Mareeba
SHIRE COUNCIL

65 Rankin Street
PO Box 154 MAREEBA QLD 4880

P: 1300 308 461
F: 07 4092 3323

W: www.msc.qld.gov.au
E: info@msc.qld.gov.au

24 November 2025

Planning Officer:	Carl Ewin
Direct Phone:	07 4086 4656
Our Reference:	OPW/25/0006
Your Reference:	160-012-001L

Conmat No. 2 Pty Ltd
C/- Erscon Consulting Engineers
PO Box 7890
CAIRNS QLD 4870

Dear Applicants,

Decision Notice
Planning Act 2016

I refer to your application and advise that on 24 November 2025, under delegated authority, Council decided to approve the application in full subject to conditions.

Details of the decision are as follows:

APPLICATION DETAILS

Application No:	OPW/25/0006
Street Address:	Country Road, Mareeba
Real Property Description:	Lot 200 on SP342245
Planning Scheme:	Mareeba Shire Council Planning Scheme 2016

DECISION DETAILS

Type of Decision:	Approval
Type of Approval:	Development Permit for Operational Works (Culvert Construction, Roadworks and Service Extensions)
Date of Decision:	24 November 2025

CURRENCY PERIOD OF APPROVAL

The currency period for this development approval is **two (2) years** starting the day that this development approval takes effect. (Refer to Section 85 "Lapsing of approval at end of currency period" of the *Planning Act 2016*.)

INFRASTRUCTURE

Where conditions relate to the provision of infrastructure, these are non-trunk infrastructure conditions unless specifically nominated as a "***necessary infrastructure condition***" for the provision of trunk infrastructure as defined under Chapter 4 of the *Planning Act 2016*.

ASSESSMENT MANAGER CONDITIONS

(C) ASSESSMENT MANAGER'S CONDITIONS (COUNCIL)

1. General

1.1 Development must be carried out substantially in accordance with the approved plans and the facts and circumstances of the use as submitted with the application, and subject to any alterations:

- found necessary by the Council's Delegated Officer at the time of examination of the engineering plans or during construction of the development because of particular engineering requirements;
- to ensure the works comply in all respects with the requirements and procedures of the FNQROC Development Manual, Queensland Urban Drainage Manual and good engineering practice; and
- to ensure compliance with the following conditions of approval.

1.2 All operational works must be designed and constructed in accordance with the design guidelines and procedures as set out in the FNQROC Development Manual, prior to works acceptance.

1.3 'For Construction' Engineering Drawings, inclusive of any amendments required by Conditions of this Permit, must be certified as approved by a suitably qualified RPEQ Engineer and a copy submitted to Council, prior to the pre-start meeting.

1.4 Where any part of Council's existing infrastructure or land is damaged as a result of construction activities occurring on the land, including but not limited to; mobilisation of heavy construction equipment, stripping, grubbing and vegetation damage, notify Council immediately of the affected infrastructure or land and have it repaired, replaced or reinstated at no cost to Council, prior to Works Acceptance.

1.5 Runoff Generally

All reasonable and practicable measures must be taken to prevent pollution entering existing creeks, waterways or drainage lines, as a result of silt run-off, oil and grease spills from any machinery. Wastewater as a result of cleaning equipment must not be discharged directly or in-directly to any watercourses, stormwater systems or private properties (in accordance with the requirements of the Environmental Protection Act (1994), the FNQROC Development Manual and Best Practice Erosion & Sediment Control – IECA Australasia).

1.6 Earthworks Construction

All earthworks must be constructed in accordance with AS 3798: Guidelines on earthworks for commercial and residential developments. At the completion of works, RPEQ Certification of the works and test results are required to be provided to Council, prior to Works Acceptance.

1.7 Stormwater Drainage

Stormwater drainage as shown on the Approved Plan(s), must be constructed in accordance with the relevant design and specifications sections of the FNQROC Development Manual and the Queensland Urban Drainage Manual, prior to Works Acceptance.

All stormwater from the land must be directed to a lawful point of discharge as per the Approved Plan(s) such that it does not adversely affect surrounding properties or properties downstream from the development, in accordance with the Queensland Urban Drainage Manual.

1.8 Council's examination of the documents should not be taken to mean that the documents have been checked in detail and Council takes no responsibility for their accuracy. If during construction, inadequacies of the design are discovered, it is the responsibility of the Principal Consulting Engineer to resubmit amended plans to Council for approval and rectify works accordingly.

2. Pre-start Meeting

2.1 In addition to the requirements of Clause CP1.07 and CP1.08 of the FNQROC Development Manual; after documentation has been approved by Council, a pre-start meeting is to be held on site prior to the commencement of work. Part 1 of the **attached** pre-start meeting pro-forma is to be completed and returned prior to the meeting including clause 1.u 'Request for Meeting' together with the prescribed Construction Monitoring Fee as set out in Council's Schedule of Fees.

3. Inspections

3.1 Inspections are to be carried out as detailed in the FNQROC Manual unless advised otherwise at the pre-start meeting.

4. Construction Security Bond and Defects Liability Bond

4.1 In addition to Clauses CP1.06 and CP1.20 of the FNQROC Development Manual; the Construction Security Bond and Defects Liability Bond shall each be a minimum of $1000 and Bank Guarantees shall have no termination date.

4.2 During the Defects Liability period, it is the responsibility of the developer to rectify any works found to be defective due to design faults and or found to exhibit faults attributed to the performance of the construction activities in terms of quality and conformance with design and specifications. The bond will be returned on satisfactory correction of any defective work and after expiration of the maintenance period. Failure to comply with a Council issued instruction to correct defective work may result in the call up of the bond to have the work completed.

5. Hours of Work

5.1 Work involving the operation of construction plant and equipment of any description, shall only be carried out on site during the following times:

- 7.00am to 6.00pm, Monday to Friday;
- 7.00am to 1.00pm Saturdays;
- No work is permitted on Sundays or Public Holidays.

5.2 No variation to the above working hours is allowed unless otherwise agreed in writing by Council.

6. Transportation of Soil

6.1 All soil transported to or from the site must be covered to prevent dust or spillage during transport. If soil is tracked or spilt onto the road pavement from works on the subject land, it must be removed no later than at the end of each working day. Sediment must not enter Council's stormwater drainage network.

REFERRAL AGENCIES

Not Applicable.

APPROVED PLANS

The following plans are Approved plans for the development:

Plan/Document Number	Plan/Document Title	Prepared by	Dated
Civil Drawings List			
160-012-C101 Rev A	COVER SHEET, LOCALITY PLAN AND DRAWINGS LIST	ERSCON	-
160-012-C102 Rev A	CGENERAL NOTES	ERSCON	30/10/2025
160-012-C103 Rev A	CULVERT PLAN	ERSCON	29/10/2025
160-012-C104 Rev A	COUNTRY ROAD LONGITUDINAL SECTION	ERSCON	28/10/2025
160-012-C105 Rev A	COUNTRY ROAD CROSS SECTIONS (SHEET 1 OF 3)	ERSCON	30/10/2025
160-012-C106 Rev A	COUNTRY ROAD CROSS SECTIONS (SHEET 2 OF 3)	ERSCON	30/10/2025
160-012-C107 Rev A	COUNTRY ROAD CROSS SECTIONS (SHEET 3 OF 3)	ERSCON	30/10/2025
160-012-C108 Rev A	TYPICAL ROAD CROSS SECTION AND DETAILS	ERSCON	30/10/2025
160-012-C109 Rev A	EROSION AND SEDIMENT CONTROL PLAN	ERSCON	30/10/2025
160-012-C110 Rev A	EROSION AND SEDIMENT CONTROL NOTES	ERSCON	30/10/2025
Structural Drawings List			
160-012-S101 Rev 3	WORKPLACE HEALTH AND SAFETY NOTES	ERSCON	21/08/2025
160-012-S102 Rev 3	STUCTURAL ENGINEERING NOTES SHEET 1 OF 2	ERSCON	21/08/2025
160-012-S103 Rev 3	STRUCTURAL ENGINEERING NOTES SHEET 2 OF 2	ERSCON	21/08/2025
160-012-S110 Rev 4	CULVERT SITE PLAN	ERSCON	3/11/2025
160-012-S111 Rev 3	TYPICAL CULVERT SECTION A	ERSCON	21/08/2025
160-012-S112 Rev 3	CULVERT DETAILS SHEET 1 OF 2	ERSCON	21/08/2025
160-012-S113 Rev 3	CULVERTY DETAILS SHEET 2 OF 2	ERSCON	21/08/2025
160-012-S120 Rev 3	CULVERT PRECAST DECK PANELS P1-P6 & P9-P11	ERSCON	21/08/2025
160-012-S121 Rev 2	CULVERT PRECAST DECK PANEL P7	ERSCON	21/08/2025
160-012-S122 Rev 2	CULVERT PRECAST DECK PANEL P8	ERSCON	21/08/2025
160-012-S123 Rev 3	CULVERT PRECAST HEAD WALL W4	ERSCON	21/08/2025
160-012-S130 Rev 2	STORMWATER PIT	ERSCON	21/08/2025

RIGHTS OF APPEAL

You are entitled to appeal against this decision. A copy of the relevant appeal provisions from the *Planning Act 2016* is attached.

During the appeal period, you as the applicant may suspend your appeal period and make written representations to council about the conditions contained within the development approval. If council agrees or agrees in part with the representations, a "negotiated decision notice" will be issued. Only one "negotiated decision notice" may be given. Taking this step will defer your appeal period, which will commence again from the start the day after you receive a "negotiated decision notice".

OTHER DETAILS

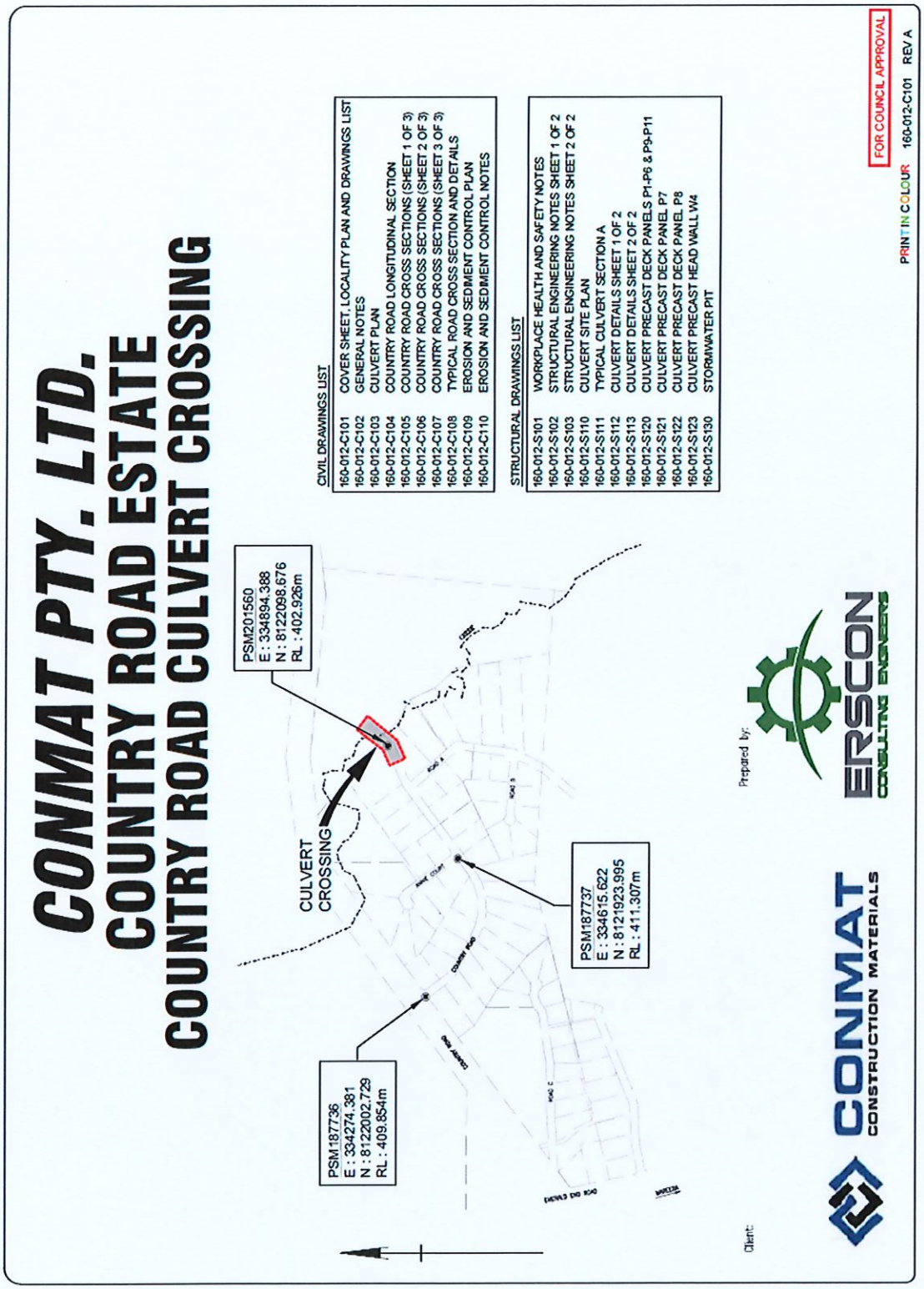
If you wish to obtain more information about Council's decision, electronic copies are available on line at www.msc.qld.gov.au, or at Council Offices.

Yours faithfully

BRIAN MILLARD
COORDINATOR PLANNING & BUILDING

Enc: Approved Plans/Documents
Appeal Rights

Approved Plans/Documents



24/11/2025

GENERAL NOTES:

1. LEVEL DATUM (AHD)
2. GRID OF LEVELS (GDA2020 ZONE 55)

NUMBER	EASTING	NORTHING	RL	LOCATION
PSM187735	334074.381	8122582.275	402.873(P)	COUNTRY ROAD, MAREEBA
PSM187737	334015.822	8122762.995	411.351(P)	COUNTRY ROAD, MAREEBA
PSM201560	334894.356	8122309.676	402.935(P)	COUNTRY ROAD, MAREEBA

3. EXISTING CONDITIONS HAVE BEEN BASED ON SURVEY DATA COLLECTED BY THESE SURVEYORS. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INFORMATION SHOWN.
4. THE CONTRACTOR IS TO LIAISE WITH THESE SURVEYS TO ESTABLISH SITE SURVEY CONTROL.
5. DETAILS OF SERVICES ARE PROVIDED FOR INFORMATION ONLY AND NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY AND COMPLETENESS OF THE INFORMATION. POSITIONS OF SERVICE CROSSINGS SHALL BE RECORDED AND SHOWN BY THE CONTRACTOR. NOT ALL CROSSINGS HAVE NECESSARILY BEEN SHOWN ON THE DRAWINGS. THE CONTRACTOR IS TO CHECK SERVICES ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. FOR ALL SPECIFICATIONS REFER TO FNQROC STANDARD SPECIFICATIONS.
7. INSPECTION AND TEST PLANS ARE TO BE UNDERTAKEN BY CONTRACTOR IN ACCORDANCE WITH FNQROC DEVELOPMENT MANUAL.
8. AS CONSTRUCTED DATA TO BE PREPARED AND SUBMITTED BY THE CONTRACTOR IN ACCORDANCE WITH FNQROC DEVELOPMENT MANUAL.

EARTHWORKS NOTES:

1. ALL EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT FNQROC DEVELOPMENT MANUAL SPECIFICATION – S1 'EARTHWORKS'.
2. FNQROC SPECIFICALLY REFERENCES AS 3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'. IN RELATION TO ALL EARTHWORK OPERATIONS INCLUDING APPROPRIATE METHODS OF TESTING, FREQUENCY OF TESTING AND REPORTING PROCEDURES. GEOTECHNICAL TESTING SERVICES SHALL BE AS DETERMINED BY LEVEL 1 IN ACCORDANCE WITH AS 3798. ALL DOCUMENTATION AND TEST RESULTS ARE TO BE COMPILED AND PROVIDED TO THE SUPERINTENDENT PRIOR TO WORKS ACCEPTANCE.
3. ALL batters SHALL BE 1 IN 3 MAX UNLESS NOTED OTHERWISE ON THE PROJECT DRAWINGS.
4. FINISHED SURFACE LEVELS SHOWN ON PROJECT DRAWINGS ARE AFTER ALL EARTHWORKS ARE COMPLETE INCLUDING TOPSOILING. ALL AREAS ARE TO BE GRADED EVENLY BETWEEN FINISHED SURFACE LEVELS UNLESS NOTED OTHERWISE.
5. DRY DENSITY RATIO AS REFERRED TO IN THESE NOTES IS THE RATIO DETERMINED IN ACCORDANCE WITH AS1289.5.4.1 OF COMPACTED DRY DENSITY IN ACCORDANCE WITH AS1289.5.2.1 OR AS1289.5.8.1 TO THE STANDARD MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289.5.1.1 (STANDARD COMPACTION).
6. NO VEGETATION SHALL BE REMOVED WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT UNLESS NOTED ON THE PROJECT DRAWINGS.
7. ALL VEGETAL MATTER, TOPSOIL AND OTHER UNSUITABLE MATERIAL SHALL BE STRIPPED/REMOVED FROM AREAS TO BE EXCAVATED OR FILLED. ALL VEGETAL MATTER AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE UNLESS ADVISED OTHERWISE BY THE SUPERINTENDENT. TOPSOIL SHALL BE STOCKPILED ON-SITE FOR REUSE. SURPLUS TOPSOIL SHALL BE DISPOSED OF OFF-SITE.
8. SHOULD ANY SOFT OR UNSUITABLE MATERIAL BE EXISTING, THE CONTRACTOR SHALL INFORM THE SUPERINTENDENT IMMEDIATELY AND SEEK THE ADVICE OF THE SUPERINTENDENT ON THE ACTION TO BE TAKEN.
9. COMPACT FILL TO MAX DRY DENSITY RATIO IN LAYERS OF THICKNESS APPROPRIATE TO THE COMPACTION PLANT EMPLOYED BUT NOT EXCEEDING 300mm.
10. ROAD NOSE SHALL BE FULLY TURFED ON COMPLETION OF TOPSOILING. ELSEWHERE DISTURBED AREAS 1:3 OR FLATTER SHALL BE GRASS SEEDED AND AREAS STEEPER THAN 1:3 SHALL BE HYDROMULCHED (UNLESS NOTED OTHERWISE).

CONCRETE NOTES:

1. ALL CONCRETE WORKS INCLUDING SUPPLY, PLACEMENT, COMPACTION, REINFORCEMENT AND FINISHING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT FNQROC DEVELOPMENT MANUAL SPECIFICATION – S7 'CONCRETE WORKS'.

DRAINAGE NOTES:

1. ALL STORMWATER DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT FNQROC DEVELOPMENT MANUAL SPECIFICATION – S4 'STORMWATER DRAINAGE'.
2. ALL NEW INLET PITS TO BE CONSTRUCTED IN ACCORDANCE WITH FNQROC STD DWG'S S1050 AND S1060.

EROSION AND SEDIMENT CONTROL NOTES:

1. PRIOR TO CONSTRUCTION COMMENCING, THE CONTRACTOR MUST PREPARE AN EROSION & SEDIMENT CONTROL PLAN (ESCP) TO MANAGE THE SITE DURING CONSTRUCTION AND THE DEFECT LIABILITY PERIOD.
2. THE ESCP MUST BE CONSISTENT WITH THE APPROVED EROSION & SEDIMENT CONTROL STRATEGY (ESCS) AND SHALL TAKE INTO CONSIDERATION THE CONTRACTOR'S PROPOSED CONSTRUCTION METHODOLOGY AND PROGRAM.
3. AN ESCP THAT DEPARTS FROM THE APPROVED ESCS MUST BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO SUBMITTING TO COUNCIL.
4. NO EARTHWORKS SHALL COMMENCE ON ANY PART OF THE SITE PRIOR TO APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES BEING INSTALLED DOWNSTREAM OF THE SITE AND IN ACCORDANCE WITH THE APPROVED ESCP.
5. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION.
6. THE IMPACT ON THE ENVIRONMENT SHALL BE MINIMISED BY ADHERING THE FOLLOWING CONSTRUCTION PRACTICES:
   - AREAS DISTURBED BY CONSTRUCTION TRAFFIC AND PROCEDURES SHALL BE MINIMISED.
   - MINIMISE TRAFFIC MOVEMENTS AND SPEEDS ON EXPOSED SURFACES.
   - REHABILITATION OF DISTURBED AREAS SHALL BE CARRIED OUT SOON AFTER THE COMPLETION OF TOPSOIL PLACEMENT.
   - FLOW DIVERSION SHALL BE CARRIED OUT BY EARLY INSTALLATION OF DRAINS ALONG TOPS OF BATTERS WITH APPROPRIATE EROSION CONTROL DEVICES.
   - SEDIMENT INTERCEPTION BY THE PLACEMENT OF SUITABLE RETENTION SYSTEMS ACROSS DRAINAGE LINES AND AT INTERSECTION POINTS FOR BOTH THE CONSTRUCTION AND STABILISED AREAS.
4. ALL ACCESS TO AND FROM THE SITE SHALL BE VIA A TEMPORARY CONSTRUCTION ENTRY/EXIT. THE CONTRACTOR SHALL NOMINATE A PROPOSED ACCESS LOCATION ON THE ESC PLAN FOR APPROVAL BY THE SUPERINTENDENT.
5. STOCKPILES SHALL ONLY BE LOCATED IN AREAS NOMINATED ON THE PROJECT DRAWINGS OR APPROVED BY THE SUPERINTENDENT. ALL STOCKPILES MUST HAVE APPROPRIATE ESC MEASURES INSTALLED TO PREVENT SEDIMENT TRANSPORT. THE MAXIMUM HEIGHT OF ALL STOCKPILES MUST BE LIMITED TO 2.0m.
6. ALL PERMANENT AND TEMPORARY UNLINED SWALES AND DRAINS MUST HAVE APPROPRIATE TEMPORARY EROSION PROTECTION.
7. ALL INITIALLY CONSTRUCTED DRAINAGE STRUCTURES MUST BE PROTECTED AGAINST SEDIMENT INFILTRATION DURING CONSTRUCTION.
8. ALL COMPLETED DRAINAGE STRUCTURES MUST BE PROTECTED AGAINST SEDIMENT INFILTRATION UNTIL DRAINAGE IS ESTABLISHED.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF DUST EMANATING FROM THE SITE AT ALL TIMES FOR THE DURATION OF CONSTRUCTION. DUST SUPPRESSION METHODS TO BE USED.
10. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE CHECKED FOR DAMAGE, CLEANED OUT AND FULLY REINSTATED AFTER EACH RAINFALL EVENT RESULTING IN RUNOFF.
11. IF EROSION AND SEDIMENT CONTROL DEVICES HAVE BEEN FOUND TO BE DEFICIENT OR FAILED IN SERVICE DUE TO UNFORESEEN CIRCUMSTANCES, CORRECTIVE ACTION IS TO BE UNDERTAKEN IMMEDIATELY WHICH MAY INCLUDE AMENDMENTS/ADDITIONS TO THE ORIGINAL APPROVED EROSION CONTROL PLANS.
12. THE INSTALLATION, REMOVAL, RELOCATION OR MODIFICATION TO EROSION AND SEDIMENT CONTROL DEVICES MAY BE MADE BY COUNCIL IF DEEMED NECESSARY AND RELEVANT.
13. EROSION AND SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE TREATMENT AREA IS SUITABLY STABILISED/REVEGETATED.
14. THE CONTRACTOR SHALL UNDERTAKE A FORMAL COMPLIANCE AUDIT OF THE ESC AT SIX WEEKS INTERVALS DURING THE CONSTRUCTION PERIOD OF THE PROJECT. RECORDS OF THE AUDIT SHALL BE RETAINED ON SITE WHERE DEEMED AS PART OF THE AUDIT THE ESCP SHALL BE UPDATED AND PROVIDED TO THE SUPERINTENDENT.

COUNTRY ROAD CENTRELINE

CHAINAGE	EASTING	NORTHING	BEARING	LENGTH	RADIUS
260.000	334875.023	8122561.793	65°34'41.10"		
T 274.614	334881.918	8122576.290	65°34'41.10"		
P 283.498	334886.816	8122583.944		18.848	R=30.000
T 292.922	334902.909	8122600.400	50°59'54.50"		
303.538	334907.663	8122606.267	50°59'54.50"		

WATER NOTES:

1. ALL WATER RETICULATION WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT FNQROC DEVELOPMENT MANUAL SPECIFICATION – S5 'WATER RETICULATION'.
2. ALL PVC AND HDPE PIPES SHALL BE CLASS PN16. PVC PIPES SHALL BE RUBBER RING JOINTED AND DUCTILE IRON COMPATIBLE.
3. FOR MAIN TERMINATIONS, HEADING & ANCHORAGE DETAILS REFER FNQROC STD DRAWINGS S2015 & S2016. ENSURE COVER TO WATER MAINS IS 900mm MINIMUM UNDER ROADWAYS AND 600mm MINIMUM ELSEWHERE.
4. ALL WATER MAINS SHALL BE INSTALLED ON A STANDARD 2.0m OFFSET FROM THE PROPERTY BOUNDARY UNLESS NOTED OTHERWISE ON PLANS.
5. WHERE NON-METALLIC PIPE ARE LAID, A CONTINUOUS STEEL WIRE, 1.6mm MIN DIAMETER, SHALL BE LAID IMMEDIATELY ABOVE THE PIPE LAID TO ASSIST IN FUTURE LOCATING. THIS WIRE IS TO BE WRAPPED ONCE AROUND ALL HYDRANTS AND VALVES.
6. COUNCIL MUST BE CONTACTED TO PERFORM ANY DIRECT CONNECTION OR ALTERATION TO LIVE WATER MAINS. THE CONTRACTOR SHALL LIAISE WITH COUNCIL THE APPROPRIATE APPLICATION FORMS AND FEES FOR THESE WORKS TO BE COMPLETED. IT MAY BE POSSIBLE FOR SOME WORKS TO BE UNDERTAKEN BY THE CONTRACTOR UNDER SPECIAL CIRCUMSTANCES AND SUBJECT TO APPROPRIATE CONDITIONS AGREED TO WITH COUNCIL.
7. ALL HYDRANTS AND VALVES TO BE LOCATED OUTSIDE PROPERTY BOUNDARY TRUNCATIONS AND CORNERS, UNLESS NOTED OTHERWISE ON PLANS. FOR VALVES & HYDRANT BOXES INSTALLATION DETAILS REFER FNQROC STD DRAWINGS S2000 AND S2005.
8. REPAIRS OR VALVES CONSTRUCTED IN CONCRETE ARE TO HAVE A COMPRESSIBLE LAYER (MULPLEX) INSTALLED ON THE SURROUND. REFER FNQROC STD DRAWING S2000.
9. THE MINIMUM TEST PRESSURE FOR ALL PIPES SHALL BE 1250 kPa. THE CONTRACT SHALL GIVE COUNCILS WATER OFFICER 24 HOURS NOTICE PRIOR TO TESTING PERIOD.

LANDSCAPING NOTES:

1. ALL LANDSCAPING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT FNQROC DEVELOPMENT MANUAL SPECIFICATION – S8 'LANDSCAPING'.
2. ALL PLANTS MUST BE ORDERED SUPPLIED BY A REPUTABLE NURSERY, AND ORDERED WELL IN ADVANCE TO ENSURE AVAILABILITY.
3. TURF TO BE USED SHALL BE ROLLED & GRADE TURF MIX OF SPECIES FOR BUFFALO GRASS (AMONGUS COMMODISUS) AND 205 COUCH GRASS VARIETIES.
4. STREET TREES SHALL BE PLANTED WHERE INDICATED ON PLAN. FINAL LOCATION TO BE DETERMINED ON SITE FOLLOWING INSTALLATION OF DRIVEWAYS AND CONFIRMATION OF SITE SERVICES.
5. STREET TREES FINAL LOCATION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   a. GREATER THAN 4.0m FROM ELECTRICITY OR TELECOMMUNICATION POLES OR PILLARS.
   b. GREATER THAN 7.5m FROM STREET LIGHTS.
   c. GREATER THAN 2.0m FROM STORMWATER DRAINAGE PITS.
   d. GREATER THAN 3.0m FROM DRIVEWAYS.
   e. A MINIMUM OF 0.9m AND A MAXIMUM OF 1.0m FROM THE BACK OF KERB.
6. TEMPORARY IRRIGATION SHALL BE INSTALLED TO ENSURE WATERING DURING THE ESTABLISHMENT PERIOD.

PRINT IN COLOUR

FOR COUNCIL APPROVAL

NO	DATE	DESCRIPTION	DRAWN	APPROVED
A	30/10/25	COUNCIL ISSUE	MF	JM
1	14/03/25	INITIAL ISSUE		

ERSCON CONSULTING ENGINEERS

CLIENT: CONMAT CONSTRUCTION MATERIALS

SCALE: NTS — ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE

DRAWN: MG | DESIGNED: MG | CHECKED: MF | APPROVED: MF

PROJECT: COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING

TITLE: GENERAL NOTES

DRAWING NO: 160-012-C102 | SIZE: A3 | REV: A

LT-RDO-20251006120630 PM
REV: 2025-11-06 Current Drawing Set Page 1 F:\Cad\Drawings\160-012-C102-NOTES.dwg

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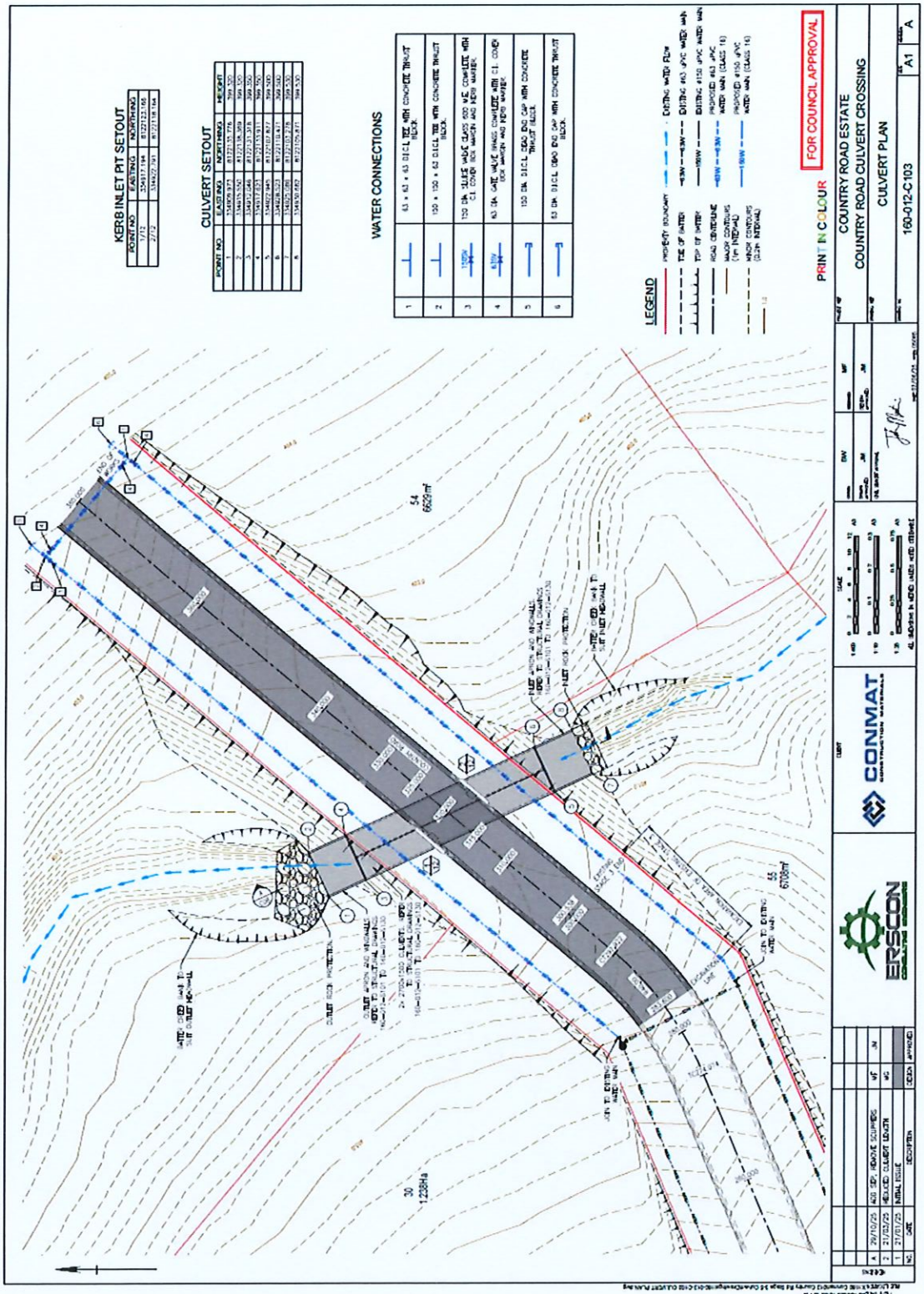
KERB INLET PIT SETOUT
CULVERT SETOUT
WATER CONNECTIONS
LEGEND
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CULVERT PLAN
160-012-C103
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6629m²
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30
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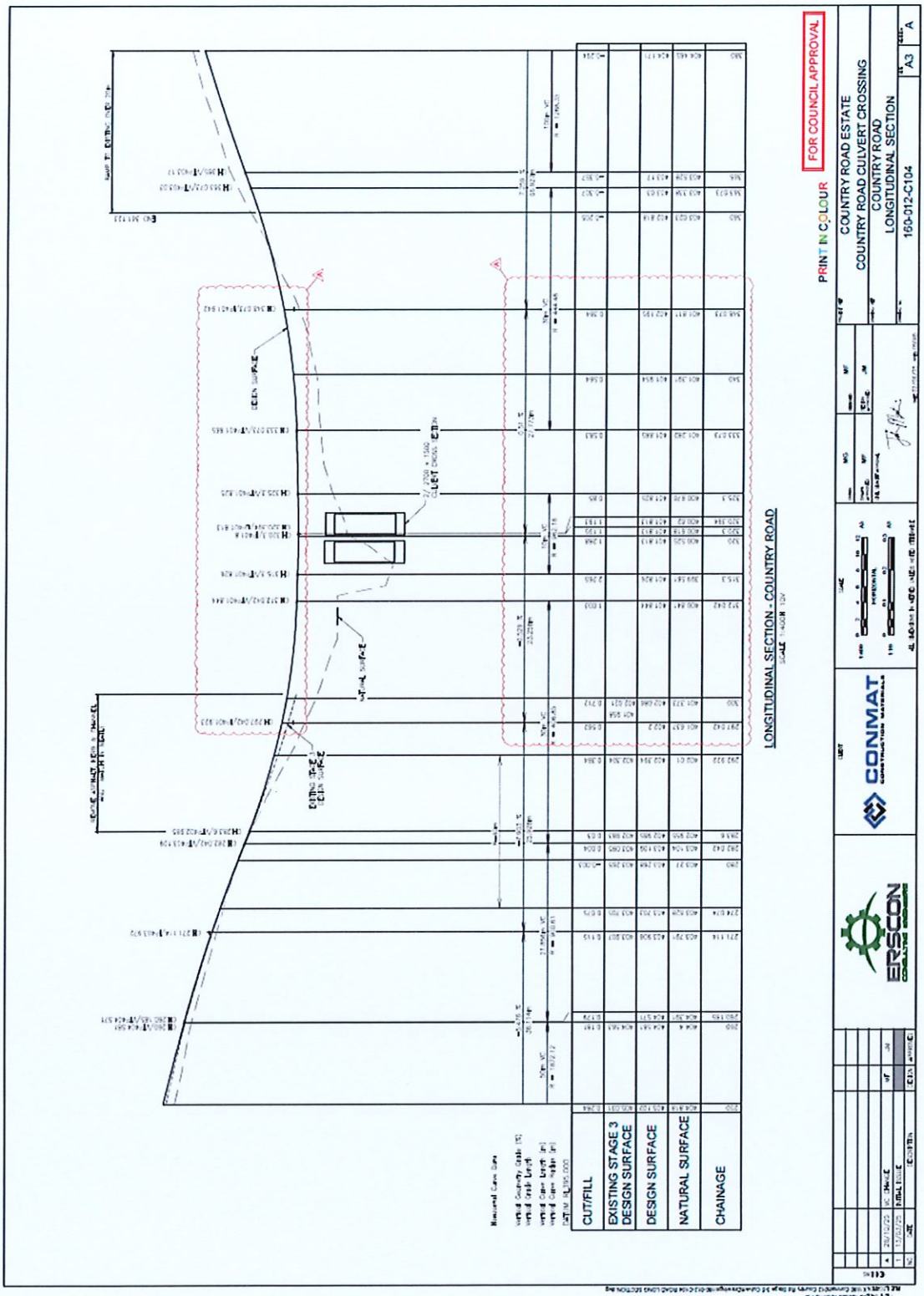
LONGITUDINAL SECTION - COUNTRY ROAD
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EXISTING STAGE 3 DESIGN SURFACE
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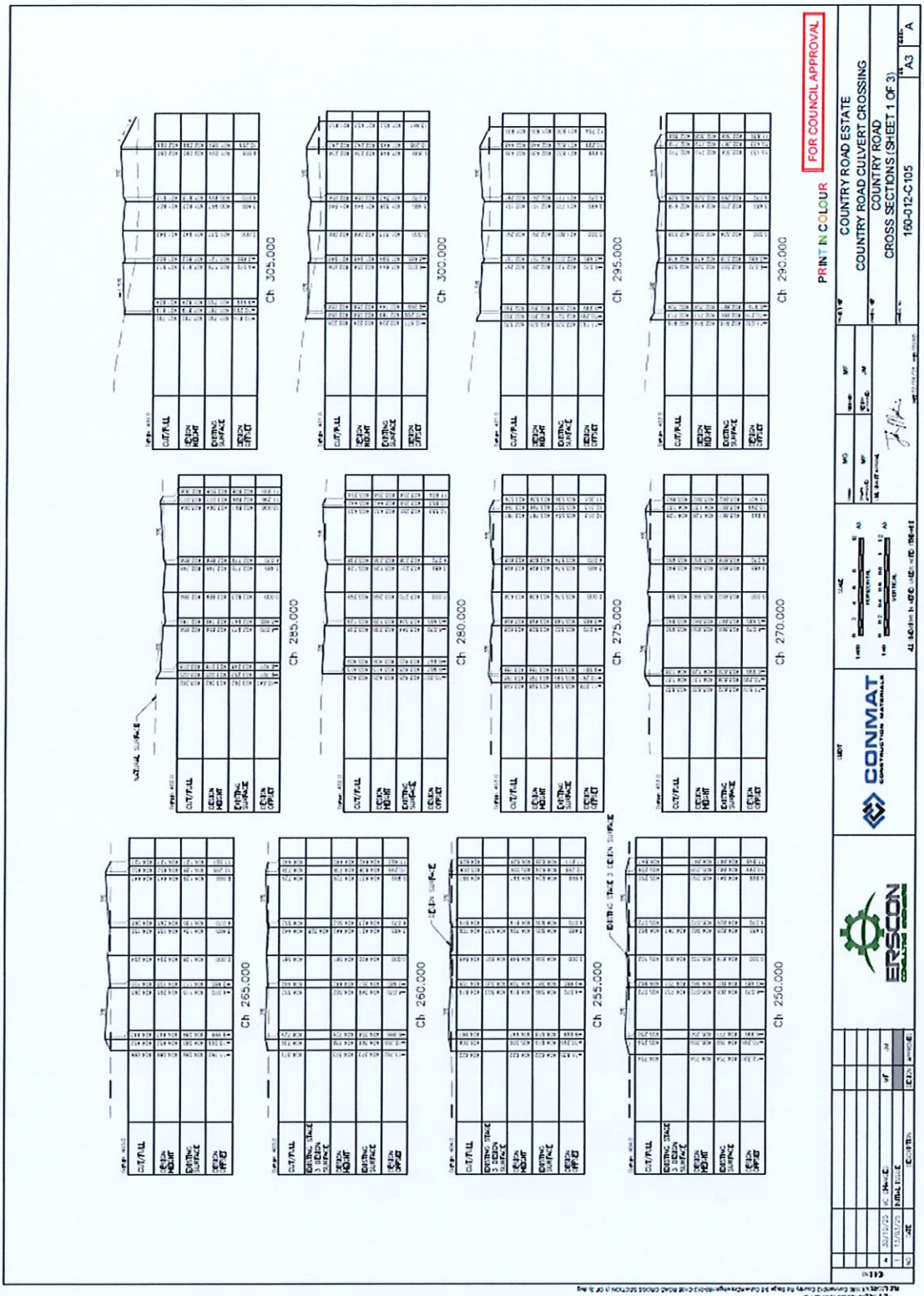
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Ch 250.000

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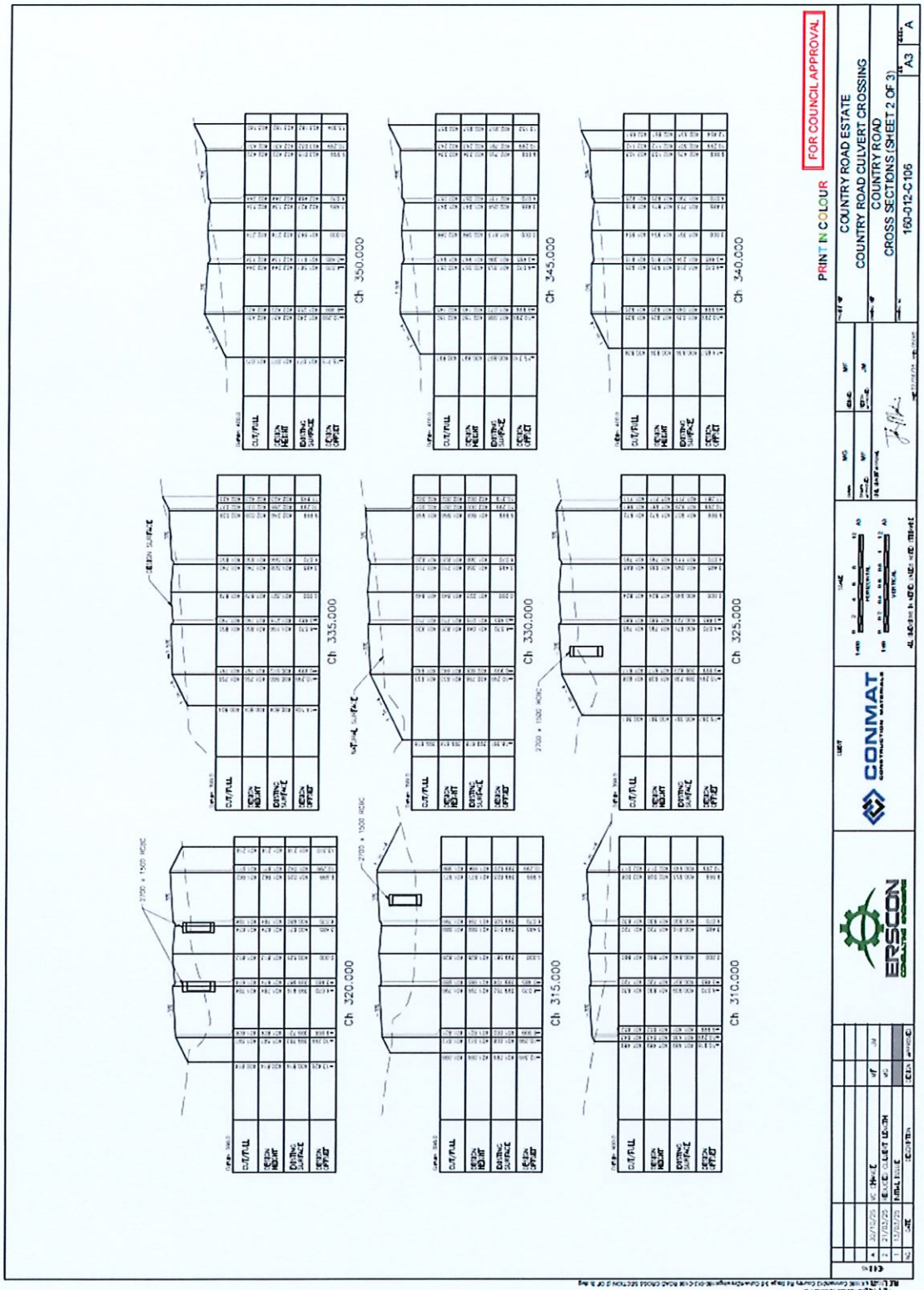
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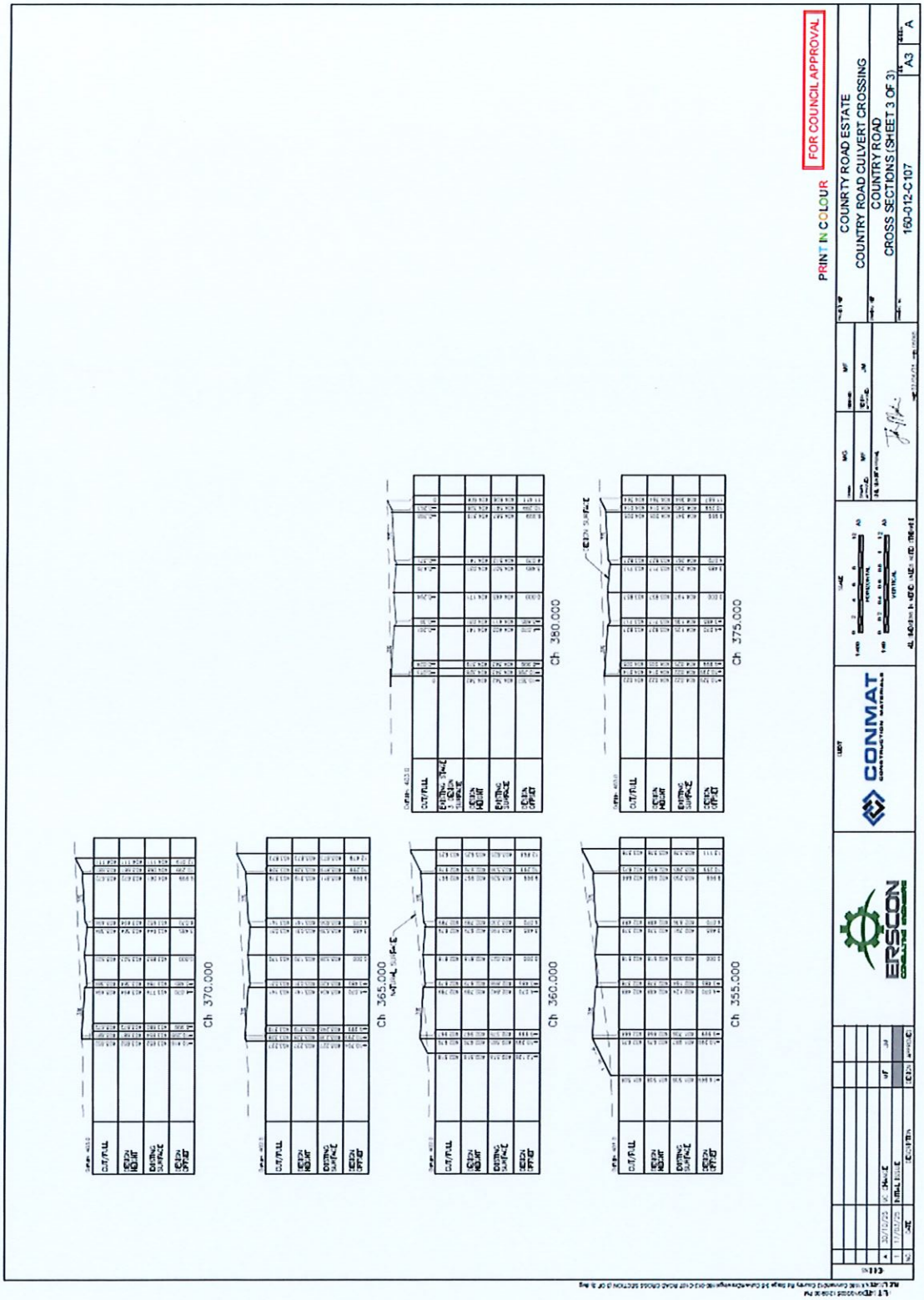
Ch 340.000
Ch 335.000
Ch 330.000
Ch 325.000
Ch 320.000
Ch 315.000
Ch 310.000
CUT/FILL
DESIGN HEIGHT
EXISTING SURFACE
DESIGN OFFSET

24/11/2025
JB.


Ch 370.000
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CUT/FILL
DESIGN HEIGHT
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FOR COUNCIL APPROVAL
COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING
COUNTRY ROAD
CROSS SECTIONS (SHEET 3 OF 3)
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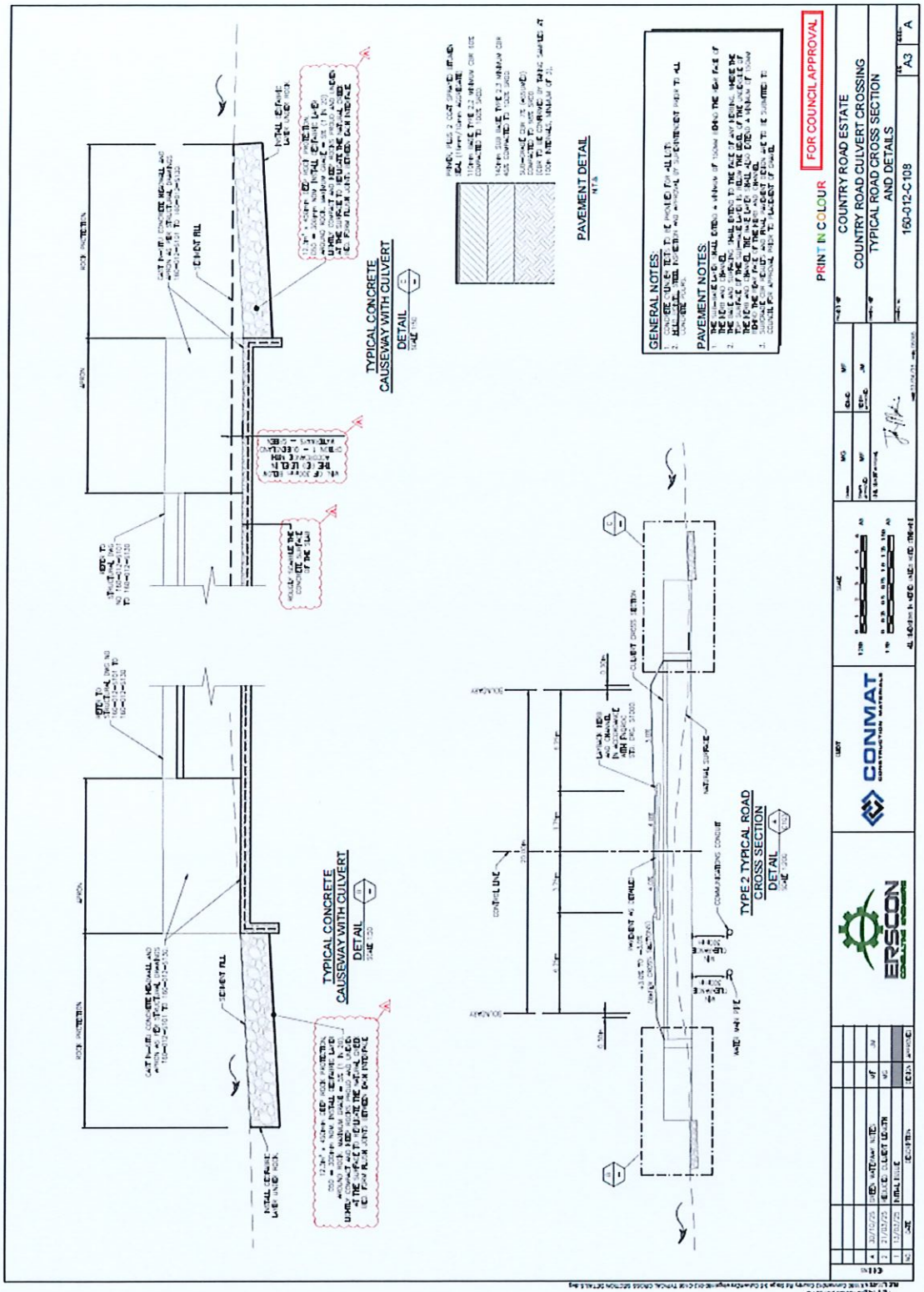
TYPICAL CONCRETE CAUSEWAY WITH CULVERT DETAIL
TYPICAL CONCRETE CAUSEWAY WITH CULVERT DETAIL
PAVEMENT DETAIL
TYPE 2 TYPICAL ROAD CROSS SECTION DETAIL
GENERAL NOTES:
PAVEMENT NOTES:
PRINT IN COLOUR
FOR COUNCIL APPROVAL
COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING
TYPICAL ROAD CROSS SECTION AND DETAILS
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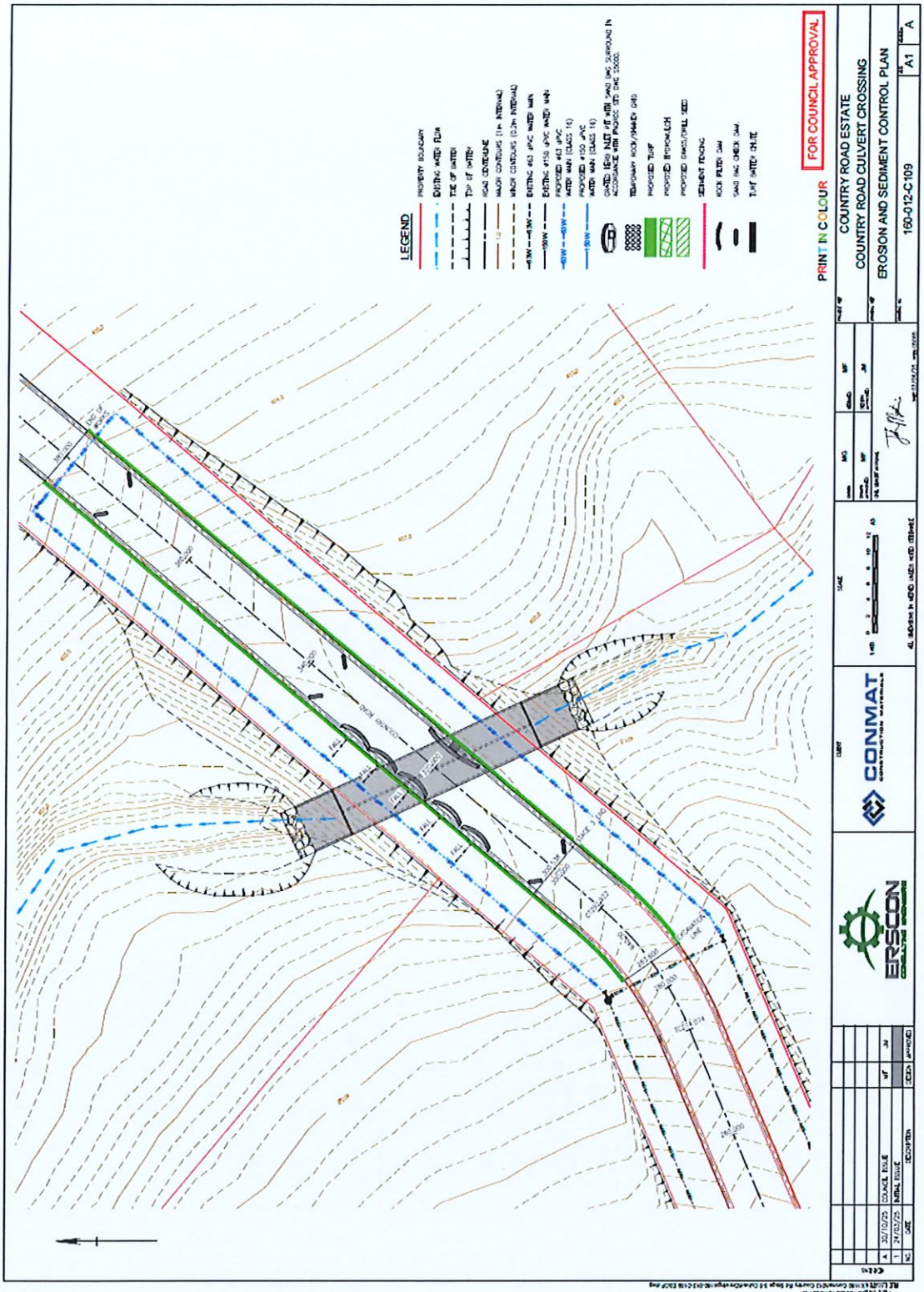
LEGEND
PROPERTY BOUNDARY
EXISTING WATER FLOW
TOE OF WATER
TOP OF WATER
ROAD CENTRELINE
MAJOR CONTOURS (1m INTERVAL)
MINOR CONTOURS (0.2m INTERVAL)
EXISTING 40 UPVC WATER MAIN
EXISTING 150 UPVC WATER MAIN
PROPOSED 40 UPVC WATER MAIN (CLASS 16)
PROPOSED 150 UPVC WATER MAIN (CLASS 16)
GRATED 1200 INLET PIT WITH SAND BAG SURROUND IN ACCORDANCE WITH IPWEAQ STD DWG S5001
TEMPORARY ROCK/GRAVEL DAM
PROPOSED TURF
PROPOSED EROSION LOCK
PROPOSED GRASS/SWALE SEED
SEDIMENT FENCING
ROCK FILTER DAM
SAND BAG CHECK DAM
TURF WATER CHUTE
PRINT IN COLOUR
FOR COUNCIL APPROVAL
COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING
EROSION AND SEDIMENT CONTROL PLAN
160-012-C109
A1
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CLIENT
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ALL DIMENSIONS IN METRES UNLESS NOTED OTHERWISE
DRAWN
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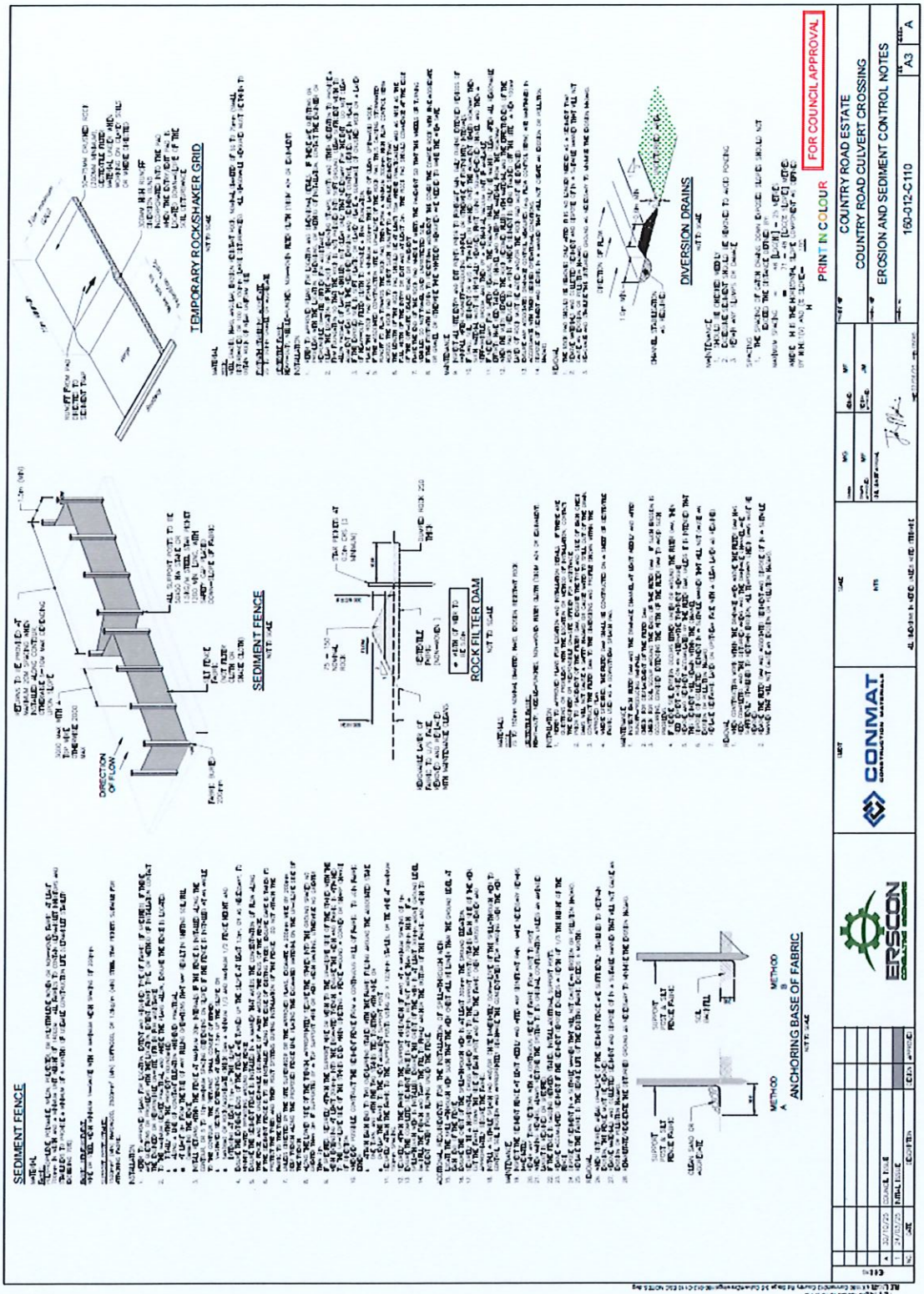
DATE
ISSUE
REVISIONS
24/03/25
30/10/25
COUNCIL ISSUE
INITIAL ISSUE

24/11/2025


SEDIMENT FENCE
TEMPORARY ROCKSHAKER GRID
SEDIMENT FENCE
ROCK FILTER DAM
DIVERSION DRAINS
ANCHORING BASE OF FABRIC
CONMAT
ERSCON
COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING
EROSION AND SEDIMENT CONTROL NOTES
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WORKPLACE HEALTH AND SAFETY DESIGN REPORT

THESE NOTES SHOULD BE READ AND UNDERSTOOD BY ALL INVOLVED IN THIS PROJECT.
THIS INCLUDES (BUT IS NOT LIMITED TO): DESIGNERS, CLIENT, OWNER, OWNER BUILDER, PRINCIPAL CONTRACTOR, SUB-CONTRACTORS, TRADE CONTRACTORS, CONSULTANTS, MAINTENANCE WORKERS, DEMOLISHERS, GENERAL WORKERS AND ANY PERSON CONDUCTING A BUSINESS OR UNDERTAKING (PCBU) ON THIS PROJECT.

GENERAL
1. ANY CHANGES TO THE SPECIFICATIONS OF THE STRUCTURAL DESIGN OR LOADING OF THE STRUCTURE BEFORE, DURING OR AFTER CONSTRUCTION MUST BE APPROVED BY THE STRUCTURAL ENGINEER OR AN APPROPRIATELY QUALIFIED ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR ALTERATION WORKS.
2. PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE) SHOULD BE PROVIDED, USED, WORN AND CURRENT AT ALL TIMES.
3. AN ADEQUATE FIRST AID KIT SHOULD BE PRESENT AND MAINTAINED ON SITE AT ALL TIMES.
4. NO UNIQUE/NON-TYPICAL BUILDING TECHNIQUES OR METHODS ARE REQUIRED FOR CONSTRUCTION, MAINTENANCE OR DEMOLITION OF THIS PROJECT. AS SUCH, A SAFETY-IN-DESIGN REVIEW BY THE ENGINEER HAS IDENTIFIED NO RISKS REQUIRING UNIQUE CONSIDERATION OR ACTION BEYOND THE REQUIREMENTS OF THE NATIONAL WORKPLACE HEALTH AND SAFETY ACT, THE WORKPLACE HEALTH AND SAFETY REGULATIONS AND INDUSTRY CODES OF PRACTICE.

SLIPS, TRIPS AND FALLS
1. CONSTRUCTION, CLEANING AND MAINTENANCE OF THIS BUILDING MAY REQUIRE PERSONS TO BE SITUATED WHERE A FALL IN EXCESS OF 1.4m IS POSSIBLE WHERE THIS ACTIVITY CANNOT BE AVOIDED, SCAFFOLDING, LADDERS, FALL BARRIERS AND/OR PPE SHOULD BE USED IN ACCORDANCE WITH THE RELEVANT GUIDELINES, REGULATIONS OR LEGISLATION. CARE SHOULD BE TAKEN TO PREVENT A FALL FROM ANY HEIGHT.
2. THE SITE SHOULD BE KEPT TIDY AND FREE OF TRIP HAZARDS AT ALL TIMES, INCLUDING DURING CONSTRUCTION, MAINTENANCE AND EVERYDAY USE.
3. ADEQUATE LIGHTING SHOULD BE PROVIDED AT ALL TIMES DURING CONSTRUCTION AND MAINTENANCE AND WHEN THE BUILDING IS BEING USED TO ENSURE SAFE WORKING CONDITIONS.
4. ACCESSWAYS AND PATHS SHOULD BE MONITORED AT ALL TIMES TO ENSURE SURFACES ARE KEPT FREE OF ANY OBJECTS THAT MAY CAUSE A SLIP OR TRIP HAZARD.

MANUAL TASKS
1. ANY ITEMS WITH A MASS GREATER THAN 25kg SHOULD BE LIFTED BY TWO OR MORE WORKERS, OR WITH THE AID OF A MECHANICAL LIFTING DEVICE. WHERE POSSIBLE, COMPONENTS SHOULD BE STORED IN A WAY WHICH MINIMISES THE NEED FOR BENDING BEFORE LIFTING.
2. ALL PORTABLE TOOLS USED DURING CONSTRUCTION, MAINTENANCE AND DEMOLITION OF THIS BUILDING SHOULD BE PROPERLY MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

FALLING OBJECTS
1. CONSTRUCTION, MAINTENANCE OR DEMOLITION WORK ON OR AROUND THIS BUILDING IS LIKELY TO INVOLVE PERSONS WORKING ABOVE GROUND LEVEL. WHERE THIS OCCURS, ONE OR MORE OF THE FOLLOWING MEASURES SHOULD BE TAKEN TO PREVENT INJURY FROM FAILING OBJECTS.
- PREVENT OR RESTRICT ACCESS TO AREAS BELOW WHERE THE WORK IS BEING CARRIED OUT BY THE USE OF APPROPRIATE BARRICADES.
- PROVIDE TOE-BOARDS TO SCAFFOLDING OR WORK PLATFORMS.
- PROVIDE MESH BARRICADES TO THE SIDE OF SCAFFOLDING OR WORK PLATFORMS.
- PROVIDE PROTECTIVE STRUCTURES, HOARDING AND GANTRIES BELOW THE WORK AREA.
- ENSURE ALL PERSONS BELOW THE WORK AREA HAVE SUITABLE PPE (HARD HATS, SAFETY FOOTWEAR, EYE PROTECTION ETC.) AND THAT IT IS USED CORRECTLY.

2. DURING CONSTRUCTION, RENOVATION OR DEMOLITION OF THIS BUILDING. PARTS OF THE STRUCTURE WILL REMAIN STANDING PRIOR TO OR AFTER SUPPORTING ELEMENTS ARE IN PLACE, CONTRACTORS SHOULD ENSURE THAT TEMPORARY BRACING OR OTHER REQUIRED SUPPORTS ARE IN PLACE AT ALL TIMES TO PREVENT COLLAPSE.
3. DURING CONSTRUCTION, RENOVATION, MAINTENANCE OR DEMOLITION MECHANICAL LIFTING OF MATERIALS MAY BE REQUIRED. WHERE SUCH LIFTING IS NECESSARY, ENSURE THAT APPROPRIATE LIFTING DEVICES ARE USED, THAT LOADS ARE APPROPRIATE AND ARE PROPERLY SECURED AND THAT ACCESS TO AREAS BELOW THE LOAD IS PREVENTED OR RESTRICTED.

PUBLIC ACCESS
1. PUBLIC ACCESS TO CONSTRUCTION AND DEMOLITION SITES AND AREAS UNDER MAINTENANCE CAN CAUSE RISK TO WORKERS AND THE PUBLIC. WARNING SIGNS AND BARRIERS SHOULD BE PROVIDED TO PREVENT UNAUTHORISED ACCESS. ELECTRICAL INSTALLATIONS, EXCAVATIONS, PLANT AND LOOSE MATERIAL SHOULD BE SECURED WHEN NOT FULLY SUPERVISED.

TRAFFIC MANAGEMENT
1. PARKING OF VEHICLES OR LOADING/UNLOADING OF VEHICLES ON THIS SITE/ROADWAY MAY CAUSE A TRAFFIC HAZARD. PARKING FOR WORKERS AND LOADING AREAS SHOULD BE PROVIDED AND SUPERVISED BY TRAINED TRAFFIC MANAGEMENT PERSONNEL.
2. CONSTRUCTION OF THIS BUILDING MAY REQUIRE LOADING AND UNLOADING OF MATERIALS ON THE ROADWAY. DELIVERIES SHOULD BE WELL PLANNED TO AVOID CONGESTION OF LOADING AREAS. LOADING AND UNLOADING SHOULD BE SUPERVISED BY TRAINED TRAFFIC MANAGEMENT PERSONNEL.
3. PLANT OPERATING ON THIS SITE MAY CAUSE A RISK OF COLLISION. A TRAFFIC MANAGEMENT PLAN SHOULD BE ADOPTED AND SUPERVISED BY TRAINED TRAFFIC MANAGEMENT PERSONNEL.
4. ANY TEMPORARY ROAD CLOSURES ARE TO COMPLY WITH ALL LOCAL GOVERNMENT REQUIREMENTS. THE PRINCIPAL CONTRACTOR IS TO COMPLETE ALL NECESSARY DOCUMENTATION FOR TRAFFIC MANAGEMENT, SIGNAGE, BARRICADES, TRAFFIC CONTROLLERS ETC.

SERVICES
1. UNDERGROUND SERVICES MAY BE PRESENT AT THIS SITE. ALL SERVICES SHOULD BE LOCATED (USING DIAL BEFORE YOU DIG AND A SPECIALIST CONTRACTOR) AND CLEARLY MARKED PRIOR TO ANY WORKS COMMENCING.

BEFORE YOU DIG www.1100.com.au

2. WHERE THERE IS A RISK OF WORKERS OF PLANT COMING INTO CONTACT WITH POWER LINES THEY SHOULD BE DISCONNECTED OR RELOCATED. WHERE THIS IS NOT POSSIBLE, POWER LINES SHOULD BE CLEARLY MARKED WITH BRIGHT COLOURED MARKERS AND SIGNAGE SHOULD BE PROVIDED AT GROUND LEVEL.
3. DURING RENOVATION AND MAINTENANCE WORK, ALL EXISTING SERVICES WITHIN THE WORK AREA SHOULD BE LOCATED PRIOR TO WORK COMMENCING. IF DISCONNECTION IS NOT POSSIBLE, SERVICES SHOULD BE CLEARLY MARKED TO AVOID ANY RISK OF CONTACT OR RUPTURE.
4. ANY TEMPORARY SERVICES ARE TO BE CLEARLY MARKED AND HAVE ALL NECESSARY PROTECTIVE COVERINGS FOR THE PROPER PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT AUTHORITIES.

HAZARDOUS SUBSTANCES
1. MANY MATERIALS USED IN THE CONSTRUCTION OF THIS BUILDING CAN CAUSE HARM IF INHALED OR HANDLED. PERSONS WORKING ON OR IN THE BUILDING DURING CONSTRUCTION, MAINTENANCE OR DEMOLITION SHOULD ENSURE GOOD VENTILATION AND WEAR PERSONAL PROTECTIVE EQUIPMENT INCLUDING PROTECTION AGAINST INHALATION WHILE USING POWDERED MATERIALS OR WHEN SANDING, DRILLING, CUTTING OR OTHERWISE DISTURBING OR CREATING POWDERED MATERIAL.
2. TREATED TIMBER MAY BE USED IN THIS BUILDING. DUST OR FUMES FROM THIS MATERIAL CAN BE HARMFUL. PERSONS WORKING ON OR IN THIS BUILDING DURING CONSTRUCTION, MAINTENANCE OR DEMOLITION SHOULD ENSURE GOOD VENTILATION AND WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. DO NOT BURN TREATED TIMBER.
3. MANY TYPES OF GLUE, SOLVENTS, SPRAY PACKS, PAINTS, VARNISHES AND SOME CLEANING MATERIALS AND DISINFECTANTS HAVE DANGEROUS EMISSIONS. AREAS WHERE THESE ARE USED SHOULD BE KEPT WELL VENTILATED. PERSONAL PROTECTIVE EQUIPMENT MAY BE REQUIRED. THE MANUFACTURER'S RECOMMENDATIONS FOR USE MUST BE CAREFULLY CONSIDERED AT ALL TIMES.
4. IF IBREGLASS, ROCKWOOL, CERAMIC AND OTHER MATERIAL USED FOR THERMAL OR SOUND INSULATION MAY CONTAIN SYNTHETIC MINERAL FIBRE WHICH MAY BE HARMFUL IF INHALED OR IF IT COMES INTO CONTACT WITH THE SKIN, EYES OR OTHER SENSITIVE PARTS OF THE BODY. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT SHOULD BE WORN AT ALL TIMES WHEN INSTALLING, REMOVING OR WORKING WITH SUCH MATERIALS.
5. AREAS WHERE TIMBER FINISHES ARE APPLIED SHOULD BE KEPT WELL VENTILATED DURING SANDING AND APPLICATION AND FOR A PERIOD AFTER INSTALLATION. PERSONAL PROTECTIVE EQUIPMENT MAY BE REQUIRED. THE MANUFACTURER'S RECOMMENDATIONS FOR USE MUST BE CAREFULLY CONSIDERED AT ALL TIMES.
6. WORKS INVOLVING EXPOSURE TO ASBESTOS SHALL ONLY BE CARRIED OUT BY LICENCED SPECIALISTS AND STRICTLY IN ACCORDANCE WITH THE WHS REGULATIONS.

OTHER HIGH-RISK ACTIVITY
1. ALL ELECTRICAL WORK SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE '*CODE OF PRACTICE MANAGING ELECTRICAL RISKS AT THE WORKPLACE, AS/NZ 3012*' AND ALL LICENSING REQUIREMENTS. NEW ELECTRICAL INSTALLATION ON CONSTRUCTION AND DEMOLITION SITES MUST BE IN ACCORDANCE WITH THE WIRING RULES OF AS/NZS 3000 AND APPROPRIATE REQUIREMENTS OF AS/NZA 3012.
2. ALL WORK USING PLANT SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE '*CODE OF PRACTICE MANAGING RISKS OF PLANT AT THE WORKPLACE*'.
3. ALL WORK SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE '*CODE OF PRACTICE MANAGING NOISE AND PREVENTING HEARING LOSS AT WORK*'.
4. DUE TO THE HISTORY OF SERIOUS INCIDENTS, IT IS RECOMMENDED THAT PARTICULAR CARE BE EXERCISED WHEN UNDERTAKING ANY WORK INVOLVING STEEL CONSTRUCTION AND CONCRETE PLACEMENT.

FIRE FIGHTING
1. THE CLIENT/OWNER IS TO ENSURE THAT APPROPRIATE FIRE FIGHTING EQUIPMENT IS PROVIDED ON SITE DURING CONSTRUCTION AND MAINTAINED FOR THE LIFE OF THE BUILDING.
2. ALL FIRE FIGHTING EQUIPMENT IS TO BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS.

GENERAL WORKPLACE HEALTH AND SAFETY REQUIREMENTS
1. THE CLIENT/OWNER IS TO ENSURE THAT THE PRINCIPAL CONTRACTOR COMPLIES WITH ALL REQUIREMENTS OF THE NATIONAL WH&S ACT 2011, WORKPLACE HEALTH AND SAFETY REGULATIONS 2011 AND CODES OF PRACTICE DURING THE CONSTRUCTION OF THE BUILDING.
2. THE PRINCIPAL CONTRACTOR MEANS THE BUILDER WHO HAS OBTAINED THE BUILDING PERMIT AND WHOSE LICENCE NUMBER IS BEING USED FOR THE CONTRACT.
3. THE CLIENT/OWNER MUST ENSURE THAT THE PRINCIPAL CONTRACT COMPLETES A CONSTRUCTION WORKPLACE PLAN AS APPLICABLE UNDER THE WH&S LEGISLATION.
4. THE CLIENT/OWNER MUST ENSURE THAT THE PRINCIPAL CONTRACTOR AND ALL TRADE CONTRACTORS COMPLETE WORK METHOD STATEMENTS (WMS) AS APPLICABLE UNDER THE WH&S LEGISLSATION BEFORE ANY WORK COMMENCES.
5. THE CLIENT/OWNER MUST ENSURE THAT WORKERS HAVE A CURRENT GENERAL SAFETY INDUCTION (WHITE OR BLUE) CARD.
6. THE CLIENT/OWNER MUST ENSURE THAT THE PRINCIPAL CONTRACTOR CONDUCTS THE NECESSARY SITE-SPECIFIC INDUCTION AS REQUIRED BY WH&S LEGISLATION.
7. THE CLIENT/OWNER MUST ENSURE THAT THE PRINCIPAL CONTRACTOR HAS THE APPROPRIATE FIRST AID KITS AND THAT THEY ARE MAINTAINED AND KEPT ON SITE FOR THE DURATION OF THE CONSTRUCTION.
8. THE CLIENT/OWNER MUST ENSURE THAT THE PRINCIPAL CONTRACTOR, TRADE CONTRACTORS AND WORKERS MEET ALL OF THEIR WH&S OBLIGATIONS DURING CONSTRUCTION.
9. THE CLIENT/OWNER MUST ENSURE THAT THE PRINCIPAL CONTRACTOR AND TRADE CONTRACTORS ENSURE THAT ONLY EXPERIENCED, QUALIFIED, LICENSED PERSONS ARE EMPLOYED TO CARRY OUT THE WORK.
10. THE CLIENT/OWNER MUST ENSURE THAT THE PRINCIPAL CONTRACTOR HAS PUT IN PLACE THE WORKPLACE HEALTH AND SAFETY CONTROL MEASURES IN ACCORDANCE WITH WH&S REGULATION FOR ALL HIGH RISK CONSTRUCTION WORK INCLUDING BUT NOT LIMITED TO: CONSTRUCTION SAFETY PLAN, WORK METHOD STATEMENTS, ROOF EDGE PROTECTION, SCAFFOLDS AND WORK PLATFORMS, WORK PLATFORMS ON TRESTLE LADDERS, FALL ARREST PLATFORMS, TRAVEL RESTRAINT SYSTEMS, FALL ARREST HARNESS SYSTEMS, STAIR VOID PROTECTION, BALCONY EDGE PROTECTION, INDUSTRIAL SAFETY NETS AND EXCAVATION FALLS PROTECTION.

PRINT IN COLOUR

FOR COUNCIL APPROVAL

ERSCON CONSULTING ENGINEERS

CONMAT CONSTRUCTION MATERIALS

COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING

WORKPLACE HEALTH AND SAFTEY NOTES

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A. GENERAL NOTES

A1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS, SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE WORK. ALL DISCREPANCIES SHALL BE REFERRED FOR 'APPROVAL BY THE ENGINEER' BEFORE PROCEEDING WITH THE WORK.

A2. THE TERM 'ENGINEER' REFERRED TO IN THESE NOTES IS TAKEN TO MEAN THE CERTIFYING RPEQ ENGINEER WHOSE NAME APPEARS ON THE STRUCTURAL DESIGN CERTIFICATE ISSUED WITH THESE DRAWINGS.

A3. WHERE THE 'APPROVAL OF THE ENGINEER' IS SPECIFIED OR REQUIRED IN THESE NOTES, APPROVAL IS TO BE PROVIDED IN WRITING. SUBSTITUTIONS OR ADJUSTMENTS ARE NOT PERMITTED WITHOUT THE 'APPROVAL OF THE ENGINEER'.

A4. **WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF FNQROC, STANDARDS AUSTRALIA CODES AND THE WORKPLACE HEALTH AND SAFETY ACT.** ALL LOCAL AND STATUTORY AUTHORITY'S REQUIREMENTS AND BYLAWS ARE TO BE ADHERED TO.

A5. **AS CONSTRUCTED DATA TO BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE COUNCIL IN ACCORDANCE WITH FNQROC DEVELOPMENT MANUAL.**

A6. THE CONTRACTOR SHALL PROVIDE (TO THE CONTRACTOR'S COSTS AND CERTIFICATION) AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED, SUCH TEMPORARY BRACING ELEMENTS AS IS NECESSARY TO STABILIZE THE STRUCTURE AND ANY ADJACENT STRUCTURES DURING CONSTRUCTION, TRANSPORTATION, EXCAVATIONS AND ERECTION, ENSURING NO PART SHALL BE OVERSTRESSED DURING THESE ACTIVITIES.

A7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL EXISTING SERVICES ON THE SITE. SERVICES WHERE SHOWN ON THESE DRAWINGS ARE INDICATIVE LOCATIONS ONLY. THE CONTRACTOR IS TO RECTIFY IMMEDIATELY ANY OBSTRUCTION OR DAMAGE TO SUCH SERVICES AND PROVIDE TEMPORARY AND ADEQUATE SERVICES WHILST REPAIRS ARE CARRIED OUT.

A8. ANY DRAINAGE WORKS SHOWN ON THE STRUCTURAL DRAWINGS ARE INDICATIVE ONLY AND DO NOT FORM PART OF ERSCON's STRUCTURAL CERTIFICATION, EXCEPT DRAINAGE BEHIND RETAINING WALLS. DRAINAGE WORKS ARE TO BE BY THE CIVIL ENGINEERING DOCUMENTATION.

A9. **INSPECTIONS** AND CERTIFICATION: THE INSPECTOR MUST BE A REGISTERED PROFESSIONAL ENGINEER OF QLD AND INSPECT AND CERTIFY ALL STRUCTURE RELATED CONSTRUCTION WORKS. CONTRACTOR TO ARRANGE REQUIRED INSPECTIONS FOR THE FOLLOWING **HOLD POINTS:**

1. **AFTER EXCAVATION TO NATURAL GROUND BEFORE CONSTRUCTING ANY SOIL IMPROVEMENT WORKS OR FILL. CONTRACTOR MUST PROVIDE DCP TEST RESULTS TO THE CERTIFYING ENGINEER LATEST AT THIS STAGE OF WORKS.**
2. **AFTER ANY SOIL IMPROVEMENT WORKS OR FILL HAS BEEN CONSTRUCTED AND BASE SLAB SET UP HAS NOT BEEN STARTED YET**
3. **AFTER COMPLETED SET UP OF FORMWORK FOR BASE SLAB AND/OR APRON SLAB AND PLACEMENT OF BASE SLAB REINFORCEMENT AND/OR HEAD WALL /WING WALLS STARTER BARS** (MIN. 24h BEFORE THE CONCRETE POUR)
4. **AFTER COMPLETED SET UP OF FORMWORK FOR THE CULVERT WALLS AND PLACEMENT OF THE WALL REINFORCEMENT. FURTHER WALL SECTION INSPECTIONS CAN BE DONE VIA PHOTOS PROVIDED BY THE BUILDER TO THE ENGINEER FOR APPROVAL 24h BEFORE THE CONCRETE POUR.**
5. **AFTER COMPLETED SET UP OF FORMWORK FOR THE WING WALLS AND PLACEMENT OF THE REINFORCEMENT** (MIN. 24h BEFORE THE CONCRETE POUR).
6. **AFTER COMPLETED SET UP OF FORMWORK FOR THE CULVERT DECK PANELS AND PLACEMENT OF THE REINFORCEMENT AND ALL ANCHILLARY ITEMS** (MIN. 24h BEFORE THE CONCRETE POUR).
7. **AFTER COMPLETED SET UP OF FORMWORK FOR THE HEAD WALL AND PLACEMENT OF THE REINFORCEMENT AND ALL ANCHILLARY ITEMS** (MIN. 24h BEFORE THE CONCRETE POUR).
8. **AFTER PLACEMENT OF THE CULVERT DECK PANELS AND THE HEAD WALL PANEL BUT BEFORE GROUTING OF THE CONNECTION POINTS OF THE DECK PANELS TO THE WALLS.**

A10. PERMISSION IS GIVEN TO COPY THESE PLANS FOR USE ON THIS SPECIFIC PROJECT ONLY. PLANS MAY ONLY BE REPRODUCED AS A COMPLETE SET AND MUST INCLUDE THE STRUCTURAL DESIGN CERTIFICATE.

A11. IF ANY PART OF THIS DOCUMENTATION IS UNCLEAR OR ILLEGIBLE, PLEASE CONTACT THIS OFFICE.

A12. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THESE DRAWINGS.

A13. ABBREVIATIONS:

ABBR.	DESCRIPTION	ABBR	DESCRIPTION
CBR	CALIFORNIA BEARING RATIO	RCBC	REINFORCED CONCRETE BOXED
CL	CENTRE LINE	REIN	REINFORCEMENT
C.J.	CONSTRUCTION JOINT	S.C.	SAW CUT
CM	CONRETE MASONRY (BLOCKWORK)	SRDD	STANDARD RELATIVE DRY DENSITY
CRS	CENTRES	T.B.A	TO BE ADVISED
DCP	DYNAMIC CONE PENETROMETER	T/O	TOP OVER (REINFORCING LAYER)
E/W	EACH WAY (REINFORCING LAYERS)	T/U	TOP UNDER (REINFORCING LAYER)
HORI	HORIZONTAL	TYP	TYPICAL
MAX	MAXIMUM	ULS	ULTIMATE LIMIT STATE
MIN	MINIMUM	U.N.	UNLESS NOTED OTHERWISE
QA	QUALITY ASSURANCE	VERT	VERTICAL
RC	REINFORCED CONCRETE	WH&S	WORKPLACE HEALTH & SAFETY

B. ELECTRONICALLY TRANSFERRED DRAWINGS

B1. *ERSCON* ACCEPTS NO RESPONSIBILITY FOR A DRAWING THAT HAS BEEN AMENDED IN ANY WAY BY OTHER PARTIES.

B2. ANY PART OF *ERSCON's* DRAWINGS COPIED FROM ELECTRONICALLY TRANSFERRED DRAWINGS BECOMES THE RESPONSIBILITY OF THE RECIPIENT TO DISTRIBUTE ONLY TO THE PARTICIPATING PARTIES AS COMPLETE SET OF DRAWINGS.

C. HEALTH & SAFETY

C1. THE CONTRACTOR SHALL DEVELOP, IMPLEMENT AND ADMINISTER A WORKPLACE HEALTH AND SAFETY PROGRAM THAT WILL ENSURE THAT ALL CONSTRUCTION ACTIVITIES ARE PERFORMED TO THE RELEVANT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND ANY OTHER RELEVANT STATUTORY REQUIREMENTS.

C2. THE WORKPLACE HEALTH AND SAFETY PROGRAM MUST BE COORDINATED WITH ADJOINING PROPERTY OWNERS AND ALL RELEVANT PARTIES AS NECESSARY TO ENSURE A SAFE BUILDING ENVIRONMENT AT ALL TIMES.

C3. CONTRACTOR TO ARRANGE THE DESIGN AND CERIFICATION OF ANY LIFTING ARRANGEMENT FOR ON-SITE PRECAST ELEMENTS BY A SUITABLY QUALIFIED ENGINEER.

C4. CONTRACTOR TO BE FULLY LICENSED & REGISTERED FOR THE TYPES OF CONSTRUCTION WORKS. WORKS TO BE UNDERTAKEN ONLY BY SUITABLY QUALIFIED/ TRAINED STAFF IN ACCORDANCE WITH THE MANUFACTURER's WH&S AND QA PROCEDURES.

D. DESIGN PARAMETERS AND SERVICE LOADS

D1. THE REINFORCED CONCRETE CULVERT STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT ISSUES OF AS 5100.2-2017 BRIDGE DESIGN – DESIGN LOADS, AS 5100.5-2017 BRIDGE DESIGN – CONCRETE, AND STANDARDS MENTIONED WITHIN THOSE CODES AS APPLICABLE AND SUBSEQUENTLY THE DESIGN WILL SATISFY THE MINIMUM REQUIREMENTS SET OUT IN THE FNQROC DEVELOPMENT MANUAL VERSION 9.

D2. DESIGN CRITERIA AND ASSUMPTIONS USED IN THE DESIGN AMONGST OTHERS:

i. PERMANENT, IMPOSED AND OTHER ACTIONS TO AS/NZS 1170.0: 2002 AND AS/NZS 1170.1: 2002
ii. VEHICLE LOADING TO AS 5100.2
iii. EARTHQUAKE LOADS TO AS 1170.4: 2024
iv. EXPOSURE CLASSIFICATION, CONCRETE PROPERTIES & CURING, CONCRETE STRENGTH AND REINFORCEMENT COVER TO AS 5100.5

D3. THE CULVERT HAS BEEN DESIGNED FOR THE STANDARD ROAD TRAFFIC LOADS AS DEFINED IN AS5100.2.

D4. **THE CULVERT HAS BEEN DESIGNED FOR AN EXPOSURE CLASSIFICATION B2.**

D5. ALL THE ABOVE DO NOT INCLUDE LOADS WHICH MAY BE APPLIED DURING CONSTRUCTION. THE BUILDER IS TO MAINTAIN THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION AT ALL TIMES.

E. SITE PREPARATIONS, EARTHWORKS AND FOUNDATION NOTES

E1. EARTHWORKS SHALL BE IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" AND AS FOLLOWS, AND SATISFY THE MINIMUM REQUIREMENTS SET OUT IN THE FNQROC DEVELOPMENT MANUAL SPECIFICATION 'S1 EARTHWORKS'.

E2. REFER TO THE 'GENERAL NOTES' OF THE CIVIL ENGINEERING DESIGN DOCUMENTION BY *ERSCON* CONSULTING ENGINEERS FOR FURTHER NOTES.

E3. **THE DESIGN OF THE STRUCTURE HAS BEEN BASED ON THE FOUNDATION HAVING A MINIMUM BEARING CAPACITY OF 150 kPa AND THE SOIL BEING OF GRANULAR TYPE.**

E4. **BEFORE ANY CONSTRUCTION COMMENCES, THE SAFE BEARING CAPACITY OF THE GROUND AND SOIL PROPERTIES SHALL BE VERIFIED WITH A GEOTECHNICAL INVESTIGATION AND THE REPORT FORWARDED TO THE ENGINEER. IF THE BEARING PRESSURE AND SOIL TYPE IS ASSESSED AS BEING LESS AND DIFFERENT THAN ASSUMED, THE ENGINEER WILL NEED TO BE CONTACTED TO PROVIDE A SUITABLE AMENDED DESIGN.**

E5. **UNLESS NOTED OTHERWISE IN SPECIFICATIONS, THE BASE SLAB SHALL BE FOUNDED ON COMPACTED NATURAL GROUND INCLUDING THE FOUNDATION PREPARATION WORKS AS SPECIFIED ON THE CULVERT SECTION DRAWING. DO NOT PROVIDE A DAMP PROOF MEMBRANE UNDER THE BASE SLABS. MOISTEN GROUND BEFORE CONCRETE POUR.**

E6. IF COMPACTED CONTROLLED FILL IS TO BE USED AS FOUNDING MATERIAL, THIS IS TO BE CONFIRMED WITH THE ENGINEER BEFORE CONSTRUCTION COMMENCES AND THE ENGINEER WILL NEED TO BE ASKED TO PROVIDE A SUITABLE DESIGN.

E7. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXCAVATIONS IN STABLE CONDITIONS. PROTECT SURROUNDING PROPERTY AND SERVICES FROM ADVERSE EFFECTS OF GROUND WORKS. PROVIDE TEMPORARY WORKS AS REQUIRED. PROVIDE SHORING CERTIFIED BY SUITABLY QUALIFIED STRUCTURAL ENGINEER TO ALL DEEP EXCAVATIONS WHERE REQUIRED.

E8. KEEP EXCAVATIONS FREE OF WATER. PROVIDE ADEQUATE DRAINAGE TO ENSURE FOUNDATION IS NOT AFFECTED BY MOISTURE. PREVENT FOUNDATION DRYING OUT DUE TO EXPOSURE. PLACE BLINDING, FOOTINGS AND BACKFILL AS SOON AS PRACTICABLE AFTER EXCAVATION.

E9. STRIP BUILDING PLATFORM OF ALL TOPSOIL AND VEGETATION TO A MINIMUM DEPTH OF 150mm AND STOCKPILE. REMOVE ALL DELETERIOUS MATTER.

E10. ALL TREES AND LARGER VEGETATION SHALL BE KEPT MIN. 5m AWAY FROM THE CULVERT STRUCTURE.

E11. THE CONTRACTOR SHALL CHECK ALL EXCAVATIONS FOR ORGANIC MATERIAL AND RUBBISH. IF ANY OF THIS MATERIAL IS FOUND, IT SHALL BE REMOVED FROM THE WORKS TO A PLACE DESIGNATED BY THE SUPERINTENDENT.

E12. EXPOSURE OF EXCAVATED FOOTINGS SHALL BE MINIMISED TO PREVENT LOCAL SED MOISTURE CHANGES DURING THE CONSTRUCTION PERIOD.

E13. TREE REMOVAL: WHERE A TREE IS REMOVED, EXCAVATE 200mm BELOW EXTENT OF ROOT BALL. COMPACT EXPOSED SURFACE TO 98% SRDD TO A DEPTH OF AT LEAST 250mm. PLACE APPROVED COMPACTED FILL AND REQUEST THE SPECIFICATION FROM THE ENGINEER BEFORE COMMENCING CONSTRUCTION.

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CONMAT CONSTRUCTION MATERIALS

COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING
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E14. WHERE THE SUITABLE FOUNDING MATERIAL IS DEEPER THAN REQUIRED FOR THE FOOTING, THE EXCAVATION IS TO BE BACKFILLED WITH A WEAK MIX CONCRETE (N10) TO THE UNDERSIDE OF THE FOOTING BUT THIS IS TO BE CONFIRMED WITH THE ENGINEER BEFORE COMMENCING ANY BUILDING WORKS.

E15. **BACKFILLING** SHALL NOT TAKE PLACE UNTIL THE BASE SLAB AND THE CULVERT WALLS HAVE REACHED THEIR FULL 28-DAY CONCRETE STRENGTH AND THE DECK PANELS HAVE BEEN PLACED WITH THE GROUT FILLING OF THE CONNECTION POINTS HAVING ATTAINED MIN. 40 MPa STRENGTH.

F. CONCRETE AND REINFORCEMENT NOTES

F1. ALL WORKMANSHIP AND MATERIALS SHALL BE GENERALLY IN ACCORDANCE WITH AS3600 CONCRETE STRUCTURES AND AS5100 BRIDGE DESIGN, AND STANDARDS MENTIONED WITHIN THOSE DOCUMENTS AS APPLICABLE; AND SHALL SATISFY THE MINIMUM REQUIREMENTS SET OUT IN THE FNQROC DEVELOPMENT MANUAL SPECIFICATION 'S7 CONCRETE WORKS'.

F2. ALL FORMWORK SHALL BE IN ACCORDANCE WITH AS 3610 FORMWORK FOR CONCRETE.

F3. MINIMUM COVER TO ALL REINFORCEMENT SHALL BE 50mm EXCEPT WHERE CAST AGAINST GROUND IT SHALL BE 80mm.

F4. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES. ALL CONCRETE THICKNESSES SHOWN ARE MINIMUM STRUCTURAL REQUIREMENTS; NO REDUCTION IN THICKNESS DUE TO FALLS OR TOPPING IS PERMITTED. REFER CIVIL DRAWINGS FOR CONFIRMATION OF ALL SLAB FALLS AND STEPS.

F5. NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

F6. WET CONCRETE TO BE UNIFORM, HOMOGENEOUS, COHESIVE AND ABLE TO WORK READILY INTO CORNERS AND AROUND REINFORCEMENT COMPLETELY FILLING FORMWORK WITHOUT SEGREGATION, EXCESS FREE WATER ON SURFACE, LOSS OF MATERIAL OR CONTAMINATION. CONCRETE TO HAVE GOOD DIMENSIONAL STABILITY AND ABLE TO RESIST PLASTIC SETTLEMENT CRACKING, THERMAL CRACKING AND SHRINKAGE CRACKING.

F7. USE CEMENTITIOUS MATERIALS LESS THAN SIX MONTHS OLD. USE BAGGED CEMENT IN ORDER OF RECEIPT.

F8. DO NOT ADD WATER TO CONCRETE AFTER TRUCK HAS LEFT BATCHING PLANT.

F9. CONSTRUCTION JOINTS SHALL BE LOCATED AND CONSTRUCTED AS PER THE DETAILS ON THE DRAWINGS.

F10. CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES.

CONCRETE SPECIFICATION, U.N.O. ON DRAWINGS:

ELEMENT	GRADE	SLUMP	MAX AGGREGATE SIZE
CULVERT BASE SLAB, APRON SLAB, WALLS, WINGWALLS, DECK SLAB PANEL AND HEADWALLS	**S50**	80 +/-15	20 mm
	• **MIN. CEMENTITIOUS MATERIAL CONTENT 450 kg/m³** • **MAX. THE WATER / CEMENT RATIO 0.4** • **CURE CONCRETE CONTINUOUSLY FOR AT LEAST 14 DAYS** • **MIN. 32 MPa CONCRETE STRENGTH AT TIME OF STRIPPING AND CURING** • **RECOMMENDATION: ADD PENETRON ADMIX-SB OR XYPEX ADMIX C-Series TO THE CONCRETE AT TIME OF BATCHING AS PER THE DRAWINGS SPECIFICATION AND STRICTLY IN ACCORDANCE WITH THE MANUFACTURER's SPECIFICATIONS.**		

METHOD OF PLACEMENT BY PUMP.
PROJECT ASSESSMENT IS NOT REQUIRED.

F11. PROVIDE A 10mm x 10mm CHAMFER TO EXPOSED EDGES ON CONCRETE UNO.

F12. NON-SHRINK GROUT SHALL BE Parchem CONBEXTRA CB CEMENTITIOUS, OR APPROVED

FORMWORK

F13. RESPONSIBILITY FOR DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF FORMWORK AND FALSEWORK LIES WITH THE CONTRACTOR.

F14. FORMWORK TO BE DESIGNED AND CONSTRUCTED TO AS3610.

F15. APPLY RELEASE AGENT COMPATIBLE WITH CONTACT SURFACES TO INTERIOR OF FORMWORK. WHERE NECESSARY CLEAN REINFORCEMENT TO REMOVE TRACES OF RELEASE AGENT. SEAL JOINTS BETWEEN FORMWORK PANELS, AND TO HARDENED CONCRETE WITH A FLEXIBLE RUBBER STRIP.

F16. DO NOT STRIP FORMWORK PRIOR TO 36 HOURS AFTER PLACEMENT.

REINFORCEMENT

F17. STEEL REINFORCEMENT IS TO COMPLY WITH AS/NZS4671. SYMBOLS ON DRAWINGS FOR GRADE AND TYPE OF REINFORCEMENT ARE AS FOLLOWS:
- R: STRUCTURAL GRADE 250 PLAIN ROUND BAR TO AS/NZS4671
- N: HOT ROLLED GRADE 500 DEFORMED (RIBBED) BAR DUCTILITY CLASS N TO AS/NZS4671
- L: HOT ROLLED GRADE 500 DEFORMED BAR DUCTILITY CLASS L TO AS/NZS4671
- SL: HARD DRAWN WIRE GRADE 500 SQUARE MESH DUCTILITY CLASS L TO AS/NZS4671
- RL: HARD DRAWN WIRE GRADE 500 RECTANGULAR MESH DUCTILITY CLASS L TO AS/NZS4671
- TM: HARD DRAWN STEEL GRADE 500 TRENCH MESH DUCTILITY CLASS L TO AS/NZS4671
- W: GRADE 500 STEEL REINFORCING WIRE TO AS/NZS4671

F18. FOLLOWING ABBREVIATIONS APPLY TO DESCRIBE THE PLACEMENT OF REINFORCEMENT:
EW: EACH WAY FF: FAR FACE NF: NEAR FACE
EF: EACH FACE BTM: BOTTOM

F19. PROVIDE ACRS (AUSTRALIAN CERTIFICATION AUTHORITY FOR REINFORCING STEEL LTD) CERTIFICATION OF COMPLIANCE WITH AS/NZS4671 FOR ALL REINFORCEMENT.

F20. PROVIDE DOCUMENTATION TO SHOW THAT REINFORCEMENT SUPPLIER AND MILL COMPLIES WITH AS/NZS4671.

F21. REINFORCEMENT MUST HAVE UNIQUE MARKS TO IDENTIFY SUPPLIER.

F22. DO NOT SPLICE REINFORCEMENT OTHER THAN SHOWN ON THE DRAWINGS.

F23. DO NOT BEND OR STRAIN REINFORCEMENT IN A WAY THAT MAY CAUSE DAMAGE. BEND DIAMETERS TO BE TO AS3600. BARS TO BE BENT COLD UNO. DO NOT COOL HEATED BARS BY QUENCHING.

F24. WELDING OR SITE BENDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT APPROVAL OF THE ENGINEER.

F25. ALL REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION BEFORE CONCRETING (BY APPROVED CHAIRS, SPACERS, LIGATURES OR TIES AT 800 mm MAXIMUM CENTRES EACH WAY UNO.) TO PREVENT DISPLACEMENT OF REINFORCEMENT BY WORKMEN OR EQUIPMENT DURING CONCRETE PLACEMENT.

F26. FOR CONCRETE SURFACES WITH B2 EXPOSURE CLASSIFICATION OR GREATER, ONLY USE PROPRIETARY HIGH STRENGTH FIBRE REINFORCED CEMENT SPACER BLOCKS OR SUPPORTS.

F27. SECURELY TIE REINFORCEMENT WITH WIRE TIES. TURN ENDS OF TIE WIRES INTO CONCRETE, CLEAR OF COVER ZONE.

CONCRETE TESTING

F28. TEST SLUMP OF EACH BATCH OF CONCRETE DELIVERED BEFORE PLACING CONCRETE FROM THAT DELIVERY. SLUMP MEASURED TO BE NO GREATER THAN TARGET SLUMP WITHIN TOLERANCES GIVEN IN AS1379 CLAUSE 5.2.3.

F29. CONCRETE TESTING RESULTS TO BE PROVIDED AT 1 SAMPLE PER 25m³. EACH SAMPLE TO COMPRISE FOUR CYLINDERS: TEST TWO AT 7 DAYS AND TWO AT 28 DAYS.

F30. CONCRETE TESTING TO BE BY AN APPROVED INDEPENDENT NATA REGISTERED LABORATORY.

DELIVERABLES

F31. **AT LEAST ONE WEEK PRIOR TO CONCRETE PLACEMENT SUBMIT DETAILS OF PROPOSED CONCRETE MIX DESIGNS**, SEQUENCE AND TIMES FOR CONCRETE POURS, CONSTRUCTION JOINT LOCATIONS FOR ENGINEER's/INSPECTORS's APPROVAL. NOMINATE FOR EACH MIX DESIGN THE TYPE AND PROPORTIONS OF CONSTITUENTS, AGGREGATE GRADINGS, ADDITIVES AND ADMIXTURES, MAXIMUM WATER CONTENT AND MAXIMUM WATER/CEMENT RATIO, TARGET SLUMP, TARGET CHARACTERISTIC STRENGTH (f'c), AND TARGET DRYING SHRINKAGE.

F32. USE READY MIXED CONCRETE MIXED BY BATCH PRODUCTION PROCESS DELIVERED IN AGITATING TRUCKS. FOR EACH BATCH SUPPLY A DOCKET LISTING INFORMATION REQUIRED BY AS1379 CLAUSE 1.8.3 AND FOLLOWING:
- SERIAL NUMBER OF IDENTIFICATION CERTIFICATES OF EACH BATCH
- NAME OF CONCRETE DELIVERY SUPERVISOR
- ELEMENT FOR WHICH CONCRETE WAS ORDERED AND WHERE IT WAS PLACED
- METHOD OF PLACEMENT AND CLIMATIC CONDITIONS DURING POUR
- PROJECT ASSESSMENT CARRIED OUT
- TOTAL AMOUNT OF WATER REQUIRED BY MIX DESIGN
- TOTAL AMOUNT OF WATER ADDED AT PLANT

F33. PROVIDE RECORD OF SLUMP TESTING TO SUPERINTENDENT.

F34. FORWARD CONCRETE PRODUCTION ASSESSMENT INFORMATION TO SUPERINTENDENT AS PER AS1379 CLAUSE 6.4 WHEN PRODUCTION ASSESSMENT IS UNDERTAKEN.

F35. REPORT DRYING SHRINKAGE TESTING RESULTS TO SUPERINTENDENT.

G. PRECAST CONCRETE ELEMENTS

G1. ALL PRECAST CONCRETE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3850 PREFABRICATED CONCRETE ELEMENTS, AS 5100 BRIDGE DESIGN AND AS 3610 FORMWORK FOR CONCRETE AS APPLICABLE.

G2. REINFORCEMENT OF PRECAST CONCRETE UNITS HAVE BEEN DESIGNED FOR 'IN-SERVICE' CONDITIONS ONLY. THE BUILDING CONTRACTOR IS RESPONSIBLE TO ENGAGE A QUALIFIED CONTRACTOR E.G. *REID CONSTRUCTION SYSTEMS* TO DESIGN, DOCUMENT AND CERTIFY ANY ADDITIONAL REINFORCEMENT REQUIRED FOR LOADS DURING HANDLING, LIFTING AND TRANSPORTATION, ANY LIFTERS, BRACES ETC.

G3. USE CAST IN FERRULES FOR STRUCTURAL FIXINGS, NOT MECHANICAL OR CHEMICAL ANCHORS

G4. ENSURE THAT PRECAST UNITS REMAIN UNCRACKED AND UNDAMAGED DURING HANDLING, ERECTION AND INSTALLATION OPERATIONS. USE FORMWORK BOND BREAKERS AND STRONG BACKS AS REQUIRED. PROTECT UNITS FROM STAINING, DISCOLOURATION AND OTHER DAMAGE.

G5. USE RIGID FORMWORK AND INTENSE COMPACTION, SUCH AS VIBRATING TABLES OR FORM VIBRATORS, TO AS 5100.

G6. PRECAST UNIT TOLERANCES TO BE TO AS3850 EXCEPT WHERE VARIED BY SPECIFICATION.

G7. CONTRACTOR TO PROVIDE COMPONENTS, MATERIALS, FASTENERS, BRACES, STRONGBACKS, SHIMS, JOINTING STRIPS, SEALANTS, FLASHING, GROUT AND MORTAR, BEARING PADS AND STRIPS, TIES, DOWELS, CLIPS, FIXINGS etc AS REQUIRED.

G8. CAST UNITS WITH OUTER FACE OFF FORM.

G9. REMOVE TEMPORARY ATTACHMENTS AFTER ERECTION, MAKE GOOD AND SEAL.

G10. NON-SHRINK GROUT SHALL BE OF 28 DAY CHARACTERISTIC STRENGTH OF 40 MPa e.g. Parchem CONBEXTRA CB CEMENTITIOUS, OR APPROVED EQUIVALENT INSTALLED IN ACCORDANCE WITH MANUFACTURER 's SPECIFICATIONS. SUBMIT PRODUCT DETAILS FOR APPROVAL.

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FOR COUNCIL APPROVAL

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No.	Date	Description	Drn	Chk

ERSCON CONSULTING ENGINEERS

CONMAT CONSTRUCTION MATERIALS

Drawn CS	Chk RG		
Dsn RG	Apd RG		
Approved			
22.			

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COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING
STRUCTURAL ENGINEERING NOTES
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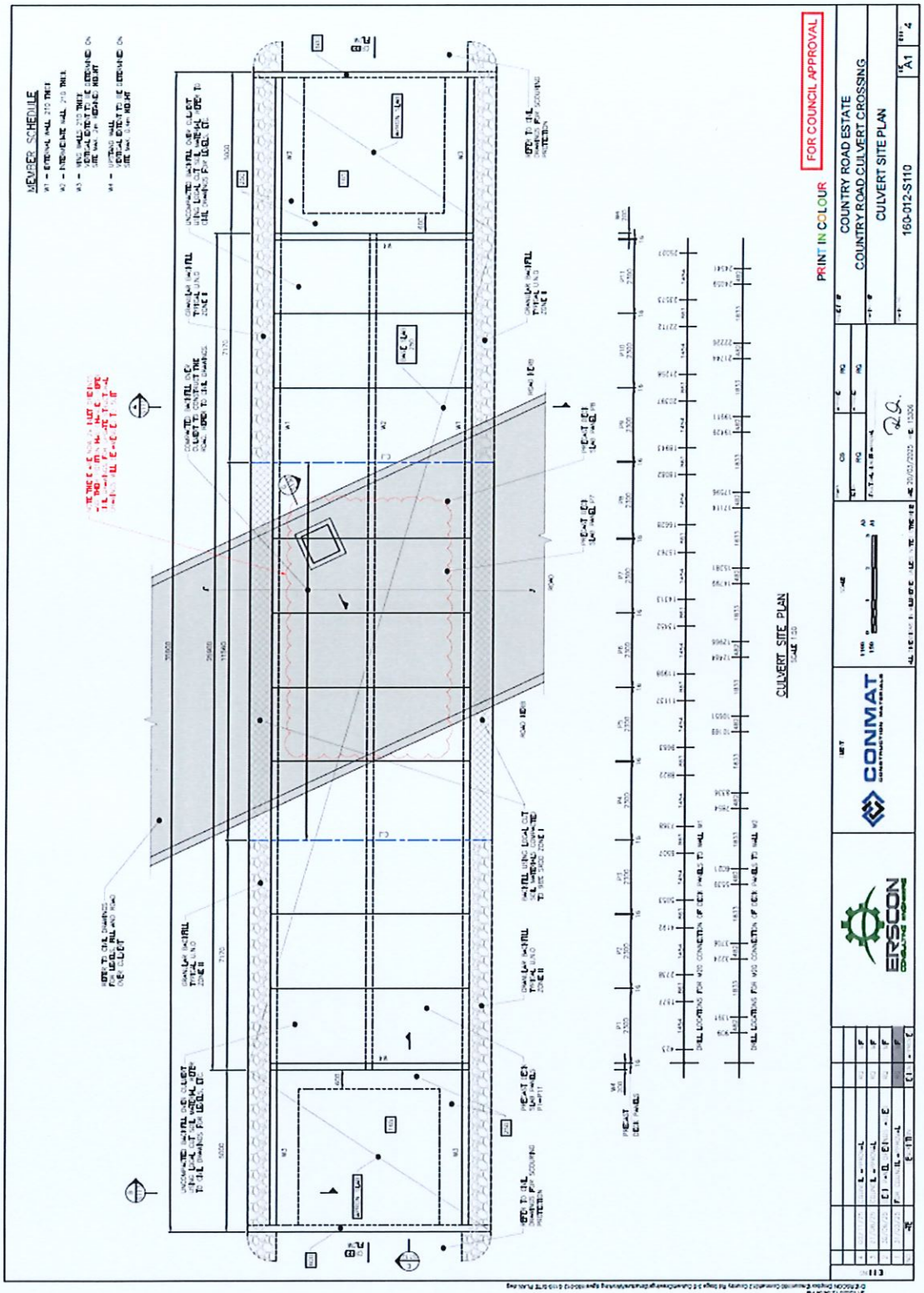
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FOR COUNCIL APPROVAL
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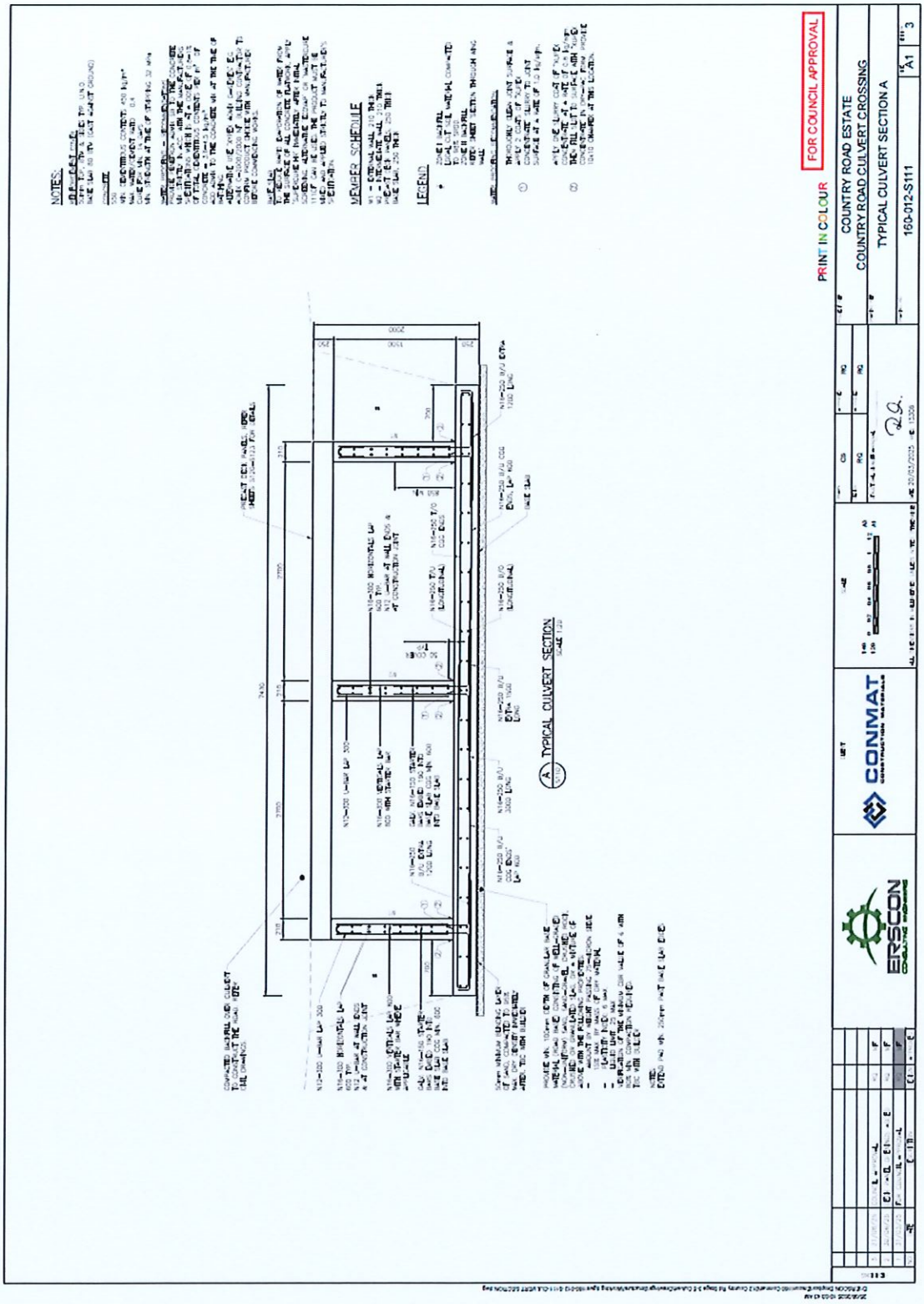
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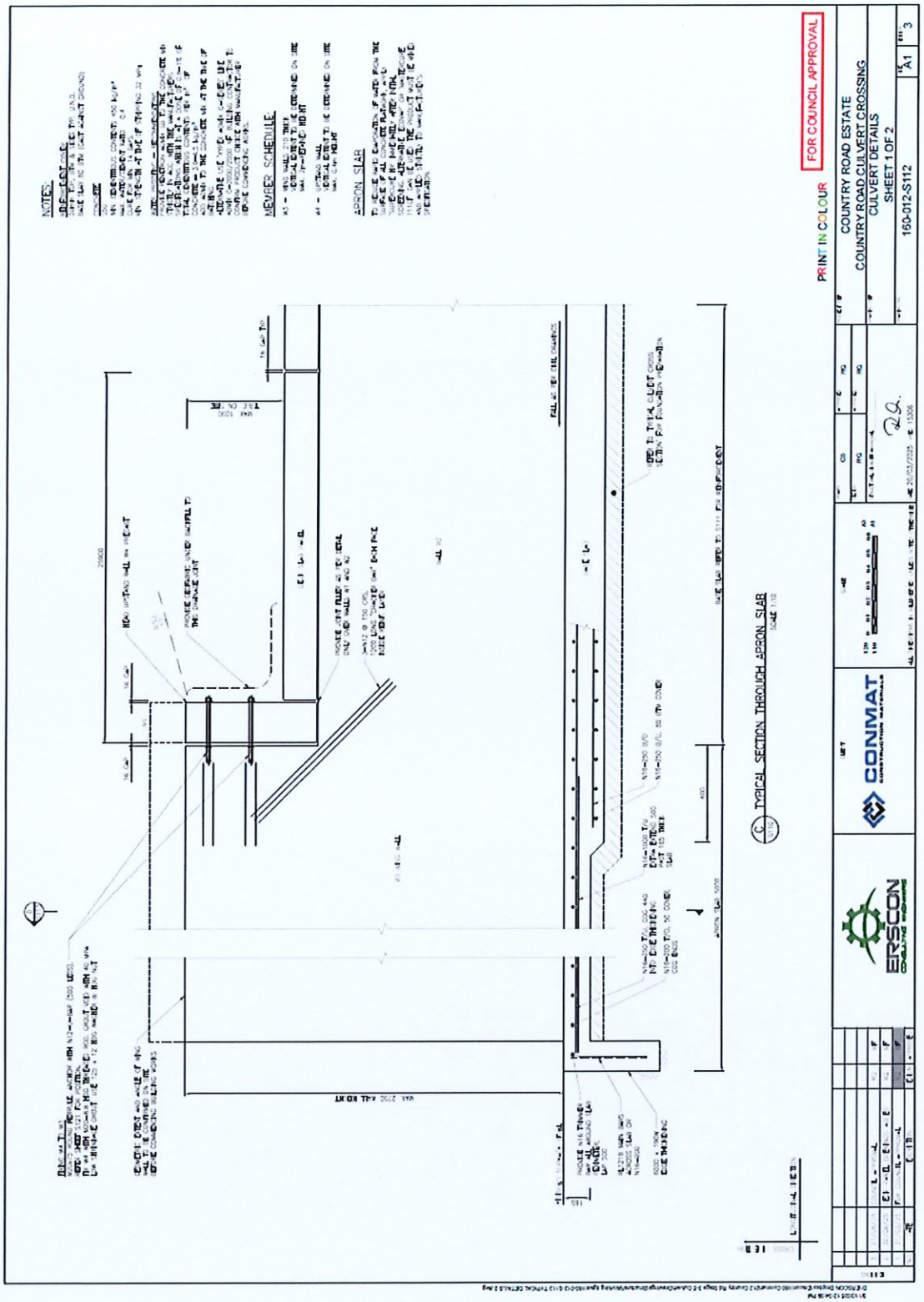
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SHEET 1 OF 2
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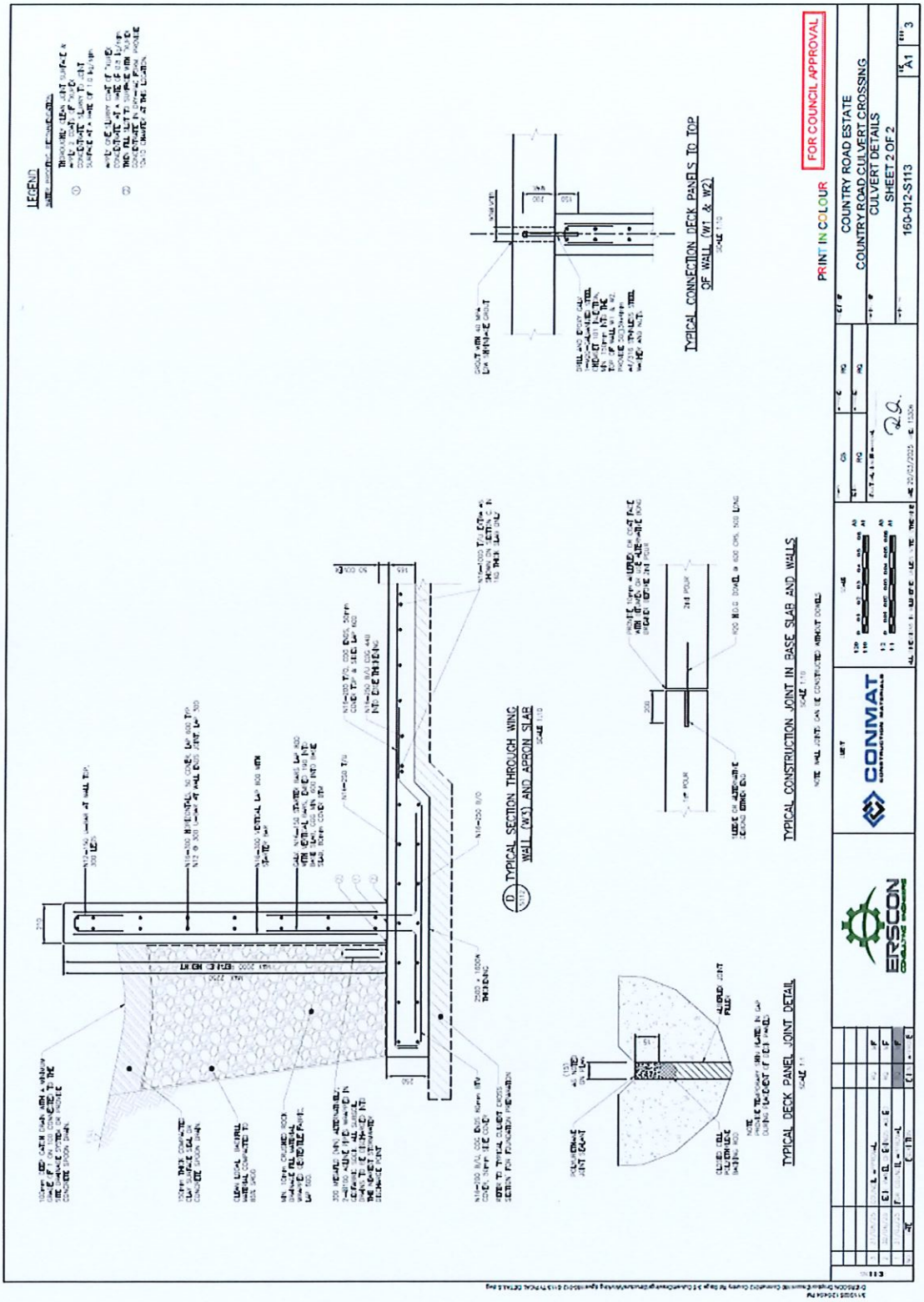
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TYPICAL DECK PANEL JOINT DETAIL
PRINT IN COLOUR
FOR COUNCIL APPROVAL
COUNTRY ROAD ESTATE
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SHEET 2 OF 2
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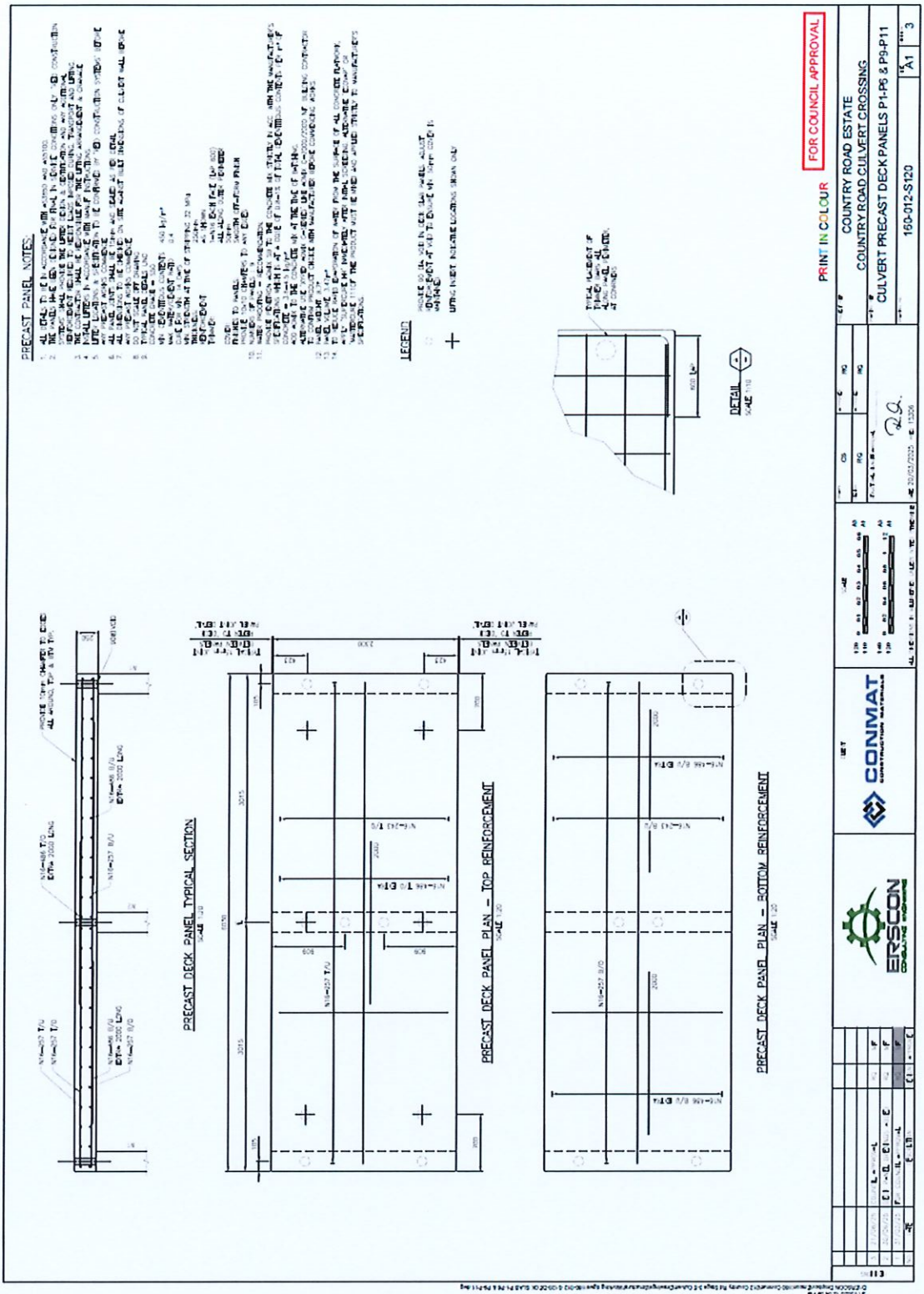
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PRINT IN COLOUR
FOR COUNCIL APPROVAL
COUNTRY ROAD ESTATE
COUNTRY ROAD CULVERT CROSSING
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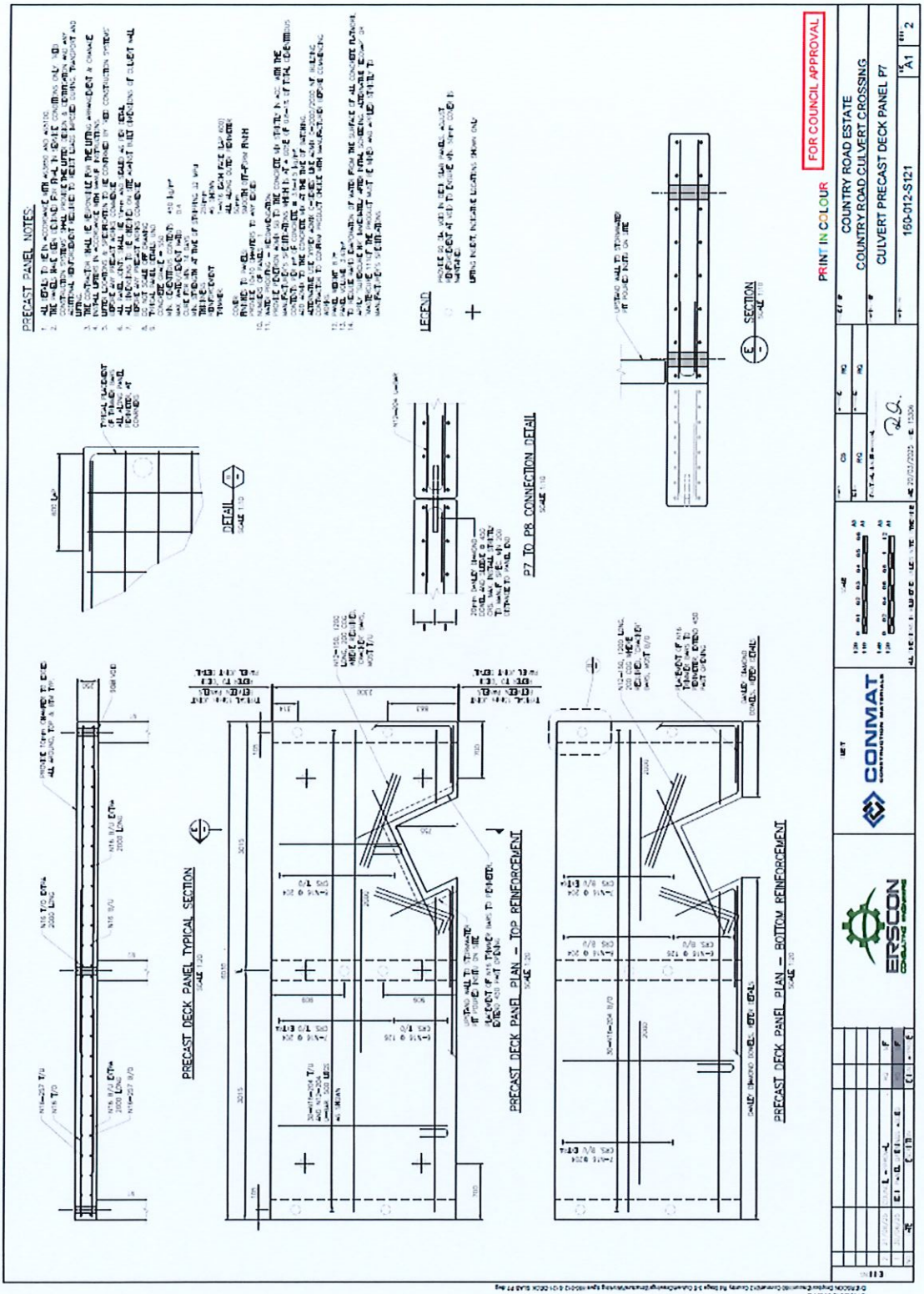
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PRINT IN COLOUR
FOR COUNCIL APPROVAL
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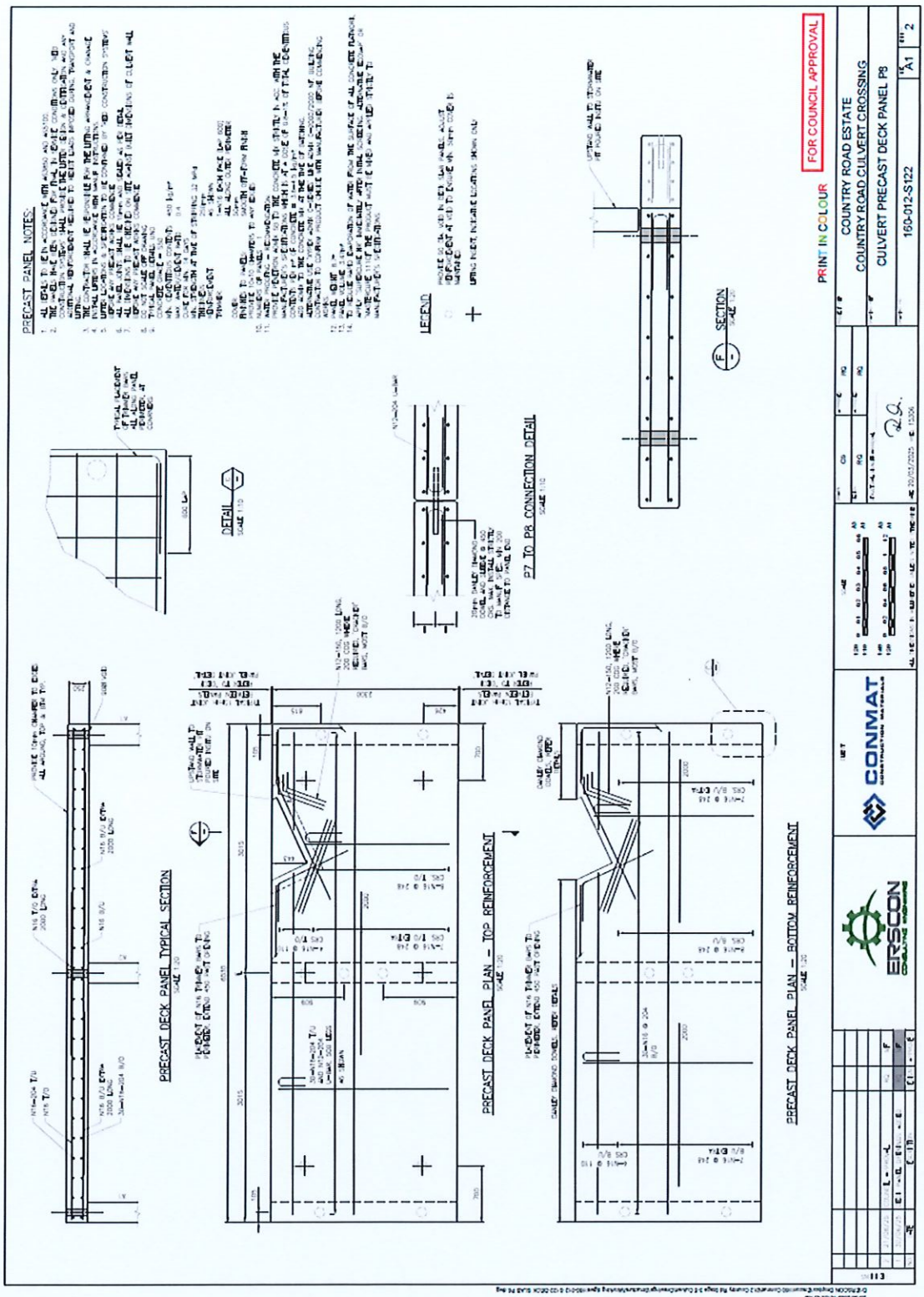
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SCALE 1:20
PRECAST DECK PANEL PLAN – TOP REINFORCEMENT
SCALE 1:20
PRECAST DECK PANEL PLAN – BOTTOM REINFORCEMENT
SCALE 1:20
PRINT IN COLOUR
FOR COUNCIL APPROVAL
COUNTRY ROAD ESTATE
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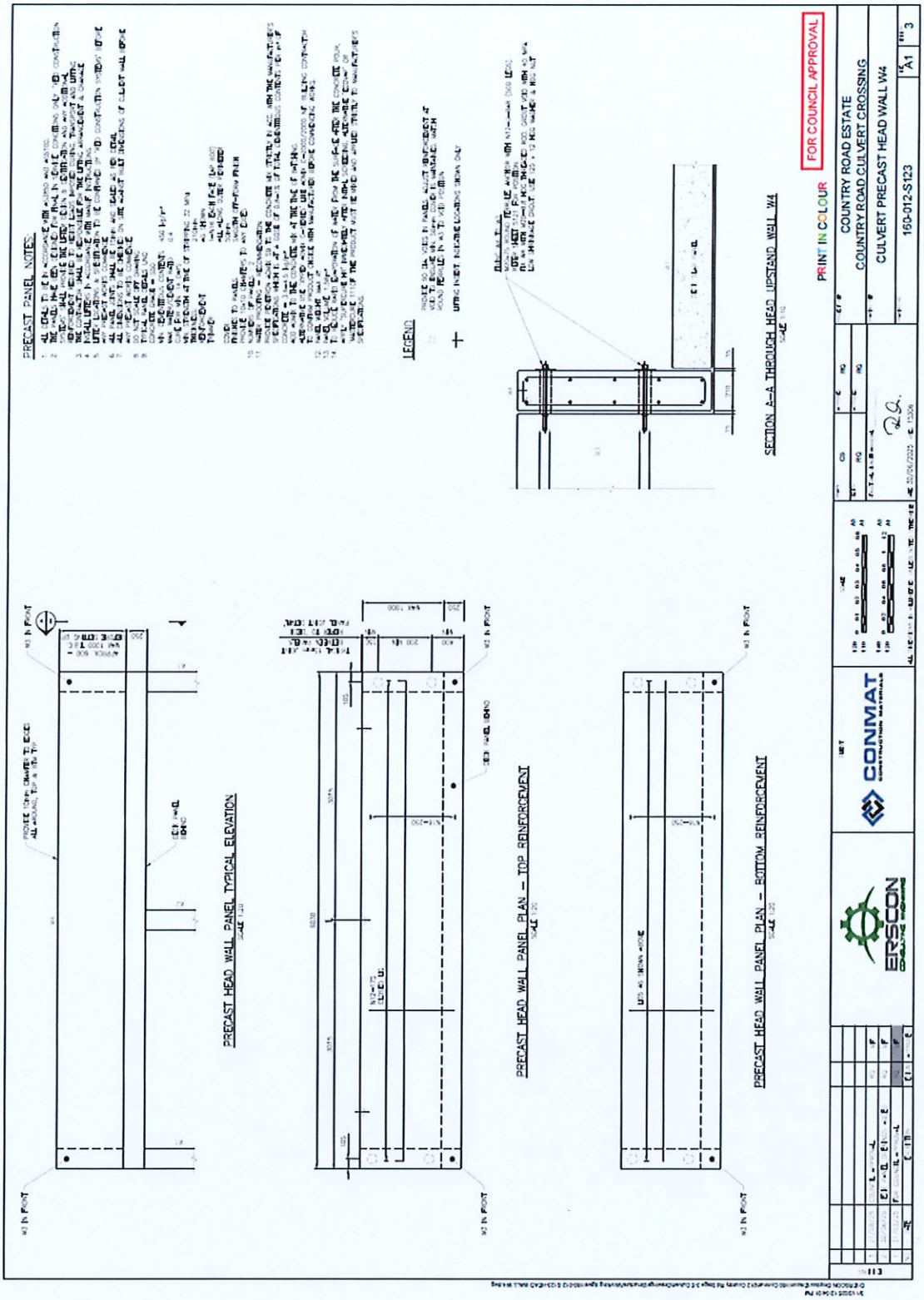
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PRECAST HEAD WALL PANEL PLAN – BOTTOM REINFORCEMENT
FOR COUNCIL APPROVAL
PRINT IN COLOUR
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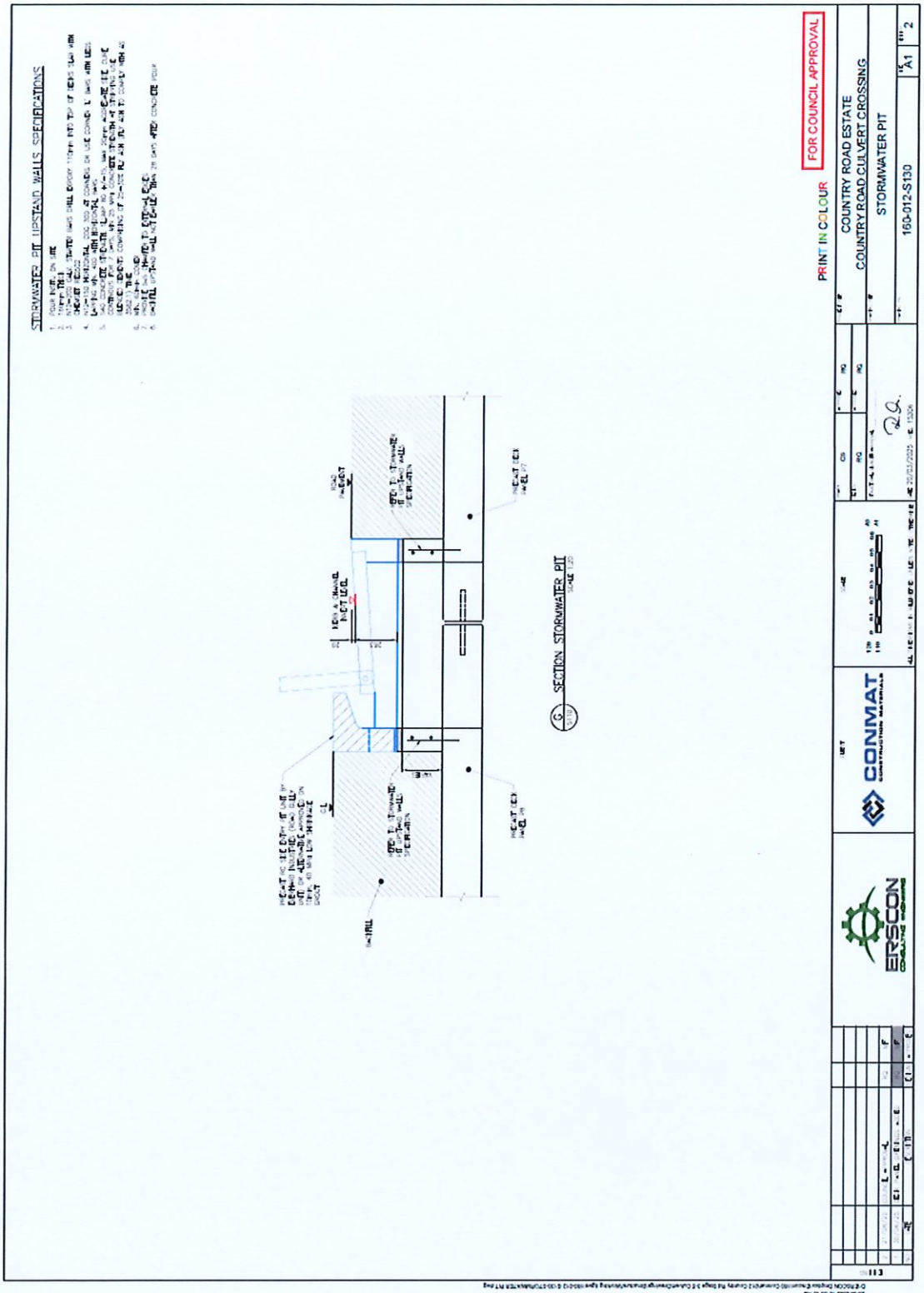
STORMWATER PIT UPSTAND WALLS SPECIFICATIONS
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COUNTRY ROAD CULVERT CROSSING
STORMWATER PIT
160-012-S130

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Appeal Rights

PLANNING ACT 2016 & THE PLANNING REGULATION 2017

Chapter 6 Dispute resolution

Part 1 Appeal rights

229 Appeals to tribunal or P&E Court

(1) Schedule 1 of the *Planning Act 2016* states –
  (a) Matters that may be appealed to –
    (i) either a tribunal or the P&E Court; or
    (ii) only a tribunal; or
    (iii) only the P&E Court; and
  (b) The person-
    (i) who may appeal a matter (**the *appellant***); and
    (ii) who is a respondent in an appeal of the matter; and
    (iii) who is a co-respondent in an appeal of the matter; and
    (iv) who may elect to be a co-respondent in an appeal of the matter.

(Refer to Schedule 1 of the Planning Act 2016)

(2) An appellant may start an appeal within the appeal period.
(3) The ***appeal period*** is –
  (a) for an appeal by a building advisory agency – 10 business days after a decision notice for the decision is given to the agency; or
  (b) for an appeal against a deemed refusal – at any time after the deemed refusal happens; or
  (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises – 20 business days after a notice us published under section 269(3)(a) or (4); or
  (d) for an appeal against an infrastructure charges notice – 20 business days after the infrastructure charges notice is given to the person; or
  (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given – 30 business days after the applicant gives the deemed approval notice to the assessment manager; or
  (f) for any other appeal – 20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note –
See the P&E Court Act for the court's power to extend the appeal period.

(4) Each respondent and co-respondent for an appeal may be heard in the appeal.
(5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
(6) To remove any doubt. It is declared that an appeal against an infrastructure charges notice must not be about-
  (a) the adopted charge itself; or

(b) for a decision about an offset or refund-
(i) the establishment cost of trunk infrastructure identified in a LGIP; or
(ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

(1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that-
(a) is in the approved form; and
(b) succinctly states the grounds of the appeal.
(2) The notice of appeal must be accompanied by the required fee.
(3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to –
(a) the respondent for the appeal ; and
(b) each co-respondent for the appeal; and
(c) for an appeal about a development application under schedule 1, table 1, item 1 – each principal submitter for the development application; and
(d) for and appeal about a change application under schedule 1, table 1, item 2 – each principal submitter for the change application; and
(e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
(f) for an appeal to the P&E Court – the chief executive; and
(g) for an appeal to a tribunal under another Act – any other person who the registrar considers appropriate.
(4) The *service period* is –
(a) if a submitter or advice agency started the appeal in the P&E Court – 2 business days after the appeal has started; or
(b) otherwise – 10 business days after the appeal is started.
(5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
(6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

231 Other appeals

(1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
(2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
(3) A person who, but for subsection (1) could have made an application under the Judicial Review Act 1991 in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.
(4) In this section –
decision includes-
(a) conduct engaged in for the purpose of making a decision; and
(b) other conduct that relates to the making of a decision; and

(c) the making of a decision or failure to make a decision; and
(d) a purported decision ; and
(e) a deemed refusal.

non-appealable, for a decision or matter, means the decision or matter-
(a) is final and conclusive; and
(b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and
(c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

232 Rules of the P&E Court

(1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.
(2) However, the P&E Court may hear and decide an appeal even if the person has not complied with the rules of the P&E Court.