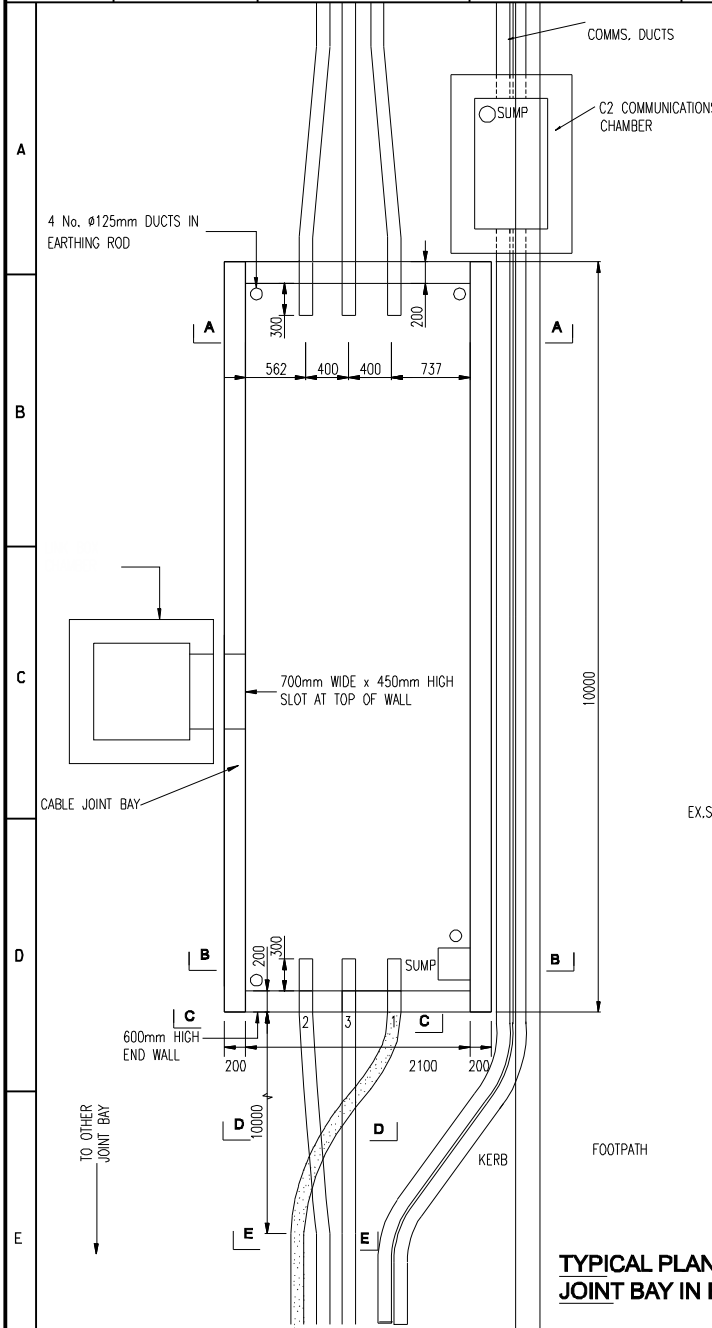


EIRGRID
FUNCTIONAL SPECIFICATION
GENERAL ARRANGEMENT
400kV CABLE
JOINT BAY
SHEET 1 – INDEX

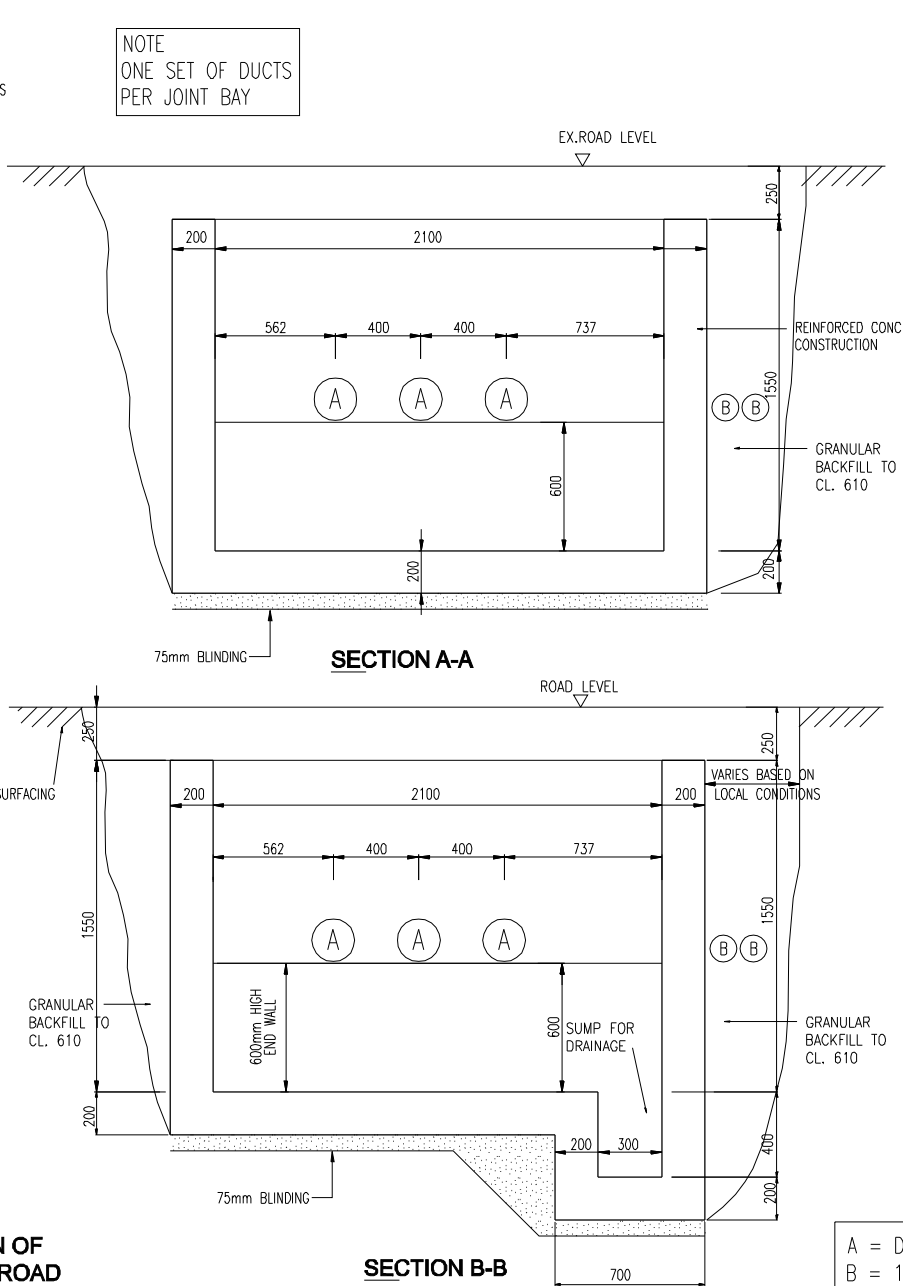
	DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
D	PE424-D7001-013	1	INDEX SHEET	0
	PE424-D7001-013	2	400kV JOINT BAY GENERAL ARRANGEMENTS	0
	PE424-D7001-013	3	400kV JOINT BAY REINFORCEMENT DETAILS	0
	PE424-D7001-013	4	400kV JOINT BAY STEEL REINFORCEMENT SCHEDULE	0
E				
F				
G				

ESB International ESBI Engineering & Facility Management Ltd Stephen Court, 19/21 St Stephen's Green, Dublin 2 Ireland Telephone +353-1-703 8000 Fax +353-1-691-8398 www.esbi.ie Registered Office as above Registered in Ireland No. 155349											Drawn J.Dillon	Produced R.Doyle	Verified K.Coughlan	Approved M.Byrne	Approved date 10/03/10		
											Client Ref		TC201955		No. of Shets 1/4	Size A4	Scale NA
											Drawing Number		PE424-D7001-013-001-000				
											Drawing Title		EIRGRID FUNCTIONAL SPECIFICATION GENERAL ARRANGEMENT 400KV CABLE JOINT BAY INDEX SHEET				
Rev		Date		Revision Description				Dm	Prod	Ver	App						
Purpose of issue – Preliminary unless indicated																	
Tender ☐		Client Approval ☐		Construction ☐		As-built ☐		Revised ☐									
Client		EIRGRID										Project		HV Cables Standards			
Contract		NA NA										Production Unit		High Voltage Engineering			

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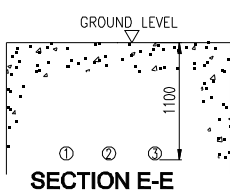
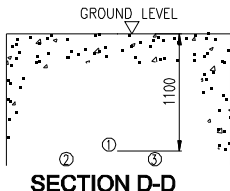
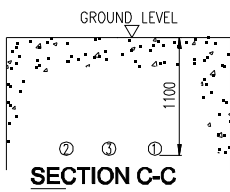


TYPICAL PLAN OF JOINT BAY IN ROAD



NOTES:

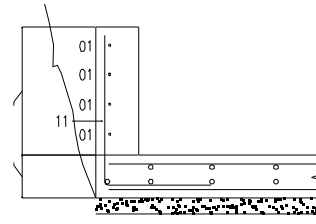
- THIS DRAWING TO BE READ IN CONJUNCTION WITH EIRGRID'S FUNCTIONAL SPECIFICATIONS.
- ALL DIMENSIONS ARE IN mm.
- DO NOT SCALE DIMENSIONS.
- THE CONTRACTOR SHALL CHECK ALL DIMENSIONS PRIOR TO CONSTRUCTION, ANY DISCREPANCIES TO BE NOTIFIED TO THIS OFFICE IN WRITING IMMEDIATELY.
- CONCRETE GRADE AS PER SPECIFICATION.
- CONCRETE COVER TO REINFORCEMENT TO BE 40mm.
- WHERE CROSS BONDING IS EMPLOYED THE DUCTING SHALL CROSS IN ACCORDANCE WITH THIS DRAWING



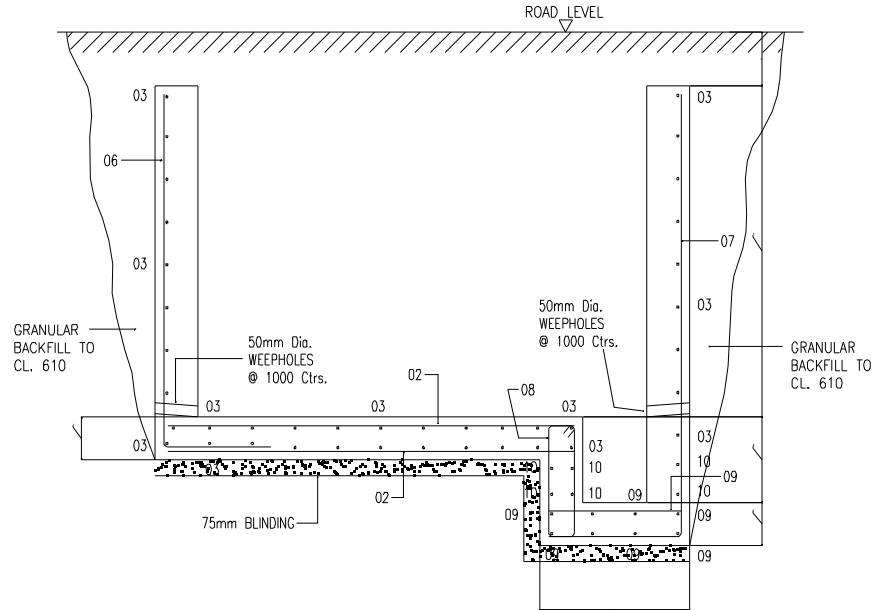
A = DUCT SIZE/TYPE AS PER SPECIFICATION
B = 125mm OD HDPE DUCT, SDR = 17.6

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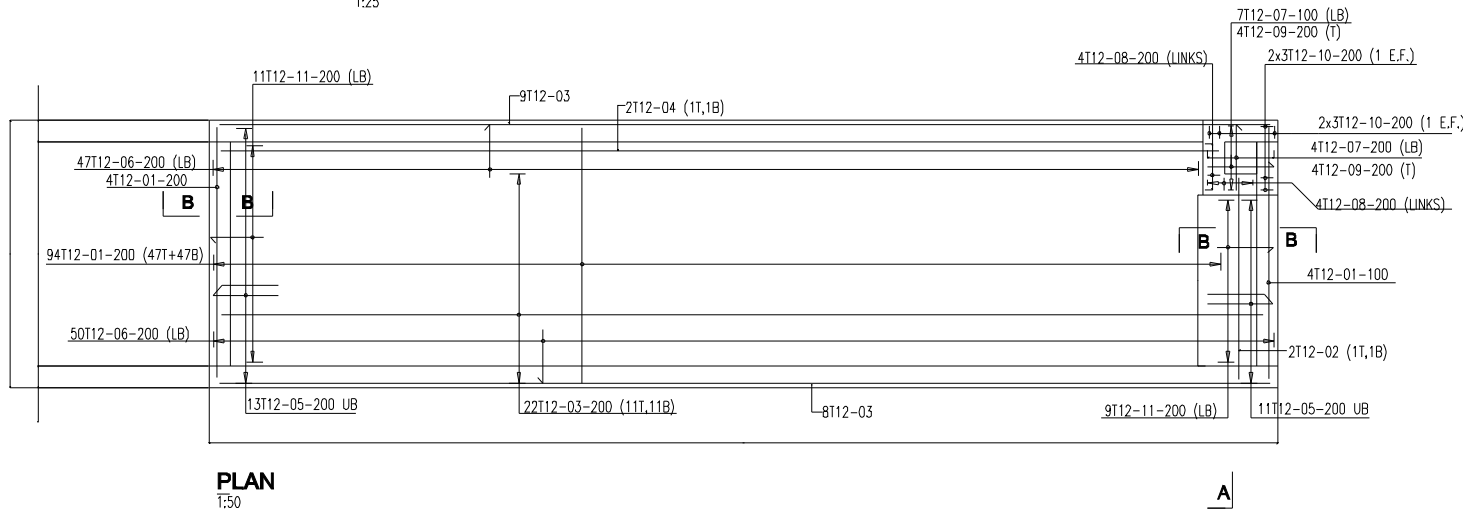
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH EIRGRID'S FUNCTIONAL SPECIFICATIONS.
2. ALL DIMENSIONS IN MILLIMETRES.
3. REINSTATEMENT TO COMPLY WITH REQUIREMENTS OF THE RELEVANT LOCAL AUTHORITY.
4. END DUCTS TO BE IN LINE.
5. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE NRA SPECIFICATION FOR ROADWORKS, MAY 2005 & SUBSEQUENT REVISIONS.
6. REINFORCED CONCRETE TO BE MINIMUM GRADE C40/20. SULPHATE RESISTING CEMENT TO BE USED WHERE AGGRESSIVE SOIL CONDITIONS APPLY, REFER TO TABLE 6.1 OF B.S. 8110.
7. CARRIAGEWAY COVERS AND FRAMES TO BE TO B.S. EN 124.
8. ALL COVERS SHALL HAVE APPROVED BADGED MARKING INCORPORATED IN THEM TO THE APPROVAL OF THE ENGINEER.
9. STEP IRONS TO BE HOT DIPPED GALVANISED TO B.S. 729 AND POSITIONED AS SHOWN ON ANY CHAMBER DEEPER THAN 700mm ON THE END REMOTE FROM ANY SIDE ENTRY DUCT.
10. BRICKWORK TO BE CLASS B ENGINEERING. BEDS AND JOINTS TO BE CLASS 1 MORTAR.



SECTION B-B
1:25



SECTION A-A
1:25



PLAN
1:50

ESB International ESB Engineering & Facility Management Ltd Stephen Court, 90/91 St Stephen's Green, Dublin 2, Ireland Telephone +353-1-703 8000 Fax +353-1-981-8399 www.esb.ie Registered Office as above Registered in Ireland No. 165548	Client Client Production Unit High Voltage Engineering	Copyright ESB International Ltd. All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or information-and-retrieval systems, or used for any purpose other than its designated purpose, without the written permission of ESB International Ltd.
	Project HV Cables Standards Drawing Title 400KV JOINT BAY	Drawn J.Dillon Produced R.Doyle Verified K.Coughlan Approved M.Byrne Approved date 10/03/10
Client Ref TC201955 No. of Shts 3/4 Size A3 Scale NA	Drawing Number PE424-D7001-013-003-000 SHEET REV	
Contract NA NA REINFORCEMENT DETAILS		

A

Project:	EIRGRID												
	400 kV GENERAL ARRANGEMENT JOINT BAY												
Title:	R.C. DETAILS OF JOINT BAY 10m x 2.5m												
DRG. No.				REV.									
PE424-D7001-013-003				000				Rev		Description	Drn.	Chk.	App.

B

* Specified to Nearest 5mm
+ Specified to Nearest 25mm

All Bending Dimensions are in
 Accordance with B.S. 8666:2005

Member	Bar Mark	Type	Size (mm)	Nr. of Mbrs.	Nr. in Each	Total Nr.	Length of Each Bar mm +	Shape Code	A * mm	B * mm	C * mm	D * mm	E/r * mm
BASE	01	B	12	1	102	102	2400	00					
	02	B	12	1	2	2	1900	00					
	03	B	12	1	39	39	9900	00					
	04	B	12	1	2	2	9300	00					
	05	B	12	1	24	24	1450	13	700	100			
	06	B	12	1	97	97	2125	11	1650				
	11	B	12	1	20	20	1200	11					
SUMP	07	B	12	1	11	11	2650	11	2060				
	08	B	12	1	8	8	1425	51	510	120			
	09	B	12	1	8	8	750	21	600				
	10	B	12	1	12	12	600	00					

D

E

F

G

 ESB International ESB Engineering & Facility Management Ltd Stephen Court, 19/21 St Stephen's Green, Dublin 2 Ireland Telephone +353-1-702 8000 Fax +353-1-861-8388 www.esb.ie Registered Office as above Registered in Ireland No. 155249	<table border="1"> <tr> <td>Rev</td> <td>Date</td> <td>Revision Description</td> <td>Drn</td> <td>Prod</td> <td>Ver</td> <td>App</td> </tr> <tr> <td colspan="7">Purpose of issue - Preliminary unless indicated</td> </tr> <tr> <td>Tender ☐</td> <td>Client Approval ☐</td> <td>Construction ☐</td> <td>As-built ☐</td> <td colspan="3">Revised ☐</td> </tr> </table>				Rev	Date	Revision Description	Drn	Prod	Ver	App	Purpose of issue - Preliminary unless indicated							Tender ☐	Client Approval ☐	Construction ☐	As-built ☐	Revised ☐			<table border="1"> <tr> <td>Drawn</td> <td>Produced</td> <td>Verified</td> <td>Approved</td> <td>Approved date</td> </tr> <tr> <td>J.Dillon</td> <td>R.Doyle</td> <td>K.Coughlan</td> <td>M.Byrne</td> <td>10/03/10</td> </tr> <tr> <td colspan="3">Client Ref</td> <td>No. of Shts</td> <td>Size</td> </tr> <tr> <td colspan="3">TC201955</td> <td>1</td> <td>A4</td> </tr> <tr> <td colspan="3">Drawing Number</td> <td colspan="2">SHEET REV</td> </tr> <tr> <td colspan="3">PE424-D7001-013-004-000</td> <td colspan="2"></td> </tr> <tr> <td colspan="5">Drawing Title</td> </tr> <tr> <td colspan="5">EIRGRID 400kV JOINT BAY</td> </tr> <tr> <td colspan="5">STEEL REINFORCEMENT DETAILS</td> </tr> </table>				Drawn	Produced	Verified	Approved	Approved date	J.Dillon	R.Doyle	K.Coughlan	M.Byrne	10/03/10	Client Ref			No. of Shts	Size	TC201955			1	A4	Drawing Number			SHEET REV		PE424-D7001-013-004-000					Drawing Title					EIRGRID 400kV JOINT BAY					STEEL REINFORCEMENT DETAILS				
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Project	HV Cables Standards																																																																									
Production Unit	High Voltage Engineering																																																																									

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STANDARD 400 kV CABLE DRAWINGS
STANDARD CROSSING ABOVE
3rd PARTY SERVICE FOR 250mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-E-001	001	STANDARD 3rd PARTY CROSSING 250mm OD HV DUCTS INDEX SHEET	00
XDC-CBL-STND-E-001	002	STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 250mm OD HV DUCTS	00

PLEASE NOTE:
EIRGRID PREFERENCE IS TO CROSS THIRD PARTY SERVICES AS PER DRAWING NO. XDC-CBL-STND-E-002.
THE CROSSING SOLUTION ILLUSTRATED IN THIS DRAWING MAY ONLY BE USED FOLLOWING AGREEMENT WITH EIRGRID

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE



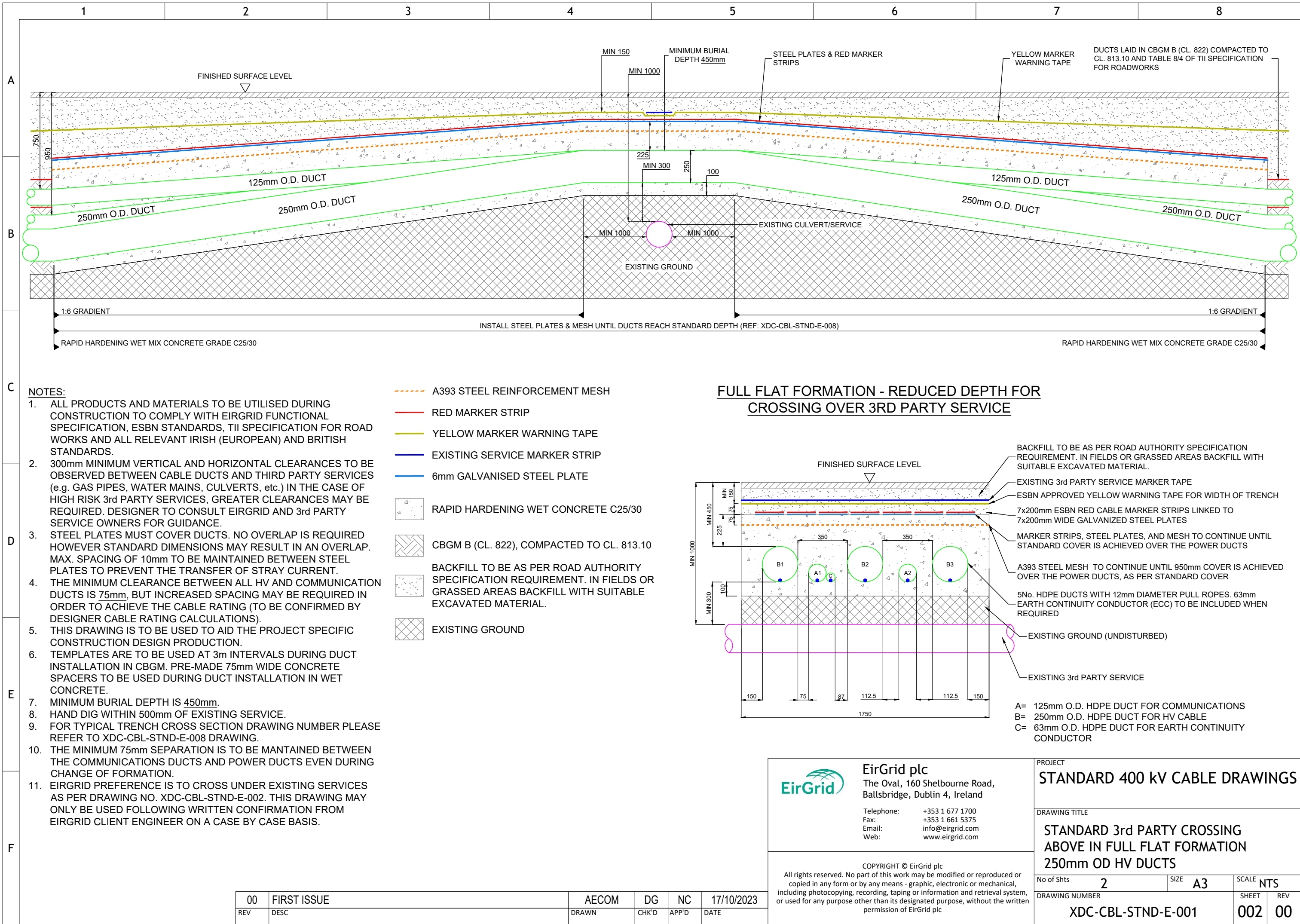
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Ballsbridge, Dublin 4, Ireland

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PROJECT			STANDARD 400 kV CABLE DRAWINGS		
DRAWING TITLE			STANDARD 3rd PARTY CROSSING 250mm OD HV DUCTS INDEX SHEET		
No of Shts	2	SIZE	A3	SCALE	NTS
DRAWING NUMBER			XDC-CBL-STND-E-001	SHEET	REV
				001	00

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK



STANDARD 400 kV CABLE DRAWINGS
STANDARD CROSSING BELOW
3rd PARTY SERVICE FOR 250mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-E-002	001	STANDARD 3rd PARTY CROSSING BELOW INDEX SHEET	00
XDC-CBL-STND-E-002	002	STANDARD 3rd PARTY CROSSING BELOW IN FULL FLAT FORMATION 250mm HV DUCTS	00

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE



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Ballsbridge, Dublin 4, Ireland

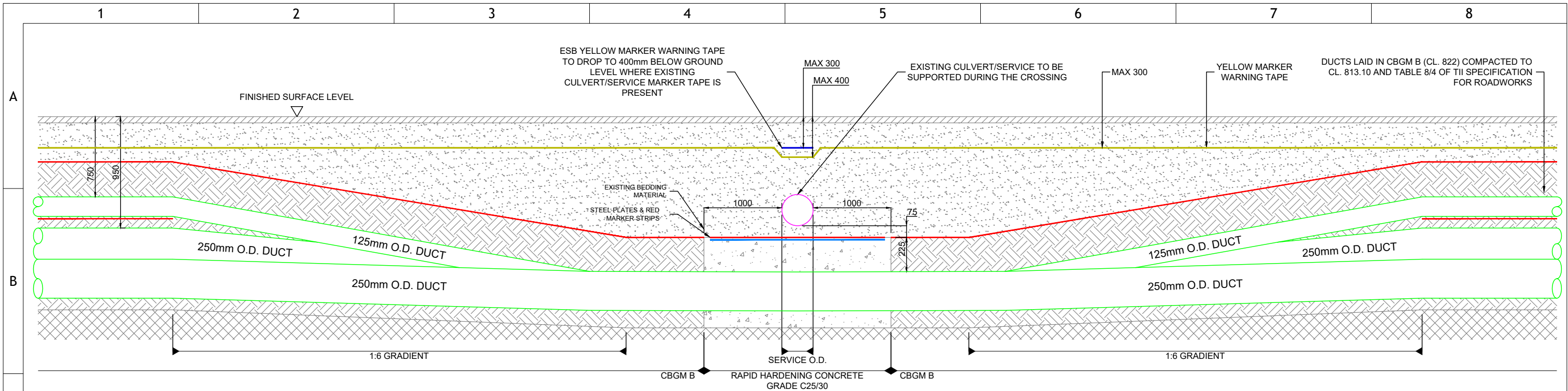
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PROJECT			
STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE			
STANDARD 3rd PARTY CROSSING BELOW INDEX SHEET			
No of Shts	2	SIZE	A3
SCALE	NTS		
DRAWING NUMBER		SHEET	REV
XDC-CBL-STND-E-002		001	00

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK

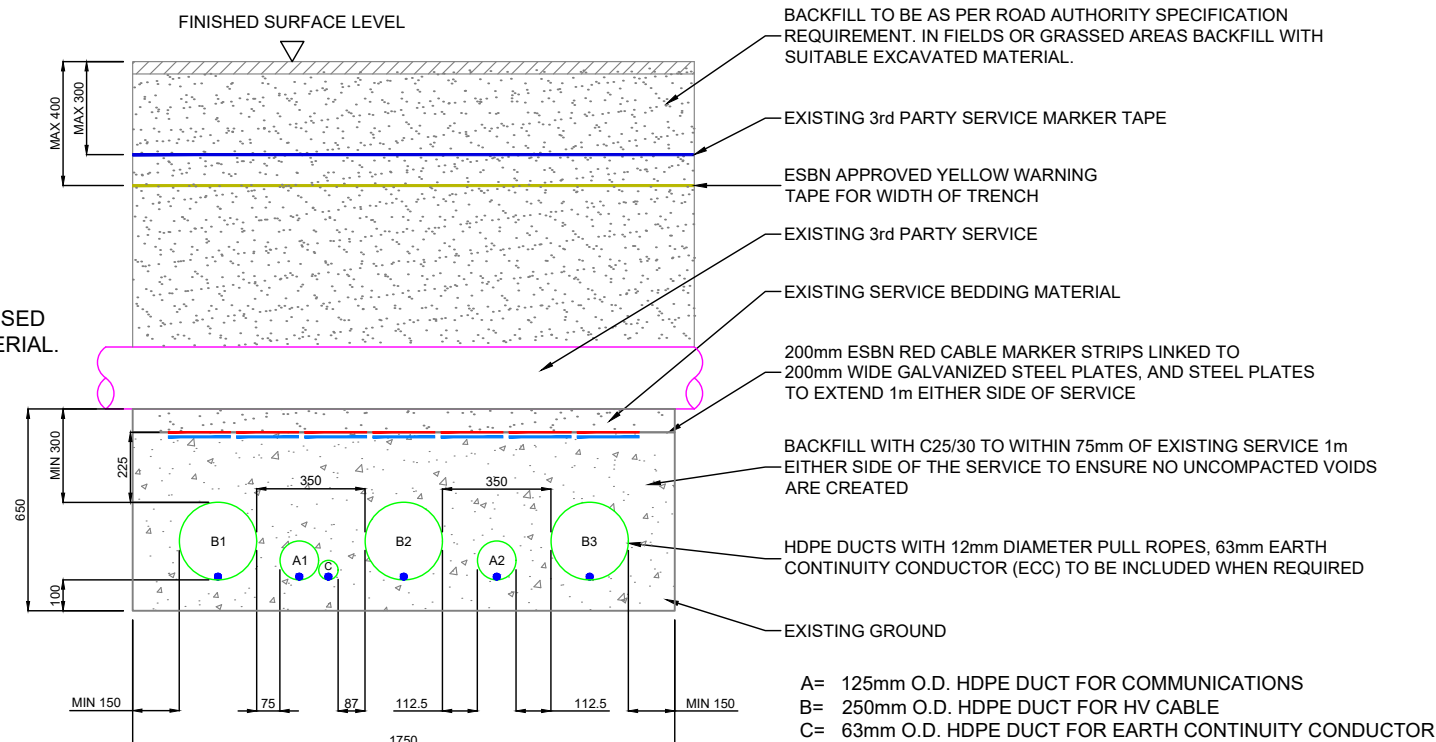


NOTES:

1. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESBN STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
2. 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
3. STEEL PLATES MUST COVER DUCTS. NO OVERLAP IS REQUIRED HOWEVER STANDARD DIMENSIONS MAY RESULT IN AN OVERLAP. MAX SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
4. THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
5. THIS DRAWING IS TO BE USED TO AID THE PROJECT SPECIFIC CONSTRUCTION DESIGN PRODUCTION.
6. TEMPLATES ARE TO BE USED AT 3m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM SPACING BETWEEN POWER DUCTS TO BE CONFIRMED WITH RATING CALCULATION.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. FOR TYPICAL TRENCH CROSS SECTION DRAWING NUMBER PLEASE REFER TO XDC-CBL-STND-E-008 DRAWING.
10. THE MINIMUM 75mm SEPARATION IS TO BE MAINTAINED BETWEEN THE COMMUNICATIONS DUCTS AND POWER DUCTS EVEN DURING CHANGE OF FORMATION.
11. IF EXISTING SERVICE MARKER TAPE IS NOT PRESENT, THE ESBN YELLOW MARKER TAPE SHOULD BE INSTALLED AT MAXIMUM 300mm BELOW FINISHED SURFACE LEVEL.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- EXISTING SERVICE MARKER STRIP
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- BACKFILL TO BE AS PER ROAD AUTHORITY SPECIFICATION REQUIREMENT. IN FIELDS OR GRASSED AREAS BACKFILL WITH SUITABLE EXCAVATED MATERIAL.
- EXISTING GROUND

FULL FLAT FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE



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PROJECT			
STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE			
STANDARD 3rd PARTY CROSSING BELOW IN FULL FLAT FORMATION 250mm HV DUCTS			
No of Shts	2	SIZE	A3
SCALE	NTS		
DRAWING NUMBER	XDC-CBL-STND-E-002	SHEET	002
REV	00		

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE

A

B

C

D

E

F

STANDARD 400 kV CABLE DRAWINGS

STANDARD CROSSING BELOW RIVERBED FOR 250mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-E-005	001	STANDARD RIVERBED CROSSING INDEX SHEET	00
XDC-CBL-STND-E-005	002	STANDARD FOR RIVERBED CROSSING OR OPEN DRAINS	00

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE



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PROJECT

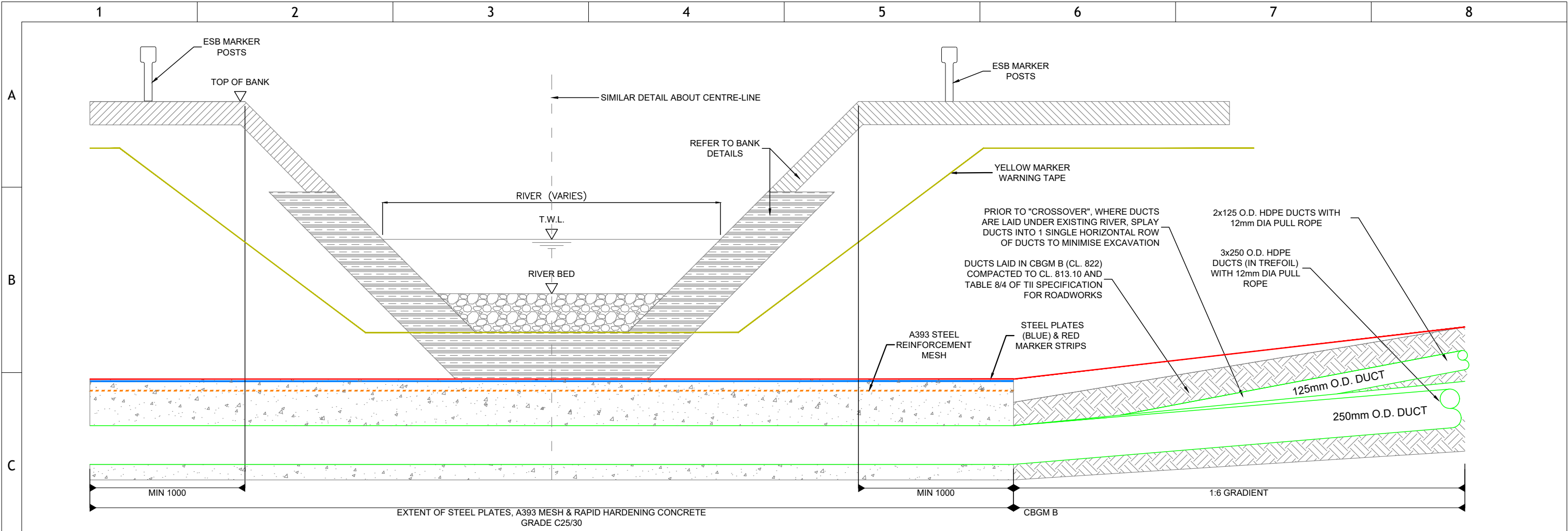
STANDARD 400 kV CABLE DRAWINGS

DRAWING TITLE

STANDARD RIVERBED CROSSING INDEX SHEET

No of Shts	2	SIZE	A3	SCALE	NTS
------------	---	------	----	-------	-----

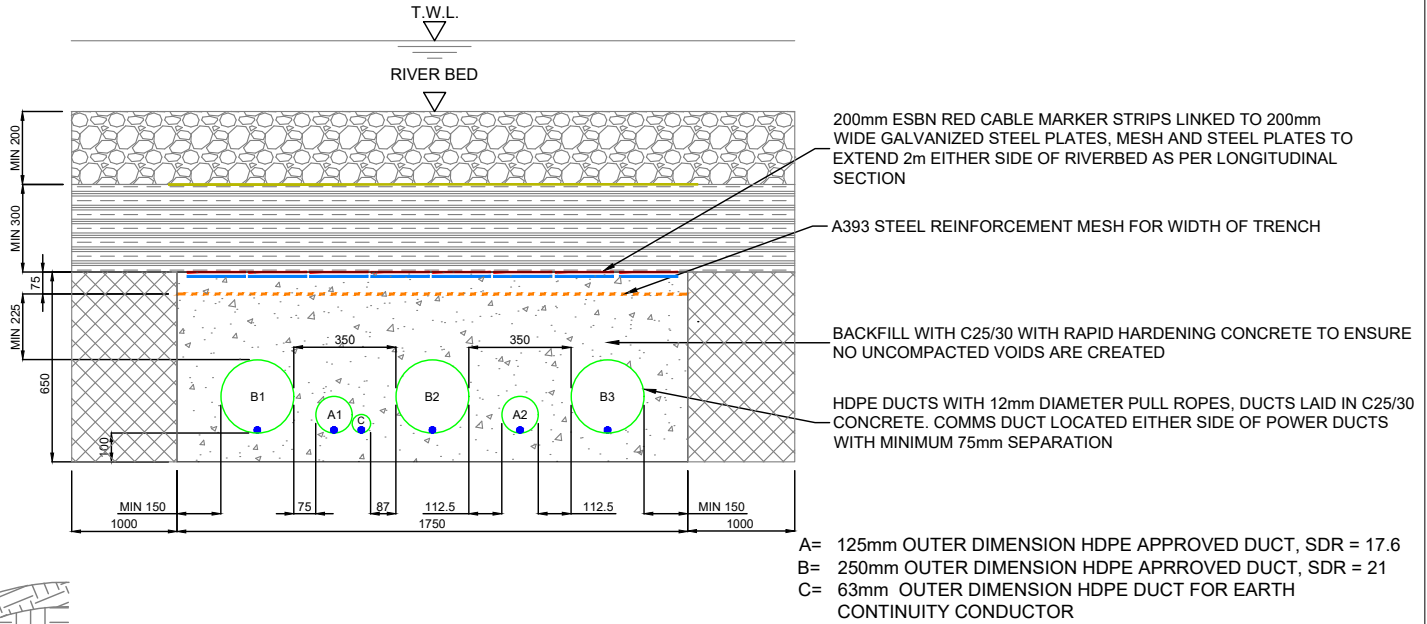
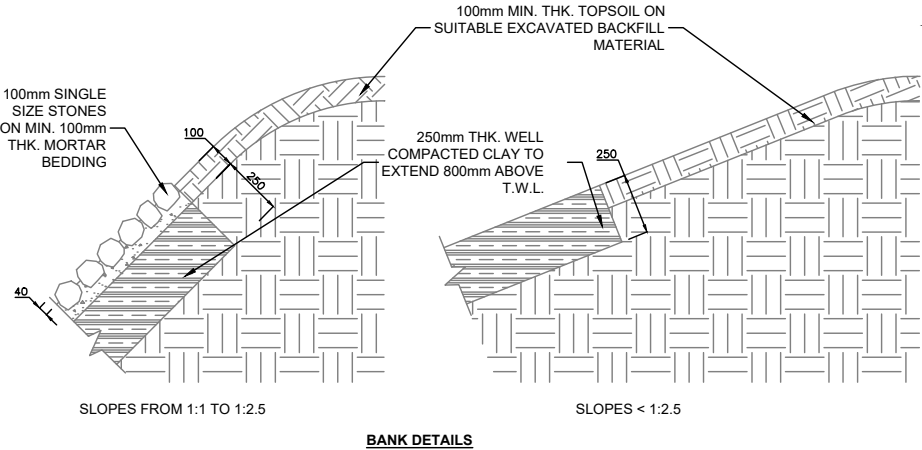
DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-E-005	001	00



NOTES:

- ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, ESNB STANDARDS, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
- 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
- STEEL PLATES MUST COVER DUCTS WITHOUT OVERLAP. MAX 10mm GAP TO BE BETWEEN TWO CONSECUTIVE PLATES.
- THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
- THIS DRAWING IS TO BE USED TO AID THE PROJECT SPECIFIC CONSTRUCTION DESIGN PRODUCTION.
- TEMPLATES ARE TO BE USED AT 3m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
- MINIMUM CLEARANCE BETWEEN CABLE TRENCH CONCRETE AND RIVER BED TO BE AGREED WITH RELEVANT AUTHORITY. IN ANY CASE, NO LESS THAN 300mm.
- STANDARD ESB MARKER POSTS TO BE INSTALLED AT EITHER SIDE OF RIVER CROSSING.
- FOR TYPICAL TRENCH CROSS SECTION DRAWING NUMBER PLEASE REFER TO XDC-CBL-STND-E-008 DRAWING.

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- A393 STEEL REINFORCEMENT MESH
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- CBGM B (CL. 822), COMPACTED TO CL. 813.10
- EXISTING GROUND
- REINSTATED RIVERBED
- COMPACTED CLAY



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PROJECT			
STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE			
STANDARD FOR RIVERBED CROSSING OR OPEN DRAINS			
No of Shts	2	SIZE	A3
SCALE	NTS		
DRAWING NUMBER	XDC-CBL-STND-E-005		REV
			00

STANDARD 400 kV CABLE DRAWINGS
STANDARD BRIDGE CROSSING FOR 250mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-E-006	001	BRIDGE CROSSING INDEX SHEET	00
XDC-CBL-STND-E-006	002	BRIDGE CARRIAGEWAY STANDARD 400 kV CABLE TRENCH	00
XDC-CBL-STND-E-006	003	BRIDGE CARRIAGEWAY STANDARD 400 kV CABLE PLAN VIEW AND LONGITUDINAL SECTION	00

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE



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Ballsbridge, Dublin 4, Ireland

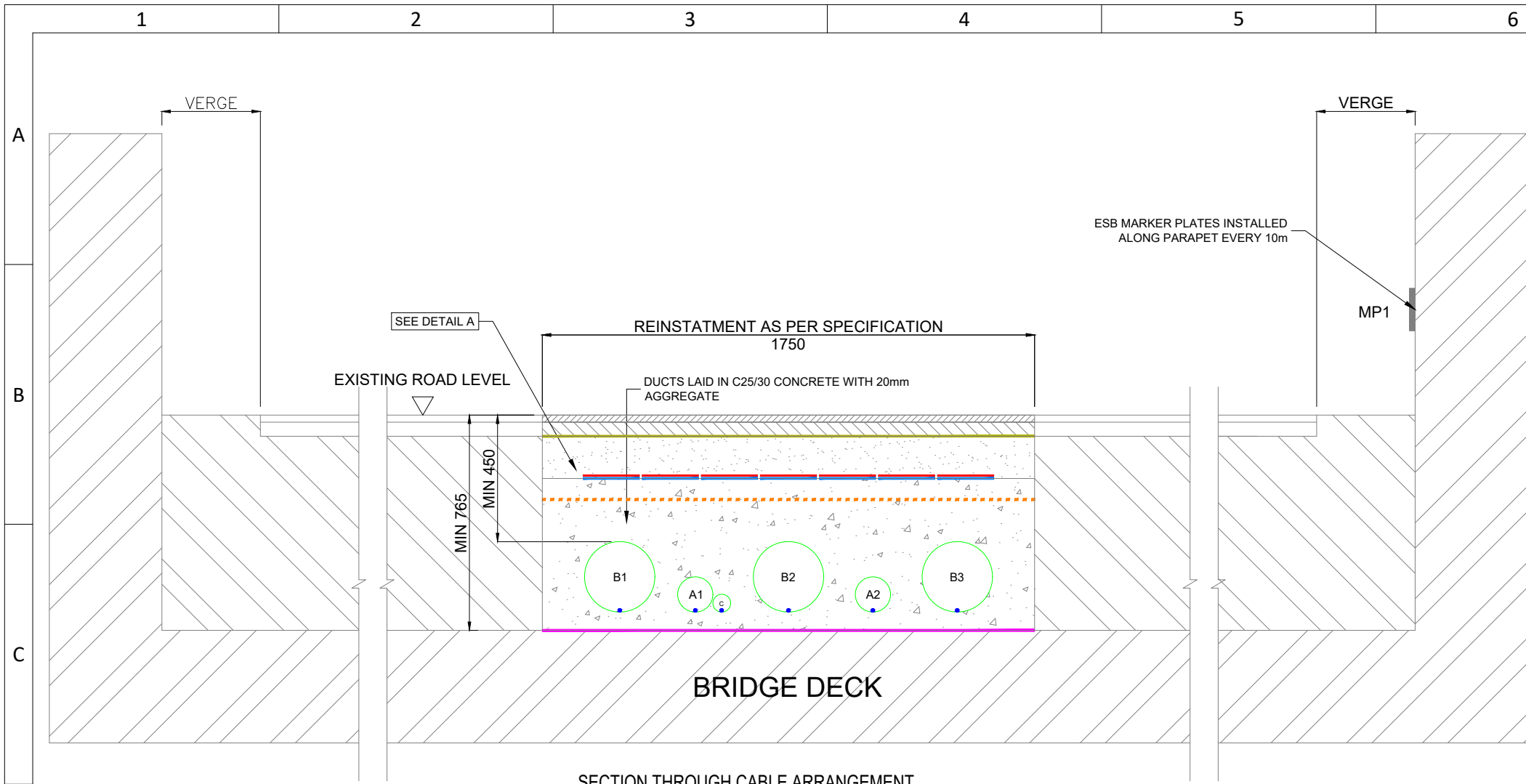
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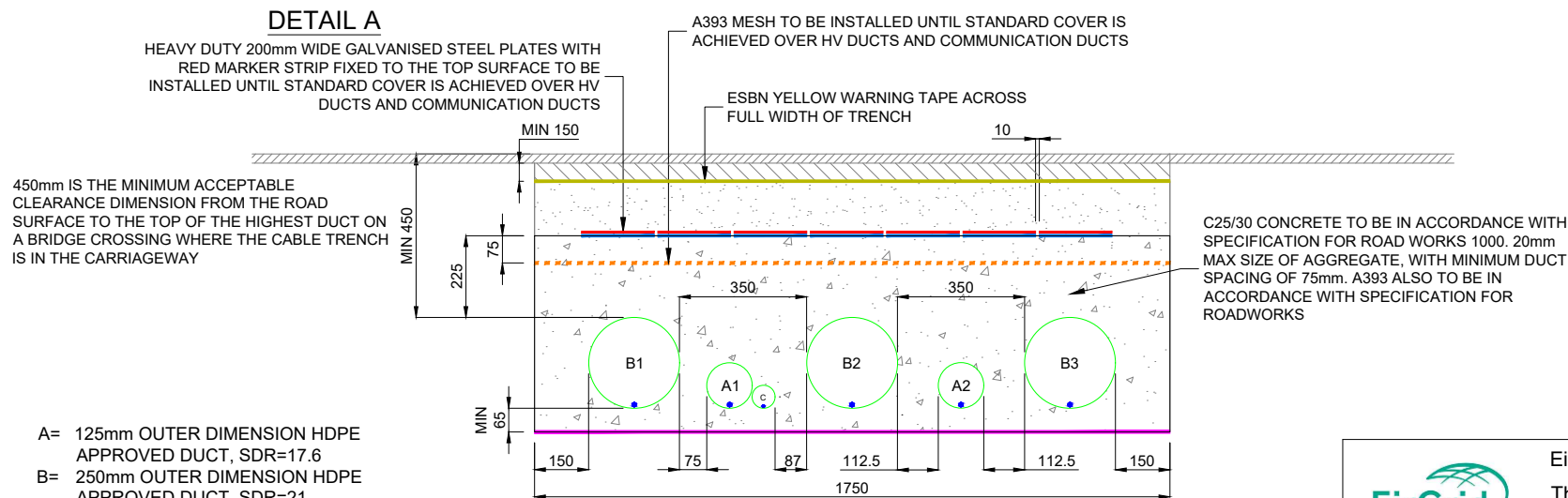
PROJECT STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE BRIDGE CROSSING INDEX SHEET			
No of Shts 3	SIZE A3	SCALE NTS	
DRAWING NUMBER XDC-CBL-STND-E-006		SHEET 001	REV 00

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK



SECTION THROUGH CABLE ARRANGEMENT
SCALE 1:20



A= 125mm OUTER DIMENSION HDPE APPROVED DUCT, SDR=17.6
B= 250mm OUTER DIMENSION HDPE APPROVED DUCT, SDR=21
C= 63mm OUTER DIMENSION HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

PROPOSED CONFIGURATION OVER BRIDGES WITH
SHALLOW COVER - WITHIN CARRRIAGEWAY

- POLYTHENE SHEET
- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- A393 STEEL MESH
- 6mm GALVANISED STEEL PLATE
- RAPID HARDENING WET CONCRETE C25/30
- BACKFILL TO BE AS PER ROAD AUTHORITY SPECIFICATION REQUIREMENT. IN FIELDS OR GRASSED AREAS BACKFILL WITH SUITABLE EXCAVATED MATERIAL.

NOTES:

- THE REQUIREMENT FOR THE BRIDGE INSTALLATION SHALL BE AGREED IN ADVANCE BY THE CUSTOMER WITH THE LOCAL AUTHORITY, OR RELEVANT PUBLIC/PRIVATE BODY.
- ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN) AND BRITISH STANDARDS.
- REINSTATEMENT TO BE AS PER TII SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN NATIONAL ROADS. WHERE ENTIRE ROAD IS TO BE RE-LAID IT IS TO BE DONE AS PER NRA SPECIFICATION FOR ROADWORKS.
- 300mm MINIMUM VERTICAL AND HORIZONTAL CLEARANCES TO BE OBSERVED BETWEEN CABLE DUCTS AND THIRD PARTY SERVICES (e.g. GAS PIPES, WATER MAINS, CULVERTS, etc.) IN THE CASE OF HIGH RISK 3rd PARTY SERVICES, GREATER CLEARANCES MAY BE REQUIRED. DESIGNER TO CONSULT EIRGRID AND 3rd PARTY SERVICE OWNERS FOR GUIDANCE.
- STEEL PLATES MUST COVER DUCTS. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
- THE MINIMUM CLEARANCE BETWEEN ALL HV AND COMMUNICATION DUCTS IS 75mm, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
- THIS DRAWING IS TO BE USED TO AID THE PROJECT SPECIFIC CONSTRUCTION DESIGN PRODUCTION.
- TEMPLATES ARE TO BE USED AT 3m INTERVALS DURING DUCT INSTALLATION. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED FOR INSTALLATION IN WET CONCRETE.
- MINIMUM BURIAL DEPTH IS 450mm.
- ROADS WITH EXISTING DEEP ASPHALT REQUIRE A MINIMUM 225 mm FROM THE UNDERSIDE OF THE EXISTING ASPHALT TO THE TOP OF THE CABLE DUCT.
- WHERE DUCT FOR EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, ATTACH THE 63 mm DUCT TO DUCT A1.
- 225 mm MINIMUM CONCRETE OVER DUCTS WHERE THEY TRANSITION FROM STANDARD CROSS SECTION AND WHERE THEY ARE AT LESS THAN STANDARD COVER TO GROUND LEVEL.
- POLYTHENE LAYER TO BE INSTALLED IF THE TRENCH IS INSTALLED DIRECTLY ON THE BRIDGE DECK.
- AT BRIDGES INCORPORATING JOINTS THE DESIGNER SHALL ASSESS THE POSSIBLE IMPACT OF THE JOINTS ON THE INTEGRITY OF THE CABLE AND WHERE REQUIRED, SHALL PREPARE A DESIGN DETAIL TO BE AGREED WITH THE BRIDGE OPERATING AUTHORITY AND THE EMPLOYER.



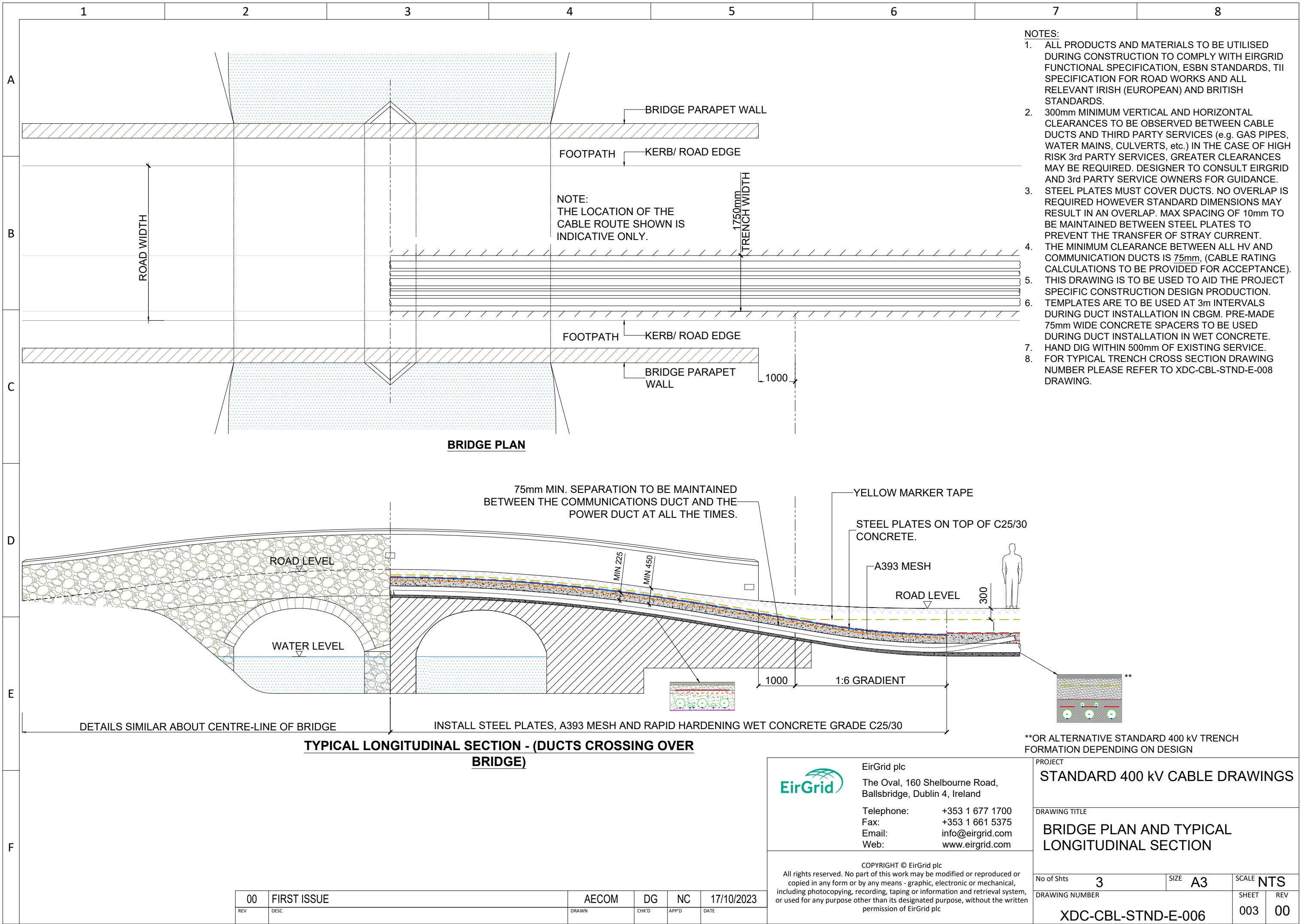
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PROJECT STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE BRIDGE CARRIAGEWAY STANDARD 400 kV CABLE TRENCH			
No of Shts	3	SIZE	A3
DRAWING NUMBER		SCALE AS SHOWN	
XDC-CBL-STND-E-006		SHEET	002
		REV	00

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE

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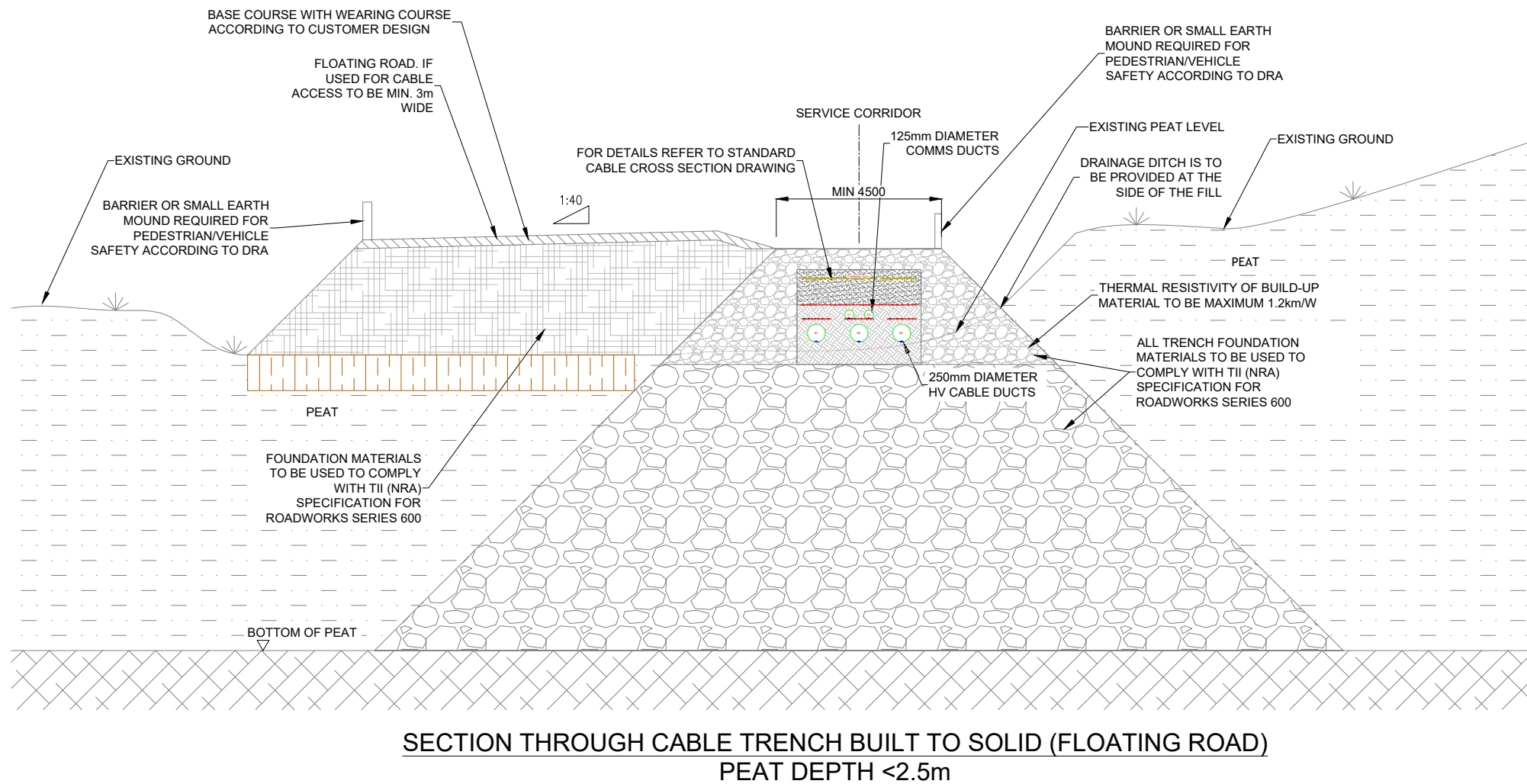
00	FIRST ISSUE	AECOM	DG	NC	03/01/2024
REV	DESC	DRAWN	CHK'D	APP'D	DATE

 EirGrid plc The Oval, 160 Shelbourne Road, Ballsbridge, Dublin 4, Ireland Telephone: +353 1 677 1700 Fax: +353 1 661 5375 Email: info@eirgrid.com Web: www.eirgrid.com	PROJECT				
	STANDARD 400 kV CABLE DRAWINGS				
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	STANDARD CABLE TRENCH THROUGH PEAT INDEX SHEET				
	No of Shts	4	SIZE	A3	SCALE
	DRAWING NUMBER			SHEET	REV
	XDC-CBL-STND-E-007			001	00

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK

NOTES:

1. BASE COURSE AND WEARING COURSE TO BE IN ACCORDANCE WITH TII (NRA) SPECIFICATION FOR ROADWORKS SERIES 900.
2. ALL PRODUCTS AND MATERIALS TO BE UTILISED DURING CONSTRUCTION TO COMPLY WITH EIRGRID FUNCTIONAL SPECIFICATION, TII SPECIFICATION FOR ROAD WORKS AND ALL RELEVANT IRISH (EUROPEAN STANDARDS).
3. THIS DRAWING IS TO BE USED TO AID THE PROJECT SPECIFIC CONSTRUCTION DESIGN PRODUCTION.
4. FOR INDICATIVE TRENCH CROSS SECTION DRAWING NUMBER PLEASE REFER TO XDC-CBL-STND-E-008 DRAWING.
5. THIS IS A INDICATIVE CROSS SECTION DETAIL FOR SHALLOW PEAT INSTALLATION. SPECIFIC CONSTRUCTION DESIGN SHALL COMPLY WITH CDS-GFS-00-001-R1.
6. THE DESIGNER/ CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY DESIGN AND WORKS.
7. ADEQUATE DRAINAGE DITCH SHALL BE PROVIDED ON THE SIDE OF THE ROAD AND CABLE TRENCH
8. THE DEVELOPER SHALL ENSURE ANY RESTRICTION / ENVIRONMENTAL REQUIREMENTS FOR SAFE DISPOSAL OF THE EXCAVATED PEAT, WHERE APPLICABLE, IS STRICTLY FOLLOWED.
9. THE ROAD AUTHORITY / OWNER TO BE CONSULTED FOR MAX ALLOWED ROAD SETTLEMENT AND THIS INFORMATION SHALL BE USED WHEN DESIGNING THE CABLE TRENCH. A DEMONSTRATION THAT SETTLEMENT OR DIFFERENTIAL SETTLEMENT OF THE CABLE SHALL NOT OCCUR TO THE EXTENT TO WHICH THE CABLE'S FUNCTION OR DURABILITY COULD BE COMPROMISED OVER THE DESIGN LIFE.



LEGEND:

- RED MARKER STRIP
- YELLOW MARKER WARNING TAPE
- BASE WEARING COARSE
- NEW ROAD BUILT-UP MATERIAL
- 6F2 OR SIMILAR MATERIAL
- PEAT
- BUILD -UP MATERIAL (LARGE STONE OF DIFFERENT SIZE) AND COMPACTED. REFER TO TII SPECIFICATIONS
- LOGS

SECTION THROUGH CABLE TRENCH BUILT TO SOLID (FLOATING ROAD)
PEAT DEPTH <2.5m



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PROJECT
STANDARD 400 kV CABLE DRAWINGS

DRAWING TITLE
INDICATIVE SECTION THROUGH SOLID
CABLE TRENCH (FLOATING ROAD)
PEAT DEPTH <2.5m

No of Shts	4	SIZE	A3	SCALE	NTS
DRAWING NUMBER	XDC-CBL-STND-E-007	SHEET	002	REV	00

00	FIRST ISSUE	AECOM	DG	NC	03/01/2024
REV	DESC	DRAWN	CHK'D	APP'D	DATE

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No of Shts	4	SIZE	A3	SCALE	NTS
DRAWING NUMBER				SHEET	REV
XDC-CBL-STND-E-007				003	00

B

- C



E

F

- | | | | | | |
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| 00 | FIRST ISSUE | AECOM | DG | NC | 03/01/2024 |
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DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK

1

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A

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F

STANDARD 400 kV CABLE DRAWINGS

STANDARD CROSS SECTIONS

250mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-E-008	001	STANDARD TRENCH CROSS SECTIONS INDEX SHEET	00
XDC-CBL-STND-E-008	002	STANDARD TRENCH CROSS SECTION TREFOIL FORMATION	00
XDC-CBL-STND-E-008	003	STANDARD TRENCH CROSS SECTION 1.75m WIDE TRENCH IN FLAT FORMATION	00
XDC-CBL-STND-E-008	004	STANDARD TRENCH CROSS SECTION 1.9m WIDE TRENCH FULL FLAT FORMATION	00
XDC-CBL-STND-E-008	005	STANDARD TRENCH CROSS SECTION TREFOIL FORMATION WITH ECC DUCT	00
XDC-CBL-STND-E-008	006	STANDARD TRENCH CROSS SECTION 1.75m WIDE TRENCH IN FLAT FORMATION WITH ECC DUCT	00
XDC-CBL-STND-E-008	007	STANDARD TRENCH CROSS SECTION 1.9m WIDE TRENCH FULL FLAT FORMATION WITH ECC DUCT	00

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
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PROJECT

STANDARD 400 kV CABLE DRAWINGS

DRAWING TITLE

STANDARD CROSS SECTIONS
INDEX SHEET

No of Shts7

SIZEA3

SCALENTS

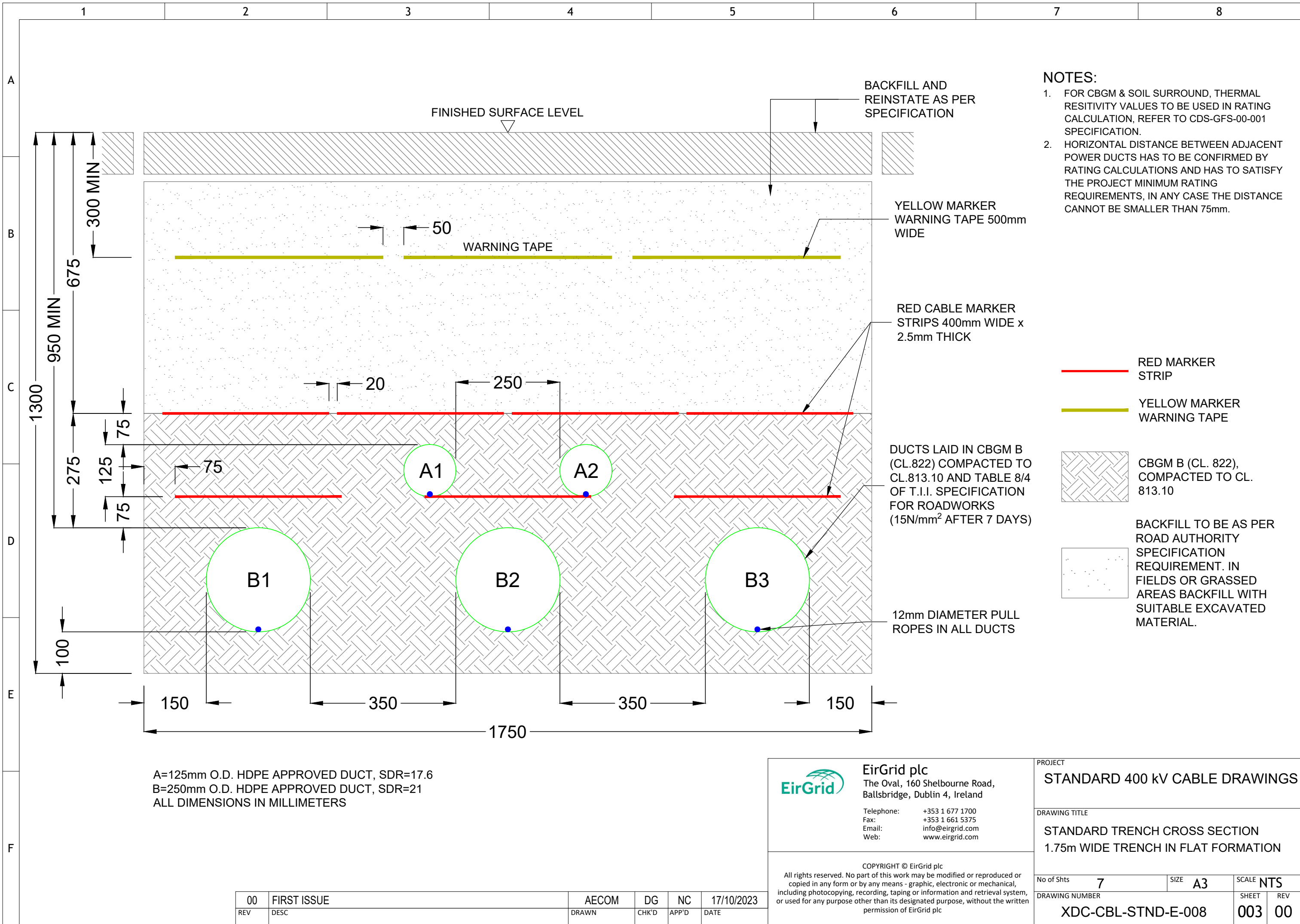
DRAWING NUMBER

XDC-CBL-STND-E-008

SHEET001

REV00

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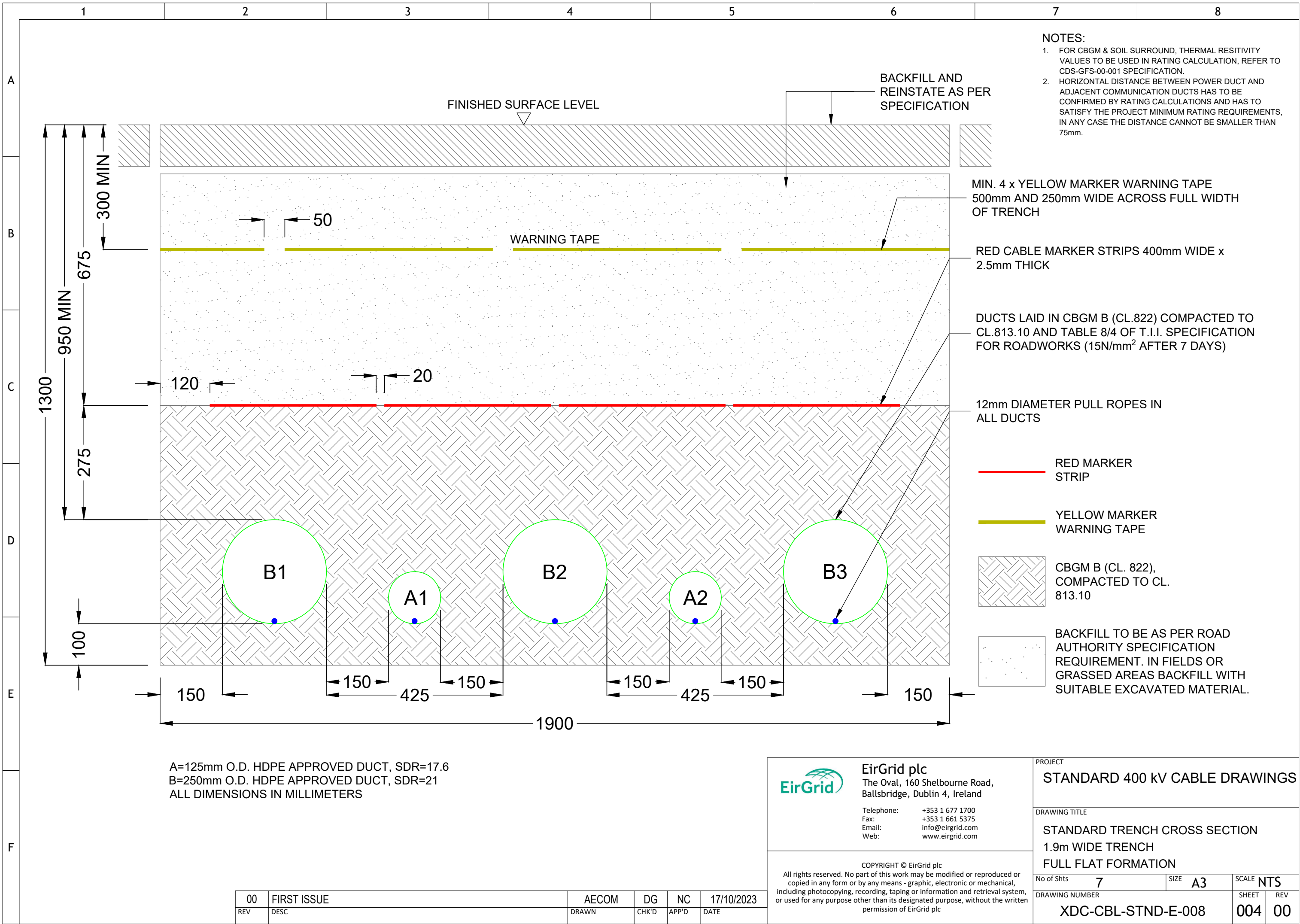
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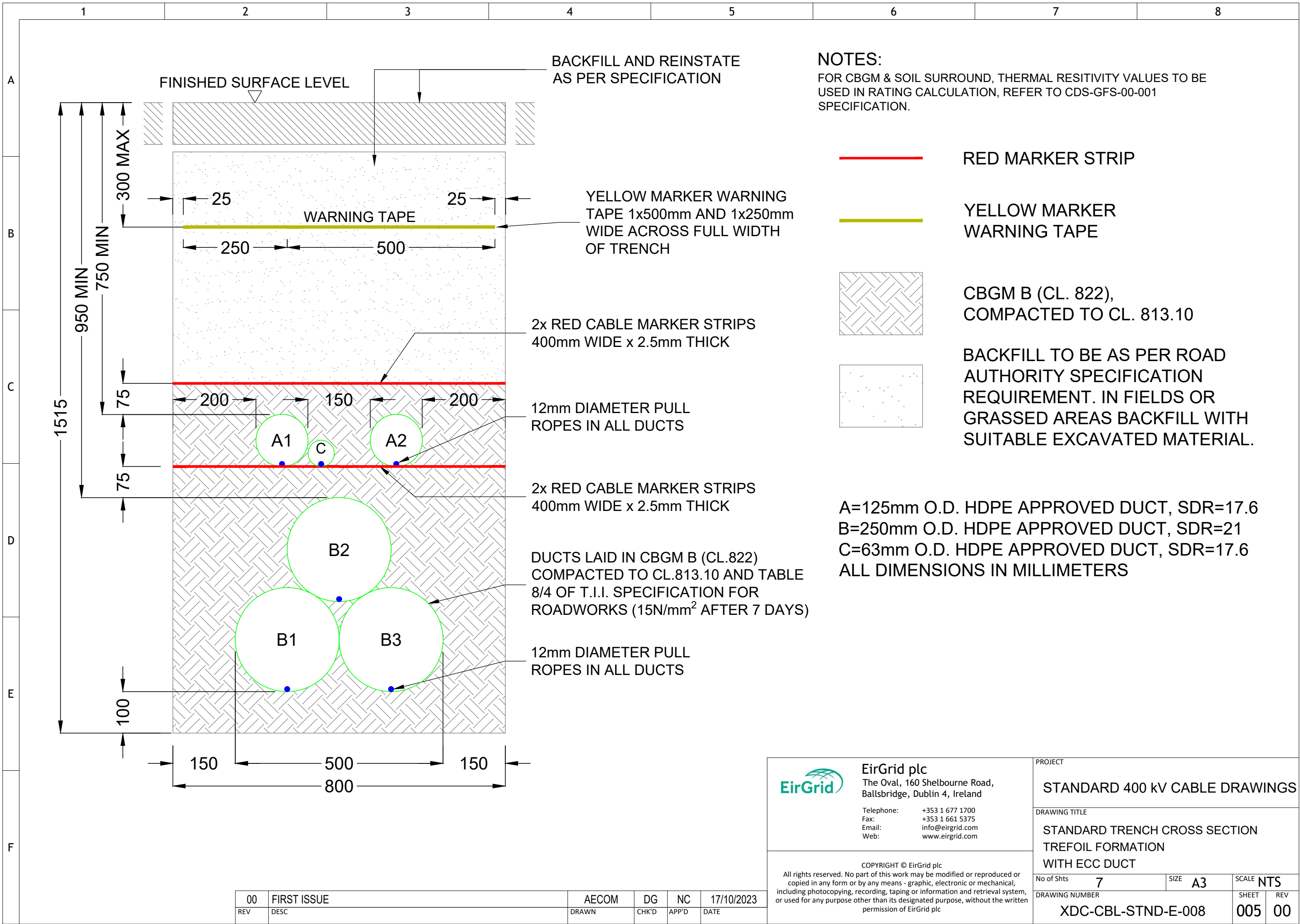
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PROJECT				STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE				STANDARD TRENCH CROSS SECTION 1.75m WIDE TRENCH IN FLAT FORMATION			
No of Shts	7	SIZE	A3	SCALE	NTS		
DRAWING NUMBER				SHEET	REV		
XDC-CBL-STND-E-008				003	00		

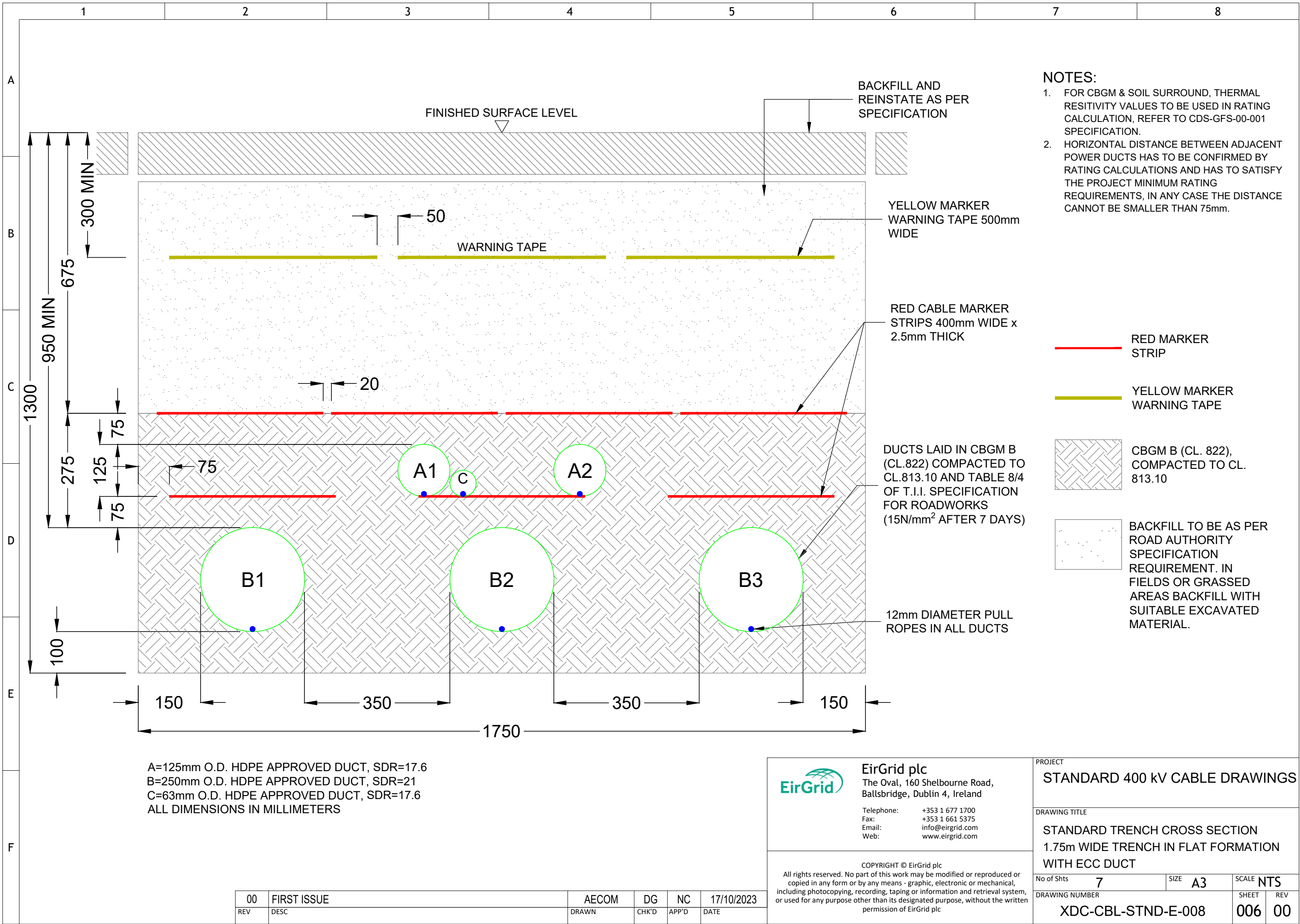
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DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK



NOTES:

- FOR CBGM & SOIL SURROUND, THERMAL RESISTIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS-GFS-00-001 SPECIFICATION.
- HORIZONTAL DISTANCE BETWEEN ADJACENT POWER DUCTS HAS TO BE CONFIRMED BY RATING CALCULATIONS AND HAS TO SATISFY THE PROJECT MINIMUM RATING REQUIREMENTS, IN ANY CASE THE DISTANCE CANNOT BE SMALLER THAN 75mm.

A=125mm O.D. HDPE APPROVED DUCT, SDR=17.6
B=250mm O.D. HDPE APPROVED DUCT, SDR=21
C=63mm O.D. HDPE APPROVED DUCT, SDR=17.6
ALL DIMENSIONS IN MILLIMETERS



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PROJECT			
STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE			
STANDARD TRENCH CROSS SECTION 1.75m WIDE TRENCH IN FLAT FORMATION WITH ECC DUCT			
No of Shts	7	SIZE	A3
DRAWING NUMBER	XDC-CBL-STND-E-008	SCALE	NTS
SHEET	006	REV	00

00	FIRST ISSUE	AECOM	DG	NC	17/10/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE

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A																																																		
B																																																		
C	STANDARD 400 kV CABLE DRAWINGS 10mx2.6m JOINT BAY <table><thead><tr><th>DRAWING No.</th><th>SHEET No.</th><th>DESCRIPTION</th><th>REVISION No.</th></tr></thead><tbody><tr><td>XDC-CBL-STND-E-012</td><td>001</td><td>400 kV JOINT BAY INDEX SHEET</td><td>01</td></tr><tr><td>XDC-CBL-STND-E-012</td><td>002</td><td>400 kV JOINT BAY GENERAL ARRANGEMENT</td><td>01</td></tr><tr><td>XDC-CBL-STND-E-012</td><td>003</td><td>400 KV JOINT BAY REINSTATEMENT</td><td>01</td></tr><tr><td>XDC-CBL-STND-E-012</td><td>004</td><td>400 KV JOINT BAY TYPICAL EARTHING ARRANGEMENT</td><td>01</td></tr><tr><td>XDC-CBL-STND-E-012</td><td>005</td><td>GENERAL ARRANGEMENT OF CABLE CLAMPING IN 10X2.6M JOINT BAY</td><td>01</td></tr></tbody></table>								DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.	XDC-CBL-STND-E-012	001	400 kV JOINT BAY INDEX SHEET	01	XDC-CBL-STND-E-012	002	400 kV JOINT BAY GENERAL ARRANGEMENT	01	XDC-CBL-STND-E-012	003	400 KV JOINT BAY REINSTATEMENT	01	XDC-CBL-STND-E-012	004	400 KV JOINT BAY TYPICAL EARTHING ARRANGEMENT	01	XDC-CBL-STND-E-012	005	GENERAL ARRANGEMENT OF CABLE CLAMPING IN 10X2.6M JOINT BAY	01																		
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F	<table><tr><td>01</td><td>UPDATED REVISION</td><td>AECOM</td><td>DG</td><td>NC</td><td>31/10/2023</td></tr><tr><td>00</td><td>FIRST ISSUE</td><td>AECOM</td><td>DG</td><td>NC</td><td>30/06/2023</td></tr><tr><td>REV</td><td>DESC</td><td>DRAWN</td><td>CHK'D</td><td>APP'D</td><td>DATE</td></tr></table>  EirGrid plc The Oval, 160 Shelbourne Road, Ballsbridge, Dublin 4, Ireland Telephone: +353 1 677 1700 Fax: +353 1 661 5375 Email: info@eirgrid.com Web: www.eirgrid.com COPYRIGHT © EirGrid plc All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc <table><tr><td colspan="2">PROJECT</td><td colspan="2">STANDARD 400 kV CABLE DRAWINGS</td></tr><tr><td colspan="2">DRAWING TITLE</td><td colspan="2">400 kV JOINT BAY INDEX SHEET</td></tr><tr><td>No of Shts</td><td>5</td><td>SIZE</td><td>A3</td></tr><tr><td colspan="2">DRAWING NUMBER</td><td>SCALE</td><td>NTS</td></tr><tr><td colspan="2">XDC-CBL-STND-E-012</td><td>SHEET</td><td>001</td></tr><tr><td colspan="2"></td><td>REV</td><td>01</td></tr></table>								01	UPDATED REVISION	AECOM	DG	NC	31/10/2023	00	FIRST ISSUE	AECOM	DG	NC	30/06/2023	REV	DESC	DRAWN	CHK'D	APP'D	DATE	PROJECT		STANDARD 400 kV CABLE DRAWINGS		DRAWING TITLE		400 kV JOINT BAY INDEX SHEET		No of Shts	5	SIZE	A3	DRAWING NUMBER		SCALE	NTS	XDC-CBL-STND-E-012		SHEET	001			REV	01
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TYPICAL PLAN OF JOINT BAY

SCALE 1:50

APPROX. 10000 (SEE NOTE 1)

MIN 2300

LINK BOX CHAMBER

EXACT LOCATION TO
BE DETERMINED
ON SITE

C2 COMMS. CHAMBER

DUCTS SHALL APPROACH THE JOINT BAY IN
STRAIGHT ALIGNMENT A MINIMUM 3M
BEFORE THE END WALL AND FINISH FLUSH
INSIDE THE WALL.

300x300x120mm
DEEP SUMP

MAX 10m SEE NOTE 23.

150mm OF DUCT TO BE LEFT
DURING CONSTRUCTION
AND CUT FLUSH POST
JOINTING

DUCTS SHALL APPROACH THE JOINT BAY IN
STRAIGHT ALIGNMENT A MINIMUM 3m BEFORE
THE END WALL AND FINISH FLUSH INSIDE THE
WALL.

30mm Ø
EARTHING OPES IN
SLAB (TYP.)

PROPRIETARY INSERT COMPRESSIBLE FILLER
FIXED TO DRY CLEAN SOCKET FACE WITH A
CONTACT ADHESIVE PRIOR TO UNIT'S PUSHED
TOGETHER.

H10 mmØ REBAR
AT 150mm CTR'S

H10 mmØ REBAR
AT 150mm CTR'S
SPHERICAL HEAD
ANCHOR FORMER

12mm Ø REBAR
(800mm LONG, UNBENT)

10 T HALFEN ANCHORS
REF: 6000-10.0-0170

12mm Ø REBAR
(800mm LONG, UNBENT)

10 T HALFEN DEHA SPHERICAL LIFTING
ANCHORS. REF: 600-10.0-0170
4 No. PER UNIT

10 T HALFEN DEHA
SPHERICAL LISTING ANCHORS.
REF: 6000-10.0-0170
4 No. PER UNIT.

DETAIL 1 - SOCKET AND SPIGOT DETAIL (WALL & FLOOR)
SCALE 1:25

DETAIL 2 - LIFTING EYE DETAIL
SCALE 1:25

EXISTING ROAD LEVEL

SPREADER BEAM REQUIRED FOR LIFTING

PRECAST CONCRETE CONSTRUCTION

AFTER PLACING THE DUCTS,
VOID IS TO BE PACKED WITH
CONCRETE C16/20 CONTAINING
A NON-SHRINK ADDITIVE.

GRANULAR BACKFILL TO CL. 610.

50mm SAND BLINDING

200mm LAYER OF CL. 804 SUBJECT
TO SITE GROUND CONDITIONS

10 T HALFEN DEHA SPHERICAL LIFTING
ANCHORS. REF: 6000-10.0-0170
4 No. PER UNIT.

30mm Ø OPENING IN SLAB

SECTION A
SCALE 1:50

A = 125mm OD HDPE DUCT (COMMS)
B = 250mm OD HDPE DUCT (POWER)
C = 125mm OD HDPE DUCT (BONDING LEADS)

01	UPDATED REVISION	AECOM	DG	NC	31/10/2023
00	FIRST ISSUE	AECOM	DG	NC	30/06/2023
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ISOMETRIC: JOINT BAY ARRANGEMENT
NOT TO SCALE



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GENERAL NOTES

- IF THE 400kV CABLE HAS A DTS FIBRE ADDITIONAL SPACING MAY BE REQUIRED IN THE JOINT BAY FOR DTS FIBRE SPLICING. THE CUSTOMER TO CONSULT THE CABLE MANUFACTURER TO DETERMINE THE MINIMUM LENGTH OF THE JOINT BAY FOR CABLE JOINTING AND FIBER SPLICING. IF A LONGER JOINT BAY IS REQUIRED ADDITIONAL PRECAST SECTION 2 CAN BE ADDED.
- ALL PRECAST CONCRETE ELEMENTS TO BE MANUFACTURED TO B.S. EN 13369:2004 "COMMON RULES FOR PRECAST CONCRETE PRODUCTS"
- LIFTING INSERTS TO BE DESIGNED & INSTALLED TO PD CEN/TR 15728:2008 "DESIGN AND USE OF INSERTS FOR LIFTING AND HANDLING OF PRECAST CONCRETE ELEMENTS."
- SPECIFIED LIFTING INSERTS HAVE A S.W.L. OF 10 TONNE.
- LOCATION AND SPECIFICATION OF LIFTING INSERTS ARE ASSUMED TO FACILITATE DEMOULDING AND HANDLING IN PRECAST MANUFACTURING FACTORY. IT IS THE RESPONSIBILITY OF THE CUSTOMER TO NOTIFY EIRGRID IF THESE ARE UNSUITABLE FOR THEIR MANUFACTURING METHODOLOGY. EIRGRID IS TO BE INFORMED OF ANY ALTERNATIVE LIFTING LOCATIONS FOR FACTORY HANDLING & DEMOULDING.
- CONCRETE TO HAVE A MINIMUM STRENGTH OF 30 N/mm² PRIOR TO HANDLING OF DEMOULDING.
- CUSTOMER IS TO ENSURE THAT A METHOD STATEMENT AND RISK ASSESSMENT, INCLUDING A LIFTING PLAN, IS PRODUCED FOR INSTALLATION AND ARE AVAILABLE TO EIRGRID FOR REVIEW IF REQUESTED. LIFTING PLAN TO INCORPORATE REQUIREMENTS OF LIFTING INSERTS AND LIFTING LOOP EYES.
- A MINIMUM LIFTING SLING ANGLE OF 50° TO THE HORIZONTAL IS REQUIRED.
- A LIFTING SYSTEM WHICH ENSURES ALL LIFTING POINTS TAKE ON AN EQUAL LOAD IS REQUIRED.
- HALFEN DEHA SPHERICAL LIFTING ANCHORS TO BE USED AS SPECIFIED. ANY DEVIATION FROM THIS MUST BE NOTIFIED TO EIRGRID BY THE CUSTOMER. LIFTING INSERTS TO BE INSTALLED AS PER MANUFACTURER'S GUIDELINES AND IN ACCORDANCE WITH PD CEN/TR 15728:2008.
- FORMWORK FOR PRECASTING TO BE OF A MINIMUM STANDARD OF VARNISHED WOODEN MOULD WITH PLANED BOARDS.
- COVER TO REINFORCEMENT TO BE 40mm.
- CONCRETE TO BE GRADE C30/37 AS SPECIFIED IN TABLE 1.
- ALL CONCRETE TO BE IN ACCORDANCE WITH I.S. EN 206-1:2013 WITH THE MIX DESIGNS SHOWN IN TABLE1.
- THE DEPTH FROM GROUND/ROAD LEVEL TO THE TOP OF THE CONCRETE WALL SHALL BE:
 - 300mm - IN PAVED ROADS AND GRASS VERGES
 - 350mm - IN PAVED CITY ROADS AND GRASSED VERGES.
 - 500mm - IN FIELDS.
- LINK BOX CHAMBER TO BE POSITIONED AT THE EDGE OF OR OFF ROAD.
- ALLOWABLE BEARING PRESSURE TO BE AT LEAST 185kPa
- FOR HIGHLY AGGRESSIVE ENVIRONMENTS, TABLE 1 IS NOT APPLICABLE. CONSULT WITH EIRGRID FOR BESPOKE DESIGN.
- JOINT BAY TO BE UNIFORMLY BACKFILLED IN LAYERS NOT EXCEEDING 300mm THICK.
- WHERE POSSIBLE JOINT BAYS SHOULD BE INSTALLED OFF FROM THE TARMAC AREA BUT WITHIN THE PUBLIC AREA. THE DESIGNER MUST CONSIDER THE LOAD INSISTING ON THE JOINT BAY LATERAL WALLS DUE TO THE TRAFFIC. A 1m WIDE LATERAL SAFETY ZONE IS TO BE PROVIDED TO SATISFY DESIGN LOADING ASSUMPTIONS.
- CUSTOMER IS RESPONSIBLE FOR ALL TRAFFIC MANAGEMENT INCLUDING WHERE NECESSARY SAFETY BARRIERS, AS PER D.R.A.
- LINK BOX CHAMBER AND C2 COMM CHAMBER FINAL POSITIONING TO BE AGREED WITH EIRGRID PRIOR TO INSTALLATION.
- BONDING LEADS NOT TO EXCEED 10m AS PER CDS-GFS-00-001.

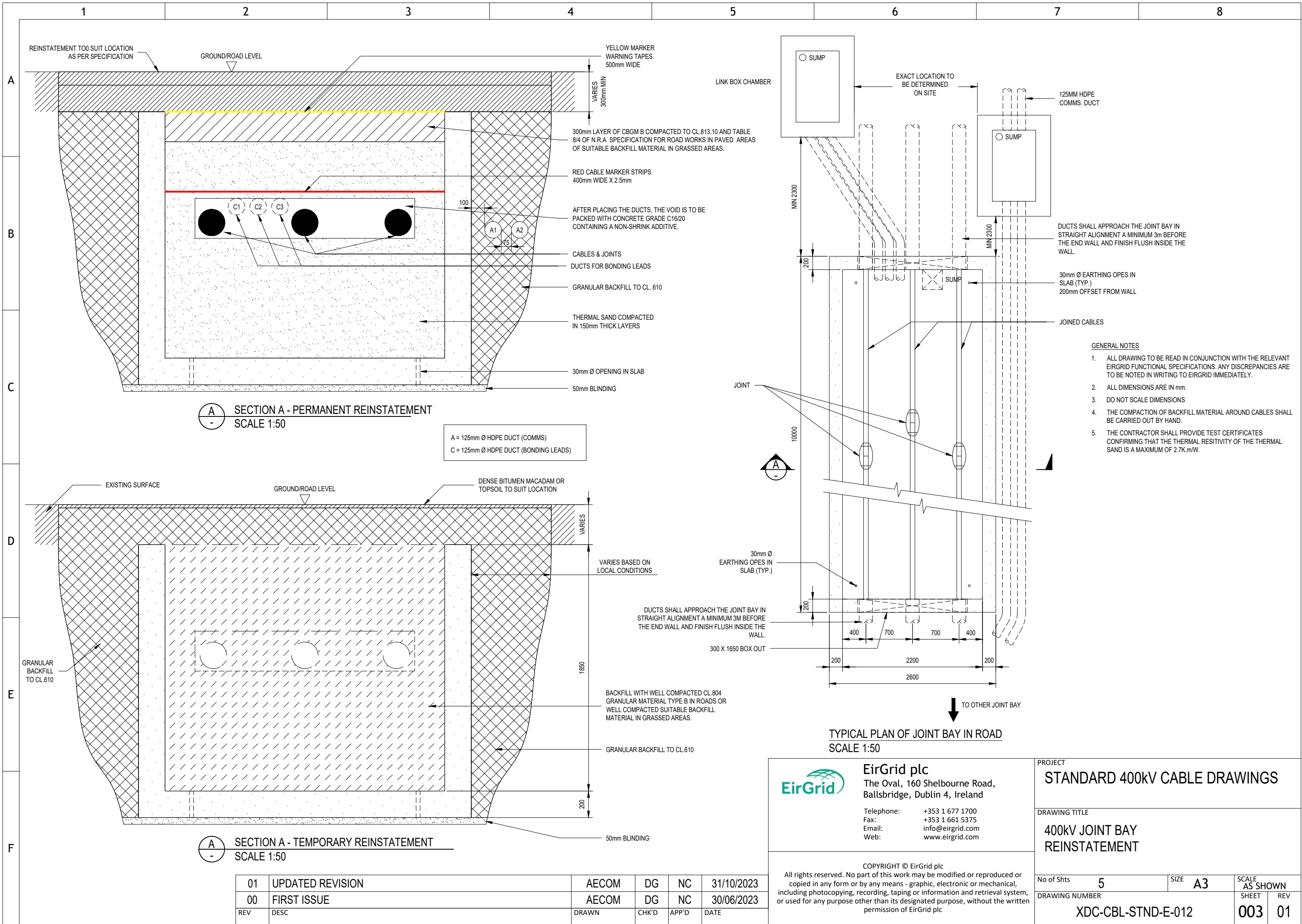
TABLE 1

	CONCRETE SPECIFICATION TO I.S. EN 206-1	
	BLINDING & MASS CONCRETE, DRAINAGE PIPE & MANHOLE SURROUNDINGS	FOUNDATIONS & WALLS
EXPOSURE CLASS	X0	XC2, XA2
MIN. CEMENT CONTENT (kg/m ³)	240	340
MAX. WATER/CEMENT RATIO	-	0.50
CEMENT TYPE TO I.S. EN 197-1	CEM 1 N	CEM 1 N
CHLORIDE CONTENT CLASS	CL 1.0	CL 0.40
MAX. AGGREGATE	10	20
MIN. COVER (C _{min}) (mm)	-	40
*COMPRESSIVE STRENGTH CLASS	C16/20	C30/37

NOTES
1. *C16/20 TO BE READ AS FOLLOWS: 16 - REFERS TO MIN. CHARACTERISTIC CYLINDER STRENGTH (N/mm²).
20 - REFERS TO MIN. CHARACTERISTIC CUBE STRENGTH (N/mm²).
2. DESIGN WORKING LIFE TO BE 50 YEARS MINIMUM.

PROJECT STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE 400 kV JOINT BAY GENERAL ARRENGEMENT			
No of Shts	5	SIZE	A3
DRAWING NUMBER XDC-CBL-STND-E-012		SHEET	002
		REV	01

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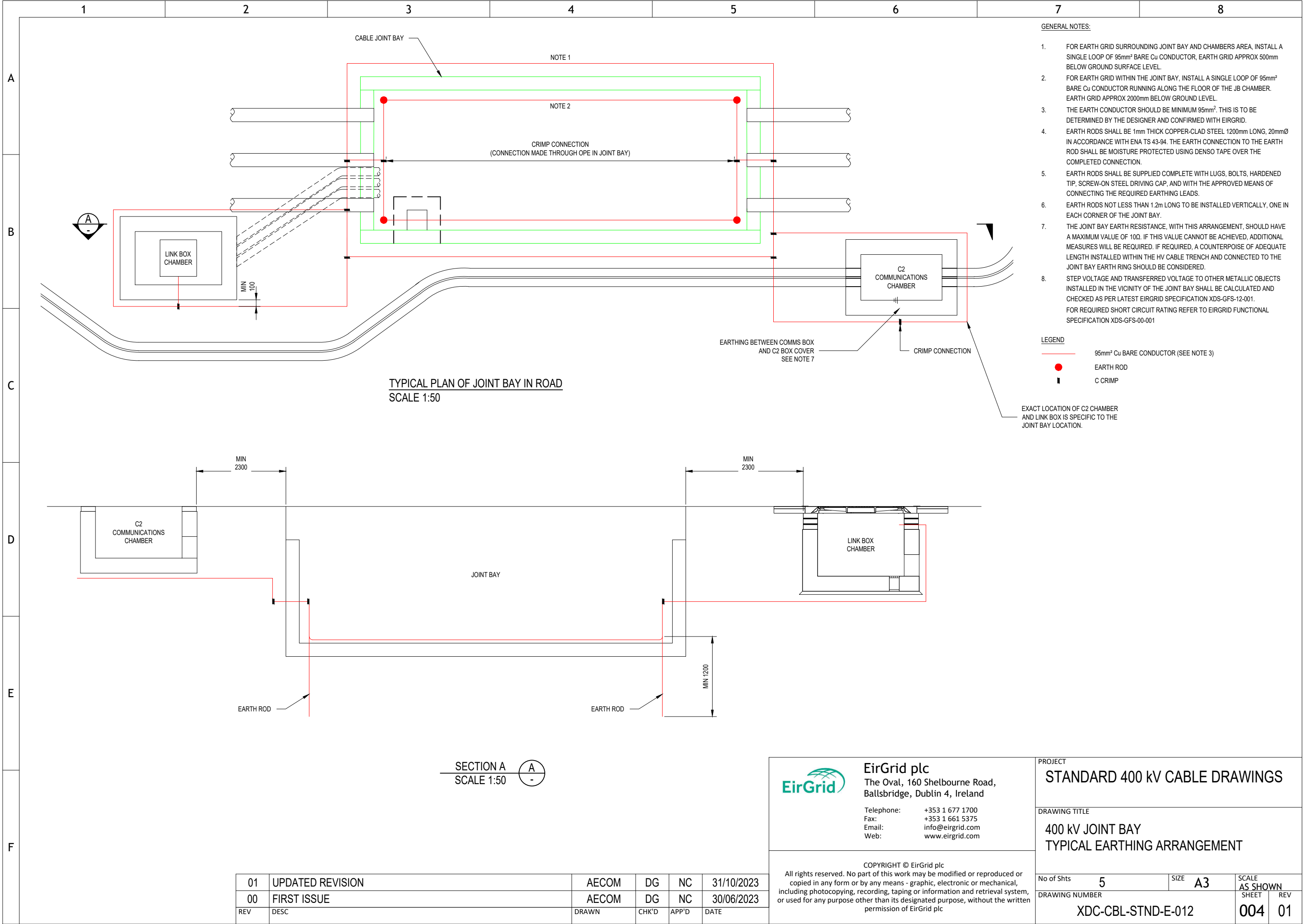
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PROJECT STANDARD 400kV CABLE DRAWINGS			
DRAWING TITLE 400kV JOINT BAY REINSTATEMENT			
No of Shts 5	SIZE A3	SCALE AS SHOWN	
DRAWING NUMBER XDC-CBL-STND-E-012		SHEET 003	REV 01



GENERAL NOTES:

- FOR EARTH GRID SURROUNDING JOINT BAY AND CHAMBERS AREA, INSTALL A SINGLE LOOP OF 95mm² BARE Cu CONDUCTOR, EARTH GRID APPROX 500mm BELOW GROUND SURFACE LEVEL.
- FOR EARTH GRID WITHIN THE JOINT BAY, INSTALL A SINGLE LOOP OF 95mm² BARE Cu CONDUCTOR RUNNING ALONG THE FLOOR OF THE JB CHAMBER. EARTH GRID APPROX 2000mm BELOW GROUND LEVEL.
- THE EARTH CONDUCTOR SHOULD BE MINIMUM 95mm². THIS IS TO BE DETERMINED BY THE DESIGNER AND CONFIRMED WITH EIRGRID.
- EARTH RODS SHALL BE 1mm THICK COPPER-CLAD STEEL 1200mm LONG, 20mmØ IN ACCORDANCE WITH ENA TS 43-94. THE EARTH CONNECTION TO THE EARTH ROD SHALL BE MOISTURE PROTECTED USING DENSO TAPE OVER THE COMPLETED CONNECTION.
- EARTH RODS SHALL BE SUPPLIED COMPLETE WITH LUGS, BOLTS, HARDENED TIP, SCREW-ON STEEL DRIVING CAP, AND WITH THE APPROVED MEANS OF CONNECTING THE REQUIRED EARTHING LEADS.
- EARTH RODS NOT LESS THAN 1.2m LONG TO BE INSTALLED VERTICALLY, ONE IN EACH CORNER OF THE JOINT BAY.
- THE JOINT BAY EARTH RESISTANCE, WITH THIS ARRANGEMENT, SHOULD HAVE A MAXIMUM VALUE OF 10Ω. IF THIS VALUE CANNOT BE ACHIEVED, ADDITIONAL MEASURES WILL BE REQUIRED. IF REQUIRED, A COUNTERPOISE OF ADEQUATE LENGTH INSTALLED WITHIN THE HV CABLE TRENCH AND CONNECTED TO THE JOINT BAY EARTH RING SHOULD BE CONSIDERED.
- STEP VOLTAGE AND TRANSFERRED VOLTAGE TO OTHER METALLIC OBJECTS INSTALLED IN THE VICINITY OF THE JOINT BAY SHALL BE CALCULATED AND CHECKED AS PER LATEST EIRGRID SPECIFICATION XDS-GFS-12-001. FOR REQUIRED SHORT CIRCUIT RATING REFER TO EIRGRID FUNCTIONAL SPECIFICATION XDS-GFS-00-001

LEGEND

- 95mm² Cu BARE CONDUCTOR (SEE NOTE 3)
- EARTH ROD
- C CRIMP

EXACT LOCATION OF C2 CHAMBER AND LINK BOX IS SPECIFIC TO THE JOINT BAY LOCATION.

SECTION A
SCALE 1:50



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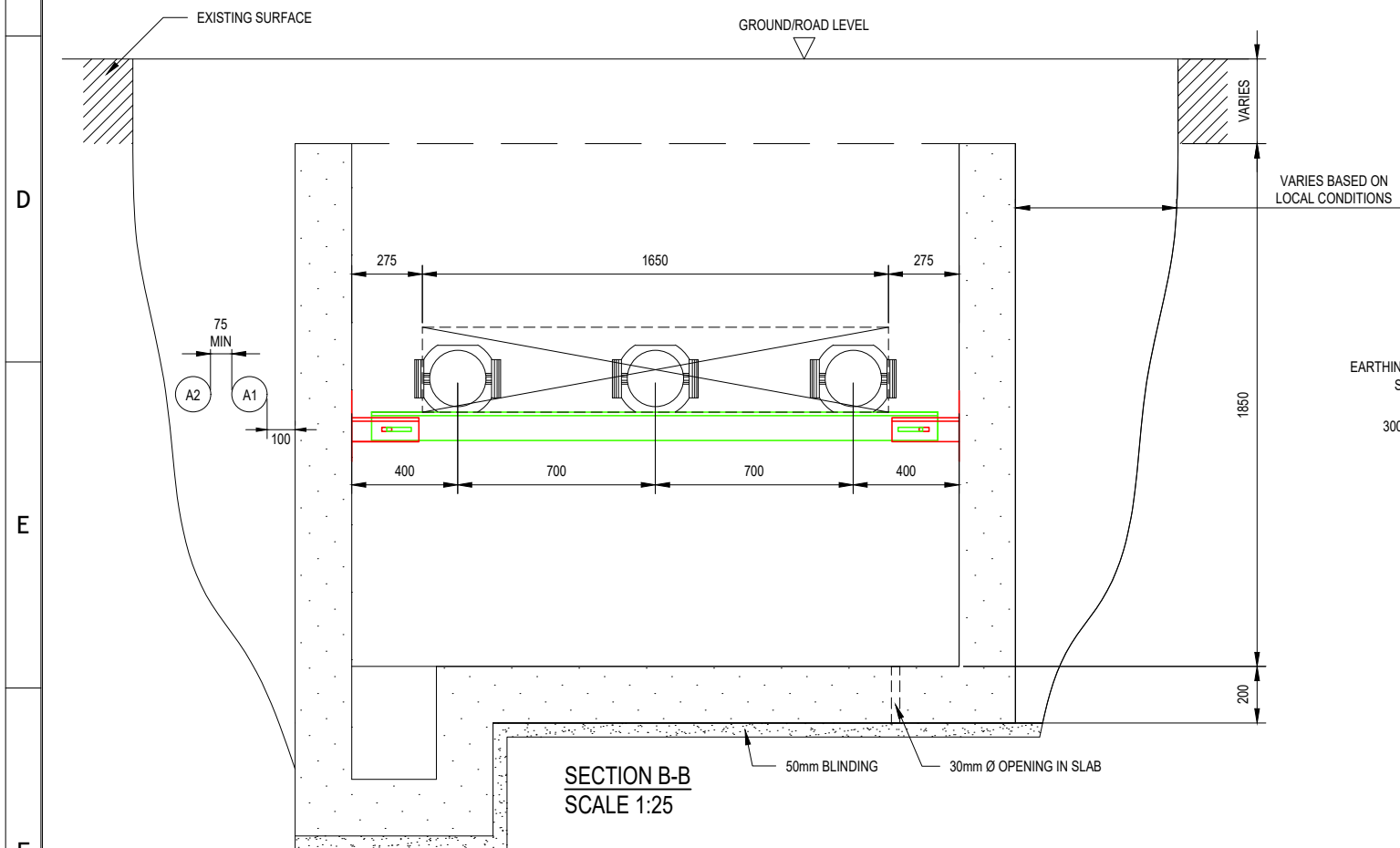
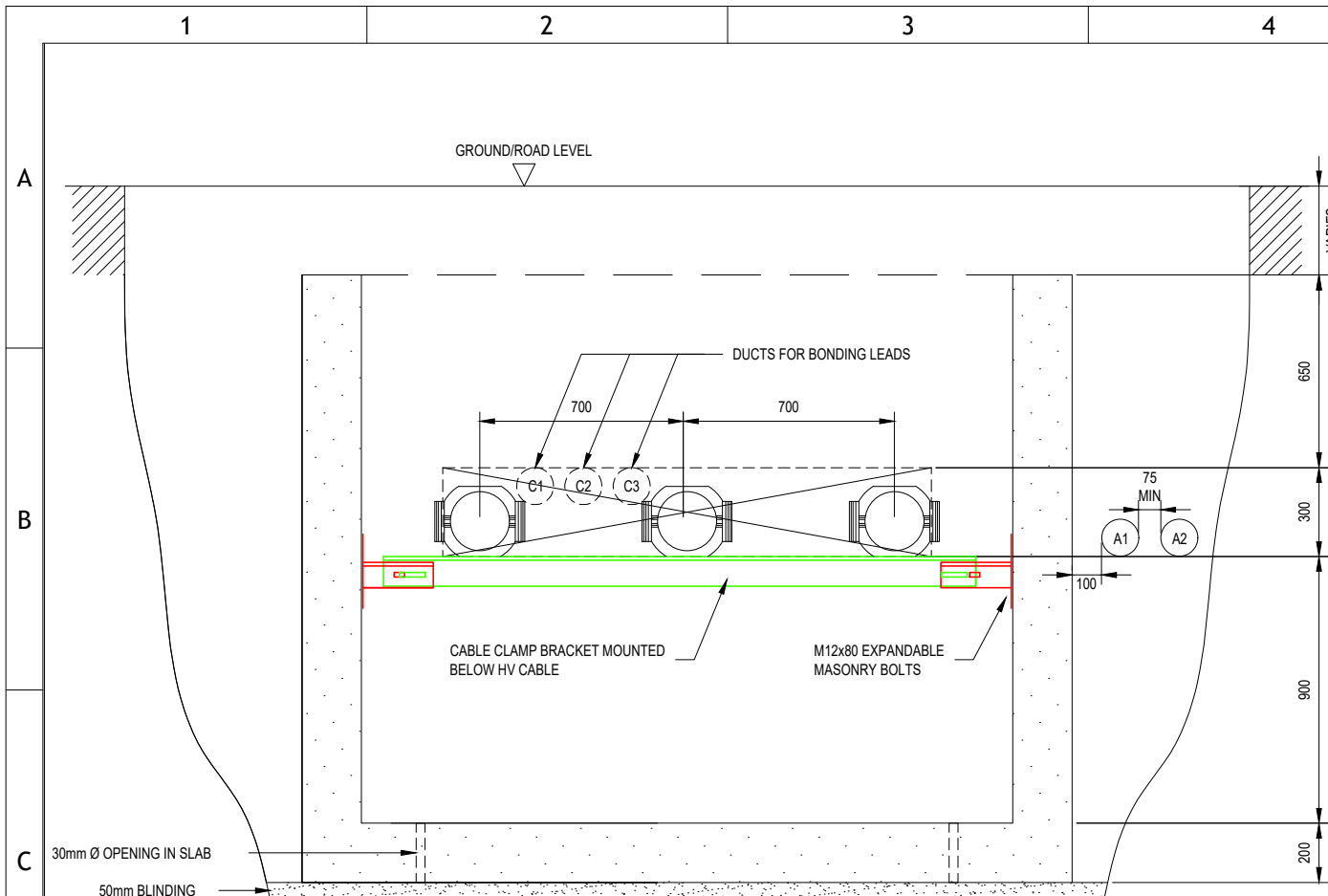
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PROJECT STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE 400 kV JOINT BAY TYPICAL EARTHING ARRANGEMENT			
No of Shts 5	SIZE A3	SCALE AS SHOWN	
DRAWING NUMBER XDC-CBL-STND-E-012		SHEET 004	REV 01

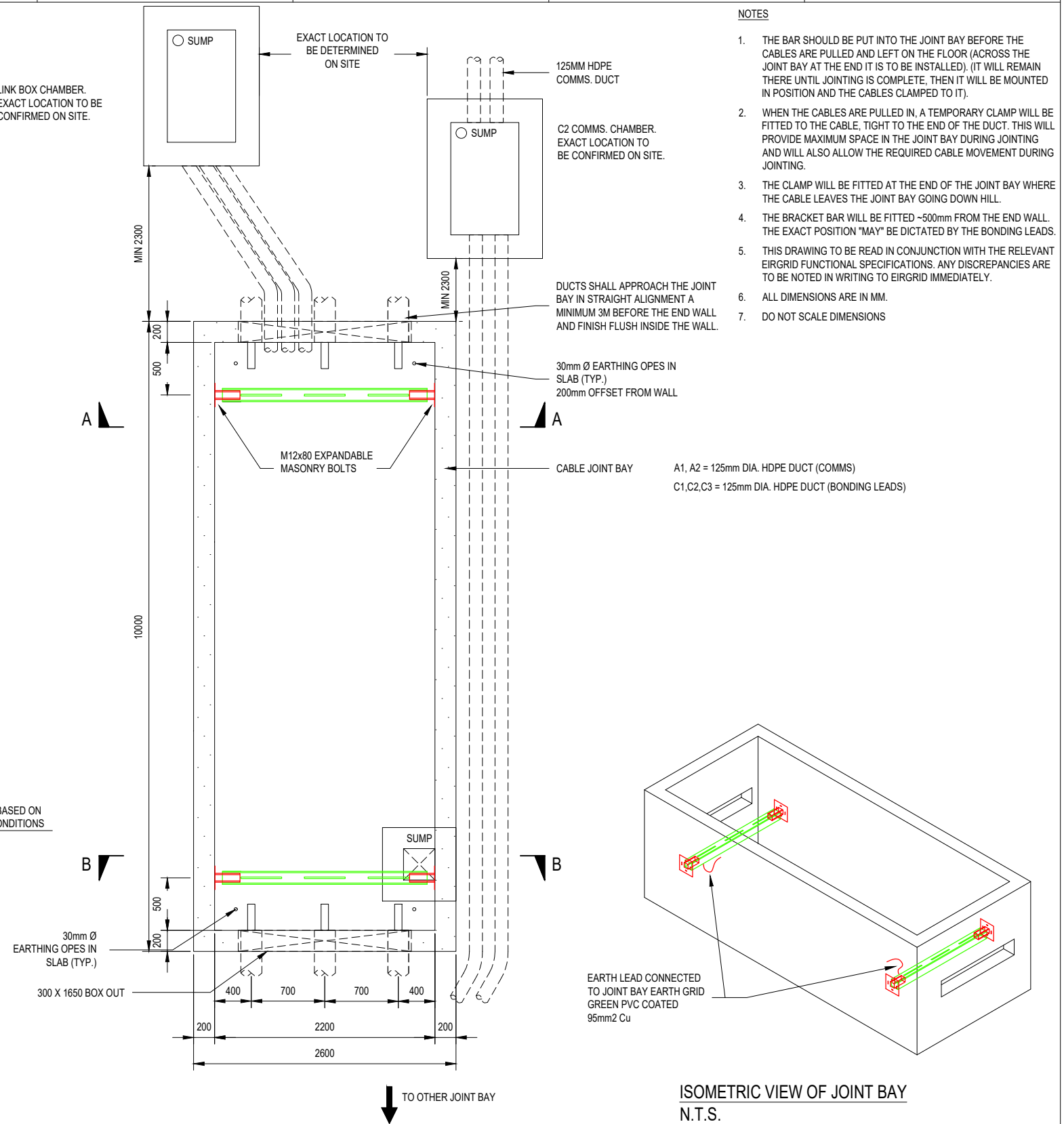
01	UPDATED REVISION	AECOM	DG	NC	31/10/2023
00	FIRST ISSUE	AECOM	DG	NC	30/06/2023
REV	DESC	DRAWN	CHK'D	APP'D	DATE

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LINK BOX CHAMBER.
EXACT LOCATION TO BE
CONFIRMED ON SITE.



NOTES

1. THE BAR SHOULD BE PUT INTO THE JOINT BAY BEFORE THE CABLES ARE PULLED AND LEFT ON THE FLOOR (ACROSS THE JOINT BAY AT THE END IT IS TO BE INSTALLED). (IT WILL REMAIN THERE UNTIL JOINTING IS COMPLETE, THEN IT WILL BE MOUNTED IN POSITION AND THE CABLES CLAMPED TO IT).
2. WHEN THE CABLES ARE PULLED IN, A TEMPORARY CLAMP WILL BE FITTED TO THE CABLE, TIGHT TO THE END OF THE DUCT. THIS WILL PROVIDE MAXIMUM SPACE IN THE JOINT BAY DURING JOINTING AND WILL ALSO ALLOW THE REQUIRED CABLE MOVEMENT DURING JOINTING.
3. THE CLAMP WILL BE FITTED AT THE END OF THE JOINT BAY WHERE THE CABLE LEAVES THE JOINT BAY GOING DOWN HILL.
4. THE BRACKET BAR WILL BE FITTED ~500mm FROM THE END WALL. THE EXACT POSITION "MAY" BE DICTATED BY THE BONDING LEADS.
5. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE RELEVANT EIRGRID FUNCTIONAL SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE NOTED IN WRITING TO EIRGRID IMMEDIATELY.
6. ALL DIMENSIONS ARE IN MM.
7. DO NOT SCALE DIMENSIONS

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PROJECT STANDARD 400 kV CABLE DRAWINGS					
DRAWING TITLE GENERAL ARRANGEMENT OF CABLE CLAMPING IN 10m X 2.6m JOINT BAY					
No of Shts	5	SIZE	A3	SCALE	AS SHOWN
DRAWING NUMBER XDC-CBL-STND-E-012				SHEET	REV
				005	01

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STANDARD 400 kV CABLE DRAWINGS
STANDARD TRENCH CROSS SECTION FOR CABLES
INSTALLED IN FARMLAND

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-E-016	001	STANDARD FARMLAND TRENCH CROSS SECTIONS INDEX SHEET	00
XDC-CBL-STND-E-016	002	STANDARD FARMLAND TRENCH CROSS SECTION 400 kV TREFOIL FORMATION	00
XDC-CBL-STND-E-016	003	STANDARD FARMLAND TRENCH CROSS SECTION 400 kV FLAT FORMATION	00
XDC-CBL-STND-E-016	004	STANDARD FARMLAND TRENCH CROSS SECTION 400 kV FULL FLAT FORMATION	00
XDC-CBL-STND-E-016	005	STANDARD FARMLAND TRENCH CROSS SECTION 400 kV TREFOIL FORMATION WITH ECC DUCT	00
XDC-CBL-STND-E-016	006	STANDARD FARMLAND TRENCH CROSS SECTION 400 kV FLAT FORMATION WITH ECC DUCT	00
XDC-CBL-STND-E-016	007	STANDARD FARMLAND TRENCH CROSS SECTION 400 kV FULL FLAT FORMATION WITH ECC DUCT	00

00	FIRST ISSUE	AECOM	DG	NC	11/04/2025
REV	DESC	DRAWN	CHK'D	APP'D	DATE

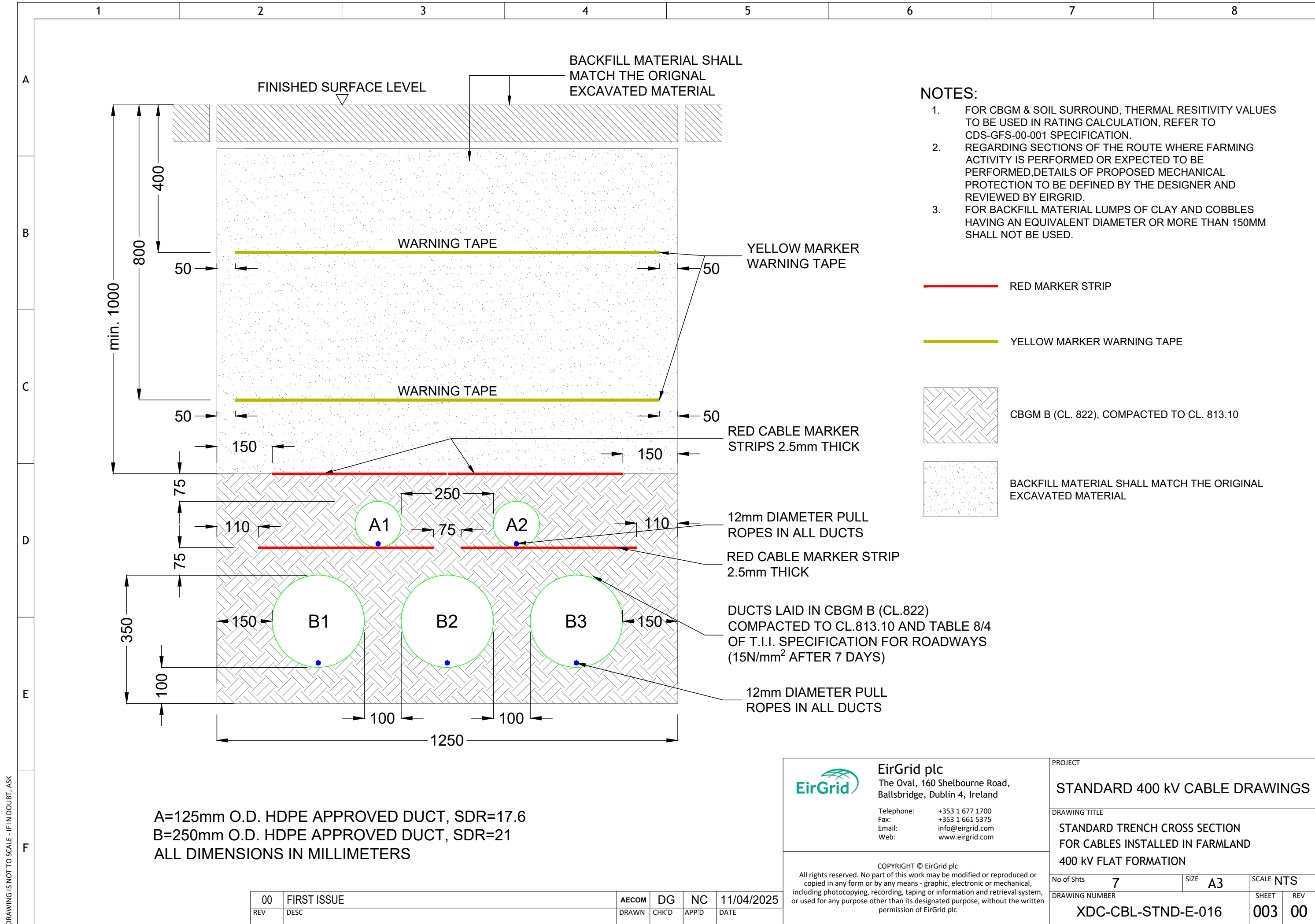


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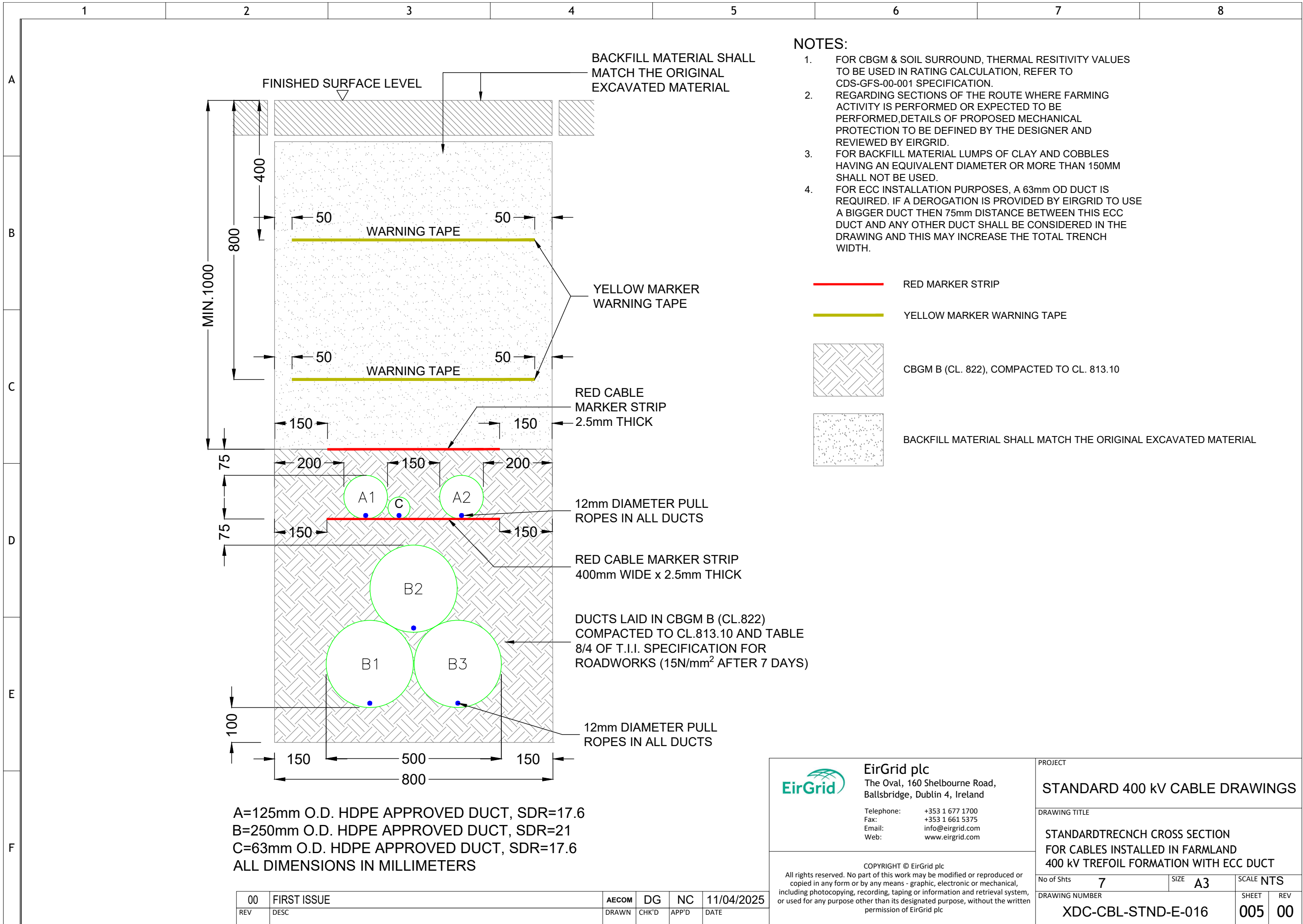
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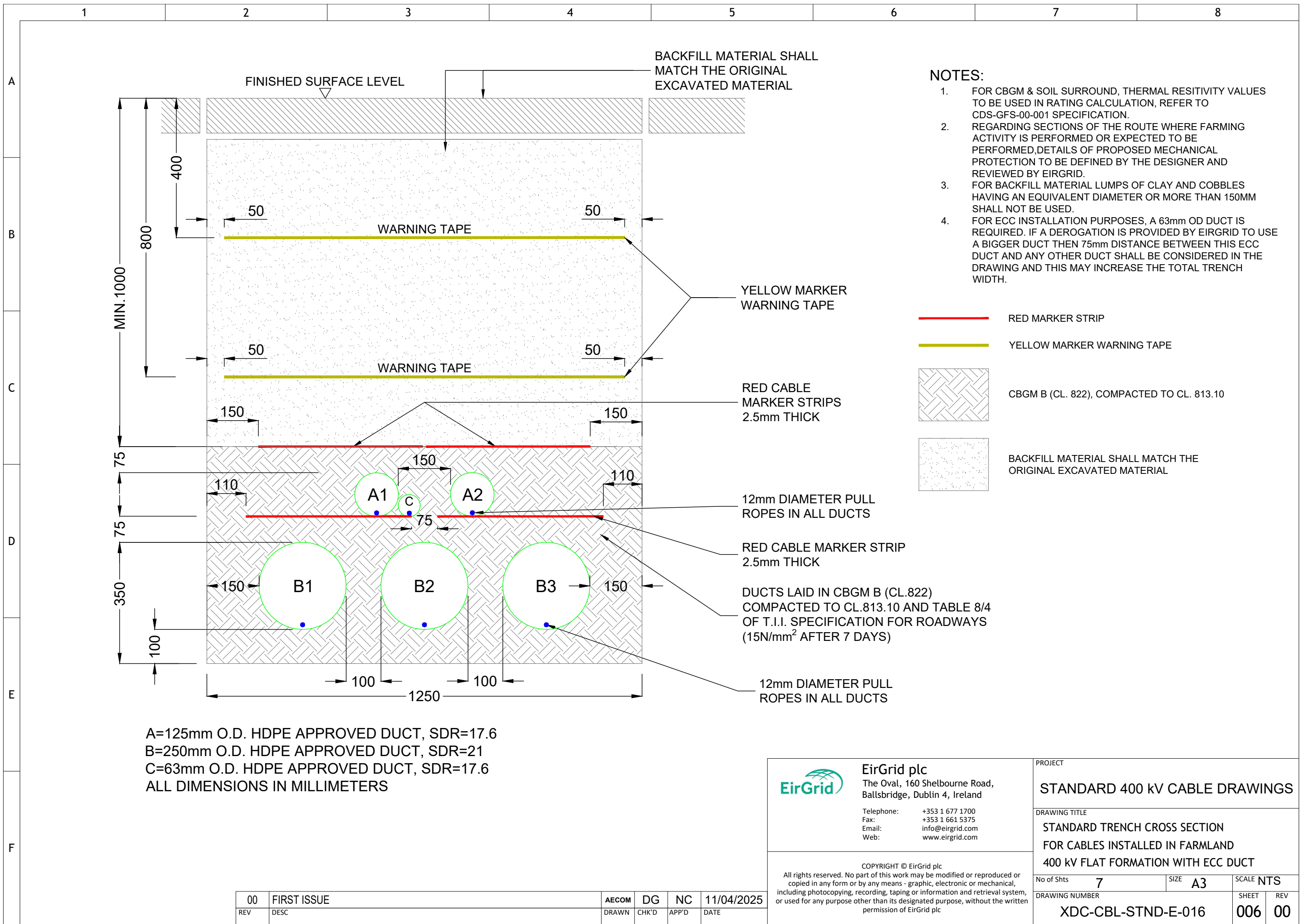
PROJECT STANDARD 400 kV CABLE DRAWINGS			
DRAWING TITLE STANDARD TRENCH CROSS SECTION FOR CABLES INSTALLED IN FARMLAND INDEX SHEET			
No of Shts	7	SIZE	A3
SCALE		NTS	
DRAWING NUMBER XDC-CBL-STND-E-016		SHEET 001	REV 00



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		DRAWING TITLE STANDARD TRENCH CROSS SECTION FOR CABLES INSTALLED IN FARMLAND 400 kV FLAT FORMATION WITH ECC DUCT	
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		DRAWING NUMBER XDC-CBL-STND-E-016	SCALE NTS
		SHEET 006	REV 00

00	FIRST ISSUE	AECOM	DG	NC	11/04/2025
REV	DESC	DRAWN	CHK'D	APP'D	DATE

