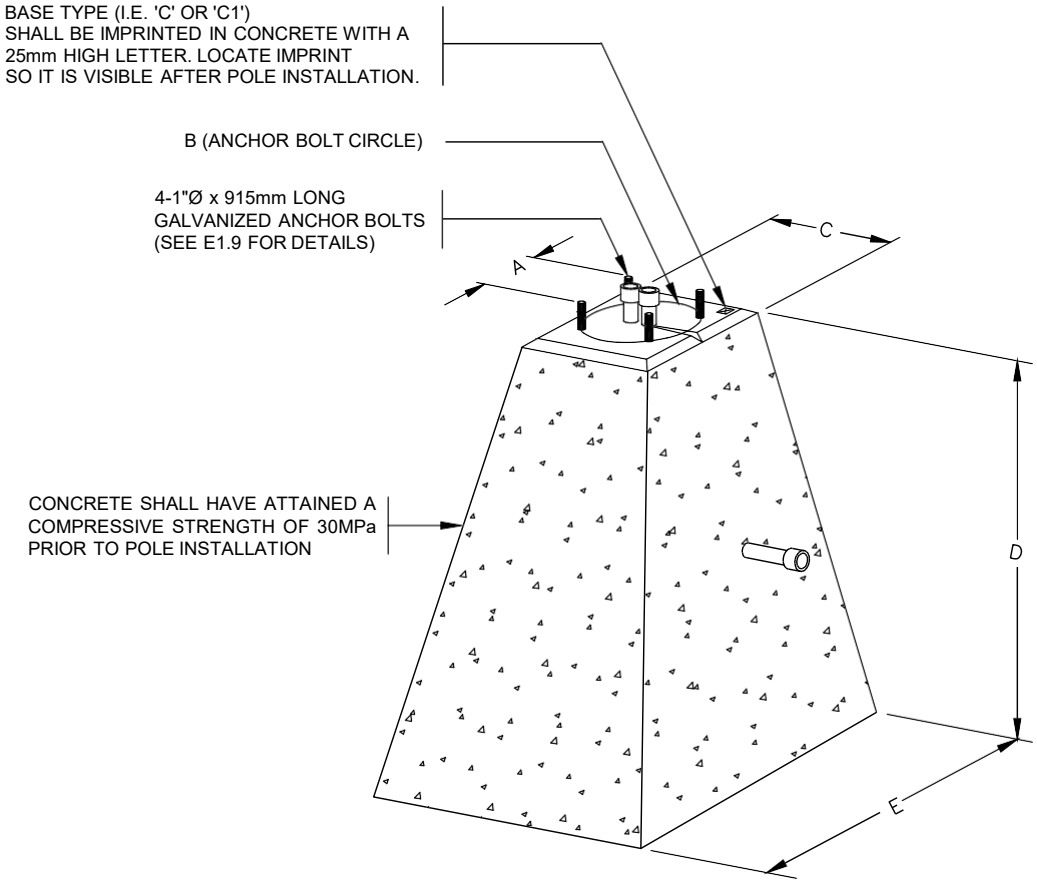
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. SEE DRAWING E-1.4 FOR ADDITIONAL DETAILS.
4. SEE DRAWINGS E-1.13 & E-1.14 FOR BACKFILL REQUIREMENTS.
5. CLEAR COVER TO REINFORCING 50mm.

CITY OF NANAIMO
THE HARBOUR CITY

TYPE D & D1 FORM TUBE PRECAST OR CAST-IN-PLACE CONCRETE BASES

Scale:	NTS
Created:	NOV 2012
Rev Date:	MAY 2020
Dwg No:	E-1.2A



PRECAST CONCRETE BASES

BASE TYPE	POLE TYPE	APPROXIMATE MASS	VOLUME OF CONCRETE	A	B	C	D	E
C	7.5m, 9.0m & 11.0m DAVIT LUMINAIRE POLES	2000 kg	0.83m3	197	280	450	1500	1000
C1	6.6m, 8.1m & 10.1m DAVIT LUMINAIRE & 3.1m, 5.1m & 6.6m POST TOP LUMINAIRE ON 0.9m HIGH SERVICE BASE	2000 kg	0.83m3	269	380	450	1500	1000

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. SEE DRAWING E-1.4 & E-1.4A FOR ADDITIONAL DETAILS.
4. SEE DRAWING E-1.4A & E-1.14 FOR BACKFILL REQUIREMENTS.

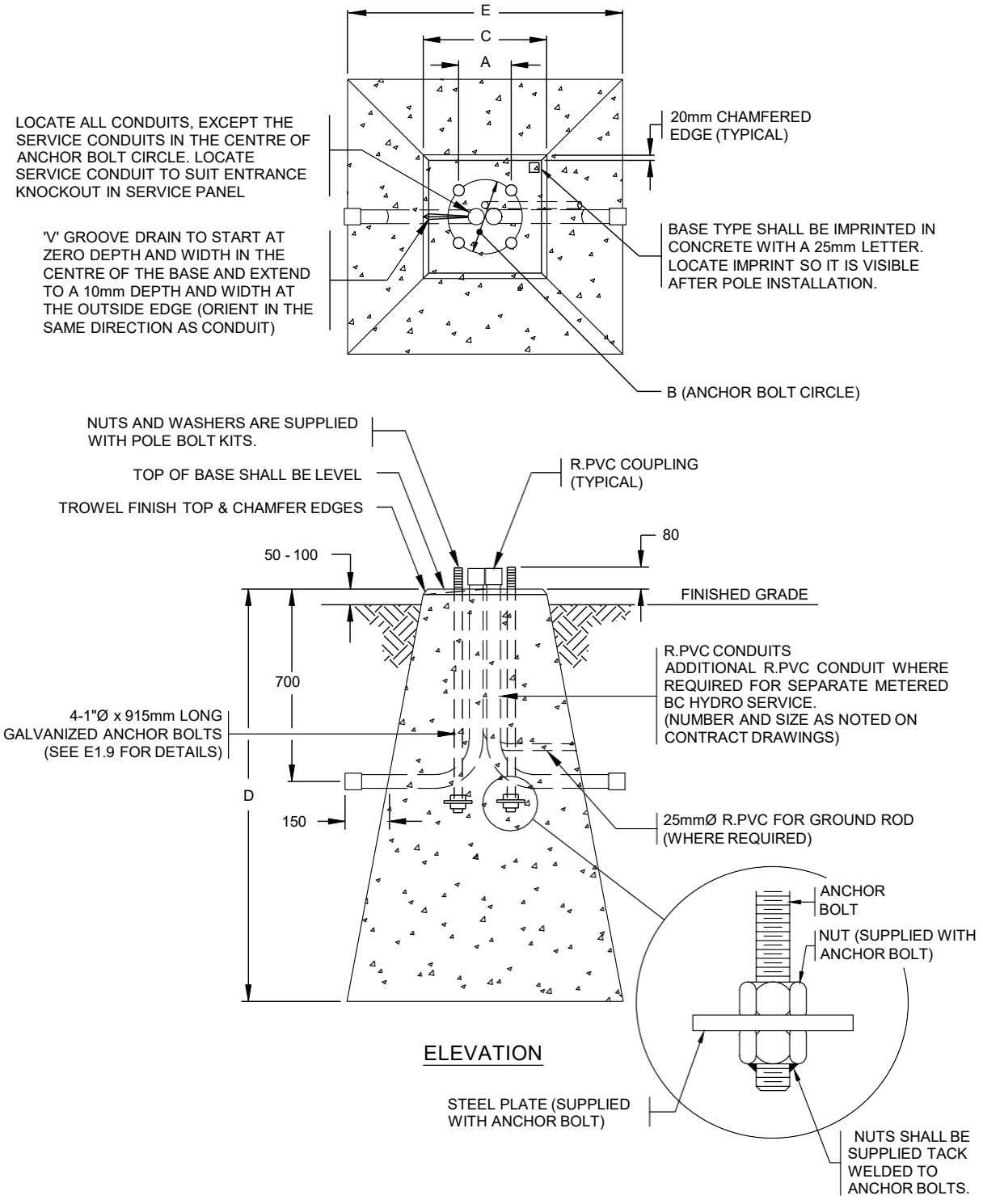
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO\13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWG\SE-1.3

2.28.2020

CITY OF NANAIMO
THE HARBOUR CITY

TYPE C & C1 TRAPEZOIDAL SHAPE CONCRETE BASES

Scale: NTS
Created: MAY 1999
Rev Date: NOV 2016
Dwg No: E-1.3



SEE DRAWING E-1.3 FOR NOTES AND ADDITIONAL DETAILS

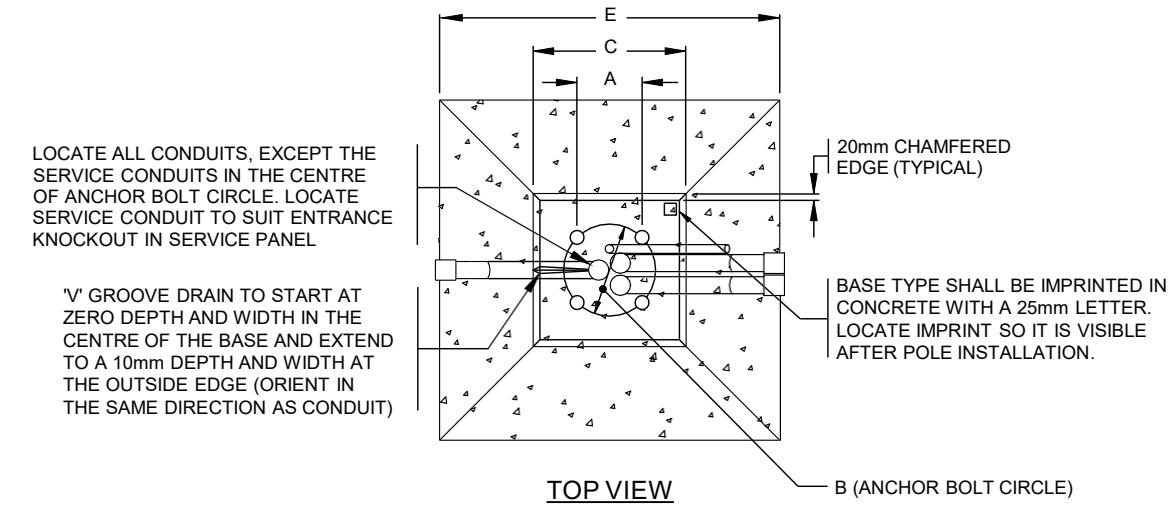
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO\13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWGS\E-1.4

3.3.2020

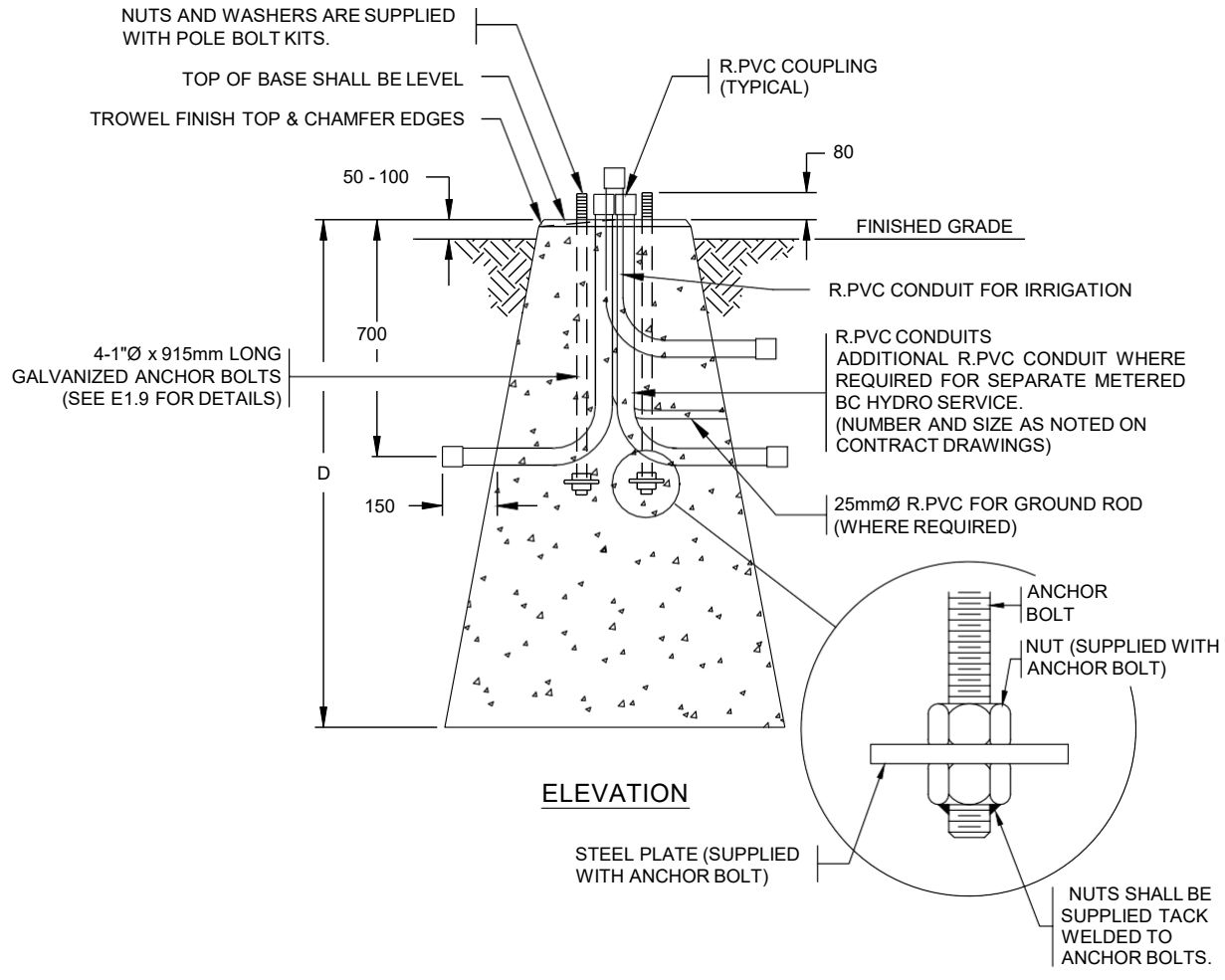
CITY OF NANAIMO
THE HARBOUR CITY

TYPE C & C1 TRAPEZOIDAL SHAPE CONCRETE BASES

Scale:	NTS
Created:	JUN 2013
Rev Date:	NOV 2016
Dwg No:	E-1.4



TOP VIEW



ELEVATION

SEE DRAWING E-1.3 FOR NOTES AND ADDITIONAL DETAILS

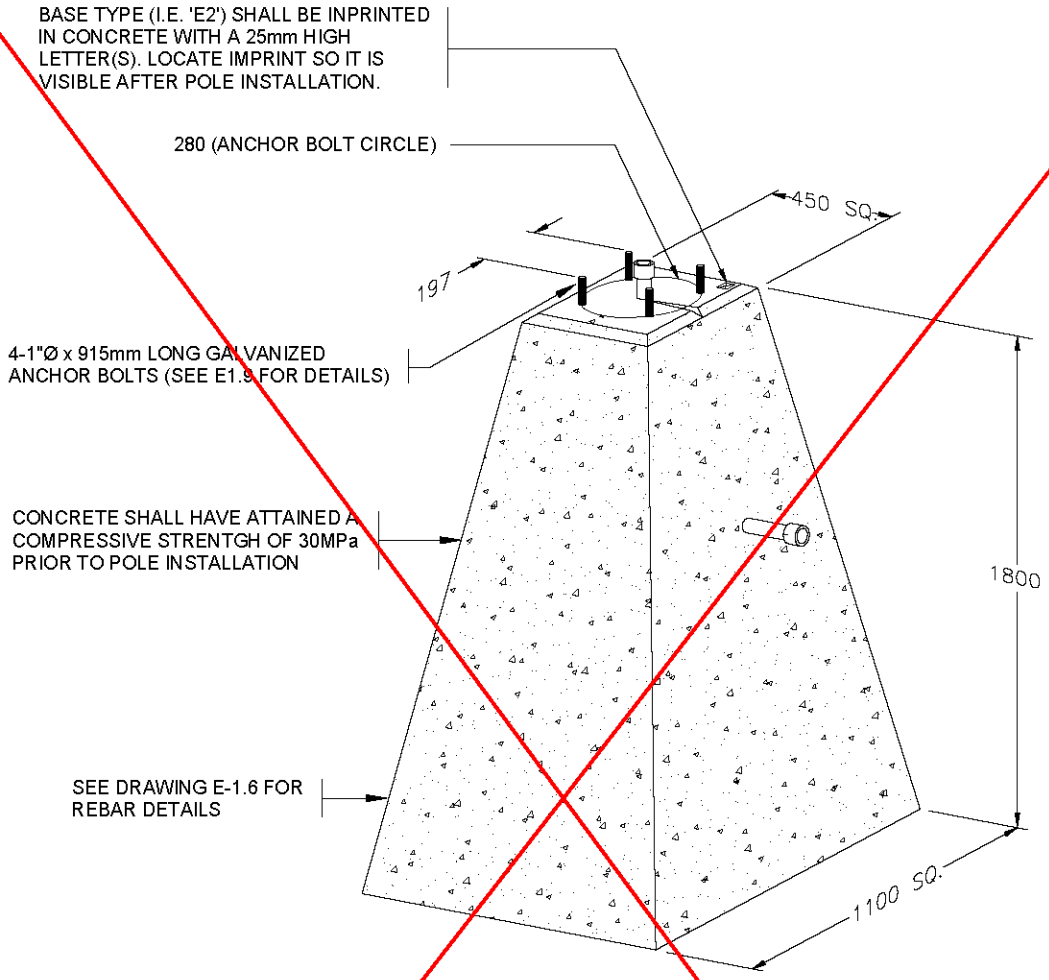
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOE5SIEDITION NO13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWG\SIE-1.4A

2.28.2020

CITY OF NANAIMO
THE HARBOUR CITY

TYPE C & TYPE C1 TRAPEZOIDAL SHAPE CONCRETE BASES WITH IRRIGATION

Scale:	NTS
Created:	JUN 2013
Rev Date:	NOV 2019
Dwg No:	E-1.4A



PRECAST CONCRETE BASES

BASE TYPE	POLE TYPE	APPROXIMATE MASS	VOLUME OF CONCRETE
E2	TYPE 1 AND 3 SIGNAL POLES	2450 kg	1.0m^3

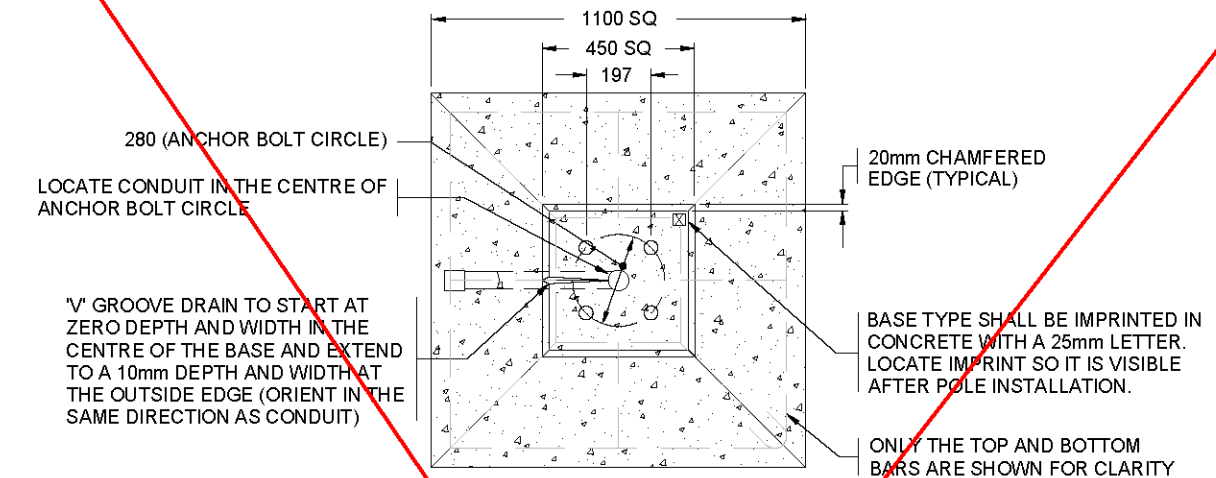
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. SEE DRAWING E-1.6 FOR ADDITIONAL DETAILS.
4. SEE DRAWINGS E-1.13 & E-1.14 FOR BACKFILL REQUIREMENTS.

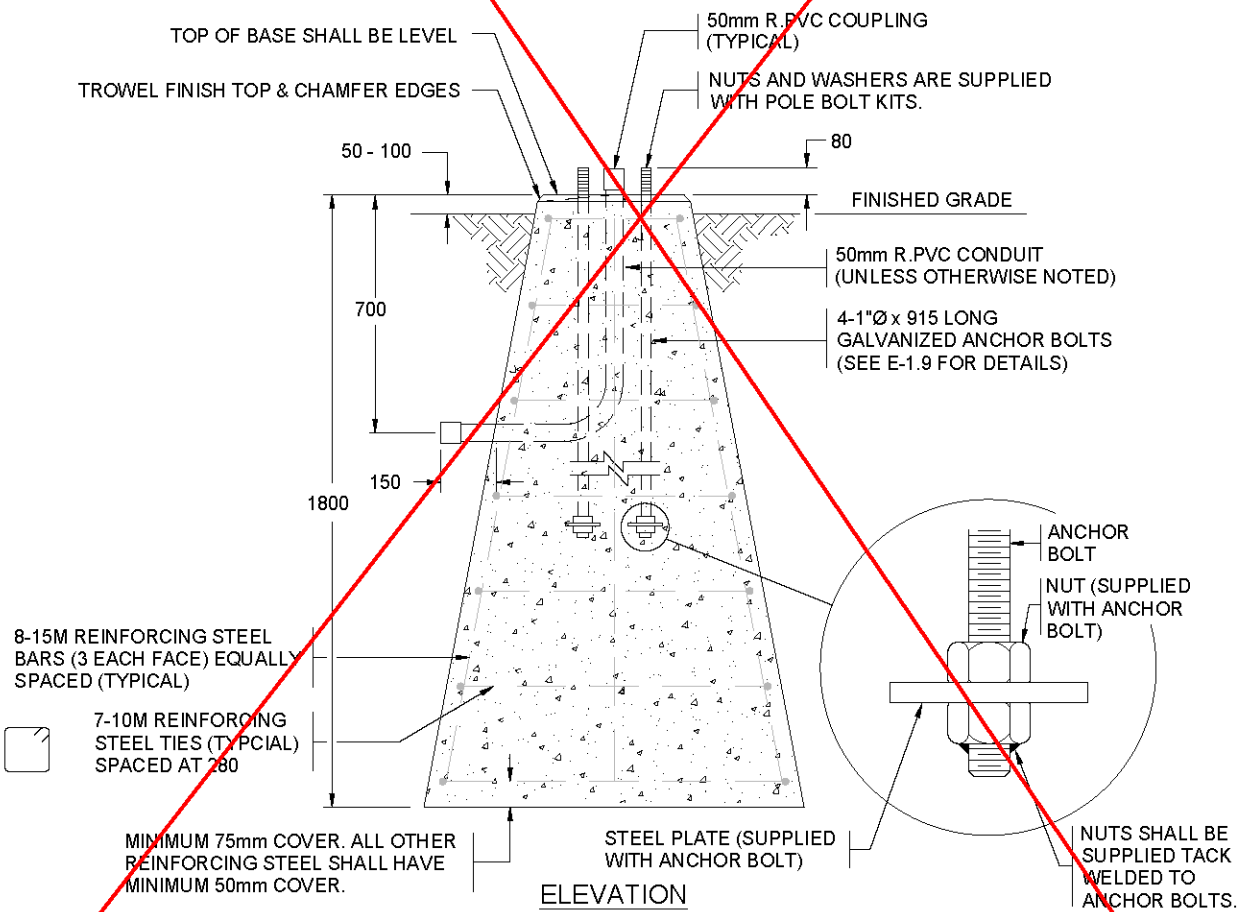
CITY OF NANAIMO
THE HARBOUR CITY

TYPE E2 TRAPEZOIDAL SHAPE CONCRETE BASE

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-1.5



TOP VIEW



ELEVATION

SEE DRAWING E-1.5 FOR NOTES AND ADDITIONAL DETAILS

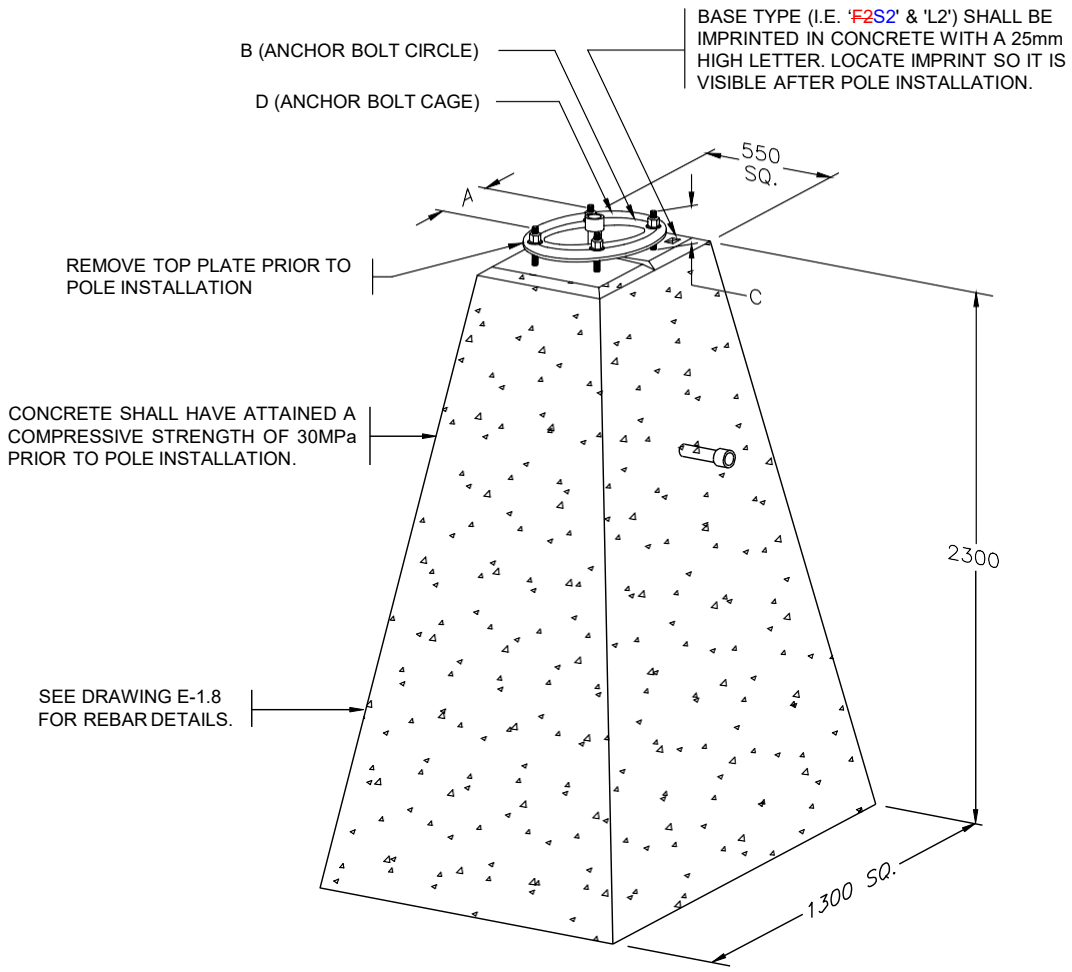
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO\13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWG\SE-1.6

2.28.2020

CITY OF NANAIMO
THE HARBOUR CITY

TYPE E2 TRAPEZOIDAL SHAPE CONCRETE BASE

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2016
Dwg No:	E-1.6



PRECAST CONCRETE BASES

BASE TYPE	POLE TYPE	APPROXIMATE MASS	VOLUME OF CONCRETE	A	B	C	D (ANCHOR BOLTS)
S2 ~~F2~~ Ed 15	~~TYPE 6 AND 7 SHAFTS~~ TYPE S POLE Ed 15	5000 kg	2.0 m3	243	343	160	4-25 (1") Ø x 1220 (48") GALVANIZED ~~ANCHOR BOLTS PRE-ASSEMBLED~~ GRADE 150 DYWIDAG PRE-ASSEMBLED IN A CAGE Ed 15
L2	TYPE L POLES	5040 kg	2.0 m3	276	390	140	4-1 1/2"Ø x 1370 GALVANIZED ANCHOR BOLTS PRE-ASSEMBLED IN A CAGE

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. SEE DRAWING E-1.8 FOR ADDITIONAL DETAILS.
4. SEE DRAWINGS E-1.13 & E-1.14 FOR BACKFILL REQUIREMENTS.

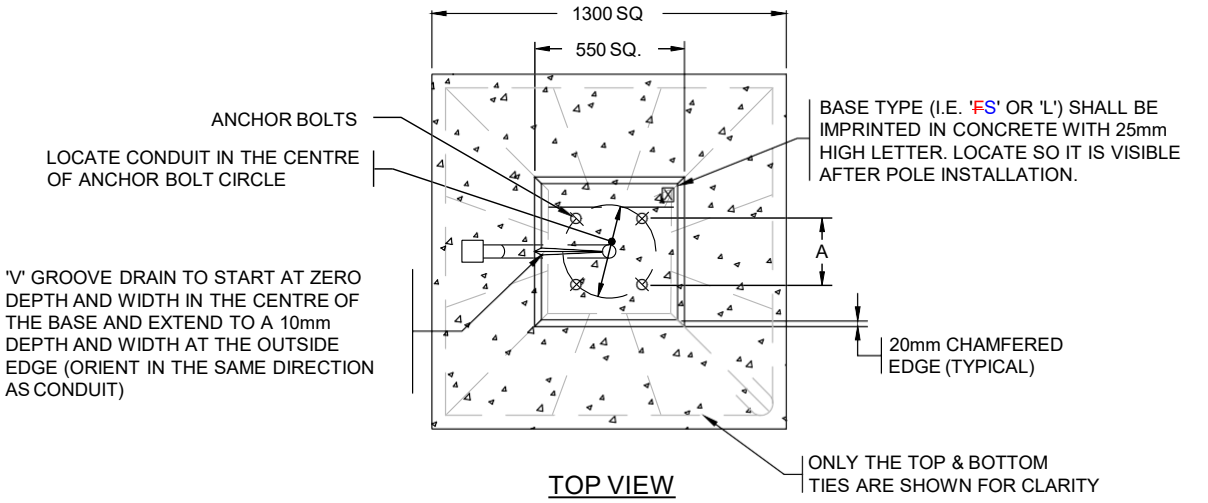
(Confirm bolts with structural...)

CITY OF NANAIMO
THE HARBOUR CITY

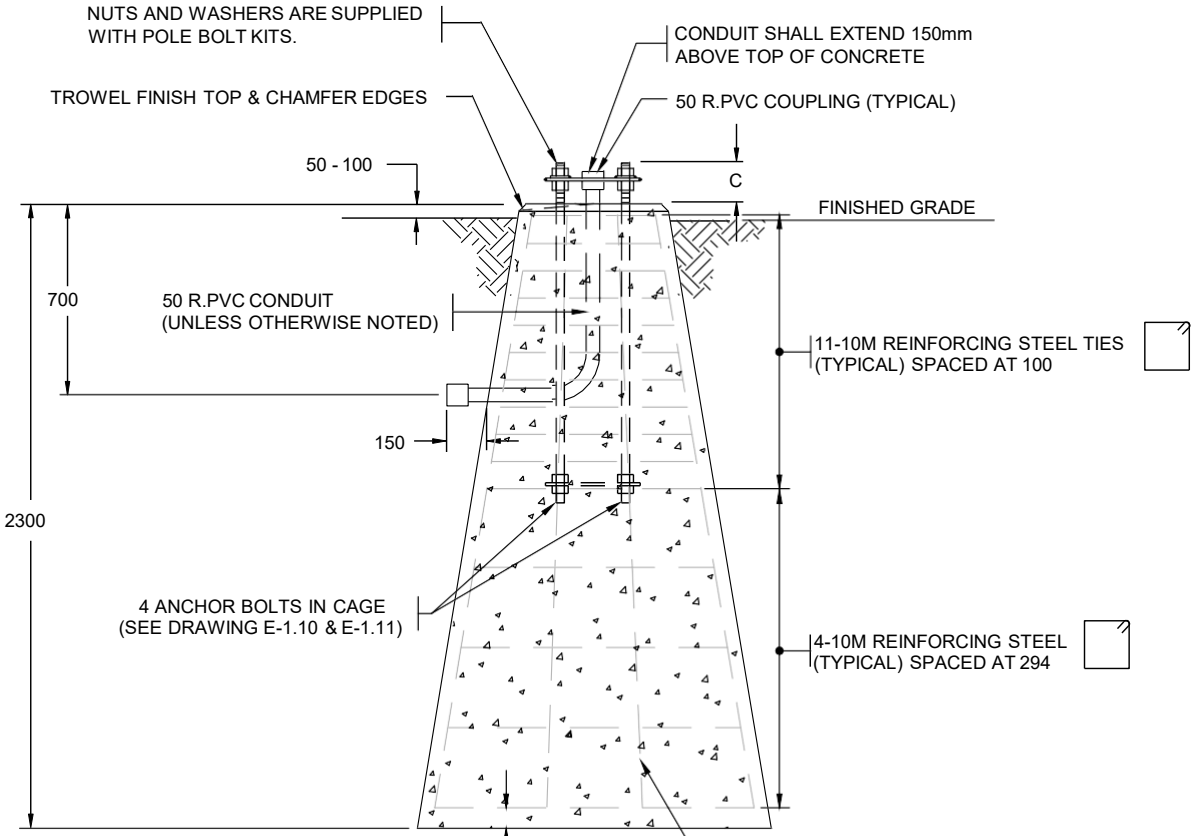
S2
TYPE ~~F2~~ & L2 TRAPEZOIDAL SHAPE CONCRETE BASES

Scale: NTS
Created: JAN 1998
Rev Date: ~~JAN 1998~~
Dwg No: E-1.7

3.3.2020



TOP VIEW



ELEVATION

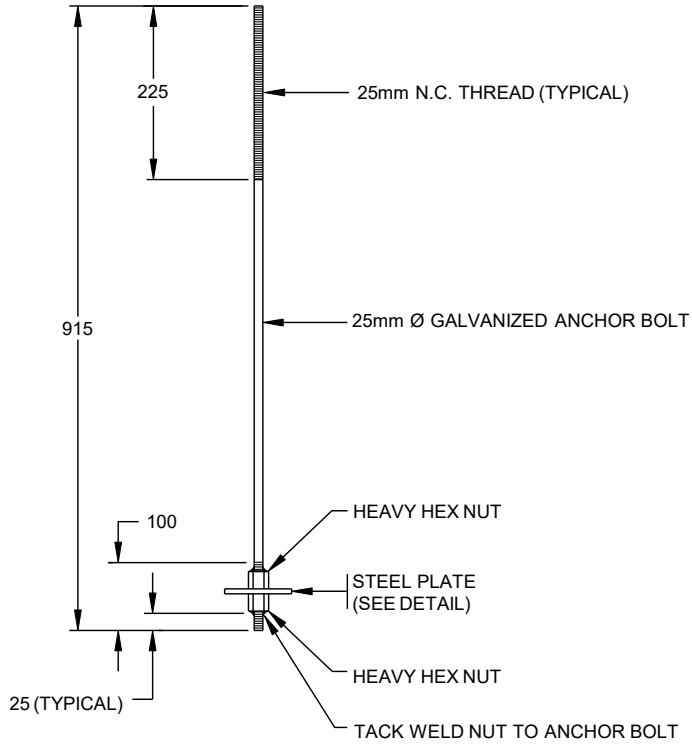
SEE DRAWING E-1.7 FOR NOTES AND ADDITIONAL DETAILS

CITY OF NANAIMO
THE HARBOUR CITY

Ed 15

TYPE F~~2~~ S2 & L2 TRAPEZOIDAL SHAPE CONCRETE BASES

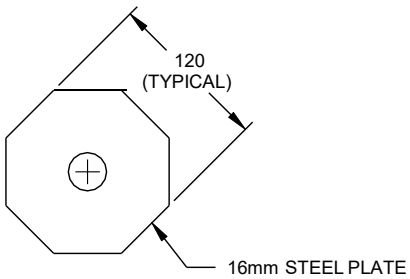
Scale: NTS
Created: JAN 1998
Rev Date: ~~NOV 2016~~
Dwg No: E-1.8



ANCHOR BOLT

4 PER SET

APPROXIMATE MASS (PER SET)
21 kg



STEEL PLATE

NOTES:

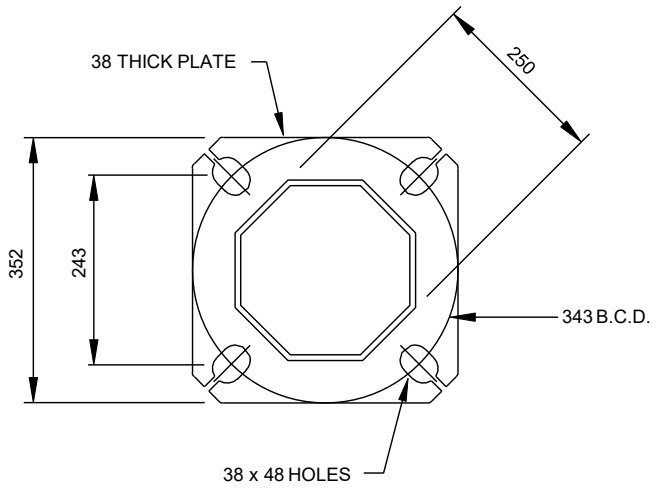
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

25mm DIAMETER ANCHOR BOLTS

Scale:	NTS
Created:	NOV 2009
Rev Date:	NOV 2009
Dwg No:	E-1.9

2.28.2020



TYPE S POLE BASE PLATE

1:10

PARTS LIST FOR TYPE S SIGNAL POLE		
PART	MINISTRY STOCK NUMBER	MASS (kg)
TYPE [S] POLE SHAFT	SN3152	385
TYPE [5S] SIGNAL ARM - 5.0m	SN3150	104
TYPE [5.5S] SIGNAL ARM - 5.5m	SN3155	111
TYPE [6S] SIGNAL ARM - 6.0m	SN3160	118
TYPE [6.5S] SIGNAL ARM - 6.5m	SN3165	125
TYPE [7S] SIGNAL ARM - 7.0m	SN3170	132
TYPE [7.5S] SIGNAL ARM - 7.5m	SN3175	192
TYPE [8S] SIGNAL ARM - 8.0m	SN3180	204
TYPE [8.5S] SIGNAL ARM - 8.5m	SN3185	214
TYPE [9S] SIGNAL ARM - 9.0m	SN3190	224
TYPE [9.5S] SIGNAL ARM - 9.5m	SN3195	292
TYPE [10S] SIGNAL ARM - 10.0m	SN3100	306
TYPE [10.5S] SIGNAL ARM - 10.5m	SN3105	320
TYPE [11S] SIGNAL ARM - 11.0m	SN3110	340
TYPE [1.75L] LUMINAIRE ARM EXTENSION - 1.75m	SN2063	29
TYPE [0.25L] LUMINAIRE ARM EXTENSION - 0.25m	SN2064	10
TYPE [2A] LUMINAIRE ARM	SN1832	35
TYPE 1 FLANGE COVER PLATE [1 FCP]	SN1367	1.5
TYPE S FLANGE COVER PLATE [S FCP]	SN1368	3
TYPE 3 FLANGE COVER PLATE [3 FCP]	SN2084	4
POST TOP TENON [PTT]	SN1831	5

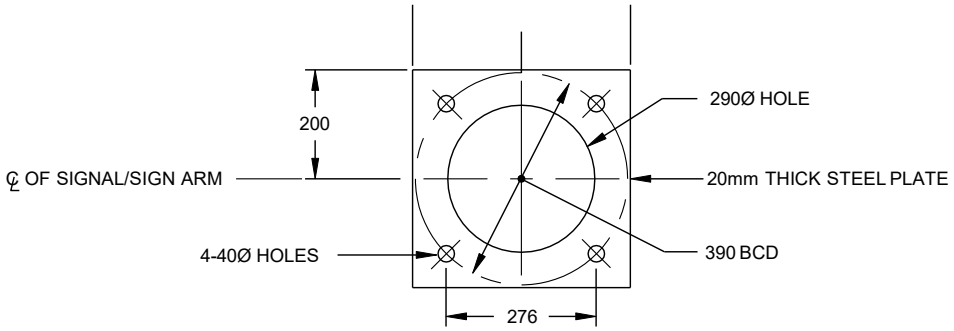
* [ ] I.D. LABEL ON POLE

2.28.2020

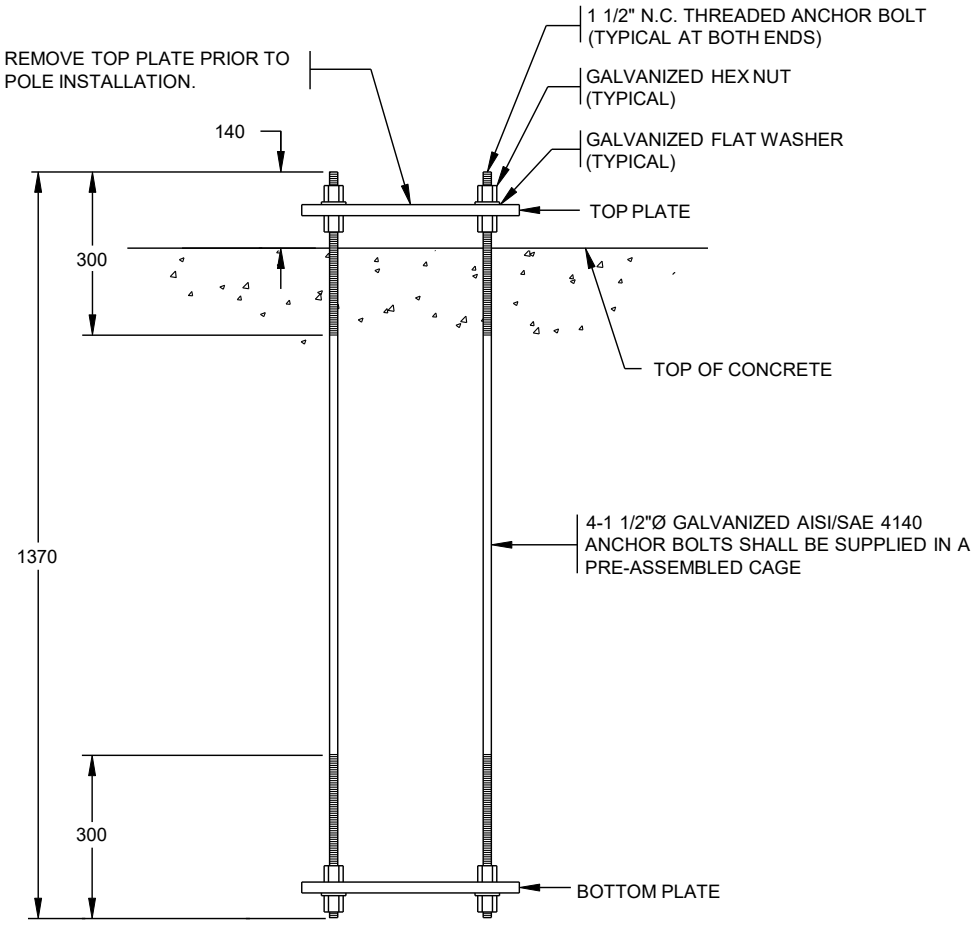
CITY OF NANAIMO
THE HARBOUR CITY

ANCHOR BOLT CAGE FOR TYPE S POLES

Scale: NTS
Created: JAN 1998
Rev Date: NOV 2016
Dwg No: E-1.10



TOP AND BOTTOM PLATES



ANCHOR BOLT CAGE

APPROXIMATE MASS
95 kg

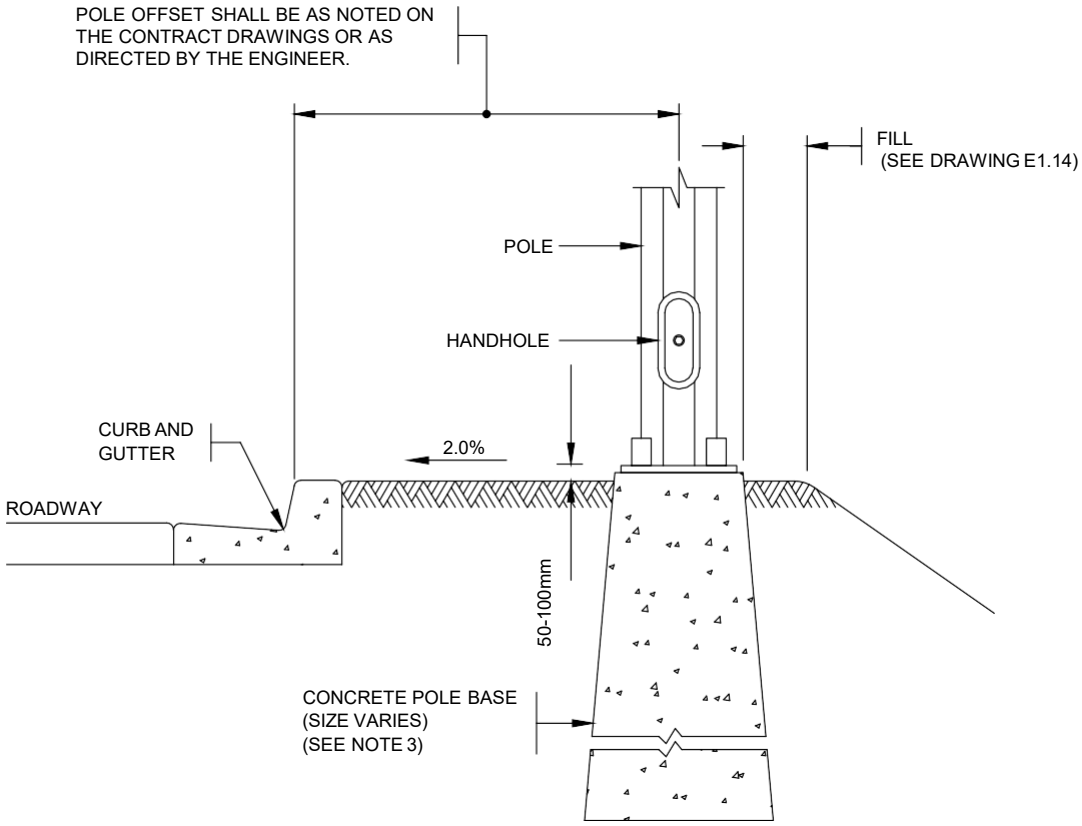
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

ANCHOR BOLT CAGE FOR TYPE L POLES

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-1.11



ELEVATION

NOTES:

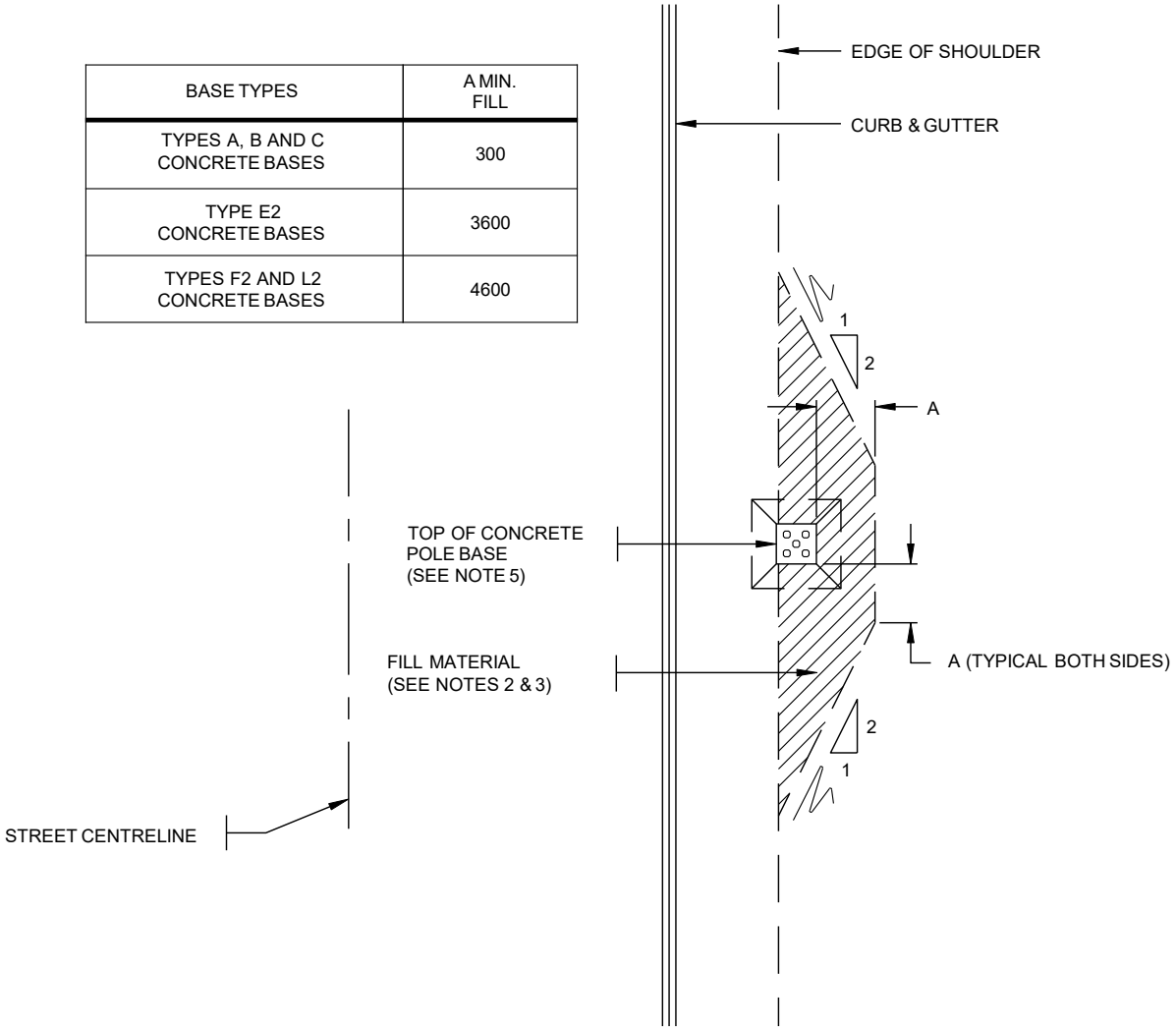
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
3. CONCRETE BASE SHALL BE INSTALLED PARALLEL TO STREET CENTRELINE, NOT FACE OF CURB.

CITY OF NANAIMO
THE HARBOUR CITY

POLE BASE INSTALLATION DETAILS

Scale: NTS
Created: MAY 2013
Rev Date: NOV 2019
Dwg No: E-1.13

BASE TYPES	A MIN. FILL
TYPES A, B AND C CONCRETE BASES	300
TYPE E2 CONCRETE BASES	3600
TYPES F2 AND L2 CONCRETE BASES	4600



PLAN

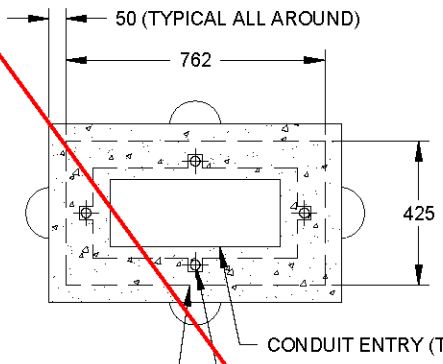
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. FILL MATERIAL SHALL CONSIST OF CLEAN WELL GRADED GRANULAR SOIL HAVING A MAXIMUM FINES CONTENT OF 8% (SILT AND CLAY SIZE PARTICLES) AND A MAXIMUM AGGREGATE SIZE OF 100mm.
3. FILL MATERIAL SHALL BE SUPPLIED, INSTALLED AND FULLY COMPACTED IN ACCORDANCE WITH SECTION 4 FOR THE MINIMUM AREA ALL AROUND THE BASE AS SHOWN ABOVE.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
5. CONCRETE BASE SHALL BE INSTALLED PARALLEL TO STREET CENTRELINE, NOT FACE OF CURB.

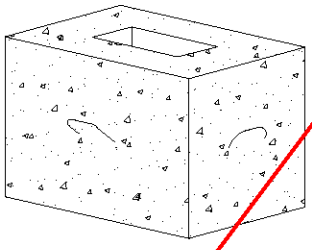
CITY OF NANAIMO
THE HARBOUR CITY

POLE BASE INSTALLATION DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2019
Dwg No:	E-1.14

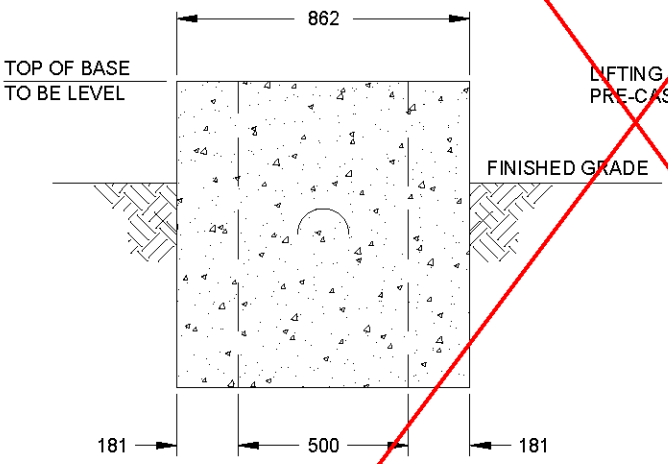


TOP VIEW

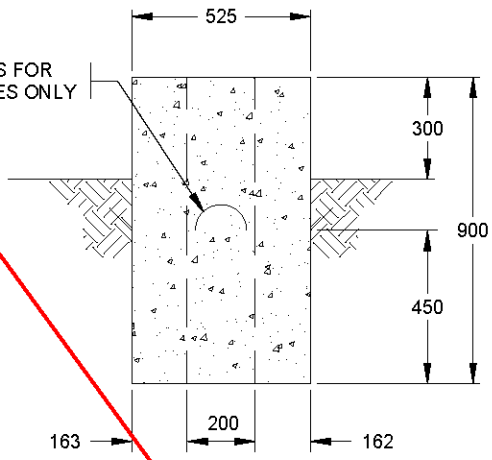


PICTORIAL VIEW

APPROXIMATE MASS
800 kg



FRONT VIEW



SIDE VIEW

NOTES:

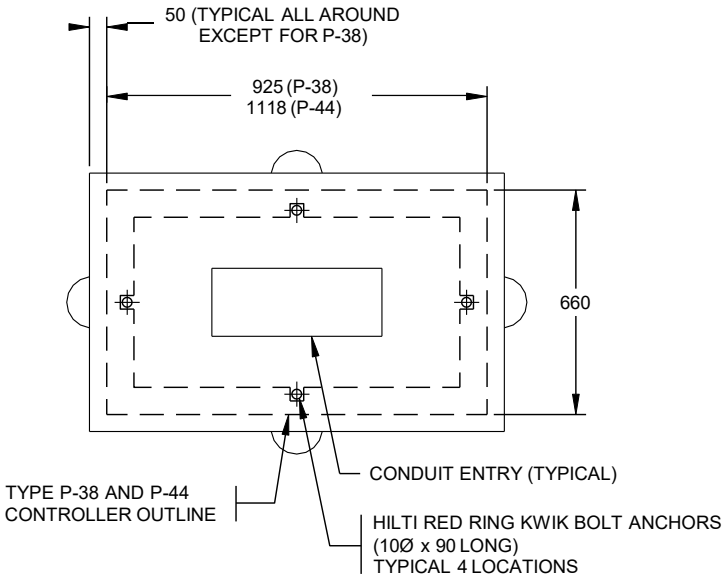
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. BASES TO BE PRE-CAST OR CAST-IN-PLACE.

CITY OF NANAIMO
THE HARBOUR CITY

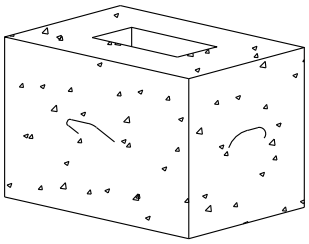
TYPE M (NEMA CABINET) CONCRETE CONTROLLER BASE

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-2.1

2.28.2020

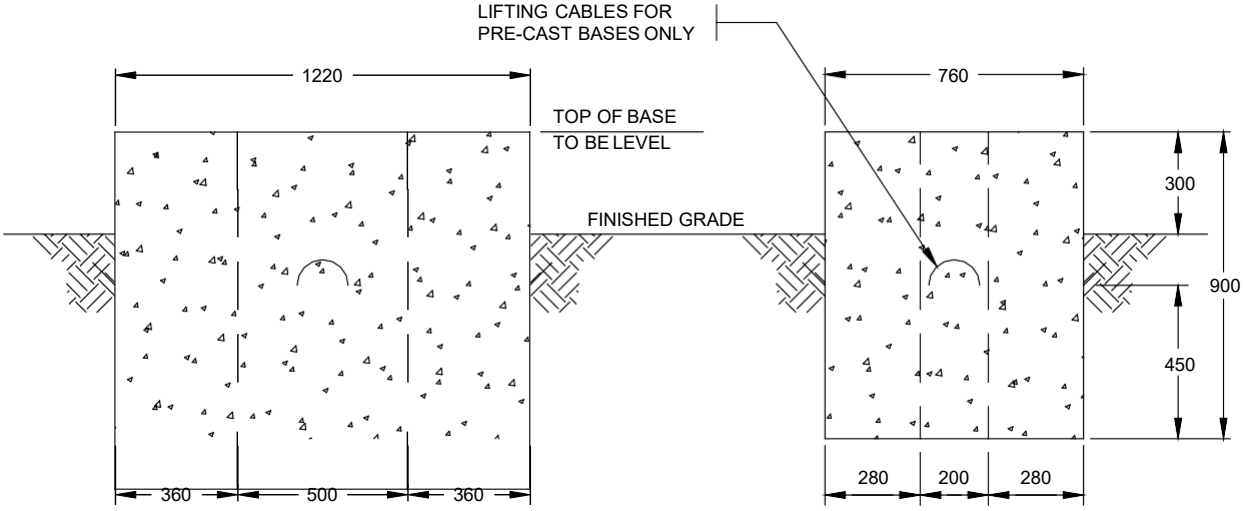


TOP VIEW



PICTORIAL VIEW

APPROXIMATE MASS
1861 kg



FRONT VIEW

SIDE VIEW

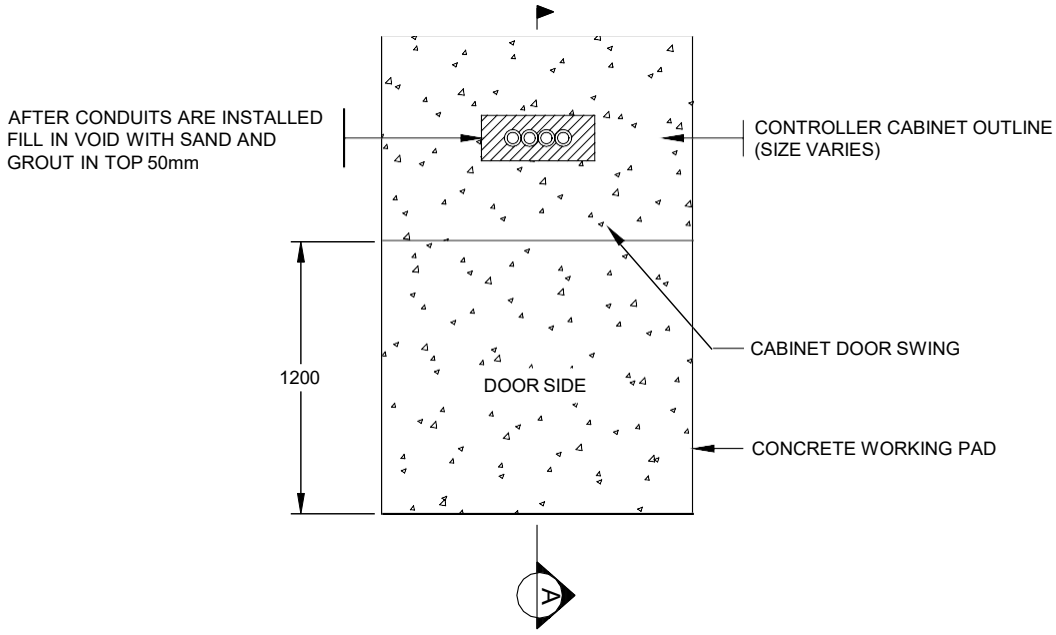
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. BASES TO BE PRE-CAST OR CAST-IN-PLACE

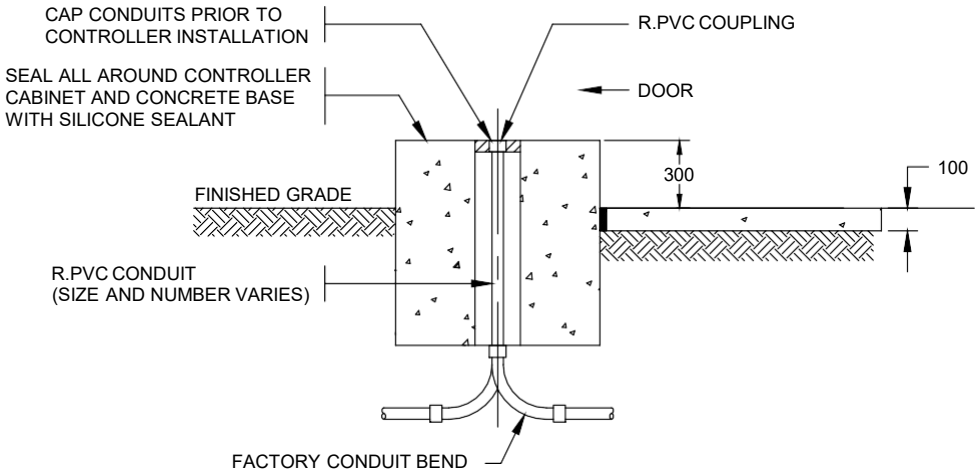
CITY OF NANAIMO
THE HARBOUR CITY

TYPE P (NEMA CABINET)
CONCRETE CONTROLLER BASE

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-2.2



TOP VIEW



SECTION A

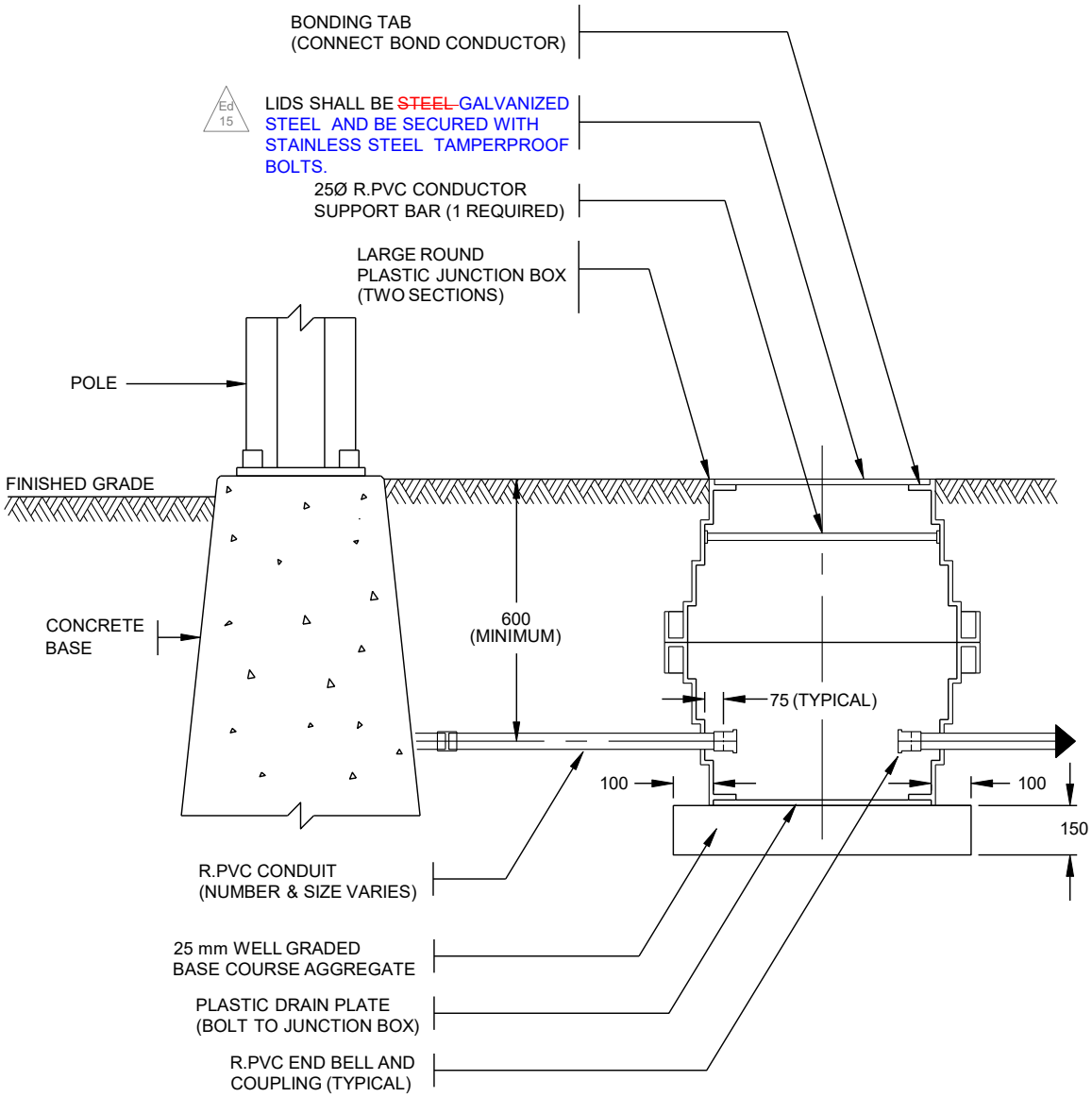
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

CONTROLLER INSTALLATION (FOR TYPE P CABINETS)

Scale:	NTS
Created:	MAY 2003
Rev Date:	MAY 2003
Dwg No:	E-2.3



NOTES:

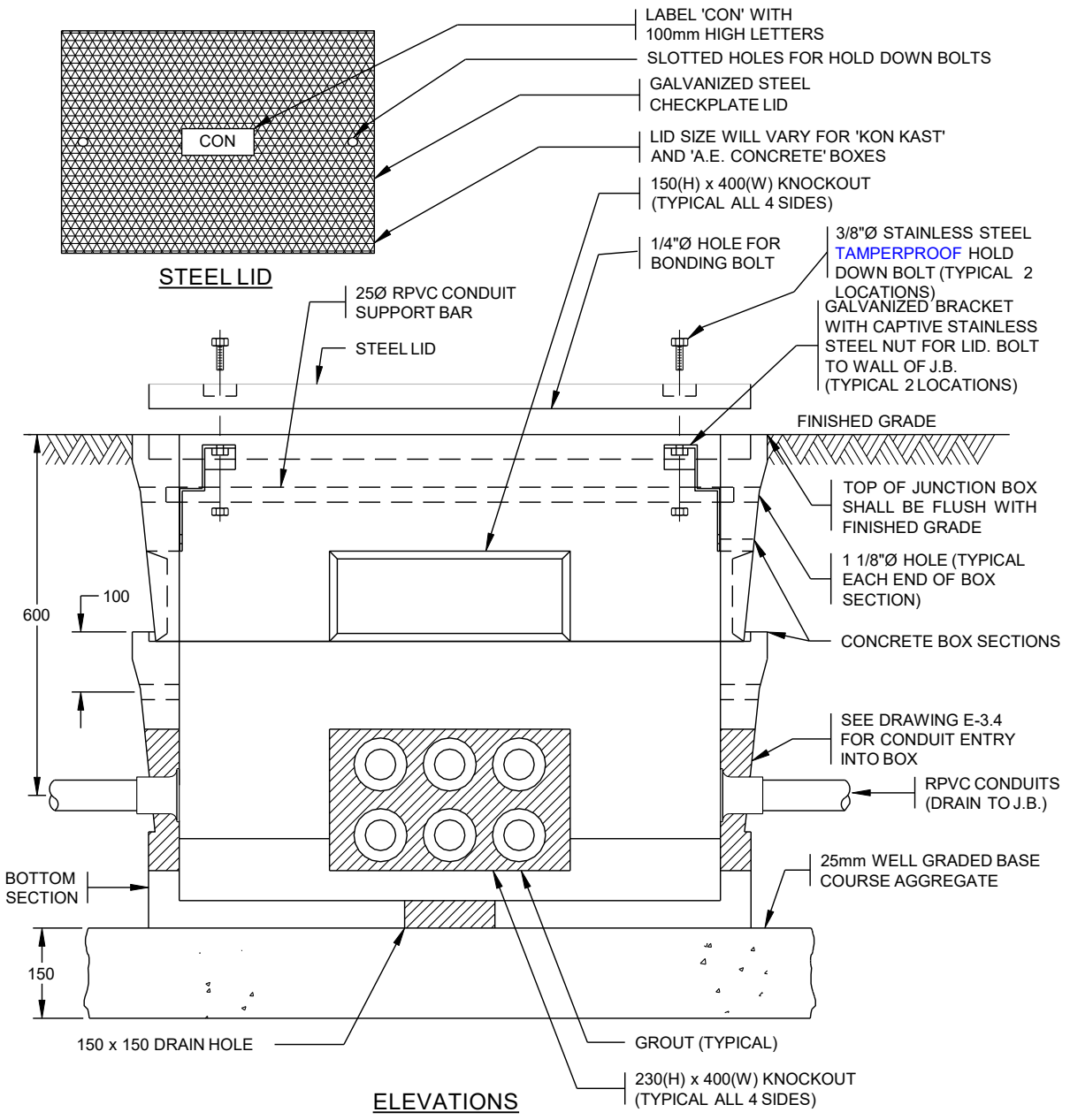
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. INSTALL LID ON PLASTIC JUNCTION BOX BEFORE BACKFILLING, TAMPING & PAVING OPERATIONS.
3. INSTALL TOP OF JUNCTION BOX FLUSH WITH FINISHED GRADE.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
5. CONCRETE JUNCTION BOX INSTALLATION SIMILAR.
6. NUMBER OF CONDUITS ENTERING JUNCTION BOX NOT TO EXCEED 10 (UNLESS OTHERWISE NOTED).

CITY OF NANAIMO
THE HARBOUR CITY

JUNCTION BOXES

Scale: NTS
Created: MAY 2003
Rev Date: ~~MAY 2003~~
Dwg No: E-3.1

Ed 15



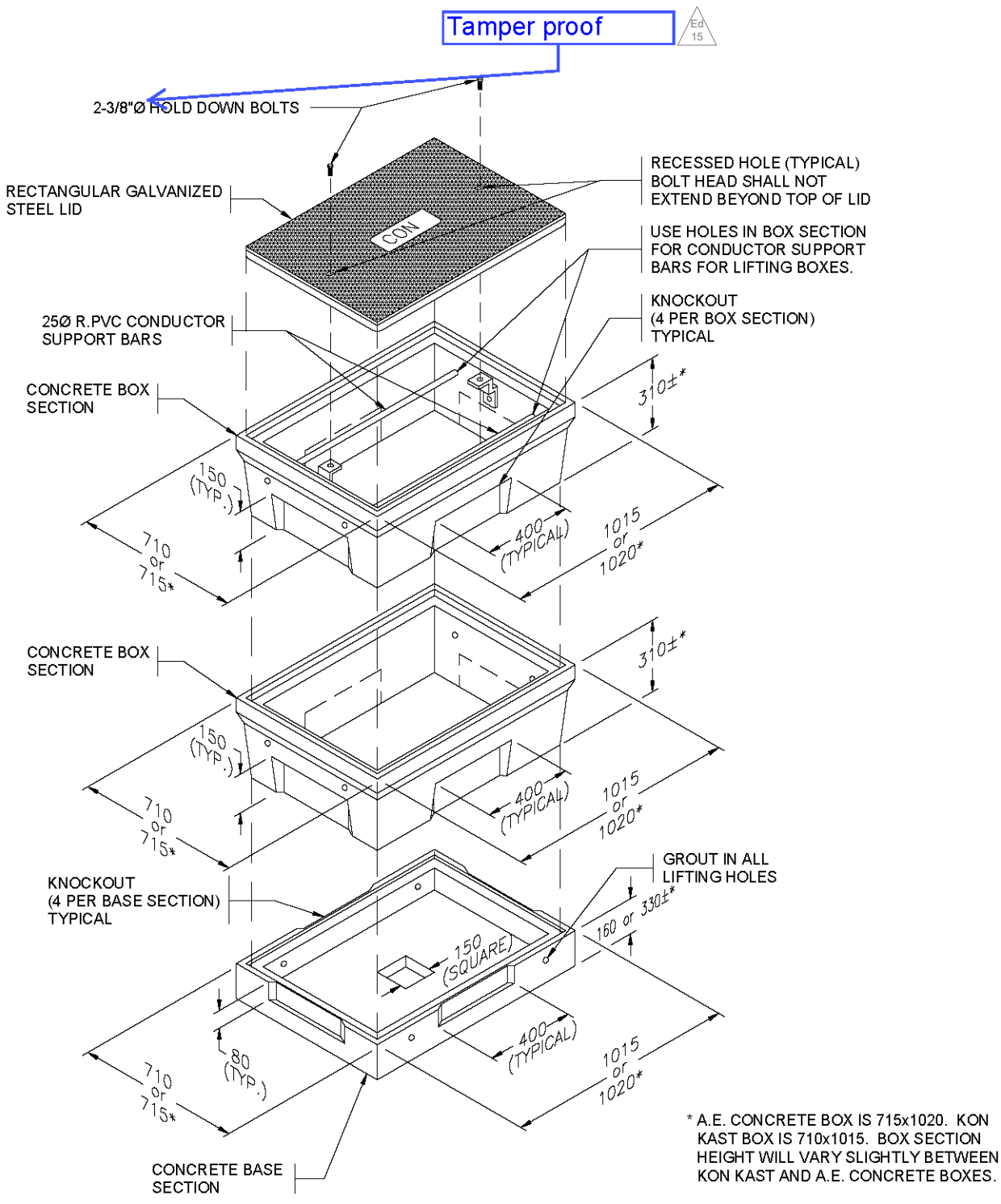
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS
2. ONLY PRODUCTS WITHIN THE CITY OF NANAIMO'S APPROVED PRODUCTS LIST, AND APPROVED BY THE CITY ENGINEER SHALL BE USED.
3. JUNCTION BOX SHALL BE DESIGNED FOR 5000kg STATIC LOADING.
4. VAULTS SHALL BE PRE-CAST CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 35 MPa AT 28 DAYS.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

CONCRETE JUNCTION BOX DETAILS

Scale: NTS
Created: JAN 1998
Rev Date: ~~JAN 1998~~
Dwg No: E-3.2



* A.E. CONCRETE BOX IS 715x1020. KON KAST BOX IS 710x1015. BOX SECTION HEIGHT WILL VARY SLIGHTLY BETWEEN KON KAST AND A.E. CONCRETE BOXES.

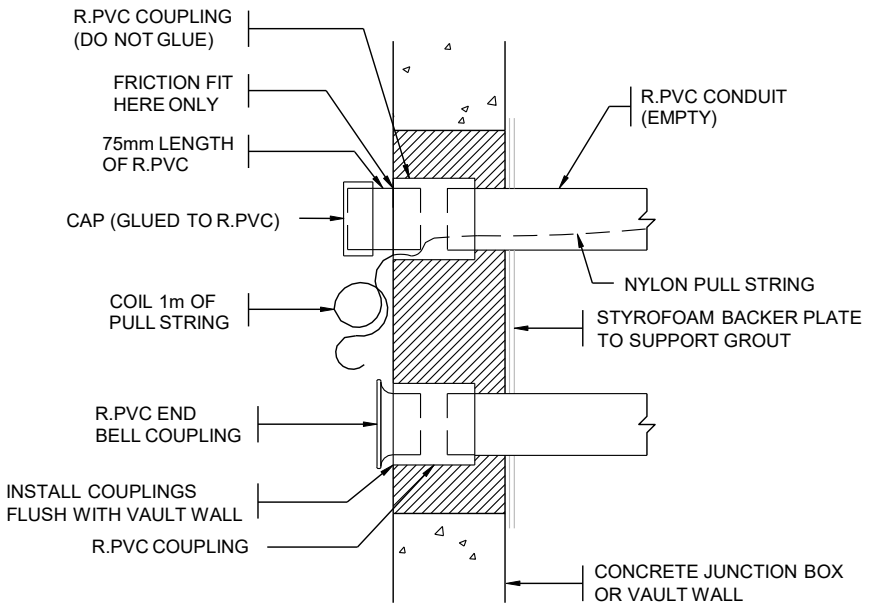
NOTE: THESE BOXES ARE NOT INTERCHANGEABLE.

SEE DRAWING E-3.2 FOR NOTES

CITY OF NANAIMO
THE HARBOUR CITY

CONCRETE JUNCTION BOX DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	~~JAN 1998~~
Dwg No:	E-3.3



CONDUIT ENTRY TO VAULT OR CONCRETE JUNCTION BOX

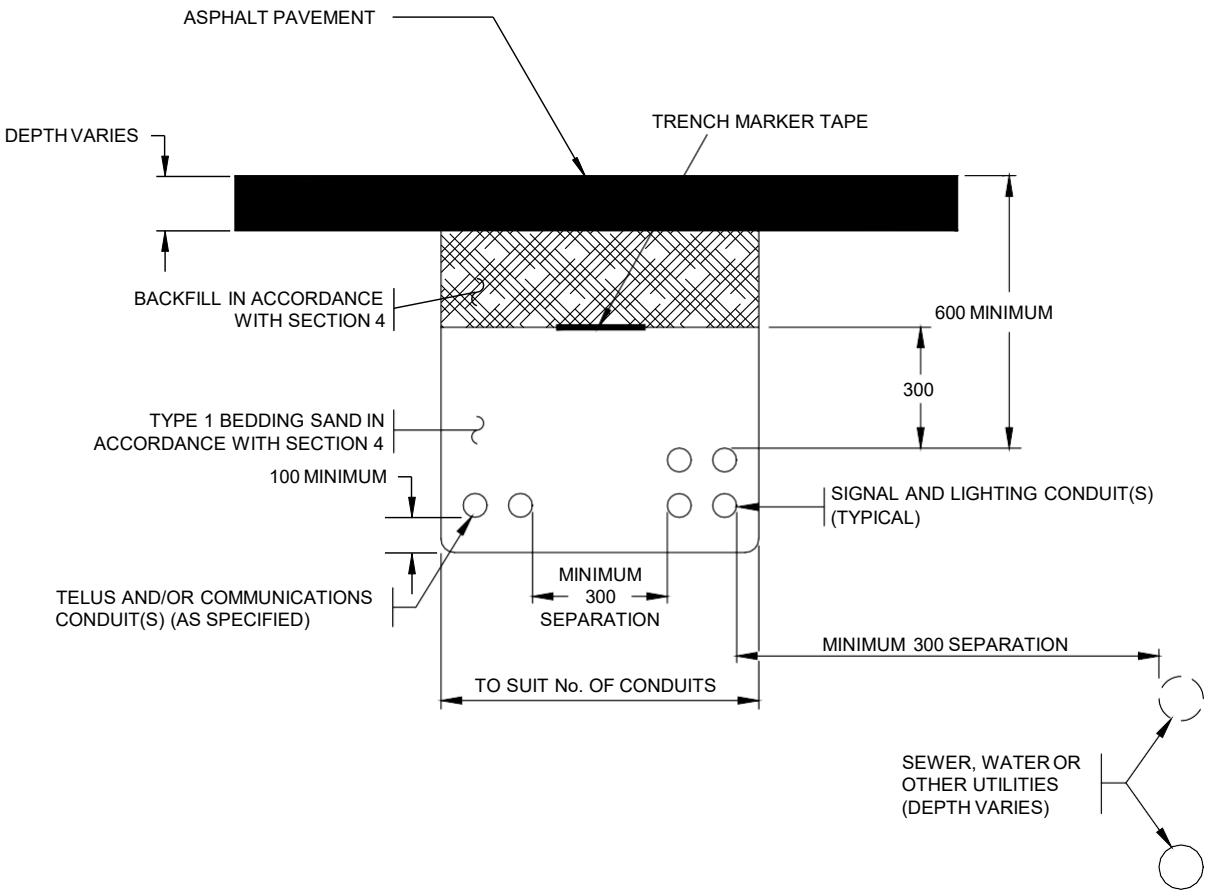
SEE DRAWINGS E-3.2 & E-3.3
FOR NOTES AND ADDITIONAL DETAILS.

CITY OF NANAIMO
THE HARBOUR CITY

CONDUIT ENTRY INTO CONCRETE VAULT OR JUNCTION BOX

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-3.4

2.28.2020



NOTES:

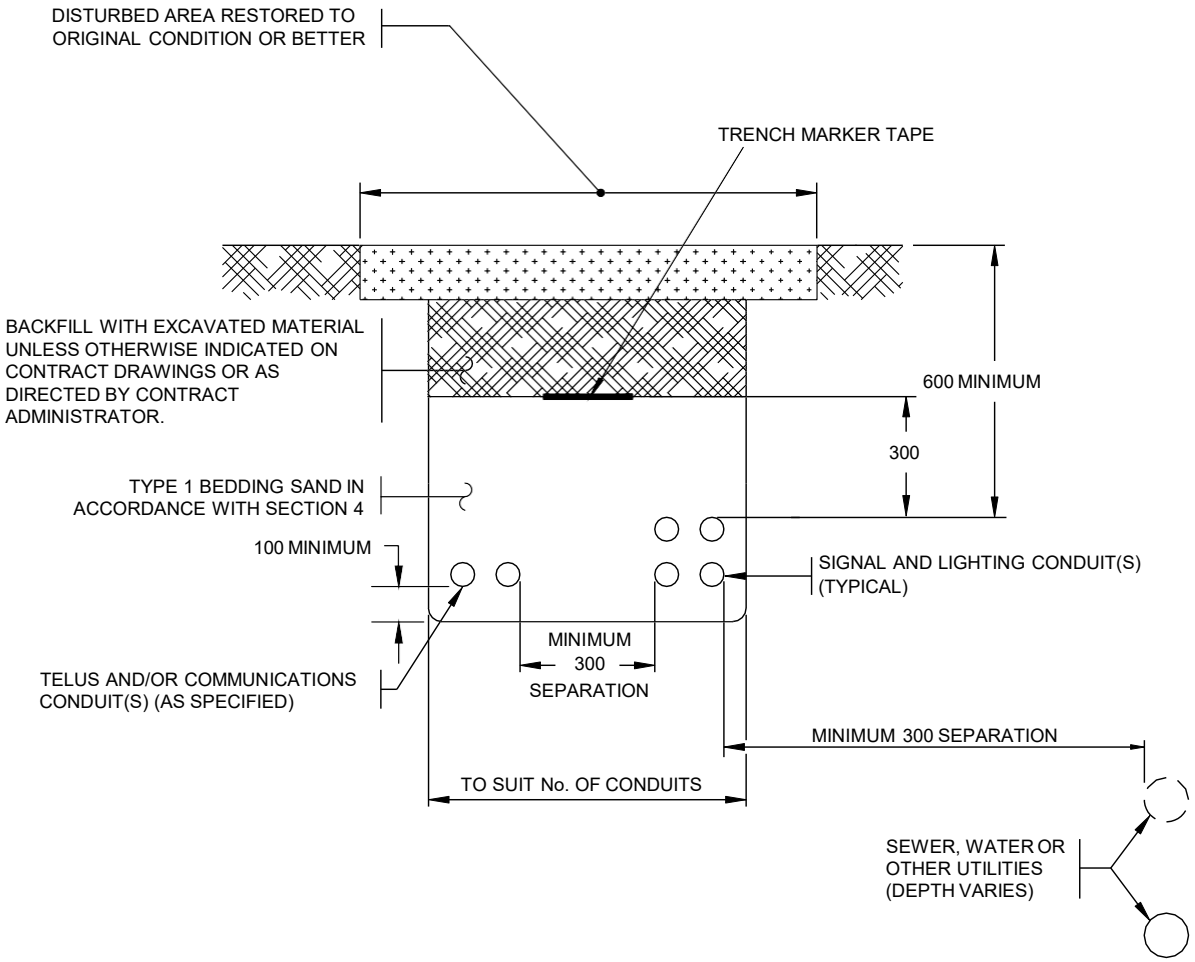
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

2.28.2020

CITY OF NANAIMO
THE HARBOUR CITY

UNDERGROUND CONDUIT IN PAVED AREAS

Scale:	NTS
Created:	MAY 1999
Rev Date:	NOV 2019
Dwg No:	E-4.1



NOTES:

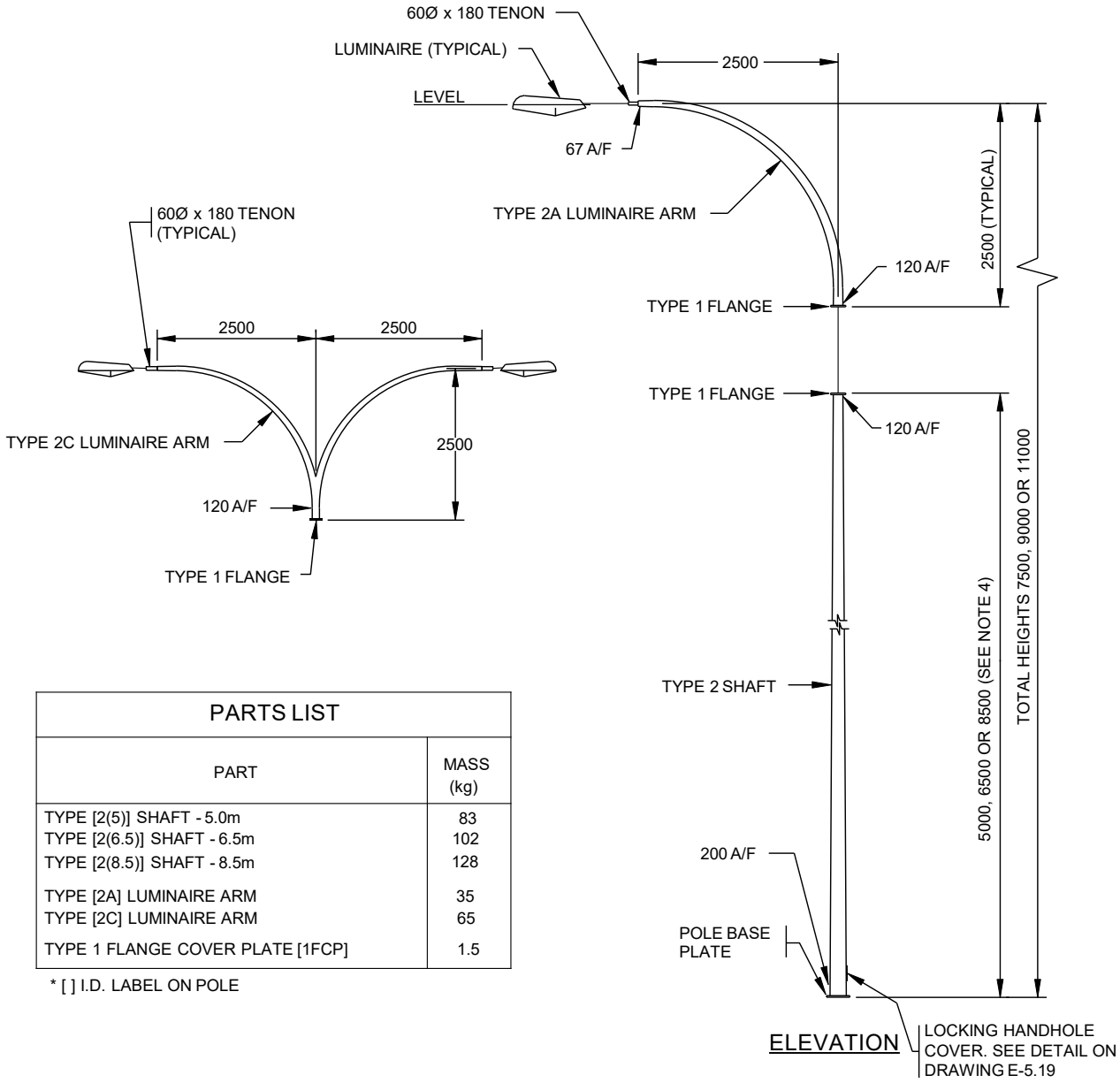
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

UNDERGROUND CONDUIT IN NON-PAVED AREAS

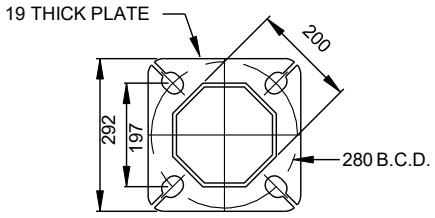
Scale:	NTS
Created:	MAY 1999
Rev Date:	NOV 2019
Dwg No:	E-4.2

2.28.2020



PARTS LIST	
PART	MASS (kg)
TYPE [2(5)] SHAFT - 5.0m	83
TYPE [2(6.5)] SHAFT - 6.5m	102
TYPE [2(8.5)] SHAFT - 8.5m	128
TYPE [2A] LUMINAIRE ARM	35
TYPE [2C] LUMINAIRE ARM	65
TYPE 1 FLANGE COVER PLATE [1FCP]	1.5

* [ ] I.D. LABEL ON POLE



POLE BASE PLATE

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SEE DRAWING E-5.2 FOR TYPE 2 SHAFT, BOLT KITS AND POLE ASSEMBLY DETAILS.
3. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
4. POLE SHAFTS TO BE SUPPLIED 0.9m SHORTER WHERE BEING INSTALLED ON SERVICE BASE.

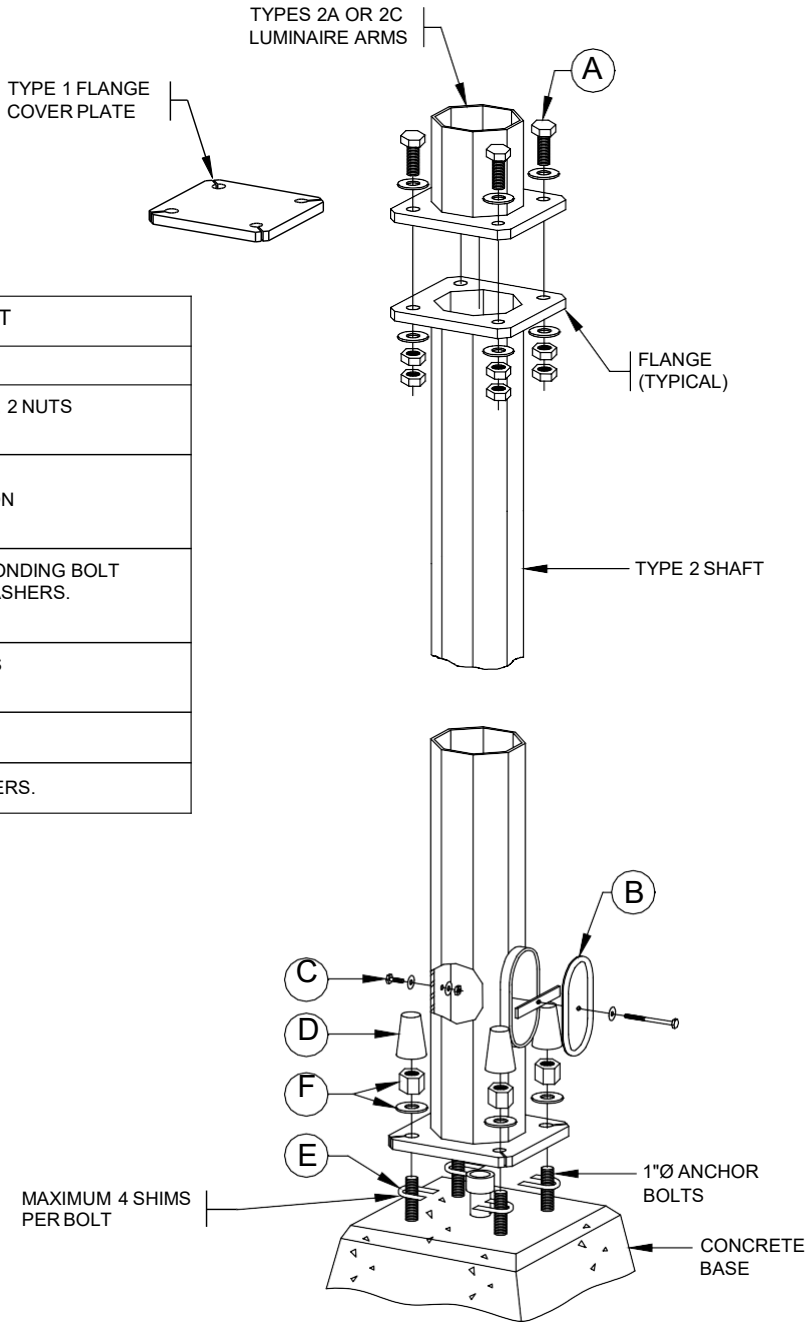
CITY OF NANAIMO
THE HARBOUR CITY

LUMINARE POLE (HIGHWAYS TYPE 2 SHAFT)

Scale:	NTS
Created:	JAN 1998
Rev Date:	MAY 2020
Dwg No:	E-5.1

2.28.2020

TYPE 2 SHAFT BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
A	4	5/8"Ø x 3" LONG BOLT, 2 NUTS AND 2 WASHERS.
B	1	LOCKING HANDHOLE COVER. SEE DETAIL ON DRAWING E-5.19
C	1	3/8"Ø x 1 1/4" LONG BONDING BOLT WITH 1 NUT AND 2 WASHERS.
D	4	PLASTIC NUT COVERS FOR 1" NUTS.
E	4	LEVELLING SHIMS.
F	4	1"Ø NUTS AND WASHERS.



POLE ASSEMBLY DETAIL

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH, UNLESS OTHERWISE NOTED.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.

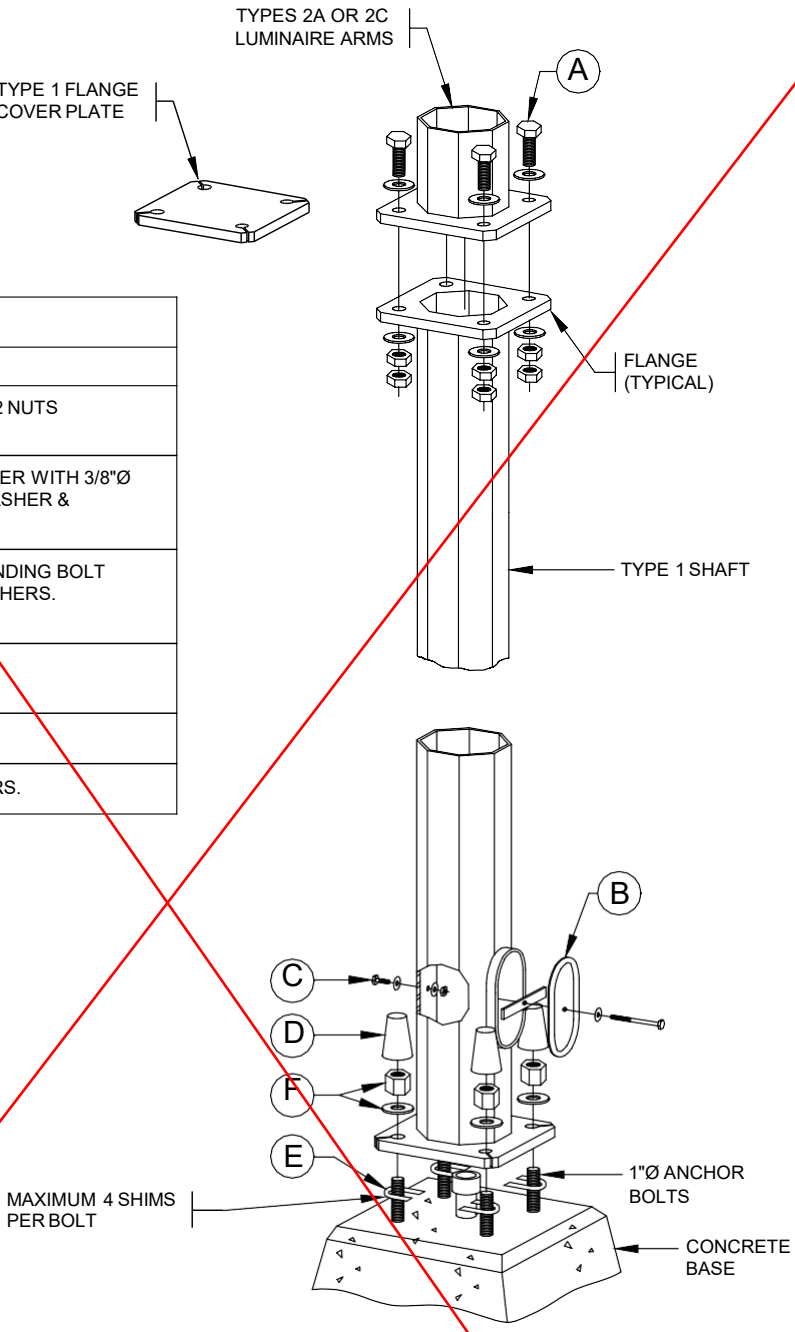
CITY OF NANAIMO
THE HARBOUR CITY

LUMINARE POLE (HIGHWAYS TYPE 2 SHAFT)

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2019
Dwg No:	E-5.2

3.20.2020

TYPE 2 SHAFT BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
A	4	5/8"Ø x 3" LONG BOLT, 2 NUTS AND 2 WASHERS.
B	1	SMALL HANDHOLE COVER WITH 3/8"Ø x 2 1/2" LONG BOLT, WASHER & BACKER BAR.
C	1	3/8"Ø x 1 1/4" LONG BONDING BOLT WITH 1 NUT AND 2 WASHERS.
D	4	PLASTIC NUT COVERS FOR 1" NUTS.
E	4	LEVELLING SHIMS.
F	4	1"Ø NUTS AND WASHERS.



POLE ASSEMBLY DETAIL

NOTES:

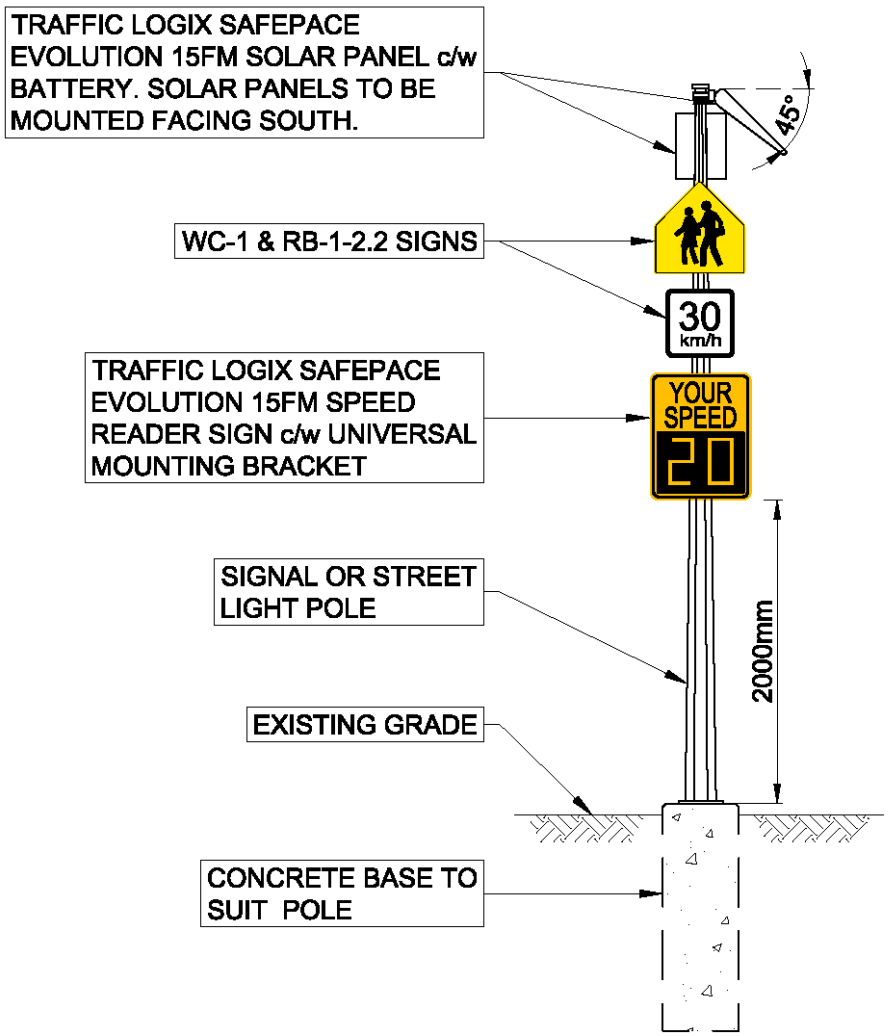
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH, UNLESS OTHERWISE NOTED.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (HIGHWAYS TYPE 1 SHAFT)

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2019
Dwg No:	E-5.3

3.20.2020



P:\PROJECTS\2023 - PROJECTS 4181-44894431 - CON MOESS LIGHTING UPDATE\ELECTRICAL DRAWINGS\4431E

1.29.2024

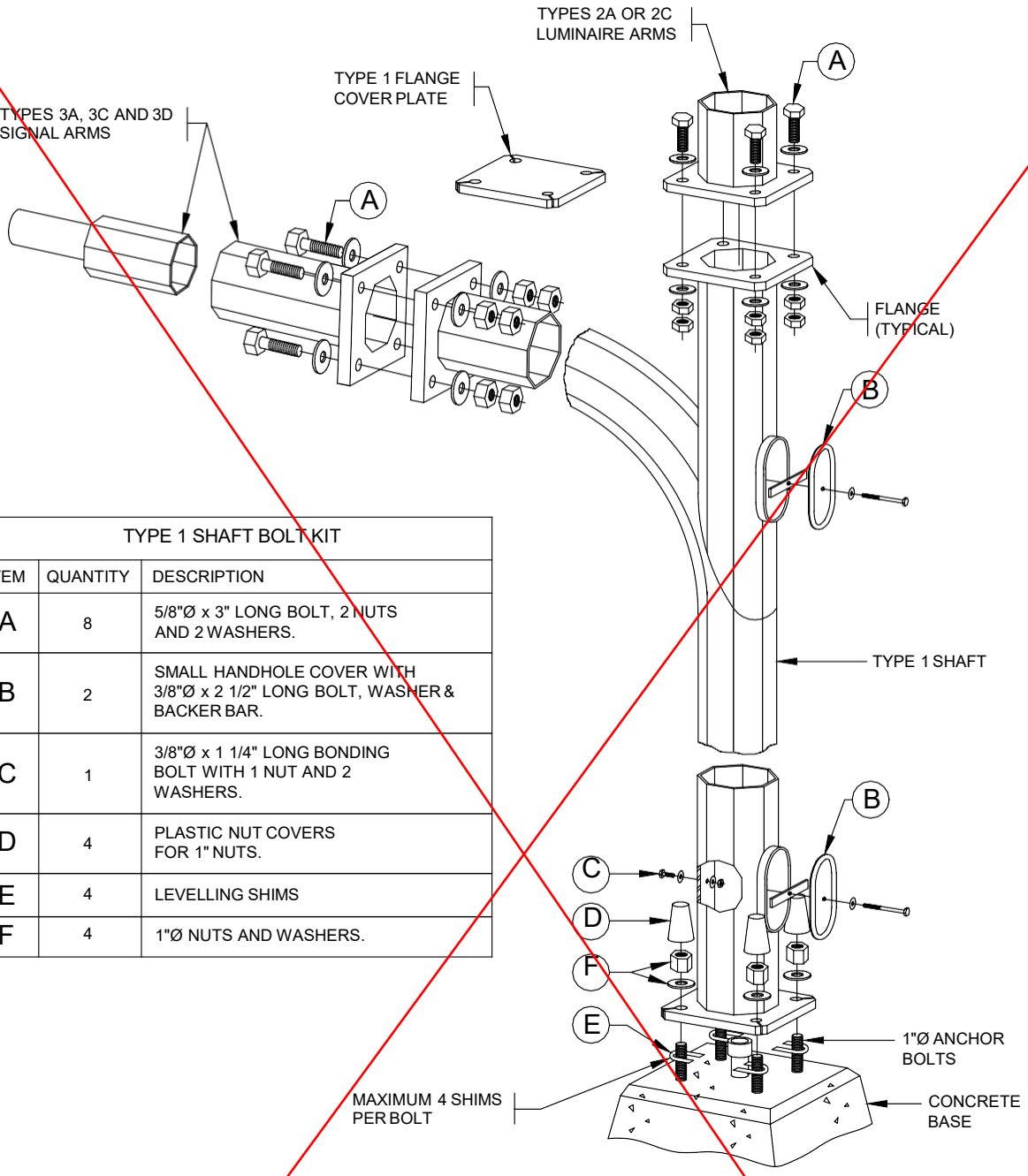
CITY OF NANAIMO
THE HARBOUR CITY

Ed 15

SPEED READER SIGN ON POST

Scale:	1:50
Drawn:	CD
Date:	JAN, 2024
Dwg No:	E-5.3

Ed 15



TYPE 1 SHAFT BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
A	8	5/8"Ø x 3" LONG BOLT, 2 NUTS AND 2 WASHERS.
B	2	SMALL HANDHOLE COVER WITH 3/8"Ø x 2 1/2" LONG BOLT, WASHER & BACKER BAR.
C	1	3/8"Ø x 1 1/4" LONG BONDING BOLT WITH 1 NUT AND 2 WASHERS.
D	4	PLASTIC NUT COVERS FOR 1" NUTS.
E	4	LEVELLING SHIMS
F	4	1"Ø NUTS AND WASHERS.

POLE ASSEMBLY DETAIL

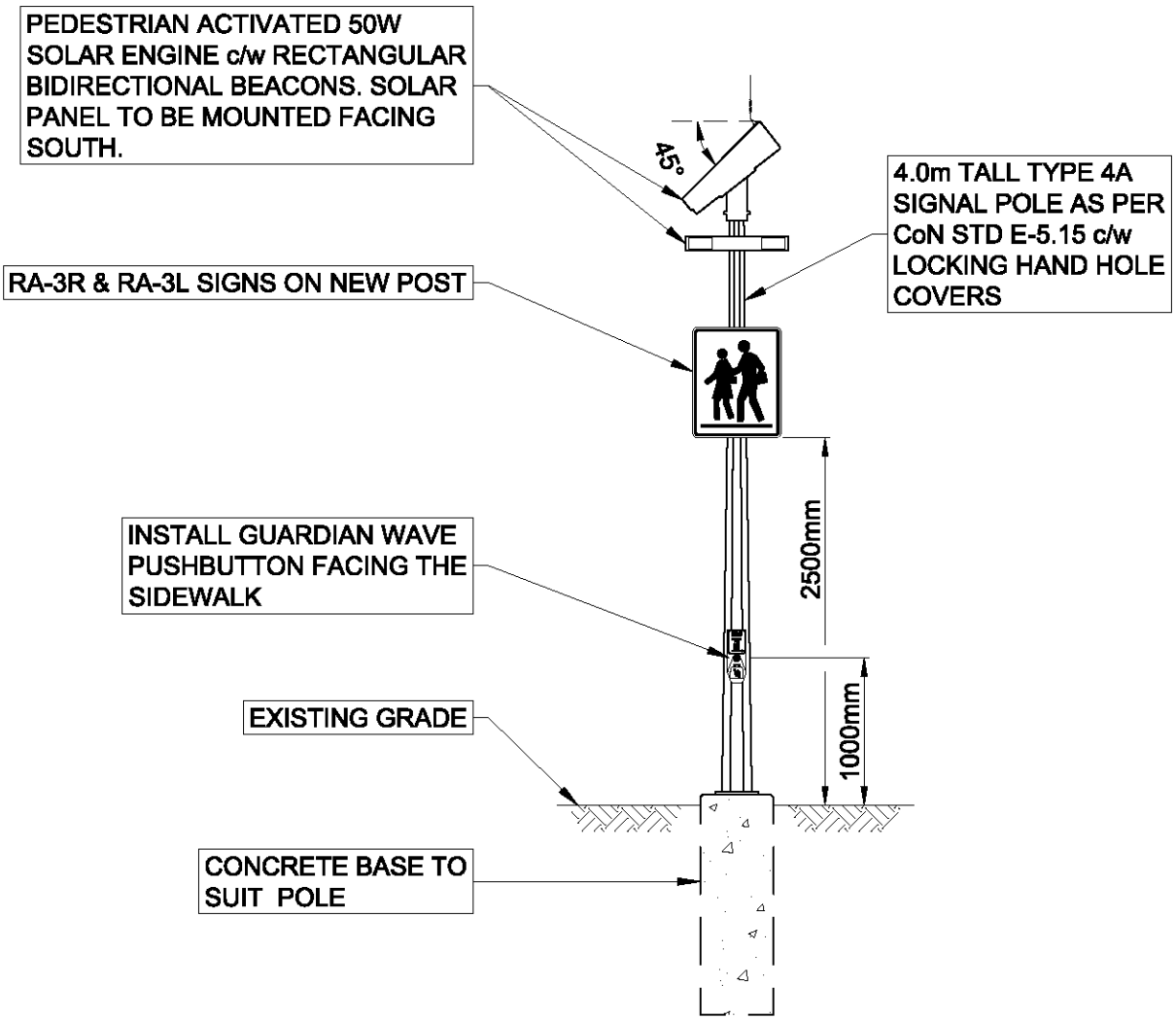
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH, UNLESS OTHERWISE NOTED.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (HIGHWAYS TYPE 1 SHAFT)

Scale: NTS
Created: JAN 1998
Rev Date: JAN 1998
Dwg No: E-5.4



NOTES:

1. POLE TO BE INSTALLED ON ONCOMING SIDE OF CROSSWALK WHERE POSSIBLE.

P:\PROJECTS\2023 - PROJECTS 4181-44894431 - CON MOESS LIGHTING UPDATE\ELECTRICAL DRAWINGS\4431E

1:29:2024

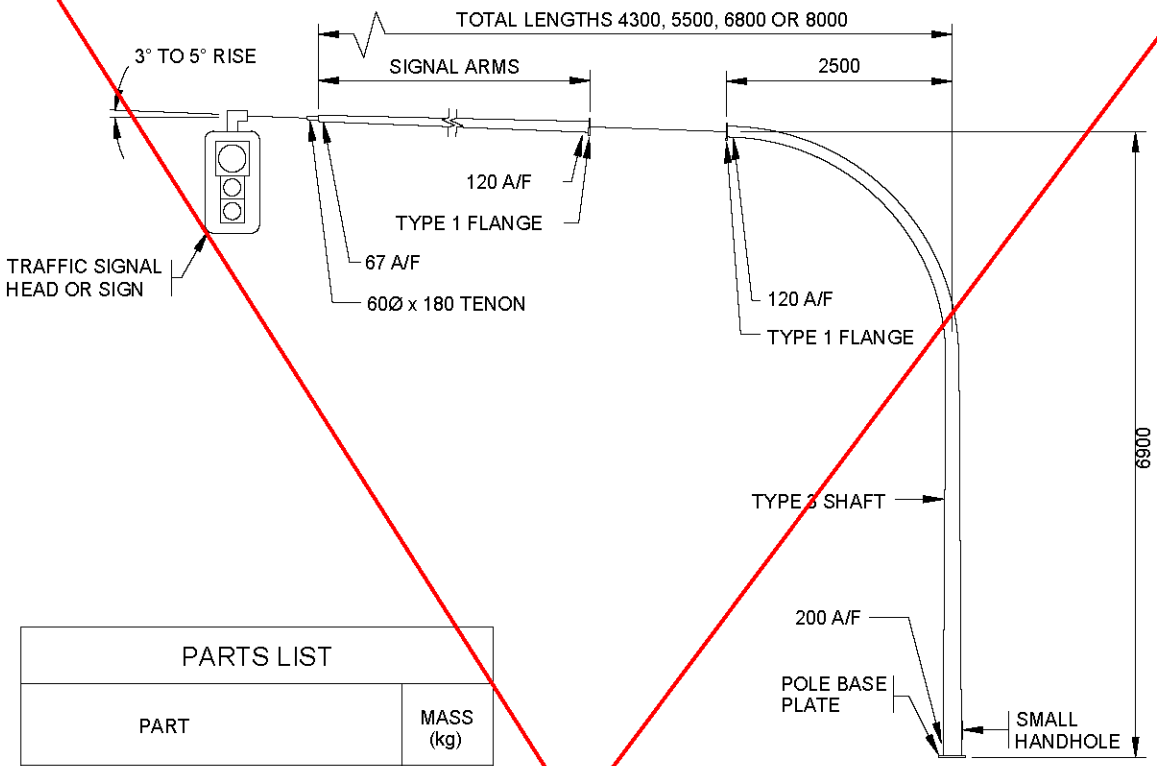
CITY OF NANAIMO
THE HARBOUR CITY

Ed 15

CROSS WALK FLASHER POST

Scale:	1:50
Drawn:	CD
Date:	JAN, 2024
Dwg No:	E-5.4

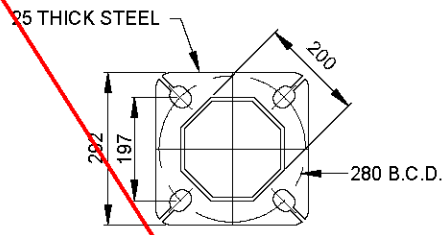
Ed 15



ELEVATION

PARTS LIST	
PART	MASS (kg)
TYPE [3] SHAFT	186
TYPE [3C] SIGNAL ARM - 1.8m	18
TYPE [3A] SIGNAL ARM - 3.0m	27
TYPE [3D] SIGNAL ARM - 4.3m	54
TYPE [3E] SIGNAL ARM - 5.5m	68

* [ ] I.D. LABEL ON POLE



POLE BASE PLATE

NOTES:

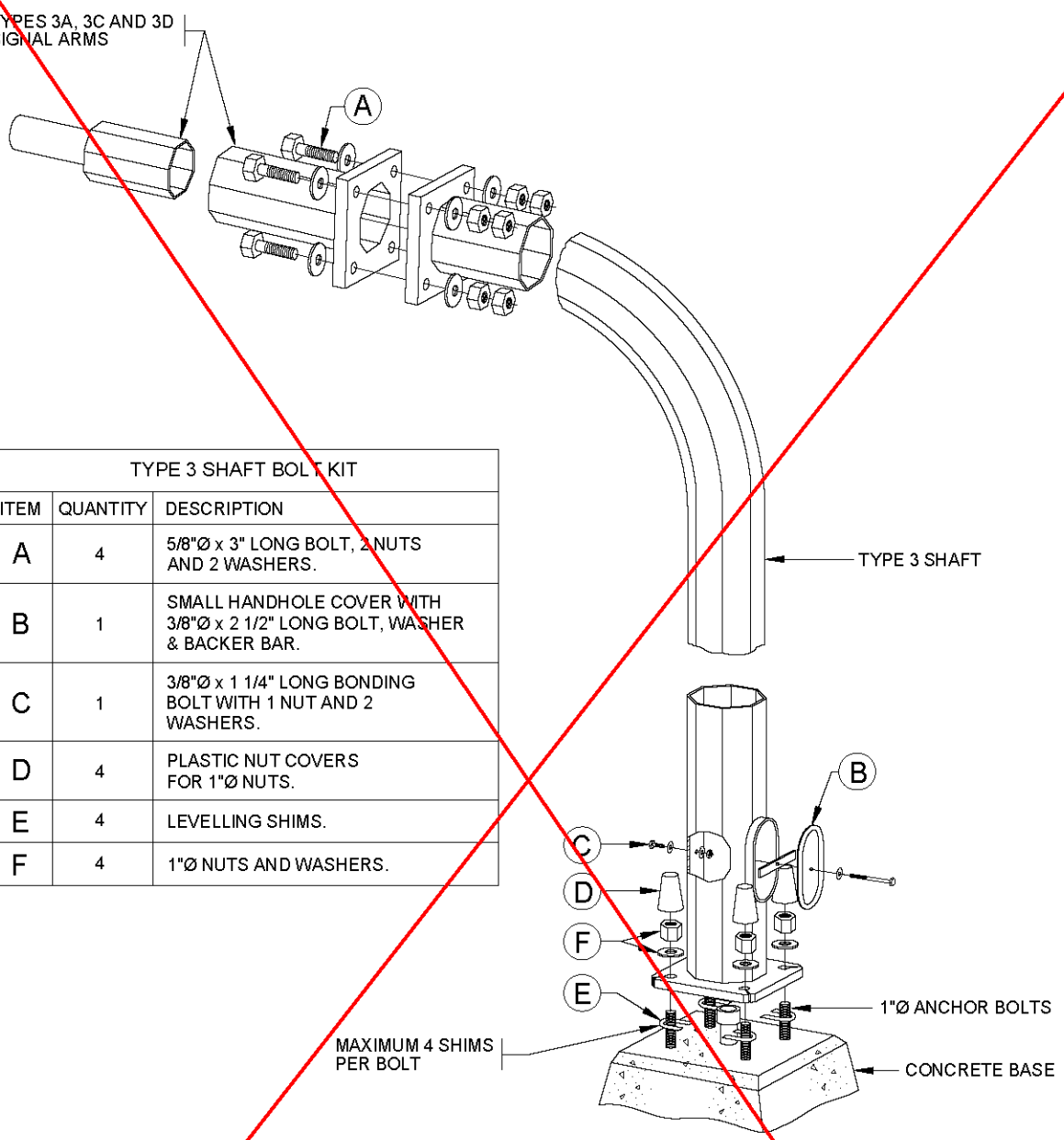
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SEE DRAWING E-5.6 FOR TYPE 3 SHAFT, BOLT KITS AND POLE ASSEMBLY DETAILS.
3. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (HIGHWAYS TYPE 3 SHAFT)

Scale: NTS
Created: JAN 1998
Rev Date: JAN 1998
Dwg No: E-5.5

3.3.2020



TYPE 3 SHAFT BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
A	4	5/8"Ø x 3" LONG BOLT, 2 NUTS AND 2 WASHERS.
B	1	SMALL HANDHOLE COVER WITH 3/8"Ø x 2 1/2" LONG BOLT, WASHER & BACKER BAR.
C	1	3/8"Ø x 1 1/4" LONG BONDING BOLT WITH 1 NUT AND 2 WASHERS.
D	4	PLASTIC NUT COVERS FOR 1"Ø NUTS.
E	4	LEVELLING SHIMS.
F	4	1"Ø NUTS AND WASHERS.

POLE ASSEMBLY DETAIL

NOTES:

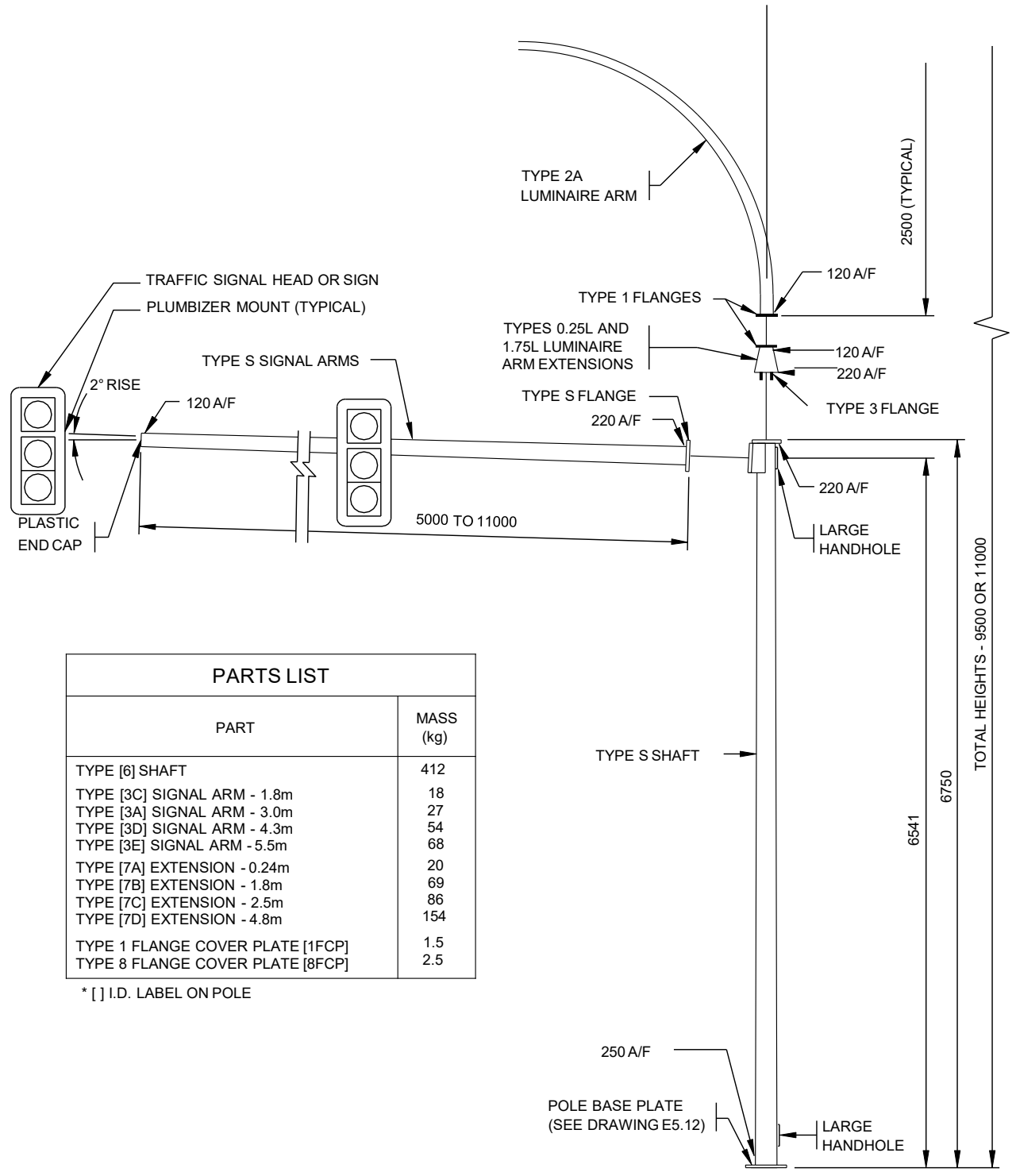
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH, UNLESS OTHERWISE NOTED.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (HIGHWAYS TYPE 3 SHAFT)

Scale: NTS
Created: JAN 1998
Rev Date: JAN 1998
Dwg No: E-5.6

3.20.2020



PARTS LIST	
PART	MASS (kg)
TYPE [6] SHAFT	412
TYPE [3C] SIGNAL ARM - 1.8m	18
TYPE [3A] SIGNAL ARM - 3.0m	27
TYPE [3D] SIGNAL ARM - 4.3m	54
TYPE [3E] SIGNAL ARM - 5.5m	68
TYPE [7A] EXTENSION - 0.24m	20
TYPE [7B] EXTENSION - 1.8m	69
TYPE [7C] EXTENSION - 2.5m	86
TYPE [7D] EXTENSION - 4.8m	154
TYPE 1 FLANGE COVER PLATE [1FCP]	1.5
TYPE 8 FLANGE COVER PLATE [8FCP]	2.5

* [ ] I.D. LABEL ON POLE

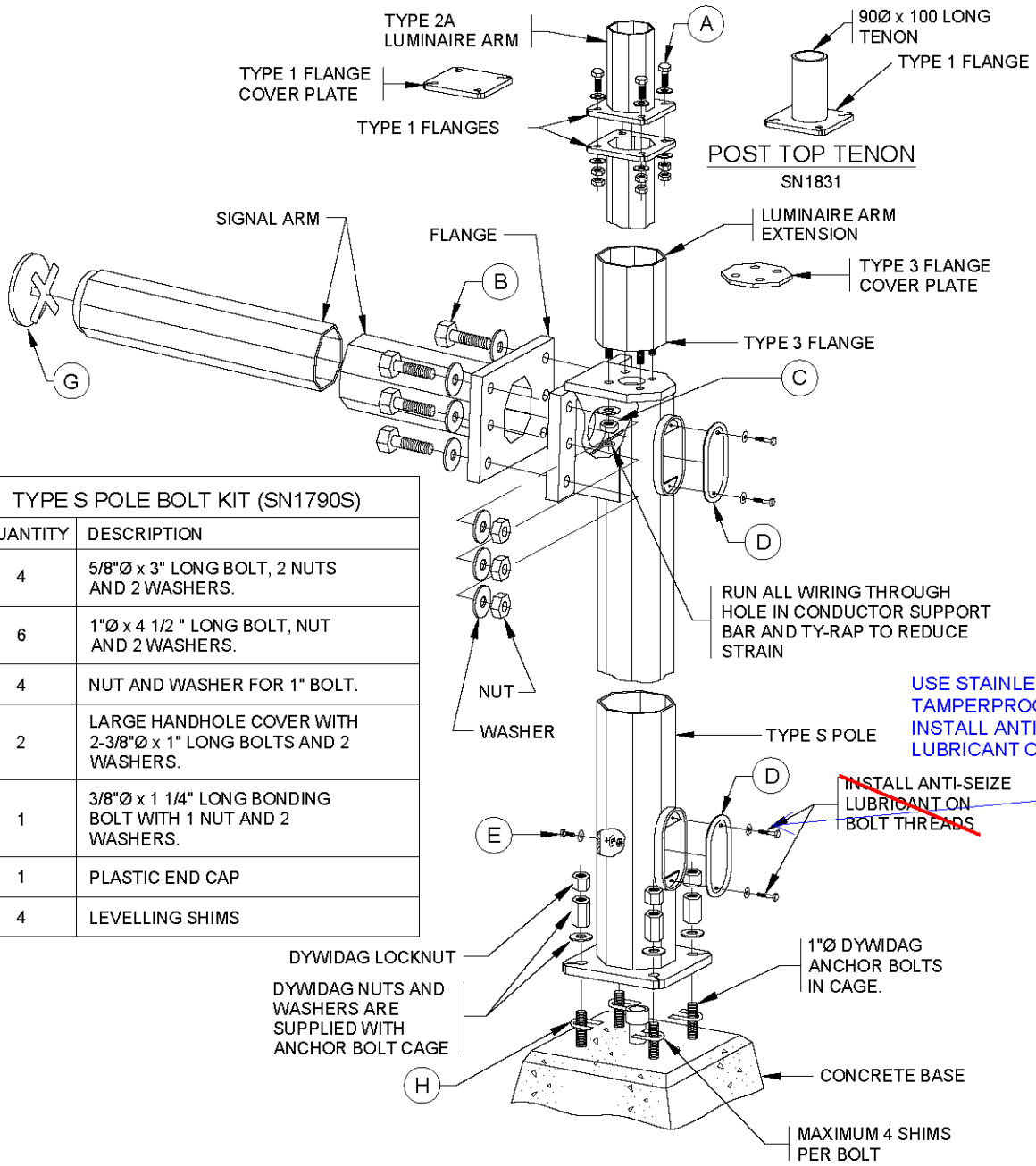
NOTES:

1. SEE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (TYPE S SHAFT)
INSTALLATION DETAILS

Scale: NTS
Created: MAY 2013
Rev Date: NOV 2016
Dwg No: E-5.7

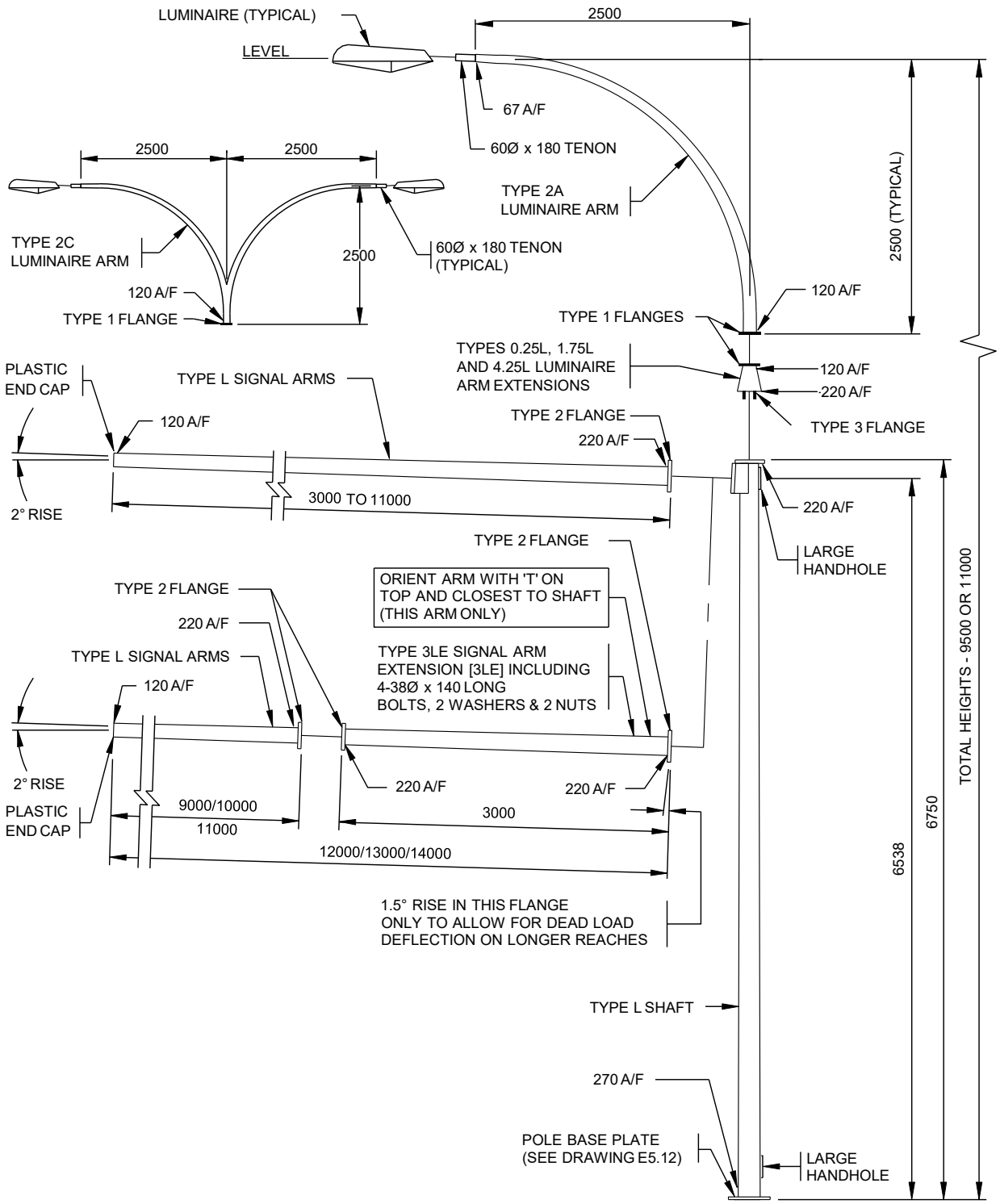


POLE ASSEMBLY DETAIL

TYPE S POLE BOLT KIT (SN1790S)		
ITEM	QUANTITY	DESCRIPTION
A	4	5/8"Ø x 3" LONG BOLT, 2 NUTS AND 2 WASHERS.
B	6	1"Ø x 4 1/2 " LONG BOLT, NUT AND 2 WASHERS.
C	4	NUT AND WASHER FOR 1" BOLT.
D	2	LARGE HANDHOLE COVER WITH 2-3/8"Ø x 1" LONG BOLTS AND 2 WASHERS.
E	1	3/8"Ø x 1 1/4" LONG BONDING BOLT WITH 1 NUT AND 2 WASHERS.
G	1	PLASTIC END CAP
H	4	LEVELLING SHIMS

NOTES:

1. SEE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.



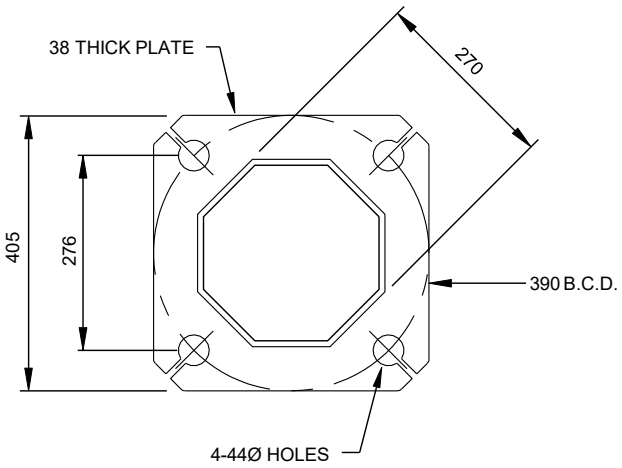
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SEE DRAWING E-5.13 FOR BOLT KITS AND POLE ASSEMBLY DETAILS.
3. SEE DRAWING E-5.12 FOR BASE PLATE AND PARTS LIST.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (HIGHWAYS TYPE L SHAFT)

Scale:	NTS
Created:	MAY 2013
Rev Date:	MAY 2020
Dwg No:	E-5.11



TYPE L POLE BASE PLATE

PARTS LIST FOR TYPE L SIGNAL POLE	
PART	MASS (kg)
TYPE [L] POLE SHAFT	442
TYPE [3L] SIGNAL ARM - 3.0m	97
TYPE [4L] SIGNAL ARM - 4.0m	118
TYPE [5L] SIGNAL ARM - 5.0m	173
TYPE [6L] SIGNAL ARM - 6.0m	201
TYPE [7L] SIGNAL ARM - 7.0m	229
TYPE [8L] SIGNAL ARM - 8.0m	259
TYPE [9L] SIGNAL ARM - 9.0m	284
TYPE [10L] SIGNAL ARM - 10.0m	377
TYPE [11L] SIGNAL ARM - 11.0m	410
TYPE [3LE] SIGNAL ARM EXTENSION - 3.0m	114
TYPE [4.25L] LUMINAIRE ARM EXTENSION - 4.25m	82
TYPE [1.75L] LUMINAIRE ARM EXTENSION - 1.75m	29
TYPE [0.25L] LUMINAIRE ARM EXTENSION - 0.25m	10
TYPE [2A] LUMINAIRE ARM	35
TYPE [2C] LUMINAIRE ARM	65
TYPE 1 FLANGE COVER PLATE [1 FCP]	1.5
TYPE 2 FLANGE COVER PLATE [2 FCP]	4
TYPE 3 FLANGE COVER PLATE [3 FCP]	4

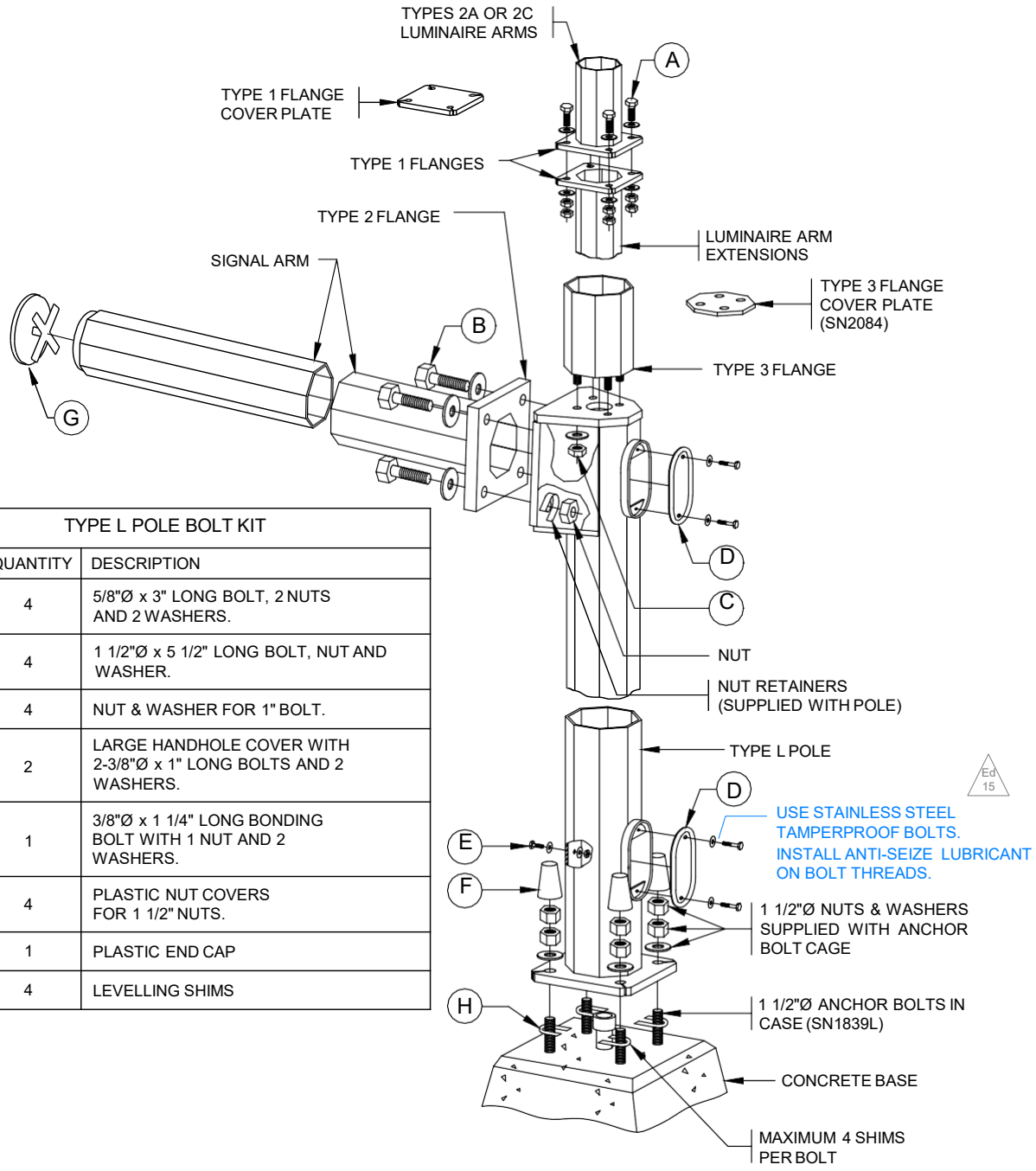
* [ ] I.D. LABEL ON POLE

2.28.2020

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (HIGHWAYS TYPE L SHAFT)

Scale: NTS
Created: MAY 2013
Rev Date: MAY 2013
Dwg No: E-5.12



TYPE L POLE BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
A	4	5/8"Ø x 3" LONG BOLT, 2 NUTS AND 2 WASHERS.
B	4	1 1/2"Ø x 5 1/2" LONG BOLT, NUT AND WASHER.
C	4	NUT & WASHER FOR 1" BOLT.
D	2	LARGE HANDHOLE COVER WITH 2-3/8"Ø x 1" LONG BOLTS AND 2 WASHERS.
E	1	3/8"Ø x 1 1/4" LONG BONDING BOLT WITH 1 NUT AND 2 WASHERS.
F	4	PLASTIC NUT COVERS FOR 1 1/2" NUTS.
G	1	PLASTIC END CAP
H	4	LEVELLING SHIMS

Ed 15

POLE ASSEMBLY DETAIL

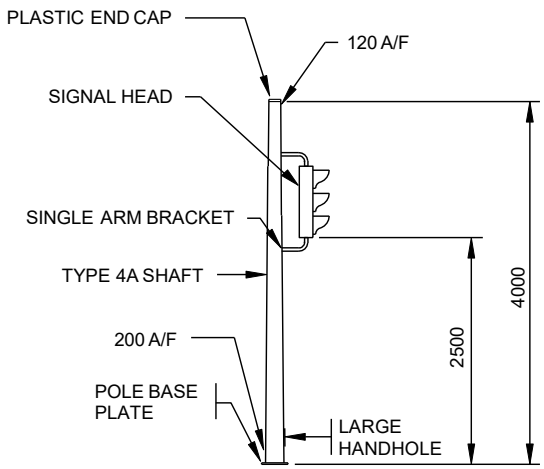
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH, UNLESS OTHERWISE NOTED.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.

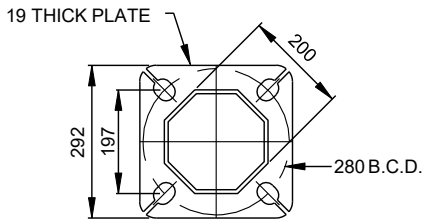
CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POLE (HIGHWAYS TYPE L SHAFT)

Scale:	NTS
Created:	JAN 1998
Rev Date:	~~JAN 1998~~
Dwg No:	E-5.13



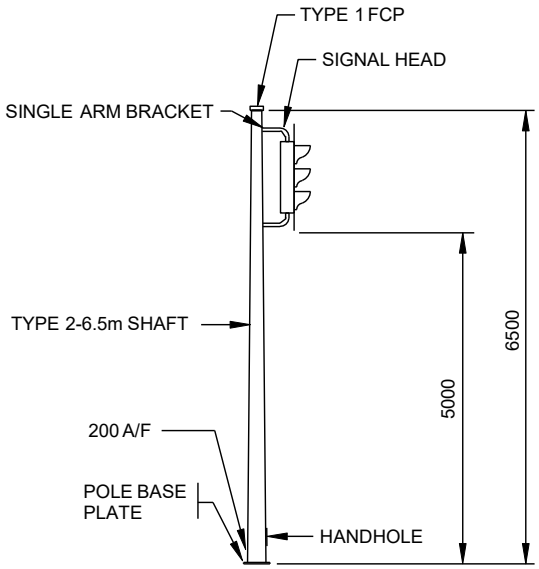
TYPE 4A SHAFT



POLE BASE PLATE

PARTS LIST	
PART	MASS (kg)
TYPE [2] SHAFT TYPE [4A] SHAFT	102 66

* [ ] I.D. LABEL ON POLE



TYPE 2-6.5m SHAFT

NOTES:

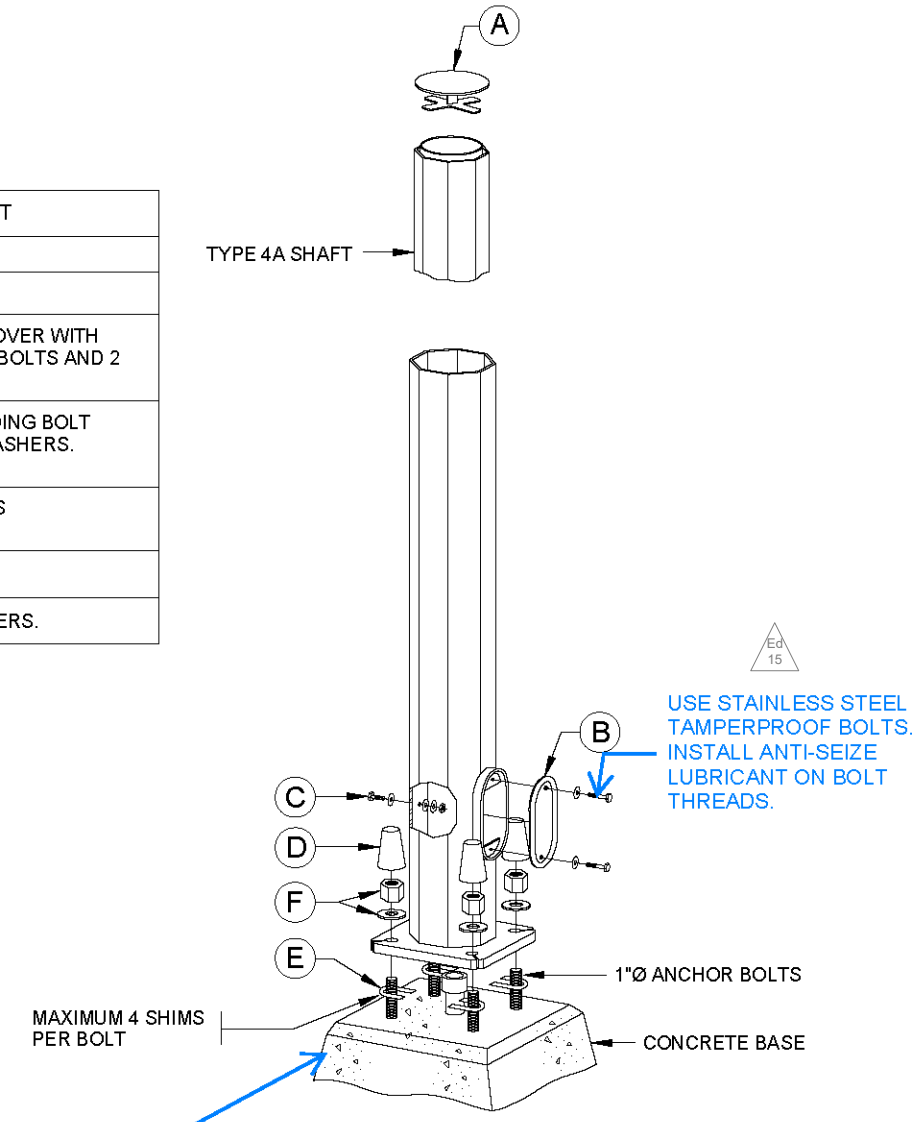
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SEE DRAWING E-5.15 FOR TYPE 4A SHAFT, BOLT KITS AND POLE ASSEMBLY DETAILS.
3. ALL DIMENSION IN MILLIMETERS UNLESS OTHERWISE NOTED.
4. POLE SHAFTS TO BE SUPPLIED 0.9m SHORTER WHERE BEING INSTALLED ON SERVICE BASE.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POSTS
(HIGHWAYS TYPE
4A & 2-6.5m SHAFTS)

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-5.14

TYPE 4A SHAFT BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
A	1	PLASTIC END CAP
B	1	LARGE HANDHOLE COVER WITH 2-3/8"Ø x 1 1/4" LONG BOLTS AND 2 WASHERS.
C	1	3/8"Ø x 1" LONG BONDING BOLT WITH 1 NUT AND 2 WASHERS.
D	4	PLASTIC NUT COVERS FOR 1"Ø NUTS.
E	4	LEVELING SHIMS.
F	4	1"Ø NUTS AND WASHERS.



Ed 15

USE STAINLESS STEEL TAMPERPROOF BOLTS. INSTALL ANTI-SEIZE LUBRICANT ON BOLT THREADS.

Ed 15

Should show a Type B cylindrical base

POLE ASSEMBLY DETAIL

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH, UNLESS OTHERWISE NOTED.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.

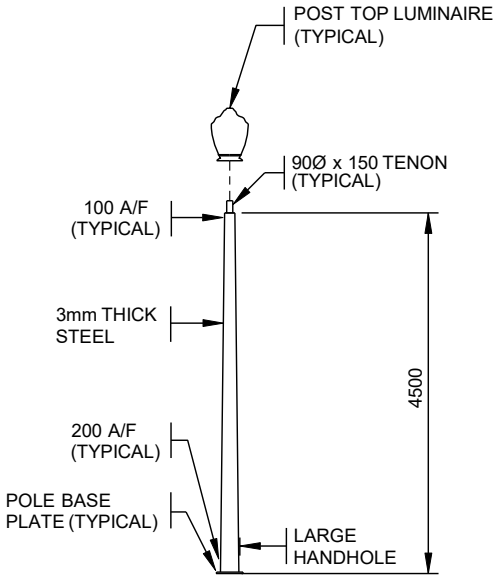
CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL POSTS
(HIGHWAYS TYPE 4A & 2-6.5m SHAFTS)

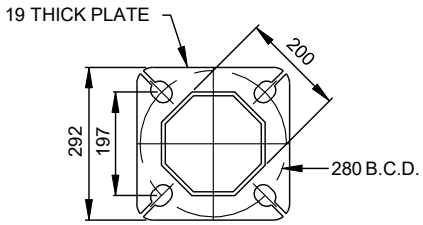
Scale: NTS
Created: JAN 1998
Rev Date: ~~JAN 1998~~
Dwg No: E-5.15

3.20.2020

PARTS LIST	
PART	MASS (kg)
4.5m - POST TOP LUMINAIRE POLE	55



4.5m POLE



POLE BASE PLATE

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SEE DRAWING E-5.17 FOR BOLT KIT AND POLE ASSEMBLY DETAILS.
3. ALL DIMENSION IN MILLIMETERS UNLESS OTHERWISE NOTED.
4. POST TOP POLES TO BE SUPPLIED 0.9m SHORTER WHEN INSTALLED ON A SERVICE BASE.

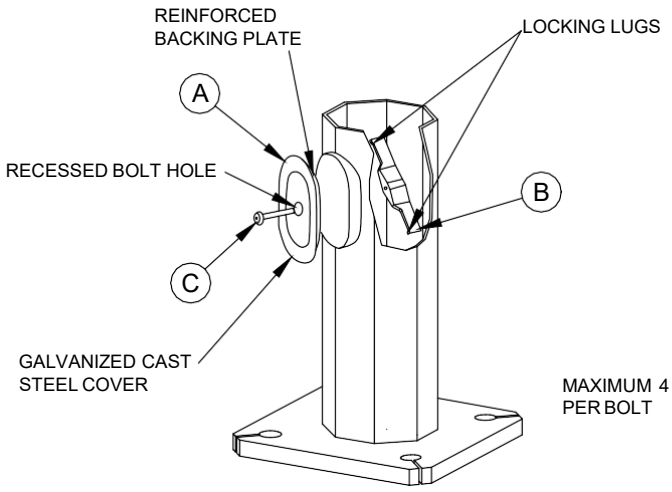
CITY OF NANAIMO
THE HARBOUR CITY

POST TOP LUMINAIRE POLES

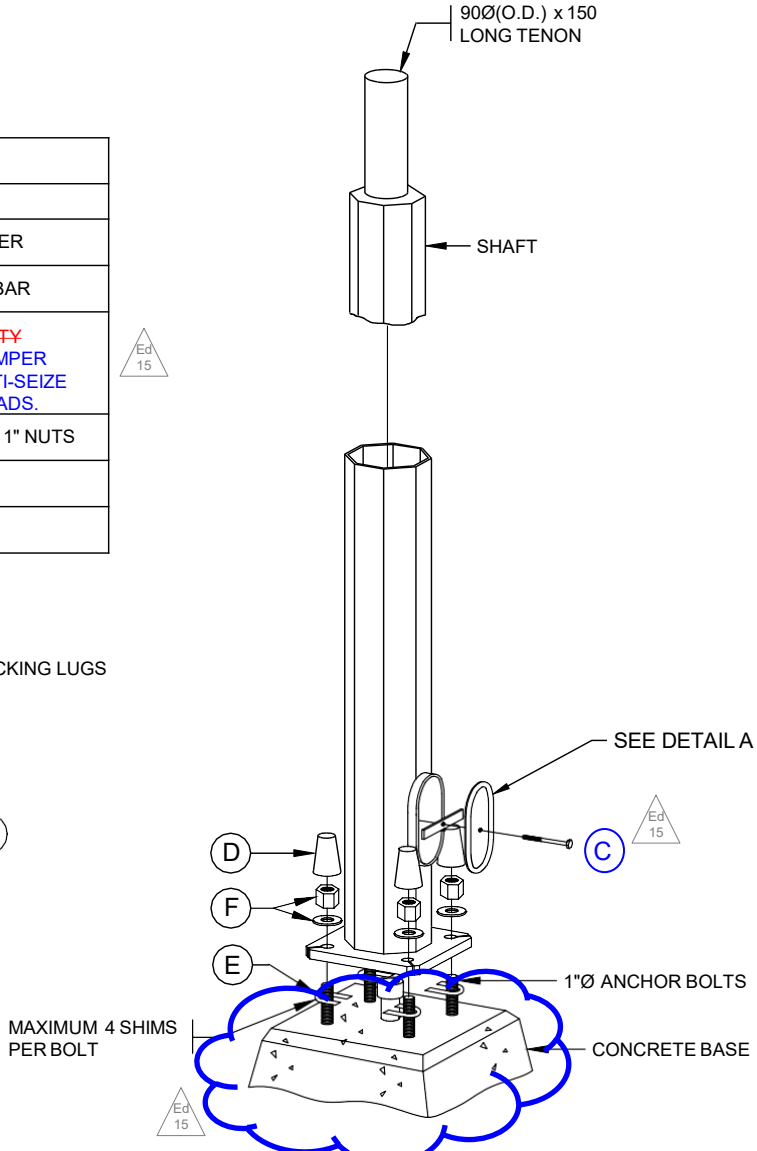
Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2019
Dwg No:	E-5.16

POST TOP POLE BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
A	1	LOCKABLE HANDHOLE COVER
B	1	TAMPER PROOF BACKING BAR
C	1	~~TAMPER PROOF HEAVY DUTY BOLT~~STAINLESS STEEL TAMPER PROOF BOLT. INSTALL ANTI-SEIZE LUBRICANT ON BOLT THREADS.
D	4	PLASTIC NUT COVERS FOR 1" NUTS
E	4	LEVELLING SHIMS
F	4	1"Ø NUTS AND WASHERS

Ed 15



DETAIL A

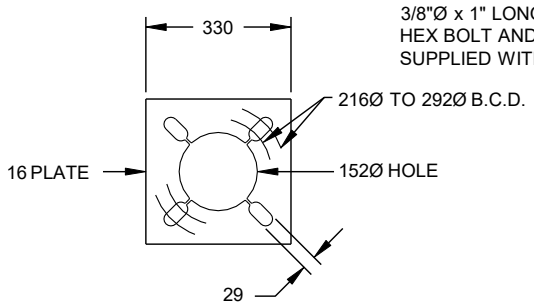


POLE ASSEMBLY DETAIL

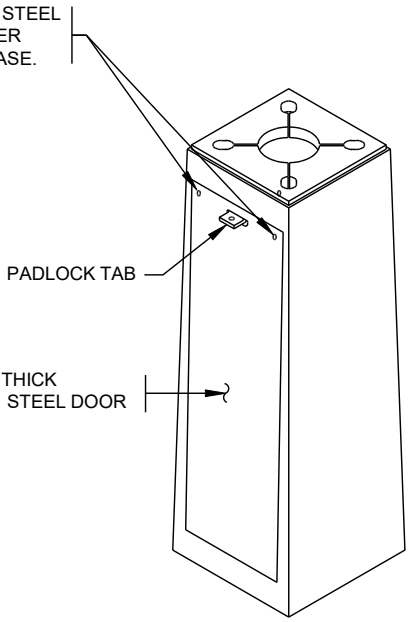
Should show a Type B cylindrical base

NOTES:

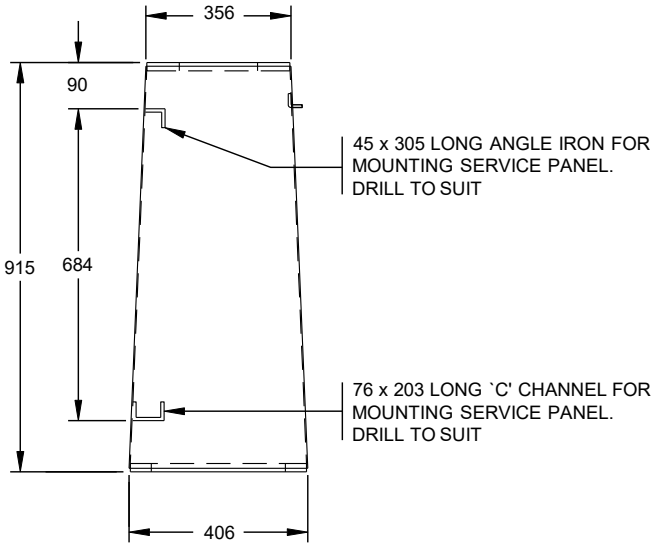
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SHAFTS TO BE INSTALLED PLUMB.
3. ALL SHAFTS, ARMS AND EXTENSIONS TO BE SUPPLIED WITH A GALVANIZED FINISH, UNLESS OTHERWISE NOTED.
4. APPLY GREASE TO ANCHOR BOLT THREADS.
5. TOUCH UP ANY SCRATCHES IN GALVANIZED SURFACES WITH COLD GALVANIZING COMPOUND.



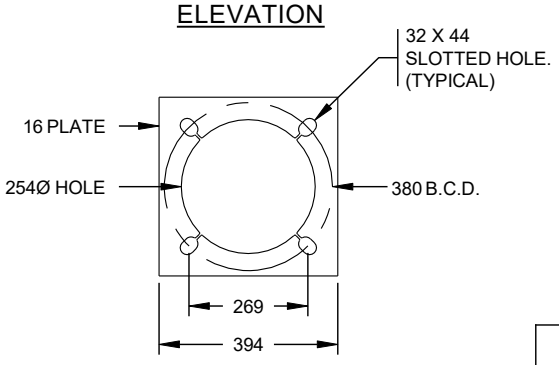
TOP VIEW



PICTORIAL VIEW



ELEVATION



BOTTOM VIEW

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SERVICE BASE TO BE USED WITH TYPE 2 SHAFTS AND POST TOP POLES ONLY.
3. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

SERVICE BASE BOLT KIT		
ITEM	QUANTITY	DESCRIPTION
POLE CONNECTION BOLTS	4	1"Ø x 3" LONG SAE GRADE 5 BOLT, NUT AND GALVANIZED 2 WASHERS.

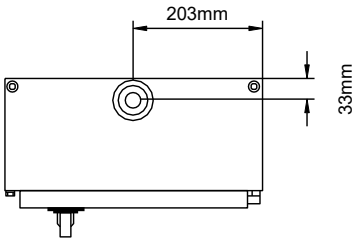
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO\13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWGS\E-5.18

2.28.2020

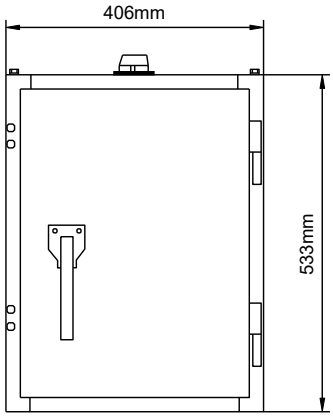
CITY OF NANAIMO
THE HARBOUR CITY

SERVICE BASE

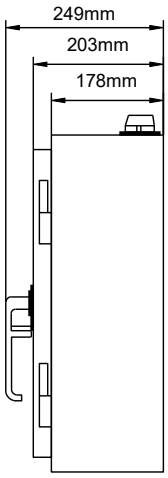
Scale: NTS
Created: JAN 1998
Rev Date: JAN 1998
Dwg No: E-5.18



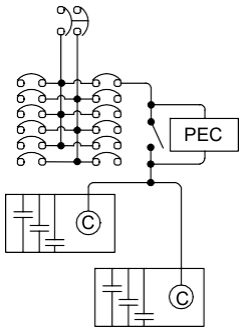
TOP VIEW



FRONT VIEW



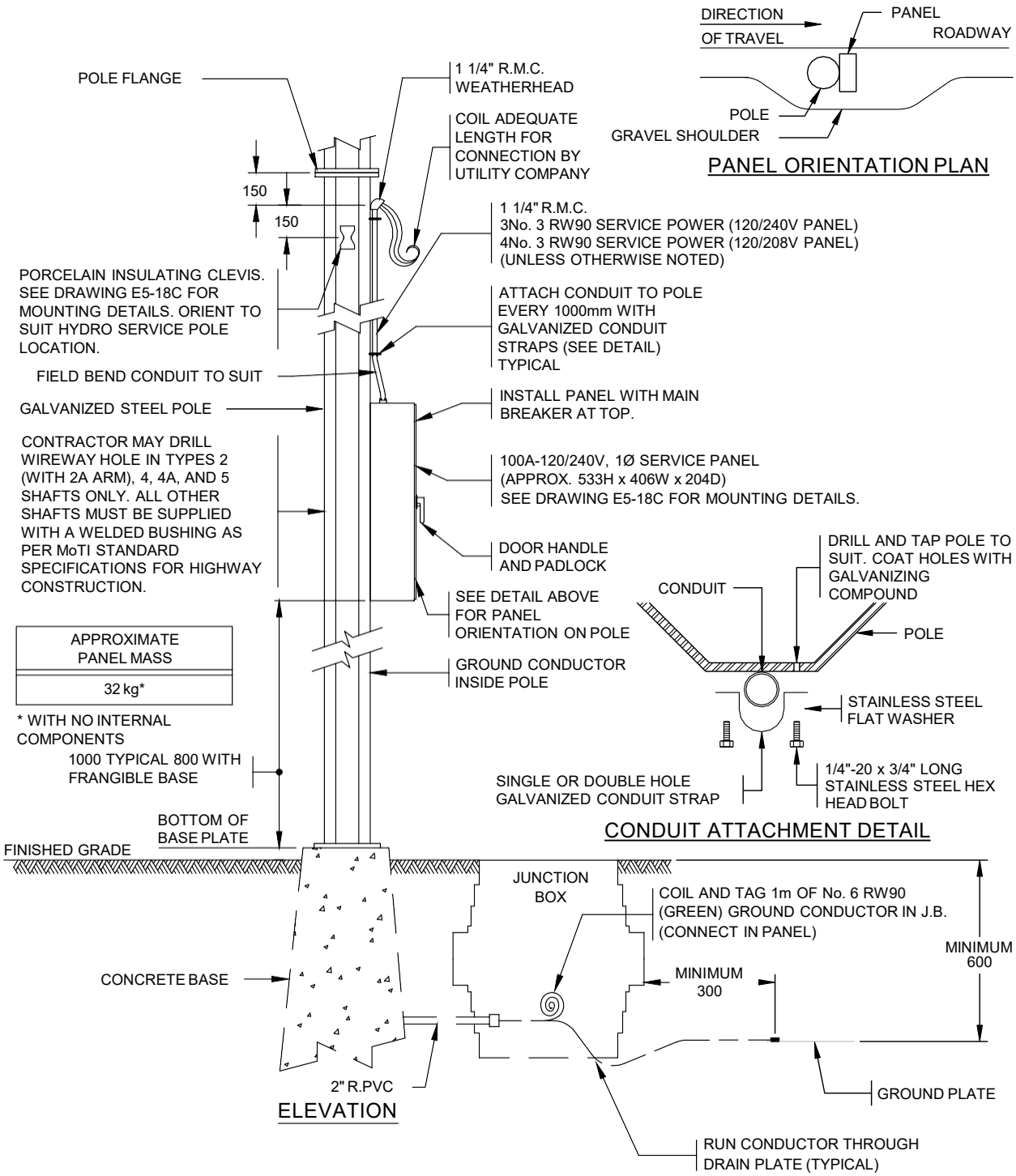
SIDE VIEW



CITY OF NANAIMO
THE HARBOUR CITY

POLE MOUNTED SERVICE PANEL

Scale:	NTS
Created:	NOV 2012
Rev Date:	NOV 2012
Dwg No:	E-5.18A



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

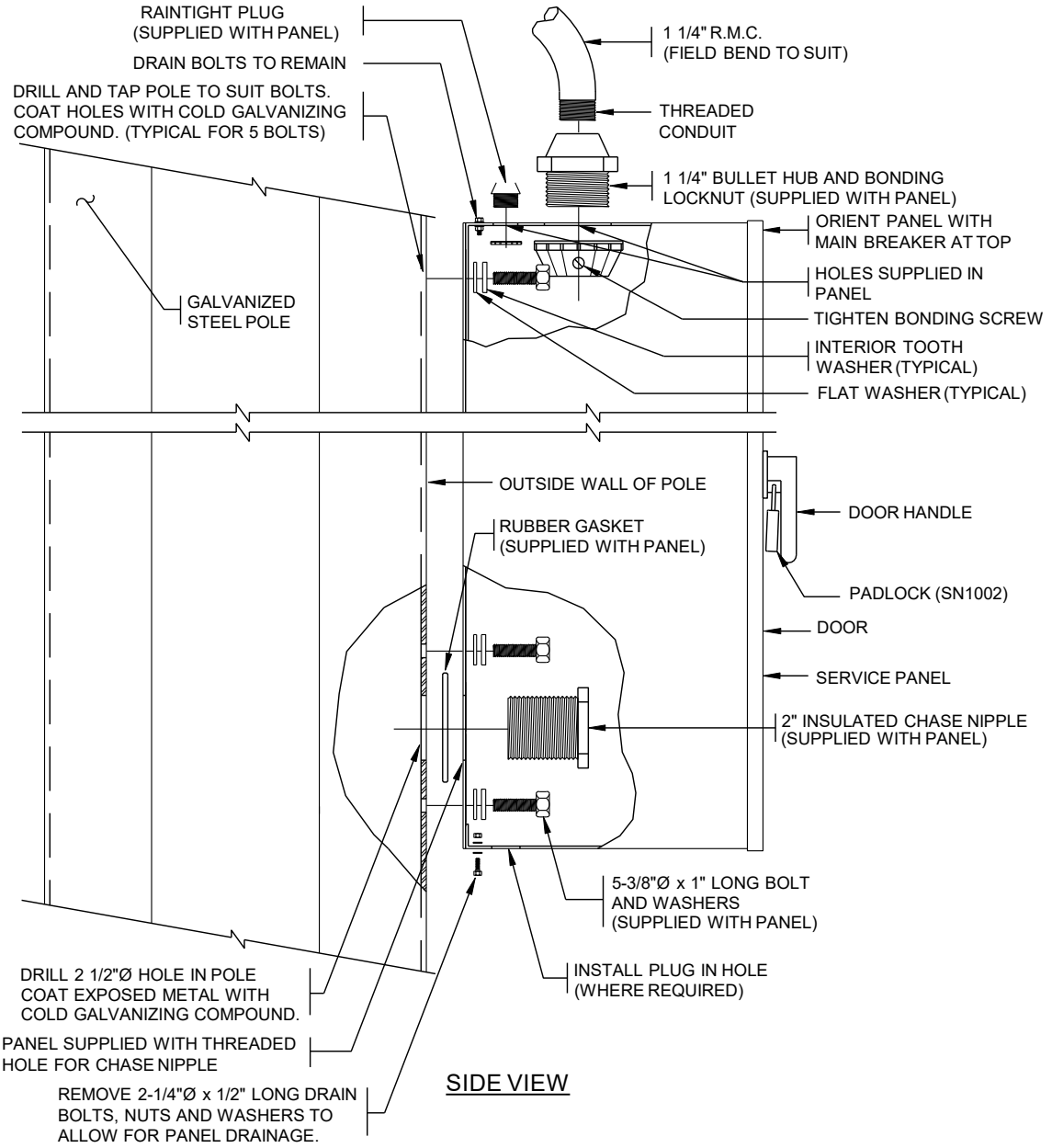
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOE SS IED ITION NO 13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWG\SIE-5.18B

2.28.2020

CITY OF NANAIMO
THE HARBOUR CITY

100A - OVERHEAD DROP SERVICE
(INSTALLATION DETAILS)

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-5.18B



SIDE VIEW

NOTES:

1. SEE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. PANEL ASSEMBLY AND INSTALLATION INSTRUCTIONS SUPPLIED WITH PANEL.

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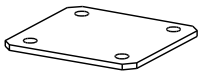
3.3.2020

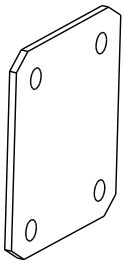
CITY OF NANAIMO
THE HARBOUR CITY

100A - OVERHEAD DROP SERVICE
(INSTALLATION DETAILS)

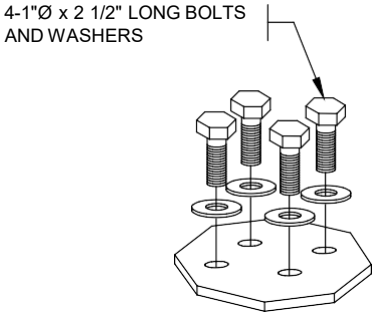
Scale:	NTS
Created:	NOV 2012
Rev Date:	NOV 2012
Dwg No:	E-5.18C



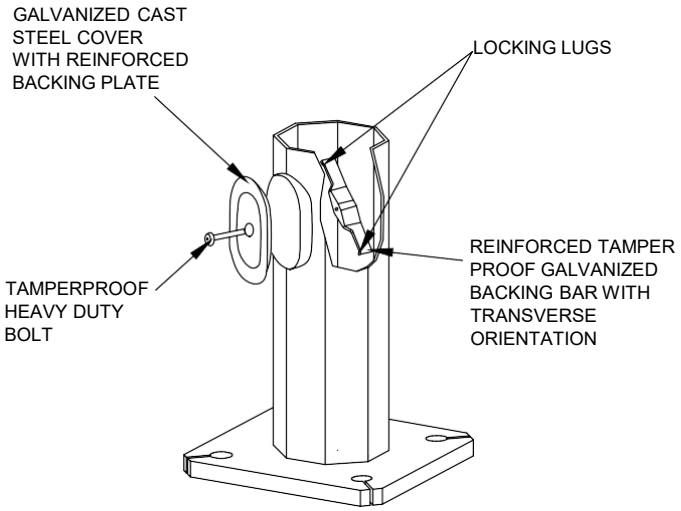
TYPE 1 FLANGE COVER PLATE



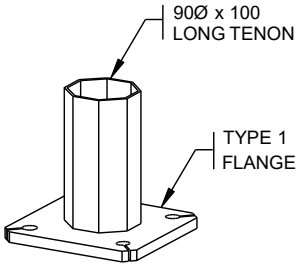
TYPE 2 FLANGE COVER PLATE



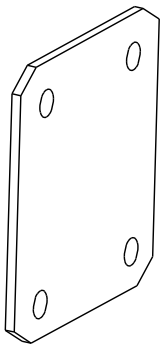
TYPE 3 FLANGE COVER PLATE



SECURITY 4 X 7 HANDHOLE COVER KIT



POST TOP TENON



TYPE 8 FLANGE COVER PLATE

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.

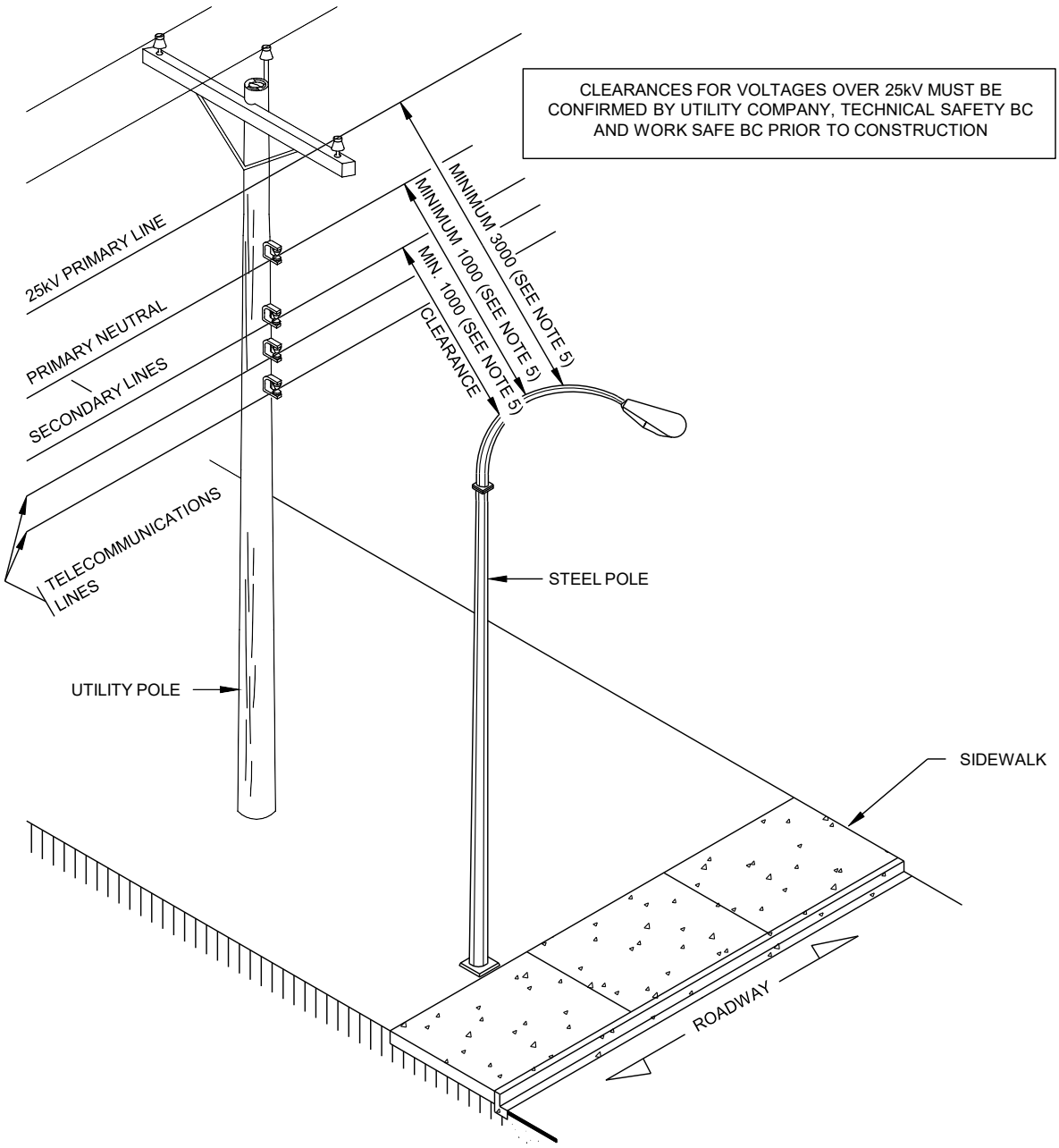
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO\13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWGS\E-5.19

2.28.2020

CITY OF NANAIMO
THE HARBOUR CITY

POLE ACCESSORIES (HIGHWAYS TYPE)

Scale:	NTS
Created:	NOV 2012
Rev Date:	NOV 2019
Dwg No:	E-5.19



NOTES:

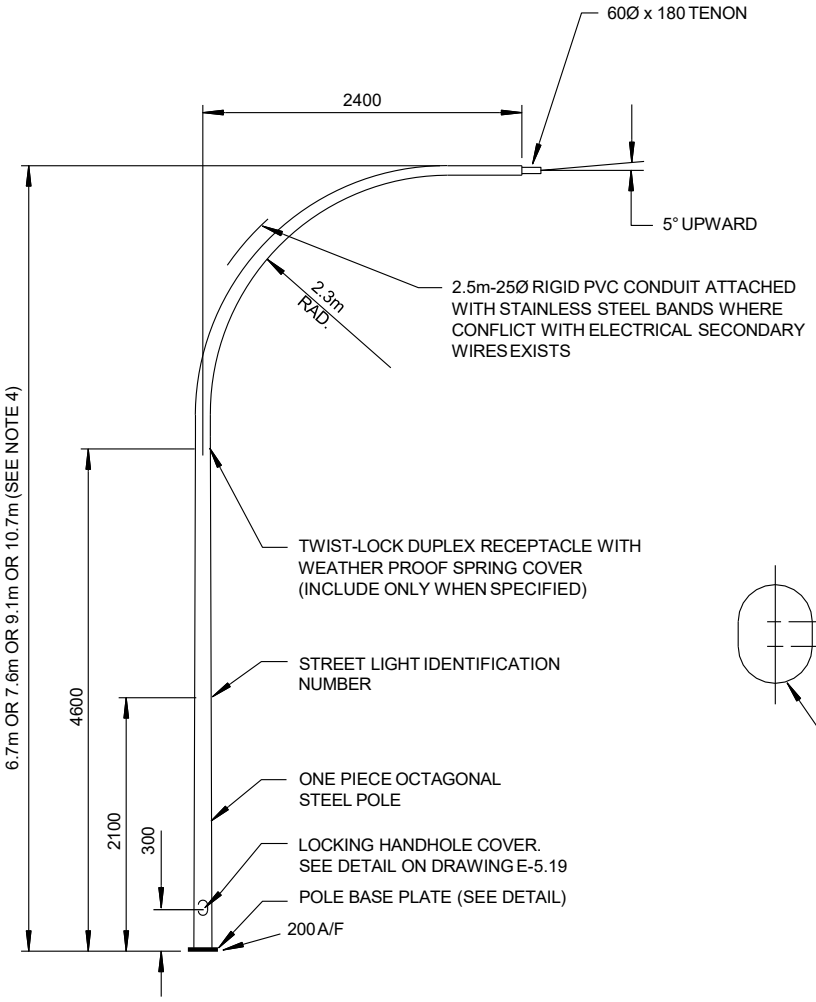
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. CLEARANCES LISTED ABOVE ARE TO BE USED AS A GUIDELINE ONLY. EXACT REQUIRED CLEARANCES MAY VARY AND MUST BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION. AS PER THE REQUIREMENTS OF THE UTILITY COMPANY.
3. FOR CLEARANCES LESS THAN SHOWN, CONTRACTOR TO OBTAIN APPROVAL FROM UTILITY COMPANY AND WORKERS COMPENSATION BOARD PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL COORDINATE WITH TELECOMMUNICATIONS UTILITIES TO INSTALL PLASTIC WEAR SHIELDS ON LINES THAT COME INTO CONTACT WITH POLES.
5. MINIMUM DISTANCE TO INCLUDE MAXIMUM SAG AND SWING.

CITY OF NANAIMO
THE HARBOUR CITY

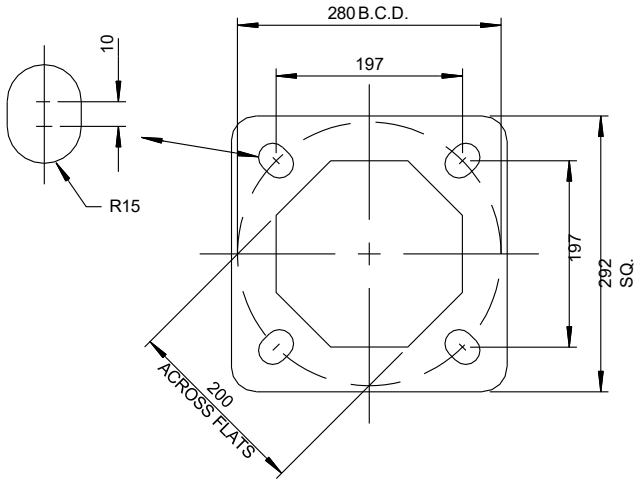
MINIMUM CLEARANCES TO OVERHEAD POWERLINES

Scale:	NTS
Created:	JAN 1998
Rev Date:	MAY 2020
Dwg No:	E-5.20

2.28.2020



ELEVATION



POLE BASE PLATE

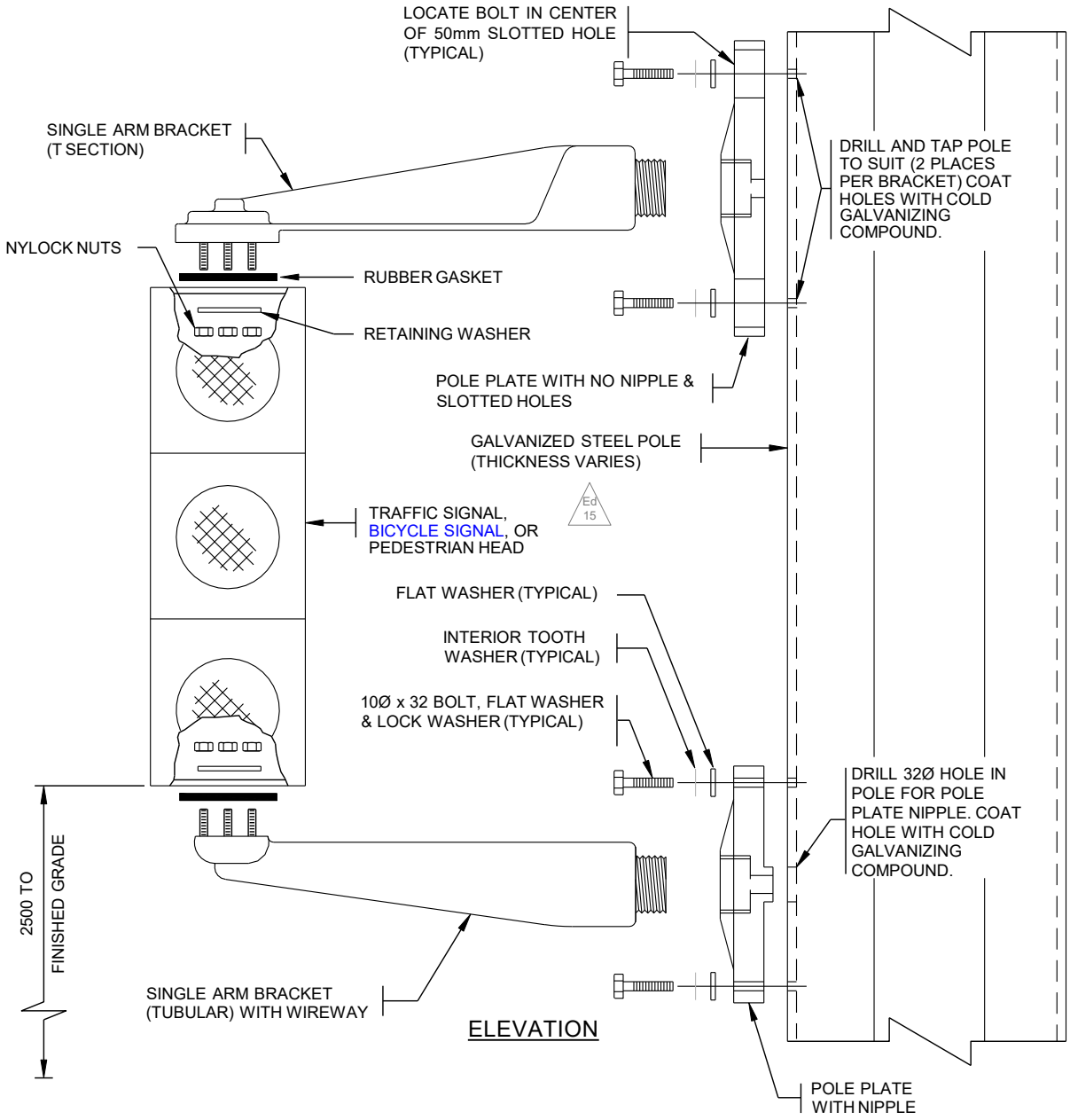
NOTES:

1. STRICT ADHERENCE TO CLEARANCES FROM HIGH VOLTAGE POWER AS SPECIFIED IN THE CANADIAN ELECTRICAL CODE IS REQUIRED
2. ALL DIMENSIONS IN MILLIMETERS UNLESS SHOWN OTHERWISE
3. POLE TO BE SUPPLIED 0.9m SHORTER WHERE BEING INSTALLED ON SERVICE BASE.
4. 6.7m AND 7.6m POLES REQUIRE APPROVAL FROM THE CITY ENGINEER.

CITY OF NANAIMO
THE HARBOUR CITY

ONE PIECE LUMINAIRE POLE FOR SINGLE ~~FAMILY~~ RESIDENTIAL ZONE

Scale:	NTS
Created:	JUL 1999
Rev Date:	~~NOV 2019~~
Dwg No:	E-5.21



ELEVATION

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM SIGNAL HEADS AS DIRECTED BY THE CITY ENGINEER.
3. WHERE 3 OR MORE SIDE MOUNT SIGNAL HEADS ARE REQUIRED ON POLE, LOCATE 3rd & 4th PEDESTRIAN HEAD ARM BRACKETS WITH WIREWAY & POLE PLATE WITH NIPPLE TO TOP OF HEAD TO AVOID EXCESSIVE DRILLING OF POLE IN ONE AREA.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

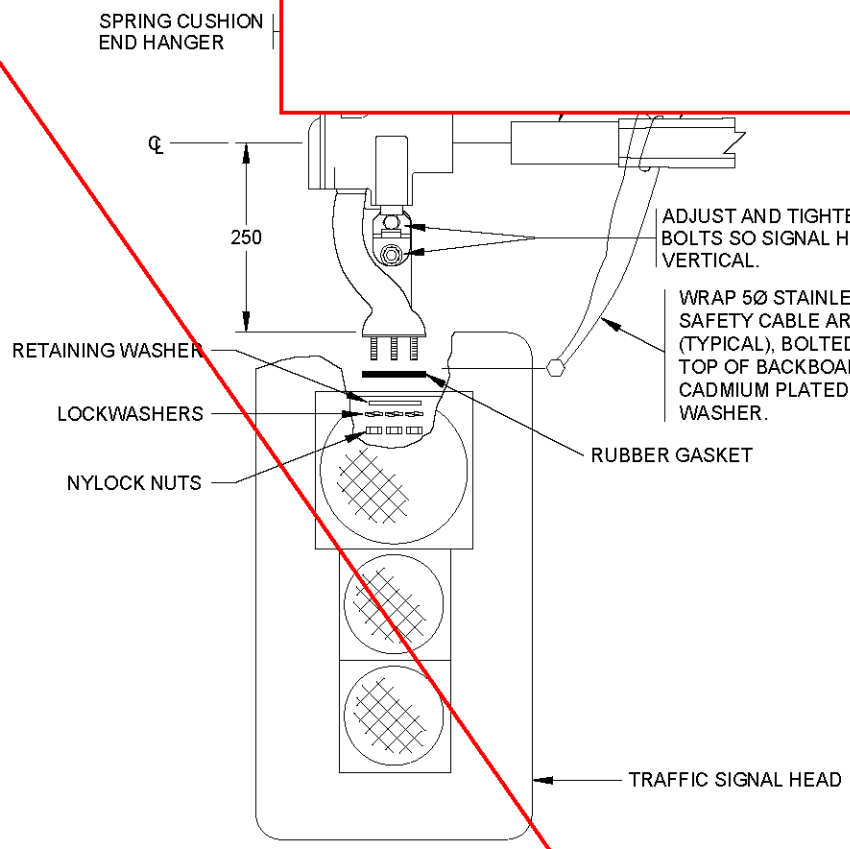
CITY OF NANAIMO
THE HARBOUR CITY

SIDE OF POLE SIGNAL HEAD MOUNTING

Scale:	NTS
Created:	JAN 1998
Rev Date:	~~JAN 1998~~
Dwg No:	E-6.1

3.3.2020

Replace with MoTI drawing SP635-2.3.6 from 2020 Standard Specifications for Highway Construction



ELEVATION

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM SIGNAL HEADS AS DIRECTED BY THE CITY ENGINEER.
3. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

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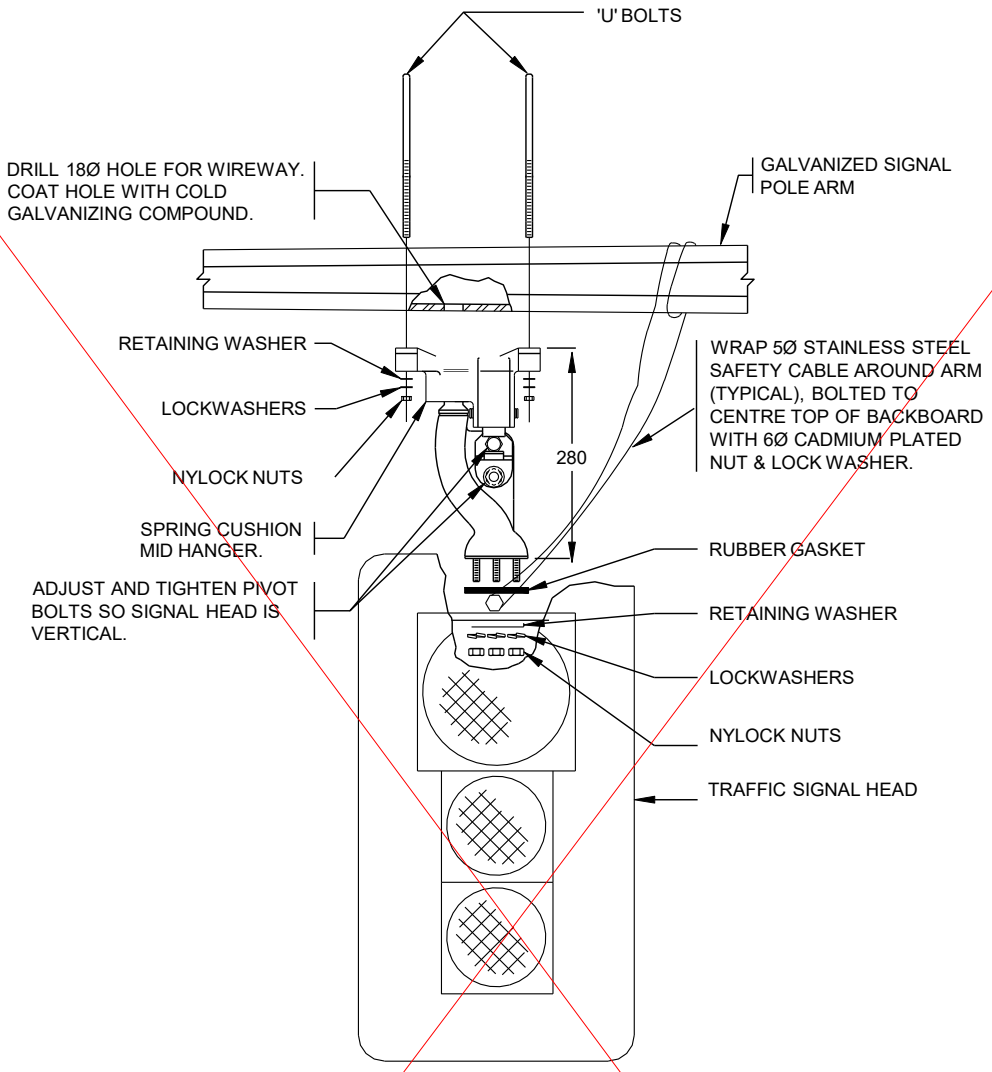
3.2.2020

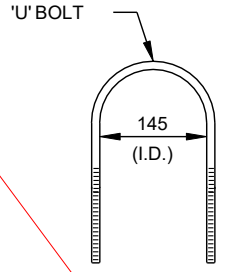
CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD SIGNAL HEAD MOUNTING WITH SPRING CUSHION END HANGER

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-6.2



ELEVATION



SIDE VIEW

NOTES:

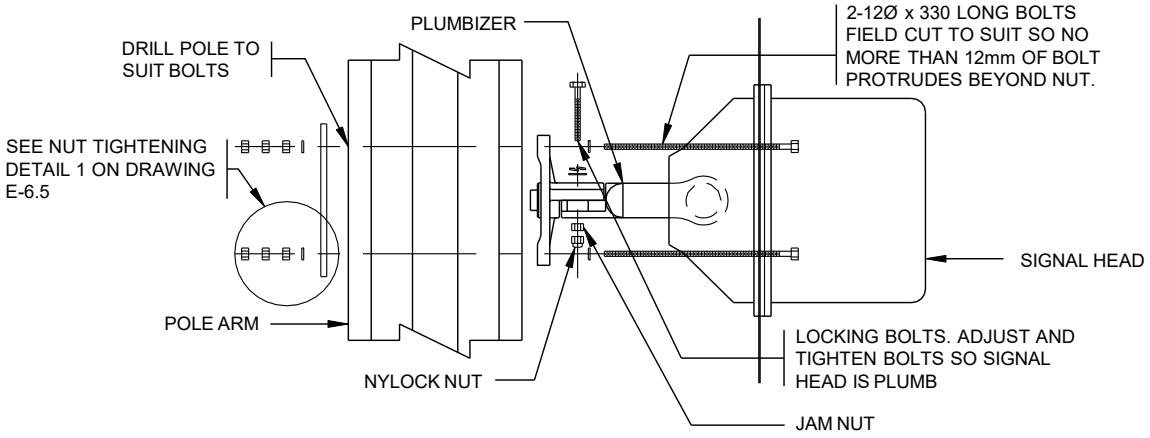
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM SIGNAL HEADS AS DIRECTED BY THE CITY ENGINEER.
3. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

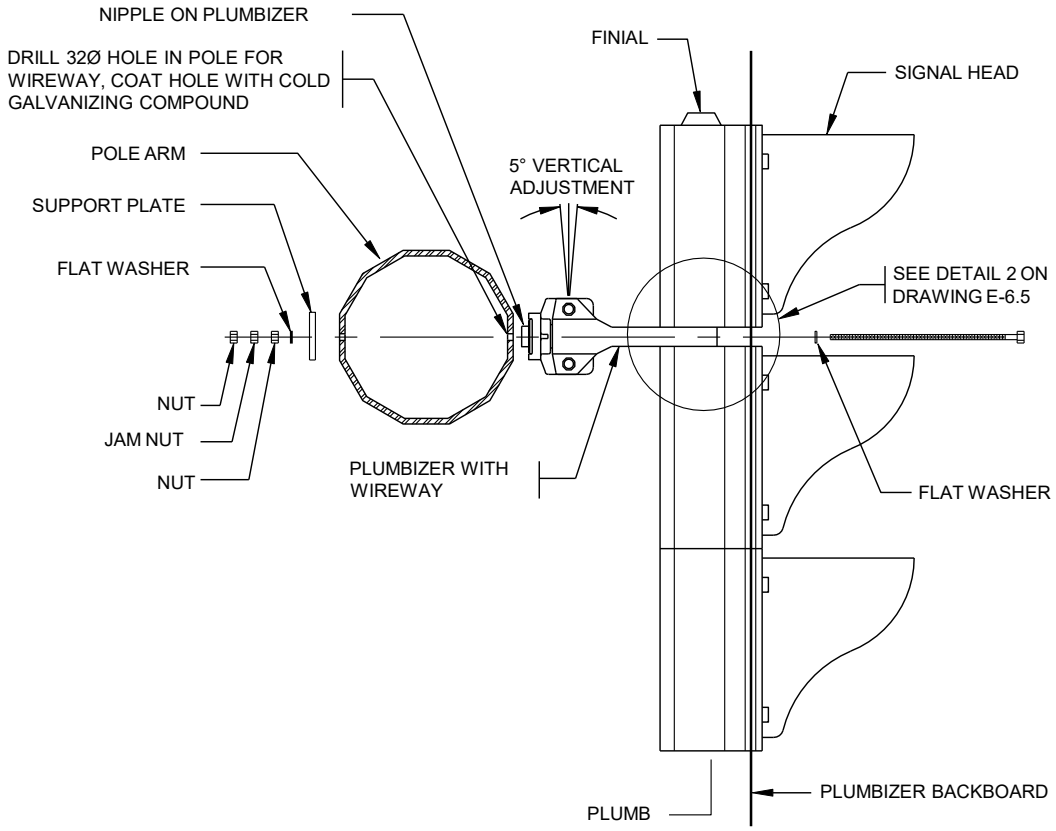
OVERHEAD SIGNAL HEAD MOUNTING WITH SPRING CUSHION MID HANGER

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-6.3

3.2.2020



TOP VIEW



ELEVATION

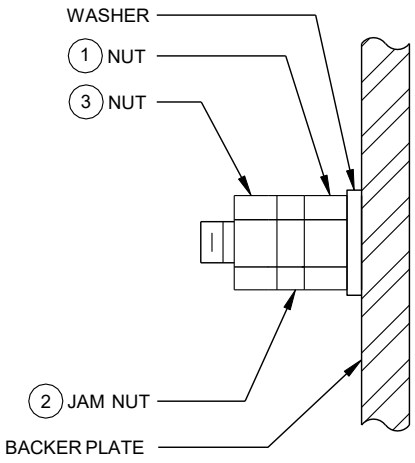
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM SIGNAL HEADS AS DIRECTED BY THE CITY ENGINEER.

CITY OF NANAIMO
THE HARBOUR CITY

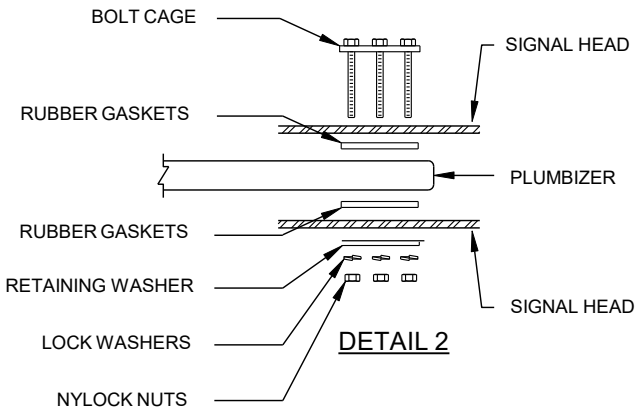
OVERHEAD SIGNAL HEAD MOUNTING WITH PLUMBIZER

Scale: NTS
Created: JAN 1998
Rev Date: NOV 2016
Dwg No: E-6.4



- TIGHTEN NUT (1) AGAINST WASHER,
- TIGHTEN JAM NUT (2) AGAINST NUT,
- SNUG NUT (3) AGAINST JAM NUT 2 AND THEN TIGHTEN NUT 3 AND JAM NUT 2 INTO EACH OTHER.

DETAIL 1



DETAIL 2

NOTES:

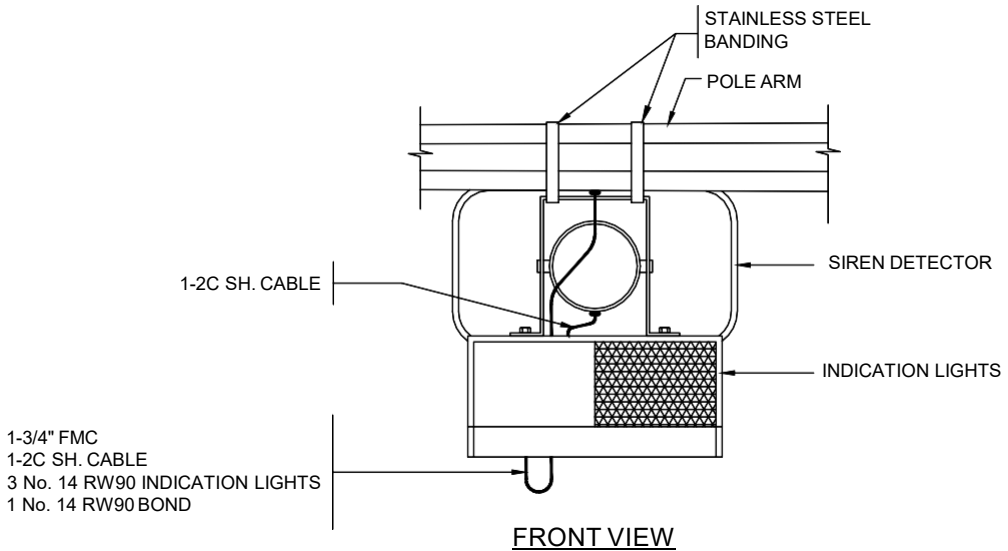
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM SIGNAL HEADS AS DIRECTED BY THE CITY ENGINEER.

CITY OF NANAIMO
THE HARBOUR CITY

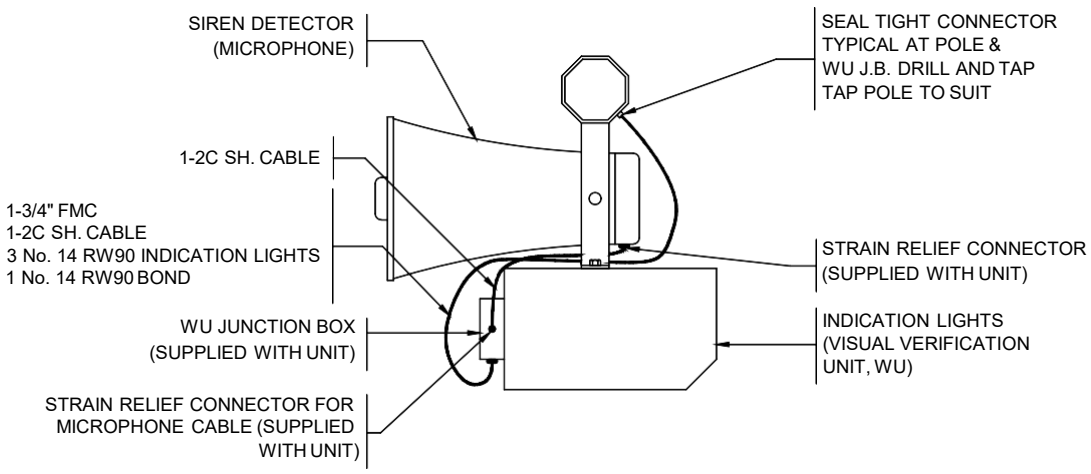
OVERHEAD SIGNAL HEAD MOUNTING WITH PLUMBIZER

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2016
Dwg No:	E-6.5

3.2.2020



FRONT VIEW



SIDE VIEW

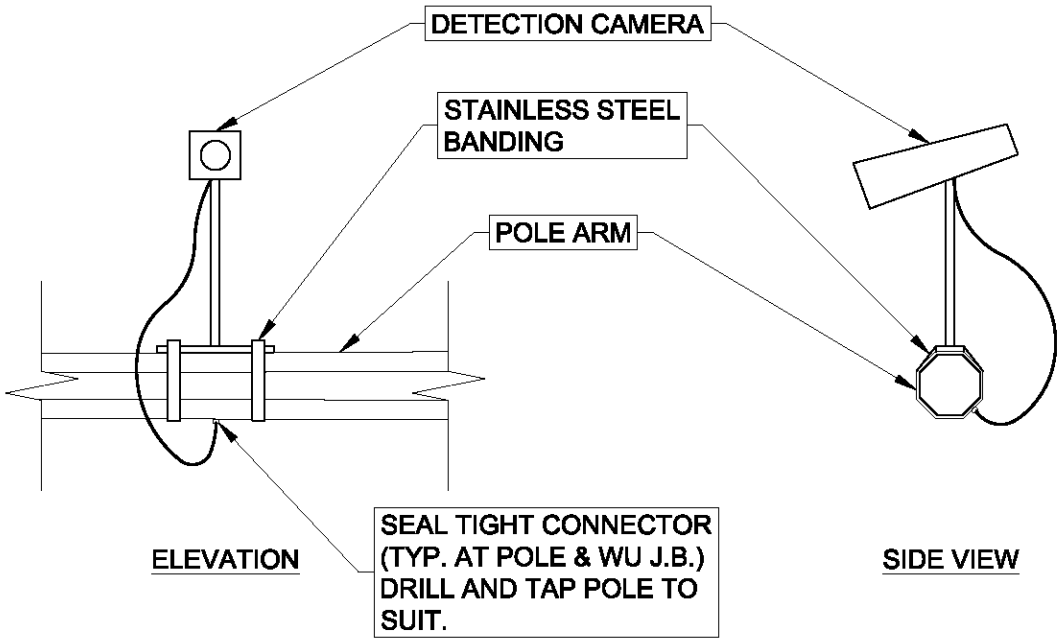
NOTES:

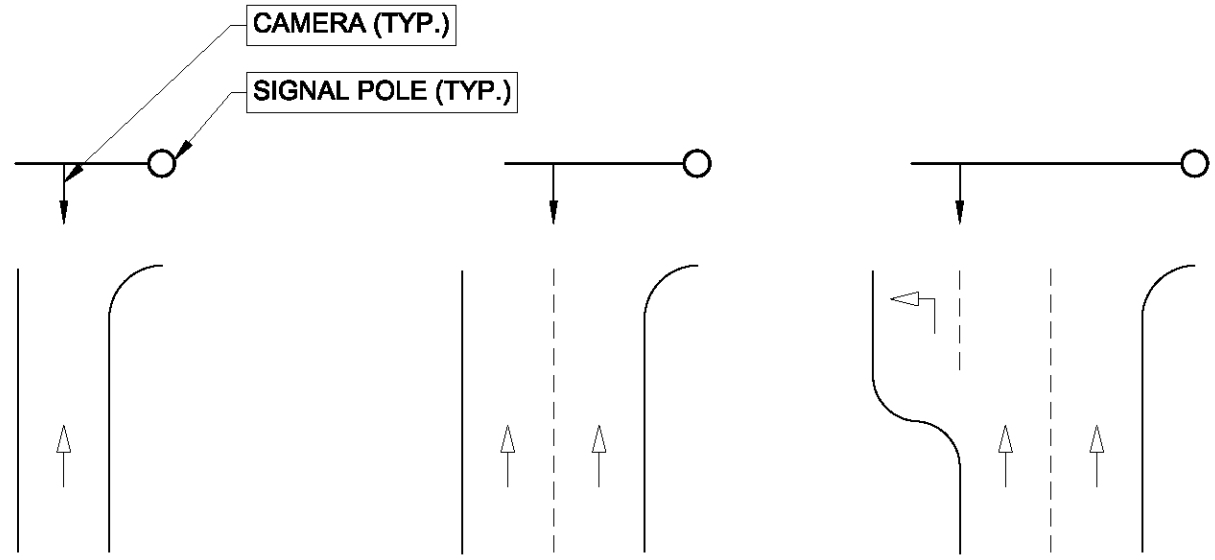
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. PRE-EMPTION UNIT IS TO BE SUPPLIED BY THE CITY OF NANAIMO AND INSTALLED BY THIS CONTRACTOR.
3. AIM, ADJUST SIREN PRE-EMPTION UNIT AS DIRECTED BY THE CITY ENGINEER.

CITY OF NANAIMO
THE HARBOUR CITY

EMERGENCY VEHICLE SIREN-ACTIVATED PRE-EMPTION UNIT

Scale:	NTS
Created:	MAY 2001
Rev Date:	NOV 2019
Dwg No:	E-6.6





PLAN VIEW - CAMERA LOCATIONS

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. CAMERA MANUFACTURER / MODEL VARIES. INSTALL CAMERA AS PER MANUFACTURER'S REQUIREMENTS WITH STAINLESS STEEL HARDWARE.
3. AIM, ADJUST CAMERA AS DIRECTED BY THE CITY.
4. CITY TO PROVIDE PROGRAMMING FOR CAMERA DETECTION SYSTEM.

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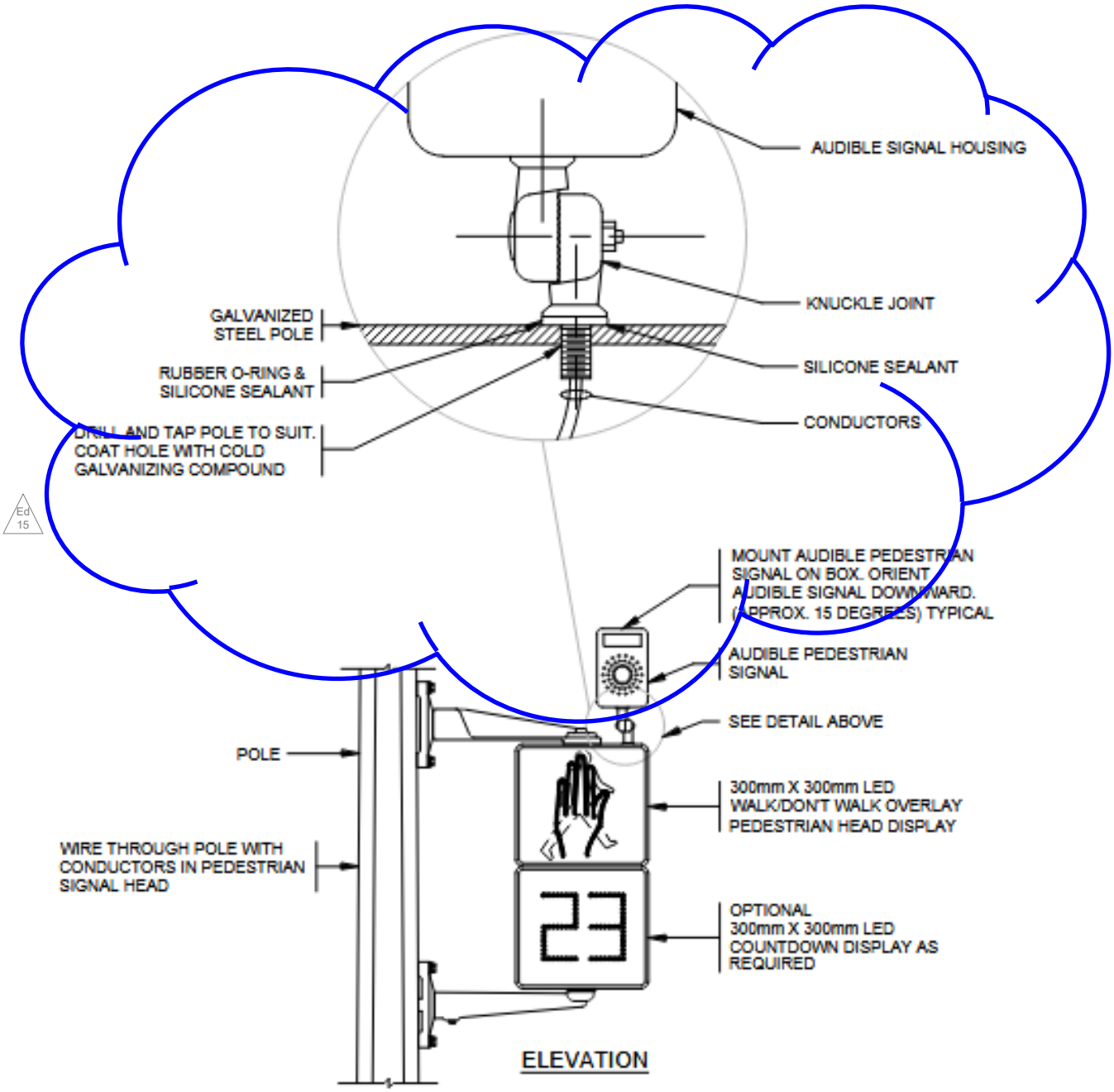
1.29.2024

CITY OF NANAIMO
THE HARBOUR CITY

Ed 15

INTERSECTION TRAFFIC DETECTION CAMERA

Scale:	N.T.S.
Drawn:	CD
Date:	JAN, 2024
Dwg No:	E-6.7



ELEVATION

Ed 15

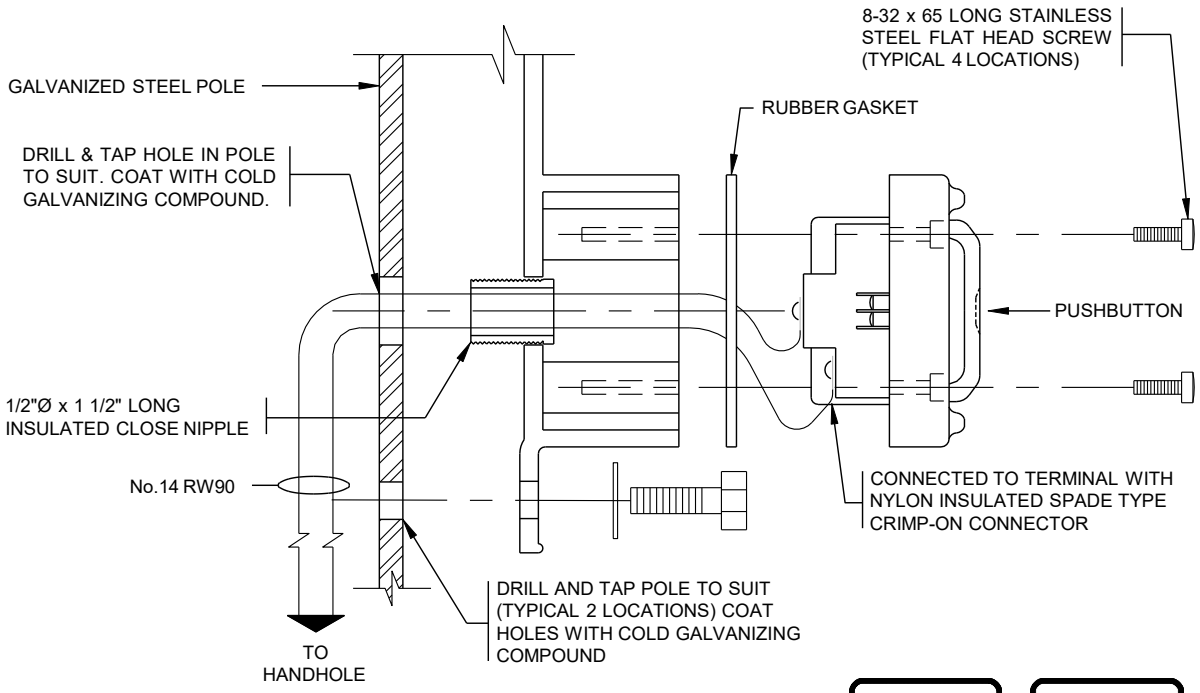
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM, ADJUST AND CONNECT AUDIBLE SIGNAL AS PER MANUFACTURERS INSTRUCTIONS TO SATISFACTION THE CITY ENGINEER.
3. AUDIBLE SIGNAL TO 'CHIRP' FOR EAST TO WEST CROSSINGS & 'CUCKOO' FOR NORTH TO SOUTH CROSSINGS. AT INTERSECTIONS WHERE NORTH/SOUTH AND EAST/WEST ARE NOT EASILY DEFINED CONTACT CITY ENGINEER FOR DIRECTION.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
5. ORDER AUDIBLE SIGNAL HEAD WITH MINIMUM 3.0m OF CONDUCTORS.

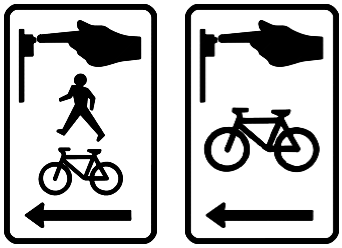
CITY OF NANAIMO
THE HARBOUR CITY

PEDESTRIAN & AUDIBLE SIGNALS

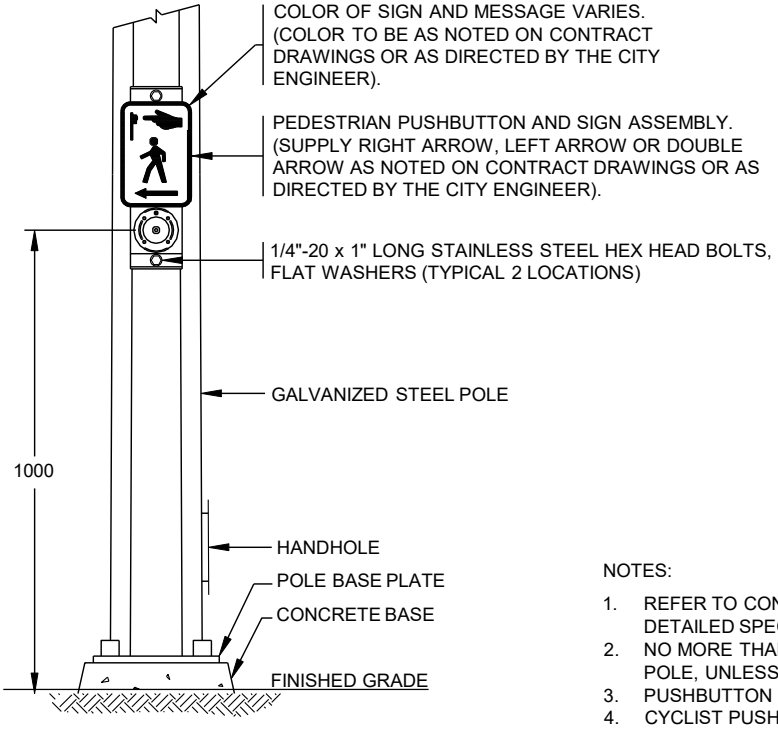
Scale:	N.T.S.
Created:	AUG 2025
Rev Date:	AUG 2025
Dwg No:	E-7.1



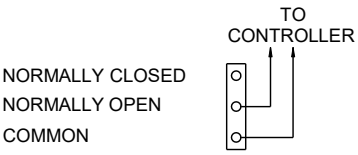
SIDE VIEW



ALTERNATE PEDESTRIAN PUSHBUTTON SIGNS



ELEVATION



PEDESTRIAN PUSHBUTTON CONNECTIONS

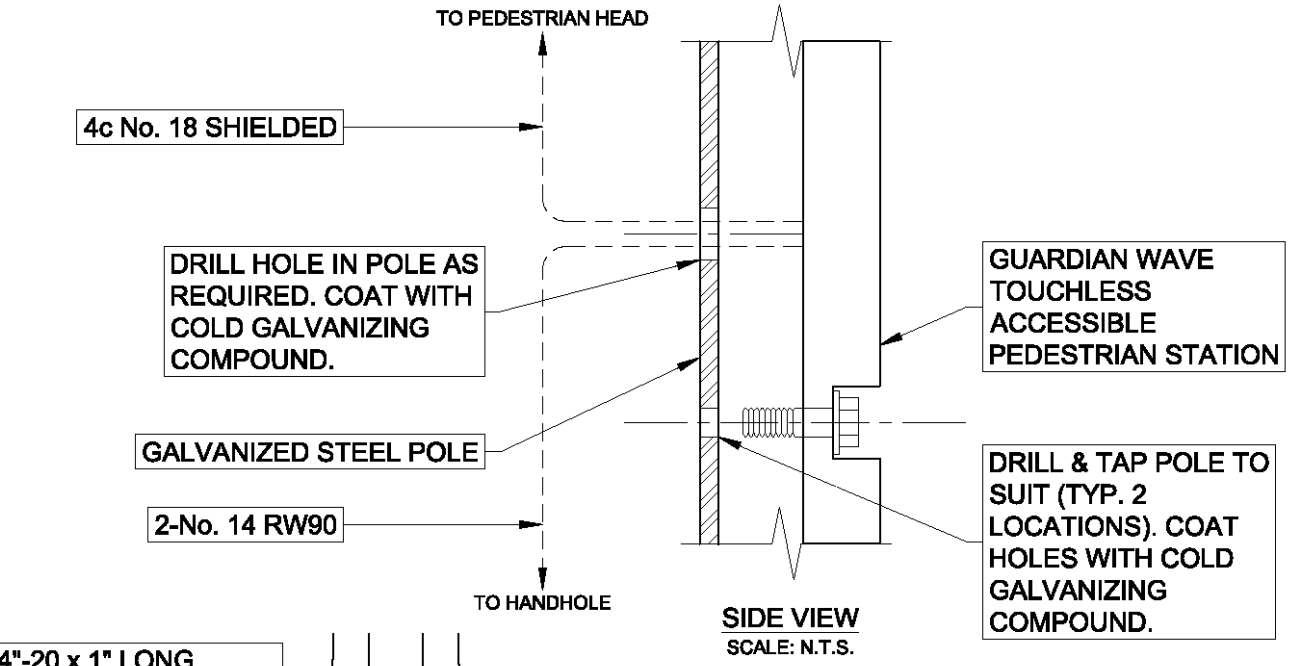
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. NO MORE THAN 2 PUSHBUTTONS TO BE INSTALLED ON EACH POLE, UNLESS OTHERWISE NOTED.
3. PUSHBUTTON TO HAVE NORMALLY OPEN CONTACTS.
4. CYCLIST PUSHBUTTON TO BE INSTALLED AS DIRECTED ON THE DRAWINGS OR BY THE CITY ENGINEER.
5. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

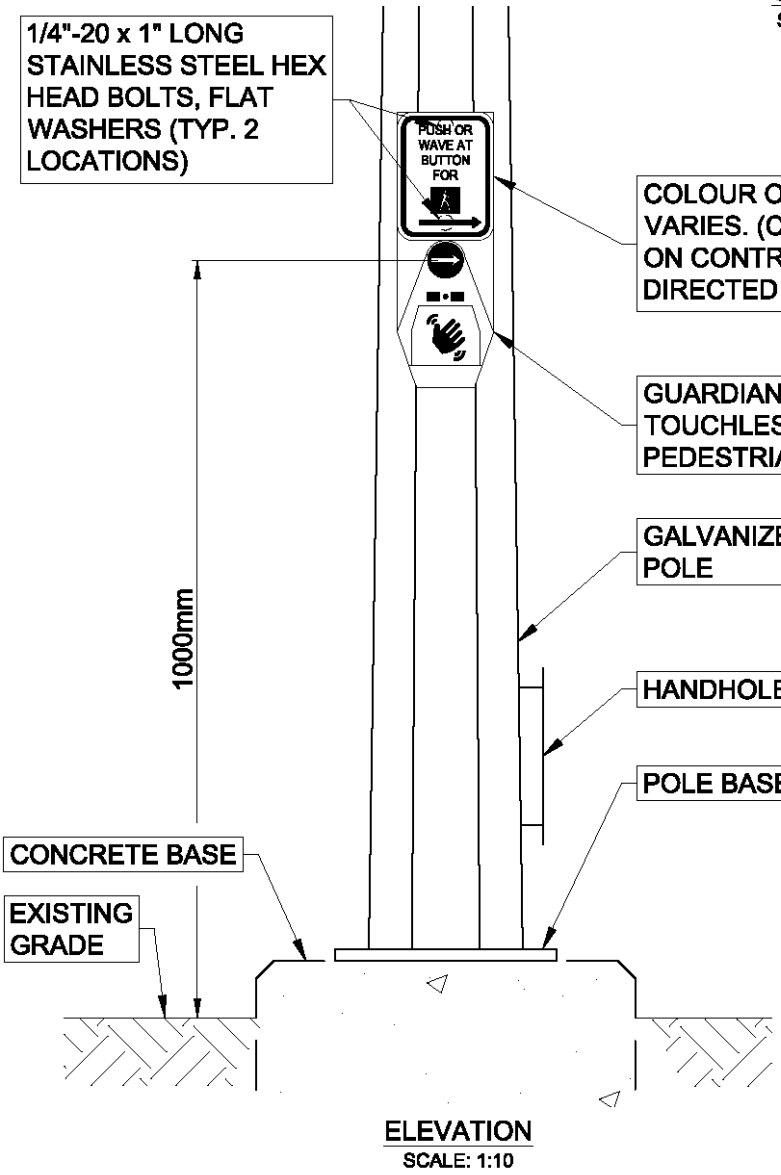
CITY OF NANAIMO
THE HARBOUR CITY

PEDESTRIAN PUSHBUTTON WITH INTEGRAL SIGN

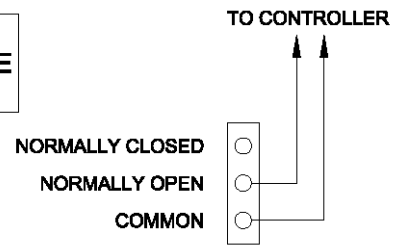
Scale:	NTS
Created:	MAY 2001
Rev Date:	NOV 2016
Dwg No:	E-8.1



SIDE VIEW
SCALE: N.T.S.



ELEVATION
SCALE: 1:10



PEDESTRIAN PUSHBUTTON CONNECTIONS

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. NO MORE THAN 2 PUSHBUTTONS TO BE INSTALLED ON EACH POLE, UNLESS OTHERWISE NOTED.
3. PUSHBUTTON TO HAVE NORMALLY OPEN CONTACTS.
4. INSTALL POWER INTERFACE MODULE (PIM) IN PEDESTRIAN HEAD HOUSING AS PER MANUFACTURER'S INSTRUCTIONS.
5. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
6. CITY TO PROVIDE PROGRAMMING FOR PUSHBUTTONS.

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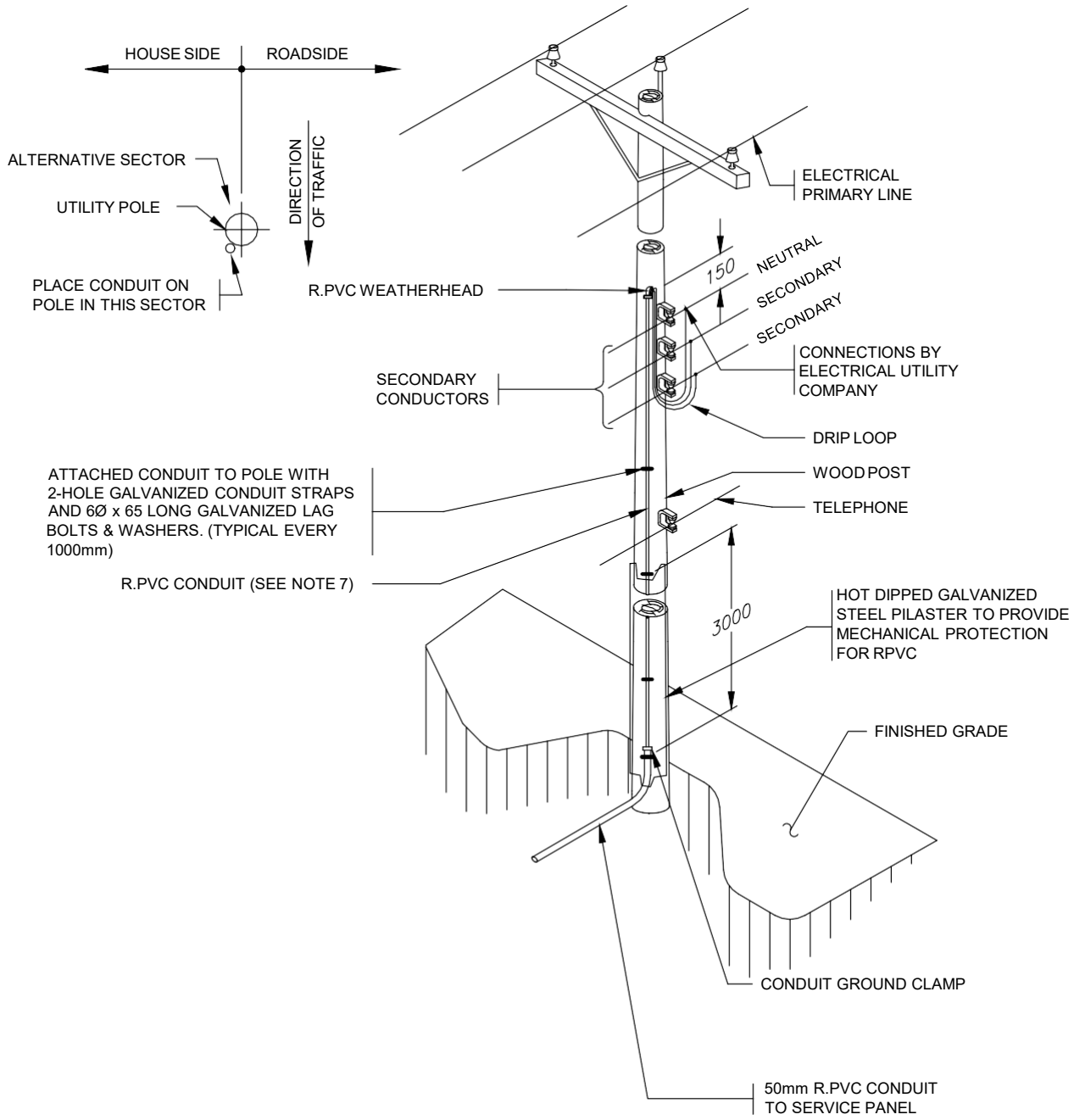
1.29.2024

CITY OF NANAIMO
THE HARBOUR CITY

GUARDIAN WAVE PUSHBUTTON WITH INTEGRAL SIGN

Scale:	AS SHOWN
Drawn:	CD
Date:	JAN, 2024
Dwg No:	E-8.2



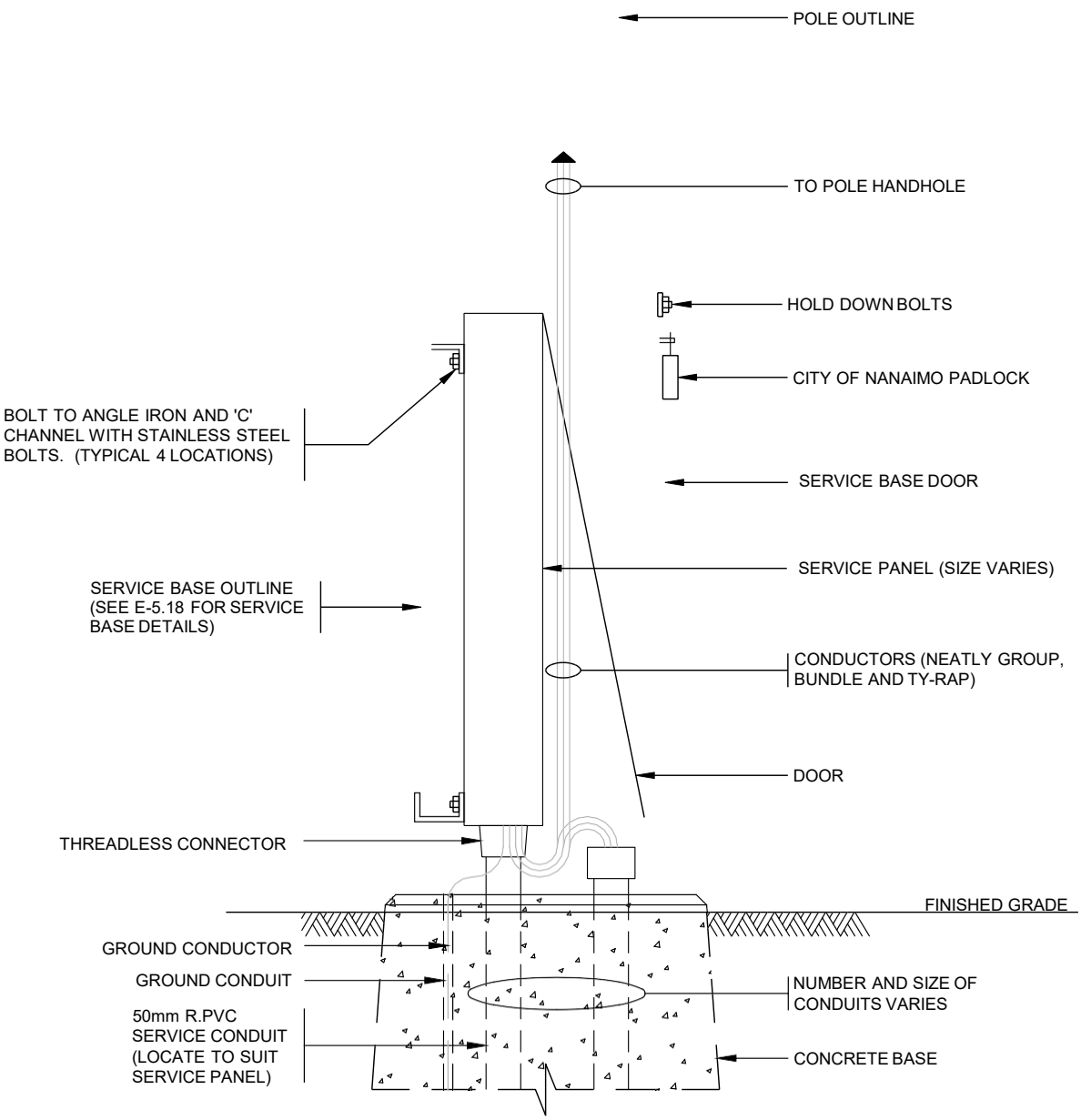
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF SERVICE CONDUCTORS. CONNECTION BY ELECTRICAL UTILITY COMPANY UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO OBTAIN PERMISSION FROM UTILITY COMPANY PRIOR TO INSTALLING CONDUIT ON THEIR POLE.
4. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
5. SERVICE CONDUCTORS AS DETAILED ON CONTRACT DRAWINGS.
6. MOUNT CONDUIT ON CONCRETE POLE WITH 19mm STAINLESS STEEL BANDING.
7. CONDUIT UP POLE TO SUIT SERVICE CONDUCTORS (MINIMUM 30mmØ).

CITY OF NANAIMO
THE HARBOUR CITY

UNDERGROUND DIP SERVICE

Scale:	NTS
Created:	NOV 2012
Rev Date:	NOV 2016
Dwg No:	E-9.1



NOTES:

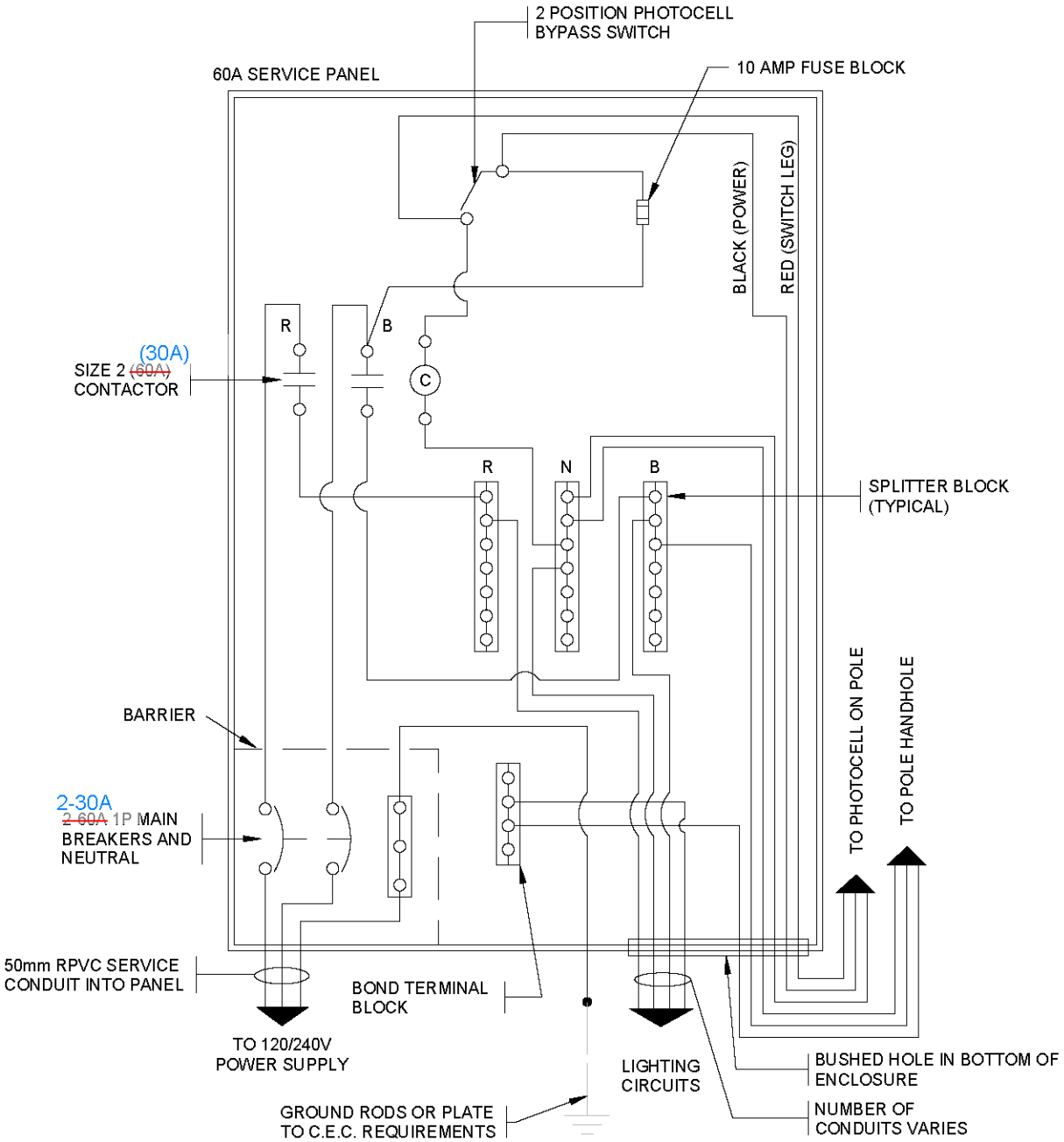
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.

CITY OF NANAIMO
THE HARBOUR CITY

SERVICE PANEL IN SERVICE BASE

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-10.1

3.2.2020

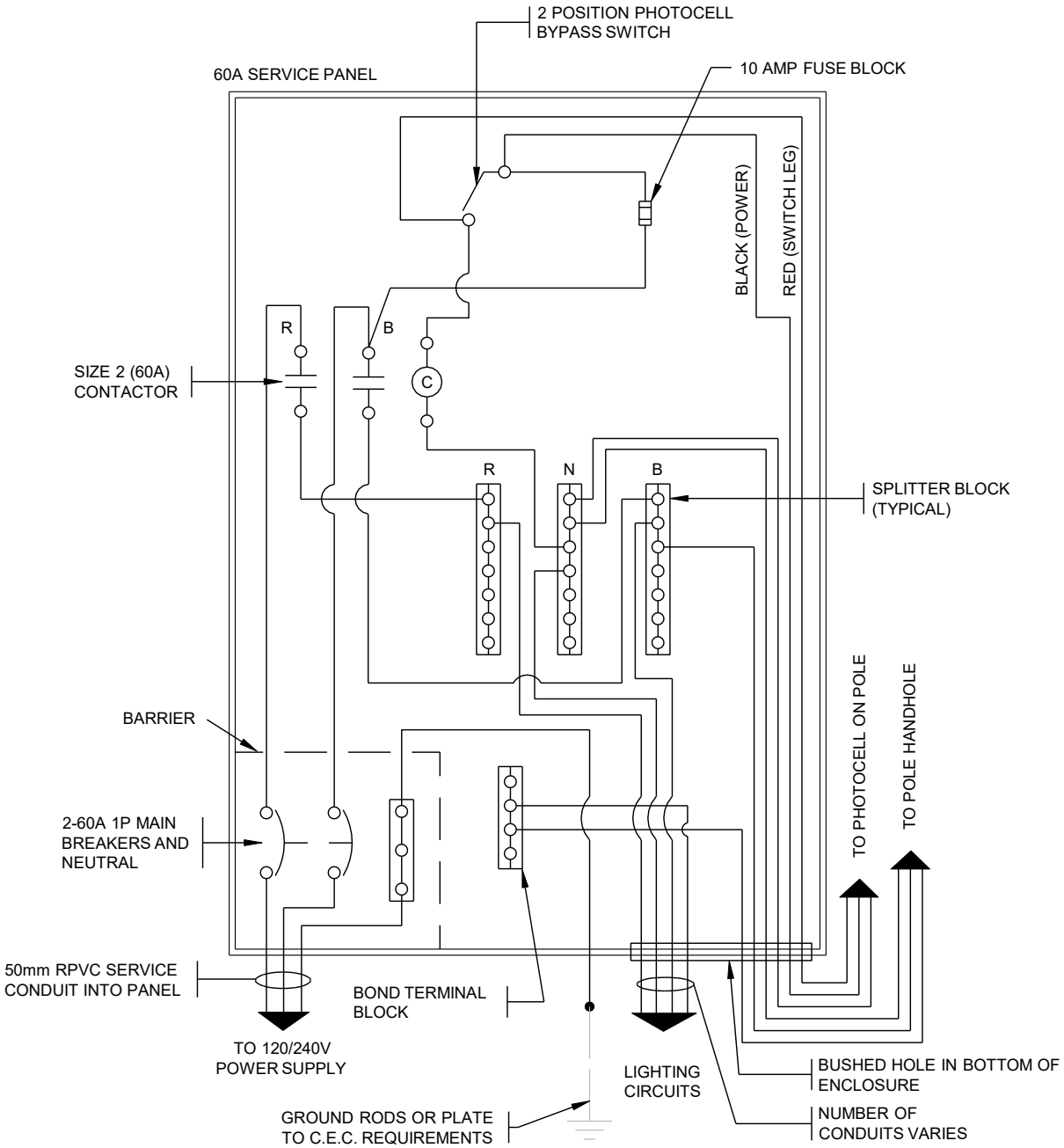


CITY OF NANAIMO
THE HARBOUR CITY

30A
TYPICAL ~~60A~~ STREET LIGHTING WIRING
DIAGRAM (FOR USE IN SERVICE BASE)

Scale:	NTS
Created:	~~NOV 2012~~
Rev Date:	~~NOV 2012~~
Dwg No:	~~E-10.3~~ E-10.2

3.2.2020



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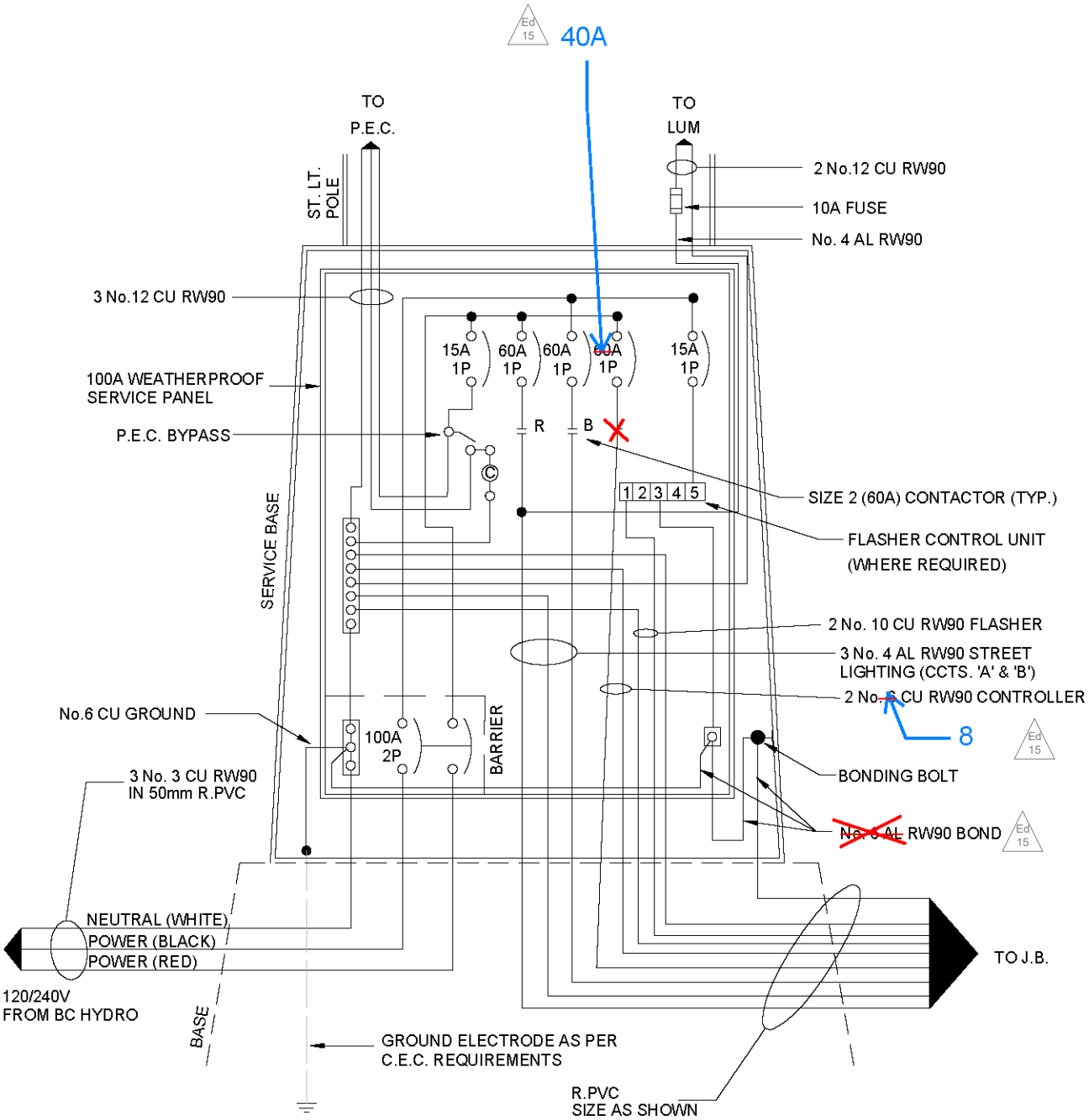
CITY OF NANAIMO
THE HARBOUR CITY

TYPICAL 60A STREET LIGHTING WIRING DIAGRAM (FOR USE IN SERVICE BASE)

Scale:	NTS
Created:	NOV 2012
Rev Date:	NOV 2012
Dwg No:	E-10.3

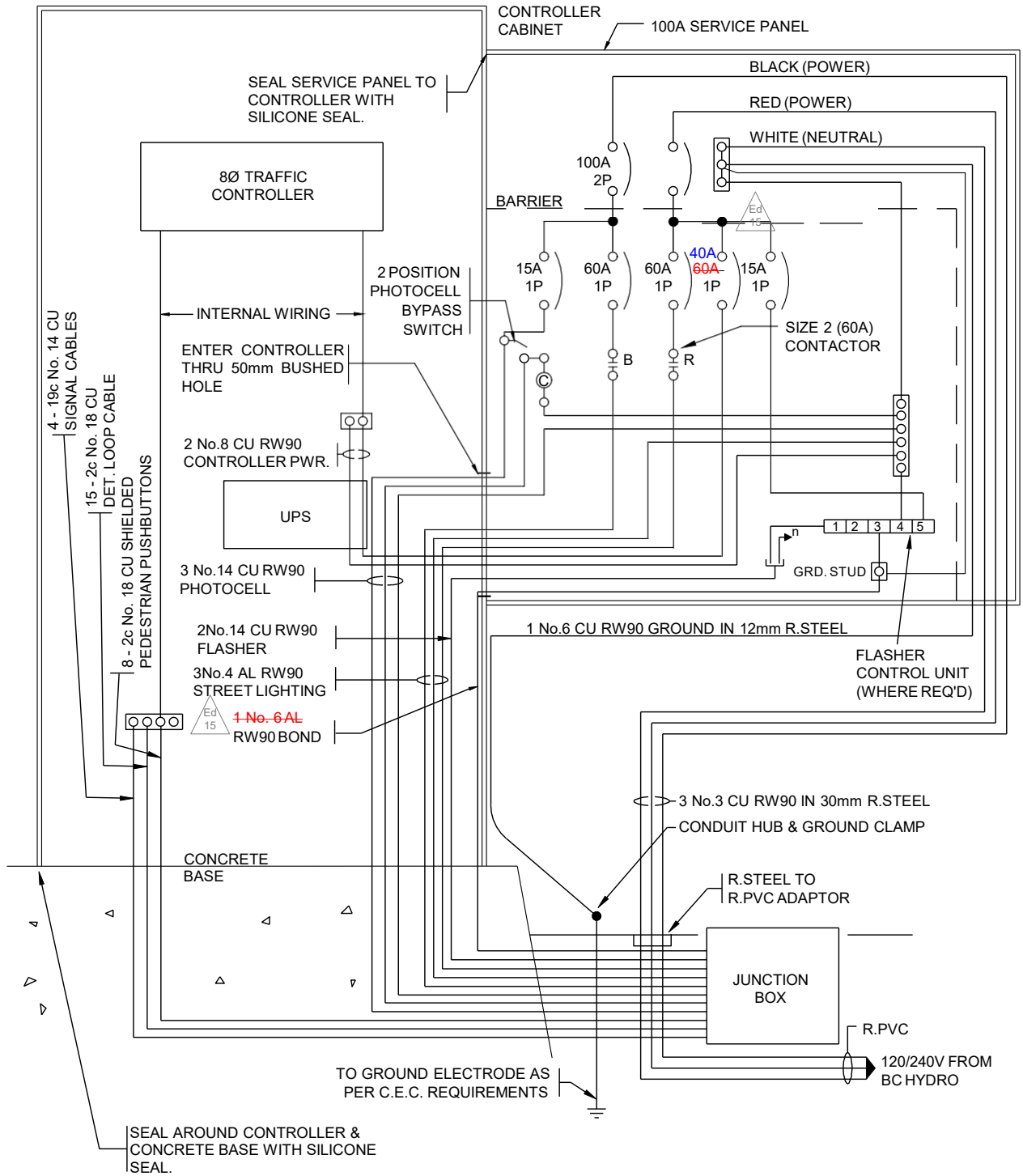
3.2.2020



CITY OF NANAIMO
THE HARBOUR CITY

TYPICAL 100A TRAFFIC SIGNAL / STREET LIGHTING / WIRING DIAGRAM (FOR USE IN SERVICE BASE)

Scale:	NTS
Created:	NOV 2012
Rev Date:	NOV 2019
Dwg No:	E-10.4



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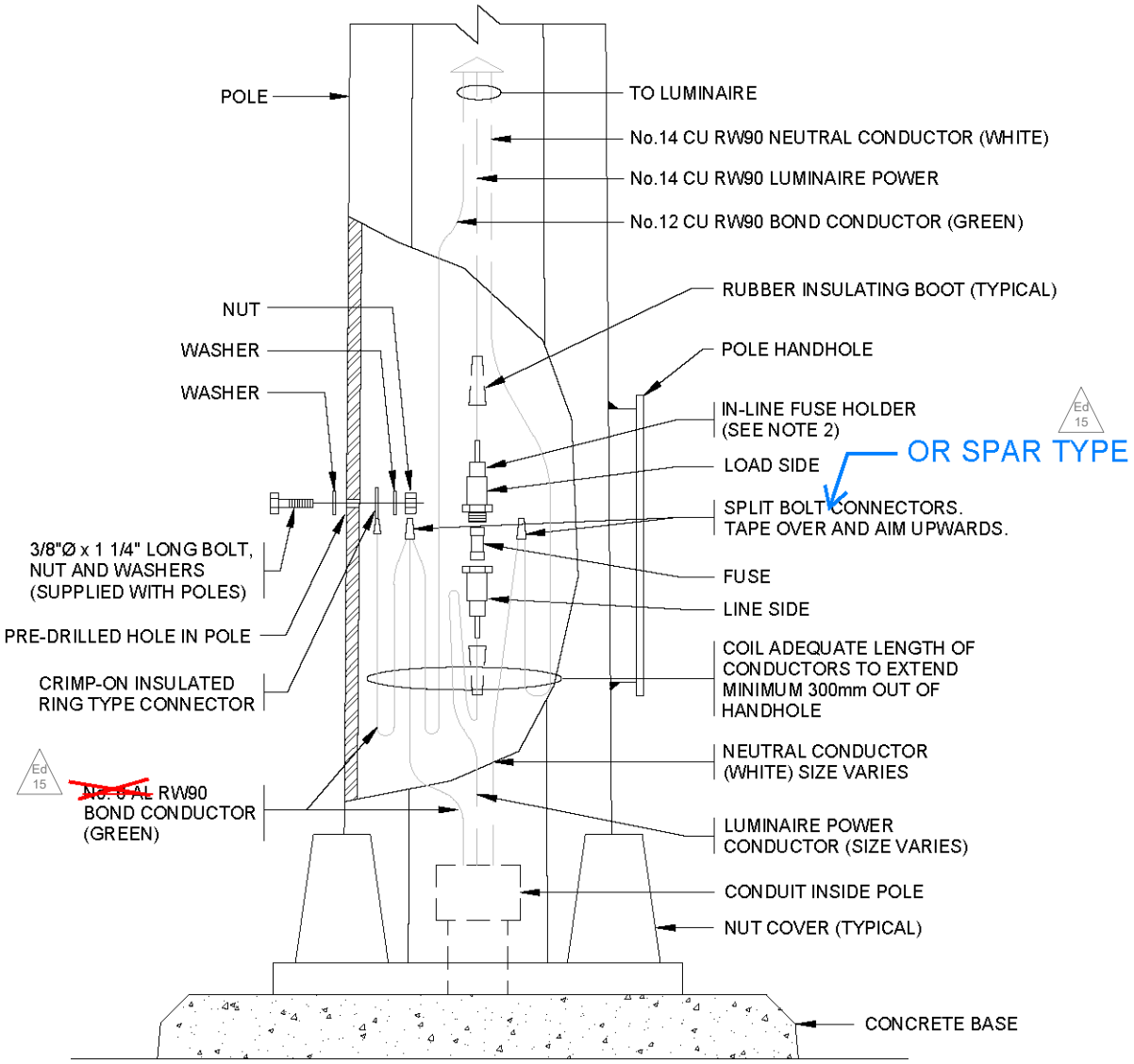
CITY OF NANAIMO
THE HARBOUR CITY

WIRING DIAGRAM

Scale:	NTS
Created:	JAN 1998
Rev Date:	~~NOV 2019~~
Dwg No:	E-10.5

Ed 15

3.2.2020



ELEVATION

NOTES:

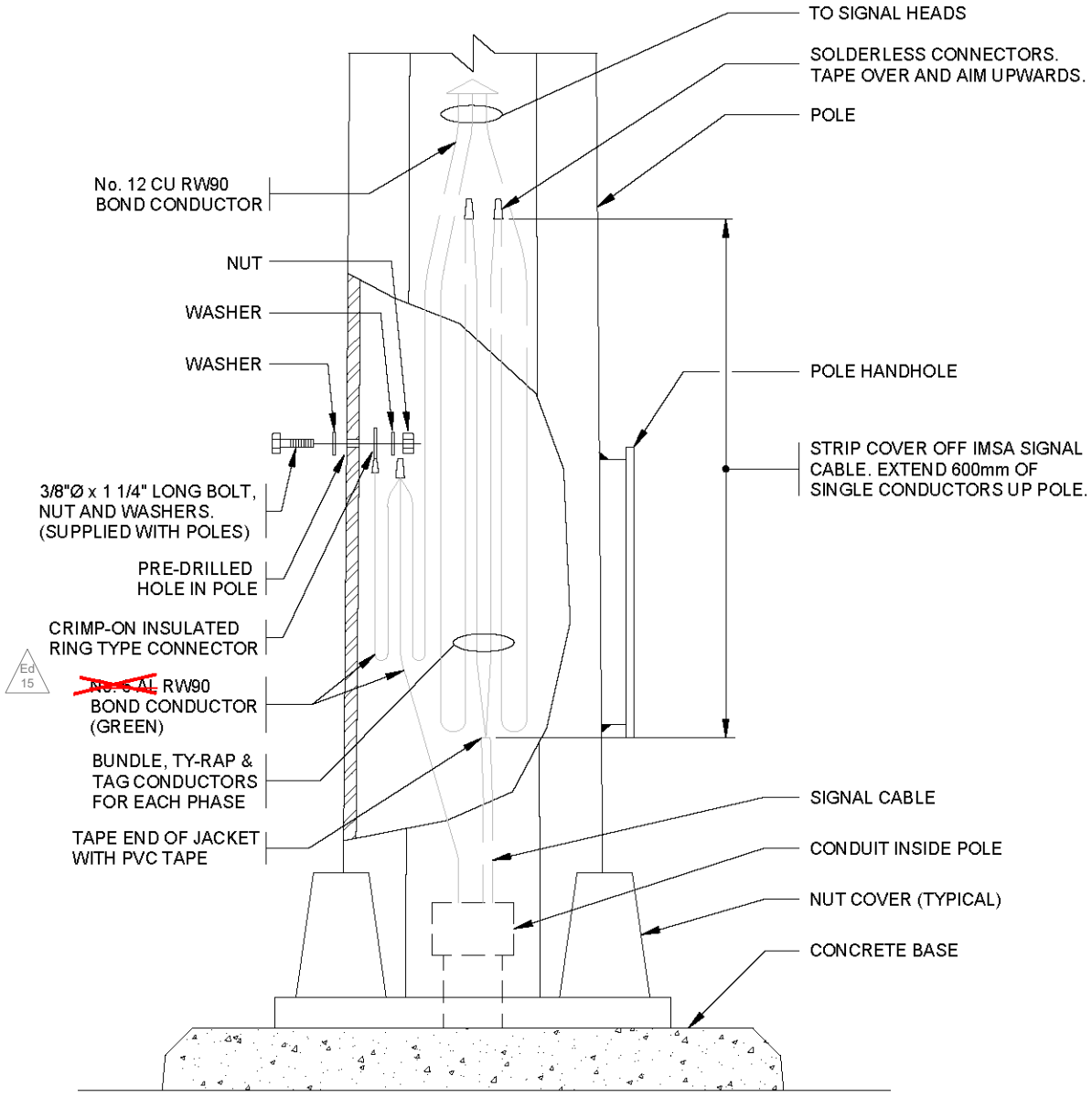
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. FUSE INSTALLATION IN JUNCTION BOXES SIMILAR.

CITY OF NANAIMO
THE HARBOUR CITY

LUMINAIRE WIRING IN POLE HANDHOLE

Scale: NTS
Created: JAN 1998
Rev Date: ~~JAN 1998~~
Dwg No: E-12.1

3.3.2020



ELEVATION

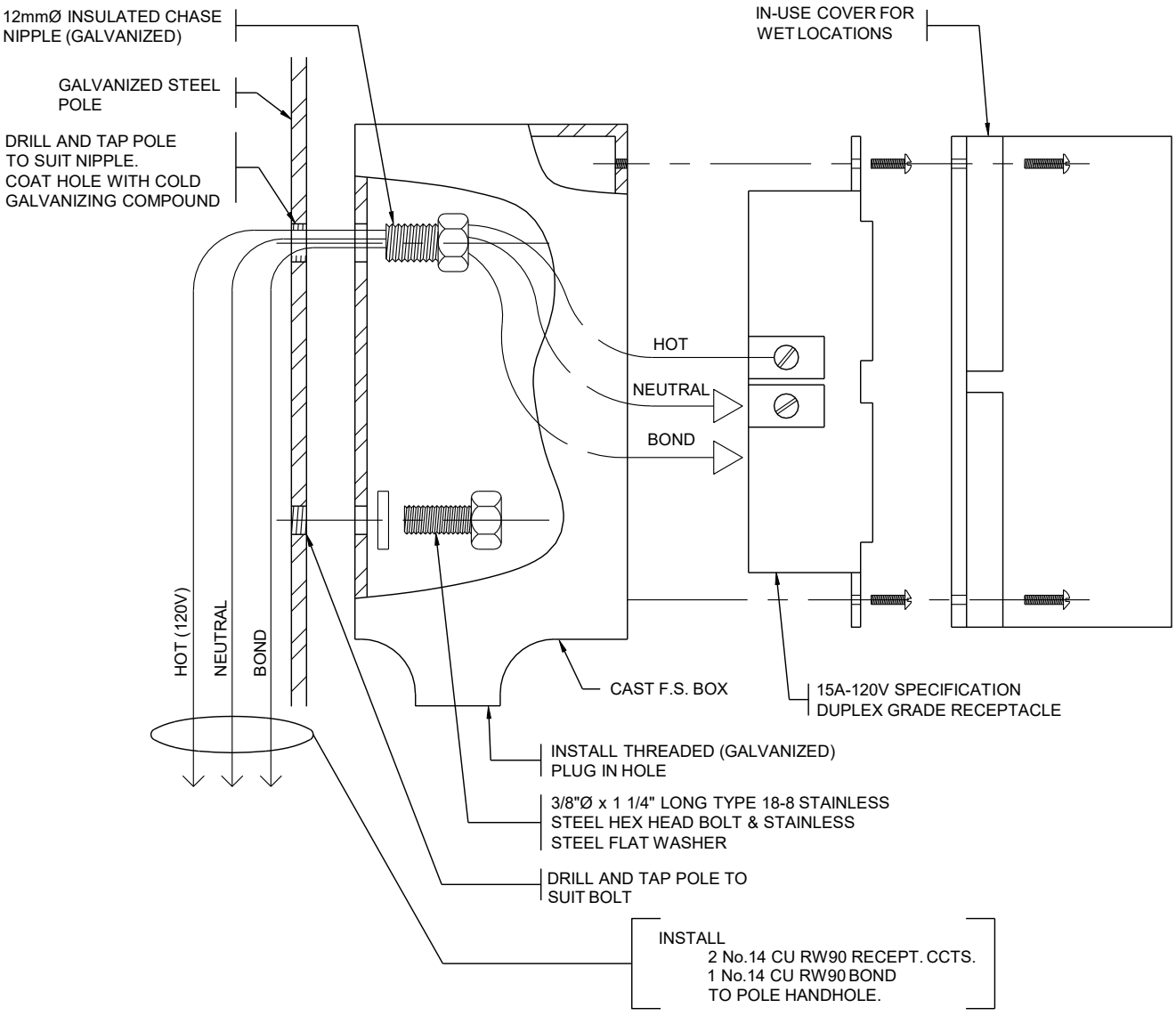
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.

CITY OF NANAIMO
THE HARBOUR CITY

SIGNAL CABLE WIRING IN POLE HANDHOLE

Scale: NTS
Created: JAN 1998
Rev Date: ~~NOV 2019~~
Dwg No: E-12.2



NOTES:

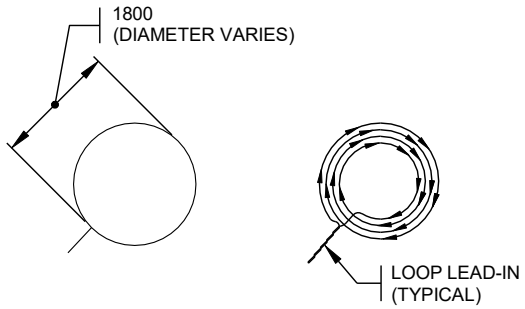
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. RECEPTACLE MOUNTING HEIGHT AND ORIENTATION ON POLE TO BE NOTED ON CONTRACT DRAWING.
3. FUSE RECEPTACLE CIRCUITS, WITH A 10AMP FUSE, IN HANDHOLE AT BASE OF POLE AS PER DRAWING E12-1.
4. RECEPTACLES TO NOT BE INSTALLED ON POLES WITHIN 50m OF A SIGNALIZED INTERSECTION AND NOT UNDER ANY CIRCUMSTANCES TO BE INSTALLED ON TRAFFIC SIGNAL OR SIGN POLES.

CITY OF NANAIMO
THE HARBOUR CITY

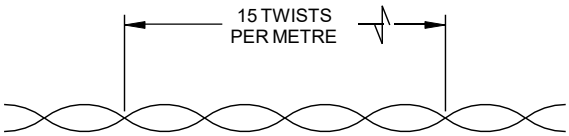
POLE MOUNTED RECEPTACLE

Scale:	NTS
Created:	JAN 1998
Rev Date:	MAY 2020
Dwg No:	E-13.1

3.3.2020



ROUND LOOP



LOOP LEAD-IN CONDUCTORS

(TYPICAL FROM LOOP TO SHIELDED
CABLE SPLICE IN JUNCTION BOX)

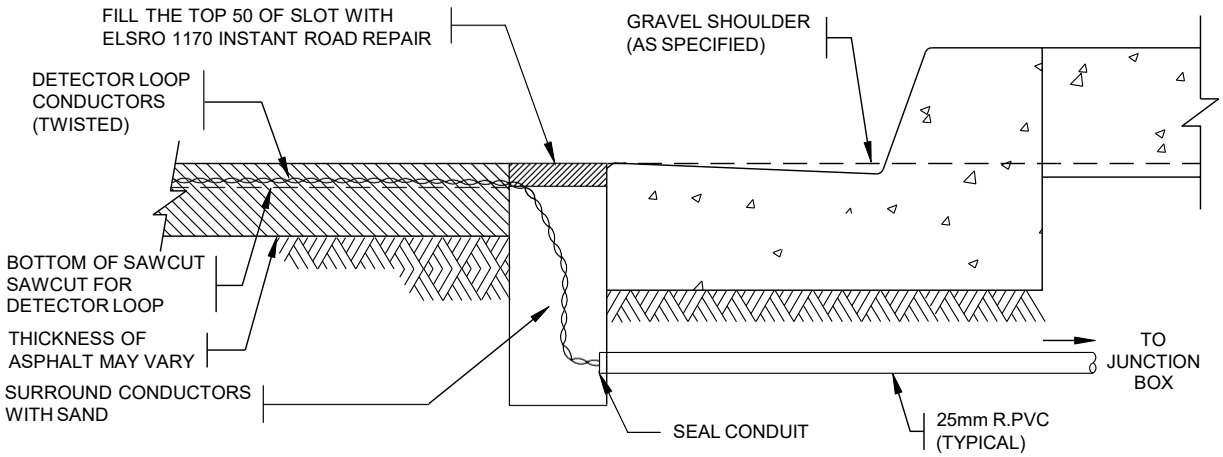
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. LOOP INDUCTANCE TO BE EQUAL TO OR GREATER THAN SHIELDED CABLE INDUCTANCE. (A 2:1 RATIO IS PREFERABLE) SHIELDED CABLE INDUCTANCE IS 0.72 µH PER METER.

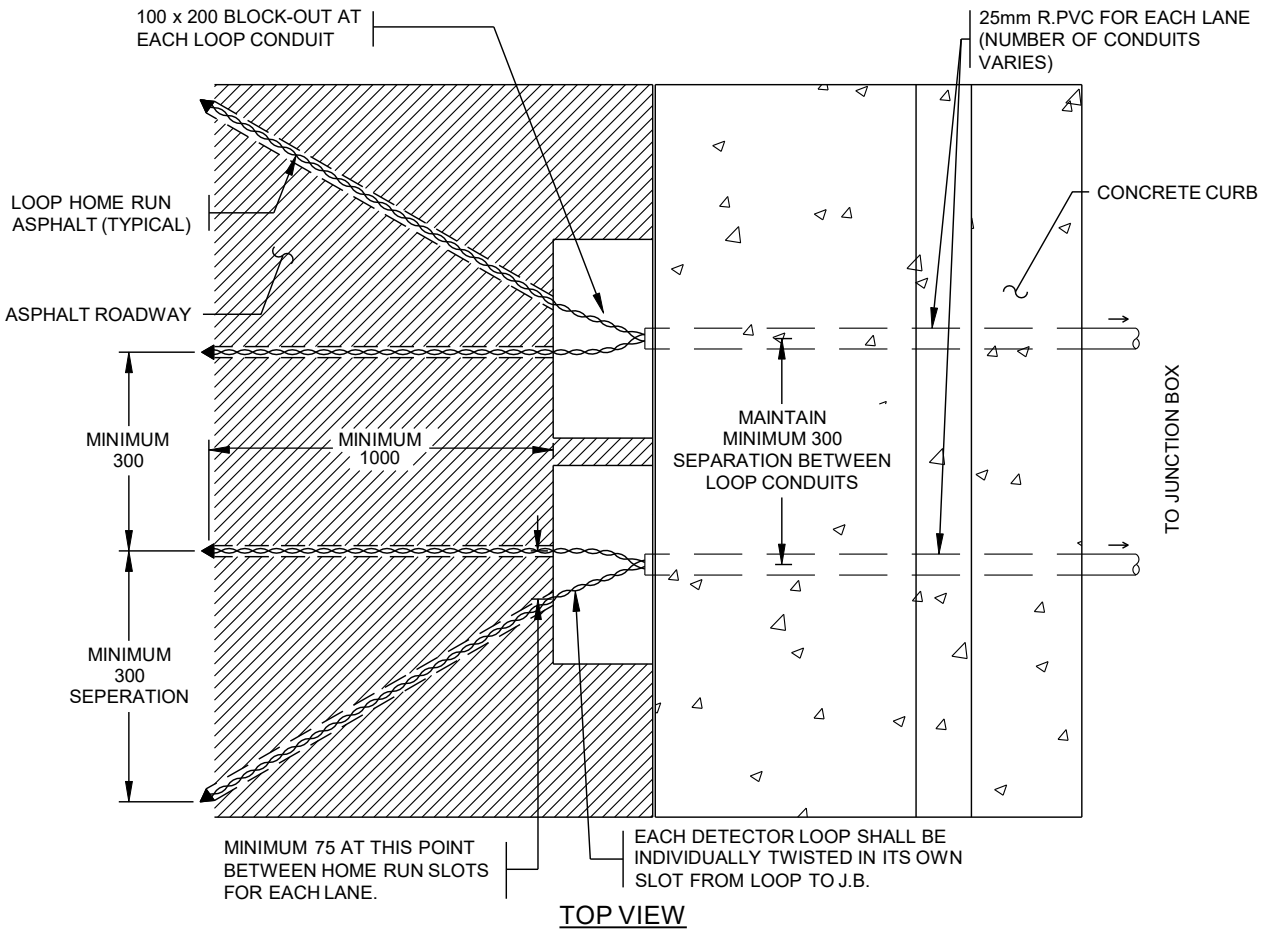
CITY OF NANAIMO
THE HARBOUR CITY

ROUND TRAFFIC SIGNAL DETECTOR LOOP

Scale:	N.T.S.
Created:	NOV. 2009
Rev Date:	MAY 2020
Dwg No:	E-14.1



ELEVATION



TOP VIEW

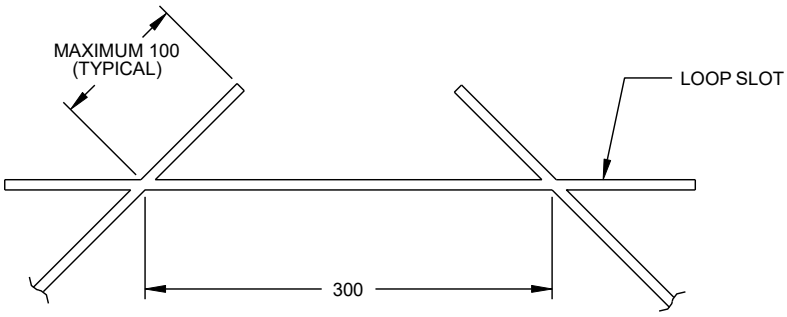
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

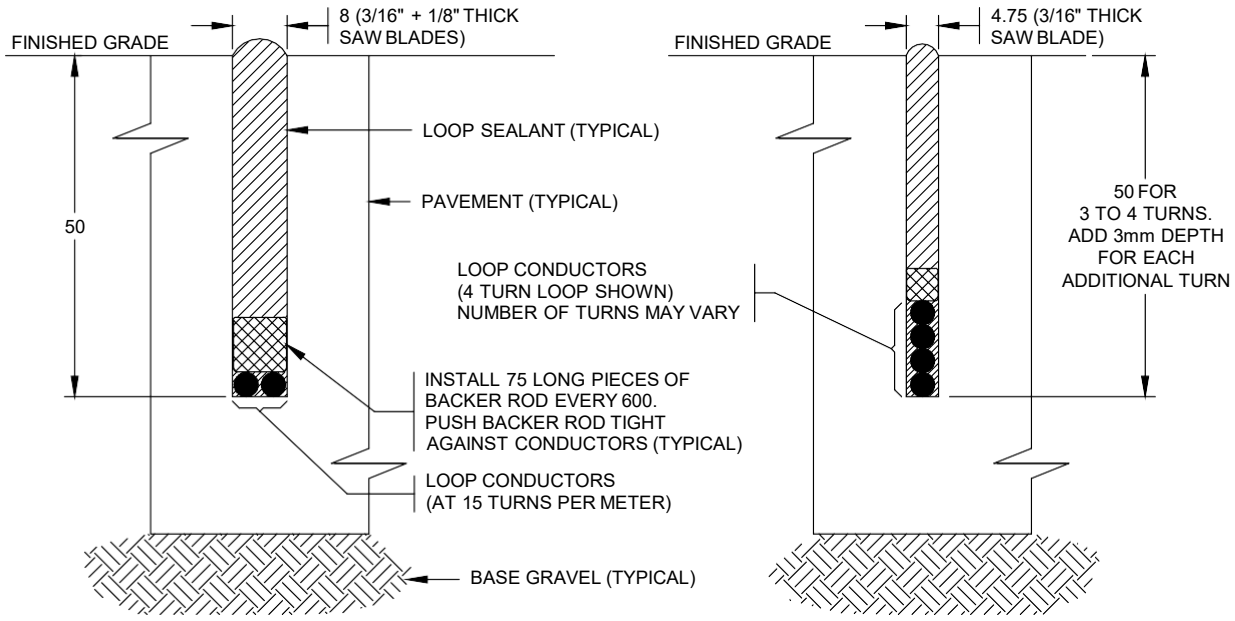
CITY OF NANAIMO
THE HARBOUR CITY

DETECTOR LOOPS RISER SERVICE CONNECTION

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-14.2



TYPICAL LOOP CORNER DETAIL



HOME RUN SLOT

LOOP SLOT

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. LOOP SLOT SEALANTS SHALL BE ELSRO HOT POUR CRACK FILLER No. 1190 OR B.P. BURFALT 16607 170, TYPE 2 OR APPROVED EQUAL.
4. BACKER RODS SHALL BE DETECTOR SYSTEMS BR-625 OR APPROVED ALTERNATE.
5. ONLY ONE LOOP SHALL BE INSTALLED IN EACH HOME RUN SLOT.

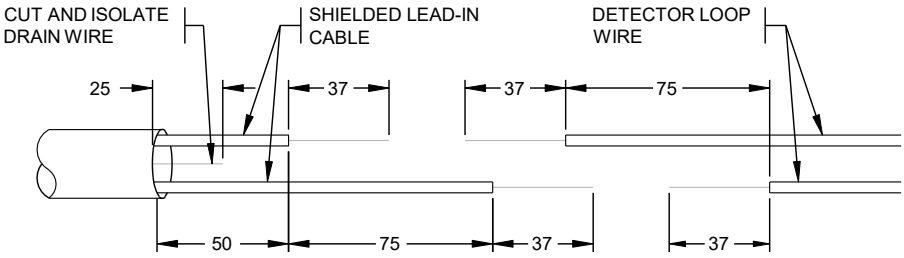
CITY OF NANAIMO
THE HARBOUR CITY

DETECTOR LOOPS RISER SERVICE CONNECTION

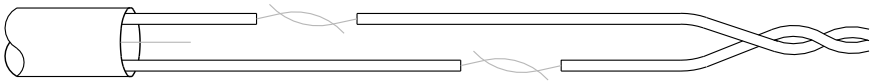
Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-14.3

3.3.2020

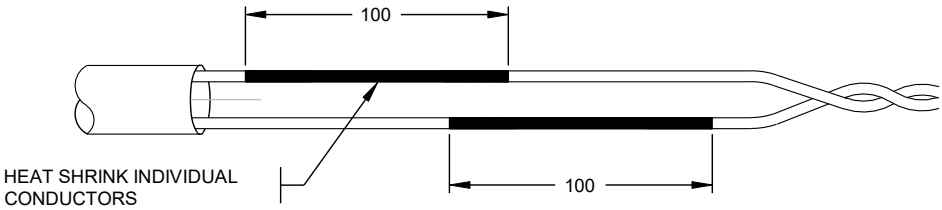
STEP 1. STRIP LOOP WIRES AND LEAD-IN CABLE AND SLIDE ON HEAT SHRINKS



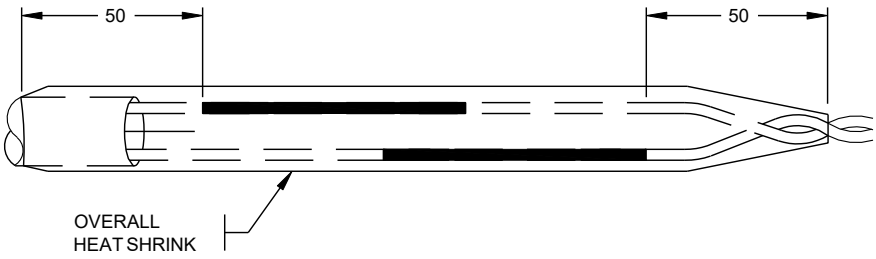
STEP 2. CONNECT AND SOLDER.
TWIST BARE CONDUCTORS TOGETHER AND SOLDER WITH 60/40 (TIN/LEAD) RESIN SOLDER.



STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY



STEP 4. ENVIRONMENTALLY SEAL TOTAL SPLICE



NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. HEAT SHRINK SHALL BE PREMIER CLEAR-SEAL (6mm I.D. INDIVIDUAL CONDUCTORS & 10mm I.D. FOR OVERALL)

CITY OF NANAIMO
THE HARBOUR CITY

DETECTOR LOOP TO SHIELDED CABLE SPLICES

Scale: NTS
Created: JAN 1998
Rev Date: JAN 1998
Dwg No: E-14.4

STEP 1 LAYOUT DETECTOR LOOPS AND REVIEW LOCATIONS WITH THE ENGINEER PRIOR TO SAWCUTTING THE ROADWAY. THE GENERAL LAYOUT OF THE DETECTOR LOOPS IS INDICATED ON DRAWING E-14.7. STOP BARS AND LANE LINES MUST BE LAID OUT PRIOR TO LOCATING DETECTOR LOOPS.

RULE 1

DETECTOR LOOPS SHALL NOT BE INSTALLED WHEN THE ROAD IS WET OR WHEN THE AMBIENT (AIR) TEMPERATURE IS LOWER THAN 5°C, UNLESS APPROVED IN WRITING BY THE CITY ENGINEER. SEALANTS DO NOT ADHERE PROPERLY IN WET CONDITIONS. SHOULD THE CONTRACTOR BE ASKED IN WRITING BY THE ENGINEER TO INSTALL LOOPS IN THE WET AND/OR WHEN THE AIR TEMPERATURE IS BELOW 5°C, THE INSTALLATION WARRANTY WILL NOT BE ENFORCED.

RULE 2

DETECTOR LOOPS SHALL NOT BE INSTALLED WHEN THE PAVEMENT IS CRACKED OR BADLY RUTTED UNLESS THE INSTALLATION IS APPROVED BY THE CITY ENGINEER.
SAW CUTS CAN OFTEN CAUSE PAVEMENT CONDITIONS TO DETERIORATE FURTHER.
IF RE-SURFACING OF THE INTERSECTION IS NOT PLANNED THEN PHOTOGRAPHS SHOULD BE TAKEN TO DOCUMENT THE PAVEMENT CONDITIONS BEFORE AND AFTER THE LOOP INSTALLATION.

STEP 2 CUT LOOP AND HOME RUN SLOTS IN ASPHALT.
ALL LOOP AND HOME RUN SLOTS SHALL BE CUT TO THE SAME DEPTH, WITH A PAVEMENT SAW.
SLOTS SHALL NOT PASS THROUGH PAVEMENT INTO THE BASE GRAVEL.

RULE 3

LOOP AND HOME RUN SLOT MUST BE INSTALLED AT LEAST 300mm FROM ANY OTHER LOOP AND EACH LEAD-IN SLOTS, EXCEPT WHERE THE LEAD-IN CONDUCTORS ENTER THE 1" RPVC CONDUIT. THIS WILL REDUCE THE PROBABILITY OF INTERFERENCE BETWEEN LOOPS.

RULE 4

WHEN REPLACING LOOPS, CUT THROUGH TWICE ON EACH SIDE OF EXISTING LOOP. THIS MAY REQUIRE ADDITIONAL SAW CUTS, IF THE EXISTING LOOP IS NOT LOCATED IN THE SAW CUT PATH OF THE NEW LOOP. THIS WILL ELIMINATE THE POSSIBILITY OF INTERFERENCE BETWEEN THE OLD AND THE NEW LOOP.

STEP 3 CLEAN THE SLOT WITH A PROFESSIONAL GRADE PRESSURIZED WATER SYSTEM. REMOVE ALL WATER AND DIRT OUT OF THE SLOT CUT AND THE SURROUNDING 100mm OF ROAD SURFACE USING COMPRESSED AIR. SLOT MUST REMAIN COMPLETELY CLEAN AND DRY UNTIL THE SLOT IS SEALED.

STEP 4 INSTALL THE LOOP CONDUCTOR INTO THE LOOP SLOT. ENSURE CONDUCTORS ARE TIGHTLY WOUND AND PUSHED INTO THE BOTTOM OF THE SLOT. TWIST CONDUCTOR HOME RUN AT 15 TURNS PER METRE. INSTALL 75mm STRIPS OF BACKER ROD EVERY 600mm TO HOLD CONDUCTORS INTO SLOT.

RULE 5

ONLY ONE CONTINUOUS CONDUCTOR SHALL BE INSTALLED IN EACH LOOP AND HOME RUN SLOT TO THE JUNCTION BOX.

RULE 6

LOOP CONDUCTORS MUST BE INSTALLED IMMEDIATELY AFTER THE LOOP AND HOME RUN SLOTS ARE CUT.

STEP 5 INSTALL LOOP SEALANT AFTER CONDUCTORS HAVE BEEN INSTALLED. LOOP SEALANTS SHALL BE HEATED AS PER MANUFACTURER'S INSTRUCTIONS AND NEATLY APPLIED USING A FUNNEL WITH A NARROW SPOUT. ANY EXCESS SEALANT ON ROAD SURFACE SHALL BE REMOVED. AN ADDITIONAL APPLICATION OF LOOP SEALANT MAY BE REQUIRED WHERE THE SEALANT IS NOT UP TO THE PAVEMENT GRADE.

NOTES:

1. SEE DRAWING E-14.6 FOR CONTINUATION OF PROCEDURES AND RULES.

CITY OF NANAIMO
THE HARBOUR CITY

DETECTOR LOOP PROCEDURES & RULES

Scale:	NTS
Created:	NOV 2009
Rev Date:	NOV 2009
Dwg No:	E-14.5

CONTINUED FROM DRAWING E-14.5

STEP 6 ONCE THE SEALING OF THE SLOT HAS BEEN PROPERLY COMPLETED, A DUST SUCH AS PORTLAND CEMENT SHALL BE SPRINKLED ONTO THE SEALANT TO PREVENT TRACKING BY ROADWAY TRAFFIC. ANY EXCESS DUST SHALL BE SWEPT OFF THE ROADWAY PRIOR TO ALLOWING TRAFFIC TO PASS OVER THE SEALED SLOT.

RULE 7

SPLICES WILL NOT BE ALLOWED IN LOOP CONDUCTORS OR SHIELDED CABLES.

STEP 7 THE SPLICES BETWEEN DETECTOR LOOP CONDUCTORS AND THE SHIELDED CABLE ARE TO BE SOLDERED AND SEALED WITH HEAT SHRINK IN ACCORDANCE WITH DRAWING E-14.4

STEP 8 REPEAT STEP 7 AT THE JUNCTION BOX OR VAULT NEAREST CONTROLLER.

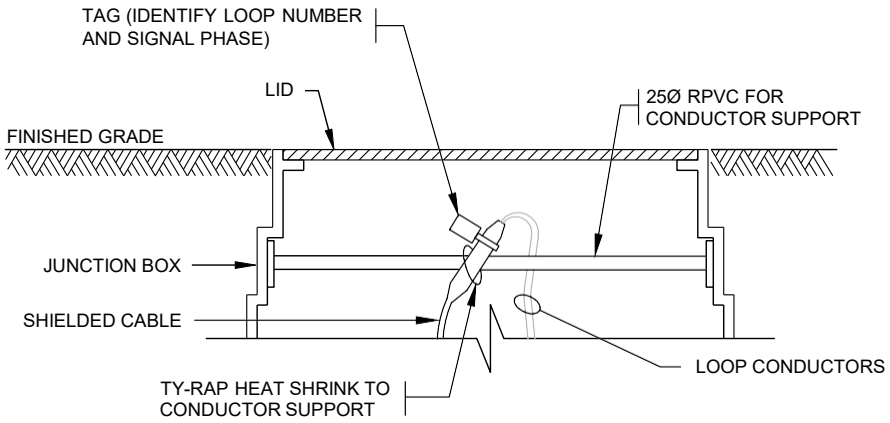
RULE 8

LOOP DETECTOR RESISTANCE TO GROUND SHALL BE GREATER THAN 1 MEGOHM, & LOOP INDUCTANCE SHALL BE WITHIN 25% OF THE VALUES SHOWN ON THE CONTRACT DRAWINGS.

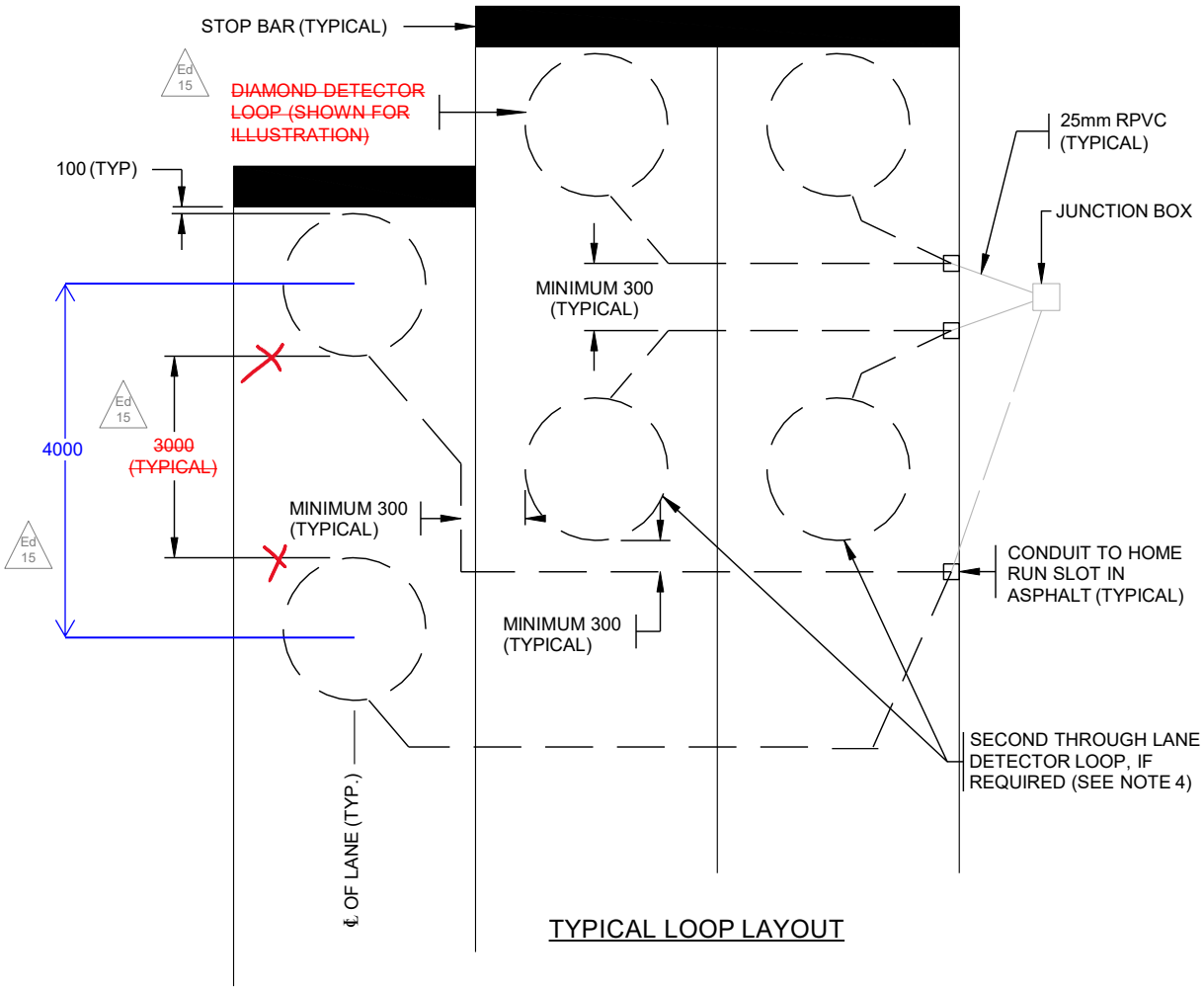
STEP 9 TAG EACH LOOP CABLE AS INDICATED BELOW.

RULE 9

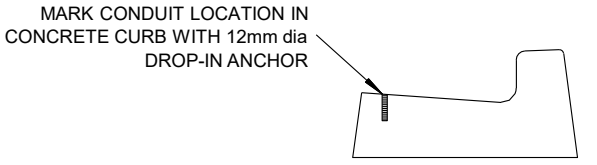
MAINTAIN THE MAXIMUM SEPARATION POSSIBLE IN THE JUNCTION BETWEEN THE LOOP CONDUCTORS AND POWER CONDUCTORS.



LOOP DETECTOR CONDUCTORS IN JUNCTION BOX



TYPICAL LOOP LAYOUT



LOOP CROSSING AT CURB (DETAIL)

NOTES:

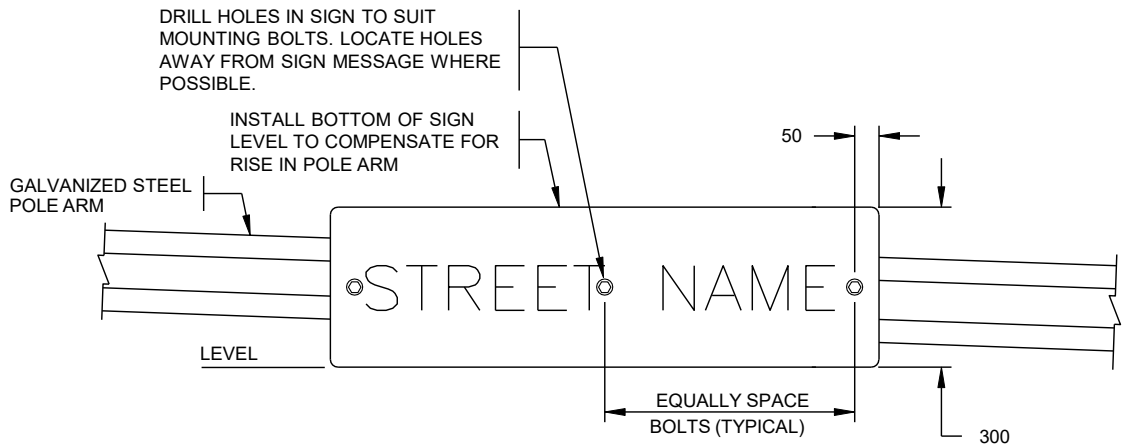
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. LOCATE LOOP CONDUITS IN ASPHALT TO SUIT LOOP LOCATIONS & MINIMIZE THE LENGTHS OF HOME RUN SLOTS IN THE ASPHALT.
4. NORMALLY NOT REQUIRED WHERE THROUGH PHASE IS RECALLED TO GREEN.

CITY OF NANAIMO
THE HARBOUR CITY

LAYOUT FOR ROUND TRAFFIC SIGNAL DETECTOR LOOPS

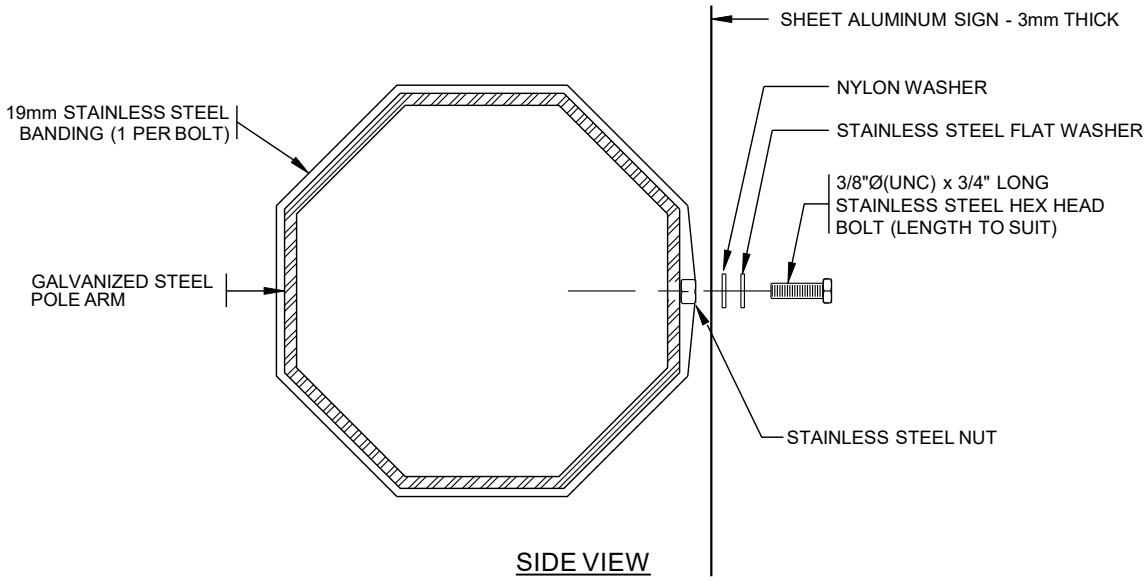
Scale: NTS
Created: NOV 2009
Rev Date: ~~NOV2009~~
Dwg No: E-14.7

3.3.2020



ELEVATION

SIGN WIDTH	NUMBER OF BOLTS
900 WIDE	3
1200 WIDE	4
1500 WIDE	5
1800 WIDE	6
2100 WIDE	7



SIDE VIEW

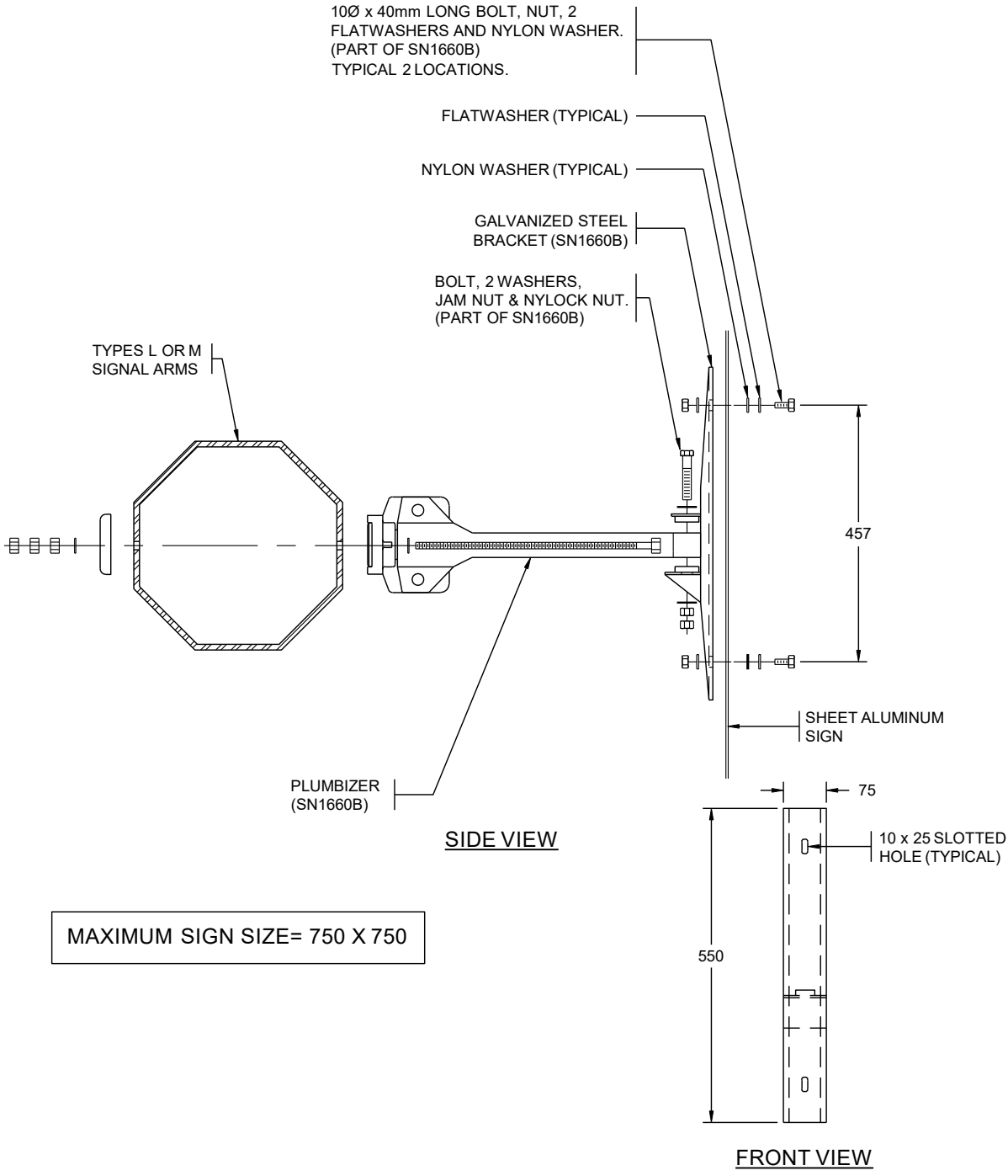
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. POSITION SIGN ON POLE ARM AS INDICATED ON THE PLANS OR AS DIRECTED BY THE CITY ENGINEER.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD STREET NAME SIGN INSTALLATION DETAILS (ON SIGNAL POLE)

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2016
Dwg No:	E-15.1



MAXIMUM SIGN SIZE= 750 X 750

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
3. AIM AS DIRECTED BY THE CITY ENGINEER.

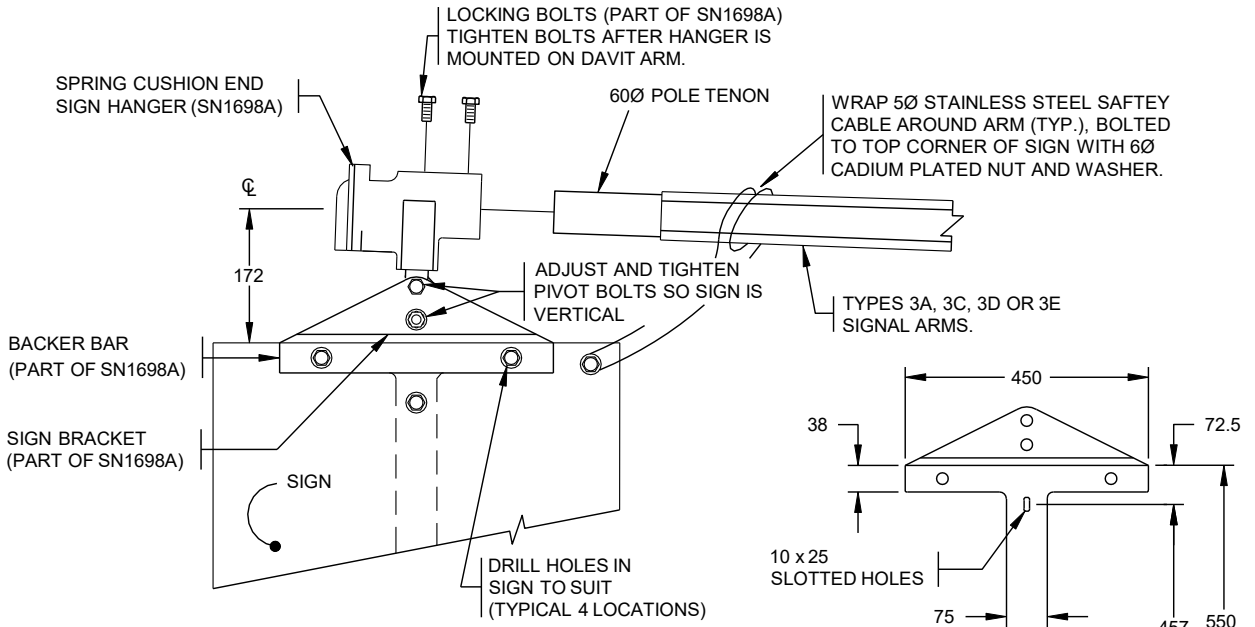
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO\13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWGS\E-15.2

3.3.2020

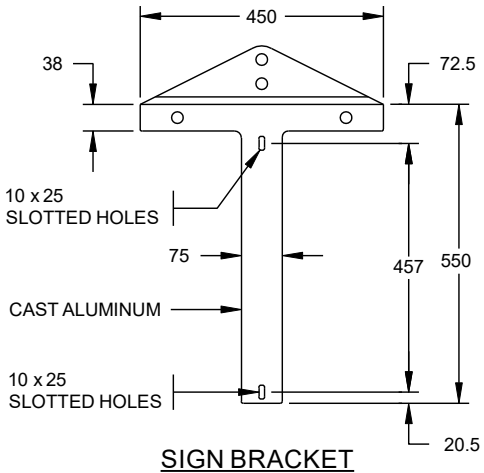
CITY OF NANAIMO
THE HARBOUR CITY

SMALL OVERHEAD SIGN INSTALLATION DETAILS
(TYPE L & M SIGNAL POST)

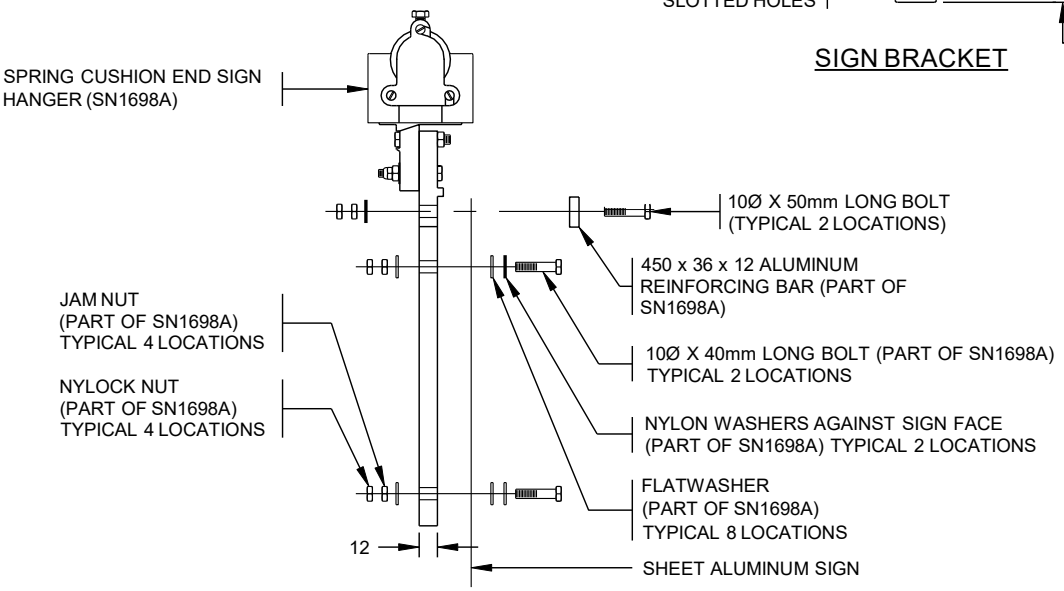
Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-15.2



ELEVATION



SIGN BRACKET



SIDE VIEW

MAXIMUM SIGN SIZE = 750 X 750

NOTES:

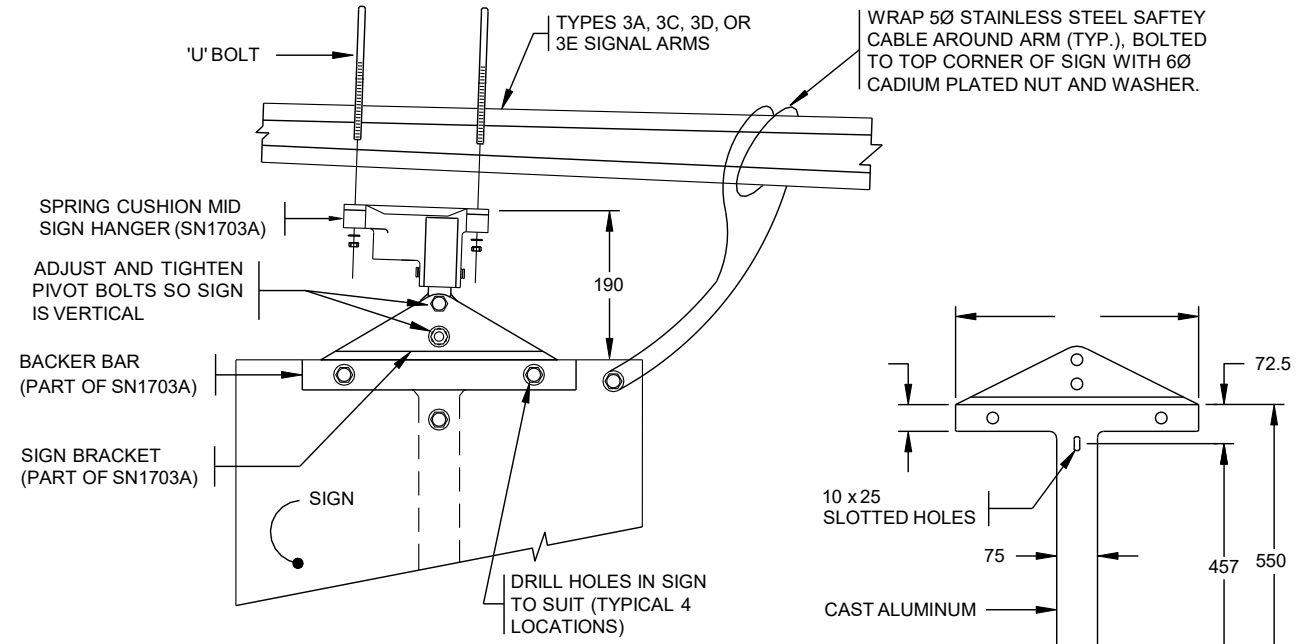
1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM SIGNS AS DIRECTED BY THE MINISTRY REPRESENTATIVE.
3. 'SN' DENOTES MINISTRY STOCK NUMBER.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

SMALL OVERHEAD SIGN INSTALLATION DETAILS
(TYPE 3 SIGNAL ARMS)

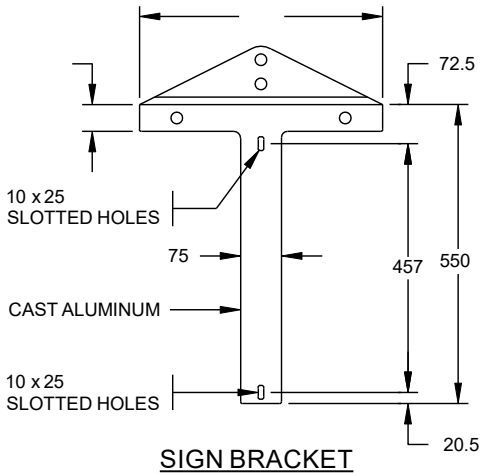
Scale:	NTS
Created:	MAY 1999
Rev Date:	MAY 1999
Dwg No:	E-15.3

3.3.2020

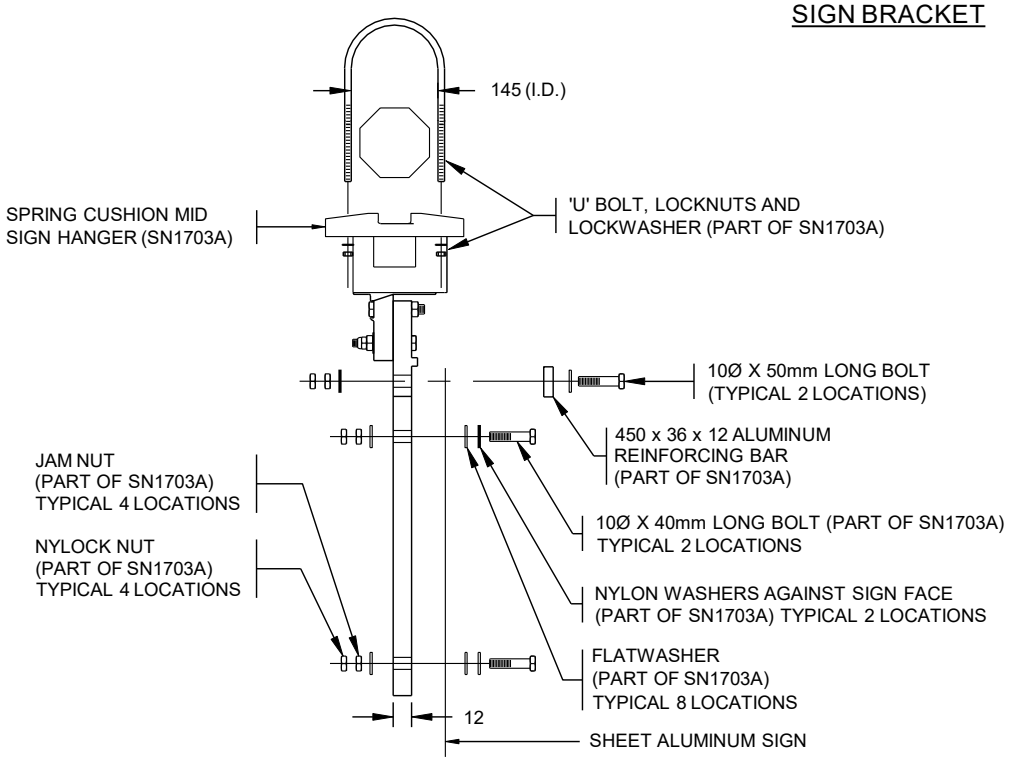


ELEVATION

MAXIMUM SIGN SIZE = 750 X 750



SIGN BRACKET



SIDE VIEW

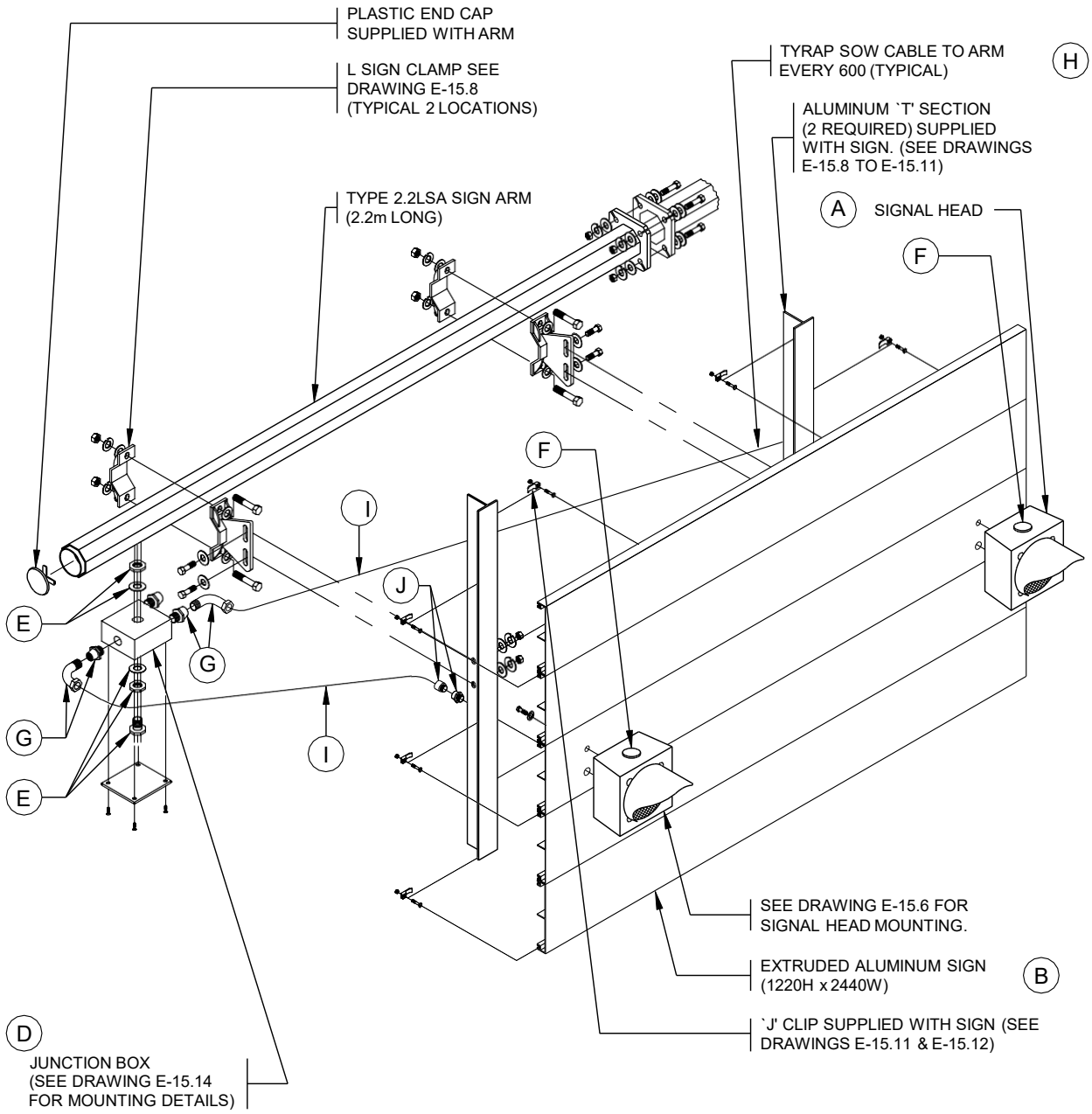
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. AIM SIGNS AS DIRECTED BY THE CITY ENGINEER.
3. 'SN' DENOTES MINISTRY STOCK NUMBER.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

SMALL OVERHEAD SIGN INSTALLATION DETAILS
(TYPE 3 SIGNAL ARMS)

Scale: NTS
Created: MAY 1999
Rev Date: MAY 1999
Dwg No: E-15.4



SEE DRAWING E-15.8 FOR NOTES AND ADDITIONAL DETAILS

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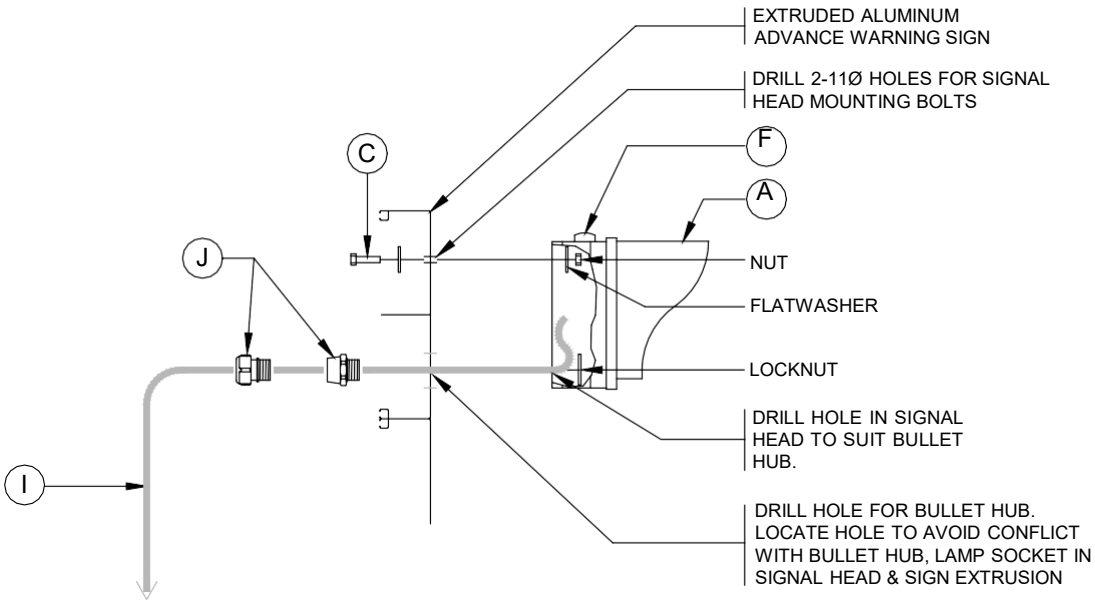
3.20.2020

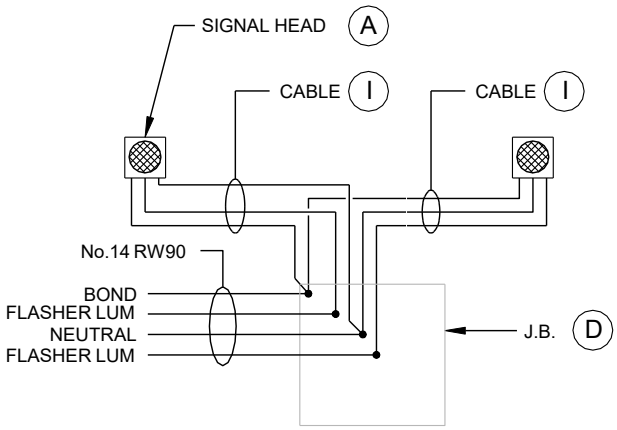
CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD EXTRUDED ALUMINUM ADVANCE WARNING SIGN ASSEMBLY DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2019
Dwg No:	E-15.5



SIGNAL HEAD MOUNTING DETAIL



WIRING DIAGRAM

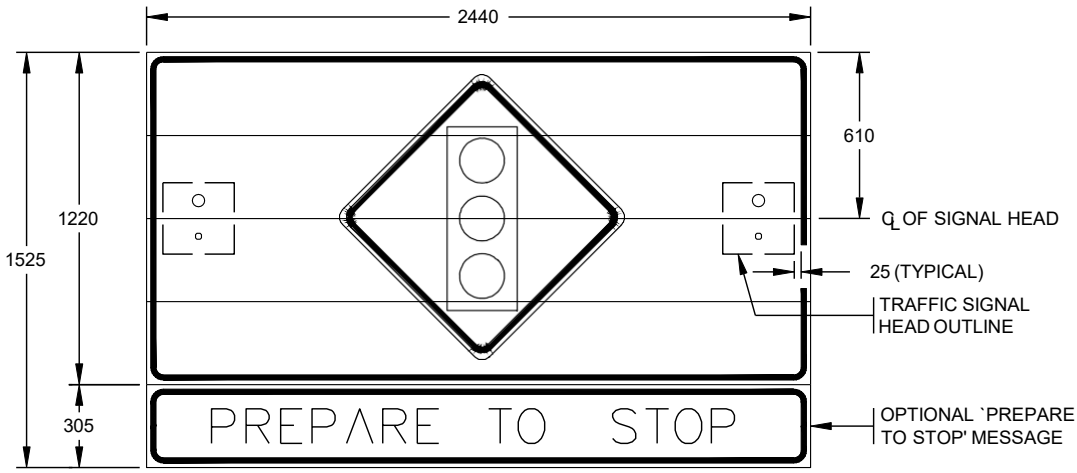
SEE DRAWING E-15.8 FOR NOTES AND ADDITIONAL DETAILS

CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD EXTRUDED ALUMINUM ADVANCE WARNING SIGN INSTALLATION DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2019
Dwg No:	E-15.6

3.20.2020



TRAFFIC SIGNAL ADVANCE WARNING SIGN

TRAFFIC SIGNAL ADVANCE WARNING SIGN KIT PARTS LIST	
ITEM	DESCRIPTION
A	200mm SIGNAL HEAD SECTION C/W YELLOW LENS, LAMP AND COWL VISOR
B	TRAFFIC SIGNAL EXTRUDED ALUMINUM ADVANCE WARNING SIGN COMPLETE WITH 3M DIAMOND GRADE REFLECTIVE SHEETING
C	10Ø x 25mm LONG STAINLESS STEEL HEX HEAD BOLT, NUT, 2 FLAT WASHERS AND 1 LOCKWASHER
D	150 x 150 x 100 PVC J.B.
E	INSULATED CHASE NIPPLE, 2 LOCKNUTS AND 2 FLAT WASHERS
F	FINIAL
G	12mm BULLET HUB AND 90° STRAIN RELIEF CONNECTOR AND LOCKNUT
H	LARGE TY-RAP
I	3c No. 14 S.O.W. CABLE
J	12mm BULLET HUB AND STRAIN RELIEF CONNECTOR AND LOCKNUT

SEE DRAWING E-15.8 FOR NOTES AND ADDITIONAL DETAILS

AutoCAD SHX Text

- PREPARE

AutoCAD SHX Text

- TO

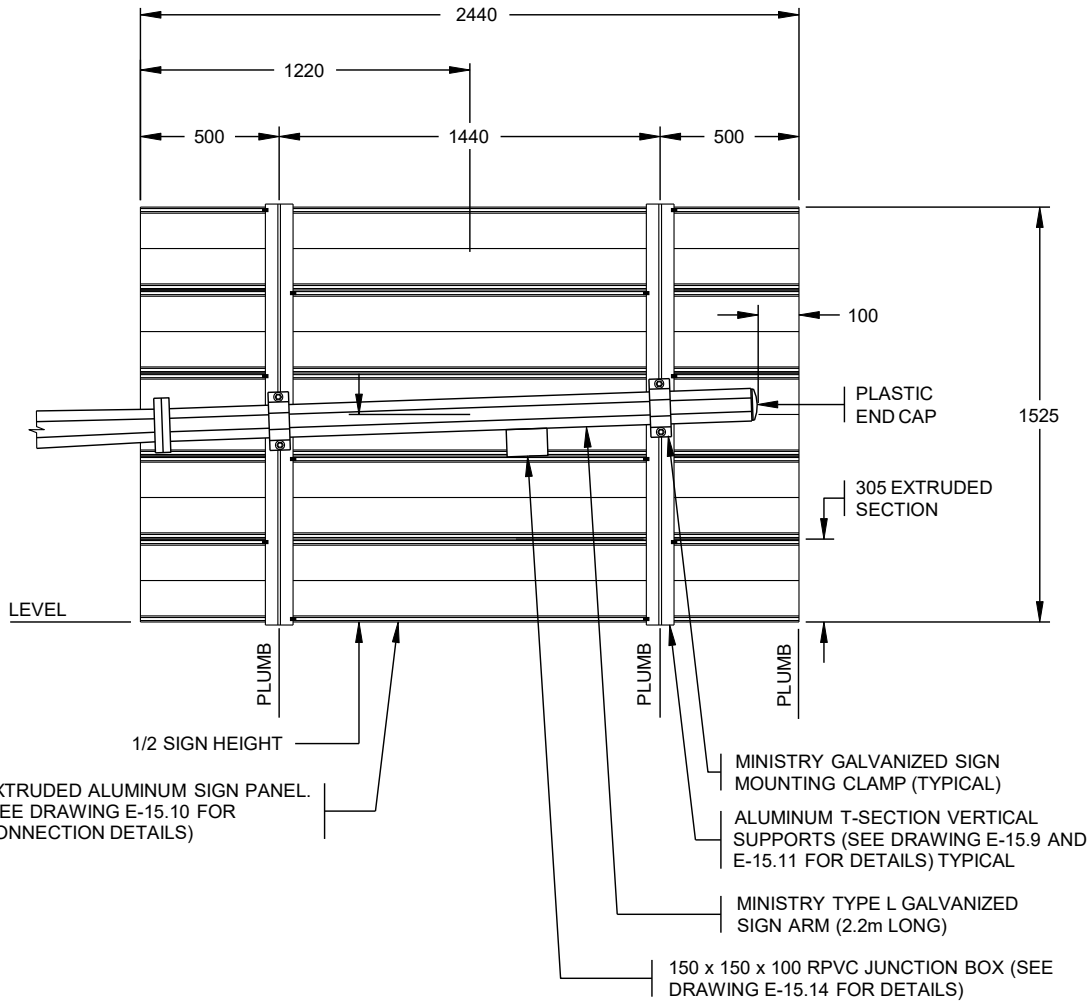
AutoCAD SHX Text

- STOP

CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD EXTRUDED ALUMINUM ADVANCE WARNING SIGN INSTALLATION DETAILS

Scale: NTS
Created: JAN 1998
Rev Date: NOV 2019
Dwg No: E-15.7



REAR ELEVATION

TOTAL MASS
EXTRUDED ALUMINUM SIGN = 48 kg

SEE DRAWING E-15.13 FOR SIGN LIGHTING DETAILS.

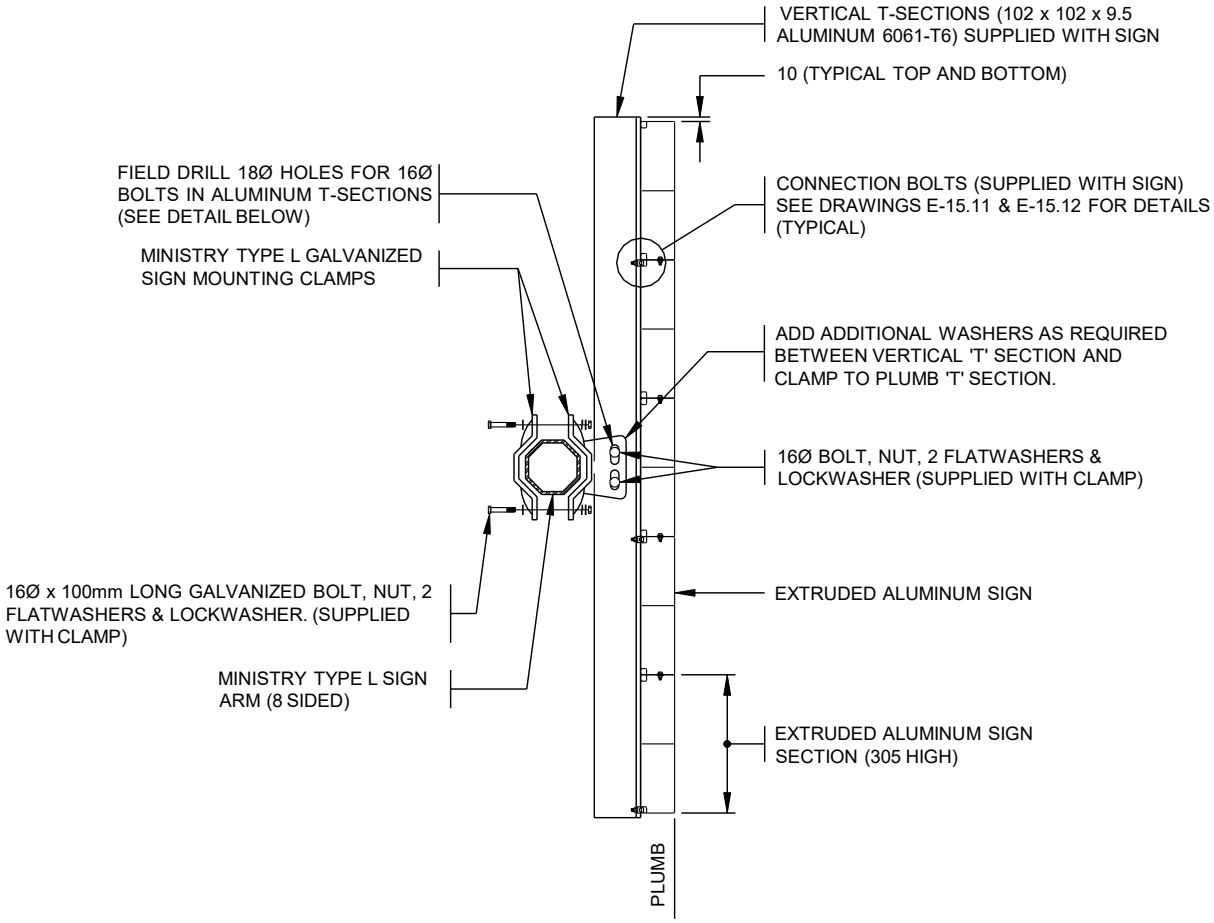
NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. SEE DRAWING E-15.5 FOR SIGN ASSEMBLY DETAILS.
3. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

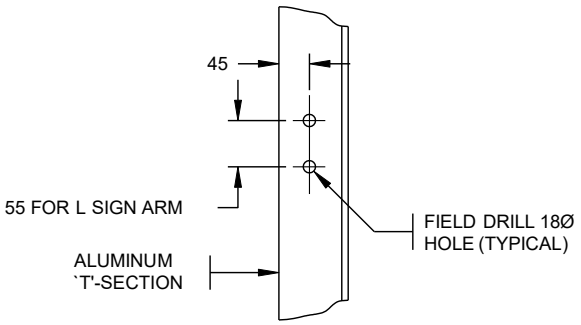
OVERHEAD EXTRUDED ALUMINUM ADVANCE WARNING SIGN INSTALLATION DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	NOV 2019
Dwg No:	E-15.8



SIGN BRACKET ASSEMBLY

SIDE VIEW



`T'-SECTION HOLE DETAIL

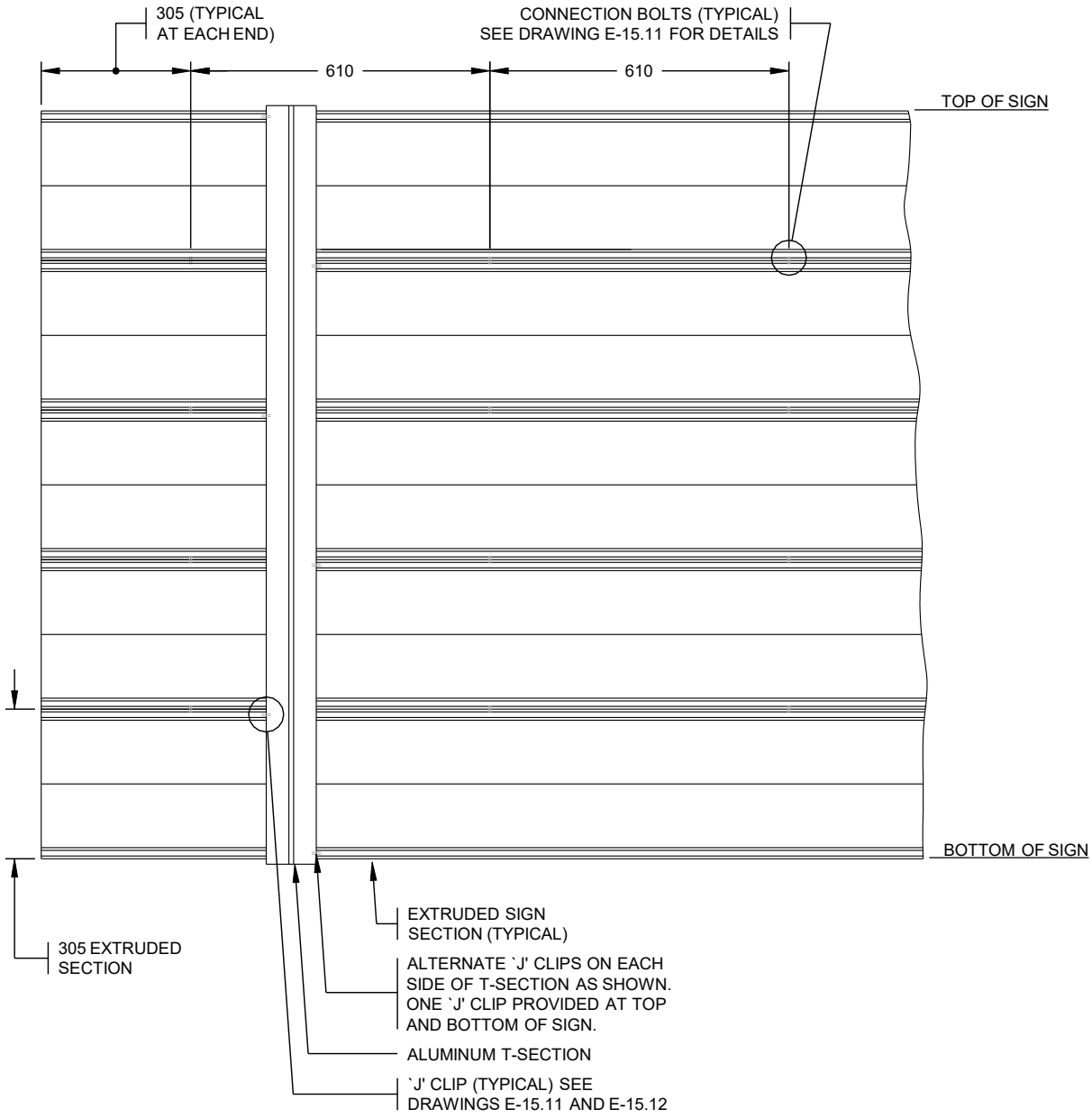
SEE DRAWING E-15.8 FOR NOTES AND ADDITIONAL DETAILS.

SIGN LIGHTING NOT SHOWN. SEE DRAWING E-15.13 FOR SIGN LIGHTING DETAILS.

CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD EXTRUDED ALUMINUM ADVANCE WARNING SIGN INSTALLATION DETAILS

Scale: NTS
Created: JAN 1998
Rev Date: JAN 1998
Dwg No: E-15.9



REAR VIEW OF SIGN

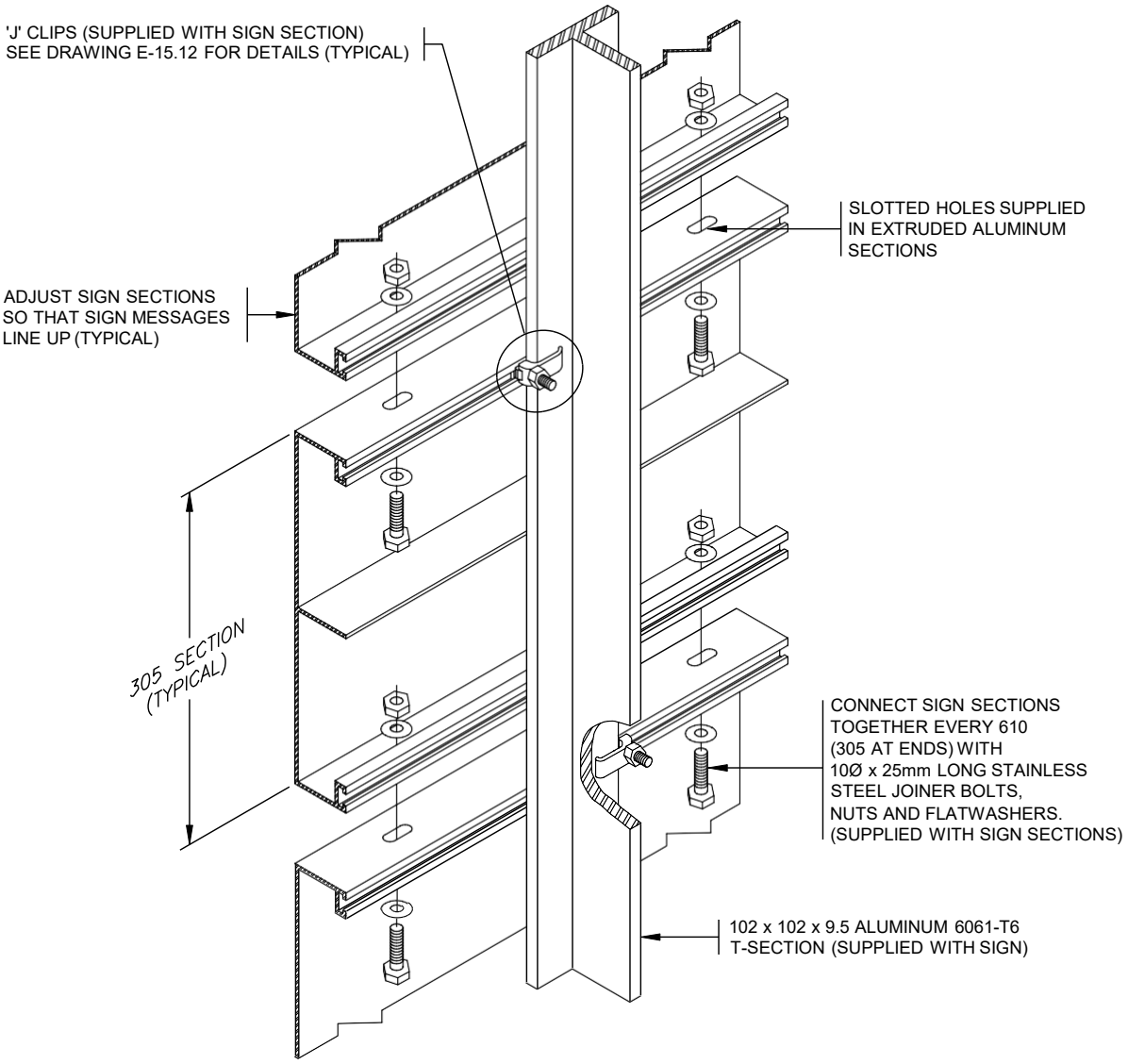
SEE DRAWING E-15.8 FOR
NOTES AND ADDITIONAL DETAILS.

CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD EXTRUDED ALUMINUM ADVANCE
WARNING SIGN INSTALLATION DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-15.10

3.2.2020



ASSEMBLY VIEW

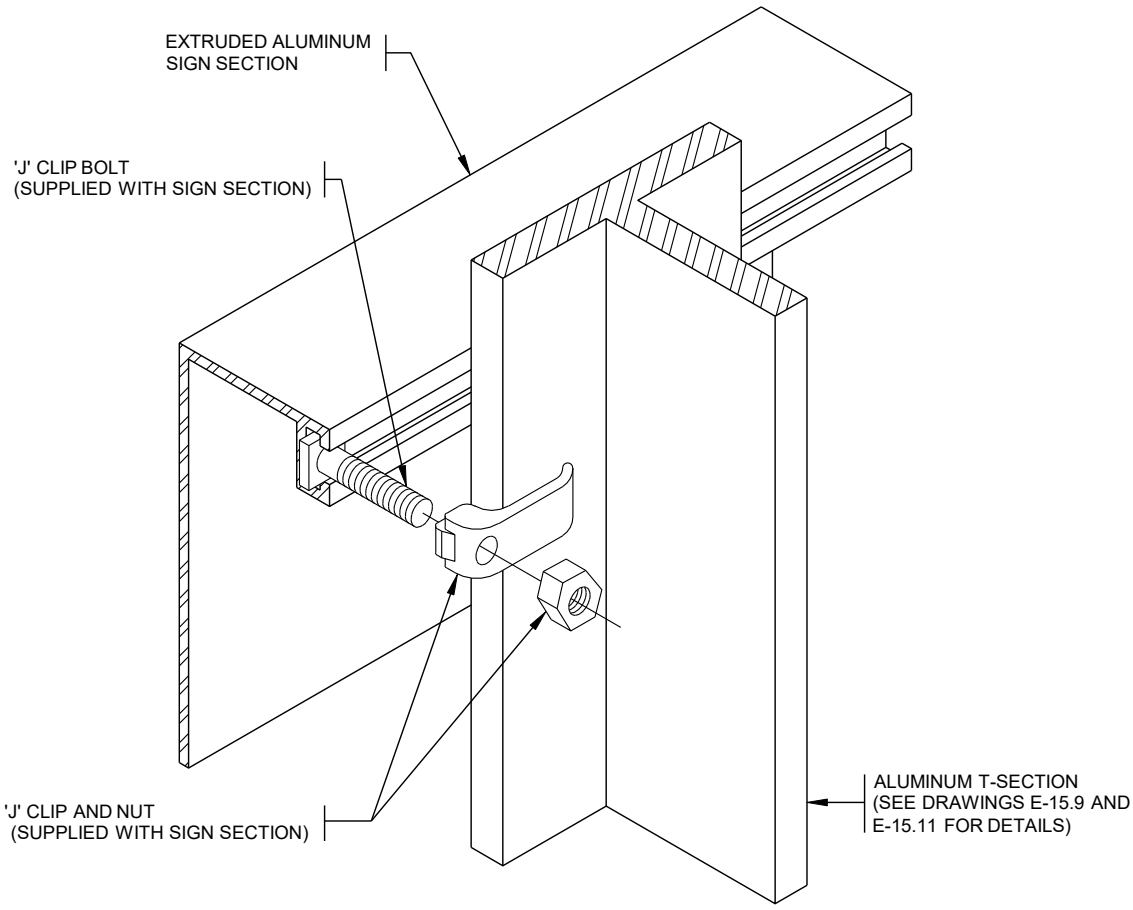
TORQUE JOINER BOLTS AND 'J' CLIPS TO 19 ft. lbs.

SEE DRAWING E-15.8 FOR NOTES AND ADDITIONAL DETAILS.

CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD EXTRUDED ALUMINUM SIGN ASSEMBLY DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-15.11



ASSEMBLY VIEW

TORQUE JOINER BOLTS AND
`J' CLIPS TO 19 ft. lbs.

SEE DRAWING E-15.8 FOR
NOTES AND ADDITIONAL DETAILS.

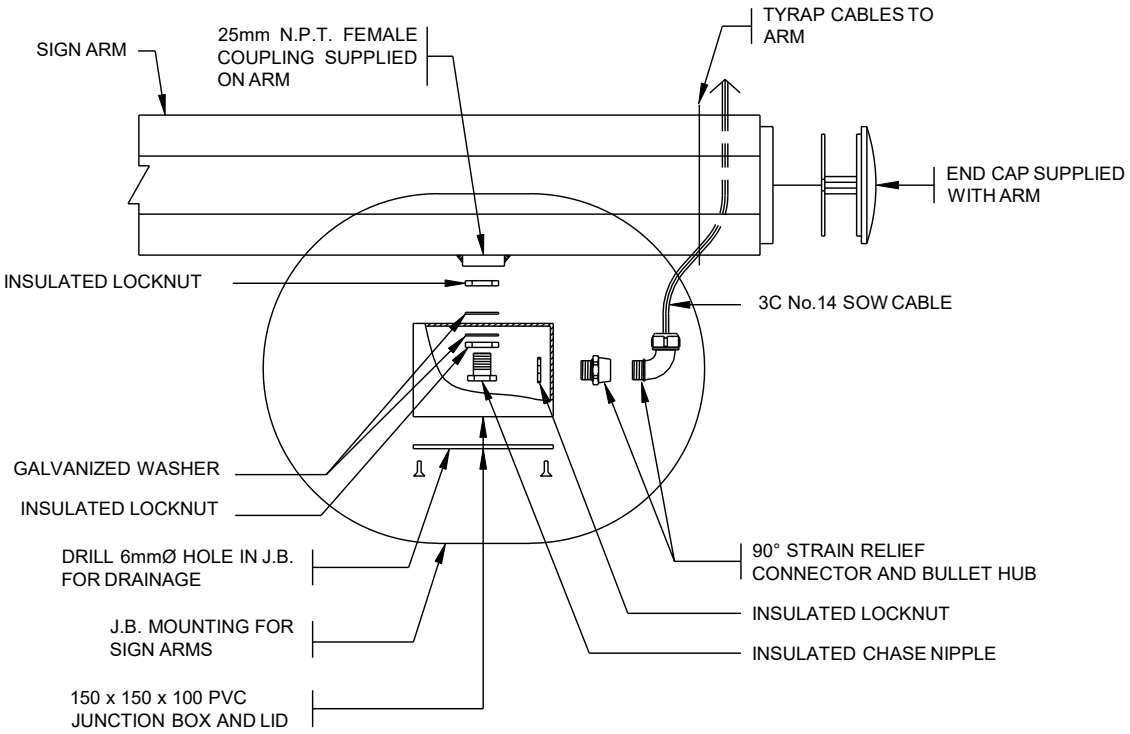
G:\INFRASTRUCTURE PLANNING\STANDARDS & PRODUCTS\MOESS\EDITION NO\13 MAY 2020\2019-09-15 REDLINE INCORPORATION - WORKING\2020 DRAWING SECTIONS\FINAL DRAFT\SECTION 10 DWG\SIE-15.12

3.2.2020

CITY OF NANAIMO
THE HARBOUR CITY

OVERHEAD EXTRUDED ALUMINUM SIGN
ASSEMBLY DETAILS

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-15.12



J.B. MOUNTING DETAIL

NOTES:

1. REFER TO CONTRACT DRAWINGS AND SECTION 10 FOR DETAILED SPECIFICATIONS.
2. ALL DIMENSIONS ARE IN MILLIMETerS UNLESS OTHERWISE NOTED.

CITY OF NANAIMO
THE HARBOUR CITY

JUNCTION BOX INSTALLATION DETAILS ON SIGN ARMS

Scale:	NTS
Created:	JAN 1998
Rev Date:	JAN 1998
Dwg No:	E-15.14