

FOR CONTINUATION SEE DWG. E-02

- NOTES:**
- ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, THE CANADIAN ELECTRICAL CODE, AND CITY SUPPLEMENTARY STANDARDS AND SPECIFICATIONS.
 - ALL CONDUCTORS SHALL BE RW90 XLPE STRANDED COPPER.
 - STAGGER CONNECTIONS IN EACH POLE SO THAT ONE LUMINAIRE CONNECTS TO BLACK PHASE CONDUCTOR AND OTHER TO RED.
 - CONDUCTORS INSIDE POLES SHALL BE NO.12 RW90 UNLESS OTHERWISE NOTED.
 - A TRON HEB SERIES WEATHERPROOF FUSE HOLDER, C/W A 10A BUSS KTK 10 FUSE AND 2' L' TYPE INSULATING BOOTS, SHALL BE INSTALLED ON EACH LUMINAIRE LIVE CONDUCTOR IN THE HANDHOLE.
 - LUMINAIRES SHALL BE BONDED WITH A NO.12 RW90 BONDING CONDUCTOR FROM THE HANDHOLE OF THE POLE TO THE LUMINAIRE.
 - ALL POLES AND SERVICE BASES SHALL BE GALVANIZED.
 - ALL STREET LIGHTS SHALL BE INSTALLED C/W WIRE SENTRY ANTI-THEFT PLATES.
 - ALL HANDHOLE COVERS SHALL BE A CITY APPROVED ANTI-THEFT TYPE. ANTI-THEFT BOLTS SUPPLIED BY THE CITY AT CONTRACTOR'S EXPENSE.
 - ALL STREET LIGHTS SHALL BE 1.0m CLEAR OF ALL DRIVEWAYS.
 - SEE BC HYDRO STANDARDS FOR SERVICE CONNECTION DETAILS.
 - CONTRACTOR SHALL ARRANGE FOR EXACT SERVICE LOCATION(S) WITH BC HYDRO PRIOR TO COMMENCING CONSTRUCTION.
 - CONTRACTOR SHALL ADVISE CITY WORKS INSPECTOR A MINIMUM 48-HOURS IN ADVANCE OF INSTALLATION OF CONDUIT AND LAMP STANDARDS.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE ADEQUACY OF THE EXISTING STREETLIGHTING SERVICE, CONDUIT AND CONDUCTORS AND MAKE ALL THE NECESSARY REPAIRS TO ADEQUATELY COMPLETE ALL CONNECTIONS INTO THE EXISTING STREETLIGHTING SYSTEM.
 - EXACT POSITION OF ALL POLES SHALL BE LAID OUT BY THE CONTRACTOR AND CONFIRMED BY PBX IN THE FIELD.

PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

OVERHEAD POWER LINE CONFLICTS
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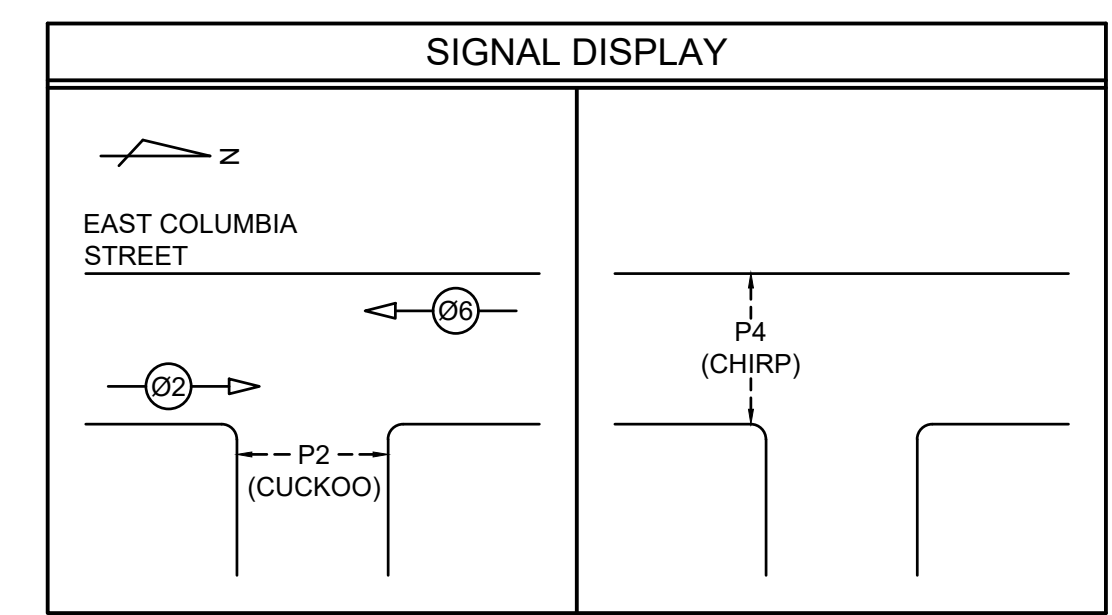
CHECK BEFORE YOU DIG
CONTRACTOR SHALL REFER TO MUNICIPAL RECORD/CIVIL DESIGN DRAWINGS FOR ALL OTHER UTILITIES, SERVICE LOCATIONS, AND DETAILS. THE EXACT LOCATION OF THESE UTILITIES SHALL BE DETERMINED ON SITE BY THE CONTRACTOR. CONTRACTOR TO REPORT ANY CONFLICTS OR DISCREPANCIES TO PBX ENGINEERING LTD. PRIOR TO ORDERING EQUIPMENT.

LOCATING EQUIPMENT
FOR CLARITY, CONDUITS, JUNCTION BOXES AND STREETLIGHT POLES MAY NOT BE SHOWN AT DESIGN OFFSETS. CONTRACTOR SHALL LOCATE ALL EQUIPMENT BASED ON STATIONS AND/OR OFFSETS AS NOTED AND SHALL NOT RELY ON COORDINATES OBTAINED FROM PBX DIGITAL DRAWINGS. CONTRACTOR TO REPORT ANY CONFLICTS OR DISCREPANCIES TO PBX ENGINEERING LTD. PRIOR TO ORDERING EQUIPMENT.

**ISSUED FOR TENDER
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**ALL EQUIPMENT IS EXISTING
UNLESS NOTED OTHERWISE**

- LEGEND**
- | | | |
|----------|----------|--|
| EXISTING | PROPOSED | |
| | | SINGLE DAVIT POLE |
| | | COMBINATION LUMINAIRE TRAFFIC SIGNAL POLE |
| | | SIGNAL POST |
| | | PRIMARY HEAD |
| | | SECONDARY HEAD |
| | | VEHICLE TRAFFIC SIGNAL PHASE |
| | | PEDESTRIAN TRAFFIC SIGNAL PHASE |
| | | 120/240V SERVICE PANEL IN SERVICE BASE |
| | | UTILITY POLE |
| | | JUNCTION BOX (# DENOTES TYPE) |
| | | CONCRETE JUNCTION BOX (# DENOTES TYPE) |
| | | MIOVISION TRAFFICLINK DETECTION CAMERA |
| | | TYPE M TRAFFIC SIGNAL CONTROLLER C/W WITH STANDING PAD |
| | | 3 No. 6 RW90 SERVICE CONDUCTORS IN 53mm RPVC |
| | | 2 No. 6 RW90 ST. LTG. & 1 No. 8 RW90 BOND IN 35mm RPVC |
| | | 3 No. 6 RW90 ST. LTG. & 1 No. 8 RW90 BOND IN 35mm RPVC |
| | | CONDUIT AND CONDUCTOR (AS SHOWN) |
| | | ELECTRICAL EQUIPMENT TO BE REMOVED (AS SHOWN) |
| R | | LUMINAIRE ON RED PHASE CONDUCTOR |
| B | | LUMINAIRE ON BLACK PHASE CONDUCTOR |
| F | | DENOTES FRANGIBLE BASE |



CONDUCTOR COLOUR CODING (FROM HAND HOLE TO SIGNAL HEADS)

ITEM	SIGNAL SECTION	CONDUCTOR COLOUR
Ø2	RED YELLOW GREEN	RED YELLOW BLUE
Ø6	RED YELLOW GREEN	RED YELLOW (RED T.T.) BLUE
Ø8	RED YELLOW GREEN	RED YELLOW (ORANGE T.T.) BLUE
P2	RED YELLOW GREEN	YELLOW BLUE PURPLE/PURPLE (YELLOW T.T.)
P2	RED YELLOW GREEN	YELLOW BLUE PURPLE/PURPLE (YELLOW T.T.)

ITEM	CIRCUITS	CONDUCTOR COLOUR
SIGNAL NEUTRAL	NEUTRAL	WHITE
STREET LIGHTING LUMINAIRES	R B	RED BLACK
TRAFFIC CONTROLLER	POWER	BLACK
NEUTRAL	NEUTRAL	WHITE
GROUND/BOND	GROUND/BOND	GREEN

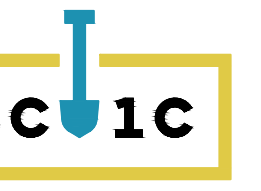
NOTE: T.T. DENOTES TAPE TRACER.



LIGHTING DESIGN CRITERIA
PER: RP-8-00 & CoNW DESIGN CRITERIA SECTION 6.4

ITEM	REQUIRED VALUES	CALCULATED VALUES	REQUIRED VALUES	CALCULATED VALUES
STREET NAME(S)		E COLUMBIA ST AT HUME PARK		NORTH ROAD
LAND USE CLASSIFICATION		RESIDENTIAL		RESIDENTIAL
ROADWAY CLASSIFICATION		ARTERIAL/ACCESS		ARTERIAL
PEDESTRIAN ACTIVITY LEVEL		MEDIUM		MEDIUM
LUMINAIRE DESCRIPTION, MANUFACTURER & MODEL		LRL NXT 48M-5-S-2ES-3-GY-4-UL-X-2H 72M-5-S-2ES-4-GY-4-UL-X-2H		LRL NXT 48M-5-S-2ES-4-GY-4-UL-X-2H 72M-5-S-2ES-6-GY-4-UL-X-2H
PHOTOMETRIC FILE NUMBER		NXT-48M-350mA-2ES-4000K.ies NXT-72M-450mA-2ES-4000K.ies		NXT-48M-450mA-2ES-4000K.ies NXT-72M-600mA-2ES-4000K.ies
LUMINAIRE WATTAGE AND LIGHT SOURCE		53W/100W LED		68W/135W LED
LIGHT LOSS FACTOR		0.81		0.81
LUMINAIRE DISTRIBUTION		TYPE II MAX THROW		TYPE II MAX THROW
POLE HEIGHT (m)		9.0m		9.0m
POLE ARRANGEMENT		N/A		STAGGERED
POLE SPACING (WORST CASE)		N/A		35.0 m
INTERSECTION ILLUMINANCE LEVEL (Eavg)		20.0 LUX		13.0 LUX
INTERSECTION UNIFORMITY RATIO (Eavg:Emin)		3.0:1		2.5:1

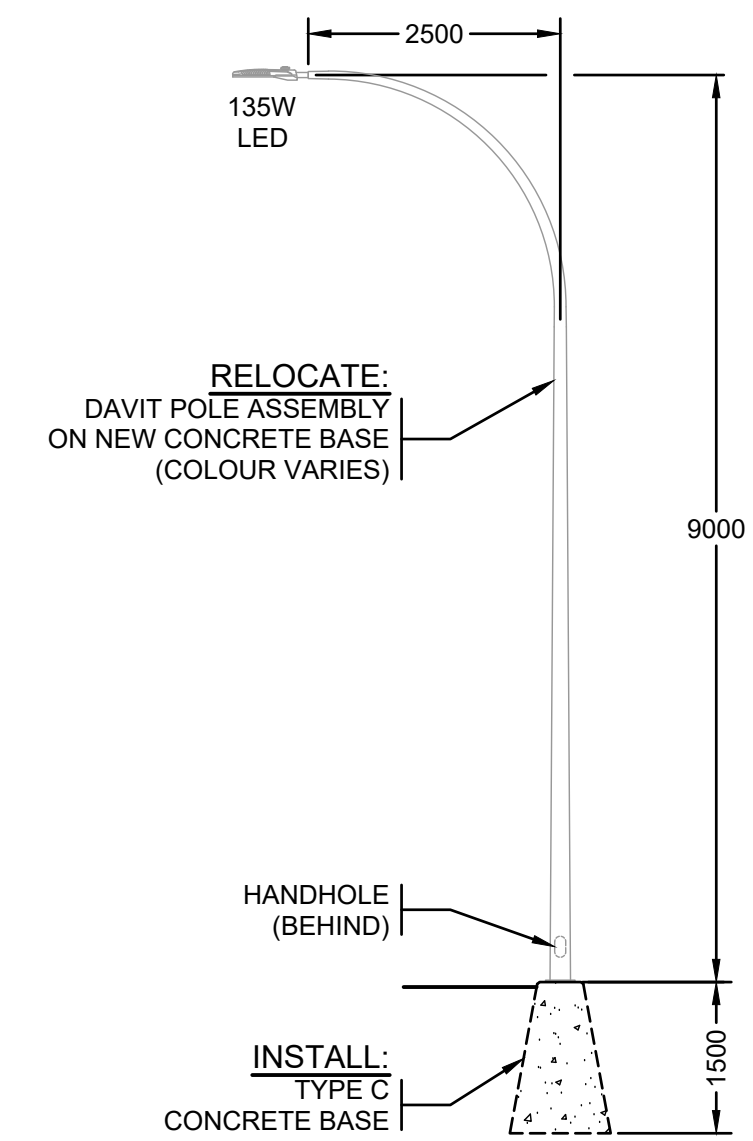
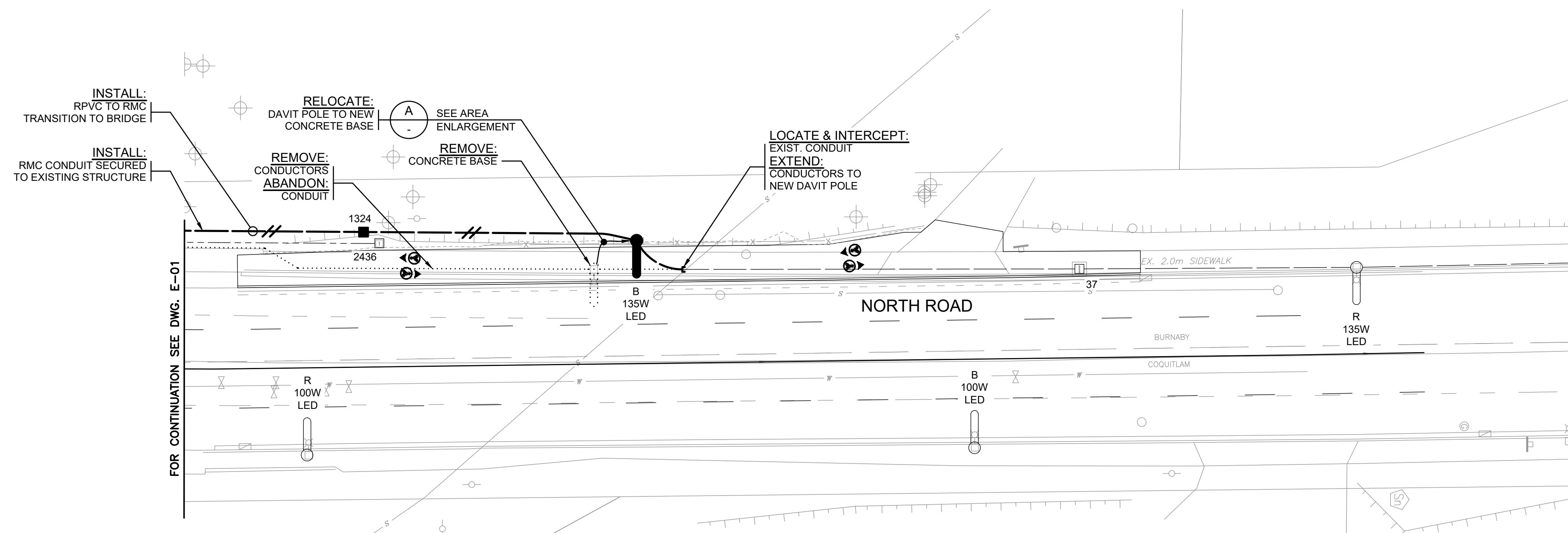
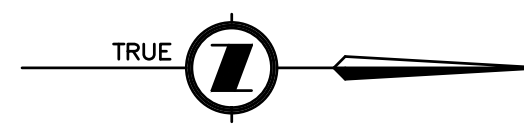
Rev.	DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA
-	22AUG23	ISSUED FOR TENDER	JL	AH	AH
P1	22MAY06	ISSUED FOR 70% DESIGN	JL	AH	AH



PBX ENGINEERING LTD.
Suite 300 - 131 Water St.
Vancouver BC, V6B 4M3
Tel: 604-408-7222
www.pbxeng.com

**TRAFFIC SIGNAL AND STREET LIGHTING
SITE PLAN
NORTH ROAD AT HUME PARK**

SCALE: AS SHOWN
PROJECT NUMBER: **220114**
DRAWING NUMBER: **E-01**
REV: -



ELEVATION **A** **A** RELOCATED DAVIT POLE
1:75 01 02 (9.0m - 42W)

PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

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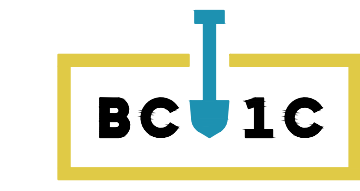
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LIGHTING DESIGN CRITERIA		
PER. CoB ENGINEERING DESIGN CRITERIA FIGURE 6.1		
ITEM	REQUIRED VALUES	CALCULATED VALUES
STREET NAME(S)	NORTH ROAD	
LAND USE CLASSIFICATION	RESIDENTIAL	
ROADWAY CLASSIFICATION	ARTERIAL	
PEDESTRIAN ACTIVITY LEVEL	MEDIUM	
LUMINAIRE DESCRIPTION, MANUFACTURER & MODEL	LRL NXT 72M-5-S-2ES-4-GY-4-UL-X-2H 72M-5-S-2ES-6-GY-4-UL-X-2H	
PHOTOMETRIC FILE NUMBER	NXT-72M-450mA-2ES-4000K.ies NXT-72M-600mA-2ES-4000K.ies	
LUMINAIRE WATTAGE AND LIGHT SOURCE	100W/135W LED	
LIGHT LOSS FACTOR	0.81	
LUMINAIRE DISTRIBUTION	TYPE II MAX THROW	
POLE HEIGHT (m)	9.0m	
POLE ARRANGEMENT	STAGGERED	
POLE SPACING (WORST CASE)	55.0 m	
INTERSECTION ILLUMINANCE LEVEL (Eavg)	13.0 LUX	19.0 LUX
INTERSECTION UNIFORMITY RATIO (Eavg:Emin)	3.0:1	3.0:1



Rev.	DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA
-	22AUG23	ISSUED FOR TENDER	JL	AH	AH
P1	22MAY06	ISSUED FOR 70% DESIGN	JL	AH	AH

CLIENT

PROJECT

CENTRAL VALLEY GREENWAY

PROFESSIONAL SEAL

DATE: 2022-08-23

PBX ENGINEERING Ltd.
Suite 300 - 131 Water St.
Vancouver BC, V6B 4M3
Tel: 604-408-7222
www.pbxeng.com

TITLE

**STREET LIGHTING
SITE PLAN
NORTH ROAD**

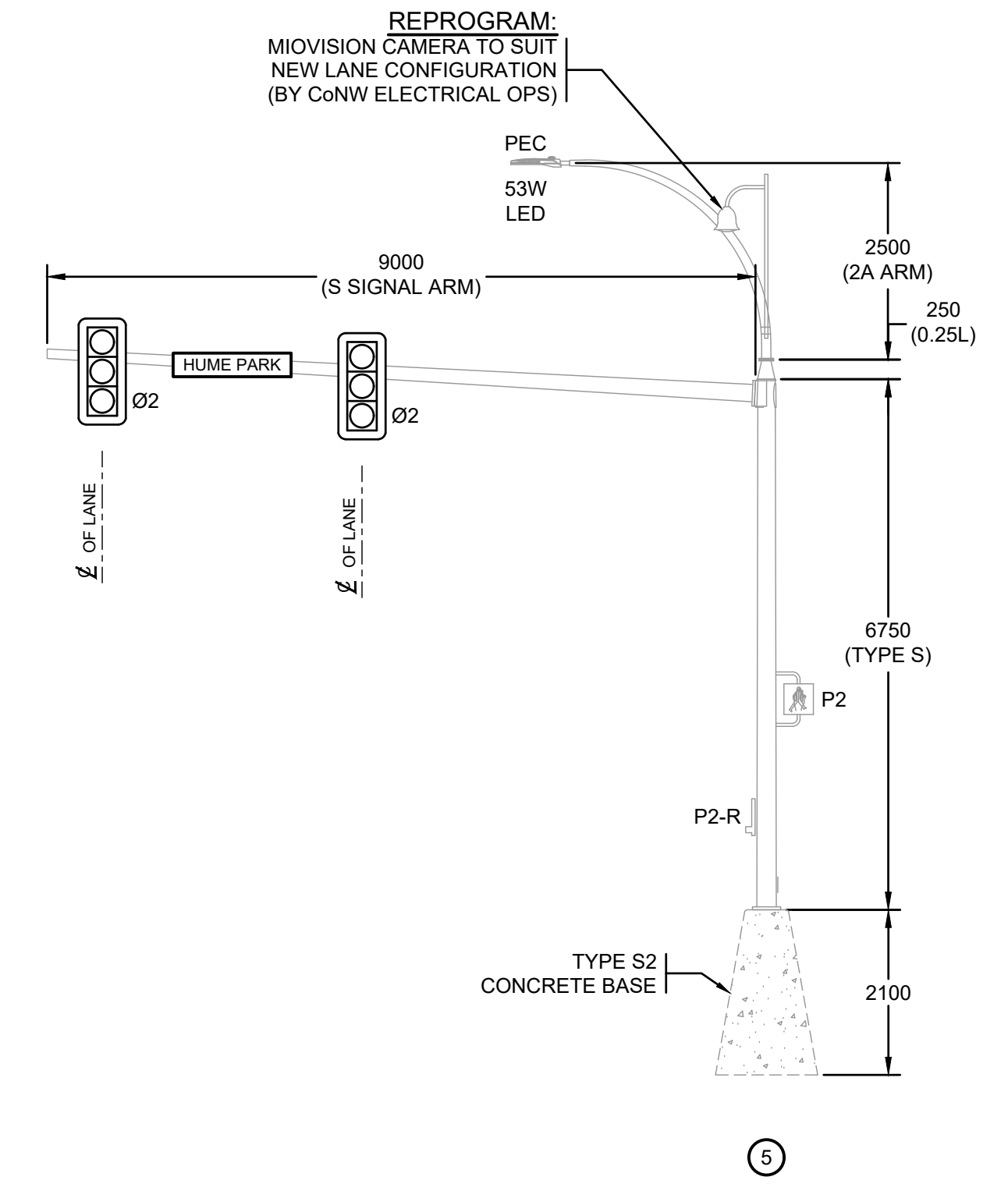
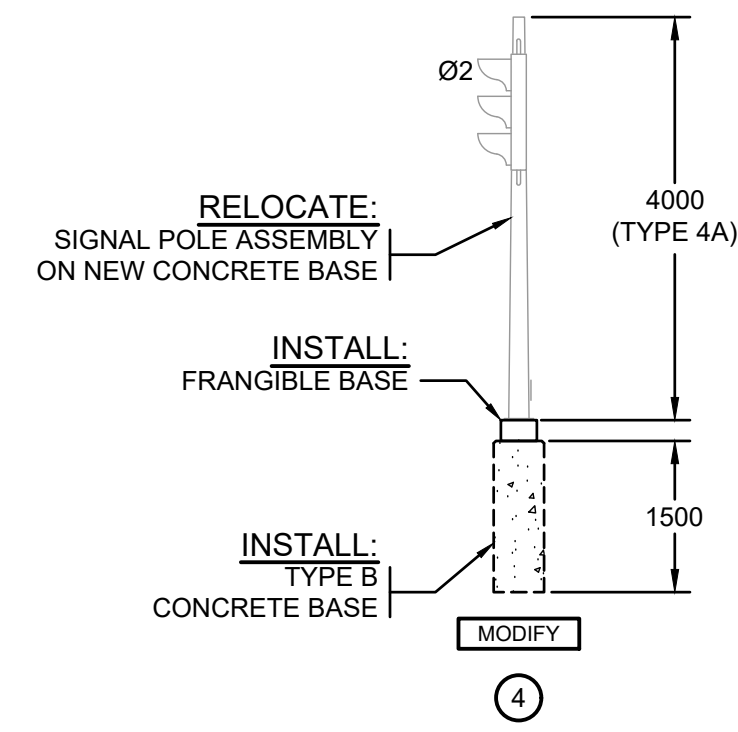
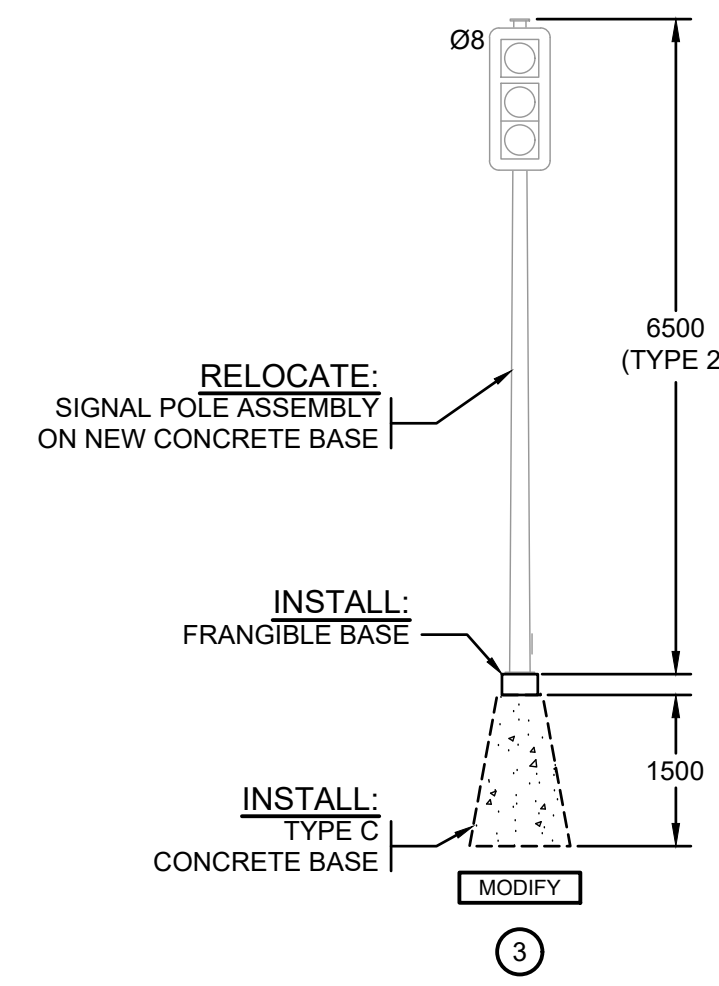
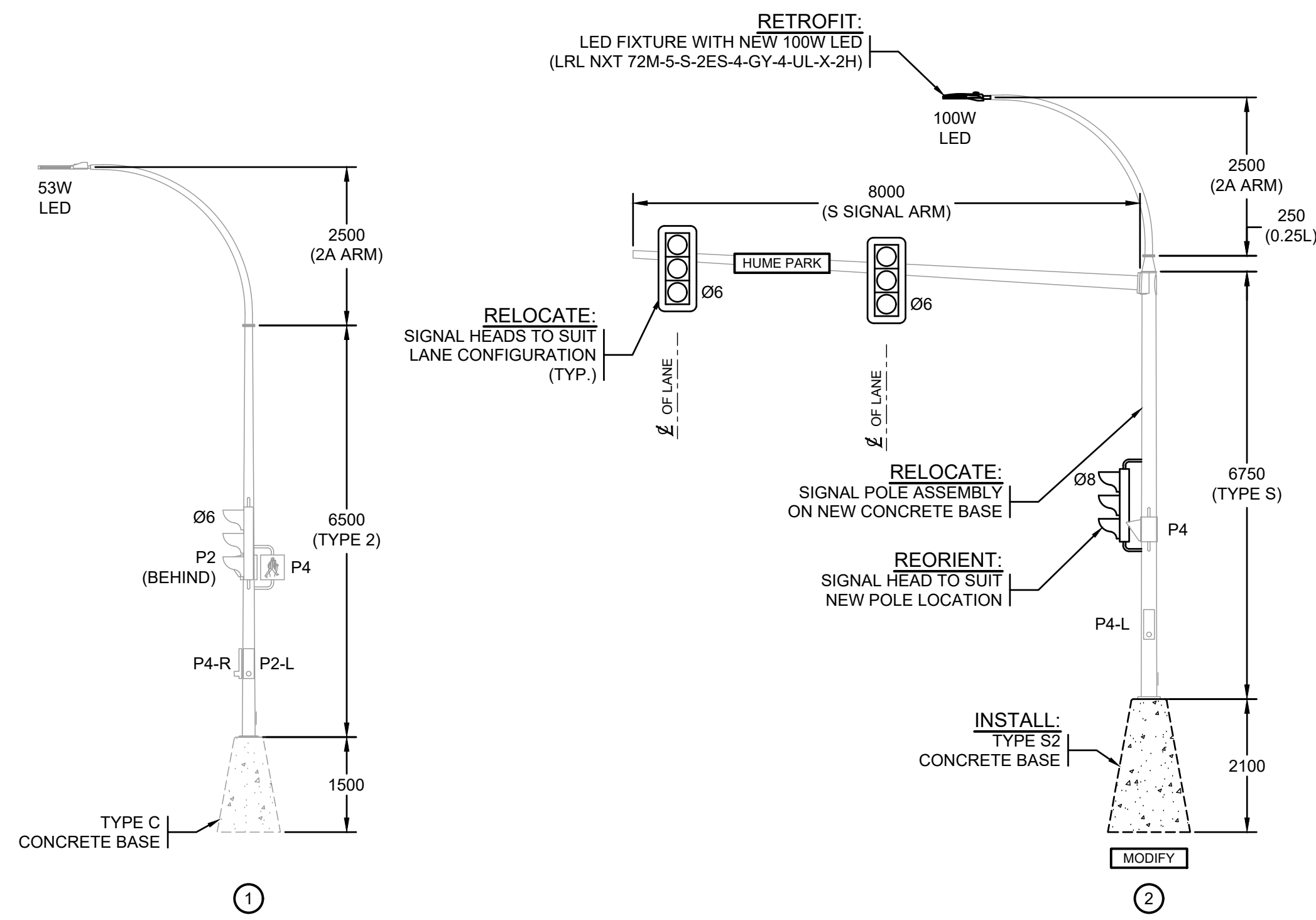
SCALE AS SHOWN

PROJECT NUMBER **220114**

DRAWING NUMBER **E-02**

REV. -

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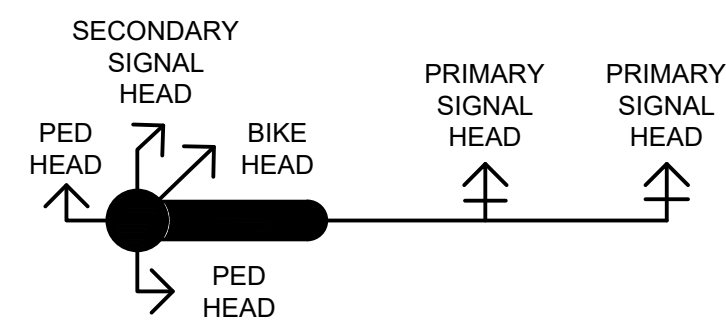


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PERMIT TO PRACTICE NUMBER:
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RECOGNIZED PRODUCT LIST			
PRODUCT	MANUFACTURER	SPECIFICATION	EXCEPTIONS
COBRA HEAD LUMINAIRES	LED ROADWAY LIGHTING	NXT	WATTAGE AS NOTED
COMPOSITE JUNCTION BOXES	INCREDIBLE BULK	CoB	POLYMER CONCRETE LID SIZE AS NOTED
POLES AND ANCHOR BOLTS	NOVA POLE OR VALMONT WEST COAST ENG. AE CONCRETE OR FRASERWAY PRECAST	MoTI/MMCD	GALVANIZED
CONCRETE BASES		MoTI/MMCD	OR EQUIVALENT

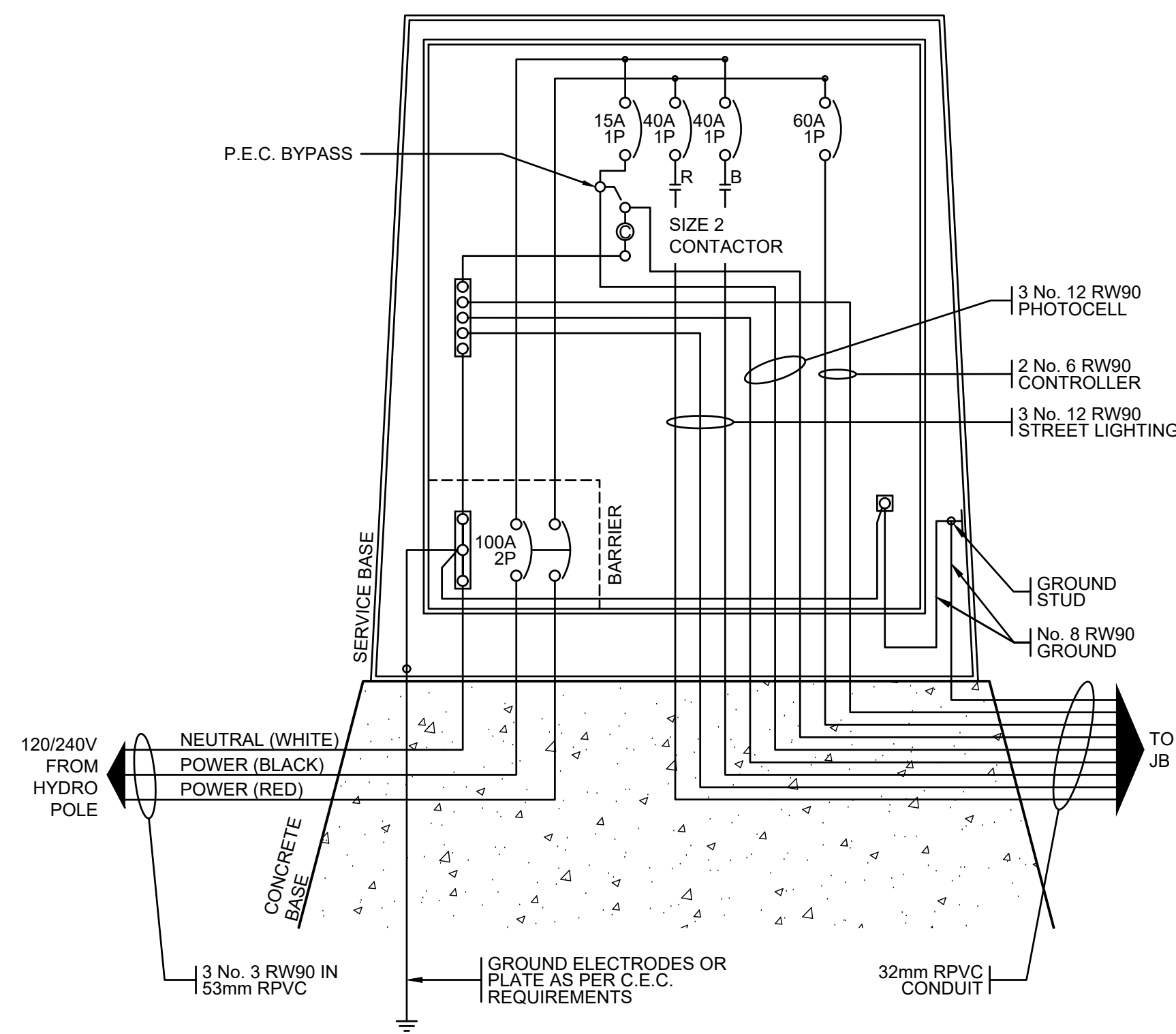
COLOUR CODING (19 CONDUCTOR SIGNAL CABLE)			
CONDUCTOR No.	SIGNAL ASSIGNMENT	LETTERING	CONDUCTOR COLOUR
1	NEUTRAL	WHITE ONE	WHITE
2	PB RETURN	WHITE TWO	WHITE
3	PRIMARY PB	-	BLACK
4	SECONDARY PB	-	ORANGE
5	PRIMARY RED	RED ONE	RED
6	SECONDARY RED	RED TWO	RED
7	SPARE	RED THREE	RED
8	PRIMARY PED DW	RED FOUR	RED
9	SECONDARY PED DW	RED FIVE	RED
10	PRIMARY AMBER	AMBER ONE	YELLOW
11	SECONDARY AMBER	AMBER TWO	YELLOW
12	PRIMARY LT AMBER	AMBER THREE	YELLOW
13	SECONDARY LT AMBER	AMBER FOUR	YELLOW
14	SECONDARY PED WALK	AMBER FIVE	YELLOW
15	PRIMARY GREEN	GREEN ONE	BLUE
16	SECONDARY GREEN	GREEN TWO	BLUE
17	PRIMARY LT GREEN	GREEN THREE	BLUE
18	SECONDARY LT GREEN	GREEN FOUR	BLUE
19	PRIMARY PED WALK	GREEN FIVE	BLUE

LT = LEFT TURN SIGNAL
DW = DONT WALK
PB = PEDESTRIAN PUSHBUTTON



SIGNAL CABLE NOTES:

- REFER TO CONTRACT DRAWINGS AND SECTION 16550 FOR DETAILED SPECIFICATIONS.
- CABLE TO BE POLYETHYLENE INSULATED POLYVINYL CHLORIDE JACKETED, RATED AT 600 VOLTS.
- CONDUCTORS TO BE No. 14 AWG STRANDED.
- REFERENCE TO CSA 22.2 - No. 239-97



DETAIL 1 EXISTING SERVICE BASE - WIRING DIAGRAM
N.T.S.

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<p>CLIENT: NEW WESTMINSTER City of Burnaby CENTRAL VALLEY GREENWAY</p>		<p>PROFESSIONAL SEAL: A.K. HUNTER #45318 ENGINEER 2022-08-23</p>	<p>PBX ENGINEERING Ltd. Suite 300 - 131 Water St. Vancouver BC, V6B 4M3 Tel: 604-408-7222 www.pbxeng.com</p>
<p>PROJECT: STREET LIGHTING SITE PLAN NORTH ROAD</p>		<p>SCALE: AS SHOWN</p>	<p>PROJECT NUMBER: 220114 DRAWING NUMBER: E-03 REV: -</p>
<p>Rev. DATE</p>	<p>ISSUE / REVISION DESCRIPTION</p>	<p>DESN QC QA</p>	<p>DATE: 2022-08-23</p>