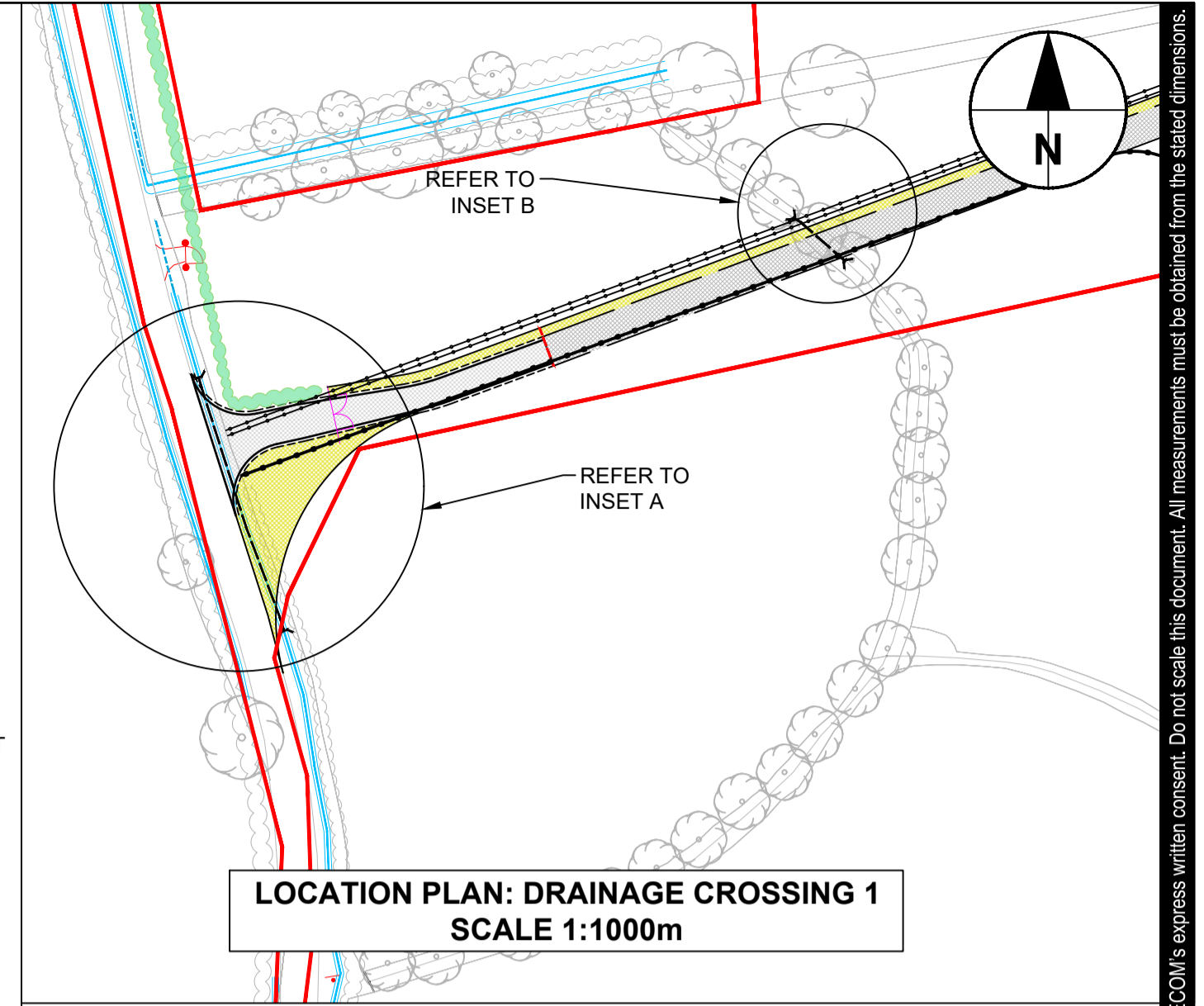


NOTES:

1. ALL DIMENSIONS ARE MILLIMETERS.
2. REINFORCED CONCRETE SHALL BE A MINIMUM GRADE OF C32/40, ALL STRUCTURAL CONCRETE SHALL BE IN ACCORDANCE WITH SERIES 1700 OF THE NRA MCDRW.
3. ALL BLINDING CONCRETE SHALL BE ST2 IN ACCORDANCE WITH IS EN 206.
4. THE MINIMUM COVER TO REINFORCEMENT FOR DURABILITY SHALL BE IN ACCORDANCE WITH NRA BS 57. MINIMUM EXPOSURE CLASS TO BE XC4.
5. ANY RESULTING VOID BETWEEN THE OUTSIDE OF PIPE AND THE OPENING IN THE HEADWALL SHALL BE FILLED WITH NON-COMPRESSIBLE HIGH STRENGTH GROUT.
6. ALL EXPOSED CONCRETE SURFACES FROM 100mm BELOW GROUND LEVEL TO BE CLASS U4/F4 FINISH. ALL OTHER CONCRETE SURFACES TO BE CLASS 11/F1 FINISH UNLESS OTHERWISE SPECIFIED.
7. HEADWALL WINGWALLS TO BE SLOPED AND SHALL MAINTAIN A MINIMUM HEIGHT OF 150mm ABOVE ADJACENT BACKFILL LEVEL.
8. RENDERED CONCRETE BLOCKWORK MAY BE USED AS AN ALTERNATIVE TO IN-SITU OR PRECAST CONCRETE FOR PIPES UP TO 300mm INNER DIAMETER.
9. ALL HEADWALLS SHALL BE BACKFILLED WITH CLASS 6N1, 6N2 OR 6P BACKFILL MATERIAL. HEADWALLS SHALL BE FOUNDED ON A MINIMUM 75mm LAYER OF ST2 BLINDING CONCRETE. DETAILS OF THE SUB-BASE LAYER TO BE CONFIRMED BASED ON SITE CONDITIONS.
10. DOUBLE-BARREL PIPES SHALL BE SEPARATED BY MINIMUM 300mm.

DUCT NOTES:

1. DRAWING IS INDICATIVE ONLY, TO BE USED TO AID IN THE DESIGN OF THE RELEVANT INFRASTRUCTURE.
2. REFER TO RELEVANT ENGINEERS DRAWINGS FOR SPECIFICATIONS & DETAILS OF DUCTS AND REQUIRED DUCT BEDDING AND ENCASEMENT.



**LOCATION PLAN: DRAINAGE CROSSING 1
SCALE 1:1000m**

PROJECT

**FIELDSTOWN 110 kV
SUBSTATION & GRID
CONNECTION**

CLIENT

**ENERGIA SOLAR
HOLDINGS LTD.**

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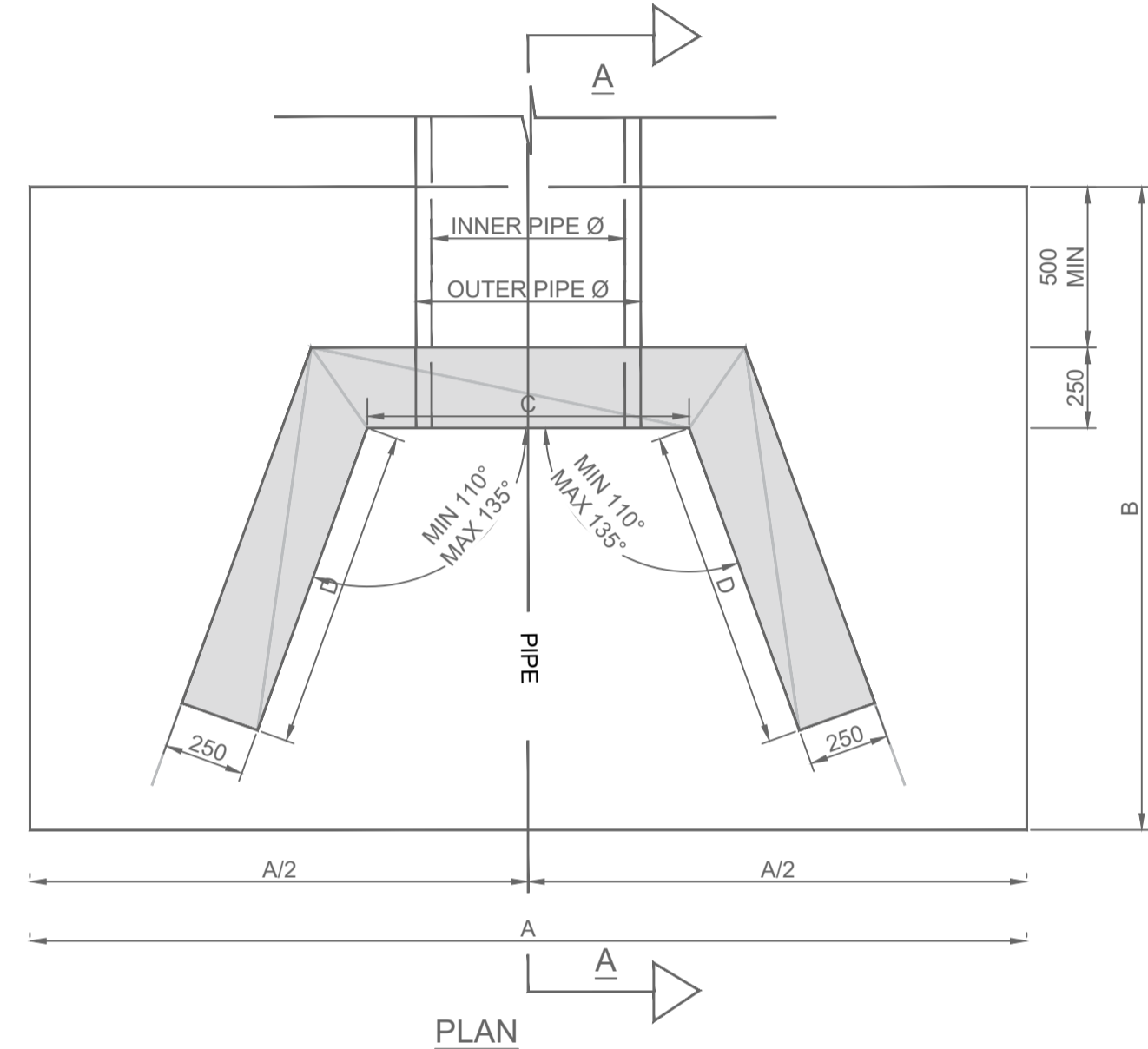
LEGEND

- SITE BOUNDARY
- PROPOSED ROAD EDGE
- PROPOSED VERGE
- EXISTING GATE TO BE MAINTAINED
- EXISTING GATE TO BE REMOVED
- PROPOSED GATE
- EXISTING TREE
- NEW WIRE FENCE AND HEDGE
- EXISTING HEDGEROW
- ASPHALT CONCRETE - HARDSTANDING SURFACE
- INTERNAL ACCESS ROAD - GRAVEL SURFACE
- OVER-RUN SPACE REQUIRED (GRASSCRETE OR SIMILAR APPROVED)
- VISIBILITY SPLAY
- VEHICLE TRACKING ANALYSIS
- EXISTING DRAINAGE DITCH
- EXISTING CULVERT
- PROPOSED CULVERT
- TRAFFIC SIGN
- BAND OF MV CABLE DUCTS
- BAND OF HV CABLE DUCTS

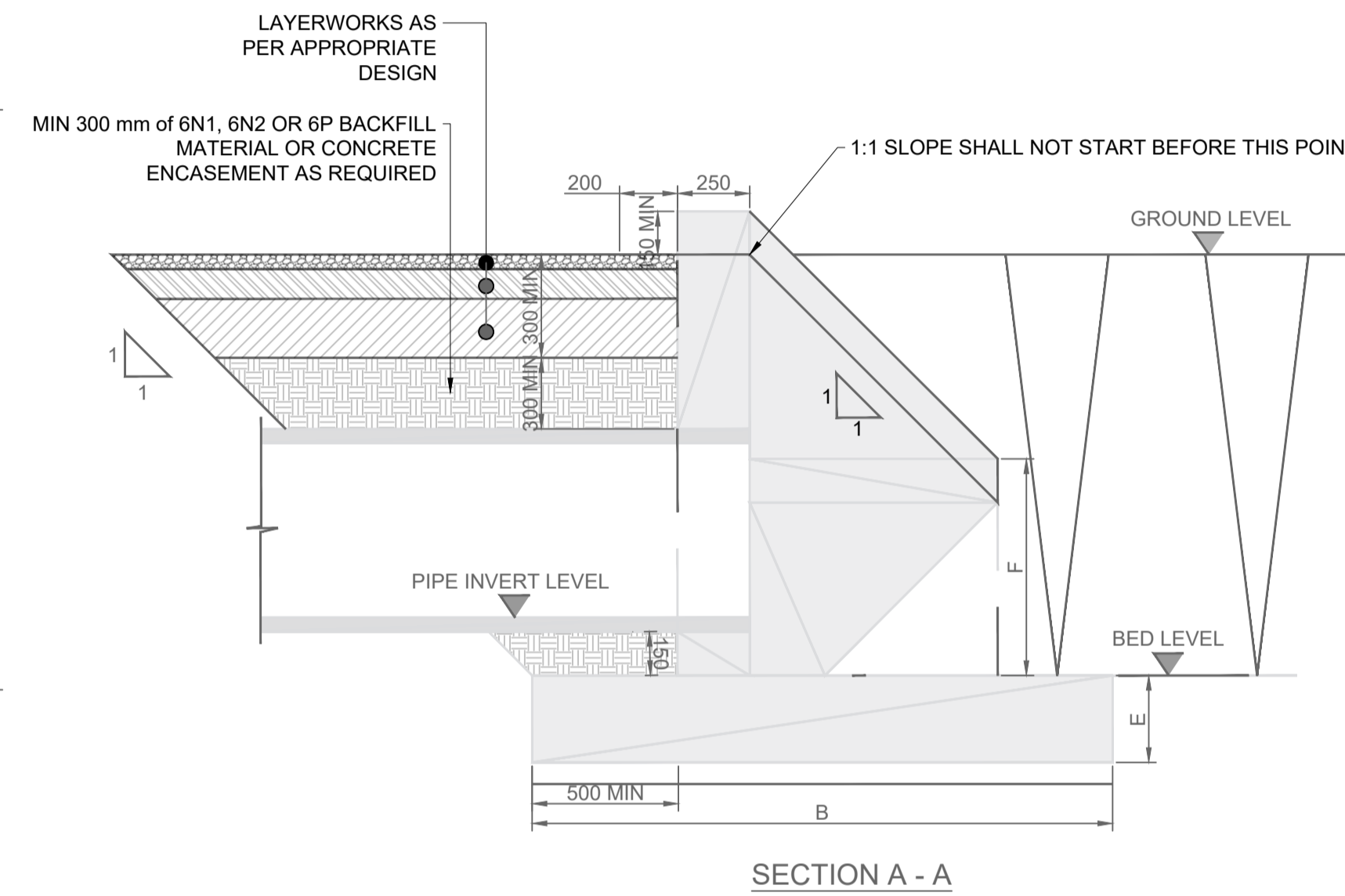
| SCHEDULE OF MINIMUM DIMENSIONS | | | | | | |
|--------------------------------|------|------|------------------------|------|-----|-----|
| PIPE INNER Ø | A | B | C | D | E | F |
| ≤300 | 2000 | 2000 | PIPE OUTER Ø + 300 | 1000 | 400 | 500 |
| 301-600 | 2500 | 2500 | PIPE OUTER Ø + 300 | 1250 | 400 | 600 |
| 601-900 | 3200 | 3200 | PIPE OUTER Ø + 300 | 1550 | 500 | 700 |
| 2 x 601-900 | 4400 | 4400 | 2 x PIPE OUTER Ø + 600 | 1550 | 500 | 700 |
| 901-1200 | 3900 | 3900 | PIPE OUTER Ø + 300 | 1850 | 500 | 800 |

ALL DIMENSIONS CONTAINED IN THE TABLE ABOVE ARE MINIMUMS ONLY AND THE DESIGNER SHALL CONFIRM DETAILS FOR SPECIFIC SITE CONDITIONS, THE DIMENSIONS CONTAINED IN THE TABLE ABOVE ARE BASED ON THE FOLLOWING CONSTRAINTS:

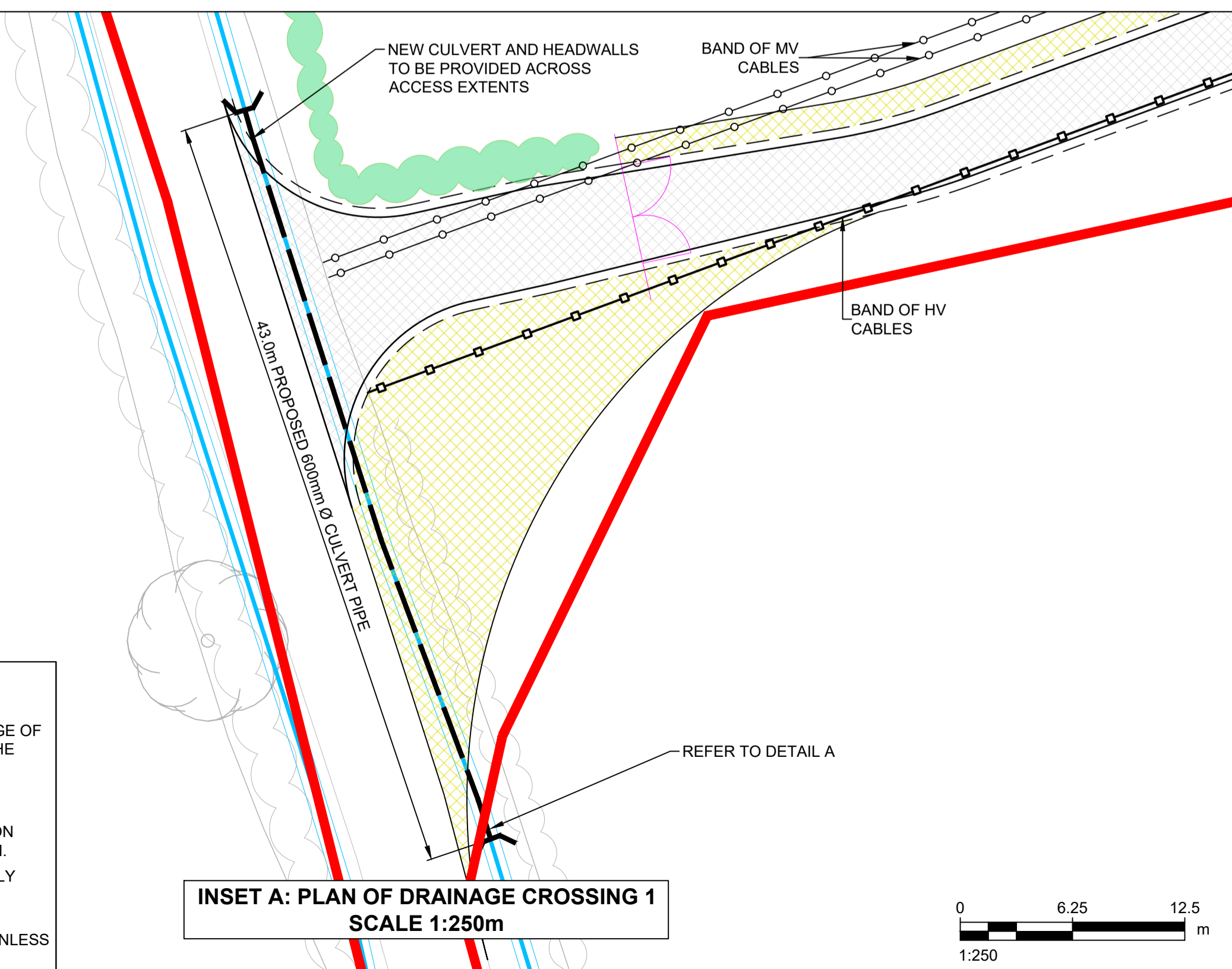
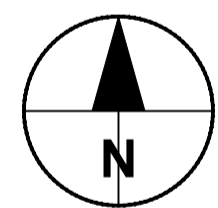
- ANGLE BETWEEN HEADWALL AND WINGWALL IS 110°;
- BACKFILL MATERIAL IS FREE DRAINING;
- THERE ARE NO LIVE LOAD EFFECT ON THE HEADWALL;
- CHARACTERISTIC VALUE OF INTERNAL FRICTION (ϕ) OF THE BACKFILL MATERIAL = 37.5°;
- 600mm COVER TO THE PIPE AT THE REAR OF THE HEADWALL, WITH A 200mm WIDE FLAT AREA BEFORE THE COMMENCEMENT OF THE MAIN EARTHWORKS SLOPE;
- SLOPE OF FILL MEASURED FROM THE REAR FACE OF THE WINGWALLS DOWNWARDS AND FROM BED LEVEL UPWARDS ARE BOTH TO BE 1:1



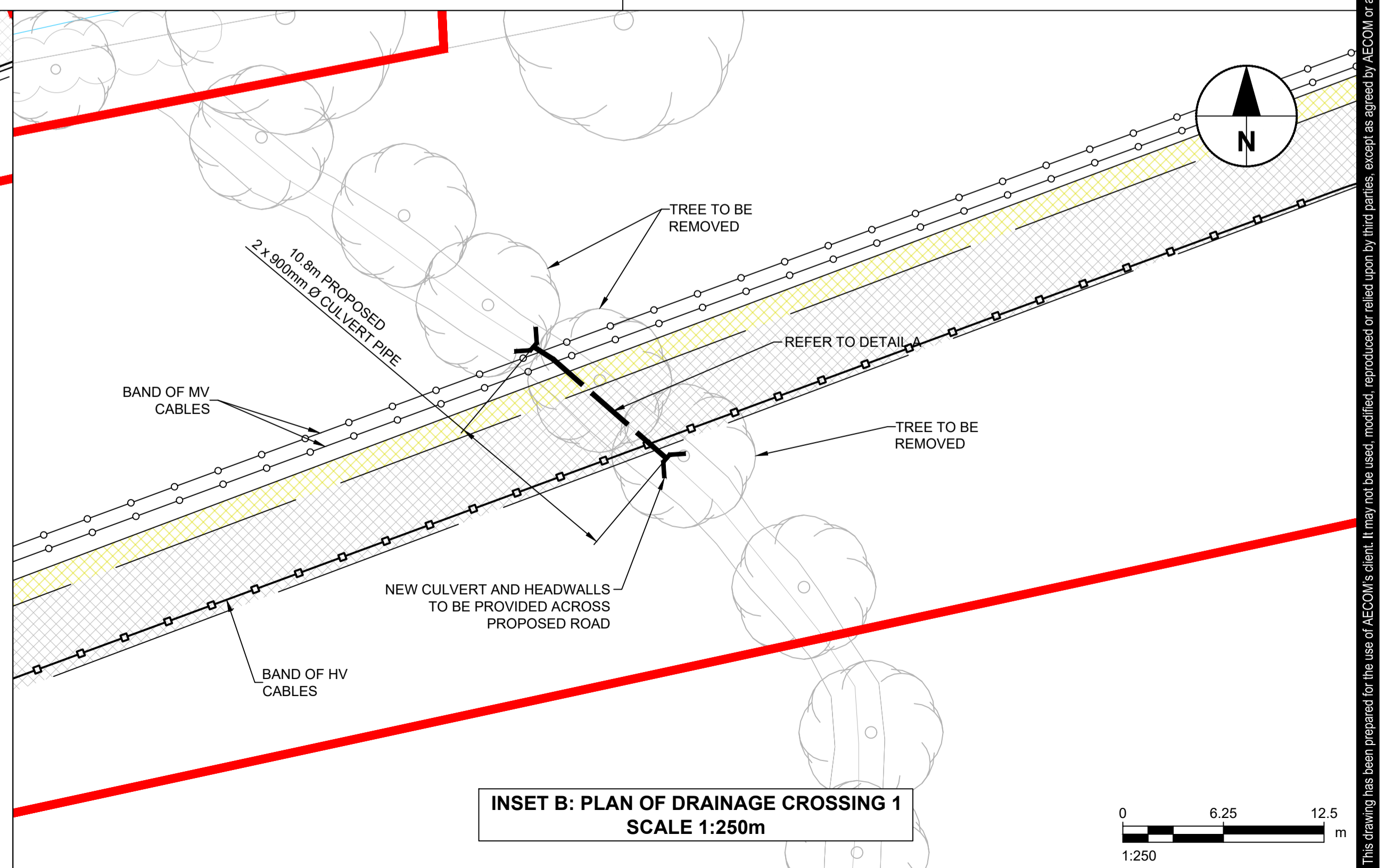
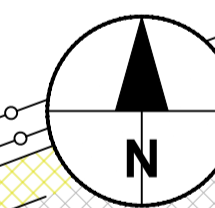
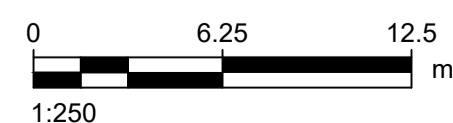
**DETAIL A: TYPICAL FORMED HEADWALL DETAILS FOR SURFACE WATER OUTFALL TO WATERCOURSE
SCALE 1:20**



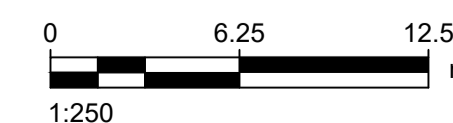
SECTION A - A



**INSET A: PLAN OF DRAINAGE CROSSING 1
SCALE 1:250m**



**INSET B: PLAN OF DRAINAGE CROSSING 1
SCALE 1:250m**



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NOTES

1. THE DRAWING IS ISSUED AT A PLANNING STAGE OF THE DESIGN. FOLLOWING FEEDBACK FROM THE PUBLIC CONSULTATION, AND/OR ADDITIONAL SURVEYS, SOME OF THE DETAILS MAY BE CHANGED.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION.
3. DO NOT SCALE FROM THIS DRAWING, USE ONLY PRINTED DIMENSIONS.
4. ALL DIMENSIONS IN METRES, ALL CHAINAGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE.

ISSUE/REVISION

| NO. | DATE | DESCRIPTION |
|-----|------------|---------------------|
| P1 | 10/11/2023 | ISSUED FOR PLANNING |
| P0 | 03/11/2023 | DRAFT |
| I/R | DATE | DESCRIPTION |

PROJECT NUMBER

60657534

SHEET TITLE

FIELDSTOWN 110 kV SUBSTATION
 DRAINAGE CHANNEL CROSSING
 STANDARD DETAIL

SHEET NUMBER

60657534-ACM-DWG-FT-616

REV

P1

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