

ELEVATION
SCALE 1:25

GENERAL NOTES-

1. INSTALLATION DETAILS ARE PROVIDED FOR THE GENERAL 3500x3500 EASEMENT.
2. CIVIL FOUNDATION IS DESIGNED FOR PWC STANDARD SPECIFICATION SOIL TYPE 1, 2 & 3 AND LIMITED TO THE PWC APPROVED 500kVA OR 1000kVA 7000 SERIES PACKAGE SUBSTATION (1710 KG MAX) FITTED WITH MAGNEFIX SWITCHGEAR. REFER TO S02-01-07-01.
3. FOR OTHER SOIL TYPES THE PWC STANDARD CIVIL DESIGN MUST BE REVIEWED AND THE AMENDED DESIGN SUBMITTED TO PWC FOR APPROVAL.
4. FOR ALL OTHER HEAVIER SUBSTATIONS OR THOSE WITH DIFFERENT CENTRE OF GRAVITY REQUIRES THE FOUNDATION DESIGN TO BE REVIEWED AND SUBMITTED TO PWC FOR APPROVAL.
5. 7000 SERIES PACKAGE SUBSTATION EARTHING, REFER TO S02-02-05-01 FOR DETAILS.
6. HEAVY DUTY ORANGE 100mm DIAMETER CONDUITS WITH 1200mm RADIUS BENDS SHALL BE USED FOR HV AND LV CABLE ENTRY. BELL ENDS SHALL BE REMOVED WITHIN THE CABLE VOID PRIOR TO ASSEMBLY. EACH HV CABLE SHALL OCCUPY ONE SINGLE 100mm CONDUIT. 4 x 240mm² LV CABLES SHALL BE INSTALLED IN EACH 100mm CONDUIT ON THE LV SIDE.
7. ALL CONDUITS (EXCEPT FOR DRAIN) SHALL BE CUT LEVEL 30mm ABOVE THE FINISHED GROUT LEVEL. (REFER DWG S02-01-09-06)
8. ALL CONDUIT ENDS SHALL BE SEALED WITH PWC APPROVED SEALANT. (REFER DWG S02-01-09-06)
9. THE PRECAST SLAB AS PER S02-02-06-47 SHALL BE USED FOR THE 7000 SERIES SUBSTATION INSTALL.
10. INSTALL SUITABLE OUTDOOR NEUTRAL CURING SILICON BEAD AT EDGE OF CONCRETE SLAB CABLE VOID NO GREATER THAN 20mm WIDTH TO LIMIT WATER INGRESS INTO CABLE VOID. THIS SHALL BE DONE PRIOR TO THE PLACEMENT OF THE SUBSTATION.
11. CROSS SECTION DETAILS SIMPLIFIED FOR CLARITY.

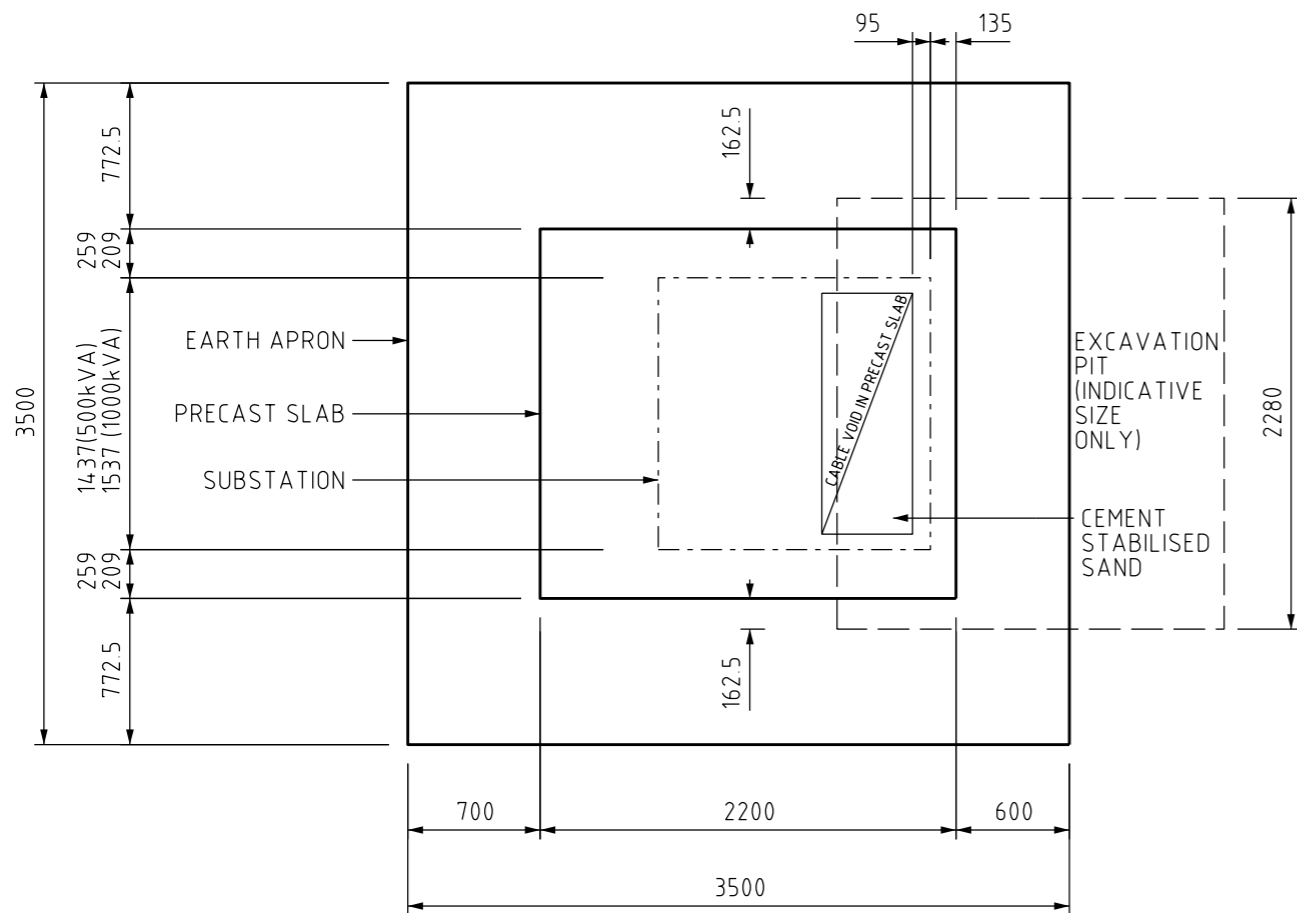
CIVIL NOTES-

1. THE CONTRACTOR IS RESPONSIBLE FOR ASSESSING SOIL CONDITIONS PRIOR TO COMMENCING WORK. HAZARD IDENTIFICATION AND RISK ASSESSMENT ARE REQUIRED PRIOR TO THE COMMENCEMENT OF WORKS.
2. THIS CIVIL DESIGN IS APPROVED FOR THE FOLLOWING SOIL CONDITIONS. OTHER SOIL CONDITIONS REQUIRE ENGINEERING DESIGN.
 - 2a - SOIL GROUP 1: (GOOD BEARING CAPACITY 300kPa) WELL COMPACTED ROCK SOIL HARD CLAY AND WELL BONDED SAND AND GRAVEL WITH GOOD SURFACE WATER DRAINAGE AND FOOTING NORMALLY ABOVE WATER TABLE.
 - 2b - SOIL GROUP 2 (MEDIUM BEARING 200kPa) COMPACT MEDIUM CLAY WELL BONDED SANDY LOAM BONDED SAND AND GRAVEL WITH REASONABLE SURFACE DRAINAGE.
 - 2c - SOIL GROUP 3: (POOR BEARING 100kPa) SOFT CLAY POOR COMPACTED SAND AND SOILS THAT TEND TO ABSORB LARGE AMOUNTS OF WATER, PROVIDED THESE DO NOT DEVELOP INTO SLUSH.
3. CEMENT STABILISED SAND SHALL BE 5% CEMENT WITH COHESION = 1000kPa AND A FRICTION ANGLE = 30 DEGREES. THE CONTRACTOR SHALL PERFORM TESTS ON SITE TO PROVE THE REQUIRED STRENGTH IS ACHIEVED.
4. MAXIMUM ALLOWABLE SURCHARGE IS 15kPa. THE CONTRACTOR IS RESPONSIBLE FOR ACCESSING SOIL CONDITIONS PRIOR TO COMMENCING WORK. KEEP ALL EXCAVATION AND LIFTING PLANT A MINIMUM OF 2000mm FROM THE EXCAVATION EDGE.
5. THE PRECAST SLAB SHALL BE FOUNDED ON COMPETENT NATURAL GROUND (COMPACTED TO 95% MMDD IF TOP SOIL IS PRESENT. REMOVE AND REPLACE WITH FILL MATERIAL THAT IS FREE OF ORGANIC MATTER, HAS A MINIMUM SOAKED CBR AT 95% MMDD OF 20% AT 2.5mm AND A PLASTICITY INDEX BETWEEN 2% AND 15%. COMPACTED TO 95% MMDD.
6. FOR SUBSTATIONS REQUIRING A REVERSED LV CONDUIT FOR CUSTOMER CABLE ENTRY CONDUIT, A 450mm WIDE TRENCH SHALL BE EXCAVATED AND BACKFILLED WITH 5% CEMENT STABILISED SAND. EXCAVATION POSITION TO SUIT CABLE POSITION REQUIREMENTS.
7. IF SUBSTATION IS ADJACENT TO PAVING THEN ENSURE PAVING IS FLUSH WITH EDGE OF EARTH APRON.
8. ENSURE 30 THICK GROUT (NOMINAL) IS SLOPED TOWARD DRAIN TO ENSURE ADEQUATE DRAINAGE.
9. ALL LIFTING ANCHORS TO BE GROUTED OR CONCRETE FILLED TO BE FLUSH WITH CONCRETE SLAB FACE.

NO	DESCRIPTION	DRN	DATE	CKD	APPD
24	AMEND NOTE 7. ADD CIVIL NOTE 9. AMEND SHEET 2,3 & 4.	C.C.	DEC'21	B.V.	B.C.
23	ADDED REVERSE CONDUIT OPTION. SHEET 2,3 & 4 AMENDED.	C.C.	JUL'21	B.V.	B.C.
22	UPDATED DRAWING WITH REVISED CIVIL INSTALLATION AND REVISED DIMENSIONS.	C.C.	MAY'21	B.V.	B.C.
AMENDMENTS					

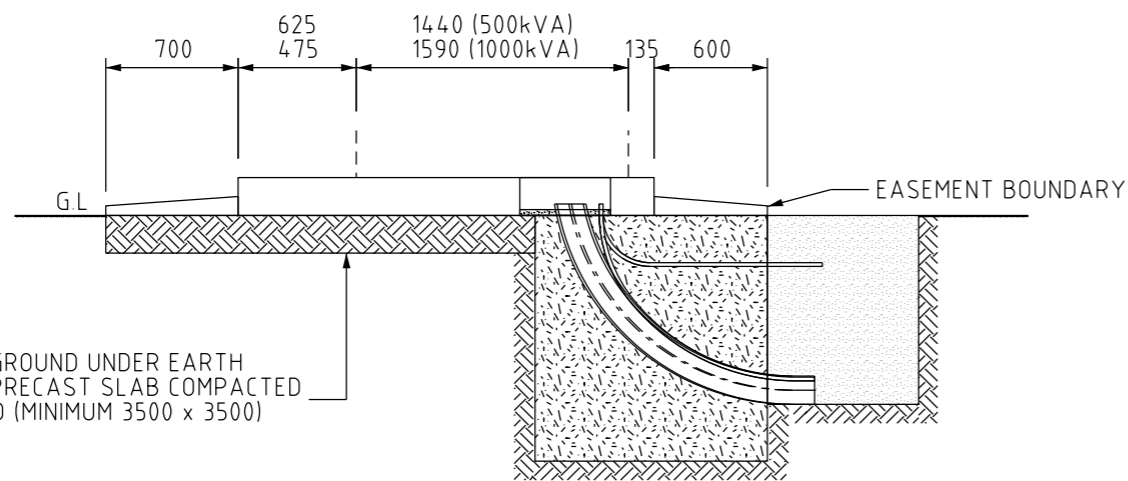


DES -		POWER STANDARD DRAWING	
DRN C.COPPINS	CIVIL, 7000 SERIES PACKAGE SUBSTATION		
CKD B.VANDERSTELT	GENERAL ARRANGEMENT		
APPD B.CHEUNG	CABLE ENTRY AND FOUNDATION		
SCALE AS SHOWN	DETAILS ELEVATION		
ISSUED MAY'2021	SHEET 1 OF 4		
ALL DIM. IN mm	A3	DRAWING NUMBER	S02-02-06-09_1
DRAFTING STANDARD TO A.S.1100	CAD PRODUCT - DO NOT AMEND MANUALLY		AMD T



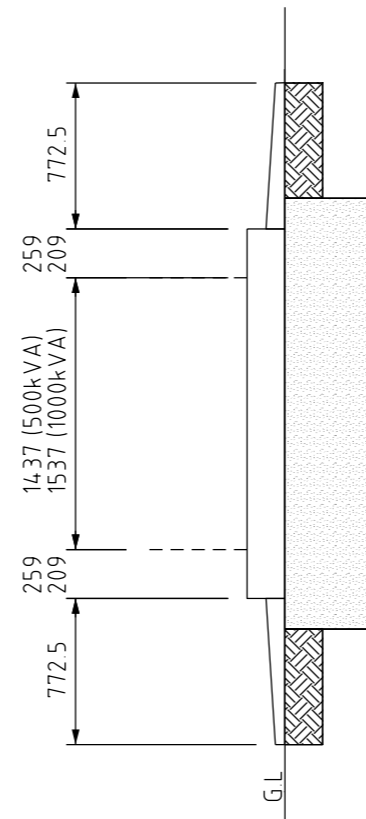
PLAN VIEW

1:40



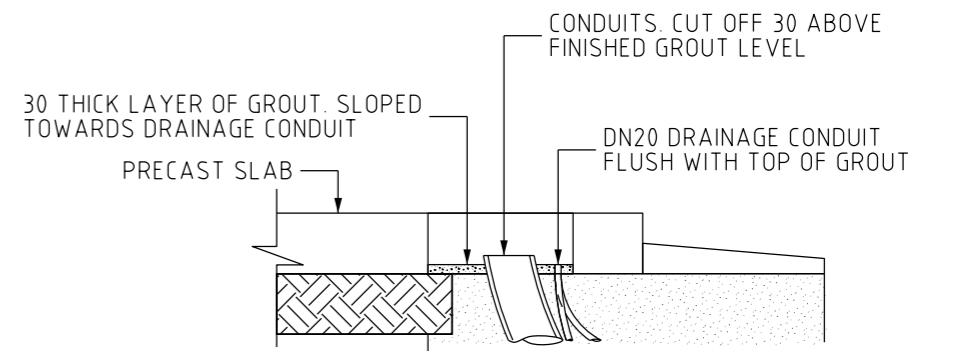
FRONT VIEW

1:40

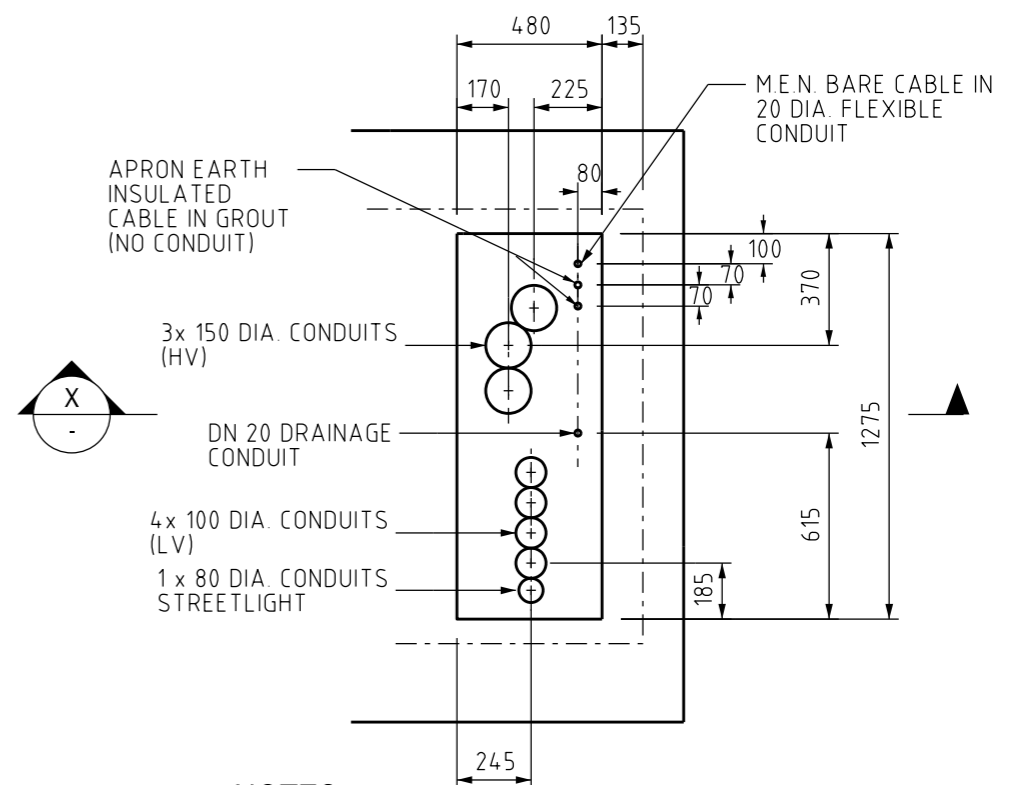


SIDE VIEW

1:40



SECTION X
N.T.S.



NOTES:

1. ALL BELL ENDS REMOVED FROM CONDUIT IN CABLE VOID PRIOR TO ASSEMBLY.
2. CROSS SECTION DETAILS SIMPLIFIED FOR CLARITY.

CONDUIT ENTRY DETAILS

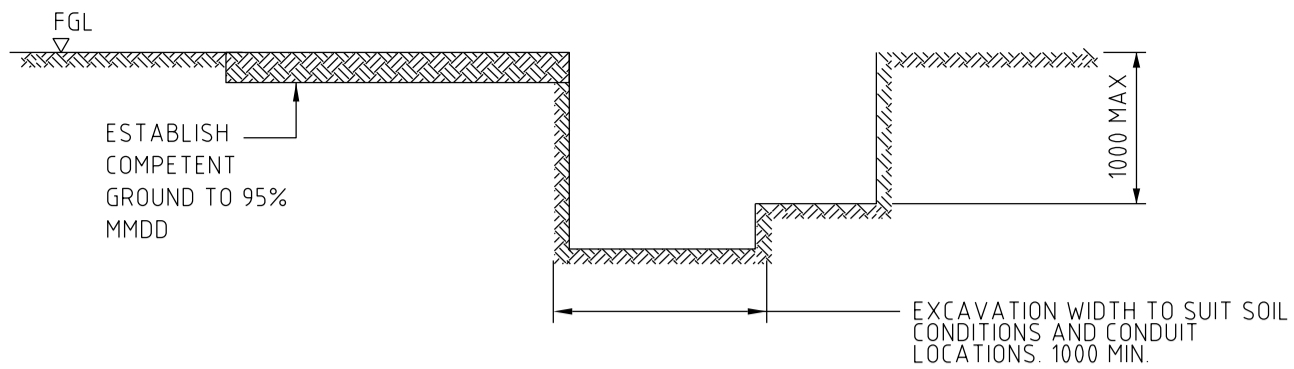
SCALE 1:25

NO	DESCRIPTION	DRN	DATE	CKD	APPD
2	ADD SECOND LOCAL EARTH CONDUIT.	C.C.	DEC'21	B.V.	B.C.
1	AMENDED PIT DIMENSIONS.	C.C.	JUL'21	B.V.	B.C.
0	ISSUED FOR CONSTRUCTION	C.C.	MAY'21	B.V.	B.C.
AMENDMENTS					

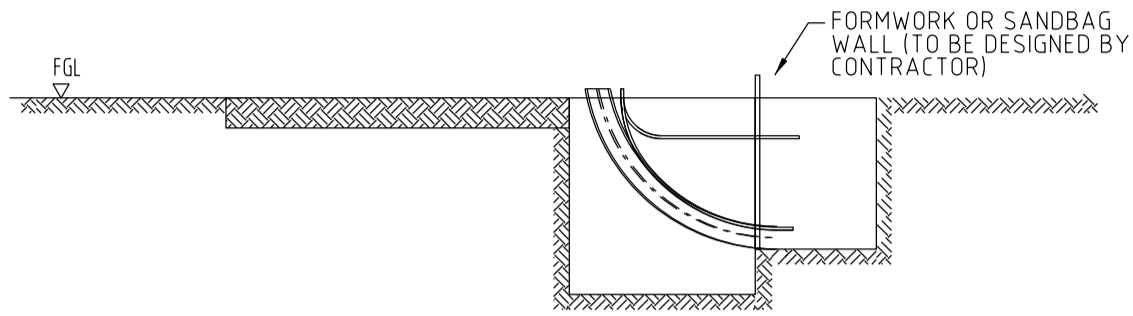


DES -		POWER STANDARD DRAWING	
DRN	C.COPPINS	CIVIL, 7000 SERIES PACKAGE SUBSTATION	
CKD	B.VANDERSTELT	CABLE ENTRY	
APPD	B.CHEUNG	AND FOUNDATION DETAILS SETOUT DRAWING	
SCALE	AS SHOWN	SHEET 2 OF 4	
ISSUED	MAY'2021	A3	DRAWING NUMBER S02-02-06-09_2
ALL DIM. IN mm			
DRAFTING STANDARD TO A.S.1100		CAD PRODUCT - DO NOT AMEND MANUALLY	

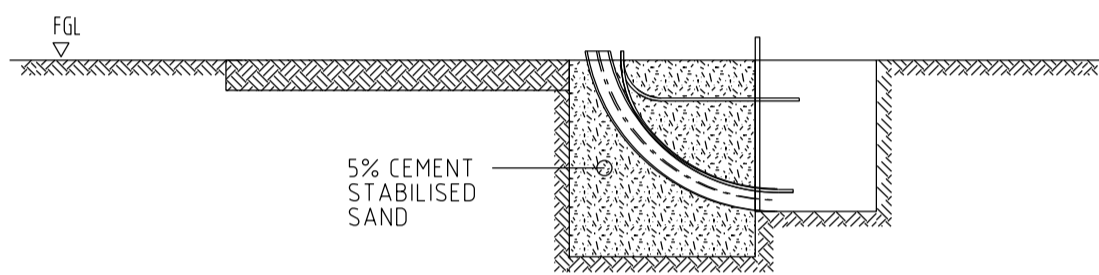




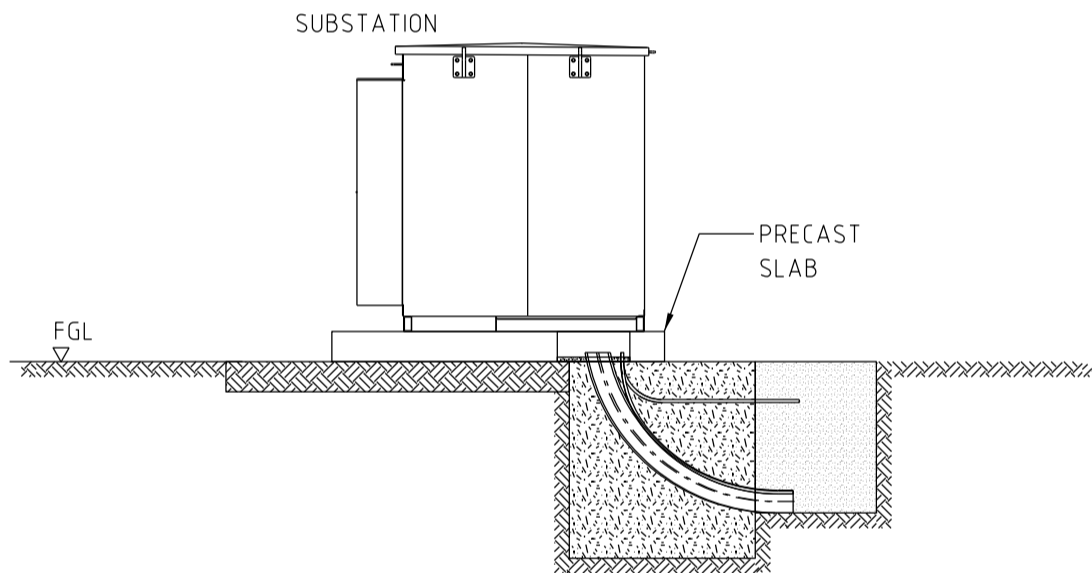
STEP 1 - COMPACT PAD FOR SLAB, INSTALL STANDARD JIG AND EXCAVATE SITE



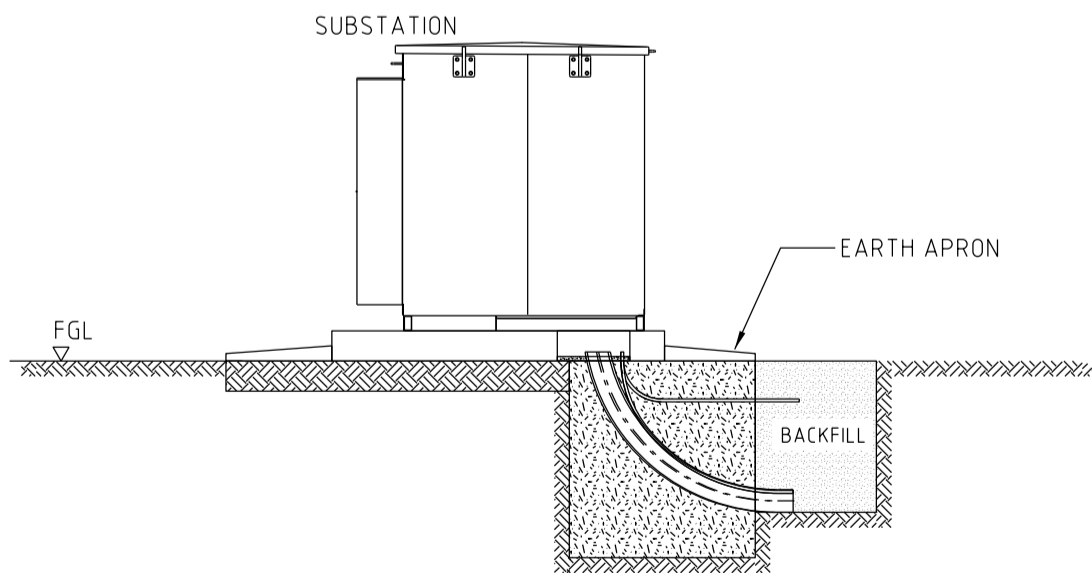
STEP 2 - INSTALL THE CONDUITS AND FORMWORK FOR THE CEMENT STABILISED SAND



STEP 3 - PLACE 5% CEMENT STABILISED SAND AND ALLOW IT TO ACHIEVE REQUIRED STRENGTH



STEP 4 - INSTALL PRECAST CONCRETE SLAB, GROUT CONDUIT ENTRY AND INSTALL SUBSTATION INCLUDING CABLES, EARTHING AND TERMINATIONS



STEP 5 - BACKFILL THE PIT AND INSTALL EARTH APRON. MAKE EXISTING PAVING FLUSH WITH EARTH APRON AS REQUIRED

CONSTRUCTION SEQUENCE

1:50

NOTE:

CROSS SECTION DETAILS SIMPLIFIED FOR CLARITY.

CONSTRUCTION SEQUENCE NOTES:-

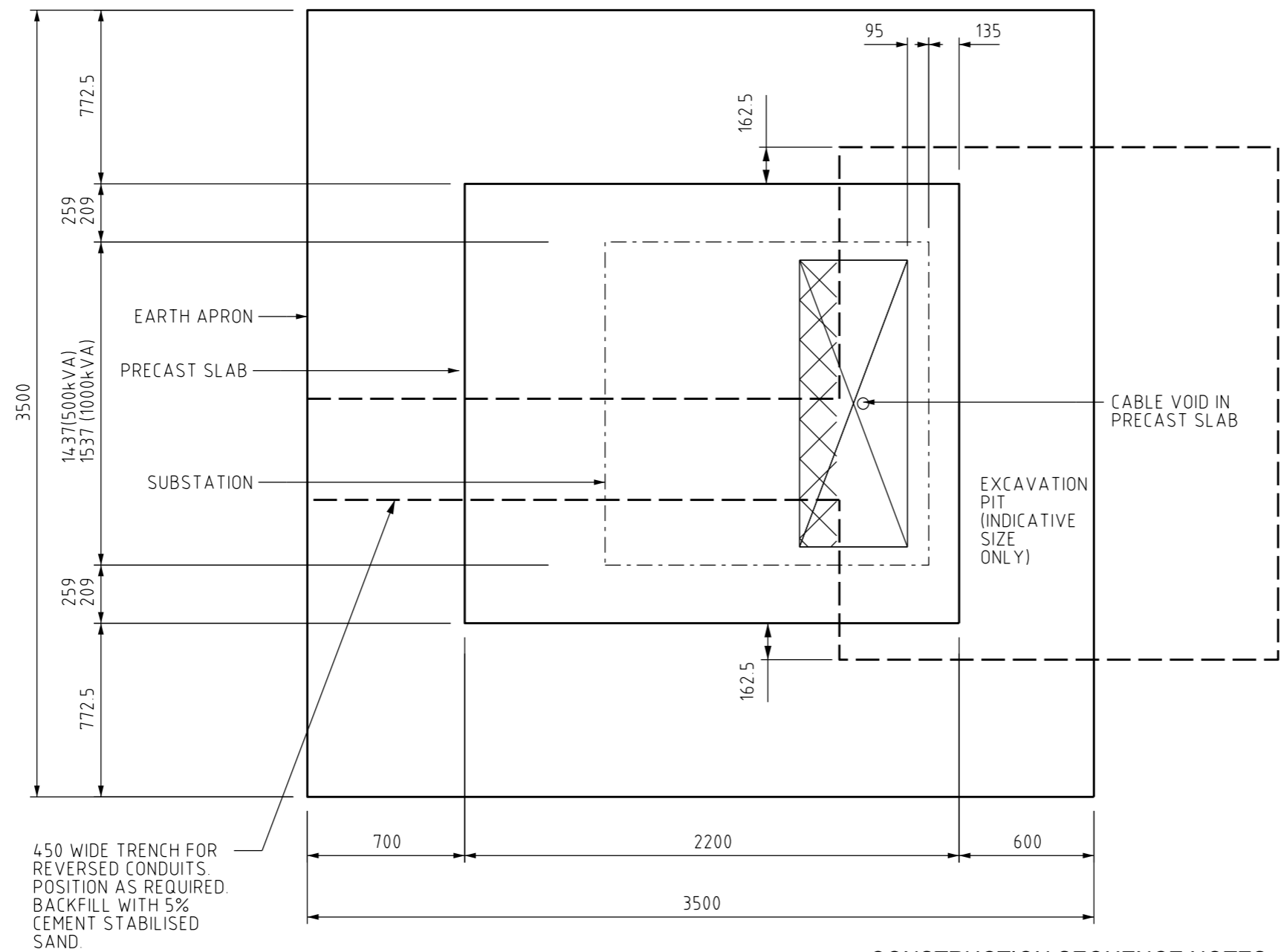
1. ESTABLISH COMPETENT NATURAL GROUND OR SELECT FILL BASE FOR THE SLAB AND COMPACT TO 95% MMDD.
2. MARK OUT THE SITE
3. EXCAVATE THE PIT.
4. INSTALL THE CONDUITS.
5. PLACE THE 5% CEMENT STABILISED SAND AND ALLOW FOR IT TO REACH THE REQUIRED STRENGTH.
6. INSTALL THE PRECAST SLAB.
7. GROUT THE CONDUIT ENTRY OPENING AND CUT OFF THE CONDUITS 30mm ABOVE THE GROUT. ALL LIFTING ANCHORS TO BE GROUTED OR CONCRETE FILLED TO BE FLUSH WITH CONCRETE SLAB FACE.
8. INSTALL THE SUBSTATION
9. BACKFILL THE PIT.
10. INSTALL CABLES AND TERMINATIONS.
11. INSTALL THE EARTH APRON.

NO	DESCRIPTION	DRN	DATE	CKD	APPD
2	AMEND NOTE 7.	CC	DEC/21	B.V.	B.C.
1	AMENDED PIT DIMENSIONS	CC	JUL/21	B.V.	B.C.
0	ISSUED FOR CONSTRUCTION	CC	MAY/21	B.V.	B.C.



DES	DRN	CKD	APPD	SCALE	ISSUED	DRAWING NUMBER	CAD PRODUCT
-	C COPPINS	B VANDERSTELT	B CHEUNG	AS SHOWN	MAY 2021	S02-02-06-09_3	- DO NOT AMEND MANUALLY





450 WIDE TRENCH FOR REVERSED CONDUITS. POSITION AS REQUIRED. BACKFILL WITH 5% CEMENT STABILISED SAND.

PLAN VIEW
1:40

CONSTRUCTION SEQUENCE NOTES:-

1. ESTABLISH COMPETENT NATURAL GROUND OR SELECT FILL BASE FOR THE SLAB AND COMPACT TO 95% MMDD.
2. MARK OUT THE SITE
3. EXCAVATE THE PIT
4. INSTALL THE CONDUITS.
5. PLACE THE 5% CEMENT STABILISED SAND AND ALLOW FOR IT TO REACH THE REQUIRED STRENGTH.
6. INSTALL THE PRECAST SLAB. REFER DRAWING S02-02-06-47.
7. GROUT THE CONDUIT ENTRY OPENING AND CUT OFF THE CONDUITS 30mm ABOVE THE GROUT. ALL LIFTING ANCHORS TO BE GROUTED OR CONCRETE FILLED TO BE FLUSH WITH CONCRETE SLAB FACE.
8. INSTALL THE 7000 SERIES SUBSTATION.
9. BACKFILL THE PIT
10. INSTALL CABLES AND TERMINATIONS.
11. INSTALL THE EARTH APRON. REFER DRAWINGS S02-02-05-01 AND S02-02-06-33.

NO	DESCRIPTION	DRN	DATE	CKD	APPD
2	AMEND NOTE 7.	C.C.	DEC'21	B.V.	B.C.
1	ADDED TRENCH FOR REVERSED CONDUITS.	C.C.	JUL'21	B.V.	B.C.
0	ISSUED FOR CONSTRUCTION	C.C.	MAY'21	B.V.	B.C.
AMENDMENTS					



POWER STANDARD DRAWING			
DES	-	CIVIL, 7000 SERIES SUBSTATION	
DRN	C.COPPINS	CABLE ENTRY AND FOUNDATION DETAILS	
CKD	B.VANDERSTELT	CONSTRUCTION SEQUENCE	
APPD	B.CHEUNG	SHEET 4 OF 4	
SCALE	AS SHOWN	A3	DRAWING NUMBER S02-02-06-09_4
ISSUED	MAY'2021		
ALL DIM. IN	mm	CAD PRODUCT - DO NOT AMEND MANUALLY	
DRAFTING STANDARD TO A.S.1100		AMDT	