STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING ABOVE
3rd PARTY SERVICE FOR 125mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-001	001	STANDARD 3rd PARTY CROSSING 125mm INDEX SHEET	00
XDC-CBL-STND-H-001	002	STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 125mm HV DUCTS	00
XDC-CBL-STND-H-001	003	STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 125mm HV DUCTS	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

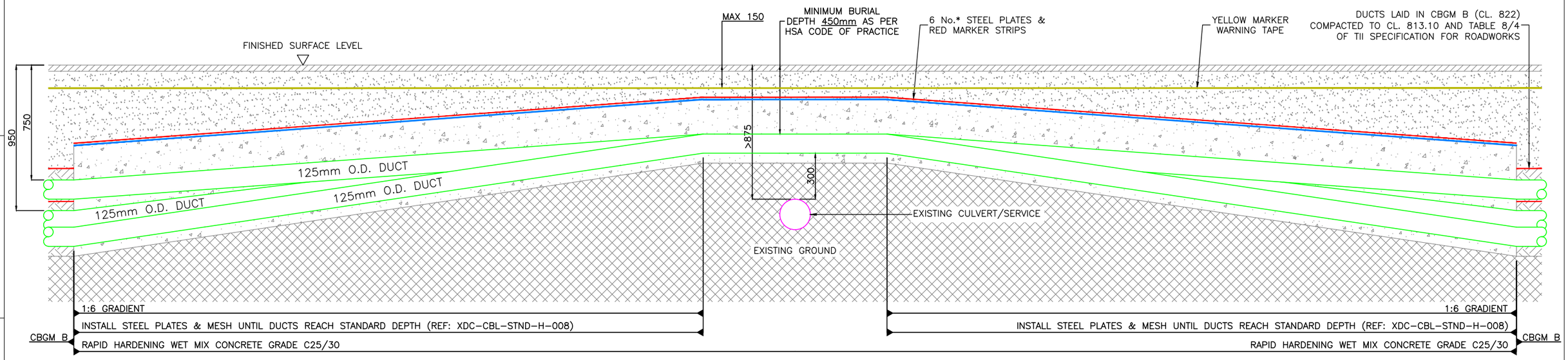
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
125mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-001	001	00

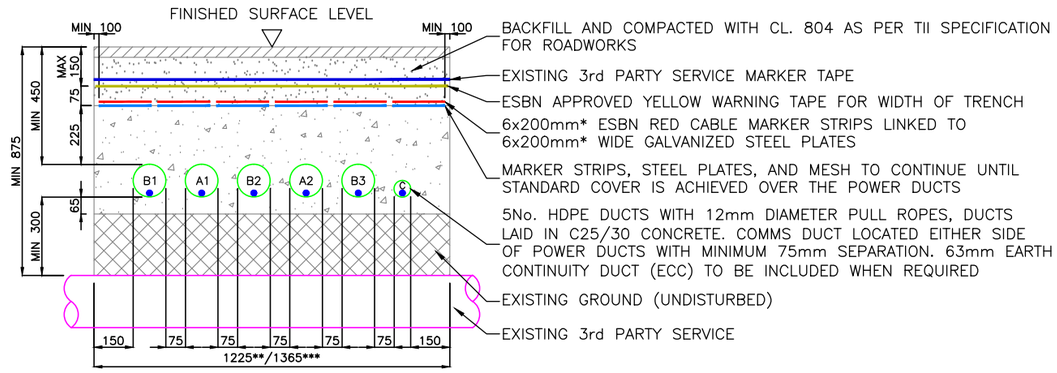


NOTES:

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. SPACING OF 25mm 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, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- 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, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATES AND RE MARKERS AND WHERE ECC IS NOT REQUIRED
** MIN 1225mm WHERE ECC NOT REQUIRED
*** SEE NOTE 9

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

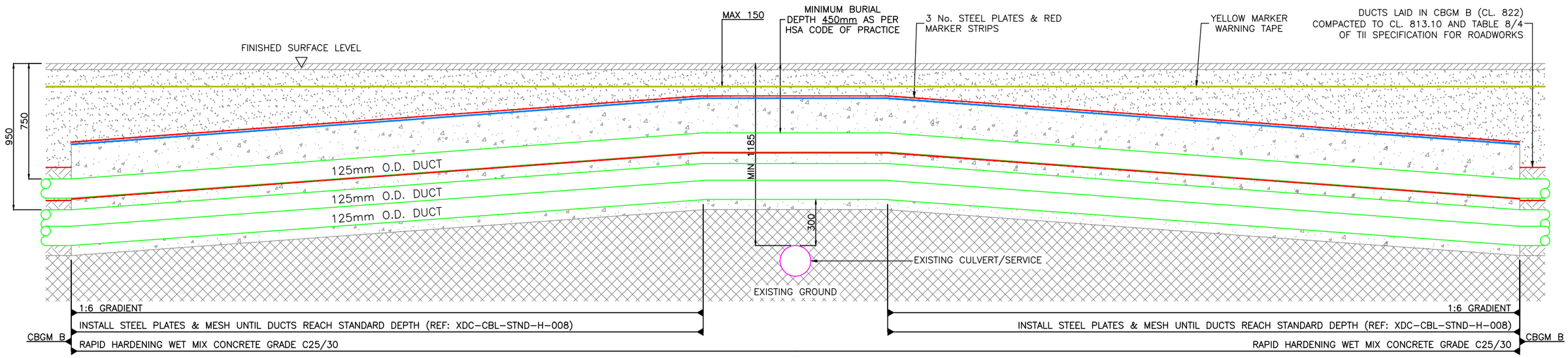
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 125mm HV DUCTS

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-001	002	00

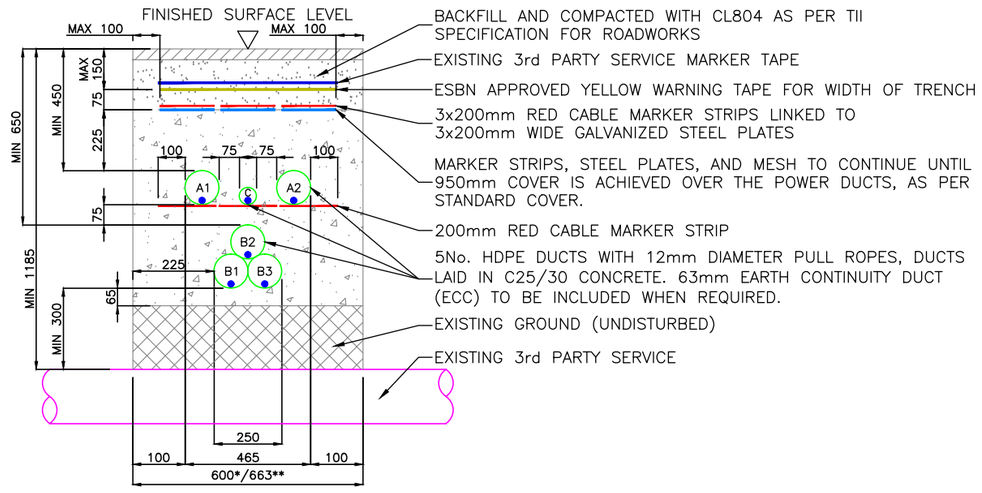


NOTES:

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. SPACING OF 25mm 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, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- 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, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 9

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 125mm HV DUCTS

No of Shts	SIZE	SCALE	
3	A3	N/A	
DRAWING NUMBER		SHEET	REV
XDC-CBL-STND-H-001		003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING ABOVE
3rd PARTY SERVICE FOR 160mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-002	001	STANDARD 3rd PARTY CROSSING 160mm INDEX SHEET	00
XDC-CBL-STND-H-002	002	STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 160mm HV DUCTS	00
XDC-CBL-STND-H-002	003	STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 160mm HV DUCTS	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

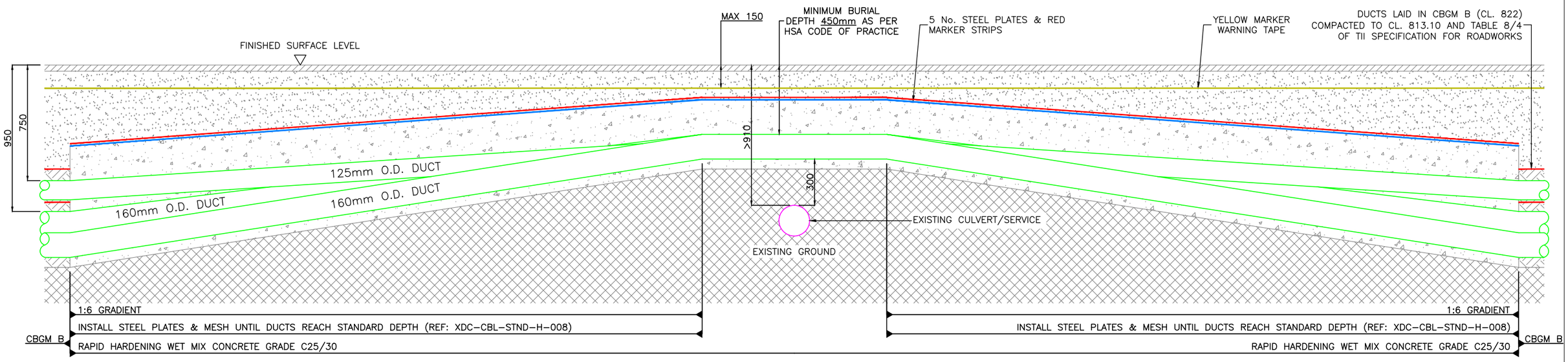
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
160mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-002	001	00

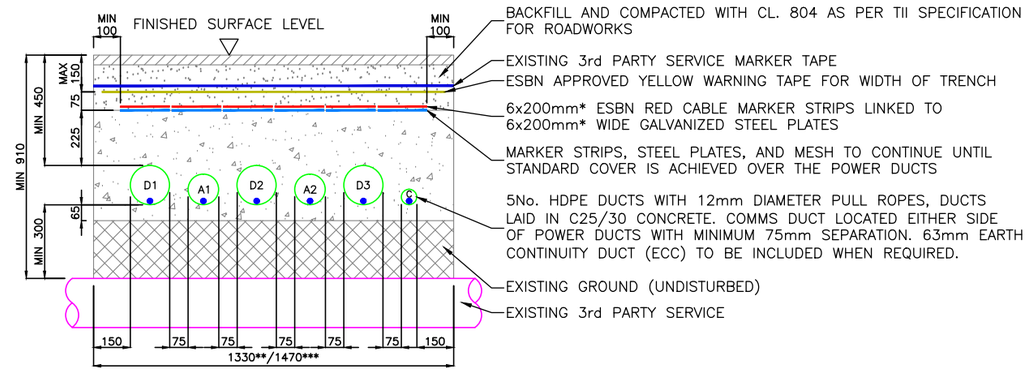


NOTES:

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. 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, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- 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, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATES AND RED MARKER WHERE AND ECC IS NOT REQUIRED
** MIN 1225mm WHERE ECC NOT REQUIRED
*** SEE NOTE 9

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

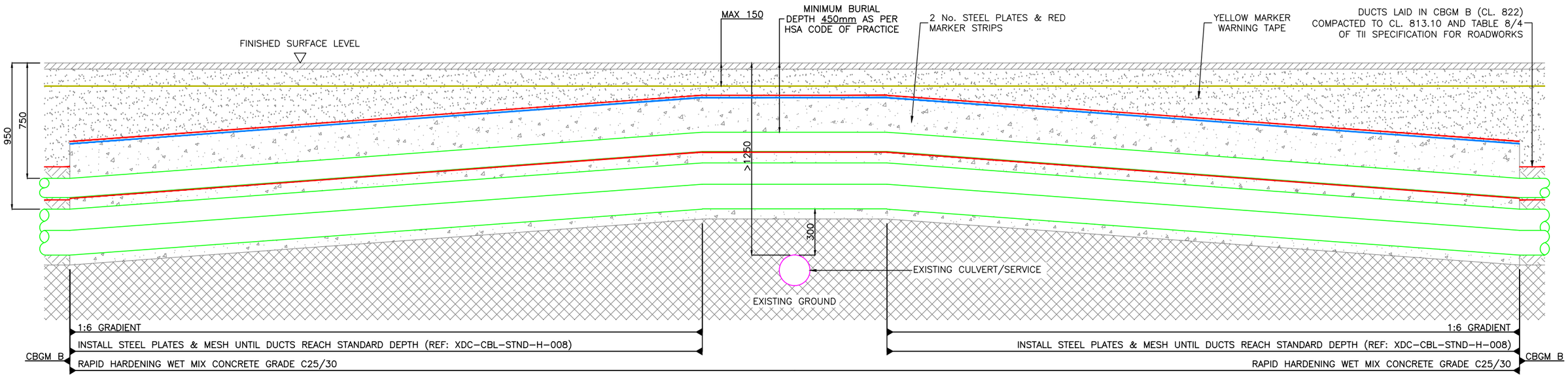
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN FULL FLAT FORMATION 160mm HV DUCTS

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-002	002	00

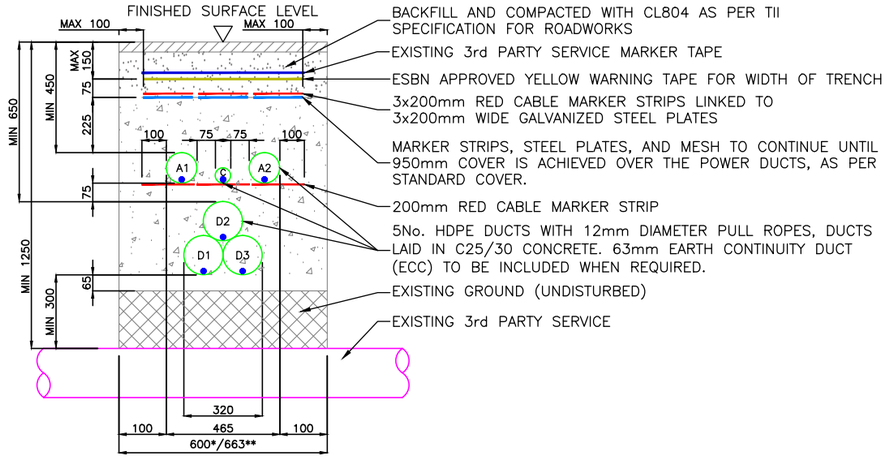


NOTES:

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. 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, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. MINIMUM BURIAL DEPTH IS 450mm.
8. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
9. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.

- 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, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION – REDUCED DEPTH FOR CROSSING OVER 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. PVC DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 9

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING ABOVE IN TREFOIL FORMATION 160mm HV DUCTS

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-002	003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING BELOW
3rd PARTY SERVICE FOR 125mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-003	001	STANDARD 3rd PARTY CROSSING 125mm INDEX SHEET	00
XDC-CBL-STND-H-003	002	STANDARD 3rd PARTY CROSSING 125mm BELOW IN FULL FLAT FORMATION	00
XDC-CBL-STND-H-003	003	STANDARD 3rd PARTY CROSSING 125mm BELOW IN TREFOIL FORMATION	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

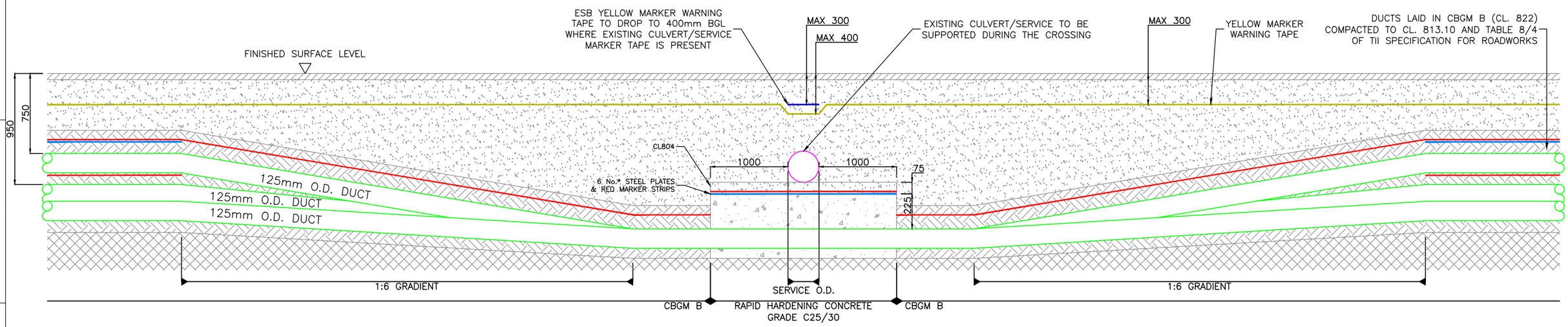
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
125mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-003	001	00

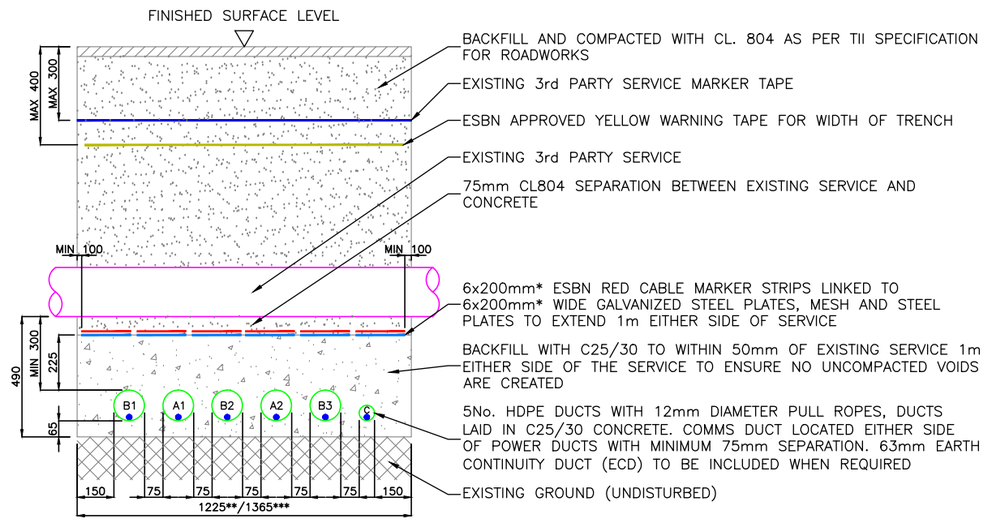


NOTES:

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. SPACING OF 25mm 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, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (TO BE CONFIRMED BY DESIGNER CABLE RATING CALCULATIONS).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
8. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
9. 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, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATES AND RED MARKER WHERE ECC IS NOT REQUIRED
** MIN 1225mm WHERE ECC NOT REQUIRED
*** SEE NOTE 8

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

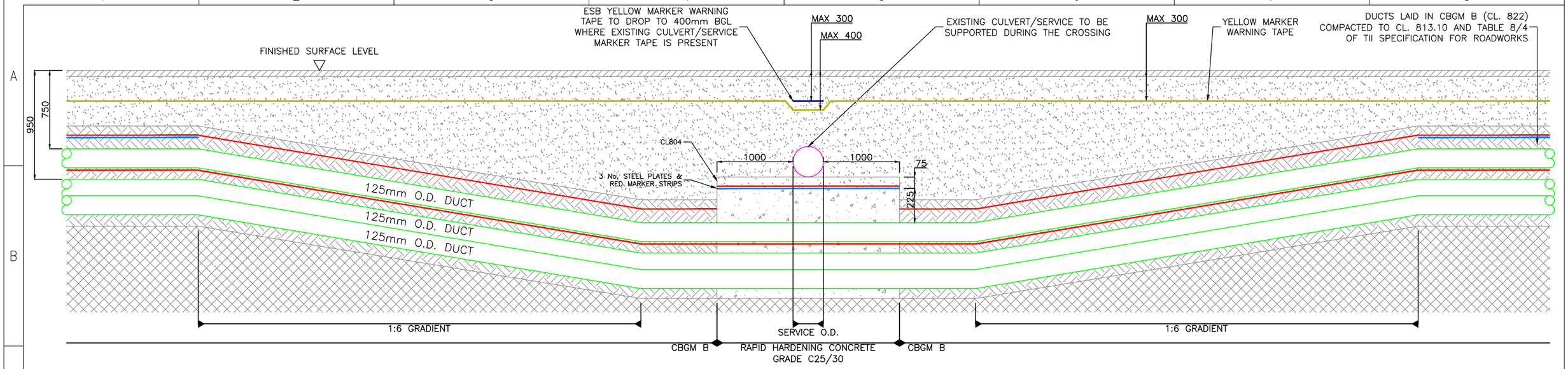
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 125mm BELOW IN FULL FLAT FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-003	002	00

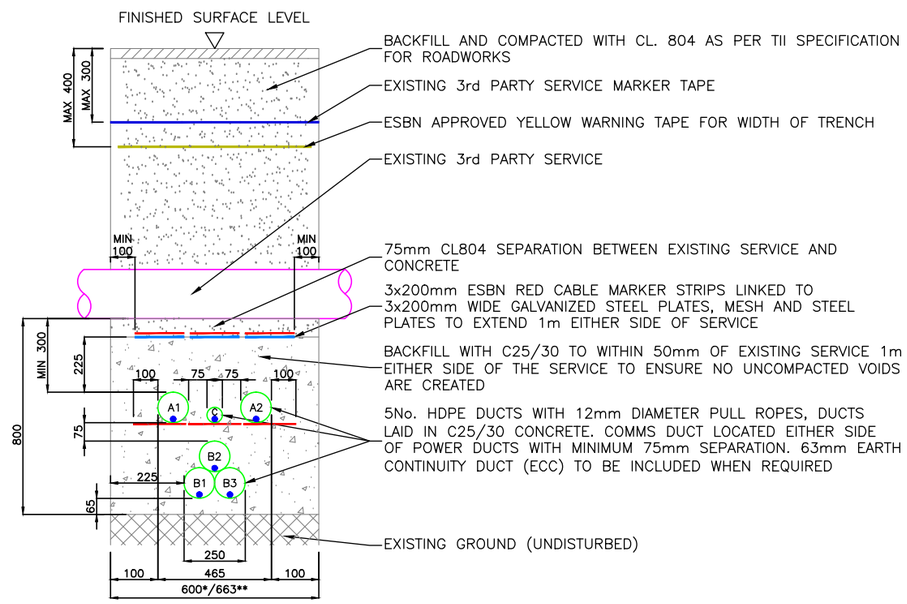


NOTES:

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. SPACING OF 25mm 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 REQUIRED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION IN CBGM. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED DURING DUCT INSTALLATION IN WET CONCRETE.
7. HAND DIG WITHIN 500mm OF EXISTING SERVICE.
8. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
9. 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, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 8

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 125mm BELOW IN TREFOIL FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-003	003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING BELOW
3rd PARTY SERVICE FOR 160mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-004	001	STANDARD 3rd PARTY CROSSING 160mm INDEX SHEET	00
XDC-CBL-STND-H-004	002	STANDARD 3rd PARTY CROSSING 160mm BELOW IN FULL FLAT FORMATION	00
XDC-CBL-STND-H-004	003	STANDARD 3rd PARTY CROSSING 160mm BELOW IN TREFOIL FORMATION	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

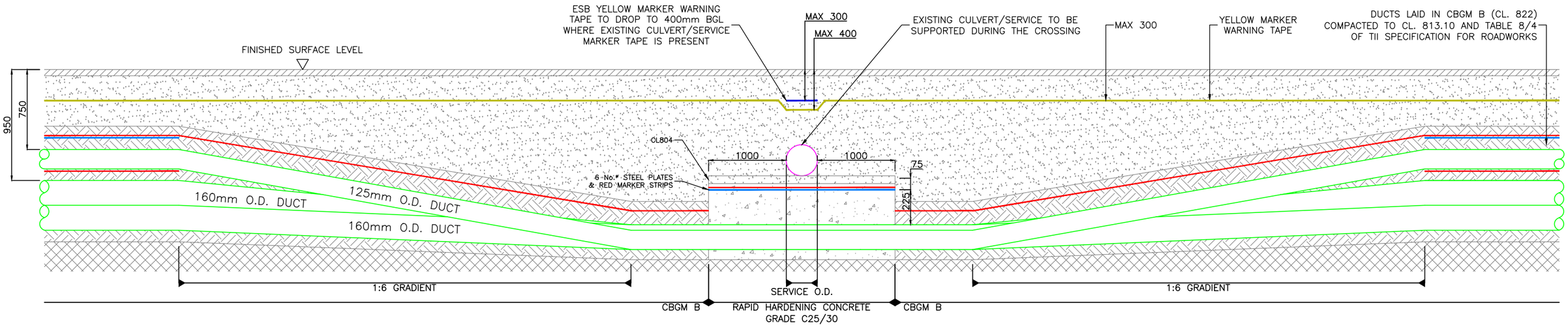
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING
160mm
INDEX SHEET

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-004	001	00

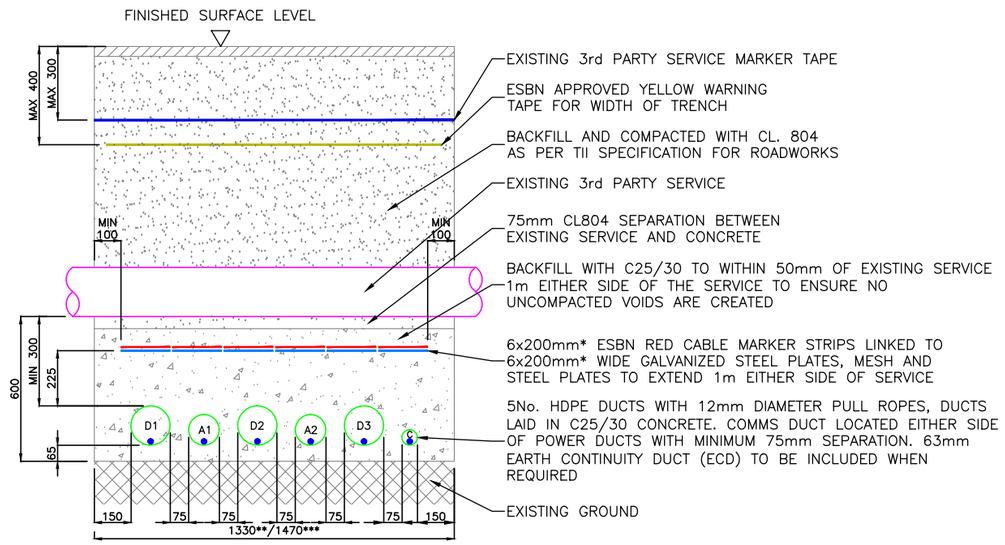


NOTES:

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. 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. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m 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. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
10. 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, COMPACTED (CL. 804)
- EXISTING GROUND

FULL FLAT FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* 5x200mm STEEL PLATE AND RED MARKER WHERE ECC IS NOT REQUIRED
** MIN 1330mm WHERE ECC NOT REQUIRED
*** SEE NOTE 9

EIRGRID
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

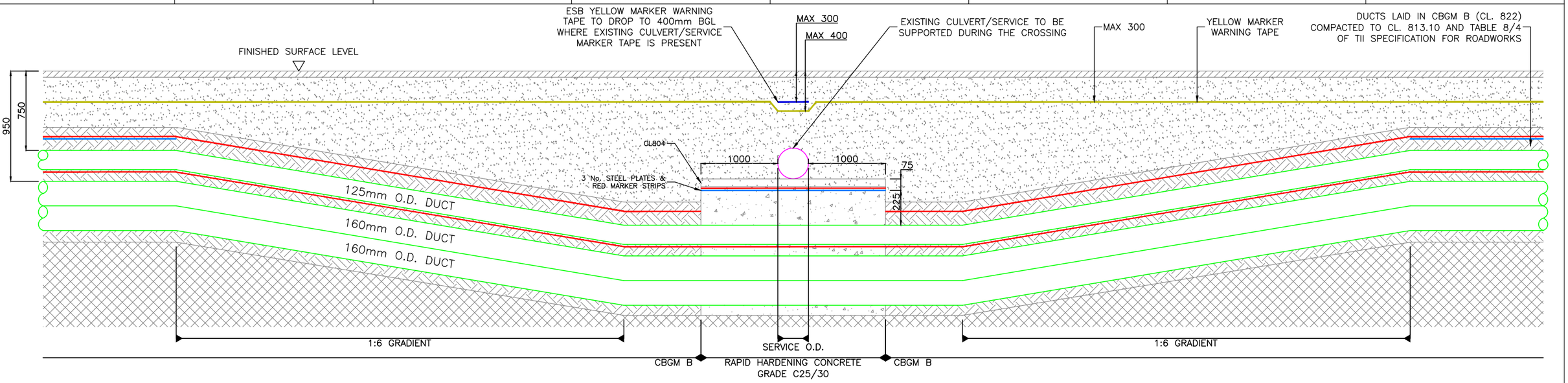
STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 160mm BELOW IN FULL FLAT FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-004	002	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

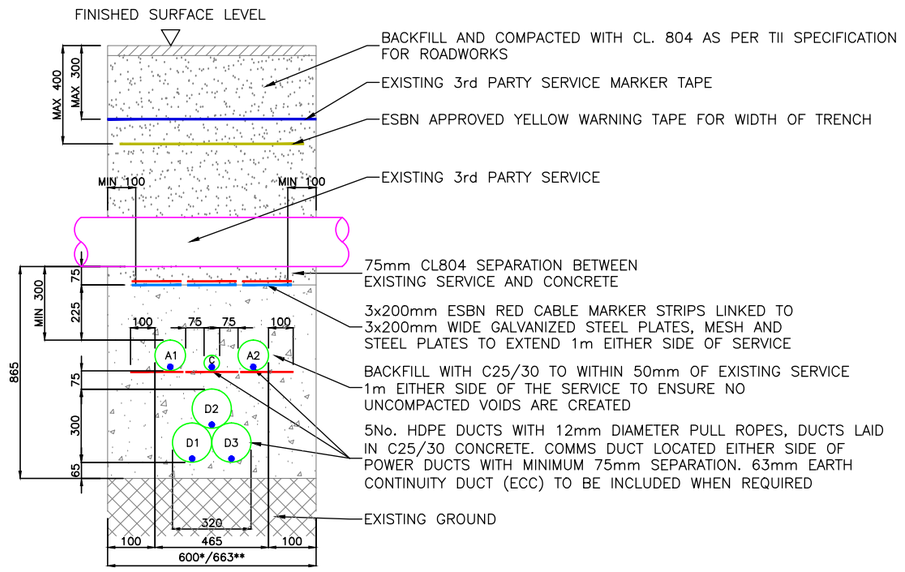


NOTES:

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. 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. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m 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. WHERE AN EARTH CONTINUITY CONDUCTOR (ECC) IS REQUIRED, A MIN 63mm DUCT TO BE INSTALLED OUTSIDE OF PHASE DUCT.
10. 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, COMPACTED (CL. 804)
- EXISTING GROUND

TREFOIL FORMATION FOR CROSSING BELOW 3RD PARTY SERVICE



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
D= 160mm O.D. HDPE DUCT FOR HV CABLE
C= 63mm O.D. HDPE DUCT FOR EARTH CONTINUITY CONDUCTOR

* MIN 600mm WHERE ECC NOT REQUIRED
** SEE NOTE 9

EIRGRID
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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD 3rd PARTY CROSSING 160mm BELOW IN TREFOIL FORMATION

No of Shts	SIZE	SCALE
3	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-004	003	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSSING BELOW
RIVERBED FOR 125mm & 160mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-005	001	STANDARD RIVERBED CROSSING INDEX SHEET	00
XDC-CBL-STND-H-005	002	STANDARD RIVERBED CROSSING 125mm RIVERBED CROSSING	00
XDC-CBL-STND-H-005	003	STANDARD RIVERBED CROSSING 160mm RIVERBED CROSSING	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

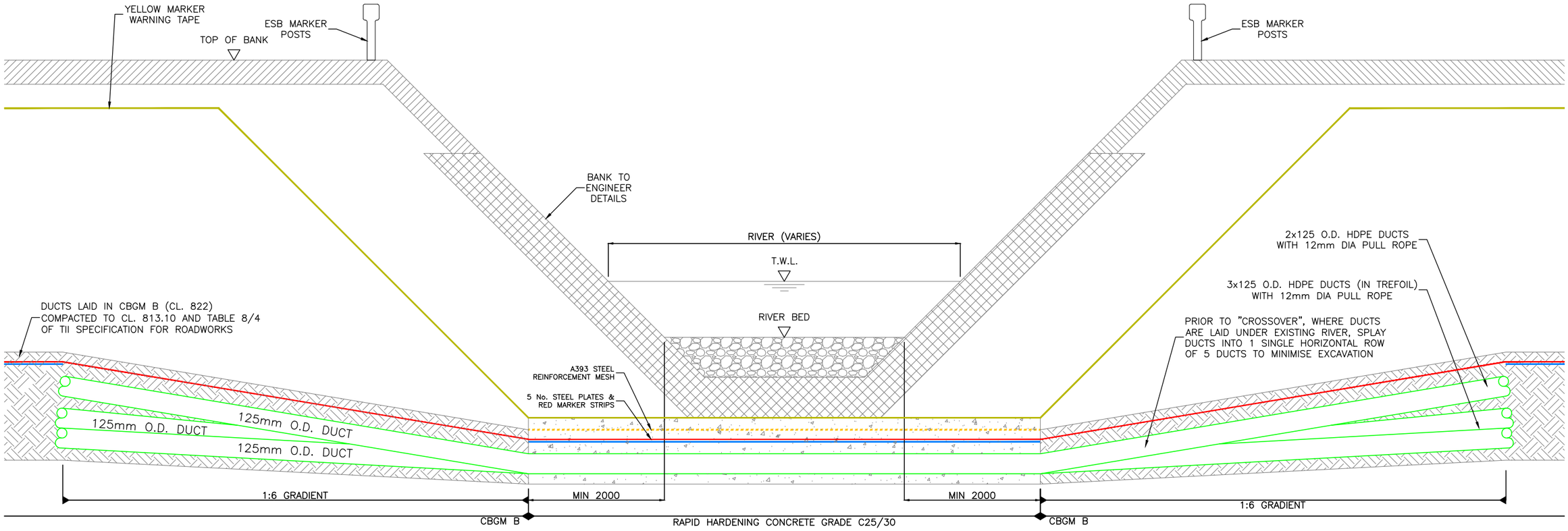
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD RIVERBED CROSSING INDEX SHEET

No of Shts 3 | SIZE A3 | SCALE N/A

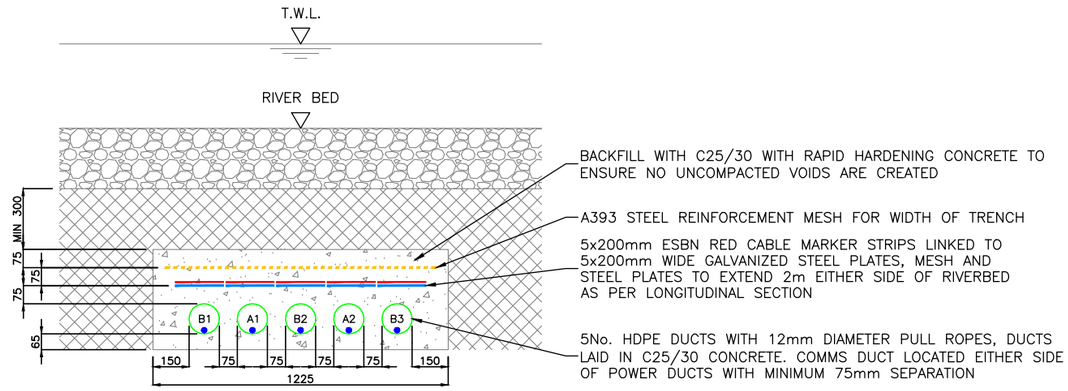
DRAWING NUMBER XDC-CBL-STND-H-005 | SHEET 001 | REV 00



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. 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, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m 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. MINIMUM CLEARANCE BETWEEN CABLE TRENCH CONCRETE AND RIVER BED TO BE AGREED WITH RELEVANT AUTHORITY. IN ANY CASE, NO LESS THAN 300mm.
9. STANDARD ESB MARKER POSTS TO BE INSTALLED AT EITHER SIDE OF RIVER CROSSING.

- 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



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 125mm O.D. HDPE DUCT FOR HV CABLE

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

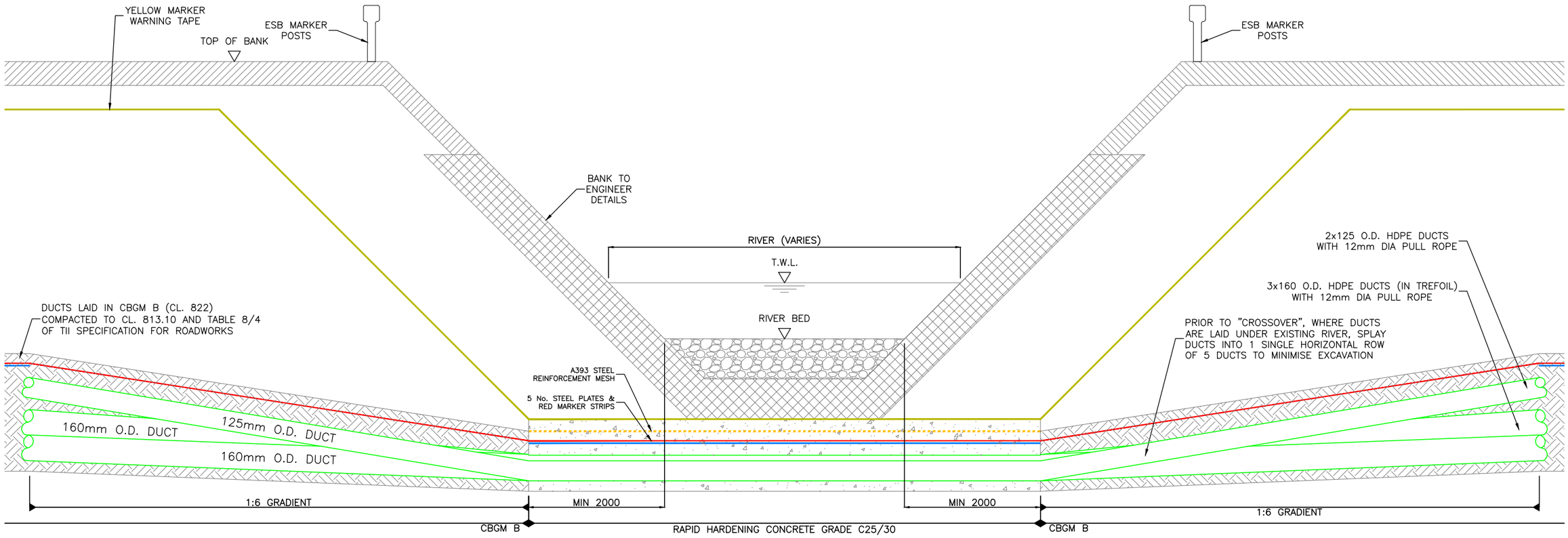
EIRGRID
EirGrid plc
The Oval, 160 Shelbourne Road,
Ballsbridge, Dublin 4, Ireland
Telephone: +353 1 677 1700
Fax: +353 1 661 5375
Email: info@eirgrid.com
Web: www.eirgrid.com

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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD RIVERBED CROSSING
125mm RIVERBED CROSSING

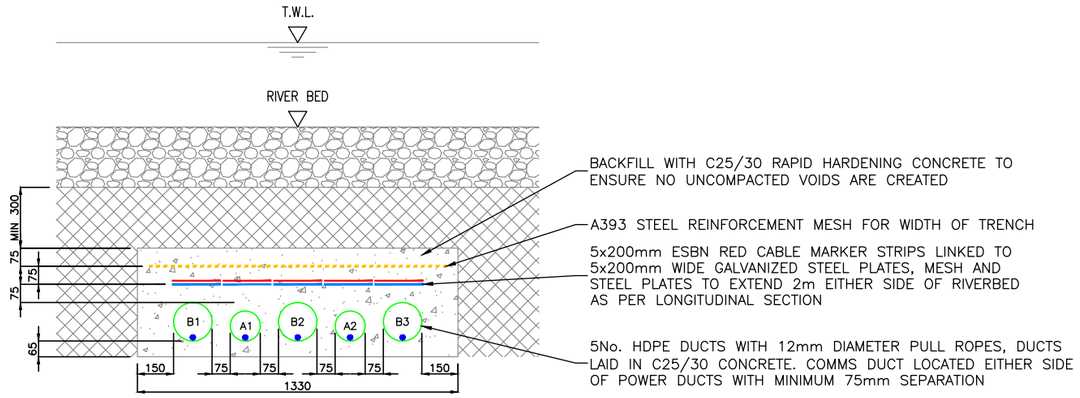
No of Shts	SIZE	SCALE	
3	A3	N/A	
DRAWING NUMBER		SHEET	REV
XDC-CBL-STND-H-005		002	00



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. 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, BUT INCREASED SPACING MAY BE REQUIRED IN ORDER TO ACHIEVE THE CABLE RATING (CABLE RATING CALCULATIONS TO BE PROVIDED FOR ACCEPTANCE).
5. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
6. TEMPLATES ARE TO BE USED AT 5m 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. MINIMUM CLEARANCE BETWEEN CABLE TRENCH CONCRETE AND RIVER BED TO BE AGREED WITH RELEVANT AUTHORITY.
9. STANDARD ESB MARKER POSTS TO BE INSTALLED AT EITHER SIDE OF RIVER CROSSING.

- 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



A= 125mm O.D. HDPE DUCT FOR COMMUNICATIONS
B= 160mm O.D. HDPE DUCT FOR HV CABLE

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD RIVERBED CROSSING
160mm RIVERBED CROSSING

No of Shts	SIZE	SCALE	
3	A3	N/A	
DRAWING NUMBER		SHEET	REV
XDC-CBL-STND-H-005		003	00

STANDARD 110kV CABLE DRAWINGS
STANDARD BRIDGE CROSSING

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-006	001	BRIDGE CROSSING INDEX SHEET	00
XDC-CBL-STND-H-006	002	BRIDGE CARRIAGEWAY STANDARD 110kV CABLE TRENCH	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

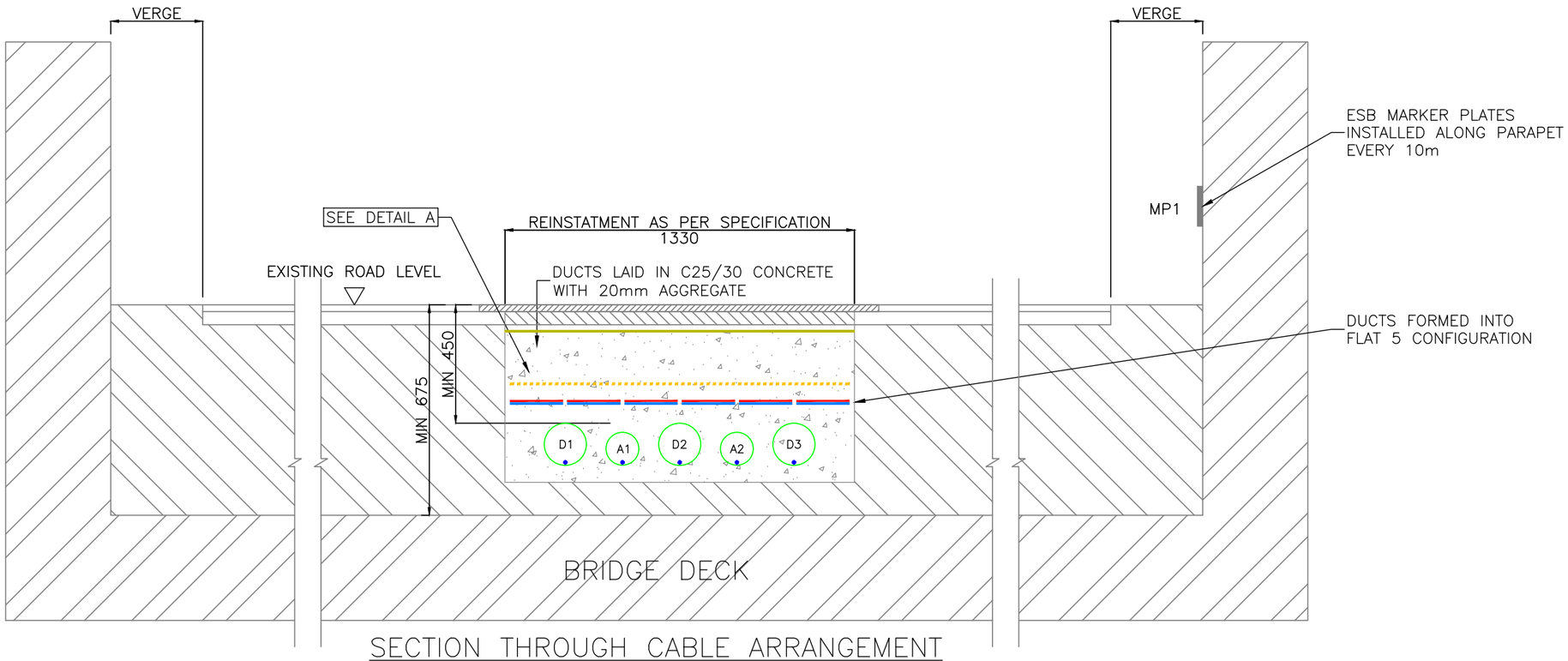
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
BRIDGE CROSSING
INDEX SHEET

No of Shts	SIZE	SCALE
2	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-006	001	00



SECTION THROUGH CABLE ARRANGEMENT

NOTES:

1. THE REQUIREMENT FOR THE BRIDGE INSTALLATION SHALL BE AGREED IN ADVANCE BY THE CUSTOMER WITH THE LOCAL AUTHORITY, OR RELEVANT PUBLIC/PRIVATE BODY.
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) AND BRITISH STANDARDS.
3. REINSTATEMENT TO BE AS PER TII SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN NATIONAL ROADS. WHERE ENTIRE ROAD TO BE RELAID IT IS TO BE DONE AS PER NRA SPECIFICATION FOR ROADWORKS.
4. 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.
5. STEEL PLATES MUST COVER DUCTS. SPACING OF 10mm TO BE MAINTAINED BETWEEN STEEL PLATES TO PREVENT THE TRANSFER OF STRAY CURRENT.
6. 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).
7. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
8. TEMPLATES ARE TO BE USED AT 5m INTERVALS DURING DUCT INSTALLATION. PRE-MADE 75mm WIDE CONCRETE SPACERS TO BE USED FOR INSTALLATION IN WET CONCRETE.
9. MINIMUM BURIAL DEPTH IS 450mm.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

A393 STEEL MESH

6mm STEEL PLATE

DETAIL A

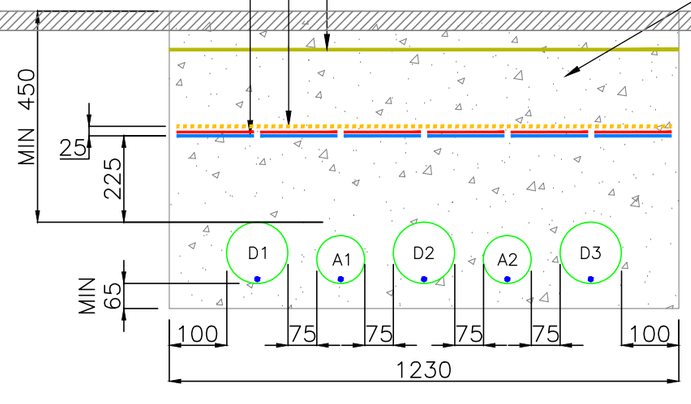
HEAVY DUTY 6X200mm WIDE GALVANISED STEEL PLATES WITH RED MARKER STRIP FIXED TO THE TOP SURFACE TO BE INSTALLED UNTIL STANDARD COVER IS ACHIEVED OVER HV DUCTS AND COMMUNICATION DUCTS

A393 MESH TO BE INSTALLED UNTIL STANDARD COVER IS ACHIEVED OVER HV DUCTS AND COMMUNICATION DUCTS

4x400mm ESBN YELLOW WARNING TAPE ACROSS FULL WIDTH OF TRENCH

C25/30 CONCRETE TO BE IN ACCORDANCE WITH SPECIFICATION FOR ROAD WORKS 1000. 20mm MAX SIZE OF AGGREGATE, WITH MINIMUM DUCT SPACING OF 75mm. A393 ALSO TO BE IN ACCORDANCE WITH SPECIFICATION FOR ROADWORKS

450mm IS THE MINIMUM ACCEPTABLE CLEARANCE DIMENSION FROM THE ROAD SURFACE TO THE TOP OF THE HIGHEST DUCT ON A BRIDGE CROSSING WHERE THE CABLE TRENCH IS IN THE CARRIAGEWAY



A= 125mm O.D. DUCT TO BE HDPE ESB APPROVED FOR COMMUNICATIONS
B/D= 125/160mm O.D. HDPE ESB APPROVED DUCT FOR HV CABLE (OVERALL TRENCH WIDTH MAY CHANGE IF DUCTS ARE 160mm O.D. BUT 75mm DISTANCE REQUIREMENT BETWEEN DUCTS TO BE MAINTAINED)

PROPOSED FLAT 5 CONFIGURATION OVER BRIDGES WITH SHALLOW COVER – WITHIN CARRRIAGEWAY

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
BRIDGE CARRIAGEWAY
STANDARD 110kV CABLE TRENCH

No of Shts	SIZE	SCALE
2	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-006	002	00

STANDARD 110kV CABLE DRAWINGS
STANDARD CROSS SECTIONS
125mm AND 160mm DUCTS

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-008	001	STANDARD CROSS SECTIONS INDEX SHEET	00
XDC-CBL-STND-H-008	002	TRENCH CROSS SECTION FOR 125mm POWER DUCTS IN TREFOIL FORMATION	00
XDC-CBL-STND-H-008	003	TRENCH CROSS SECTION FOR 160mm POWER DUCTS IN TREFOIL FORMATION	00
XDC-CBL-STND-H-008	004	TRENCH CROSS SECTION FOR 125mm POWER DUCTS IN FLAT FORMATION	00
XDC-CBL-STND-H-008	005	TRENCH CROSS SECTION FOR 160mm POWER DUCTS IN FLAT FORMATION	00
XDC-CBL-STND-H-008	006	TRENCH CROSS SECTION FOR 125mm POWER DUCTS WITH EARTH CONTINUITY DUCT – TREFOIL FORMATION	00
XDC-CBL-STND-H-008	007	TRENCH CROSS SECTION FOR 160mm POWER DUCTS WITH EARTH CONTINUITY DUCT – TREFOIL FORMATION	00
XDC-CBL-STND-H-008	008	TRENCH CROSS SECTION FOR 125mm POWER DUCTS WITH EARTH CONTINUITY DUCT – FLAT FORMATION	00
XDC-CBL-STND-H-008	009	TRENCH CROSS SECTION FOR 160mm POWER DUCTS WITH EARTH CONTINUITY DUCT – FLAT FORMATION	00

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

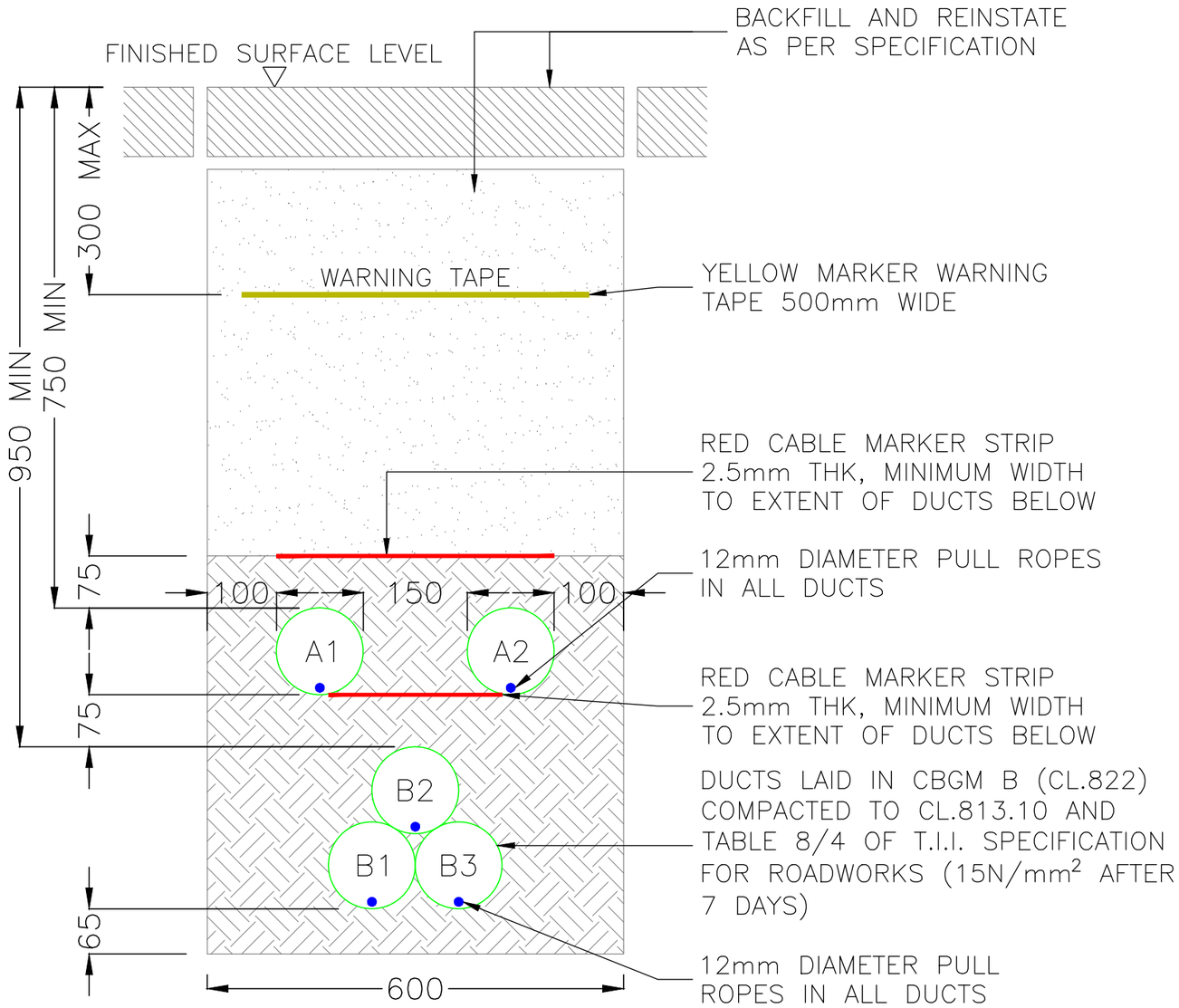
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
STANDARD CROSS SECTIONS
INDEX SHEET

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-008	001	00



NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
B=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
ALL DIMENSIONS IN MILLIMETERS

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

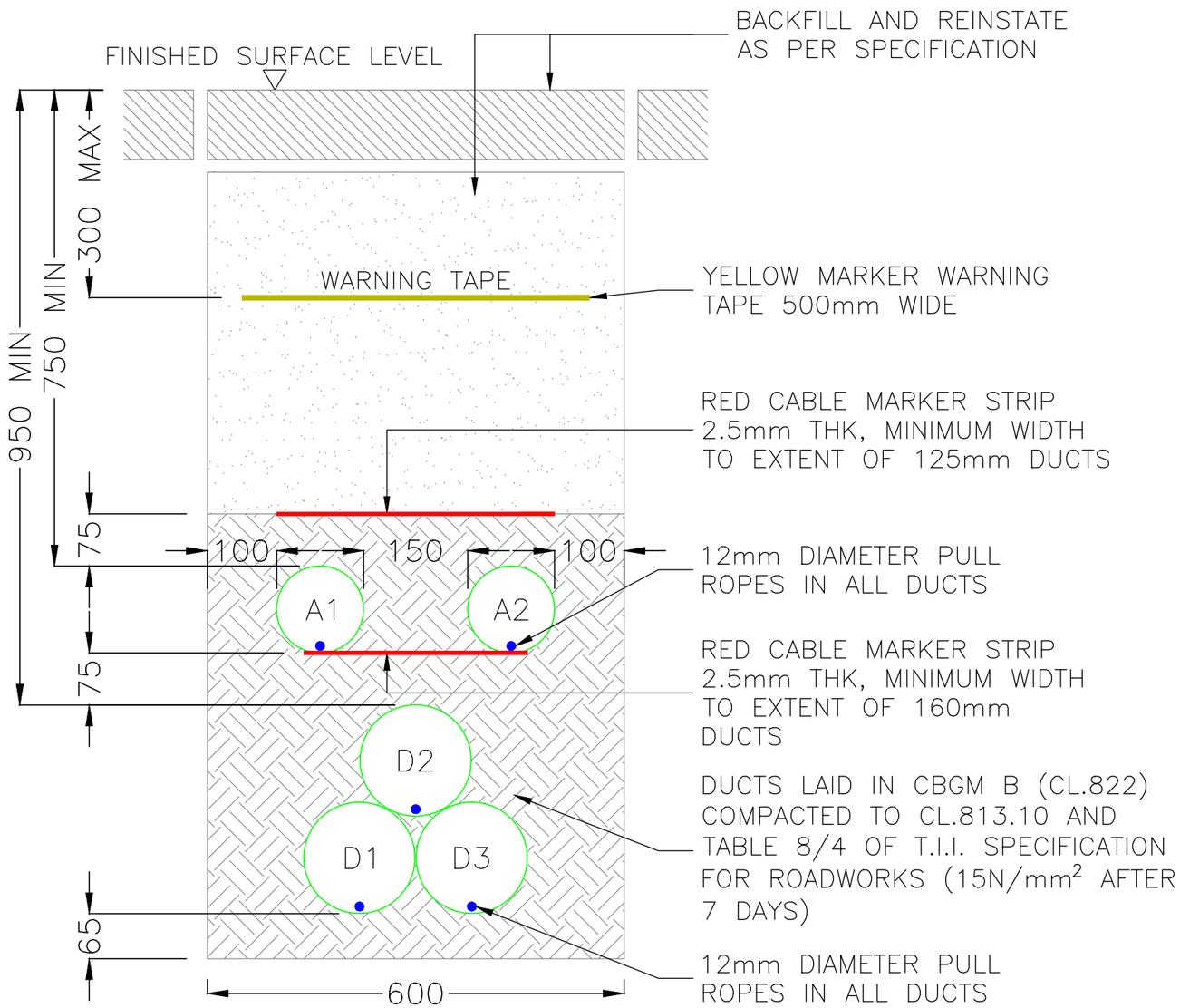
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 125mm POWER DUCTS IN TREFOIL FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	002	00



NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
D=160mm O.D. HDPE ESB APPROVED DUCT, SDR=21
ALL DIMENSIONS IN MILLIMETERS

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

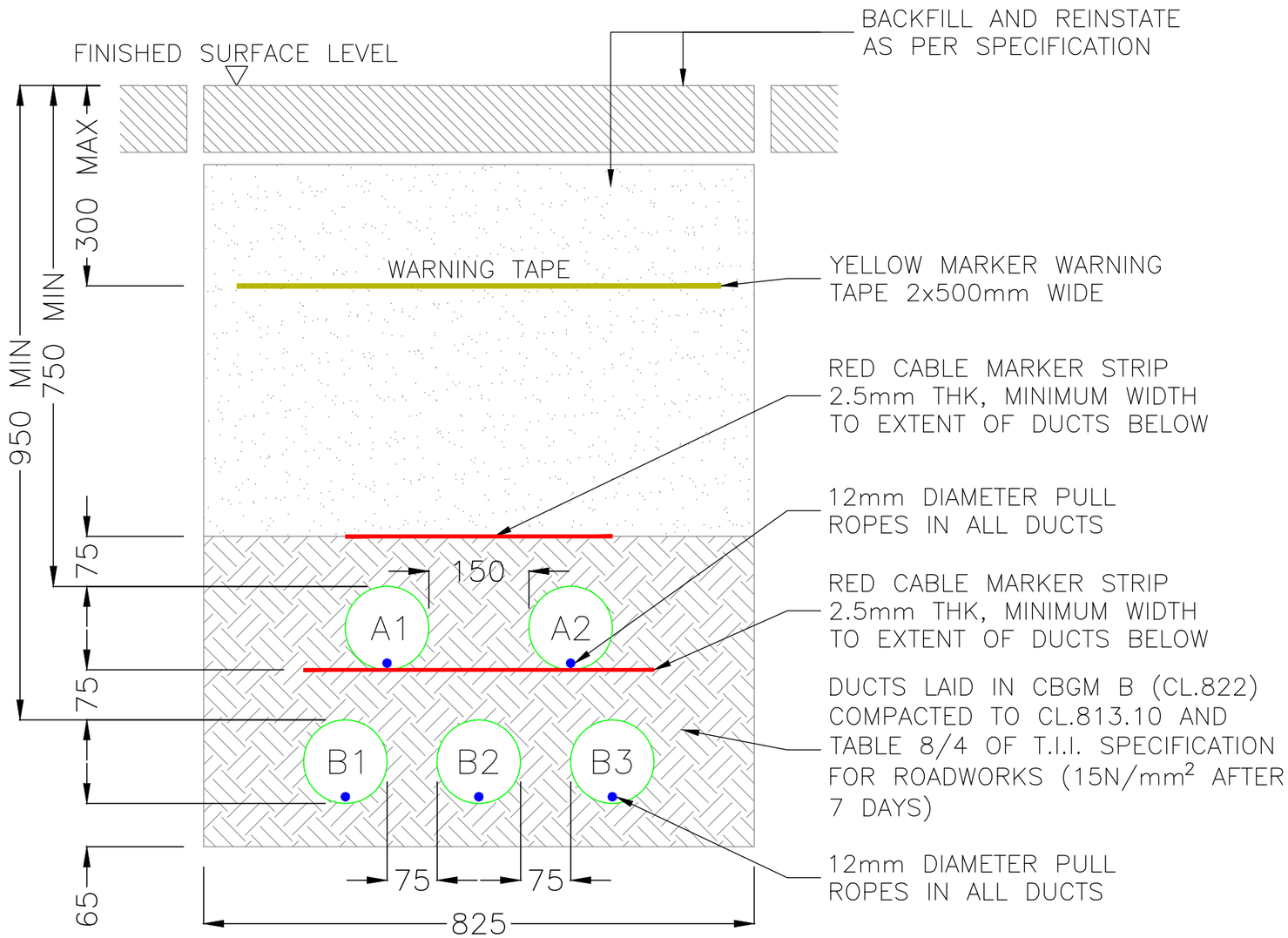
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 160mm POWER DUCTS IN TREFOIL FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	003	00



A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
B=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
ALL DIMENSIONS IN MILLIMETERS

NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

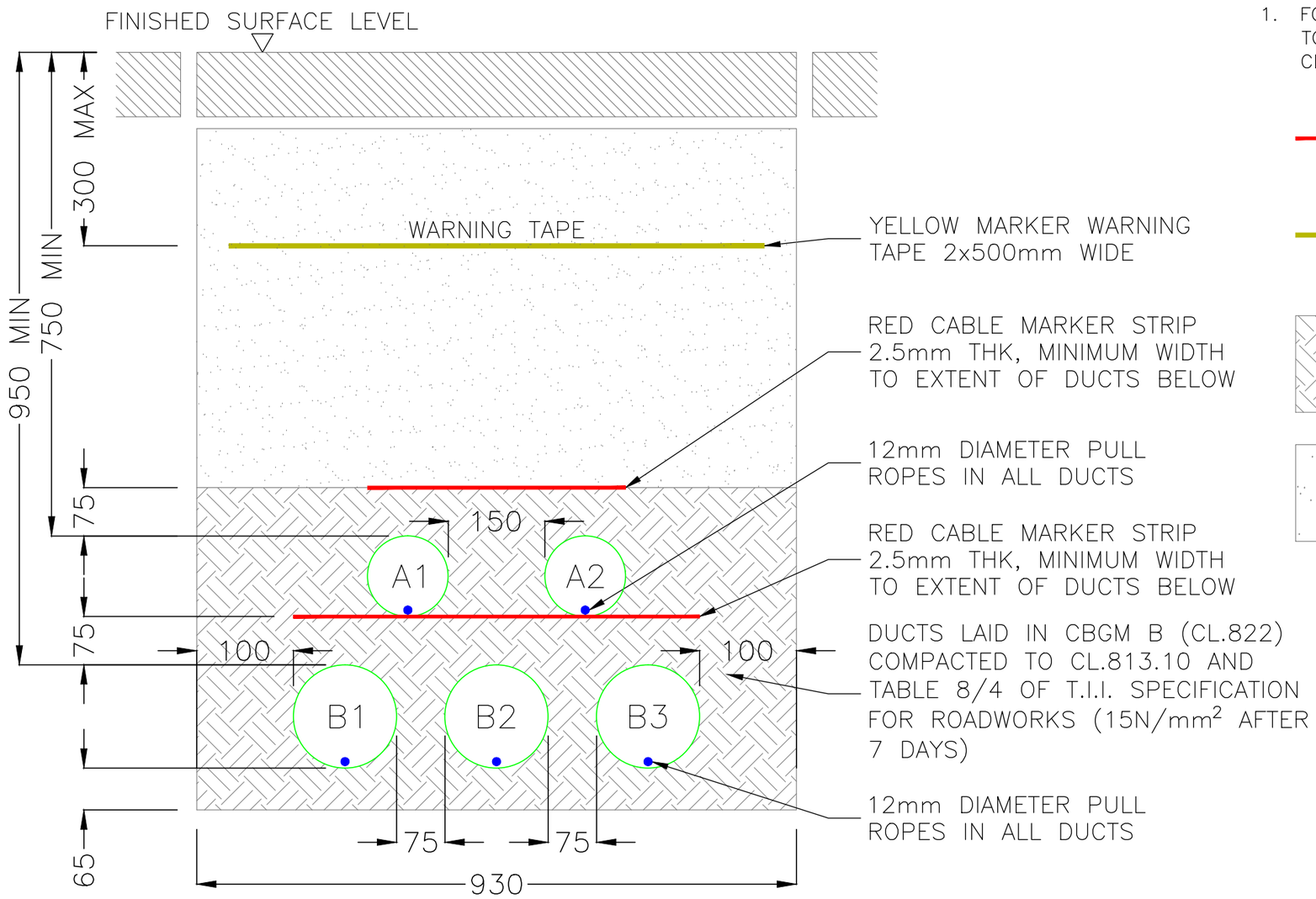
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 125mm POWER DUCTS IN FLAT FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	004	00



NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
D=160mm O.D. HDPE ESB APPROVED DUCT, SDR=21
ALL DIMENSIONS IN MILLIMETERS

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

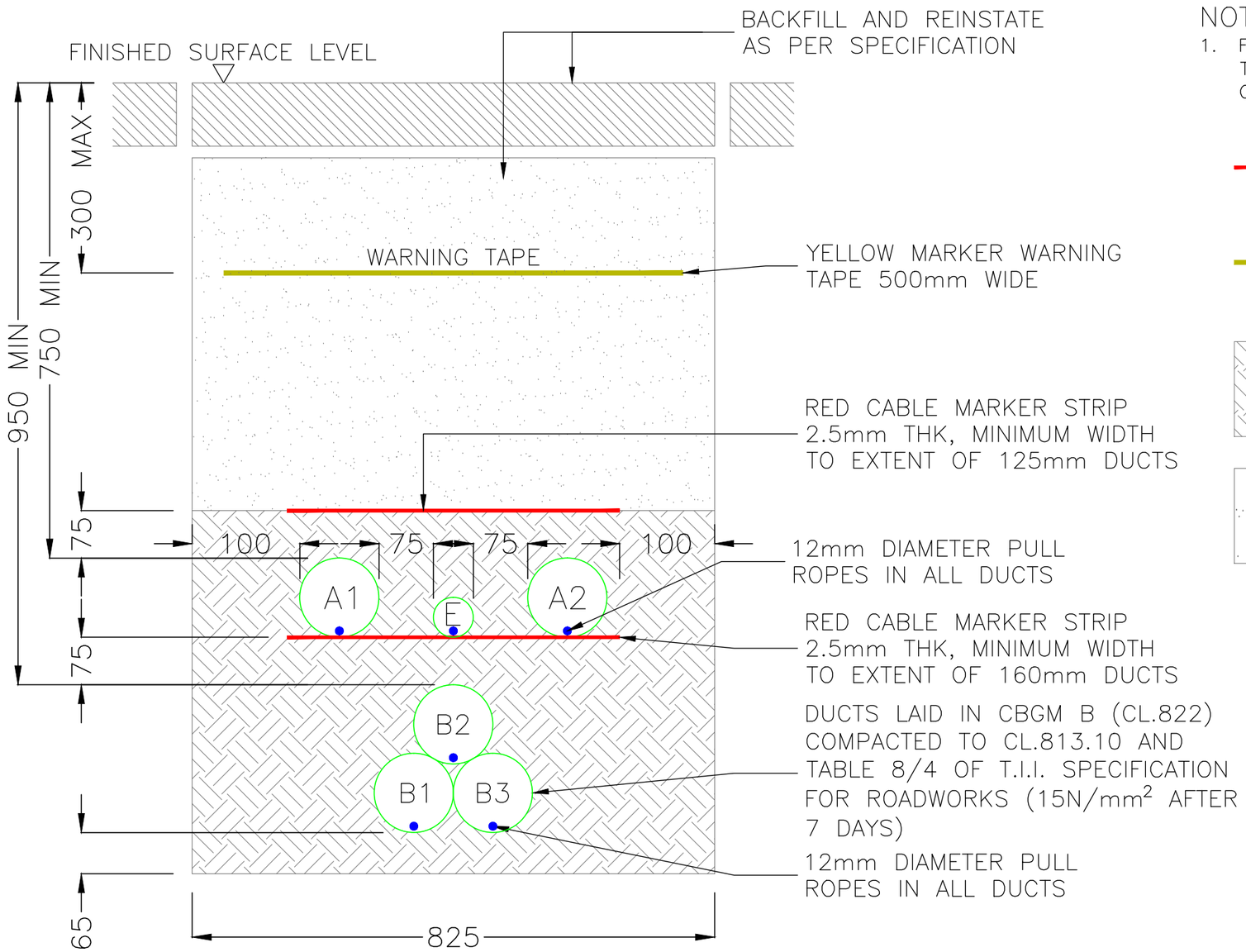
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 160mm POWER DUCTS IN FLAT FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	005	00



NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
B=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
E*=MIN 63mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
*DUCT TO BE USED FOR EARTH CONTINUITY CONDUCTOR
ALL DIMENSIONS IN MILLIMETERS

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

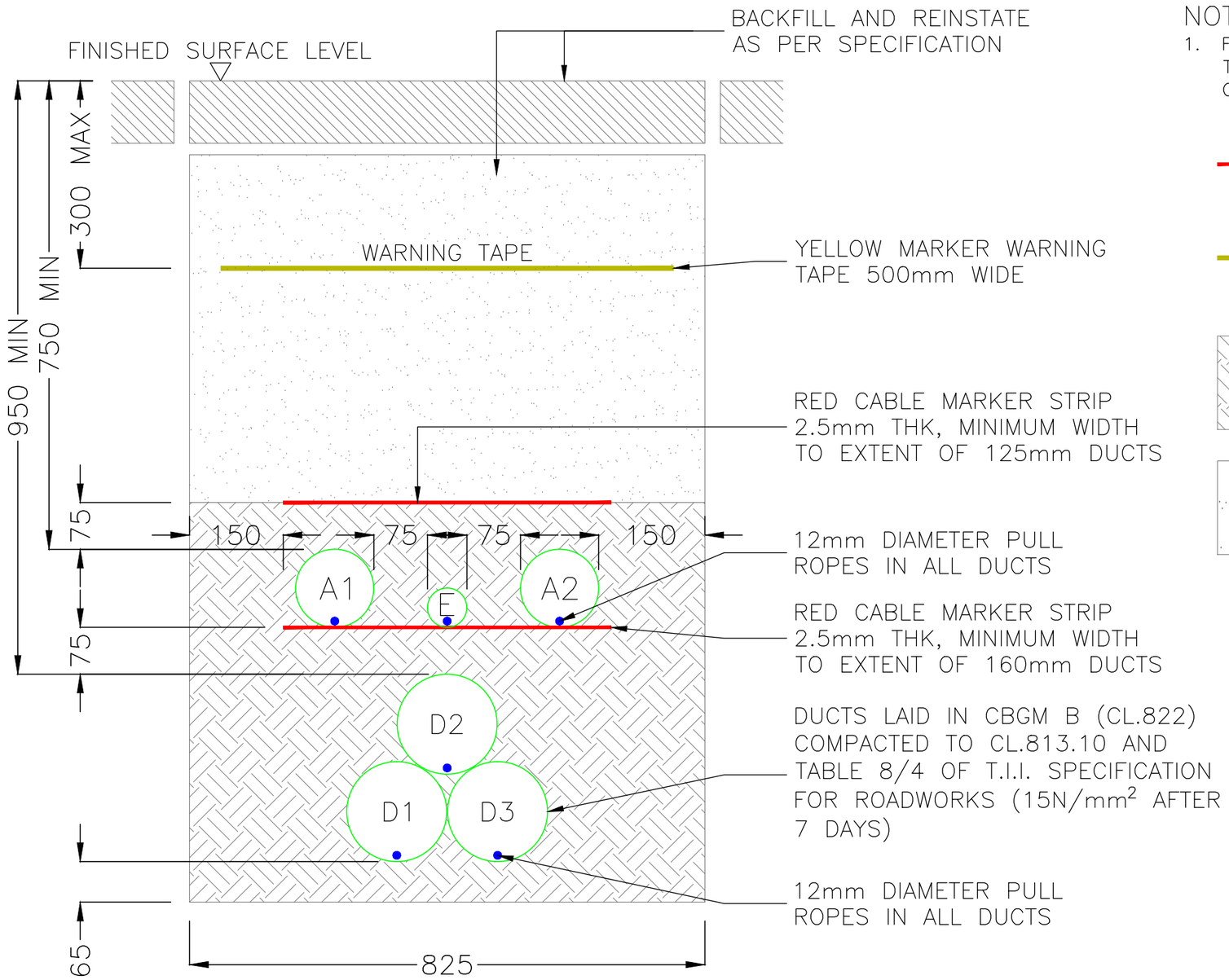
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 125mm POWER DUCTS WITH EARTH CONTINUITY DUCT – TREFOIL FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	006	00



NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
D=160mm O.D. HDPE ESB APPROVED DUCT, SDR=21
E*=MIN 63mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
*DUCT TO BE USED FOR EARTH CONTINUITY CONDUCTOR
ALL DIMENSIONS IN MILLIMETERS

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

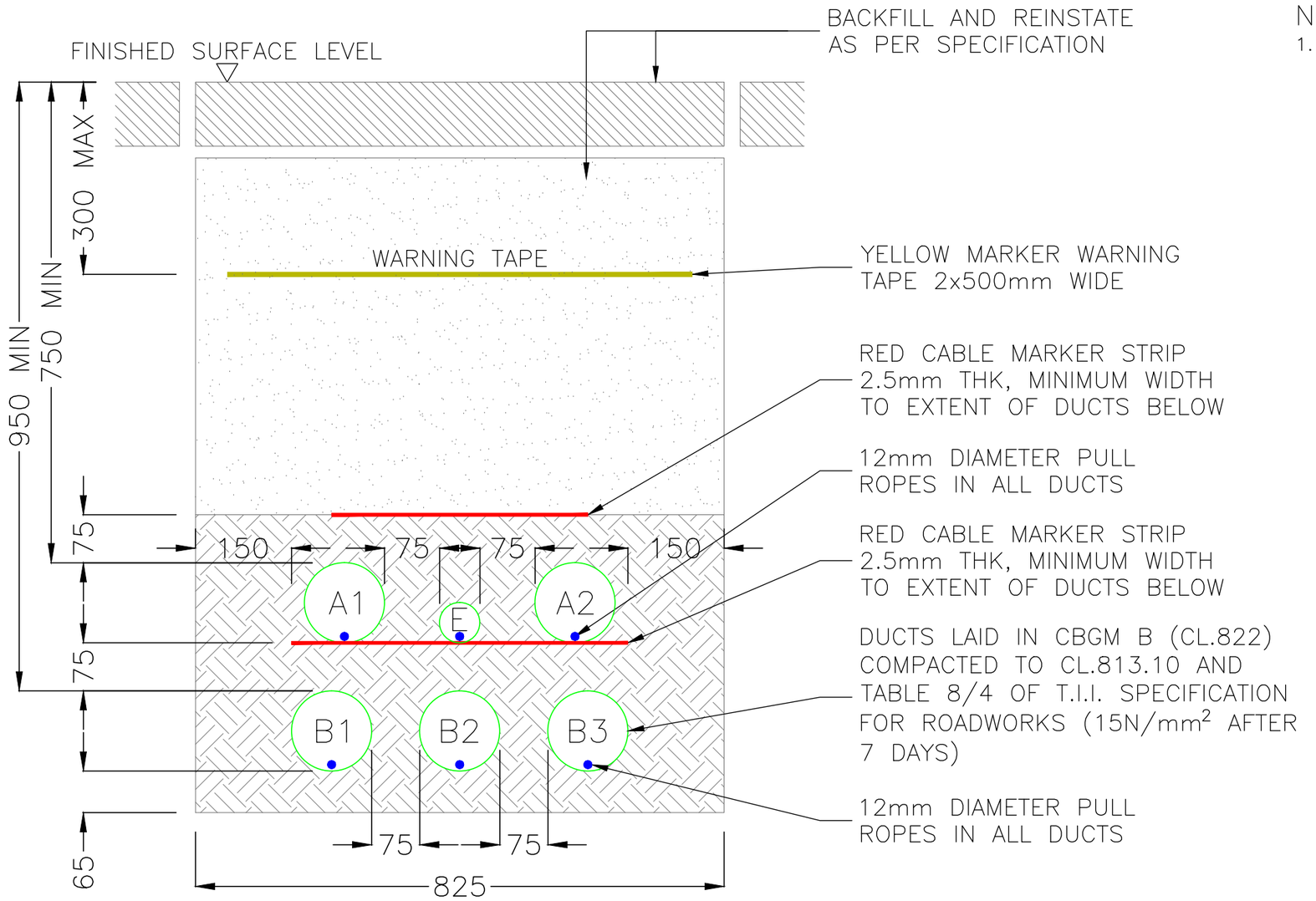
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 160mm POWER DUCTS WITH EARTH CONTINUITY DUCT – TREFOIL FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	007	00



NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
B=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
*E=MIN 63mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
*DUCT TO BE USED FOR EARTH CONTINUITY CONDUCTOR
ALL DIMENSIONS IN MILLIMETERS

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

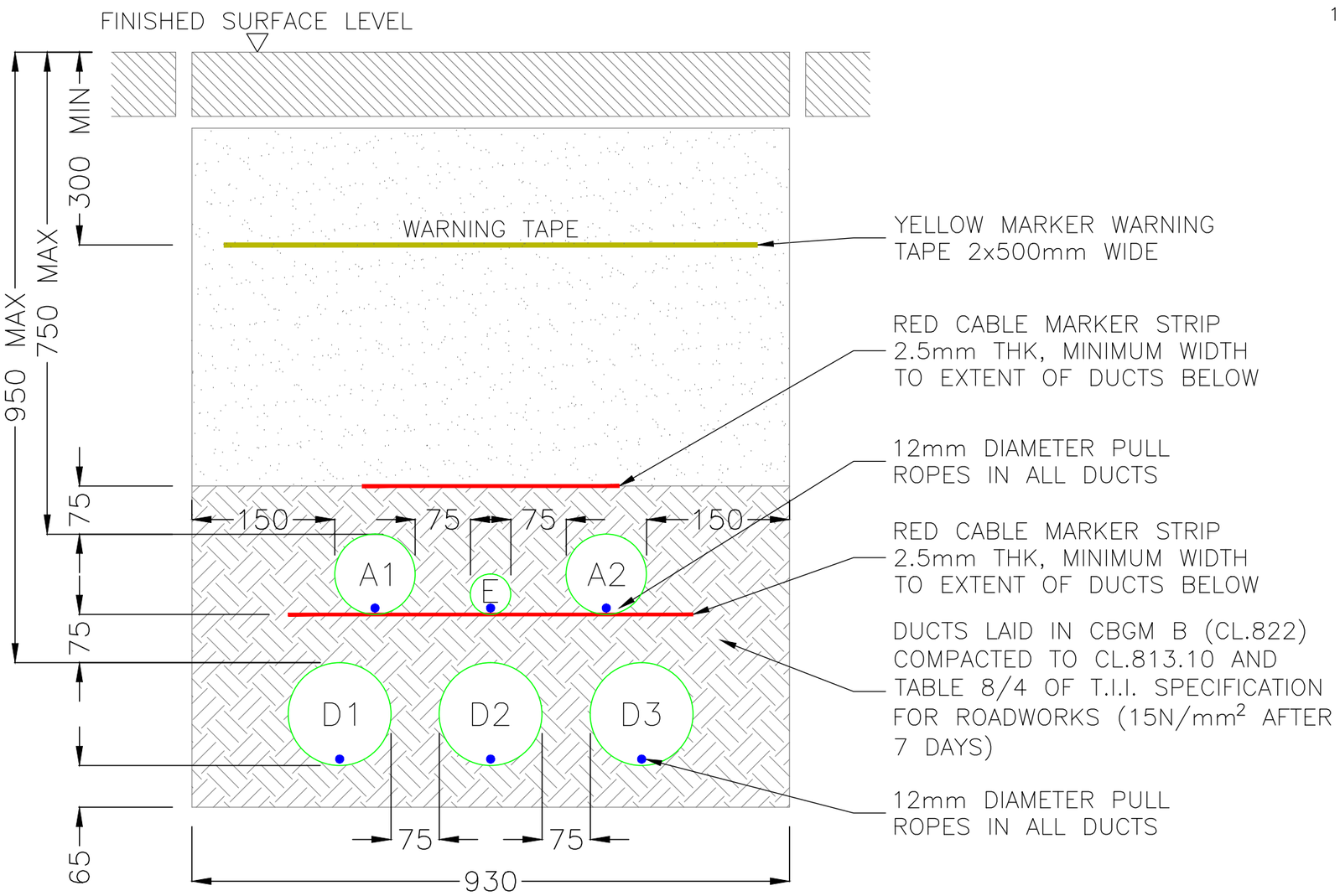
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means – graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 125mm POWER DUCTS WITH EARTH CONTINUITY DUCT – FLAT FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	008	00



A=125mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
D=160mm O.D. HDPE ESB APPROVED DUCT, SDR=21
*E=63mm O.D. HDPE ESB APPROVED DUCT, SDR=17.6
*DUCT TO BE USED FOR EARTH CONTINUITY CONDUCTOR
ALL DIMENSIONS IN MILLIMETERS

NOTES:

1. FOR CBGM & SOIL SURROUND, THERMAL RESITIVITY VALUES TO BE USED IN RATING CALCULATION, REFER TO CDS–HFS–02–001 SPECIFICATION.

RED MARKER STRIP

YELLOW MARKER WARNING TAPE

CBGM B (CL. 822), COMPACTED TO CL. 813.10

BACKFILL, COMPACTED (CL. 804)

REV	DESC	DRAWN	CHECKED	APPROVED	DATE
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EIRGRID
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

STANDARD 110kV CABLE DRAWINGS

DRAWING TITLE
TRENCH CROSS SECTION FOR 160mm POWER DUCTS WITH EARTH CONTINUITY DUCT – FLAT FORMATION

No of Shts	SIZE	SCALE
9	A3	N/A

DRAWING NUMBER	SHEET	REV
XDC–CBL–STND–H–008	009	00

STANDARD 110kV CABLE DRAWINGS
6mx2.5m JOINT BAY

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-012	001	JOINT BAY INDEX SHEET	01
XDC-CBL-STND-H-012	002	JOINT BAY GENERAL ARRANGEMENT	01
XDC-CBL-STND-H-012	003	JOINT BAY REINSTATEMENT	01
XDC-CBL-STND-H-012	004	JOINT BAY EARTHING ARRANGEMENT	01
XDC-CBL-STND-H-012	005	JOINT BAY GENERAL ARRANGEMENT OF CABLE CLAMPING	00

REV	DESC	DRAWN	CHK'D	APP'D	DATE
01	UPDATED REVISION	AECOM	DG	NC	31/10/2023
00	FIRST ISSUE	DA	DG	CF	09/03/2020

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

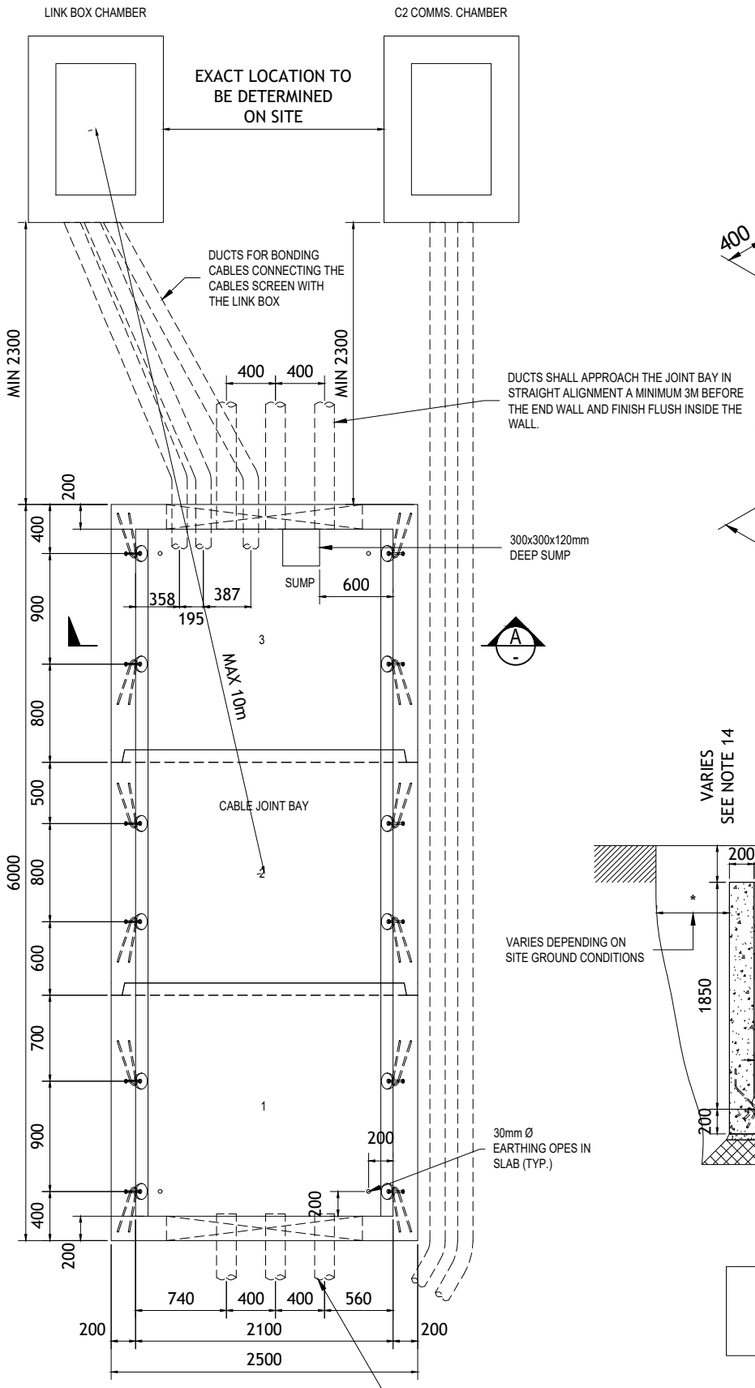
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

PROJECT
STANDARD 110 kV CABLE DRAWINGS

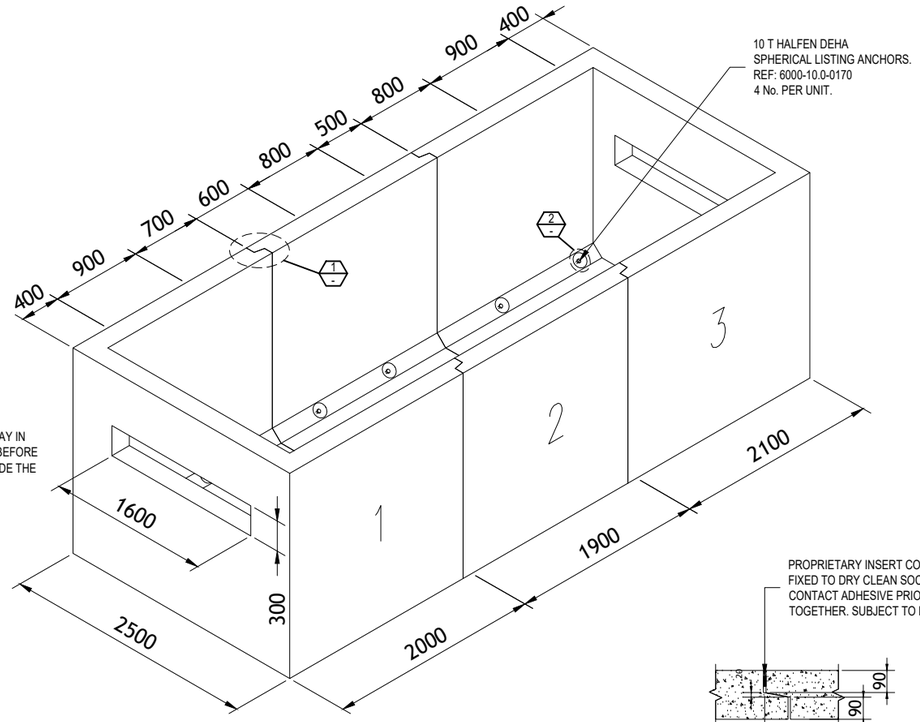
DRAWING TITLE
110 kV JOINT BAY
INDEX SHEET

No of Shts 5 | SIZE A3 | SCALE NTS

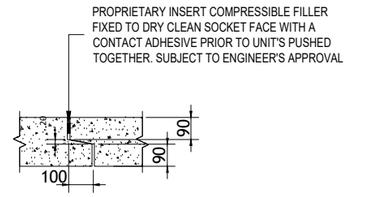
DRAWING NUMBER XDC-CBL-STND-H-012 | SHEET 001 | REV 01



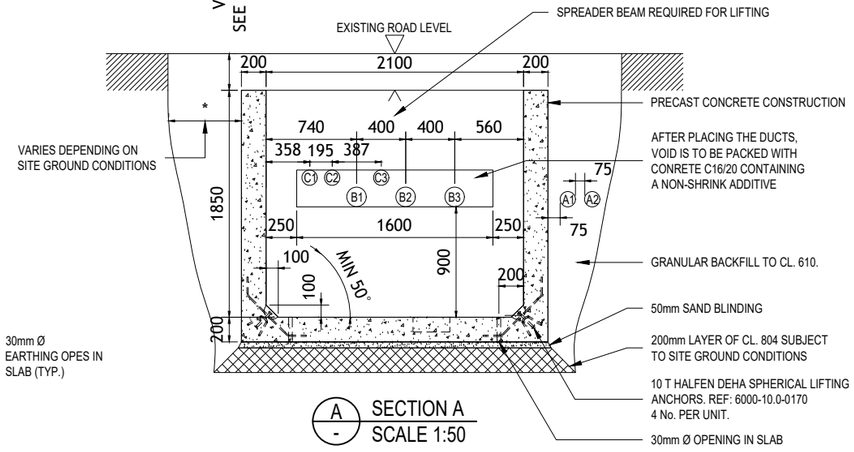
TYPICAL PLAN OF JOINT BAY
SCALE 1:50



ISOMETRIC: JOINT BAY ARRANGEMENT
NOT TO SCALE

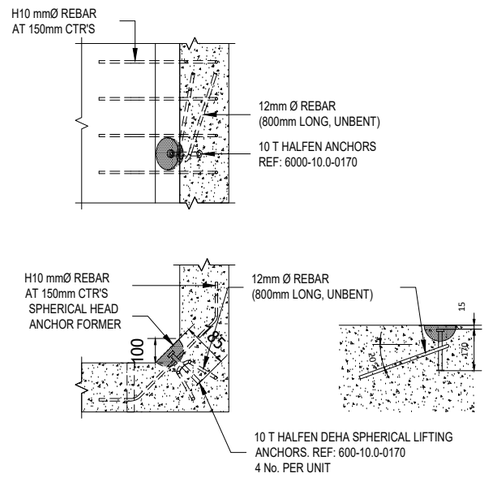


DETAIL 1 - SOCKET AND SPIGOT DETAIL (WALL & FLOOR)
SCALE 1:25



SECTION A
SCALE 1:50

A = 125mm OD HDPE DUCT (COMMS)
B = 125/160mm OD HDPE DUCT (POWER)
C = 125mm OD HDPE DUCT (BONDING LEADS)



DETAIL 2 - LIFTING EYE DETAIL
SCALE 1:25

GENERAL NOTES

1. ALL PRECAST CONCRETE ELEMENTS TO BE MANUFACTURED TO B.S. EN 13369:2004 "COMMON RULES FOR PRECAST CONCRETE PRODUCTS"
2. 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."
3. SPECIFIED LIFTING INSERTS HAVE A S.W.L. OF 10 TONNE.
4. 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.
5. CONCRETE TO HAVE A MINIMUM STRENGTH OF 30 N/mm^2 PRIOR TO HANDLING OF DEMOULDING.
6. 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.
7. A MINIMUM LIFTING SLING ANGLE OF 50° TO THE HORIZONTAL IS REQUIRED.
8. A LIFTING SYSTEM WHICH ENSURES ALL LIFTING POINTS TAKE ON AN EQUAL LOAD IS REQUIRED.
9. 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.
10. FORMWORK FOR PRECASTING TO BE OF A MINIMUM STANDARD OF VARNISHED WOODEN MOULD WITH PLANED BOARDS.
11. COVER TO REINFORCEMENT TO BE 40mm.
12. CONCRETE TO BE GRADE C30/37 AS SPECIFIED IN TABLE 1.
13. ALL CONCRETE TO BE IN ACCORDANCE WITH I.S. EN 206-1:2013 WITH THE MIX DESIGNS SHOWN IN TABLE 1.
14. THE DEPTH FROM GROUND/ROAD LEVEL TO THE TOP OF THE CONCRETE WALL SHALL BE:
    A. 500mm - IN CULTIVATED FIELDS AND GRASSED LANDS
    B. 300mm - IN PAVED ROADS AND GRASS VERGES
    C. 350mm - IN PAVED CITY ROADS AND GRASSED VERGES.
15. LINK BOX CHAMBER TO BE POSITIONED AT THE EDGE OF OR OFF ROAD.
16. ALLOWABLE BEARING PRESSURE TO BE AT LEAST 185kPa
17. FOR HIGHLY AGGRESSIVE ENVIRONMENTS, TABLE 1 IS NOT APPLICABLE. CONSULT WITH EIRGRID FOR BESPOKE DESIGN.
18. JOINT BAY TO BE UNIFORMLY BACKFILLED IN LAYERS NOT EXCEEDING 300mm THICK.
19. WHERE JOINT BAY IS TO BE INSTALLED ADJACENT TO TRAFFICKED LANE, A 1m WIDE LATERAL SAFETY ZONE IS TO BE PROVIDED TO SATISFY DESIGN LOADING ASSUMPTIONS.
20. CUSTOMER IS RESPONSIBLE FOR ALL TRAFFIC MANAGEMENT INCLUDING WHERE NECESSARY SAFETY BARRIERS, AS PER D.R.A.
21. LINK BOX CHAMBER AND C2 COMM CHAMBER FINAL POSITIONING TO BE AGREED WITH EIRGRID PRIOR TO INSTALLATION.

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 (CMin) (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.

REV	DESC	DRAWN	CHK'D	APP'D	DATE
01	UPDATED REVISION	AECOM	DG	NC	31/10/2023
00	FIRST ISSUE	DA	DG	CF	09/03/2020

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

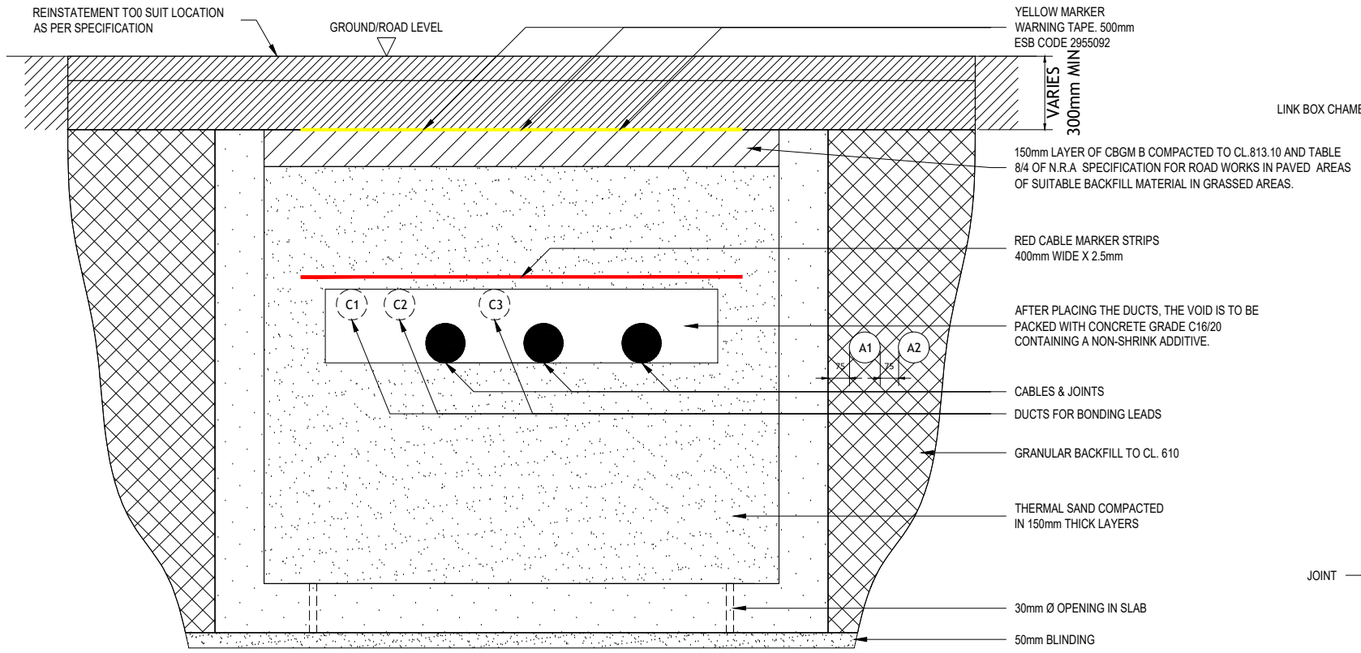
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

PROJECT
STANDARD 110 kV CABLE DRAWINGS

DRAWING TITLE
110 kV JOINT BAY
GENERAL ARRANGEMENT

No of Shts 5 | SIZE A3 | SCALE AS SHOWN

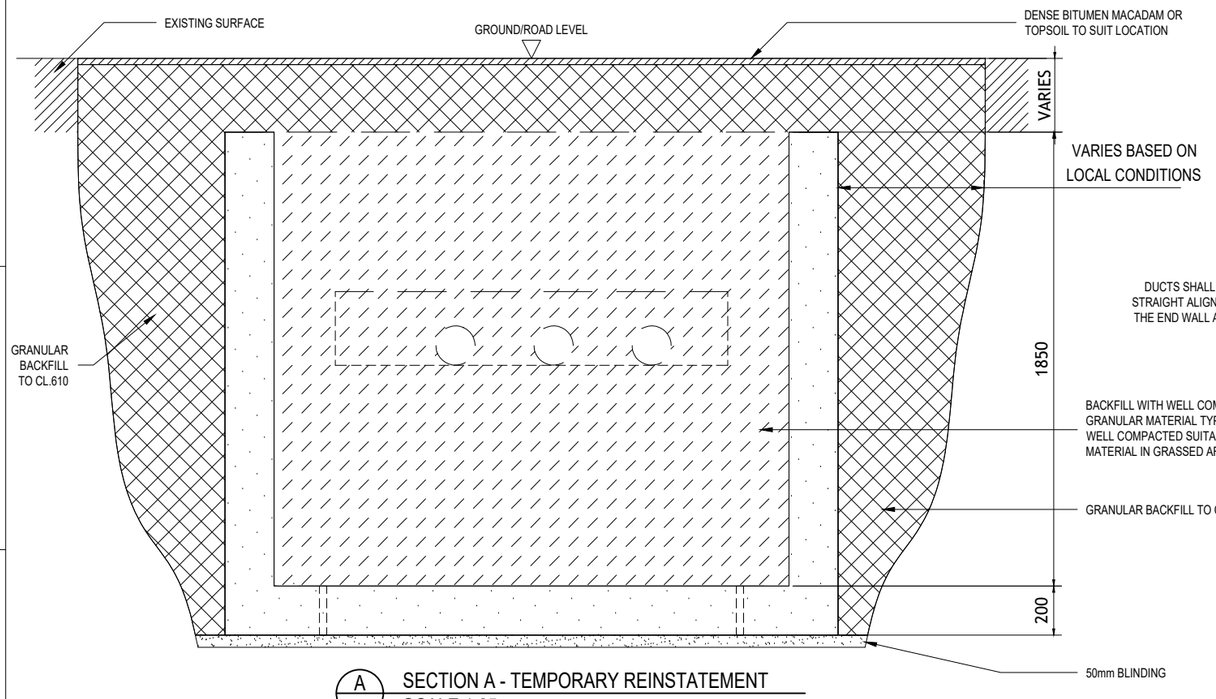
DRAWING NUMBER XDC-CBL-STND-H-012 | SHEET 002 | REV 01



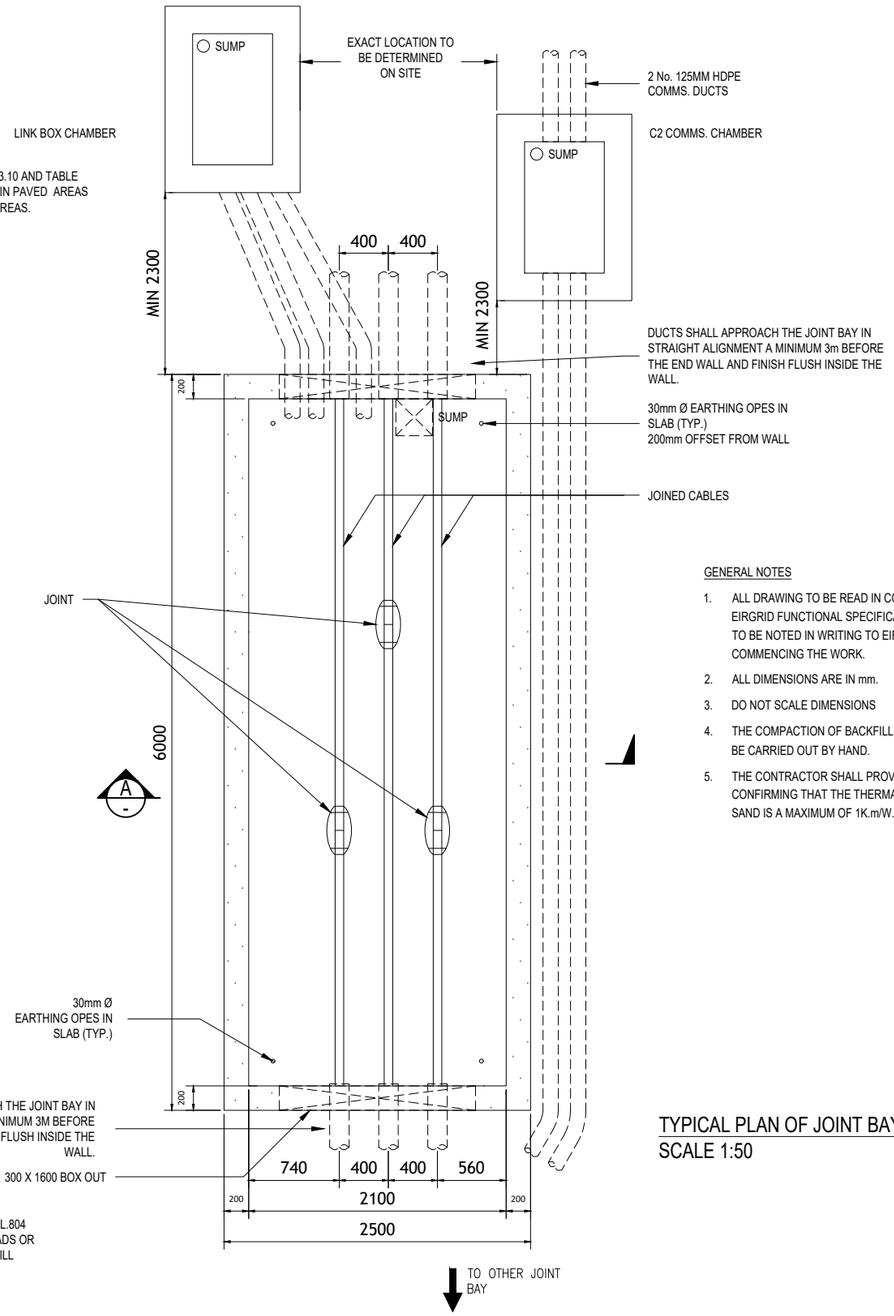
A/- SECTION A - PERMANENT REINSTATEMENT
SCALE 1:25

A = 125mm Ø HDPE DUCT (COMMS)

C = 125mm Ø HDPE DUCT (BONDING LEADS)



A/- SECTION A - TEMPORARY REINSTATEMENT
SCALE 1:25



GENERAL NOTES

1. ALL DRAWING TO BE READ IN CONJUNCTION WITH THE RELEVANT EIRGRID FUNCTIONAL SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE NOTED IN WRITING TO EIRGRID IMMEDIATELY AND PRIOR TO COMMENCING THE WORK.
2. ALL DIMENSIONS ARE IN mm.
3. DO NOT SCALE DIMENSIONS
4. THE COMPACTION OF BACKFILL MATERIAL AROUND CABLES SHALL BE CARRIED OUT BY HAND.
5. THE CONTRACTOR SHALL PROVIDE TEST CERTIFICATES CONFIRMING THAT THE THERMAL RESITIVITY OF THE THERMAL SAND IS A MAXIMUM OF 1K.m/W.

TYPICAL PLAN OF JOINT BAY IN ROAD
SCALE 1:50

REV	DESC	DRAWN	CHK'D	APP'D	DATE
01	UPDATED REVISION	AECOM	DG	NC	31/10/2023
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EirGrid plc
The Oval, 160 Shelbourne Road,
Ballsbridge, Dublin 4, Ireland

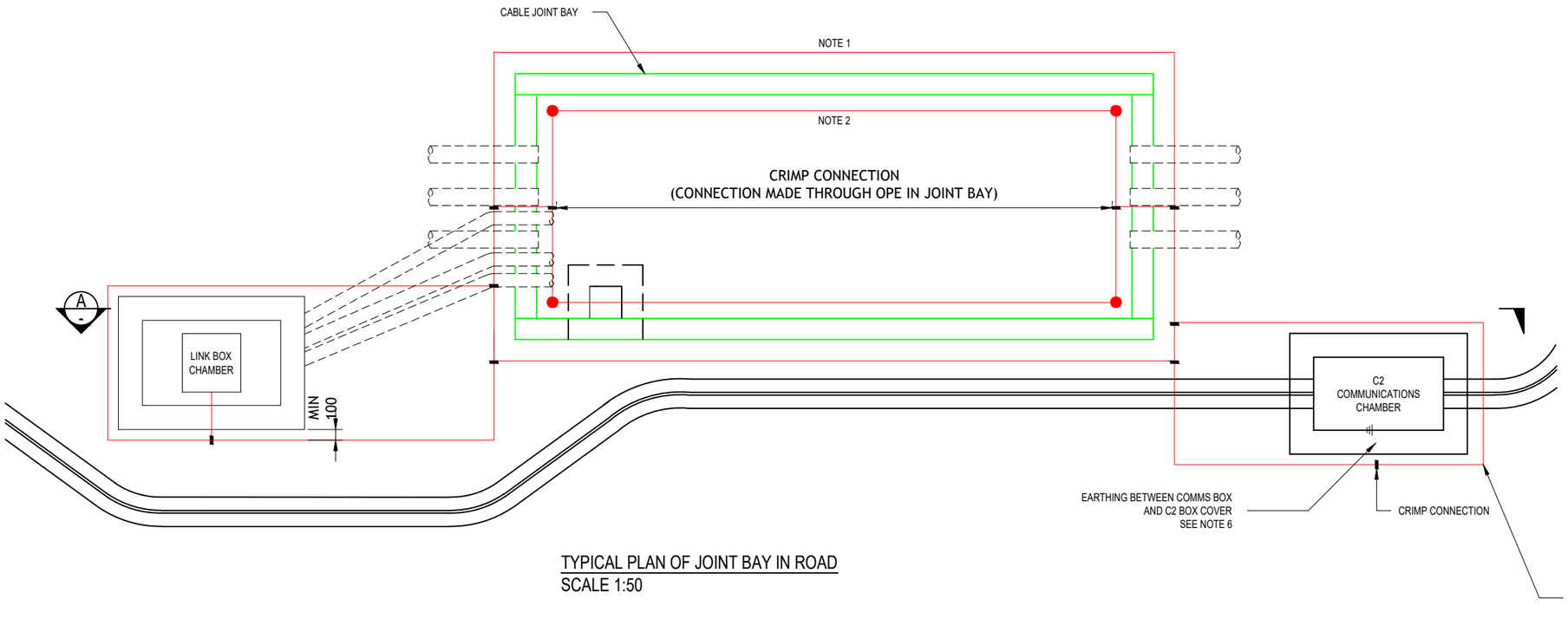
Telephone: +353 1 677 1700
Fax: +353 1 661 5375
Email: info@eirgrid.com
Web: www.eirgrid.com

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

PROJECT
STANDARD 110 kV CABLE DRAWINGS

DRAWING TITLE
110 kV JOINT BAY REINSTATEMENT

No of Shts: 5
SIZE: A3
SCALE: AS SHOWN
DRAWING NUMBER: XDC-CBL-STND-H-012
SHEET: 003
REV: 01



TYPICAL PLAN OF JOINT BAY IN ROAD
SCALE 1:50

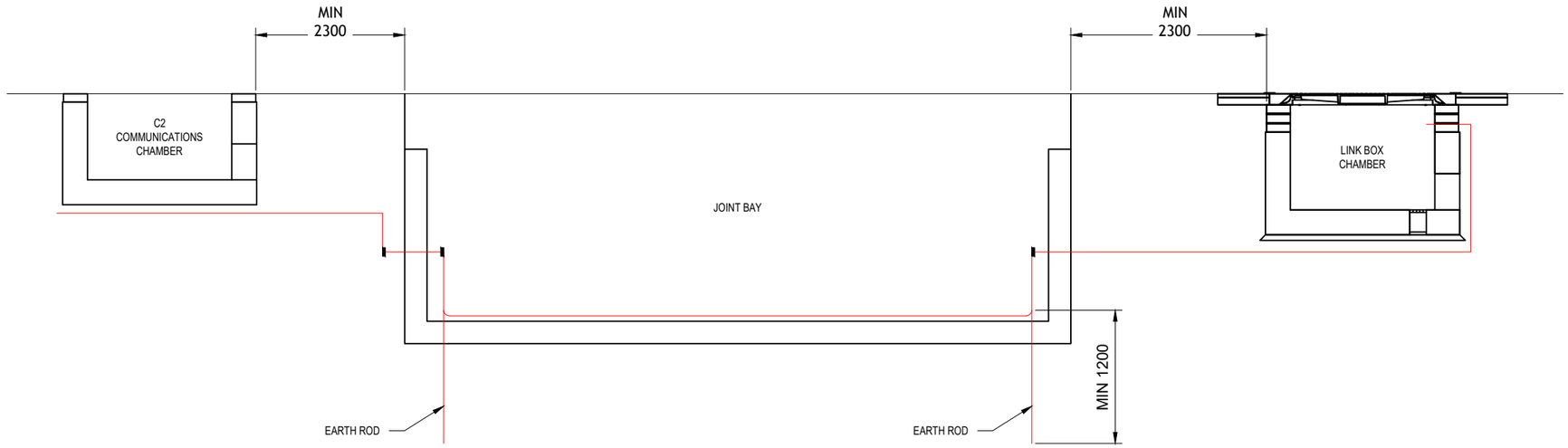
GENERAL NOTES:

1. 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.
2. 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.
3. 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.
4. 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.
5. EARTH RODS NOT LESS THAN 1.2m LONG TO BE INSTALLED VERTICALLY, ONE IN EACH CORNER OF THE JOINT BAY.
6. 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.
7. 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
- EARTH ROD
- C CRIMP



SECTION A (A / -)
SCALE 1:50

REV	DESC	DRAWN	CHK'D	APP'D	DATE
01	UPDATED REVISION	AECOM	DG	NC	31/10/2023
00	FIRST ISSUE	DA	DG	CF	09/03/2020

EirGrid plc
The Oval, 160 Shelbourne Road,
Ballsbridge, Dublin 4, Ireland

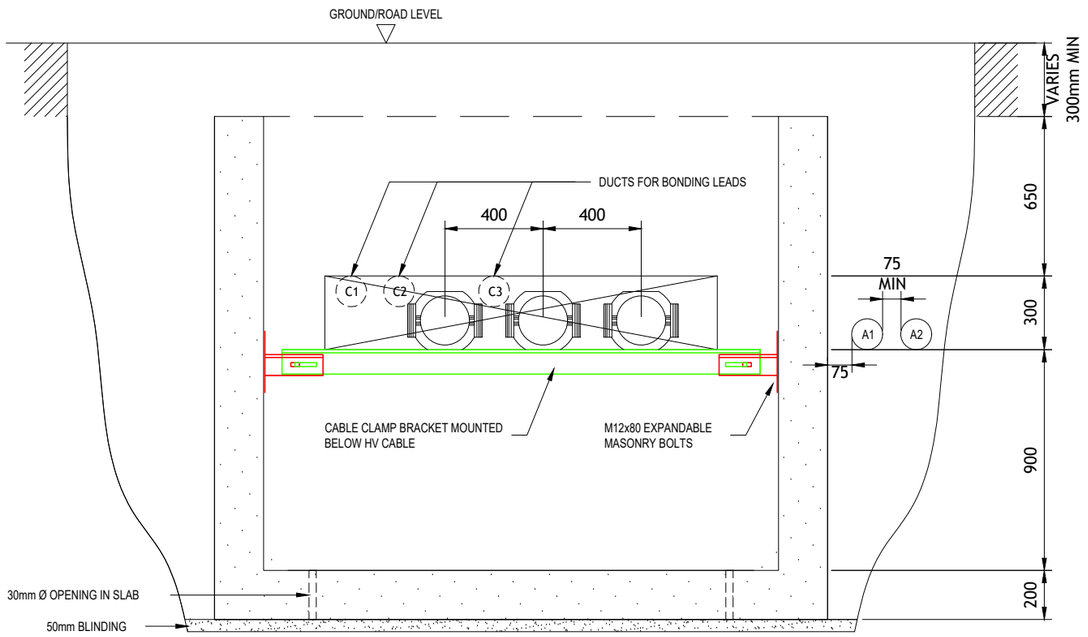
Telephone: +353 1 677 1700
Fax: +353 1 661 5375
Email: info@eirgrid.com
Web: www.eirgrid.com

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

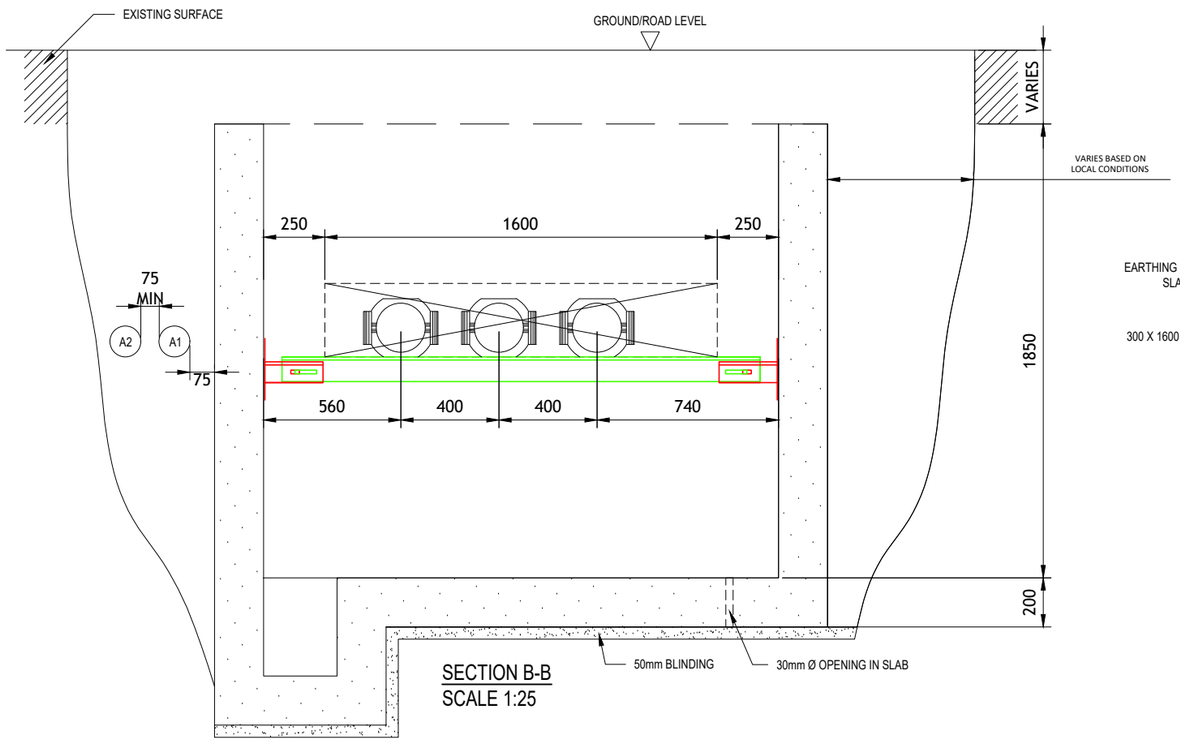
PROJECT
STANDARD 110 kV CABLE DRAWINGS

DRAWING TITLE
110 kV JOINT BAY
TYPICAL EARTHING ARRANGEMENT

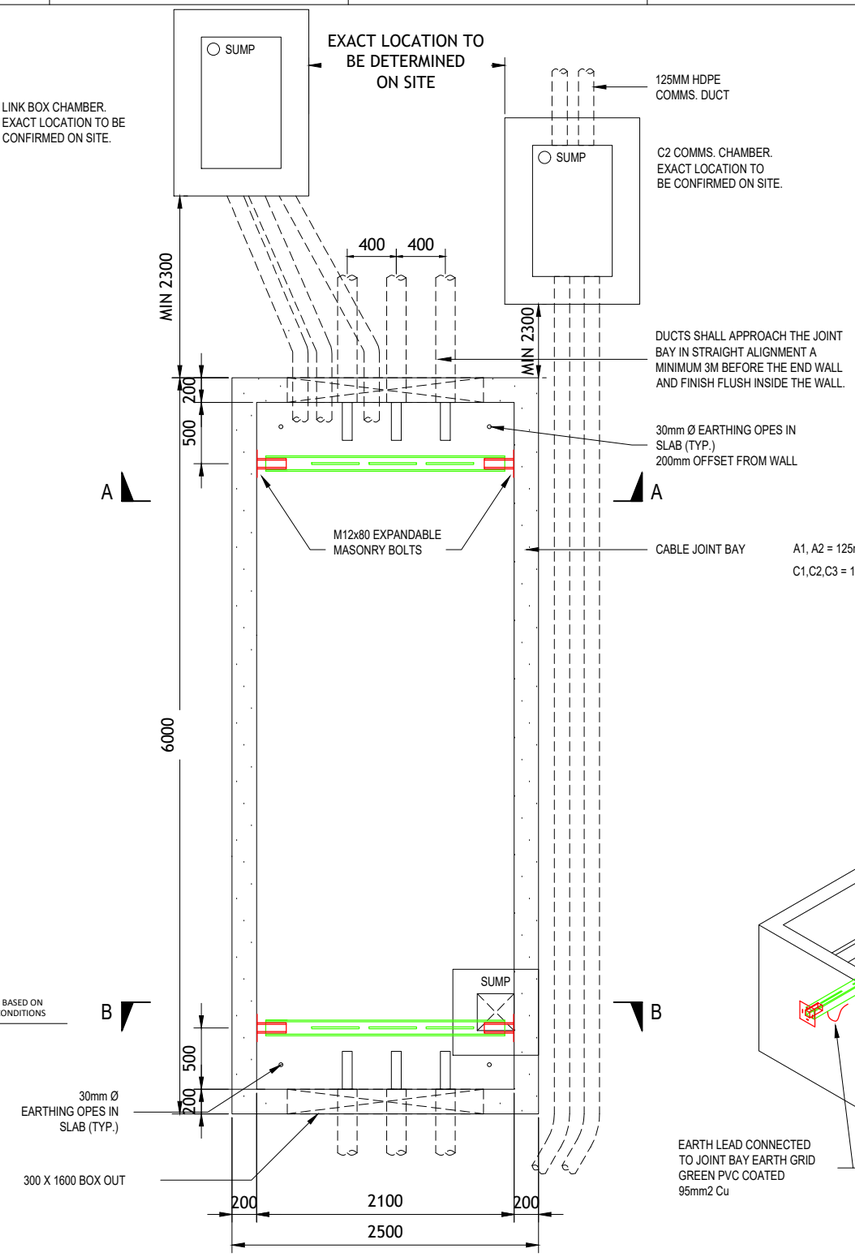
No of Shts: 5
SIZE: A3
SCALE: AS SHOWN
DRAWING NUMBER: XDC-CBL-STND-H-012
SHEET: 004
REV: 01



SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25

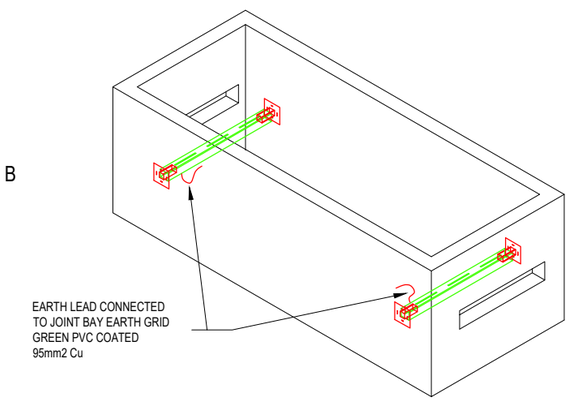


TYPICAL PLAN OF JOINT BAY IN ROAD
SCALE 1:50

A1, A2 = 125mm DIA. HDPE DUCT (COMMS)
C1,C2,C3 = 125mm DIA. HDPE DUCT (BONDING LEADS)

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



ISOMETRIC VIEW OF JOINT BAY
N.T.S.

REV	DESC	DRAWN	CHK'D	APP'D	DATE
00	FIRST ISSUE	AECOM	DG	NC	31/10/2023

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

PROJECT
STANDARD 110 kV CABLE DRAWINGS

DRAWING TITLE
GENERAL ARRANGEMENT OF CABLE CLAMPING IN 6m X 2.5m JOINT BAY

No of Shts: 5 | SIZE: A3 | SCALE: AS SHOWN

DRAWING NUMBER: XDC-CBL-STND-H-012 | SHEET: 005 | REV: 00

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK

STANDARD 110kV CABLE DRAWINGS
6m x 2.5m INTERIM JOINT BAY

DRAWING No.	SHEET No.	DESCRIPTION	REVISION No.
XDC-CBL-STND-H-912	001	INTERIM JOINT BAY - INDEX SHEET	00
XDC-CBL-STND-H-912	002	INTERIM JOINT BAY - GENERAL ARRANGEMENT	00
XDC-CBL-STND-H-912	003	INTERIM JOINT BAY - REINSTATEMENT	00
XDC-CBL-STND-H-912	004	INTERIM JOINT BAY - EARTHING ARRANGEMENT	00
XDC-CBL-STND-H-912	005	INTERIM JOINT BAY - GENERAL ARRANGEMENT OF CABLE CLAMPING	00

REV	DESC	DRAWN	CHK'D	APP'D	DATE
00	DRAFT INTERIM ISSUE	AECOM	DG	NC	15/05/2026

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

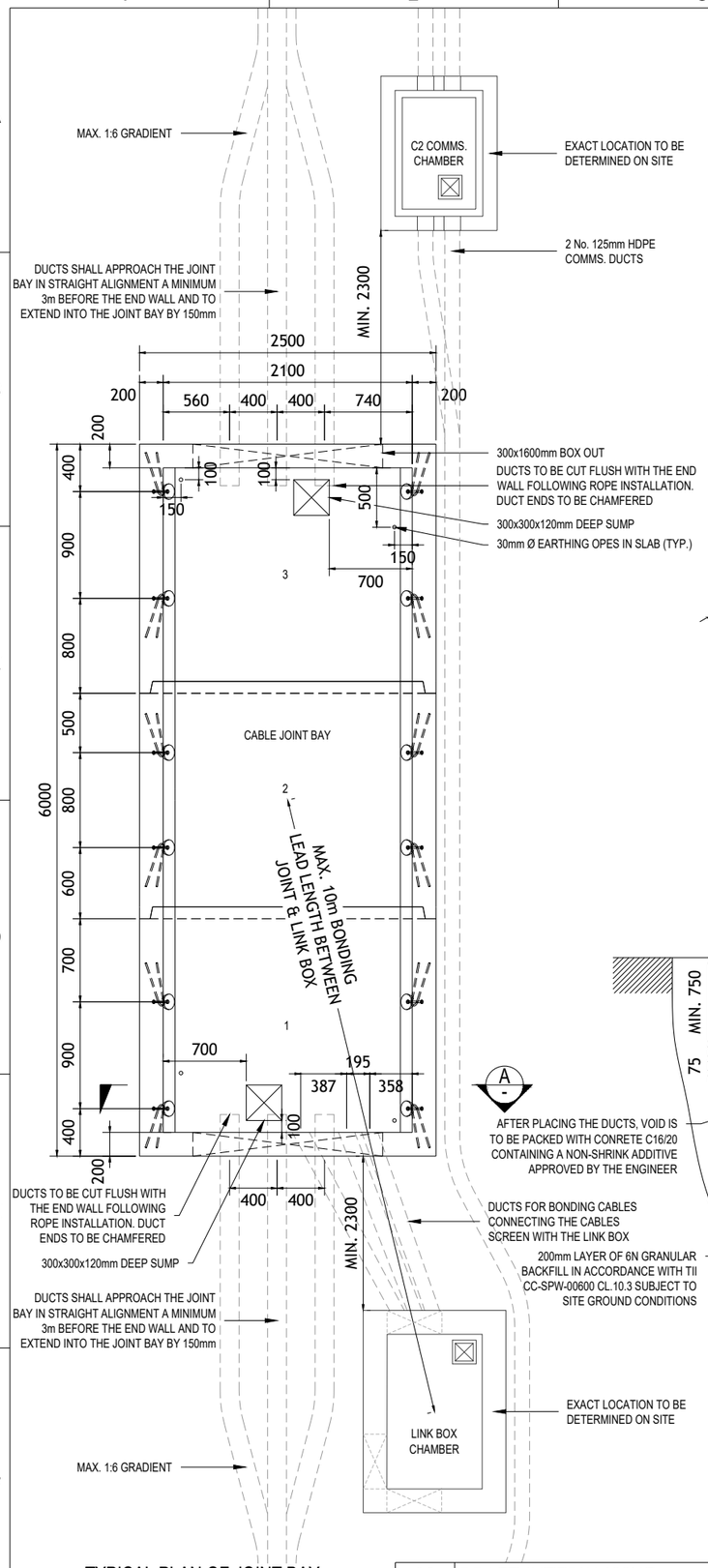
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

PROJECT
STANDARD 110 kV CABLE DRAWINGS

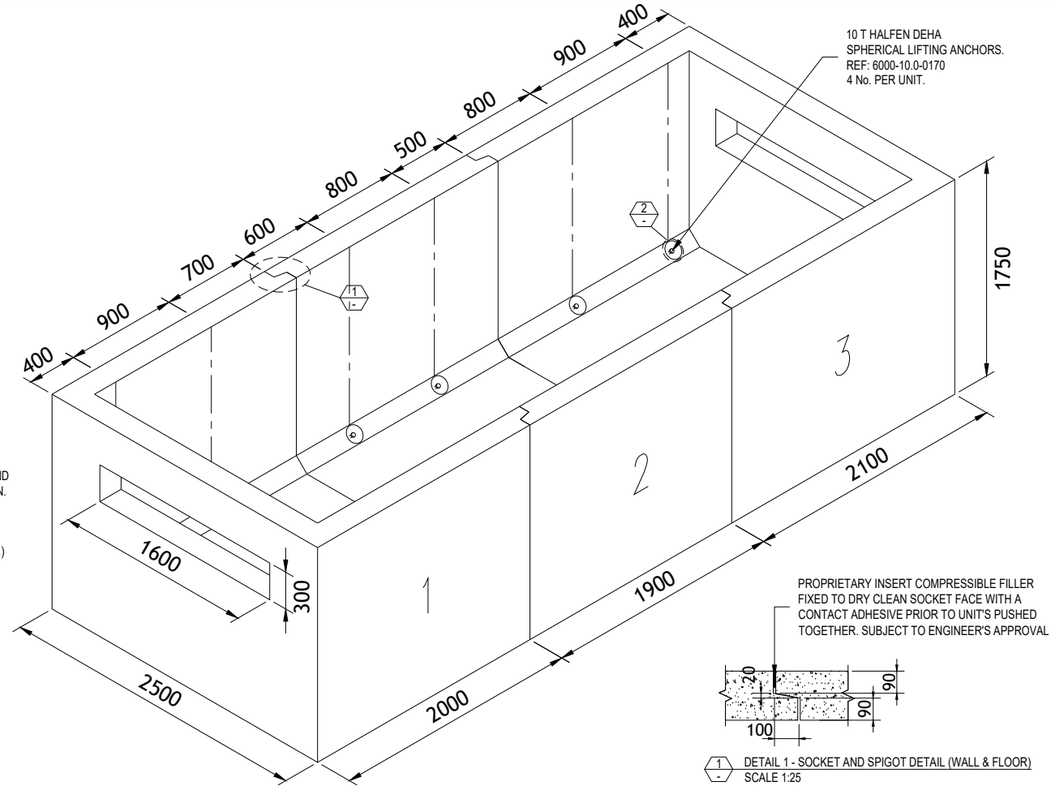
DRAWING TITLE
INTERIM 110 kV JOINT BAY
INDEX SHEET

No of Shts 5 | SIZE A3 | SCALE NTS

DRAWING NUMBER XDC-CBL-STND-H-912 | SHEET 001 | REV 00

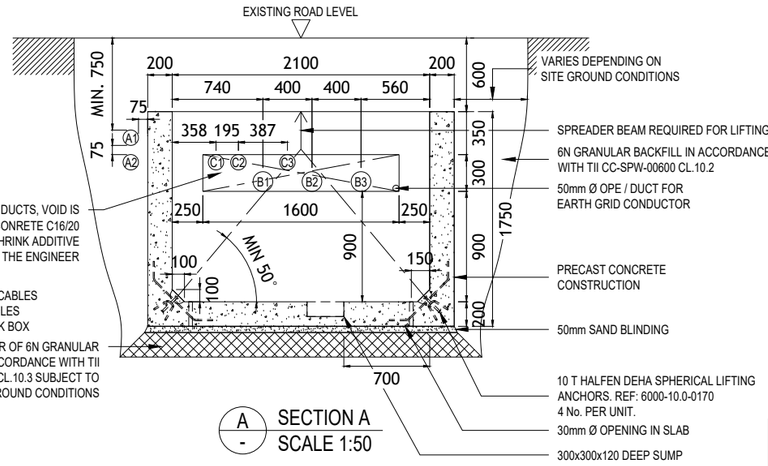


TYPICAL PLAN OF JOINT BAY
N.T.S



ISOMETRIC: JOINT BAY ARRANGEMENT
SCALE 1:50

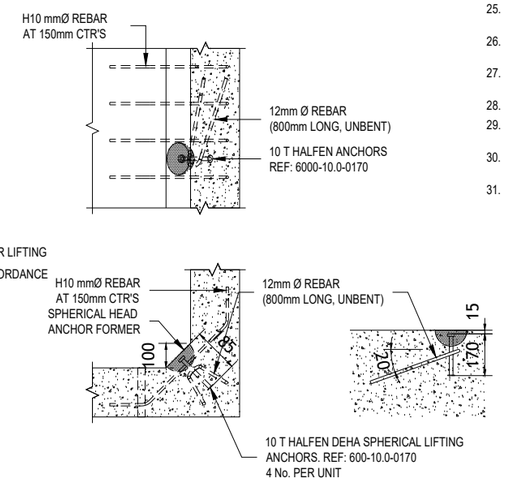
1 - DETAIL 1 - SOCKET AND SPIGOT DETAIL (WALL & FLOOR)
SCALE 1:25



A - AFTER PLACING THE DUCTS, VOID IS TO BE PACKED WITH CONRETE C16/20 CONTAINING A NON-SHRINK ADDITIVE APPROVED BY THE ENGINEER

A - SECTION A
SCALE 1:50

A	= 125mm OD HDPE DUCT (COMMS)
B	= 160mm OD HDPE DUCT (POWER)
C	= 125mm OD HDPE DUCT (BONDING LEADS)



2 - DETAIL 2 - LIFTING EYE DETAIL
SCALE 1:25

GENERAL NOTES

1. THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE AND IS SUBJECT TO AMENDMENTS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT INFORMATION.
3. DO NOT SCALE FROM THIS DRAWING. USE PRINTED DIMENSIONS ONLY.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS DEFINED OTHERWISE.
5. ALL PRECAST CONCRETE ELEMENTS TO BE MANUFACTURED TO B.S. EN 13369:2004 "COMMON RULES FOR PRECAST CONCRETE PRODUCTS"
6. 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."
7. SPECIFIED LIFTING INSERTS HAVE A S.W.L. OF 10 TONNE.
8. 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.
9. CONCRETE TO HAVE A MINIMUM STRENGTH OF 30 N/mm^2 PRIOR TO HANDLING OF DEMOULDING.
10. 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.
11. A MINIMUM LIFTING SLING ANGLE OF 50° TO THE HORIZONTAL IS REQUIRED.
12. A LIFTING SYSTEM WHICH ENSURES ALL LIFTING POINTS TAKE ON AN EQUAL LOAD IS REQUIRED.
13. 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.
14. FORMWORK FOR PRECASTING SHALL BE A MINIMUM F2 FOR FORMED SURFACES AND U3 FOR UNFORMED SURFACES.
15. COVER TO REINFORCEMENT TO BE 40mm.
16. CONCRETE TO BE GRADE C30/37 AS SPECIFIED IN TABLE 1.
17. ALL CONCRETE TO BE IN ACCORDANCE WITH I.S. EN 206-1:2013 WITH THE MIX DESIGNS SHOWN IN TABLE 1.
18. THE DEPTH FROM GROUND/ROAD LEVEL TO THE TOP OF THE CONCRETE WALL SHALL BE:
    A. 600mm - IN CULTIVATED FIELDS AND GRASS LANDS
    B. 600mm - IN PAVED ROADS AND GRASS VERGES
    C. 600mm - IN PAVED CITY ROADS AND GRASS VERGES.
19. LINK BOX CHAMBER TO BE POSITIONED AT THE EDGE OF OR OFF ROAD.
20. ALLOWABLE BEARING PRESSURE TO BE AT LEAST 185kPa. SUITABILITY OF STANDARD JOINT BAY FOUNDATIONS CAN ONLY BE CONFIRMED FOLLOWING GROUND INVESTIGATION. HAND VANE TESTS SHALL BE REQUIRED AS PER GI SPECIFICATION. WHERE SPECIFIED BEARING PRESSURE IS NOT ACHIEVABLE AND WHERE PEAT IS ENCOUNTERED, THE CONTRACTOR SHALL REFER TO THE ENGINEER FOR GUIDANCE.
21. FOR HIGHLY AGGRESSIVE ENVIRONMENTS, TABLE 1 IS NOT APPLICABLE. CONSULT WITH EIRGRID FOR BESPOKE DESIGN.
22. JOINT BAY TO BE UNIFORMLY BACKFILLED IN LAYERS NOT EXCEEDING 300mm THICK.
23. WHERE JOINT BAY IS TO BE INSTALLED ADJACENT TO TRAFFICKED LANE, A 1m WIDE LATERAL SAFETY ZONE IS TO BE PROVIDED TO SATISFY DESIGN LOADING ASSUMPTIONS.
24. CUSTOMER IS RESPONSIBLE FOR ALL TRAFFIC MANAGEMENT INCLUDING WHERE NECESSARY SAFETY BARRIERS, AS PER D.R.A.
25. LINK BOX CHAMBER AND C2 COMM CHAMBER FINAL POSITIONING TO BE AGREED WITH EIRGRID PRIOR TO INSTALLATION.
26. THE LENGTH OF BONDING LEAD SHALL IN NO CASE EXCEED 10m. NO JOINTS IN THE BONDING CABLES ARE PERMITTED.
27. ALL EARTHING SHALL BE IN ACCORDANCE WITH ENA ER C55 AND EIRGRID / ESBN FUNCTIONAL SPECIFICATION.
28. LINK BOX CHAMBERS TO BE POSITIONED AT THE EDGE OR OFF ROAD.
29. CONTACT CABLE DESIGNER IF ECC IS REQUIRED. SHOULD AN ECC BE REQUIRED, AN ADDITIONAL DUCT WILL BE REQUIRED.
30. COMMUNICATION AND EARTH BONDING LEAD LINK BOX DUCTS ARE NOT PERMITTED TO CROSS AS PER ESB SPECIFICATION. DUCTS ARE TO BE INSTALLED AS OUTLINED IN THE DRAWING.
31. FOR JOINTS BETWEEN JOINT BAY SECTIONS, PROPRIETARY INSERT COMPRESSIBLE FILLER FIXED TO DRY CLEAN SOCKET FACE IS TO BE USED WITH A CONTACT ADHESIVE PRIOR TO UNITS PUSHED TOGETHER, SUBJECT TO ENGINEER'S APPROVAL.

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 (CMin) (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.

REV	DESC	DRAWN	CHK'D	APP'D	DATE
00	DRAFT INTERIM ISSUE	AECOM	DG	NC	15/05/2026

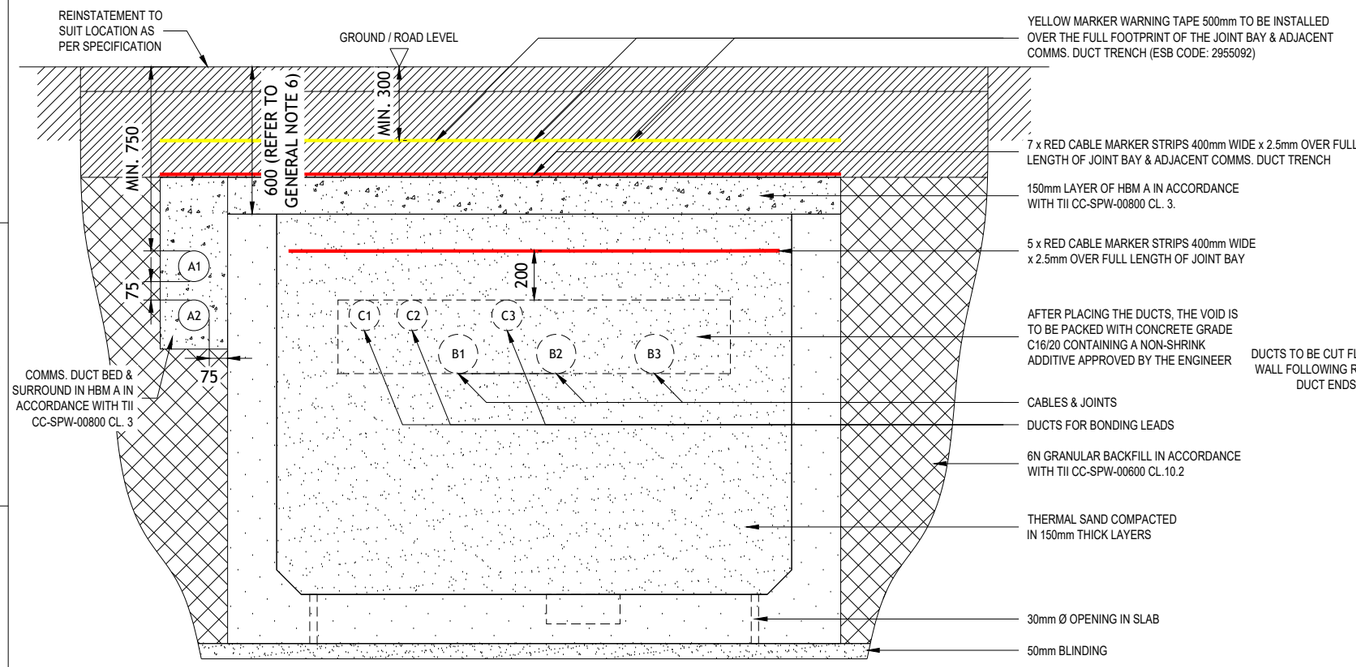
EirGrid plc
The Oval, 160 Shelbourne Road,
Ballsbridge, Dublin 4, Ireland
Telephone: +353 1 677 1700
Fax: +353 1 661 5375
Email: info@eirgrid.com
Web: www.eirgrid.com

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

PROJECT
STANDARD 110 kV CABLE DRAWINGS

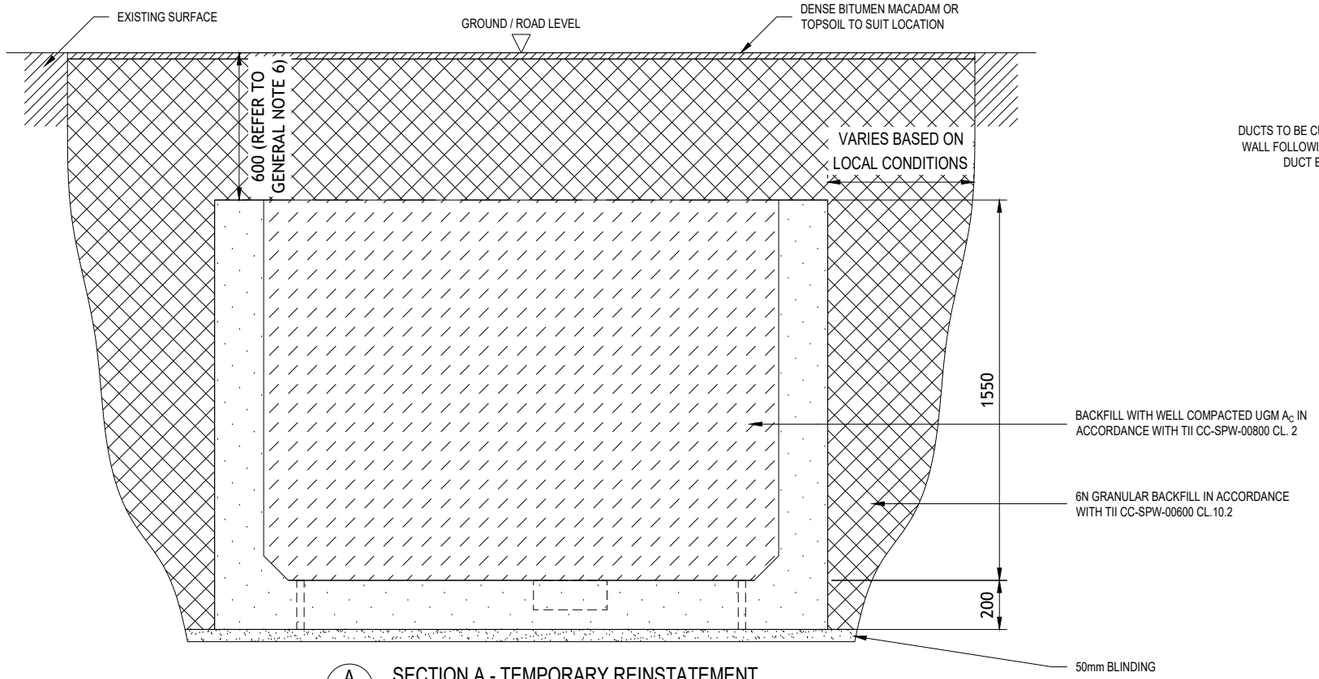
DRAWING TITLE
INTERIM 110 kV JOINT BAY GENERAL ARRANGEMENT

No of Shts: 5
SIZE: A3
SCALE: AS SHOWN
DRAWING NUMBER: XDC-CBL-STND-H-912
SHEET: 002
REV: 00

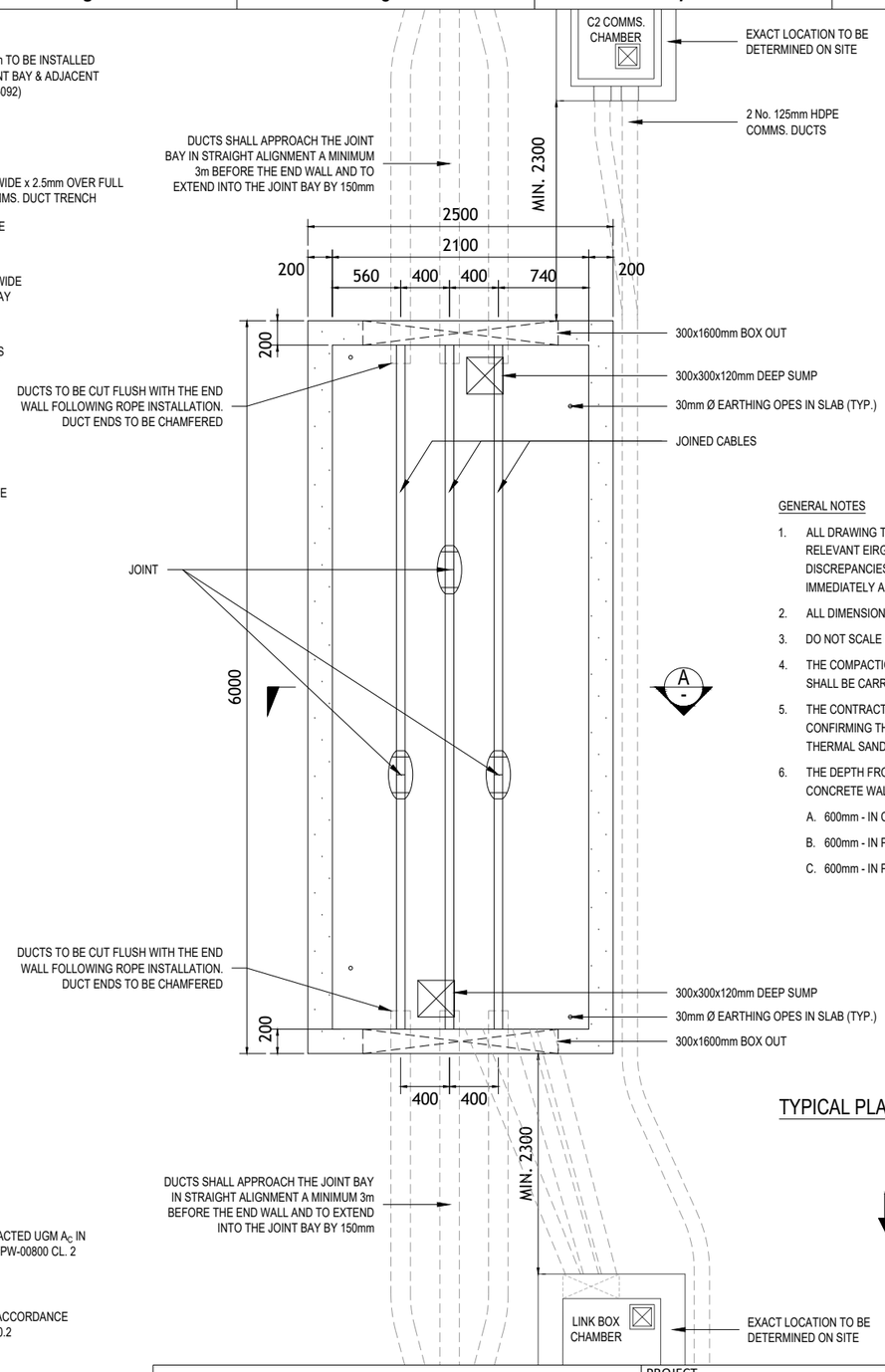


A / - SECTION A - PERMANENT REINSTATEMENT
SCALE 1:25

A = 125mm OD HDPE DUCT (COMMS)
B = 160mm OD HDPE DUCT (POWER)
C = 125mm OD HDPE DUCT (BONDING LEADS)



A / - SECTION A - TEMPORARY REINSTATEMENT
SCALE 1:25



TYPICAL PLAN OF JOINT BAY IN ROAD
N.T.S

GENERAL NOTES

1. ALL DRAWING TO BE READ IN CONJUNCTION WITH THE RELEVANT EIRGRID FUNCTIONAL SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE NOTED IN WRITING TO EIRGRID IMMEDIATELY AND PRIOR TO COMMENCING THE WORK.
2. ALL DIMENSIONS ARE IN mm.
3. DO NOT SCALE DIMENSIONS
4. THE COMPACTION OF BACKFILL MATERIAL AROUND CABLES SHALL BE CARRIED OUT BY HAND.
5. THE CONTRACTOR SHALL PROVIDE TEST CERTIFICATES CONFIRMING THAT THE THERMAL RESITIVITY OF THE THERMAL SAND IS A MAXIMUM OF 1K.m/W.
6. THE DEPTH FROM GROUND/ROAD LEVEL TO THE TOP OF THE CONCRETE WALL SHALL BE:
   A. 600mm - IN CULTIVATED FIELDS AND GRASS LANDS
   B. 600mm - IN PAVED ROADS AND GRASS VERGES
   C. 600mm - IN PAVED CITY ROADS AND GRASS VERGES.

REV	DESC	DRAWN	CHK'D	APP'D	DATE
00	DRAFT INTERIM ISSUE	AECOM	DG	NC	15/05/2026

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

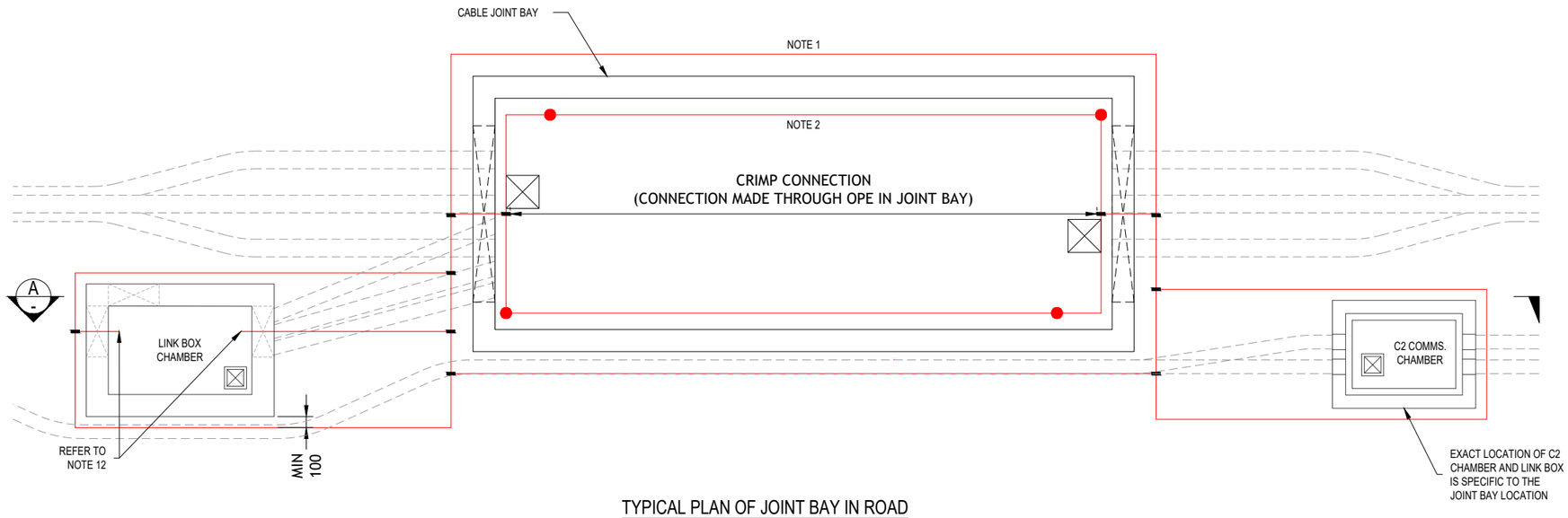
COPYRIGHT © EirGrid plc
All rights reserved. No part of this work may be modified or reproduced or copied in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid plc

PROJECT
STANDARD 110 kV CABLE DRAWINGS

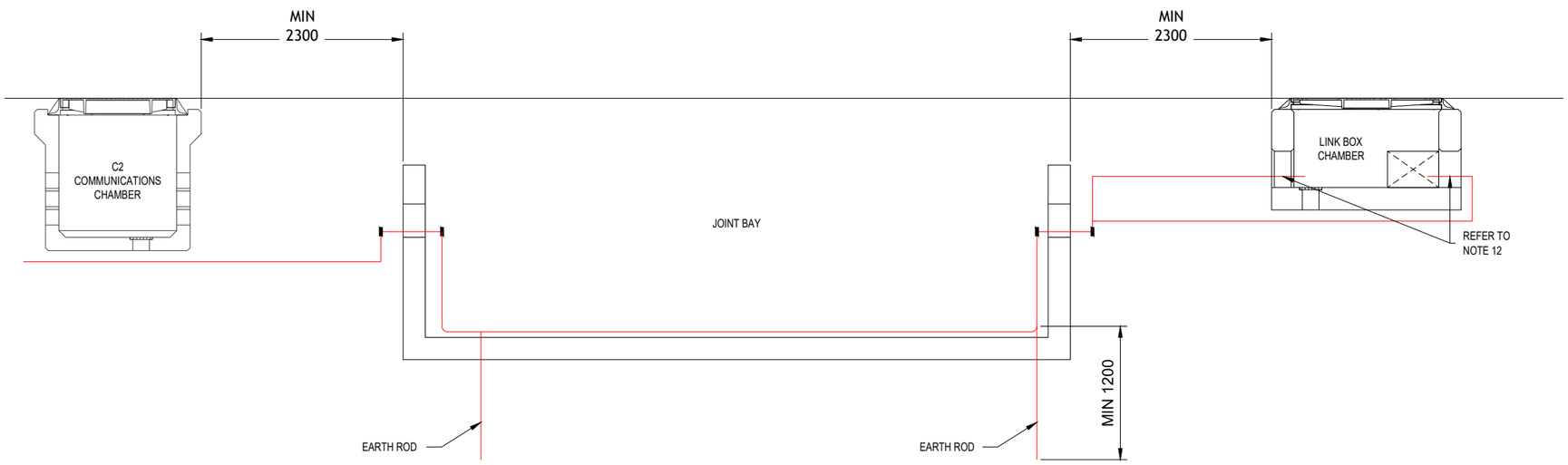
DRAWING TITLE
INTERIM 110 kV JOINT BAY REINSTATEMENT

No of Shts	SIZE	SCALE
5	A3	AS SHOWN

DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-912	003	00



TYPICAL PLAN OF JOINT BAY IN ROAD
N.T.S



SECTION A (A / -)
N.T.S

GENERAL NOTES:

1. 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.
2. 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.
3. 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.
4. 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.
5. EARTH RODS NOT LESS THAN 1.2m LONG TO BE INSTALLED VERTICALLY, ONE IN EACH CORNER OF THE JOINT BAY.
6. 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.
7. 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.
8. THE LENGTH OF BONDING LEAD SHALL IN NO CASE EXCEED 10m. NO JOINTS IN THE BONDING CABLES ARE PERMITTED.
9. ALL EARTHING SHALL BE IN ACCORDANCE WITH ENA ER C55 AND EIRGRID / ESBN FUNCTIONAL SPECIFICATION.
10. CONTACT CABLE DESIGNER IF ECC IS REQUIRED. SHOULD AN ECC BE REQUIRED, AN ADDITIONAL DUCT WILL BE REQUIRED.
11. COMMUNICATION AND EARTH BONDING LEAD LINK BOX DUCTS ARE NOT PERMITTED TO CROSS AS PER ESB SPECIFICATION. DUCTS ARE TO BE INSTALLED AS OUTLINED IN THE DRAWING.
12. TWO SEPARATE EARTH TAILS TO BE CONNECTED TO A COPPER BAR INSTALLED INSIDE THE LINK BOX.

LEGEND

- 95mm² Cu BARE CONDUCTOR
- EARTH ROD
- C CRIMP

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

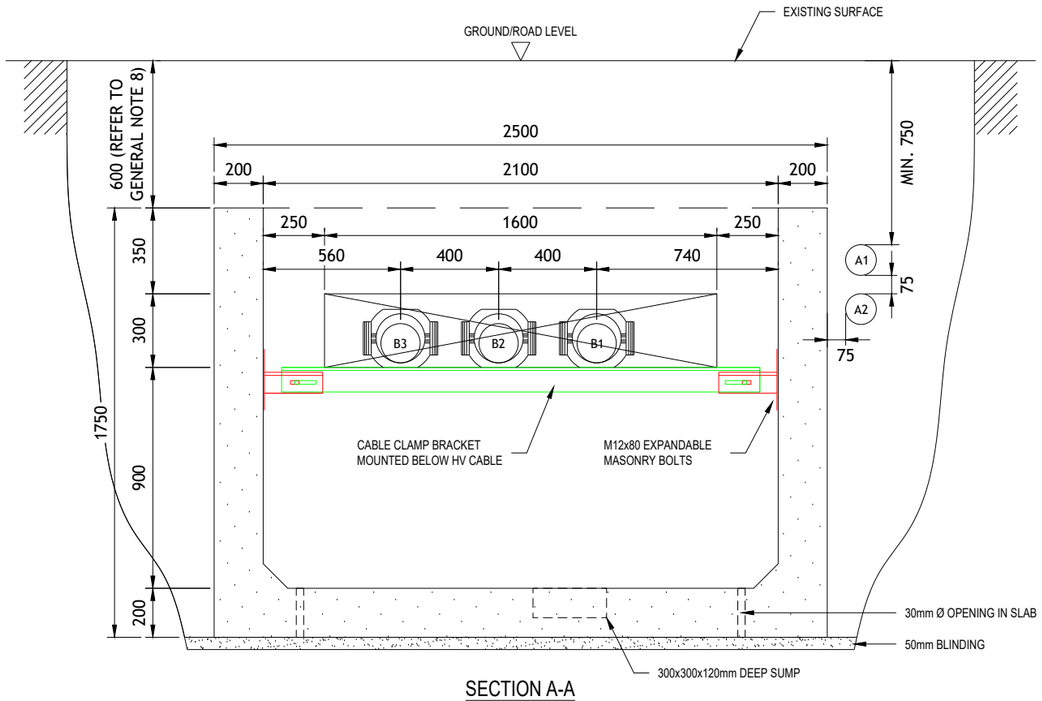
REV	DESC	DRAWN	CHK'D	APP'D	DATE
00	DRAFT INTERIM ISSUE	AECOM	DG	NC	15/05/2026

PROJECT
STANDARD 110 kV CABLE DRAWINGS

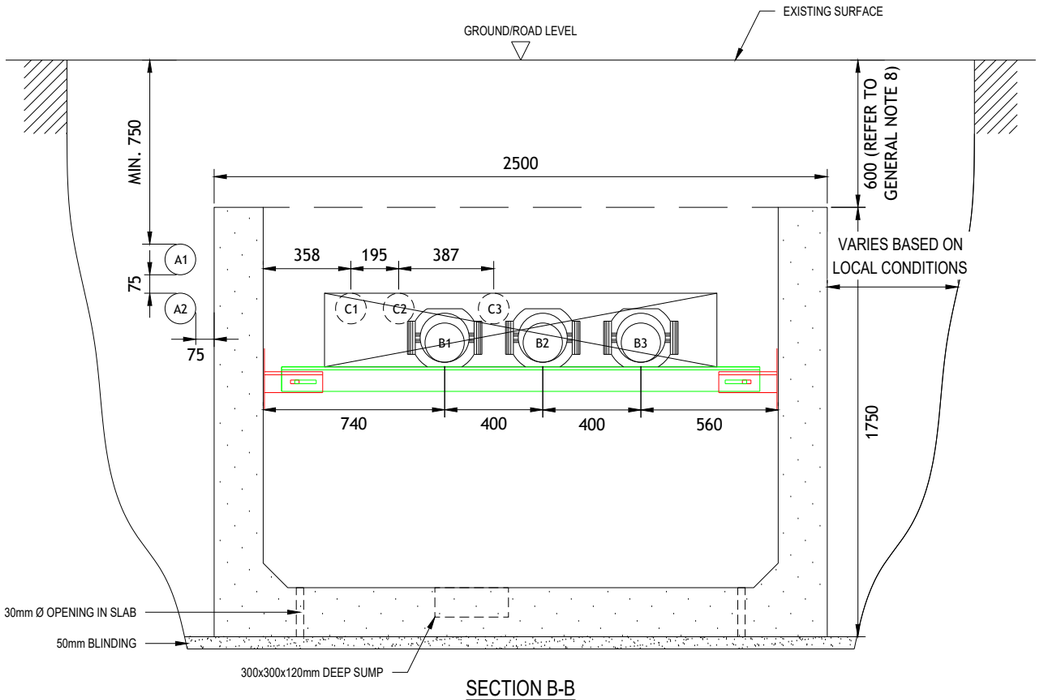
DRAWING TITLE
INTERIM 110 kV JOINT BAY
TYPICAL EARTHING ARRANGEMENT

No of Shts	SIZE	SCALE
5	A3	AS SHOWN

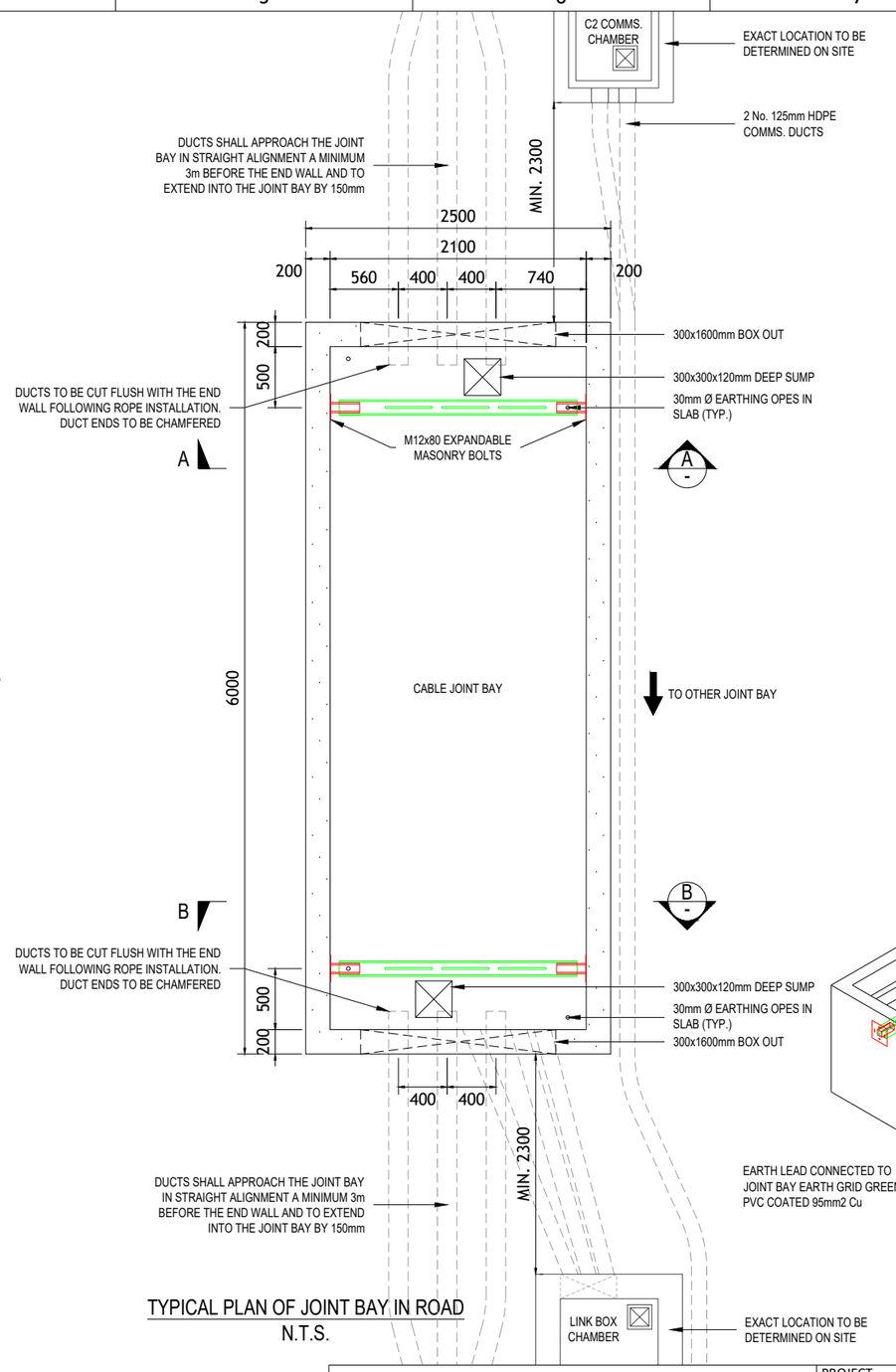
DRAWING NUMBER	SHEET	REV
XDC-CBL-STND-H-912	004	00



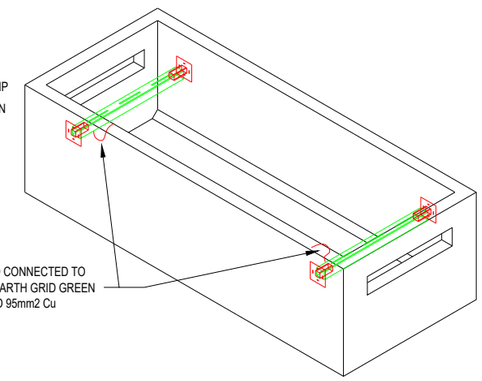
SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25



TYPICAL PLAN OF JOINT BAY IN ROAD
N.T.S.



ISOMETRIC VIEW OF JOINT BAY
SCALE 1:100

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.
8. THE DEPTH FROM GROUND/ROAD LEVEL TO THE TOP OF THE CONCRETE WALL SHALL BE:
   A. 600mm - IN CULTIVATED FIELDS AND GRASS LANDS
   B. 600mm - IN PAVED ROADS AND GRASS VERGES
   C. 600mm - IN PAVED CITY ROADS AND GRASS VERGES.

A = 125mm OD HDPE DUCT (COMMS)
B = 160mm OD HDPE DUCT (POWER)
C = 125mm OD HDPE DUCT (BONDING LEADS)

REV	DESC	DRAWN	CHK'D	APP'D	DATE
00	DRAFT INTERIM ISSUE	AECOM	DG	NC	15/05/2026

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

PROJECT
STANDARD 110 kV CABLE DRAWINGS

DRAWING TITLE
INTERIM 110kV JOINT BAY
GENERAL ARRANGEMENT OF CABLE CLAMPING

No of Shts: 5
SIZE: A3
SCALE: AS SHOWN
DRAWING NUMBER: XDC-CBL-STND-H-912
SHEET: 005
REV: 00

DRAWING IS NOT TO SCALE - IF IN DOUBT, ASK