



Environment Effects Statement Map Book

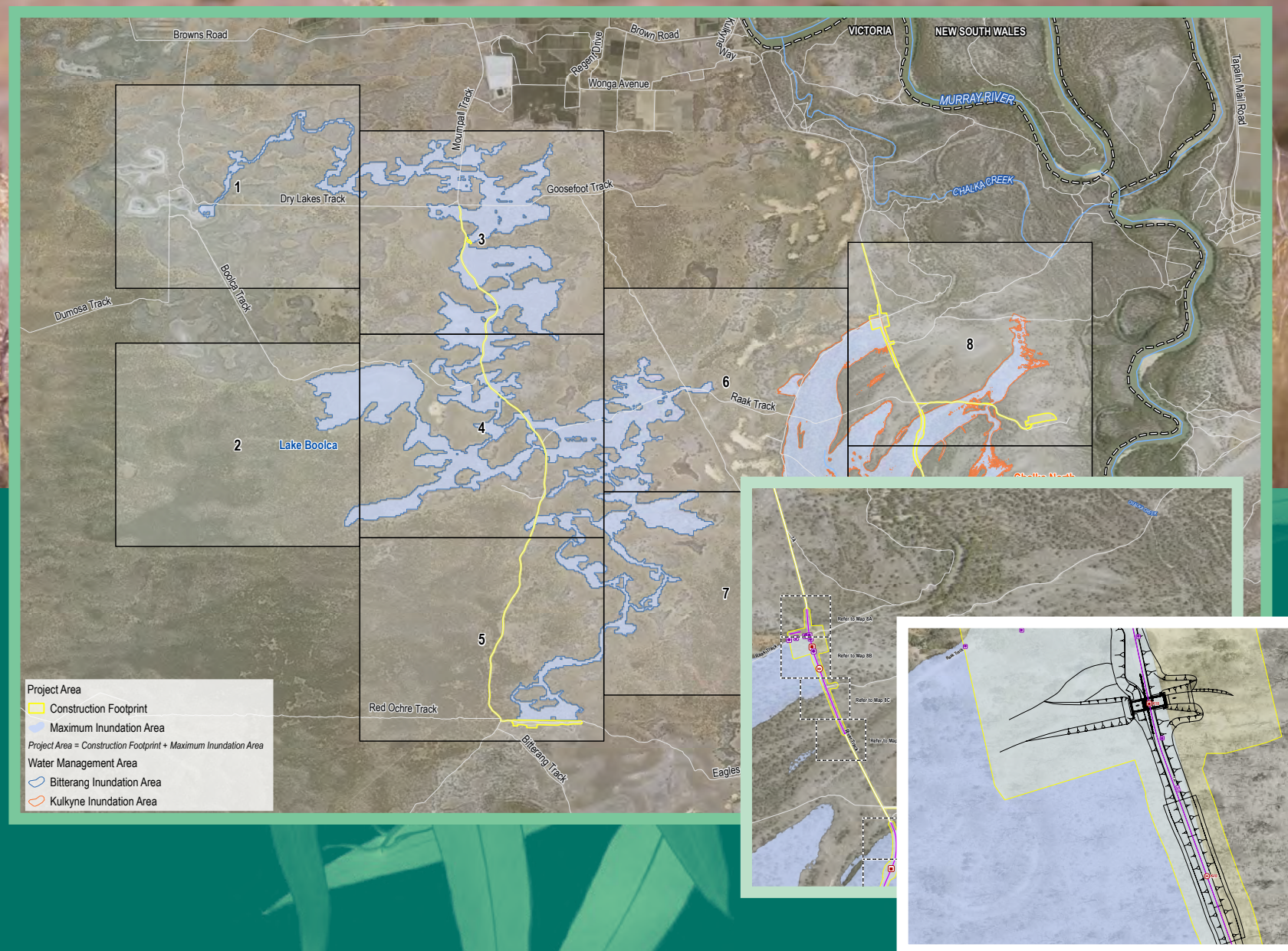
## Attachment I - MAP BOOK 2 of 2 Hattah Lakes North



This is an interactive PDF document best viewed in Adobe Acrobat.

Map extent rectangles on the overview and index maps can be clicked to jump to corresponding map pages.

[Click to continue.](#)



**VICTORIAN MURRAY FLOODPLAIN  
RESTORATION PROJECT**  
HEALTHY LANDSCAPES, STRONG COMMUNITIES





Environment Effects Statement Map Book

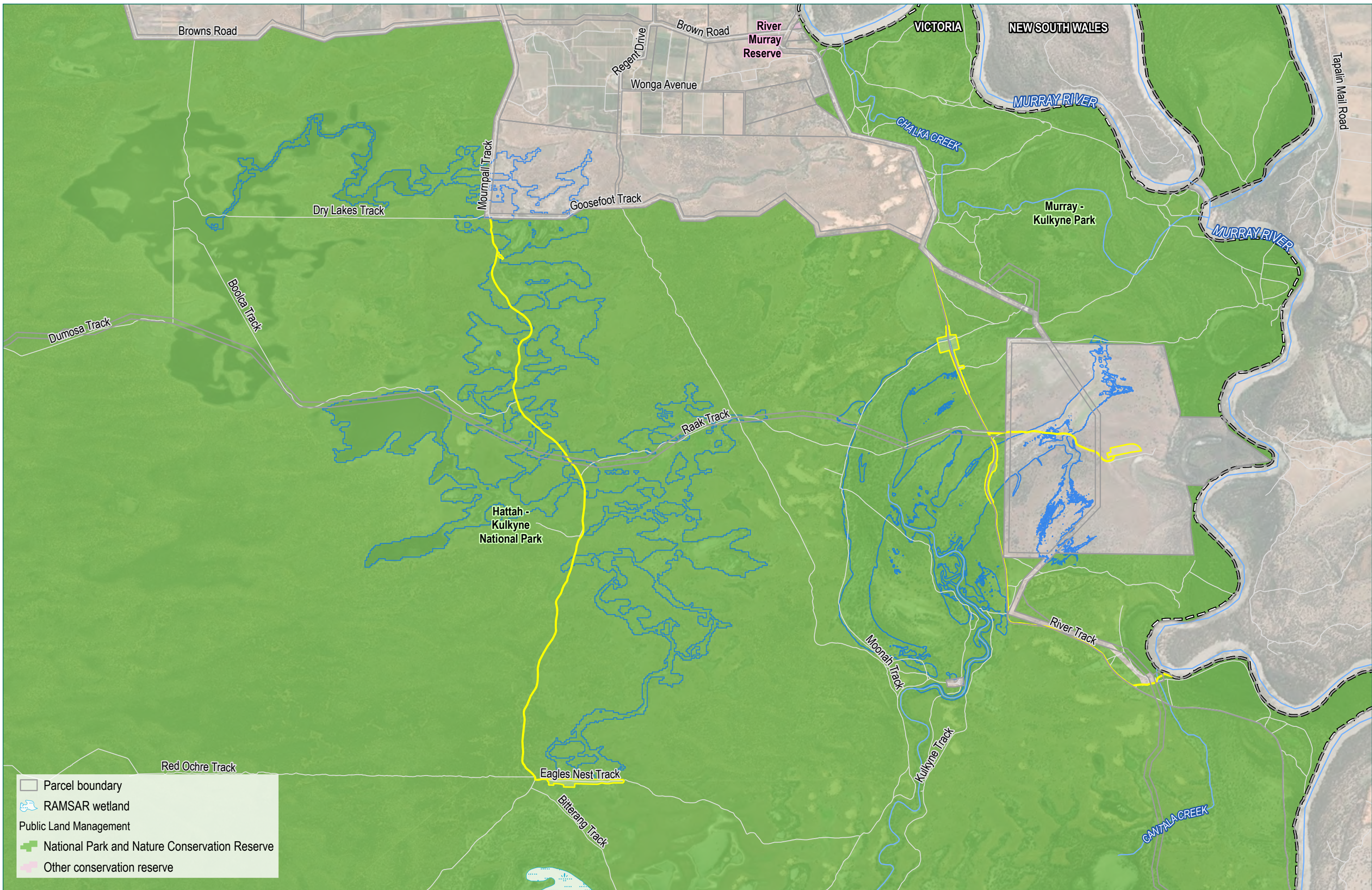
# Attachment I - MAP BOOK Hattah Lakes North

## Contents



**VICTORIAN MURRAY FLOODPLAIN  
RESTORATION PROJECT**  
HEALTHY LANDSCAPES, STRONG COMMUNITIES





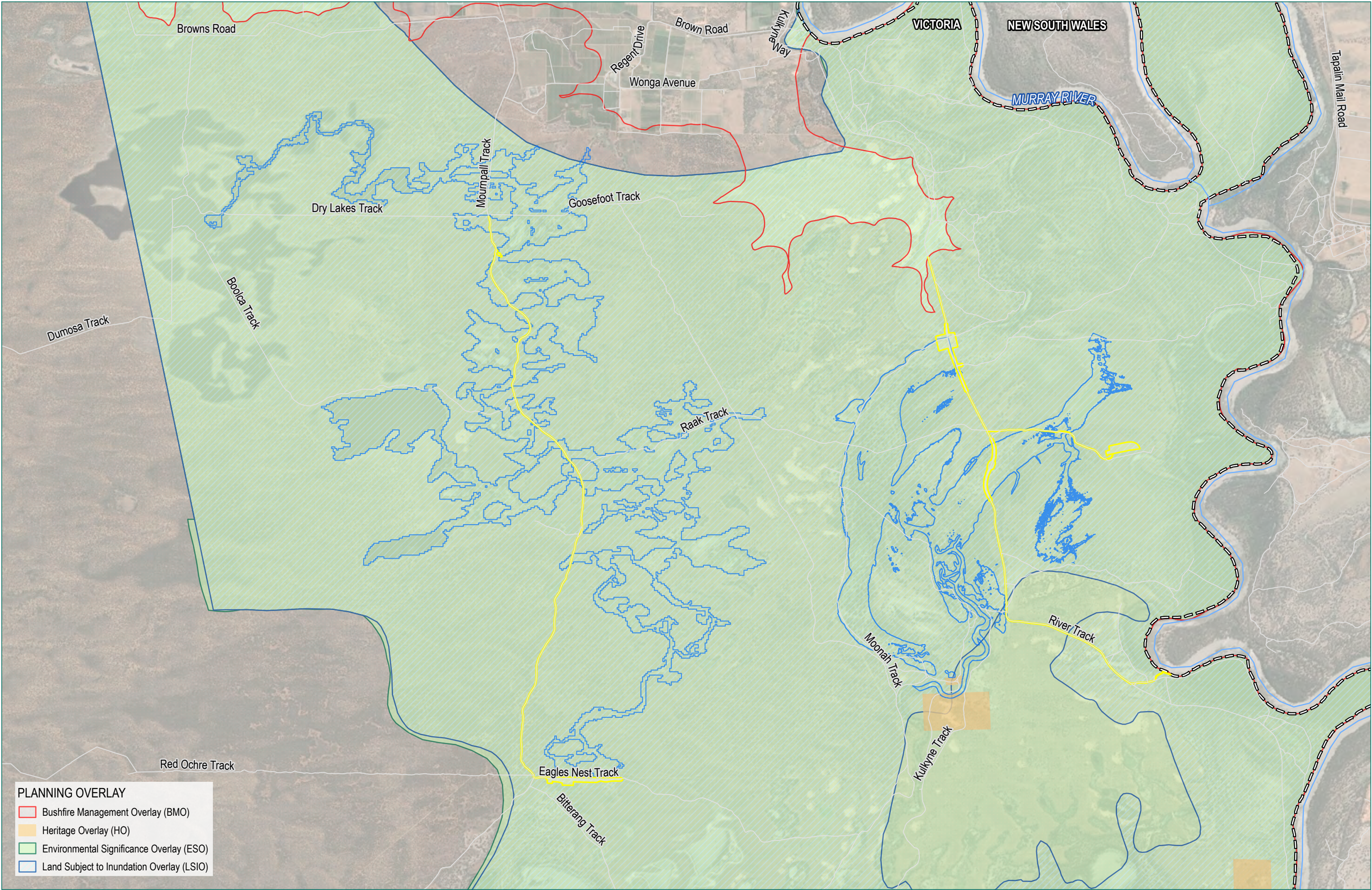
**LEGEND**

Public road  
Watercourse

Construction Footprint

Maximum Inundation Area  
State boundary





PLANNING OVERLAY

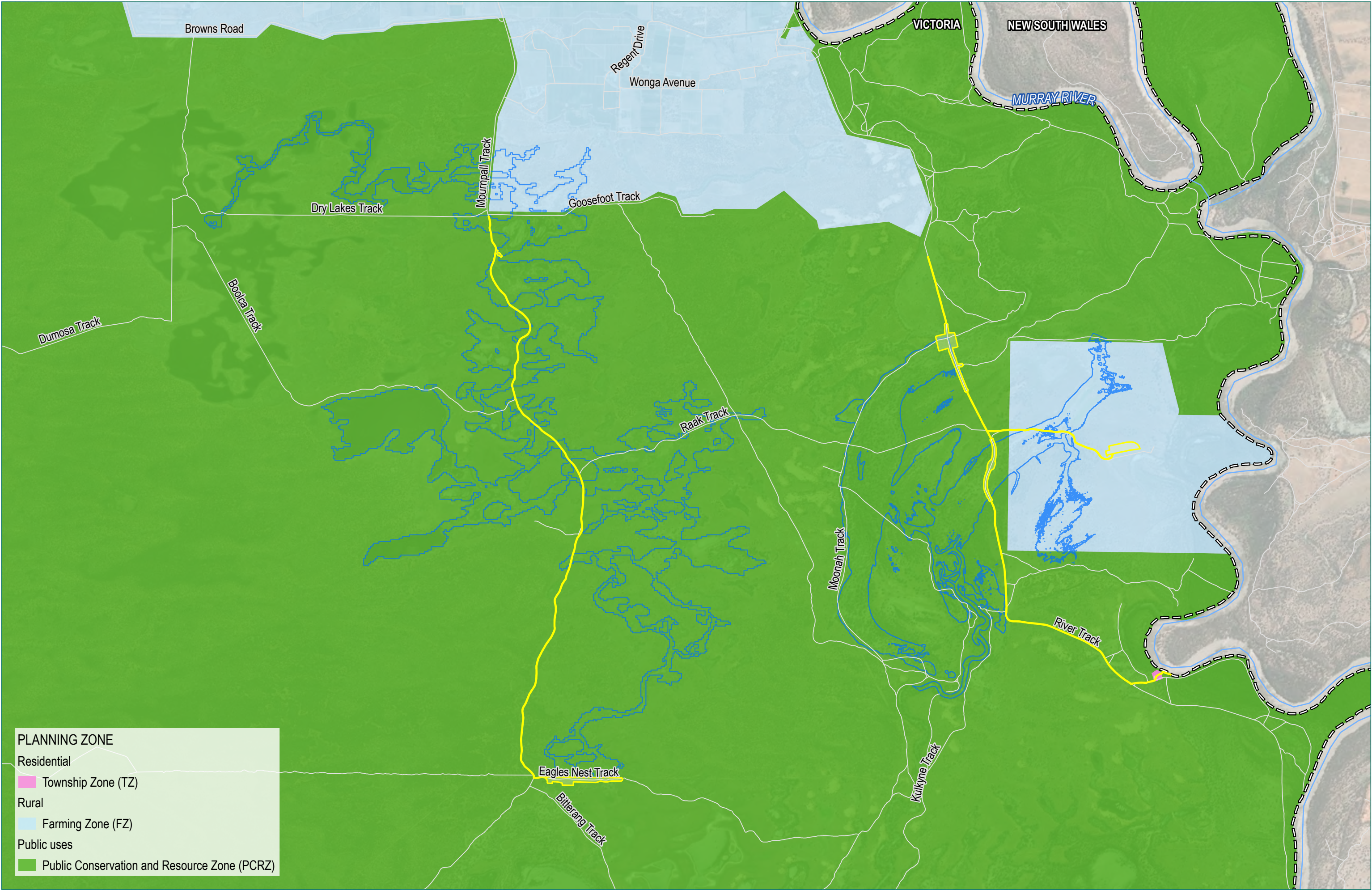
- Bushfire Management Overlay (BMO)
- Heritage Overlay (HO)
- Environmental Significance Overlay (ESO)
- Land Subject to Inundation Overlay (LSIO)

LEGEND

- Public road
- Construction Footprint
- Maximum Inundation Area
- State boundary
- Watercourse

Overview Map





**PLANNING ZONE**

Residential

Township Zone (TZ)

Rural

Farming Zone (FZ)

Public uses

Public Conservation and Resource Zone (PCRZ)



0 0.5 1 1.5 km

SCALE 1:40,000

PAGE SIZE: A3

PROJECTION: GDA2020 MGA Zone 54

**LEGEND**

- Public road
- Watercourse
- Construction Footprint
- Maximum Inundation Area
- State boundary

SOURCE:  
Construction Footprint and inundation from Tetra Tech Coffey.  
Roads, watercourses, plan zones and State boundary  
from Vicmap.  
Imagery from ArcGIS Online (various capture dates).

**HATTAH LAKES NORTH**  
Planning zones

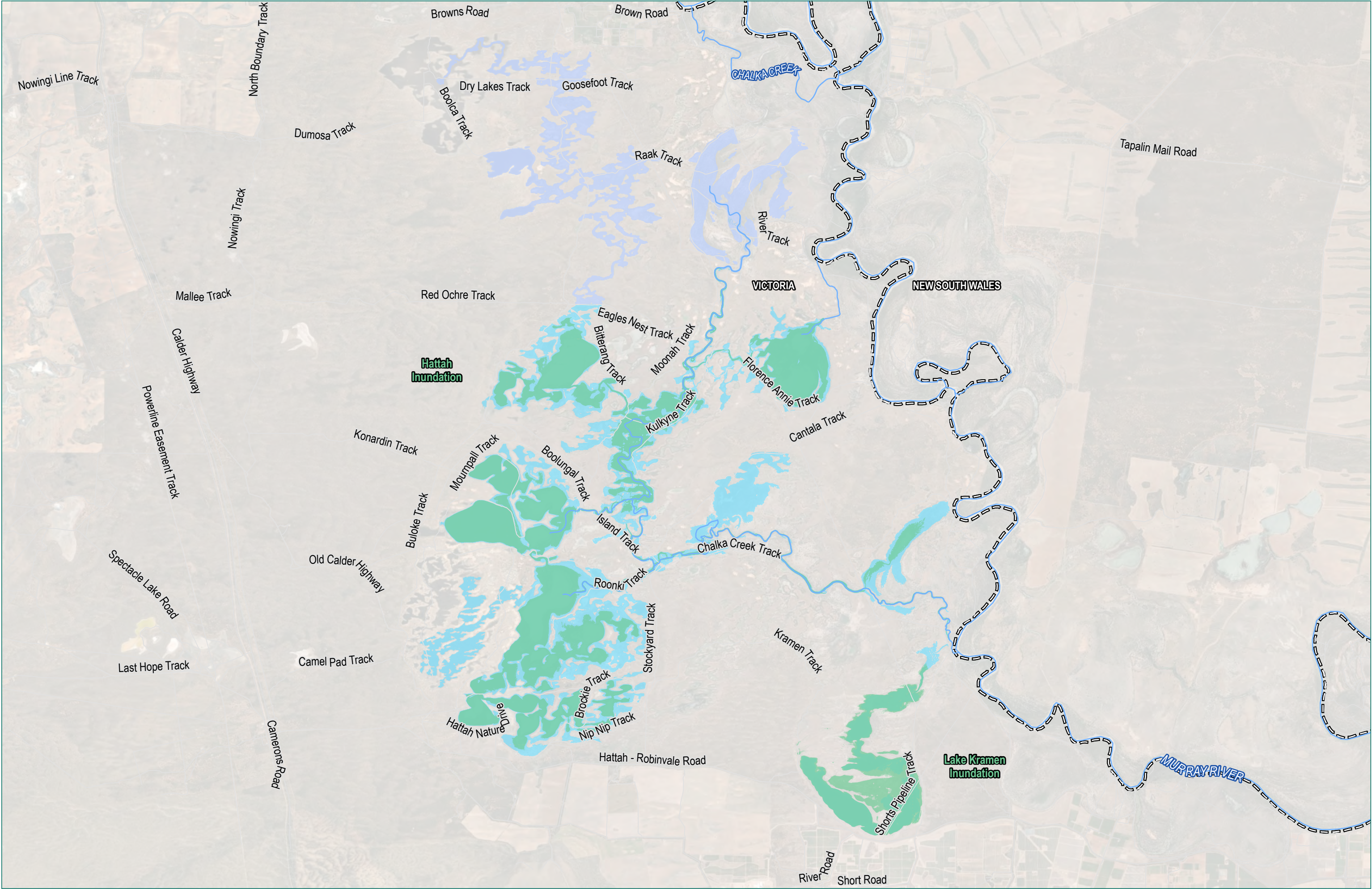
**Overview Map**

DATE: 01.09.25 FILE: 281760\_HATT\_03\_OV\_GIS

DOC REFERENCE: ...281760\_HATT\_03\_MAPS\_A\_V05

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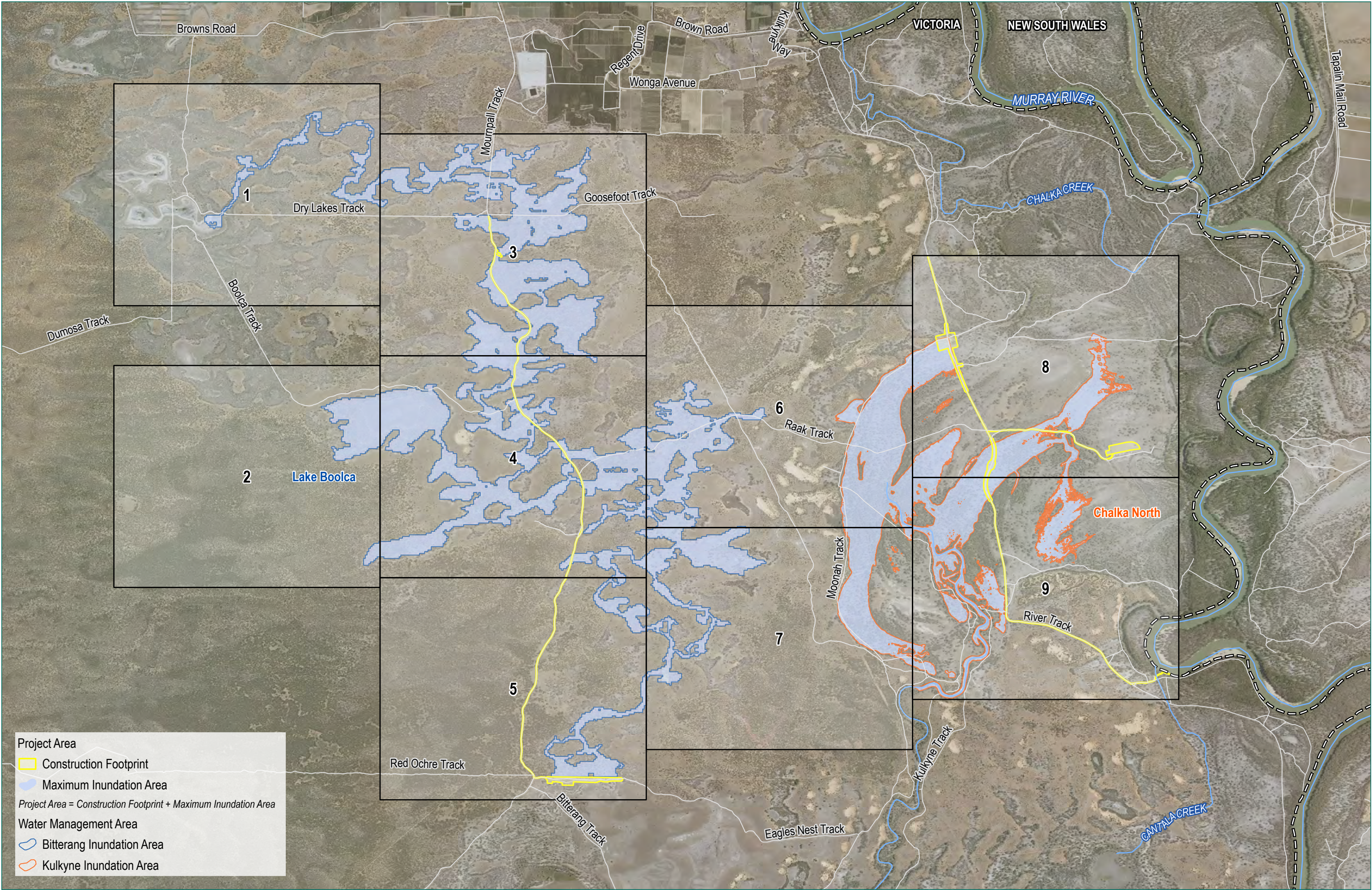




**LEGEND**

-  Watercourse
-  TLM Inundation Area
-  Previous Environmental Watering
-  Maximum Inundation Area
-  State boundary





**Project Area**

- Construction Footprint
- Maximum Inundation Area

*Project Area = Construction Footprint + Maximum Inundation Area*

**Water Management Area**

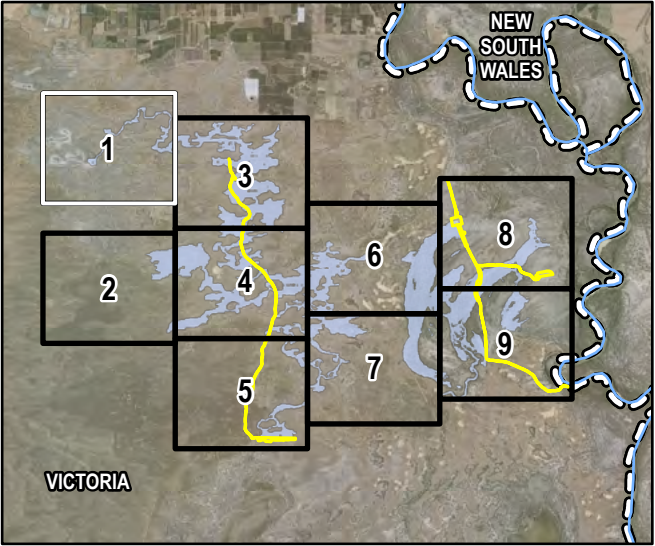
- Bitterang Inundation Area
- Kulkyne Inundation Area

**LEGEND**

- Public road
- Watercourse
- Map index overview
- State boundary

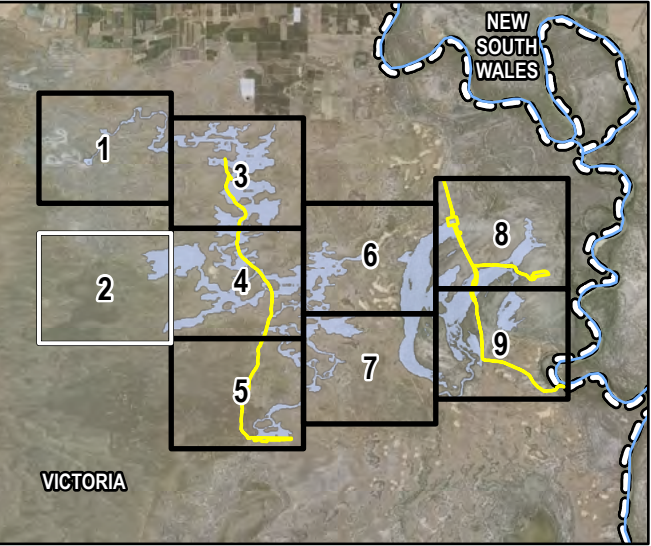
SOURCE:  
Construction Footprints and inundation from VMFRP.  
Map index from Tetra Tech Coffey.  
Roads, watercourses and State boundary from Vicmap.  
Imagery from Lower Murray Water (capture dates 2021).





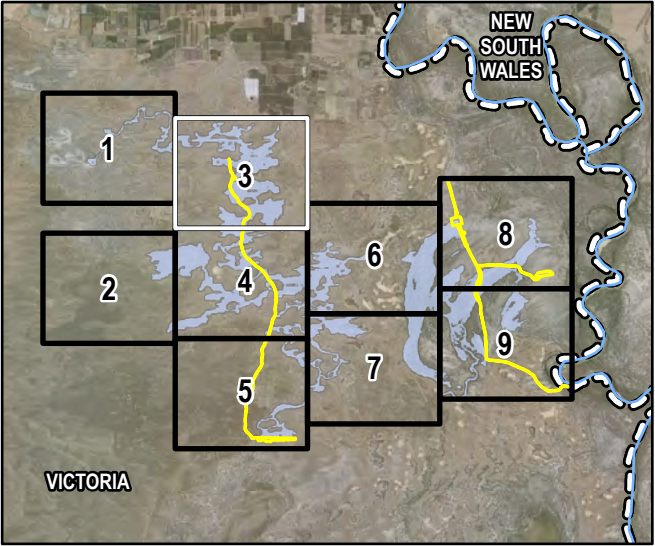
- LEGEND**
- Public road
  - Construction Footprint
  - Maximum Inundation Area
  - State boundary





- LEGEND**
- Public road
  - Construction Footprint
  - Maximum Inundation Area
  - State boundary

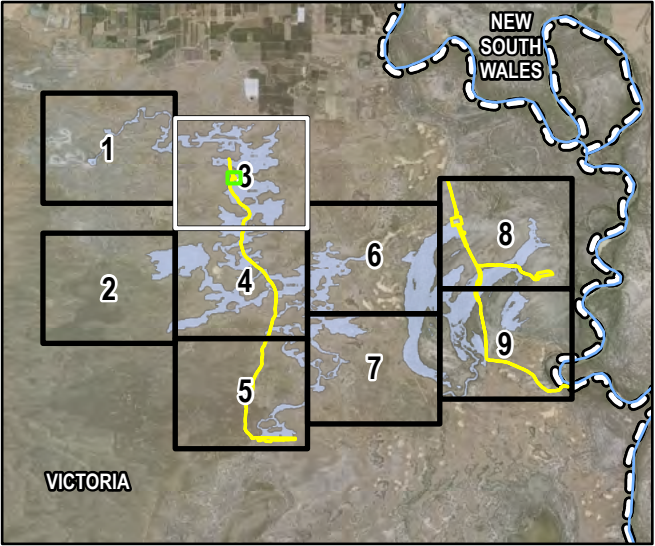











**LEGEND**

- Regulator
- Parks Victoria park furniture
- Parks Victoria signage
- Access track
- Public road
- Construction Footprint
- Maximum Inundation Area
- State boundary

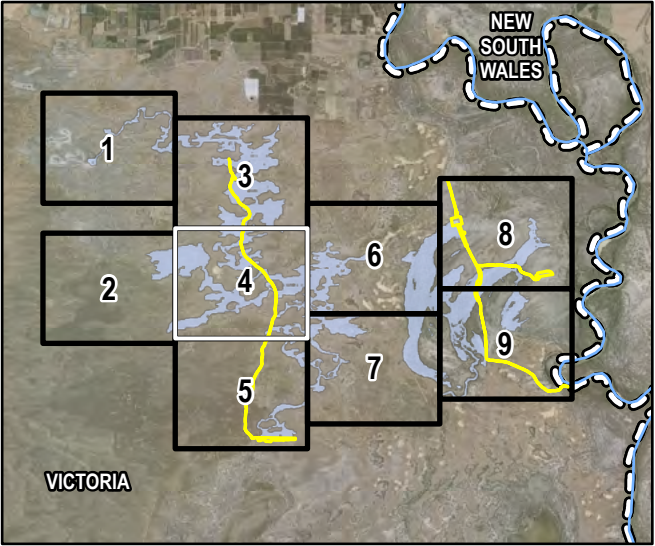




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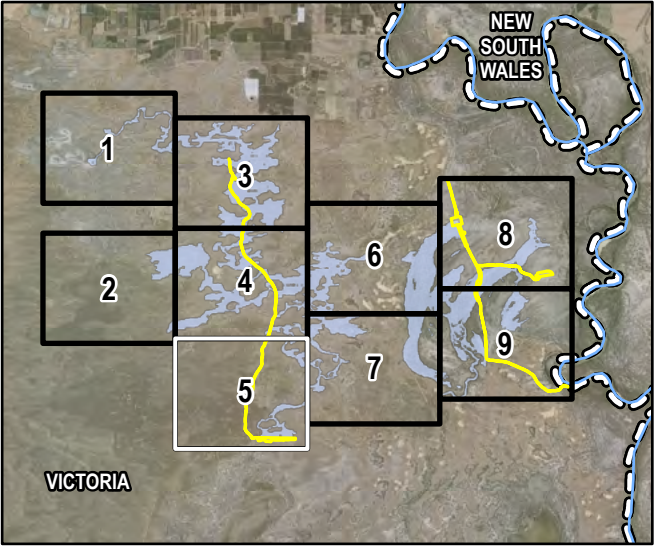
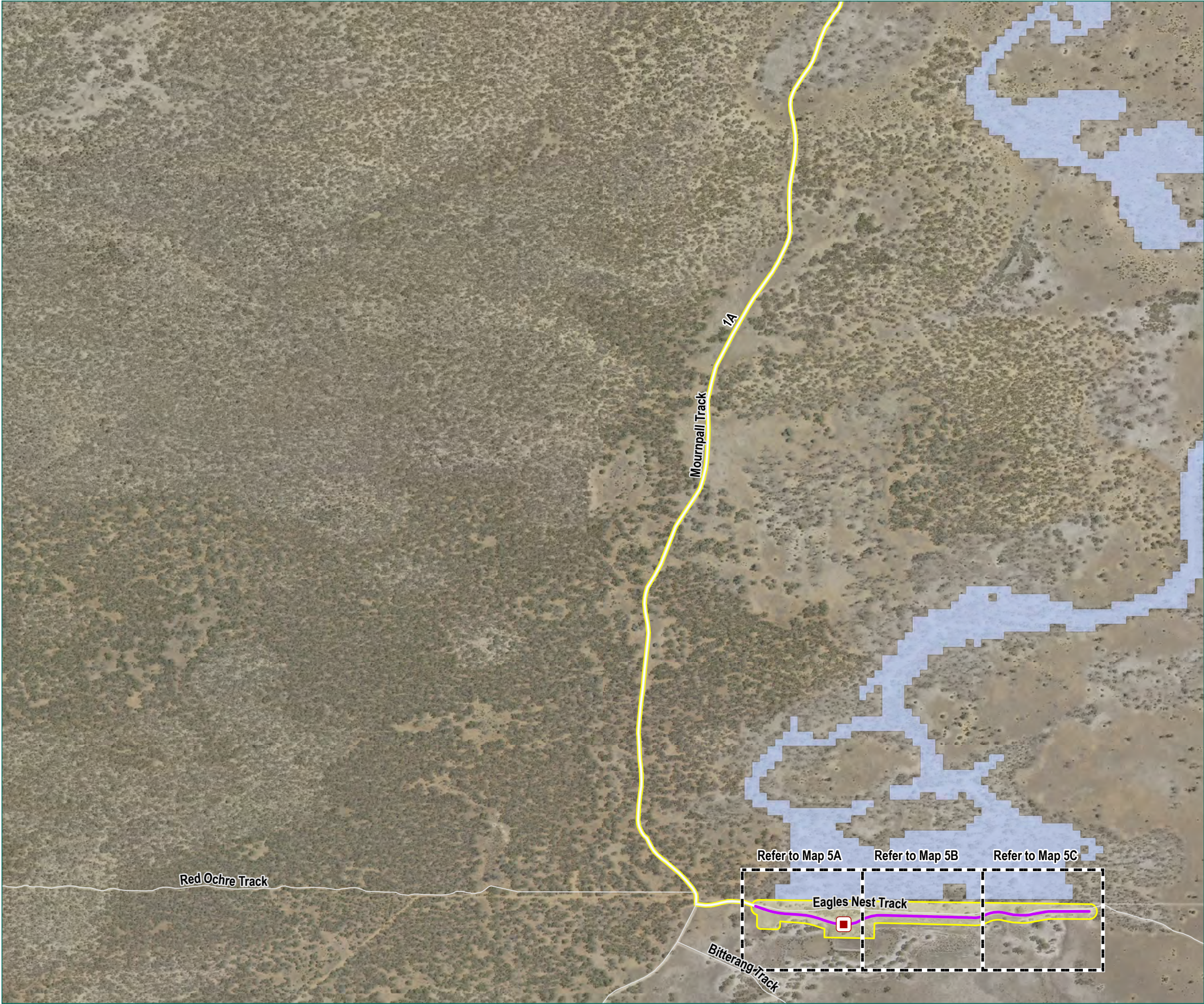
-  Regulator
-  Preliminary infrastructure design
-  Access track
-  Construction Footprint
-  Maximum Inundation Area
-  Parcel boundary
-  State boundary





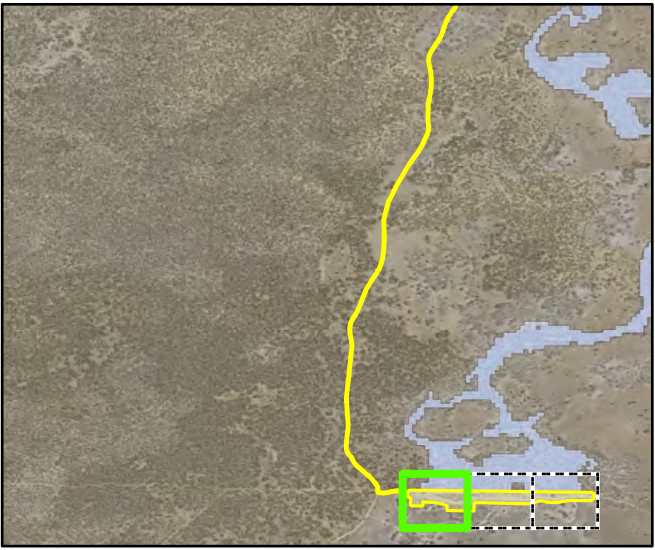
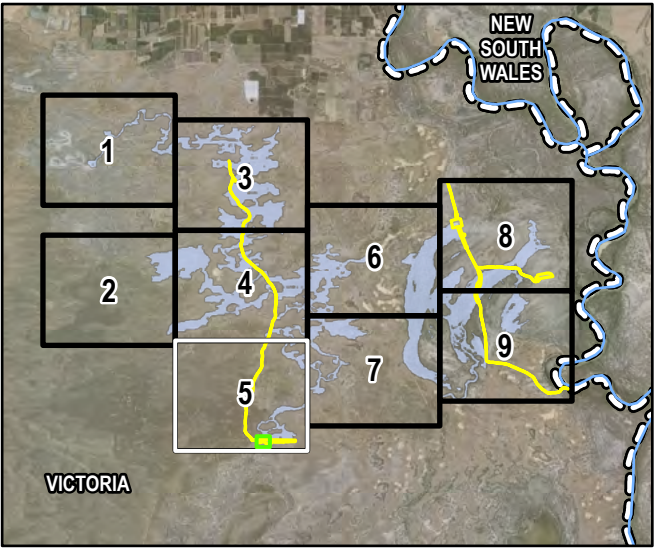
- LEGEND**
- Parks Victoria signage
  - Access track
  - Public road
  - Construction Footprint
  - Maximum Inundation Area
  - State boundary





- LEGEND**
- Regulator
  - Containment bank
  - Access track
  - Public road
  - Construction Footprint
  - Maximum Inundation Area
  - State boundary

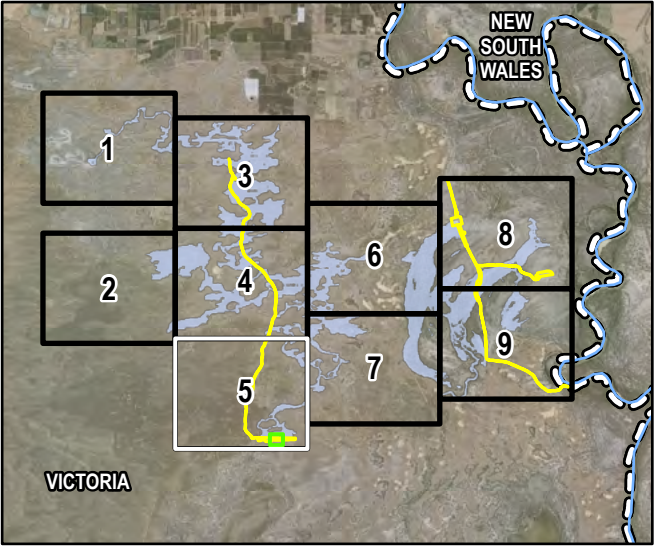




#### LEGEND

- Regulator
- Containment bank
- Preliminary infrastructure design
- Access track
- Construction Footprint
- Maximum Inundation Area
- Parcel boundary
- State boundary

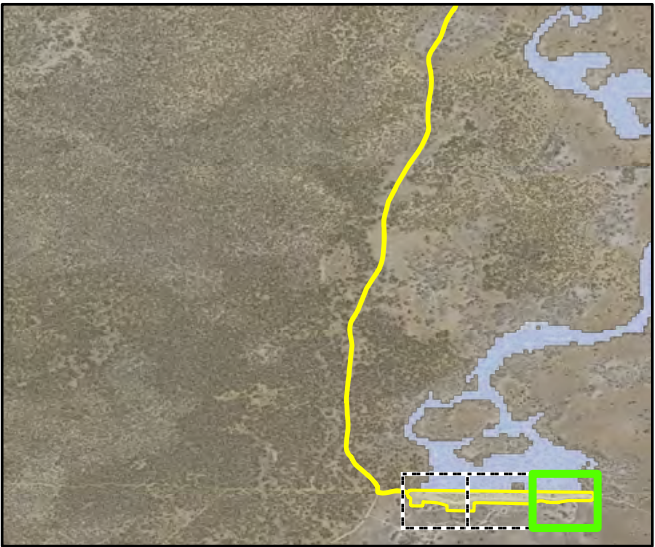
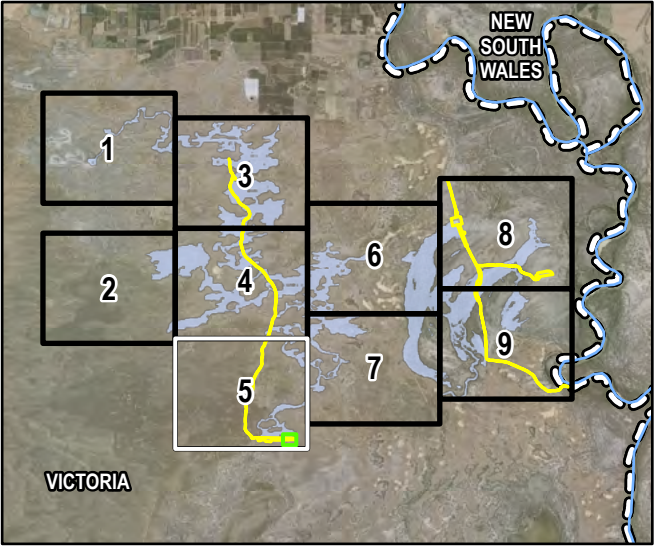
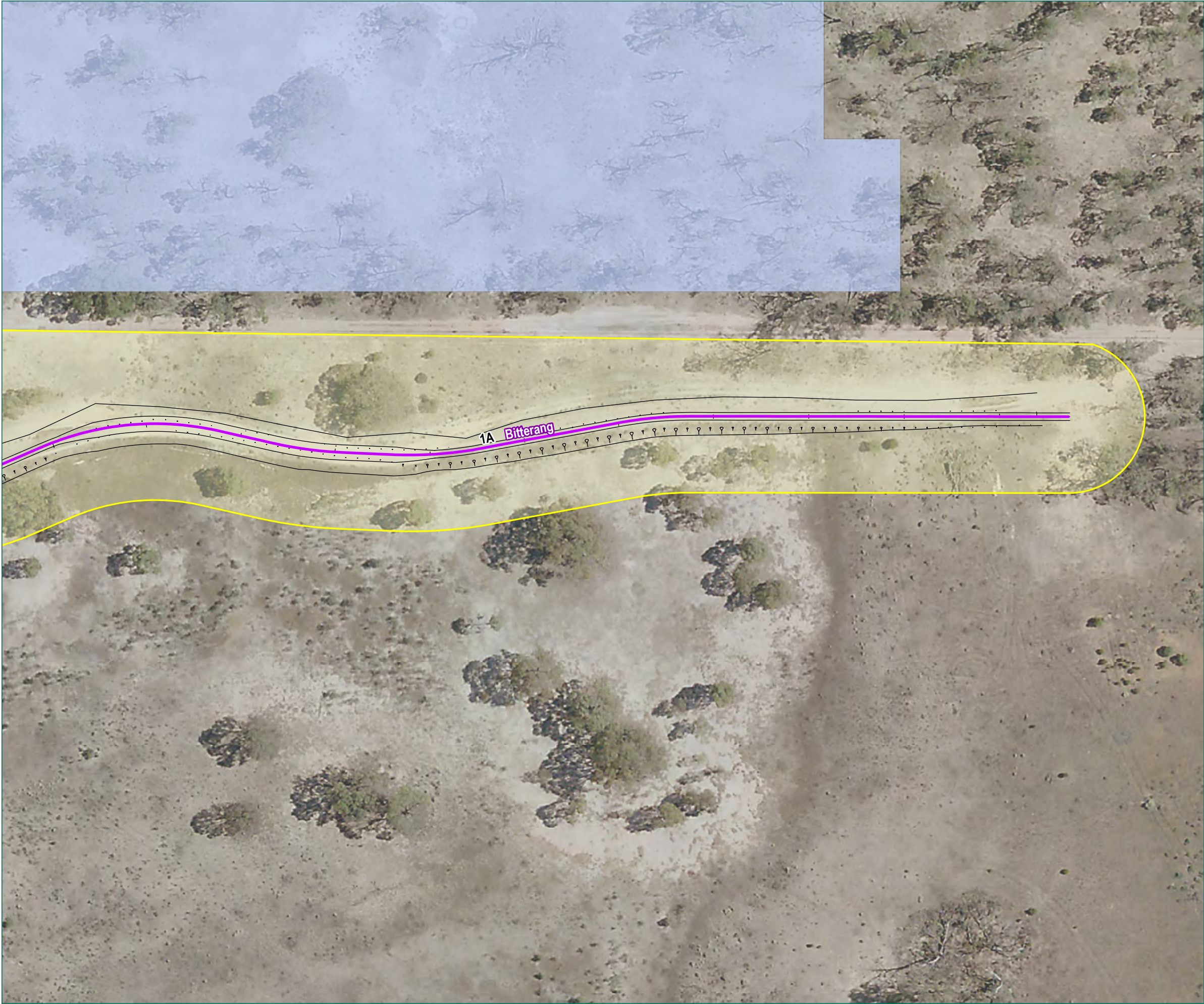




**LEGEND**

- Containment bank
- Premiminary infrastructure design
- Access track
- Construction Footprint
- Maximum Inundation Area
- Parcel boundary
- State boundary

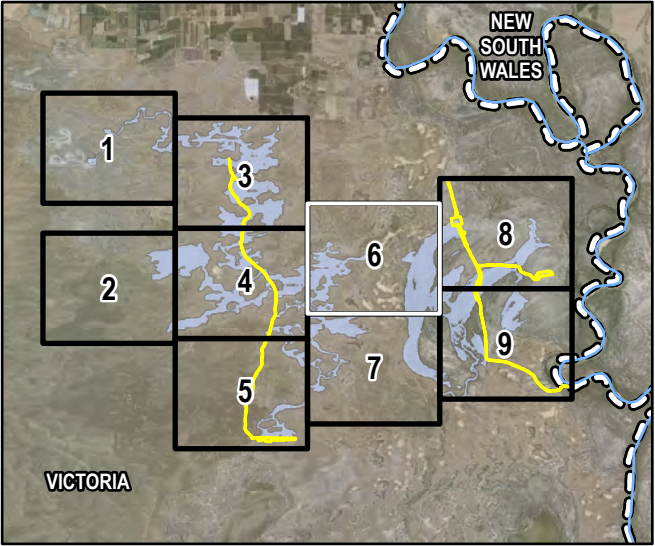




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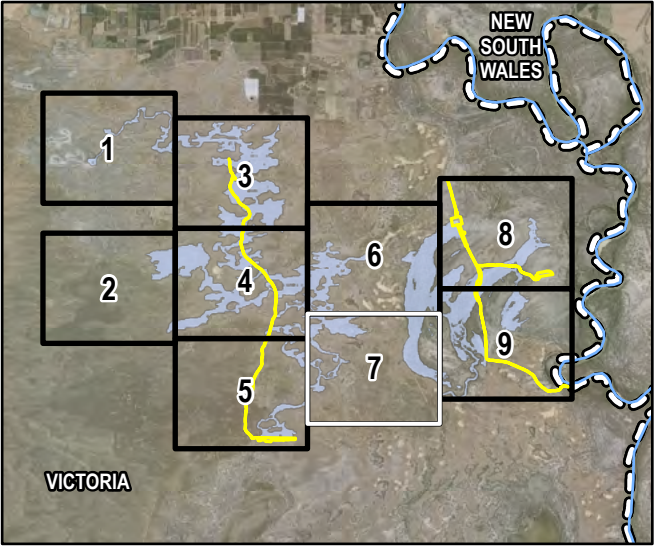
- Containment bank
- Preliminary infrastructure design
- Access track
- Construction Footprint
- Maximum Inundation Area
- Parcel boundary
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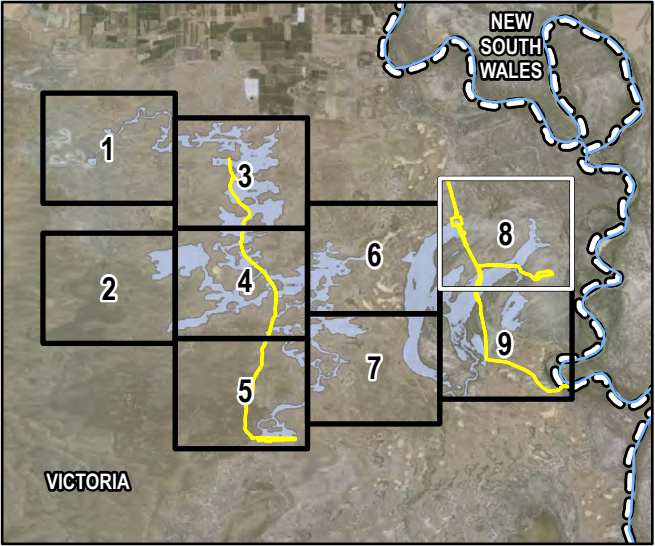
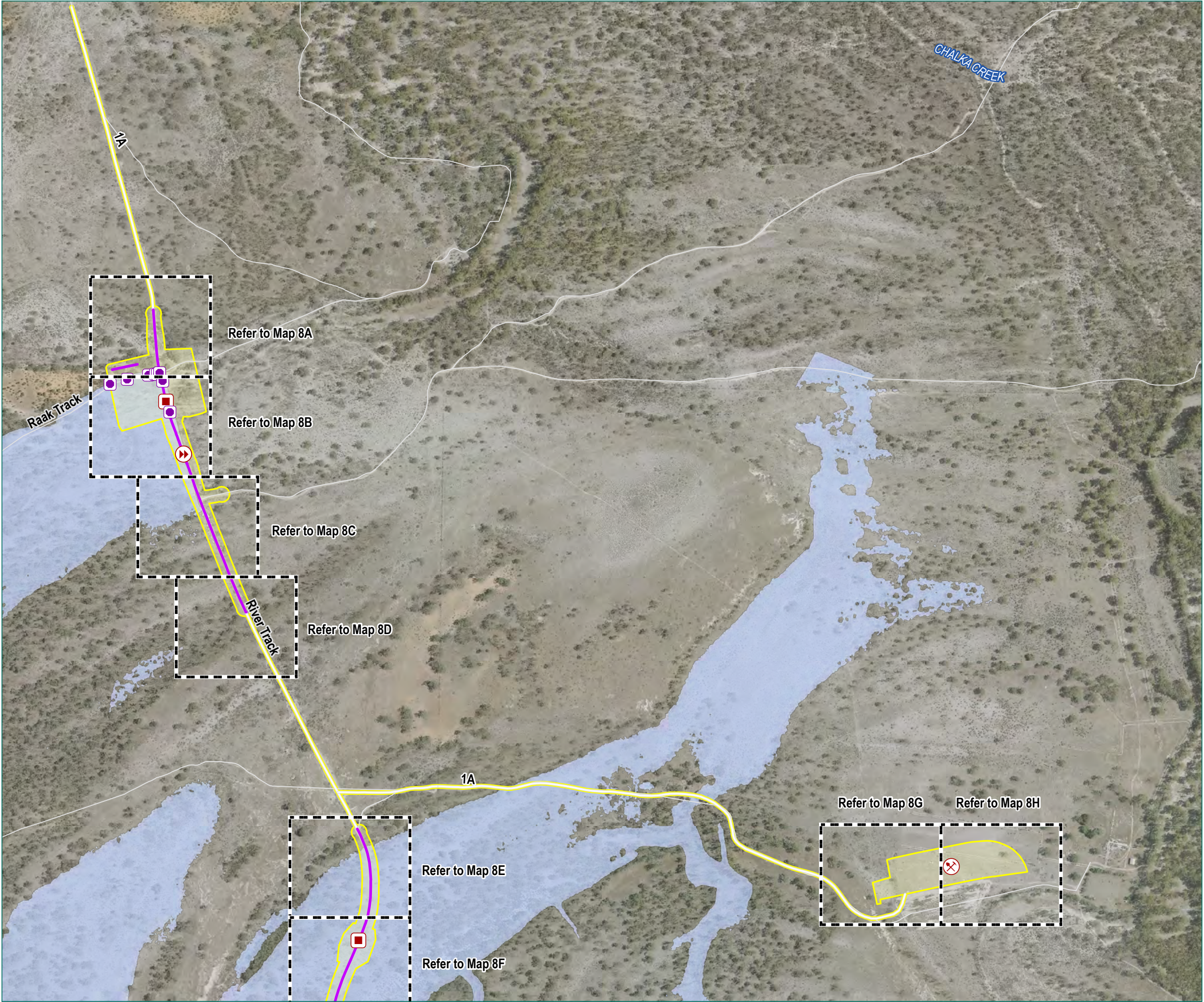
- LEGEND**
- Parks Victoria signage
  - Public road
  - Construction Footprint
  - Maximum Inundation Area
  - State boundary





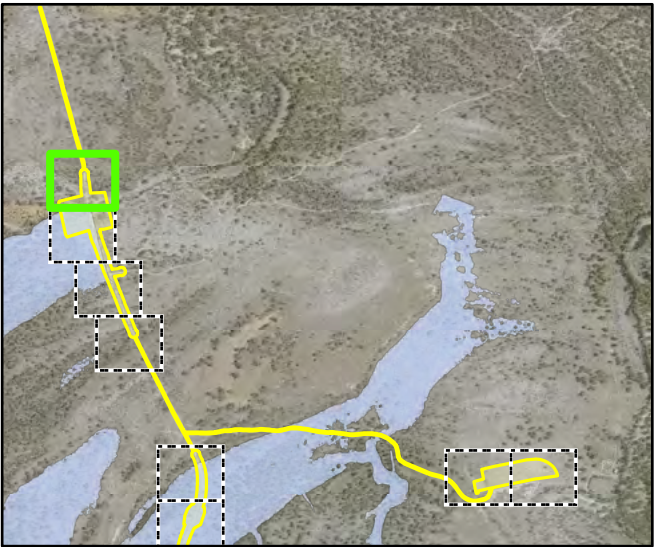
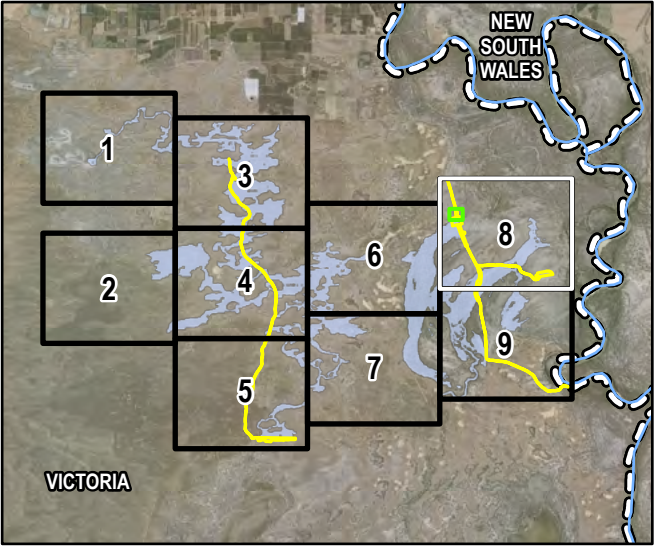
- LEGEND**
- Public road
  - Construction Footprint
  - Maximum Inundation Area
  - State boundary





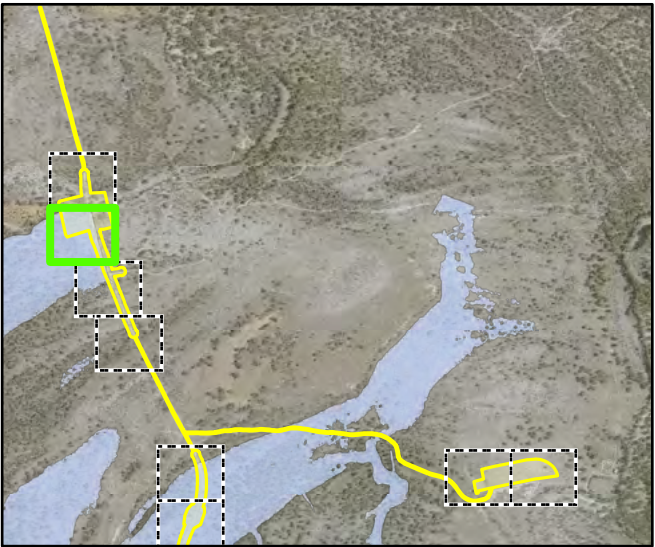
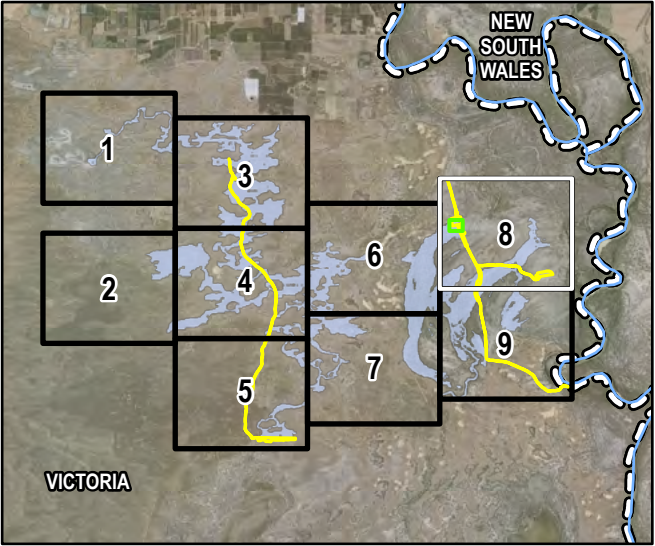
- LEGEND**
- Borrow
  - Regulator
  - Spillway
  - Parks Victoria signage
  - Containment bank
  - Access track
  - Public road
  - Construction Footprint
  - Maximum Inundation Area
  - State boundary





- LEGEND**
- Parks Victoria signage
  - Containment bank
  - Preliminary infrastructure design
  - Access track
  - Construction Footprint
  - Maximum Inundation Area
  - Parcel boundary
  - State boundary

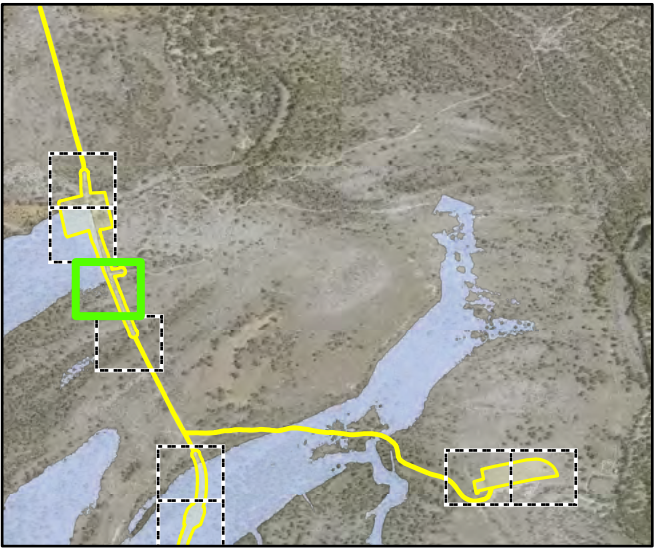
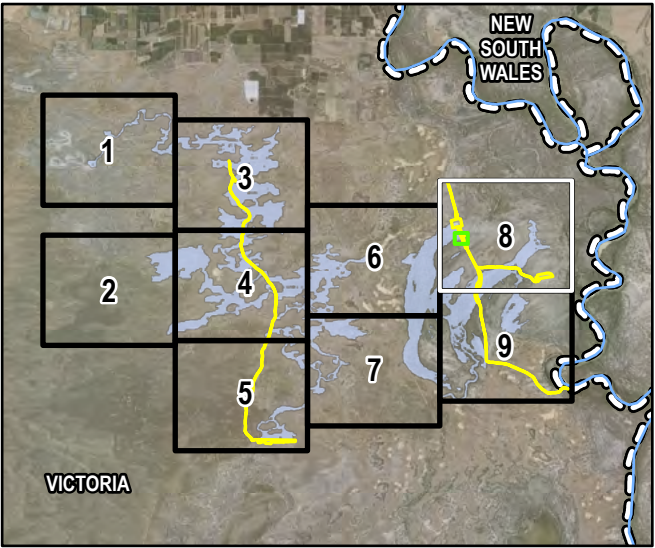




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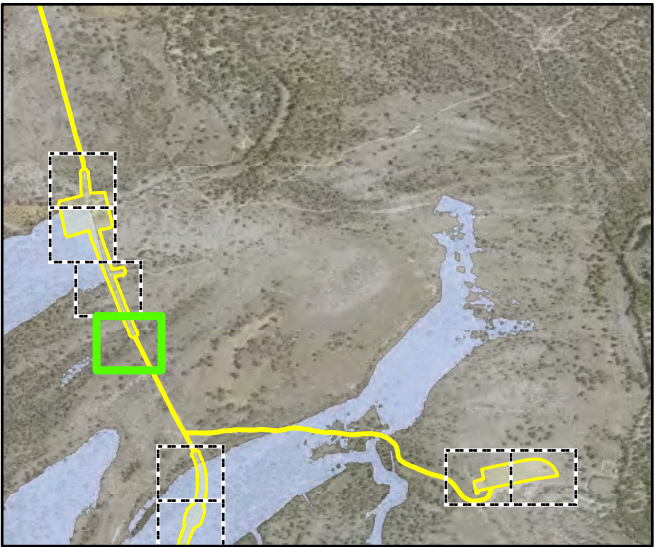
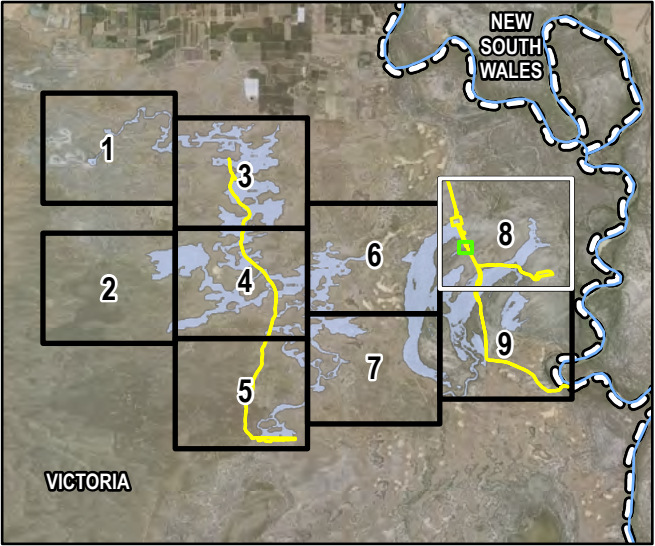
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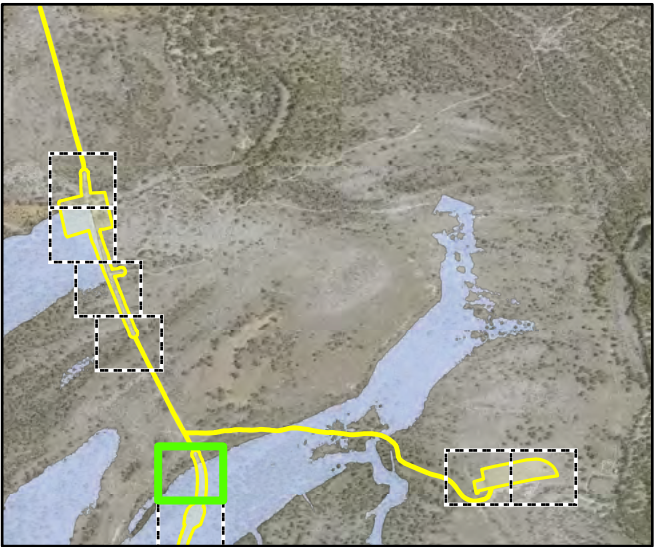
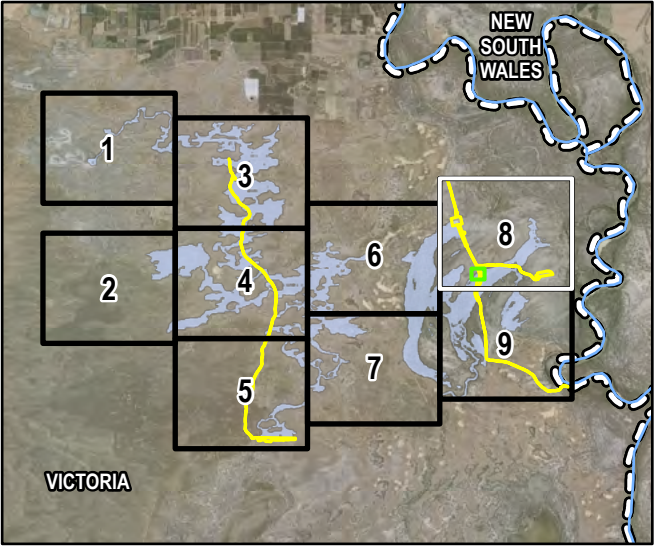
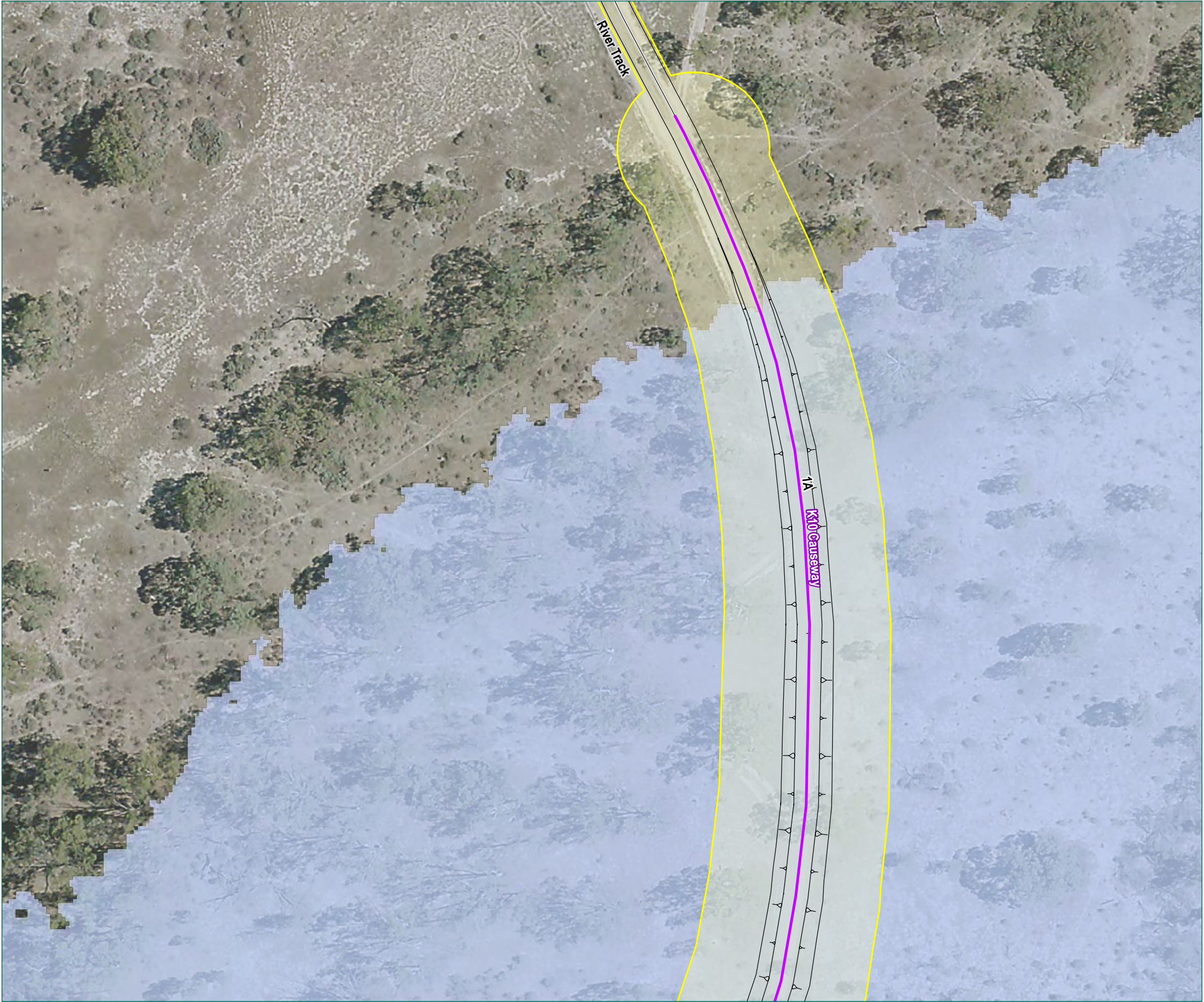




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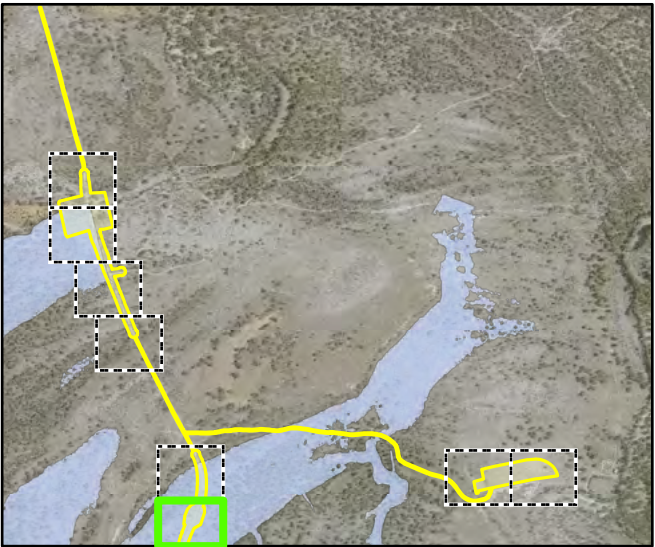
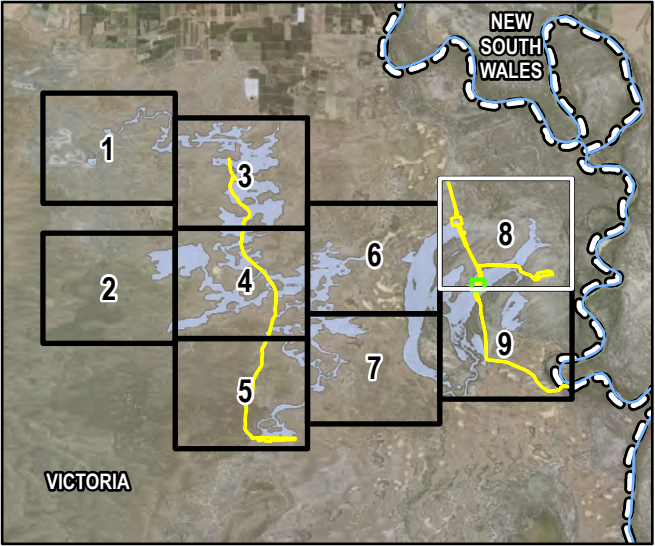












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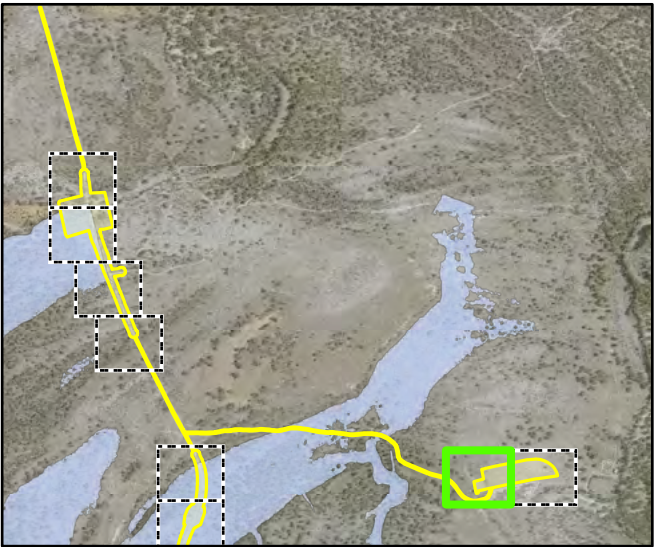
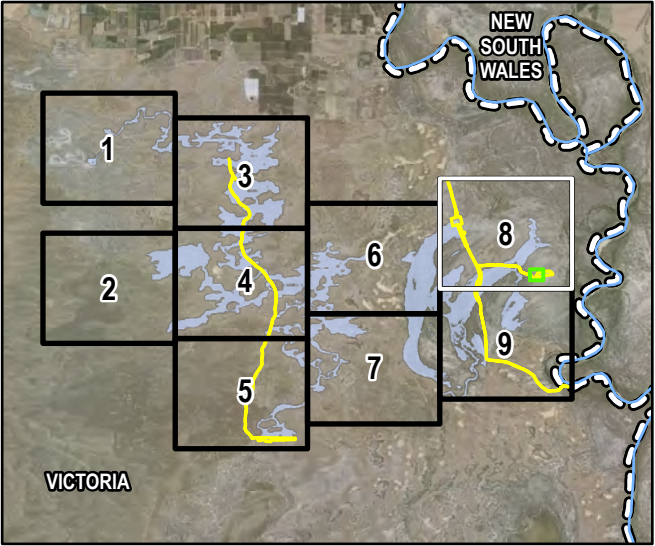




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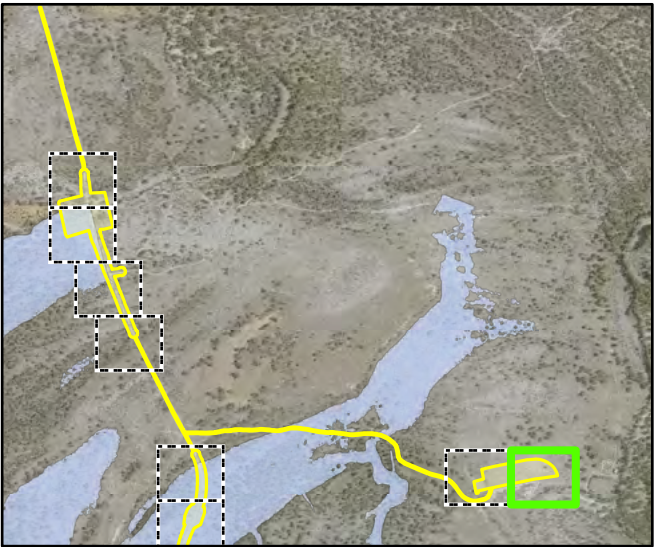
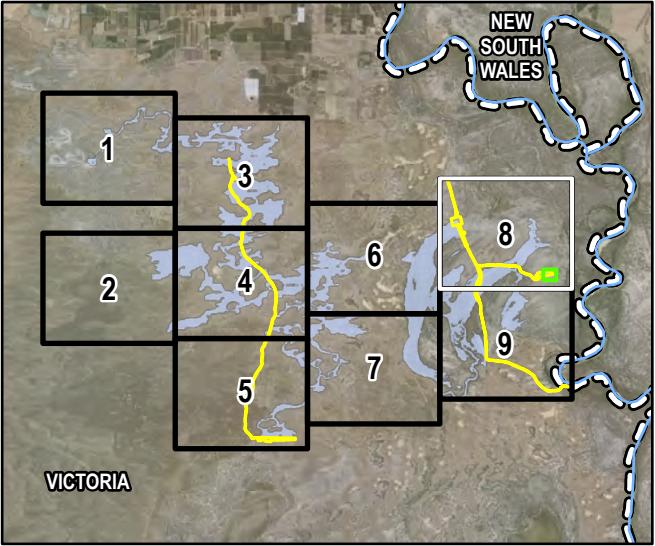
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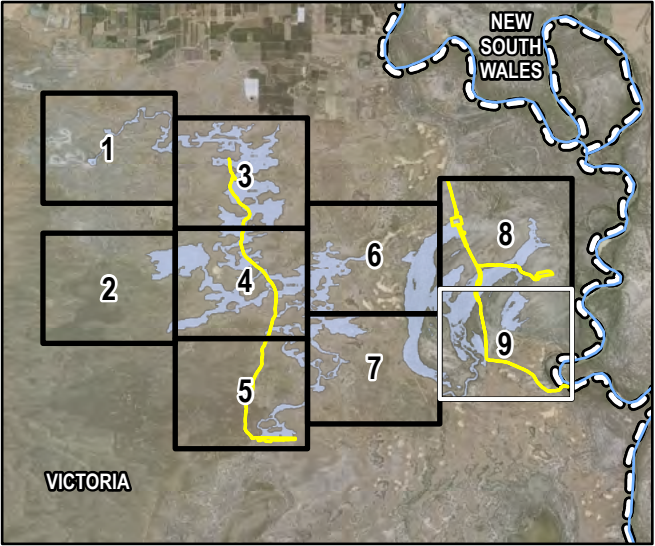
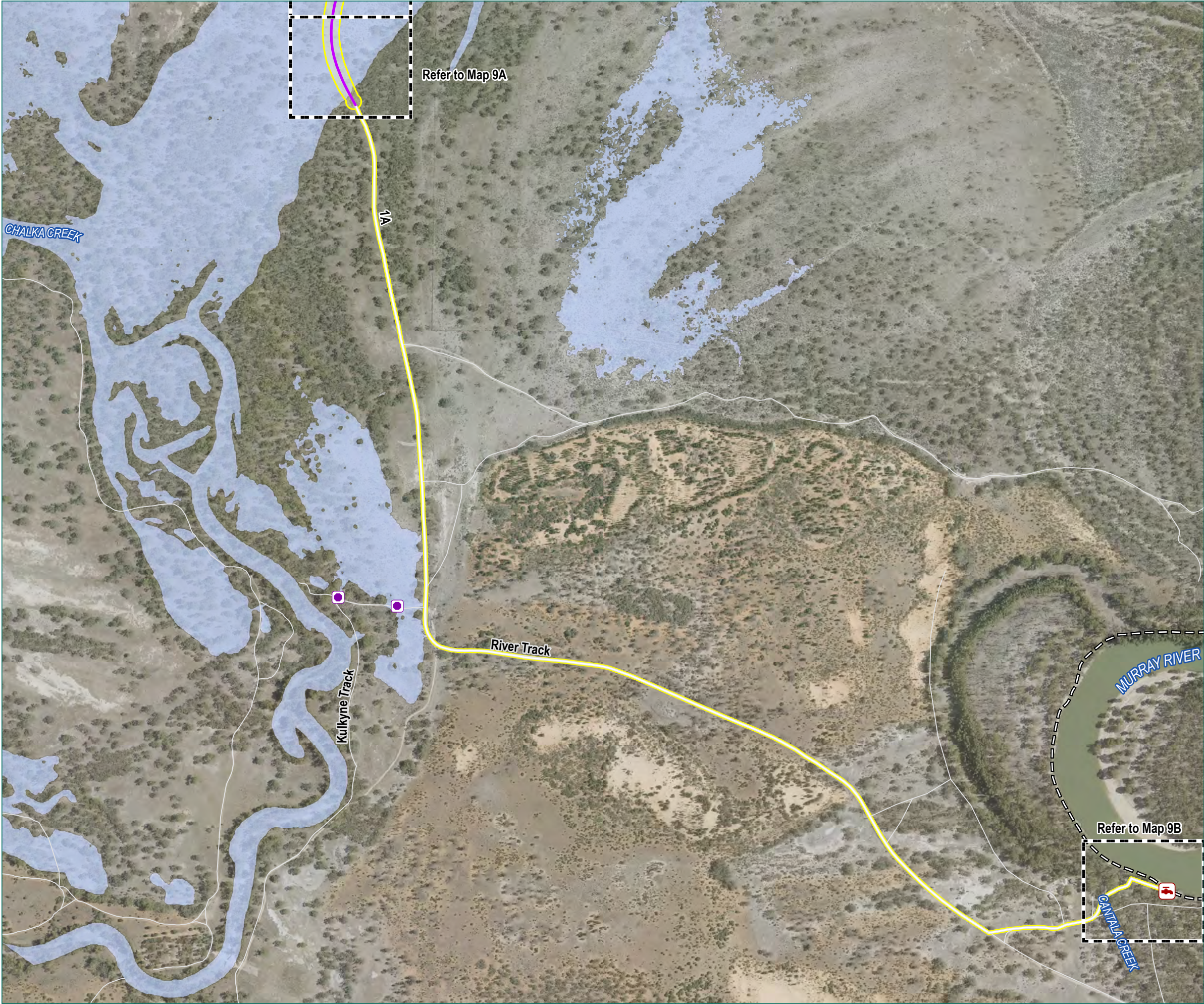
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  - Construction Footprint
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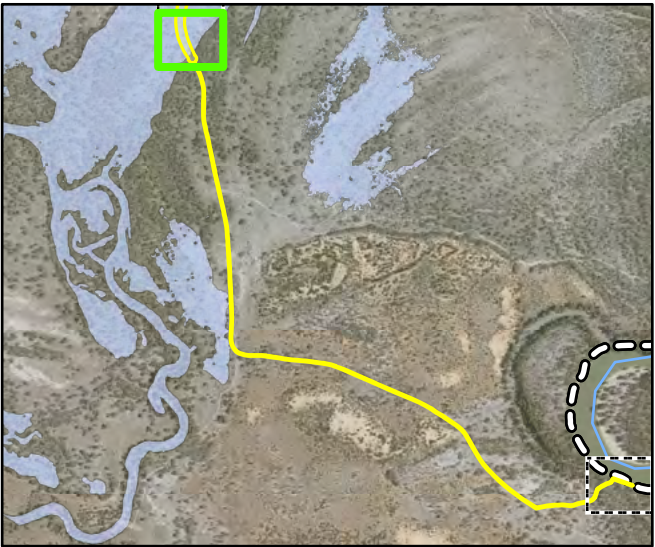
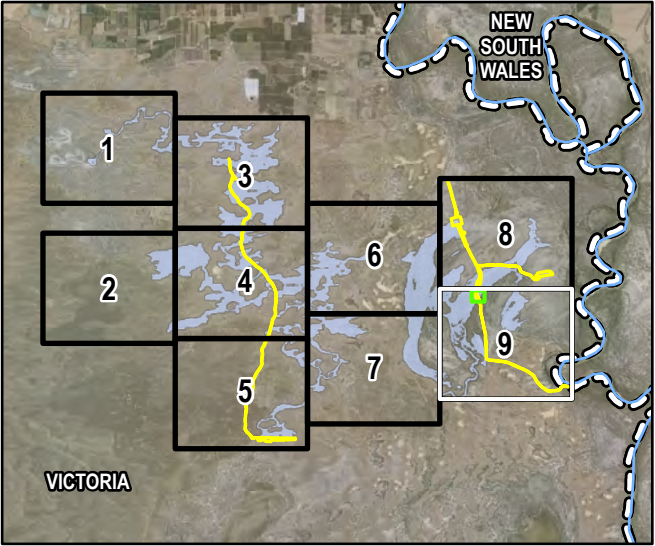
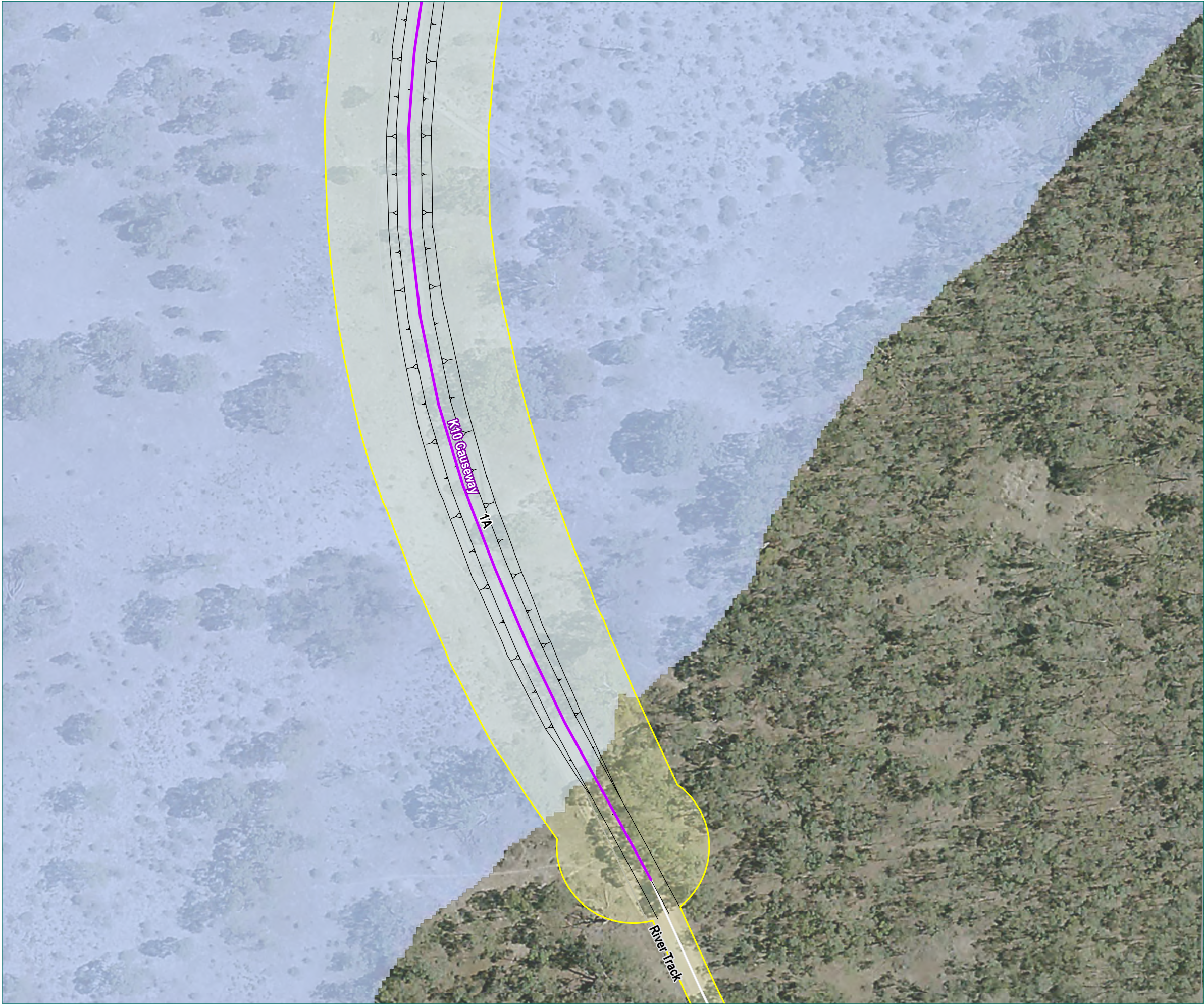
- LEGEND**
- Borrow
  - Construction Footprint
  - Maximum Inundation Area
  - Parcel boundary
  - State boundary





- LEGEND**
-  Water supply
  -  Parks Victoria signage
  -  Containment bank
  -  Access track
  -  Public road
  -  Construction Footprint
  -  Maximum Inundation Area
  -  State boundary

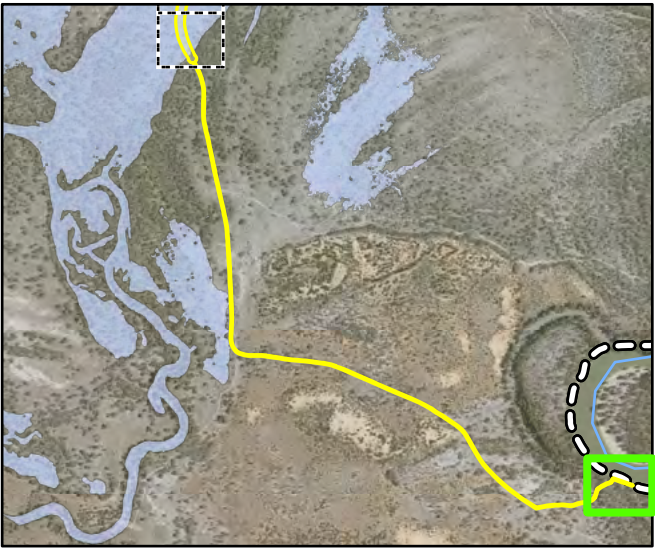
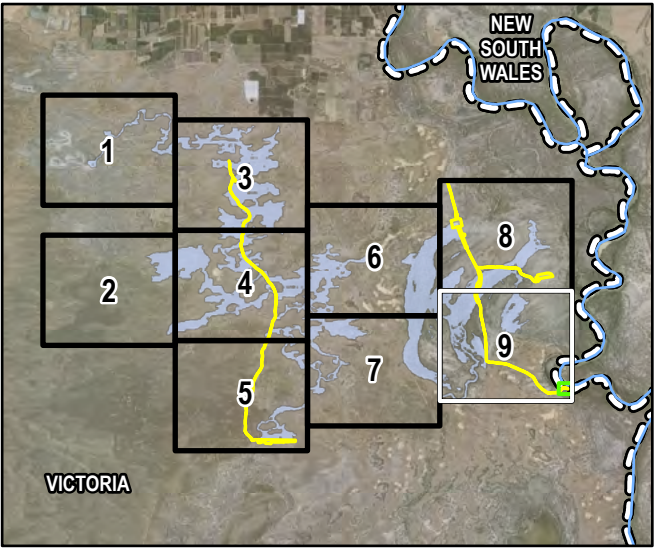




**LEGEND**

- Containment bank
- Preliminary infrastructure design
- Access track
- Construction Footprint
- Maximum Inundation Area
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- LEGEND**
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  - Access track
  - Construction Footprint
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VICTORIAN MURRAY FLOODPLAIN  
RESTORATION PROJECT  
HEALTHY LANDSCAPES. STRONG COMMUNITIES

# PROJECT STANDARD DRAWING SET



LOCALITY PLAN

## DRAWING LIST- PROJECT WIDE STANDARD DRAWINGS

	COVER SHEET, LOCALITY PLAN AND DRAWING LIST
00-3070-001-C-002	GENERAL NOTES - SHEET 1
00-3070-001-C-003	GENERAL NOTES - SHEET 2
00-3072-001-C-010	REGULATOR - MULTI BAY CULVERT REGULATOR - 1800W X 1800H TYPICAL DETAILS
00-3072-001-C-011	REGULATOR - MULTI BAY CULVERT REGULATOR WITH GUARDRAIL - 1800W X 1800H - TYPICAL DETAILS
00-3072-001-C-012	REGULATOR - MULTI BAY CULVERT REGULATOR - 1800W X 1500H - TYPICAL DETAILS
00-3072-001-C-013	REGULATOR - MULTI BAY CULVERT REGULATOR - 1800W X 1200H - TYPICAL DETAILS
00-3072-001-C-014	REGULATOR - MULTI BAY CULVERT REGULATOR - 1200W X 1200H - TYPICAL DETAILS
00-3072-001-C-015	REGULATOR - MULTI BAY CULVERT REGULATOR - 1200W X 900H - TYPICAL DETAILS
00-3072-001-C-016	REGULATOR - MULTI BAY CULVERT REGULATOR - 1200W X 600H - TYPICAL DETAILS
00-3072-001-C-017	REGULATOR - MULTI BAY TRAVERSABLE CULVERT - 1200W X 600H - TYPICAL DETAILS
00-3072-001-C-030	STANDARD REGULATOR APPROACH EMBANKMENT - BASIC ARRANGEMENT
00-3072-001-C-031	STANDARD REGULATOR APPROACH EMBANKMENT - ARRANGEMENT WITH VEHICLE PASSING
00-3072-001-C-032	STANDARD REGULATOR APPROACH EMBANKMENT - FLEXIBLE GUARDFENCE AND PASSING BAYS - DETAILS
00-3072-001-C-033	CONTAINMENT BANK - STANDARD PASSING BAY ARRANGEMENT
00-3073-001-C-001	CONTAINMENT BANK - TYPICAL SECTIONS - SHEET 1
00-3073-001-C-002	CONTAINMENT BANK - TYPICAL SECTIONS - SHEET 2
00-3073-001-C-010	SPILLWAY - CONCRETE - PLAN AND ELEVATION
00-3073-001-C-011	SPILLWAY - CONCRETE - SECTION AND DETAILS
00-3073-001-C-015	SPILLWAY - ROCK - PLAN AND ELEVATION
00-3073-001-C-016	SPILLWAY - ROCK - SECTION AND DETAILS
00-3074-001-C-001	HARDSTAND - TEMPORARY PUMPING SITE - TYPICAL ARRANGEMENT PLAN AND SECTION
00-3076-001-C-001	TRACKS - ACCESS TRACKS - TRACK TYPES

NOT FOR CONSTRUCTION

REVISIONS	No.	Description	Drawn	Reviewed	Approved	Date	Original plan page size A1
	1	ISSUED FOR REVIEW	MJW				



SURVEY INFORMATION:  
LEVEL DATUM VIDE PM: PM  
CO-ORDINATE VIDE PM: GPS NET / VICPOS  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54  
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DESIGNED BY	K.BUTLER	DATE	15/01/20
DRAWN BY	M.WOOTEN	DATE	15/01/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE	NTS	SHEET	OF

TITLE	PROJECT STANDARD DRAWING SET
	COVER SHEET, LOCALITY PLAN AND DRAWING LIST
DRAWING	

REV A

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## GENERAL NOTES

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- G2. ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS SHALL BE REFERRED TO THE SUPERINTENDENT.
- G3. DO NOT SCALE DIMENSIONS FROM DRAWINGS.
- G4. UNLESS NOTED OTHERWISE:  
ALL DIMENSIONS ARE IN MILLIMETRES (mm)  
ALL LEVELS ARE IN METRES TO AUSTRALIAN HEIGHT DATUM (AHD).
- G5. VERIFY ON SITE SETTING OUT DIMENSIONS AND EXISTING MEMBER SIZES SHOWN ON DRAWINGS BEFORE SHOP DRAWINGS, CONSTRUCTION AND FABRICATION IS COMMENCED.
- G6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES PRIOR TO COMMENCING EXCAVATION.
- G7. WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, CURRENT AUSTRALIAN STANDARDS INCLUDING ALL AMENDMENTS AND THE REQUIREMENTS OF ANY OTHER RELEVANT AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- G8. MAINTAIN STRUCTURE IN A STABLE CONDITION DURING CONSTRUCTION AND PROVIDE TEMPORARY BRACING AS REQUIRED. ENSURE NO PART IS OVERSTRESSED. DO NOT PLACE OR STORE BUILDING MATERIALS ON STRUCTURAL MEMBERS WITHOUT ENGINEER'S APPROVAL.
- G9. STRUCTURAL WORK HAS BEEN DESIGN FOR FOLLOWING LOADS:
  - SOIL LOADS: 18 KN/CU.M WITH  $K_0 = 0.6$
  - DEAD LOADS: TO AS/NZS 1170.1
  - DESIGN LIFE: 80 YEARS
  - LIVE LOAD: REFER DRAWINGS
  - CONSTRUCTION: 15 kPa LATERAL PRESSURE
  - VEHICULAR LOAD: SM1600 AS 5100
- G10. "UNO" DENOTES UNLESS NOTED OTHERWISE.

## ENVIRONMENTAL MANAGEMENT PLAN

EMP1. THE CONTRACTOR SHALL CARRY OUT ALL WORKS IN ACCORDANCE WITH THE ENVIRONMENT MANAGEMENT PLAN.

## SITE PREPARATION

- SP1. THE CONTRACTOR SHALL NOT UNDERTAKE ANY CLEARING WORK OR ANY TYPE OF DISTURBANCE OUTSIDE THE SPECIFIED LIMITS OF WORK UNLESS APPROVED BY THE SUPERINTENDENT.
- SP2. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR AND THE SUPERINTENDENT SHALL CONDUCT A JOINT INSPECTION OF THE SITE TO IDENTIFY AREAS TO BE CLEARED AND VEGETATION TO BE RETAINED AND PROTECTED.

FOUNDATION EARTHWORKS

- |     |  |
|-----|--|
| F1. | REMOVE TOP SOIL CONTAINING GRASS ROOTS OR OTHER ORGANIC MATTER AND PUT ASIDE FOR REUSE.  |
| F2. | FOUNDATION TO BE EXCAVATED TO THE REQUIRED LEVEL WITH A MINIMUM OF TRAFFICKING OR DISTURBANCE OF THE UNDERLYING MATERIAL.          |
| F3. | STRUCTURES HAVE BEEN DESIGNED FOR A SAFE WORKING BEARING PRESSURE OF 100 kPa AFTER PLACEMENT OF THE FOUNDATION IMPROVEMENT LAYERS. |

## CONCRETE GENERAL

- C1. CONCRETE SHALL BE IN ACCORDANCE WITH AS3600 - 2018 CONCRETE STRUCTURES
- C2. EXPOSURE CLASSIFICATION FOR DURABILITY IS B1.
- C3. QUALITY OF CONCRETE IN ELEMENTS TO BE AS FOLLOWS:  
BLINDING CONCRETE N15  
STRUCTURAL CONCRETE S40
- C4. MINIMUM COVER TO ALL REINFORCEMENT SHALL BE:

LOCATION	MINIMUM COVER (mm)
SURFACE EXPOSED TO AIR/WATER	50
SURFACE IN CONTACT WITH SOIL/BLINDING	70
BRIDGE DECK AT REGULATORS SLABS	50

- C5. WATERSTOPS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS.
- C6. CHAMFERS 25mm ARE REQUIRED ON EXPOSED CONCRETE CORNERS AND FILLETS WHERE SHOWN.
- C7. THE USE OF CONCRETE ADMIXTURES WHERE REQUIRED SHALL BE SUBJECT TO THE APPROVAL OF THE SUPERINTENDENT AND SHALL CONFORM TO AS1478.1.
- C8. SURFACE FINISHES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- C9. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- C10. USE PLACEMENT METHODS THAT WILL MINIMISE PLASTIC SETTLEMENT AND SHRINKAGE CRACKING. LIMIT VERTICAL FREE FALL TO 1.5m BY USE OF CHUTES, ETC. KEEP CHUTES VERTICAL, FULL AND IMMERSSED IN PLACED CONCRETE. PLACE CONCRETE IN LAYERS AND BLEND SUCCEEDING LAYERS BY COMPACTION MAINTAIN A PLASTIC CONCRETE EDGE BETWEEN CONSTRUCTION JOINTS. PROPERLY COMPACT CONCRETE USING MECHANICAL VIBRATORS (AND HAND METHODS IF REQUIRED) TO REMOVE AIR BUBBLES AND GIVE MAXIMUM COMPACTION WITHOUT SEGREGATION OF CONCRETE. TAKE CARE TO AVOID CONTACT BETWEEN VIBRATORS AND PARTIALLY HARDENED CONCRETE, FORMWORK OR REINFORCEMENT. DO NOT USE VIBRATORS TO MOVE CONCRETE ALONG FORMS.
- C11. PLACEMENT OF CONCRETE DURING HOT OR COLD WEATHER SHALL BE IN ACCORDANCE WITH THE SPECIFICATION.
- C12. PROTECT FRESH CONCRETE FROM PREMATURE DRYING - PARTICULARLY IN HOT, WINDY OR DRY (LOW HUMIDITY) CONDITIONS, EXCESSIVELY HOT OR COLD TEMPERATURES, RAIN, ETC. PROVIDE WIND BREAKS. MAINTAIN CONCRETE AT A REASONABLY CONSTANT TEMPERATURE WITH MINIMUM MOISTURE LOSS FOR CURING PERIOD.
- C13. STRIP FORMWORK TO AS3600 CLAUSE 17.6. REMOVE FORM TIE BOLTS WITHOUT DAMAGING CONCRETE. PARTS OF BOLTS LEFT IN CONCRETE MUST NOT INTRUDE INTO COVER CONCRETE. FLUSH FILL HOLES USING MATERIAL MATCHING CONCRETE SURFACE COLOUR, STRENGTH AND DURABILITY.
- C14. CEMENT GROUT TO BE 1:3 CEMENT : SAND RATIO WITH SUFFICIENT WATER TO PRODUCE PLASTIC LOW SHRINK MIX.
- C15. KEEP ON SITE A LOG BOOK RECORDING EACH PLACEMENT OF CONCRETE INCLUDING DATE, CLIMATIC CONDITIONS, PORTION OF WORK, SPECIFIED GRADE AND SOURCE OF CONCRETE, DELIVERY DOCKET DATA, METHODS OF PLACEMENT AND COMPACTION, PROJECT ASSESSMENT CARRIED OUT, SLUMP MEASUREMENT AND VOLUME.
- C16. CONSTRUCTION JOINTS OR POUR BREAKS WHERE NOT SHOWN ON THE DRAWINGS SHALL BE LOCATED AND FORMED TO THE APPROVAL OF THE SUPERINTENDENT.
- C17. WHERE SCABBLED SURFACES ARE SHOWN ON THE DRAWING, CONCRETE SURFACES AGAINST WHICH FRESH CONCRETE IS TO BE PLACED SHALL BE SCABBLED CLEANED AND DAMPENED WITH WATER IMMEDIATELY PRIOR TO PLACEMENT OF CONCRETE.
- C18. CONSTRUCTION SUPPORT PROPPING SHALL BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING.

## FORMWORK

- F1. ALL FORMWORK TO BE CLASS 3 IN ACCORDANCE WITH AS 3610.
- F2. ALL FORMWORK TO REMAIN IN PLACE UNTIL THE CONCRETE HAS DEVELOPED SUFFICIENT STRENGTH TO BE SELF SUPPORTING.
- F3. IF FORMWORK REMOVED/CRACKED PRIOR TO THE END OF THE CURING PERIOD, THEN CURING CONDITIONS SHALL BE MAINTAINED.

[illegible]

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REINFORCEMENT

R1.

REINFORCEMENT SHOWN ON THE DRAWINGS IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.

R2.

SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITION SHOWN ON THE DRAWINGS OR AS OTHERWISE APPROVED BY THE SUPERINTENDENT. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT. BAR LAPS IN MILLIMETRES ARE TO BE:

BAR SIZE	VERTICAL	HORIZONTAL ①	HORIZONTAL ②
N12	400	400	500
N16	500	500	700
N20	700	700	900
N24	900	900	1150
N28	1200	1200	1500
N32	1500	1500	1900

① HORIZONTAL BARS WITH LESS THAN 300mm CONCRETE CAST BELOW THE BAR.

② HORIZONTAL BARS WITH MORE THAN 300mm CONCRETE CAST BELOW THE BAR.

R3.

BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTRES WITH 3 WRAPS OF TIE WIRE.

R4.

REINFORCEMENT SYMBOLS :  
N GRADE 500 DEFORMED REINFORCING BARS, DUCTILITY CLASS N TO AS 4671.  
R GRADE 250 PLAIN REINFORCING BARS TO AS 1302.  
W HARD DRAWN STEEL REINFORCING WIRE, GRADE 500 DUCTILITY CLASS L TO AS 4671.  
TM HARD DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671.  
RL RECTANGULAR RIB MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671.  
SL SQUARE RIB MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671. THE NUMBERS FOLLOWING THE BAR SYMBOL INDICATE THE NOMINAL BAR DIAMETER IN MILLIMETRES AND SPACING.

R5.

REINFORCEMENT ABBREVIATIONS :  
EF EACH FACE  
NF NEAR FACE  
FF FAR FACE  
EW EACH WAY  
T TOP  
B or BTM BOTTOM  
CP CENTRAL  
LV LENGTH VARIES

R6.

WELDING OF REINFORCEMENT IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE SUPERINTENDENT.

R7.

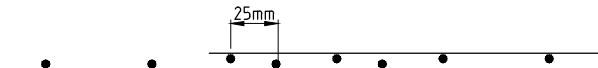
ALL REINFORCING BARS SHALL BE FIRMLY SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS. ALL REINFORCEMENT SHALL BE SECURELY TIED WITH WIRE TIES AND ALL TIE ENDS SHALL BE TURNED INWARD CLEAR OF THE COVER ZONE.

R8.

TIE WIRE SHALL NOT BE NAILED TO THE FORMS. REINFORCING BARS SHALL NOT BE USED TO KEEP FORMS APART AND A THROUGH TIE STEEL SYSTEM MAY BE USED TO TIE THE FORMS PROVIDED THAT THE FORMED HOLE IS FULLY FILLED WITH NON SHRINK CEMENTITIOUS GROUT.

R9.

FABRIC SHALL BE LAPPED SUCH THAT THE TWO OUTERMOST WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST WIRES OF THE OTHER SHEET BY 25mm MINIMUM AS SHOWN BELOW.



R10.

MESH SHALL NOT BE LAID ON THE GROUND AND PULLED INTO POSITION THROUGH THE CONCRETE.

R11.

CLEAR COVER TO REINFORCEMENT SHALL BE AS SPECIFIED IN C4.

R12.

WHERE DISTRIBUTION BARS TO MAIN REINFORCEMENT ARE NOT SHOWN ON THE DRAWINGS, PROVIDE MINIMUM N16-300, LAPPED 500mm AT SPLICES.

R13.

ALL RE-ENTRANT CORNERS OF PENETRATIONS THROUGH WALLS AND SLABS SHALL BE TRIMMED USING MINIMUM 2N12 DIAGONAL CORNER BARS 1200mm LONG.

R14.

REINFORCEMENT SET-OUT DIMENSIONS ARE SHOWN IN RELATION TO PIER CENTERLINES, QUARTER SPAN POINTS OR WALL / BEAM EDGES U.N.O.

R15.

REINFORCING BARS SHALL BE EVENLY DISTRIBUTED THROUGH THE WIDTH OF THE STRIP U.N.O.

R16.

REINFORCEMENT SHALL NOT BE CUT OR BENT ON SITE UNLESS APPROVED BY THE SUPERINTENDENT. THE REINFORCEMENT CAN ONLY BE HEATED IF APPROVED IN WRITING BY THE SUPERINTENDENT.

R17.

AT SLAB EDGES INCLUDING CONSTRUCTION AND OTHER JOINTS, AT LEAST ONE REINFORCING BAR OR FABRIC WIRE SHALL BE LOCATED PARALLEL TO AND WITHIN 75mm OF THE SLAB EDGE.

R18.

AT PENETRATIONS WITH DIMENSIONS LESS THAN 400mm DO NOT CUT REINFORCEMENT, RATHER GATHER REINFORCEMENT TO EACH SIDE OF PENETRATION U.N.O. ON THE PLANS. AT PENETRATIONS WITH DIMENSIONS LESS THAN 600mm LAY REINFORCEMENT IN REQUIRED POSITION AND CUT OUT TO SUIT PENETRATION. PROVIDE ADDITIONAL BARS TO MATCH THE SIZE, LENGTH AND NUMBER OF BARS CUT, AND PLACE EQUALLY ON EACH SIDE OF THE PENETRATION U.N.O. ON PLANS.

R19.

CONCRETE SHALL NOT BE DELIVERED UNTIL AFTER REINFORCEMENT INSPECTION AND FINAL APPROVAL IS OBTAINED FROM THE SUPERINTENDENT.

SHEET PILING GENERAL

SP1.

THE CONTRACTOR SHALL SUPPLY AND INSTALL THE SPECIFIED SHEET PILE PROFILE IN THE DRAWINGS OR APPROVED EQUIVALENT.

SP2.

ANY ALTERNATIVE SHEET PILE PROFILE PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL.

SP3.

THE DIMENSIONS OF THE STRUCTURE TO ACCOMMODATE THE SELECTED PILE PROFILE SHALL BE CONFIRMED PRIOR TO CONSTRUCTION.

SP4.

INTERLOCK SEALS SHALL BE APPLIED AT ALL INTERLOCKS.

SP5.

STEEL SHEET PILES SHALL BE HOT ROLLED SECTIONS MANUFACTURED IN ACCORDANCE WITH AS 3679.1

EARTHWORKS

E1.

ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS.

STRUCTURAL STEELWORK

SS1.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100 AND THE SPECIFICATION.

SS2.

ROLLED STEEL SECTIONS SHALL BE GRADE 300 COMPLYING WITH AS3679 U.N.O.

SS3.

BOLTS AND NUTS TO AS1252 GRADE 8.8/S U.N.O.

SS4.

SHS, RHS, AND CHS SHALL BE GRADE 350 AND COMPLY WITH AS1163, U.N.O.

SS5.

ALL BOLTS, NUTS, WASHERS AND COUPLERS SHALL BE HOT DIP GALVANISED.

SS6.

ALL WELDS TO BE 6mm CONTINUOUS FILLET WELDS U.N.O.

SS7.

ALL STEELWORKS SHALL BE HOT DIP GALVANISED AFTER FABRICATIONS U.N.O.

SS8.

GALVANISING SHALL COMPLY WITH AS/NZS 4680.

SS9.

WELDING ELECTRODES SHALL BE E49XX U.N.O AND WELD CATEGORY SP AND COMPLY WITH AS/NZS 1554 - PART 1 U.N.O.

SS10.

ALL BOLTED CONNECTIONS SHALL HAVE 10 PLATE AND 2-M20 8.8/S BOLTS MIN. U.N.O.

STRUCTURAL ALUMINIUM

SL1.

ALL ALUMINIUM TO BE IN ACCORDANCE WITH AS 1664.

SL2.

WELDING TO BE IN ACCORDANCE WITH AS 1665.

SL3.

REMOVE BURS AND SHARP CORNERS FROM ALL EDGES.

SL4.

ALL CONNECTIONS TO DISSIMILAR MATERIALS TO BE ELECTRICALLY ISOLATED USING A NEOPRENE SEPARATION LAYER.

STAINLESS STEEL

SS1.

STAINLESS STEEL STRUCTURAL COMPONENTS TO BE GRADE 316L.

SS2.

STAINLESS STEEL BOLTS AND ANCHORS SHALL BE GRADE 316. NUTS AND WASHERS SHALL BE GRADE 304 UNLESS STATED OTHERWISE.

SS3.

ALL STAINLESS STEEL MATING SURFACES AND THREADS SHALL BE COATED WITH 'LOCTITE 567' PRIOR TO ASSEMBLY.

MARKER POSTS

M1.

ROAD MARKER POSTS TO BE FLEXIBLE HDPE POST WITH FLEXIBLE JOINT. DURAPOST FLEXI 360 OR SIMILAR.

BEACHING

B1.

BEACHING STONE SHALL BE LAID ON A COMBINED GEOTEXTILE AND ROCK FILTER. THIS COMPRISES OF BIDIM A44 GEOTEXTILE OR EQUIVALENT UNLESS OTHERWISE SPECIFIED. ANCHORED AND INSTALLED TO THE MANUFACTURERS RECOMMENDATIONS.

B2.

UNLESS NOTED OTHERWISE THE DEFAULT ROCK TYPE SHALL BE TYPE D50 = 150mm.

B3.

ROCK GRADE SIZE SHALL CONFORM TO THE FOLLOWING GRADING:

	EQUIVALENT SPHERICAL DIAMETER	PERCENTAGE PASSING BY WEIGHT
1.5 - 2.0 D50	.....	100%
D50	.....	50%
0.3 - 0.4 D50	.....	10 - 20%

BOX CULVERTS

BC1.

BOX CULVERTS SHALL BE PRECAST CROWN UNITS TO AS1597.2

BC2.

CULVERT ROADWAY CLASS 2A EXPOSURE CLASSIFICATION B1.

BC3.

COMPACTION PRESSURE BEHIND WALLS NOT TO EXCEED 15 kPa (1.5 TONNE VIBRATORY ROLLER OR 300 kg VIBRATING PLATE WITHIN 0.5m OF WALL).

BC4.

FERRULES AND INSERTS TO BE LOCATED AS SHOWN ON THE DRAWINGS.

SYMBOLS

↔

LOAD BAR DIRECTION

NOT FOR CONSTRUCTION


REVISIONS

No.	Description	Drawn	Review'd	Approv'd	Date
A	ISSUED FOR REVIEW	MJW			

Original plan page size A1

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GHD GROUP TRADING AS R8 JOINT VENTURE  
11th Floor, 452 Flinders Street  
MELBOURNE, VIC 3000 Australia  
Tel: +61 3 8668 3000  
Fax: +61 3 8668 3001

SURVEY INFORMATION :  
LEVEL DATUM VIDE PM :  
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ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54  
  
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VICTORIAN MURRAY FLOODPLAIN  
RESTORATION PROJECT  
HEALTHY LANDSCAPES. STRONG COMMUNITIES

DESIGNED BY	N.PAYNTER	DATE	18/03/20
DRAWN BY	M.WOOTTEN	DATE	18/03/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE		SHEET	OF

TITLE	PROJECT WIDE STANDARD DRAWING
GENERAL NOTES	SHEET 2
DRAWING	00-3070-001-C-003
REV	A

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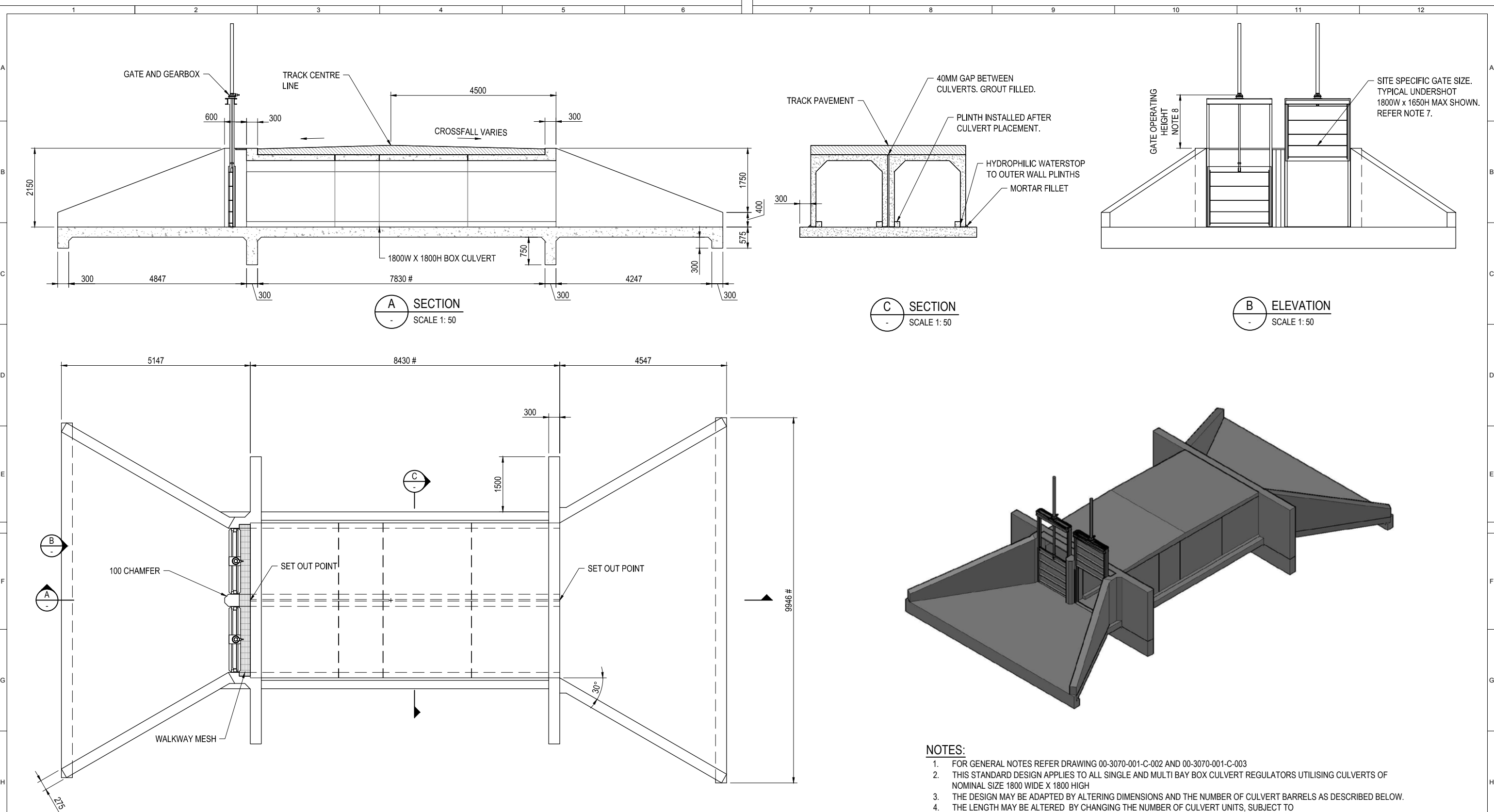
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11

12





- NOTES:**
- 1. FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-002 AND 00-3070-001-C-003
  - 2. THIS STANDARD DESIGN APPLIES TO ALL SINGLE AND MULTI BAY BOX CULVERT REGULATORS UTILISING CULVERTS OF NOMINAL SIZE 1800 WIDE X 1800 HIGH
  - 3. THE DESIGN MAY BE ADAPTED BY ALTERING DIMENSIONS AND THE NUMBER OF CULVERT BARRELS AS DESCRIBED BELOW.
  - 4. THE LENGTH MAY BE ALTERED BY CHANGING THE NUMBER OF CULVERT UNITS, SUBJECT TO
    - 4.1. 2400mm NOMINAL LENGTH CULVERTS TO BE ON WATER RETAINING END
    - 4.2. ADEQUATE TRAFFIC CLEAR ZONE
  - 5. SHORTENED STRUCTURES ARE TO BE FITTED WITH FLEXIBLE GUARD FENCE BY ADOPTING THE THROAT LENGTH, WALKWAY MESH AND DYNAMIC DEFLECTION CLEARANCE SHOWN ON DRAWING 00-3072-001-C-011
  - 6. # INDICATED DIMENSIONS TO BE VERIFIED BASED ON THE FINAL CULVERT SELECTION. THE DESIGN IS BASED ON METRIC UNITS. IMPERIAL SIZE CULVERTS MAY BE USED, PROVIDED THE DIMENSIONS ARE MODIFIED ACCORDINGLY.
  - 7. GATE SIZE AND CHECKING LEVEL ARE TO BE SELECTED ON A SITE SPECIFIC BASIS. THE GATE SIZE SHOWN IS INDICATIVE OF THE MAXIMUM SIZE SLUICE GATE FOR THIS SIZE STRUCTURE.
  - 8. GATE OPERATING HEIGHT PREFERRED RANGE 900 TO 1200, AND MAXIMUM 1500 ABOVE DECK LEVEL

REVISIONS

No.	Description	Drawn	Review'd	Approv'd	Date
A	ISSUED FOR REVIEW	MJW			

05001000150020002500mm

SCALE 1:50 AT ORIGINAL SIZE

JACOBS GROUP (AUSTRALIA) PTY LTD AND  
GHD GROUP TRADING AS R8 JOINT VENTURE  
11th Floor, 452 Flinders Street  
MELBOURNE, VIC 3000 Australia  
Tel: +61 3 8668 3000  
Fax: +61 3 8668 3001

SURVEY INFORMATION:  
LEVEL DATUM VIDE PM:  
CO-ORDINATE VIDE PM:  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54

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RESTORATION PROJECT  
HEALTHY LANDSCAPES. STRONG COMMUNITIES.

DESIGNED BY	N.PAYNTER	DATE	11/04/20
DRAWN BY	M.WOOTTEN	DATE	11/04/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE	1:50	SHEET	OF

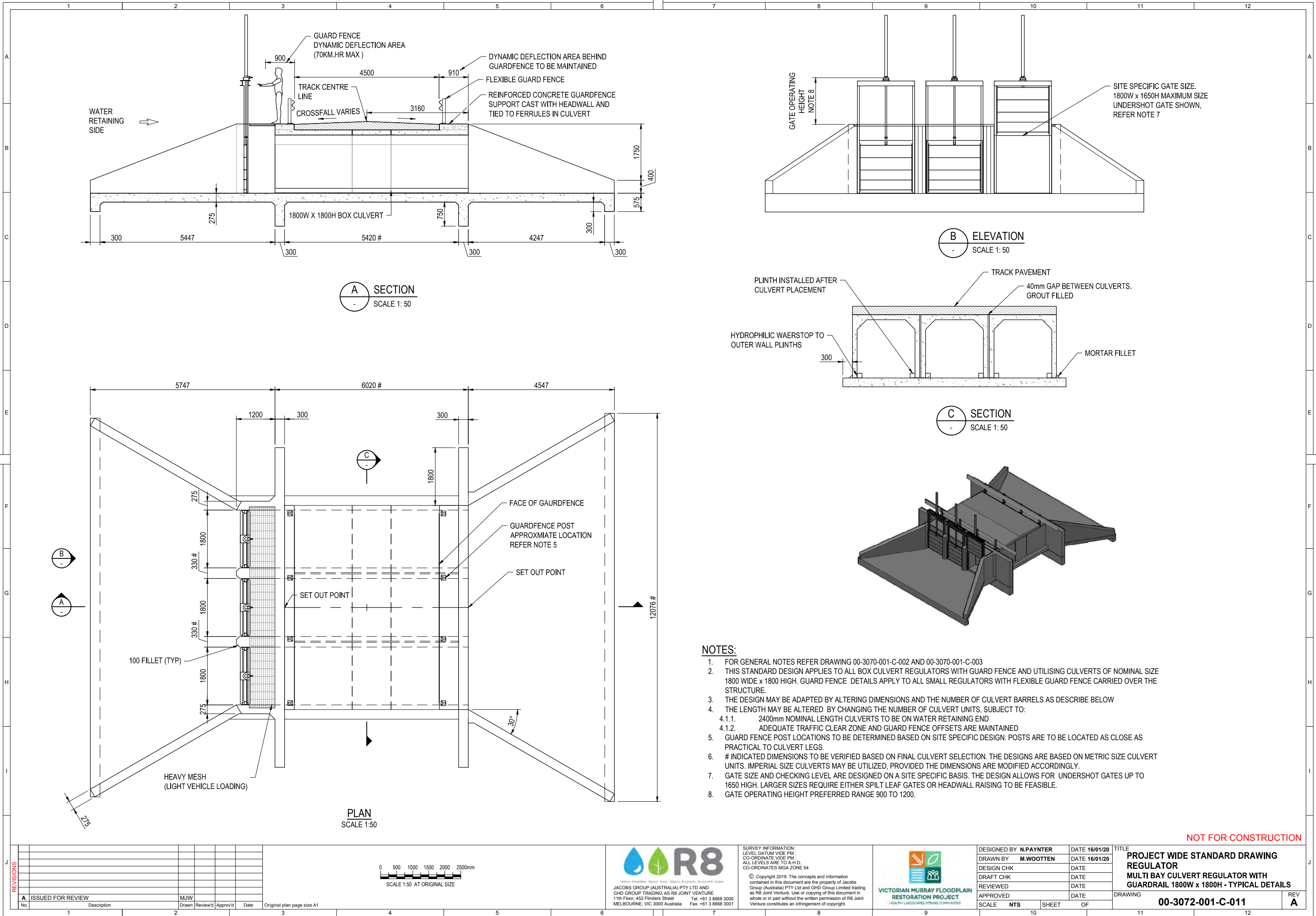
TITLE	PROJECT WIDE STANDARD DRAWING REGULATOR MULTI BAY CULVERT REGULATOR 1800W x 1800H - TYPICAL DETAILS
DRAWING	00-3072-001-C-010

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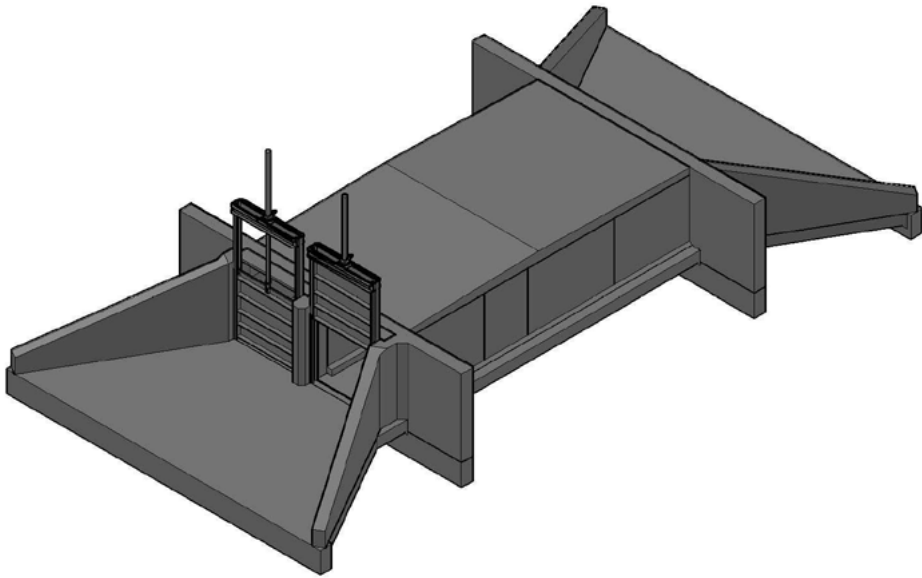
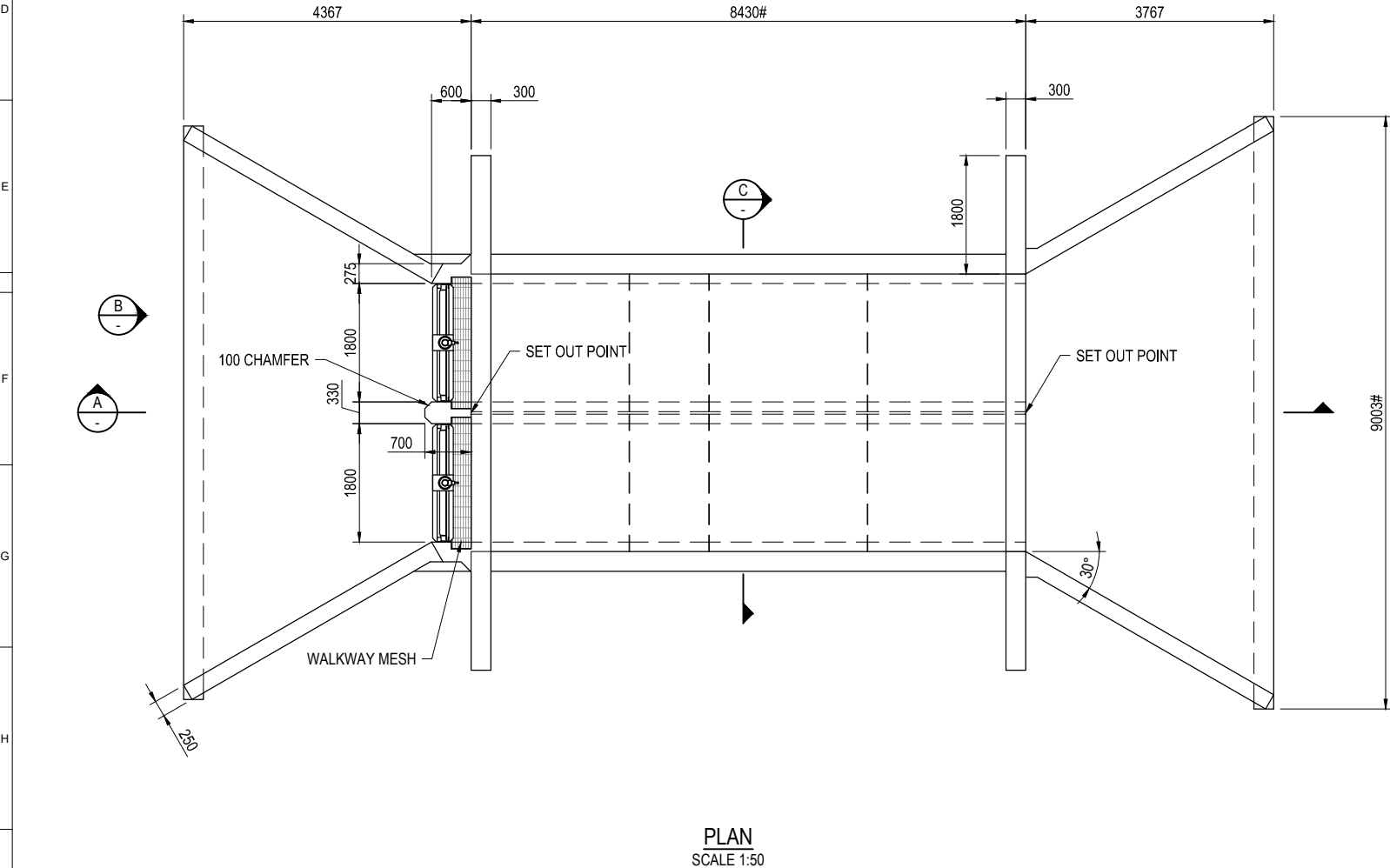
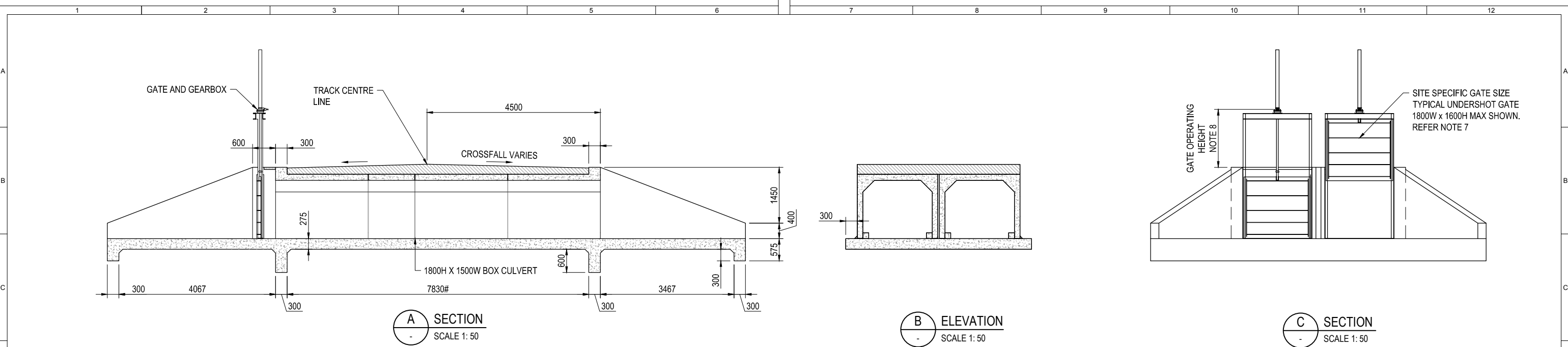
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- NOTES:**
- FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-002 AND 00-3070-001-C-003
  - THIS STANDARD DESIGN APPLIES TO ALL SINGLE AND MULTI BAY BOX CULVERT REGULATORS UTILISING CULVERTS OF NOMINAL SIZE 1800 WIDE X 1500 HIGH
  - THE DESIGN MAY BE ADAPTED BY ALTERING DIMENSIONS AND THE NUMBER OF CULVERT BARRELS AS DESCRIBED BELOW.
  - THE LENGTH MAY BE ALTERED BY CHANGING THE NUMBER OF CULVERT UNITS, SUBJECT TO
    - 2400mm NOMINAL LENGTH CULVERTS TO BE ON WATER RETAINING END
    - ADEQUATE TRAFFIC CLEAR ZONE AND GUARD FENCE OFFSETS ARE MAINTAINED
  - SHORTENED STRUCTURES ARE TO BE FITTED WITH FLEXIBLE GUARD FENCE BY ADOPTING THE THROAT LENGTH, WALKWAY MESH AND DYNAMIC DEFLECTION CLEARANCE SHOWN ON DRAWING 00-3072-001-C-011
  - # INDICATED DIMENSIONS TO BE VERIFIED BASED ON THE FINAL CULVERT SELECTION. THE DESIGN IS BASED ON METRIC UNITS. IMPERIAL SIZE CULVERTS MAY BE USED, PROVIDED THE DIMENSIONS ARE MODIFIED ACCORDINGLY.
  - GATE SIZE AND CHECKING LEVEL ARE TO BE SELECTED ON A SITE SPECIFIC BASIS. THE GATE SIZE SHOWN IS INDICATIVE OF THE MAXIMUM SIZE SLUICE GATE FOR THIS SIZE STRUCTURE.
  - GATE OPERATING HEIGHT PREFERRED RANGE 900 TO 1200, AND MAXIMUM 1500 ABOVE DECK LEVEL

REVISIONS

No.	Description	Drawn	Review'd	Approv'd	Date
1	ISSUED FOR REVIEW	MJW			

0 500 1000 1500 2000 2500mm

SCALE 1:50 AT ORIGINAL SIZE

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GHD GROUP TRADING AS R8 JOINT VENTURE  
11th Floor, 452 Flinders Street  
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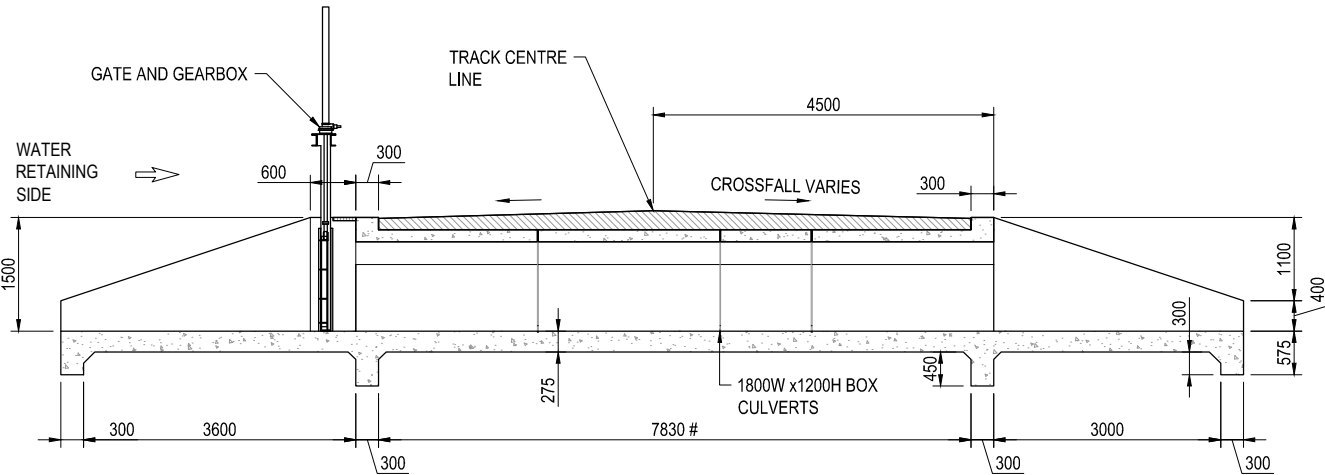
DESIGNED BY	N.PAYNTER	DATE	16/01/20
DRAWN BY	M.WOOTTEN	DATE	16/01/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE	NTS	SHEET	OF

TITLE	PROJECT WIDE STANDARD DRAWING REGULATOR MULTI BAY CULVERT REGULATOR 1800W x 1500H - TYPICAL DETAILS
DRAWING	00-3072-001-C-012

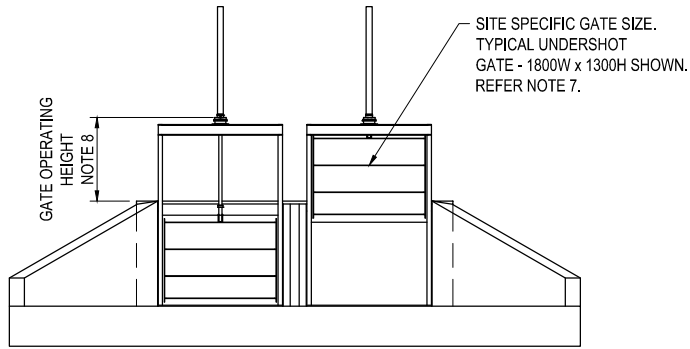
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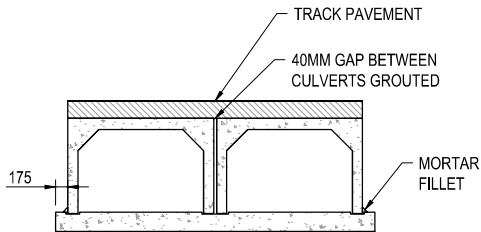




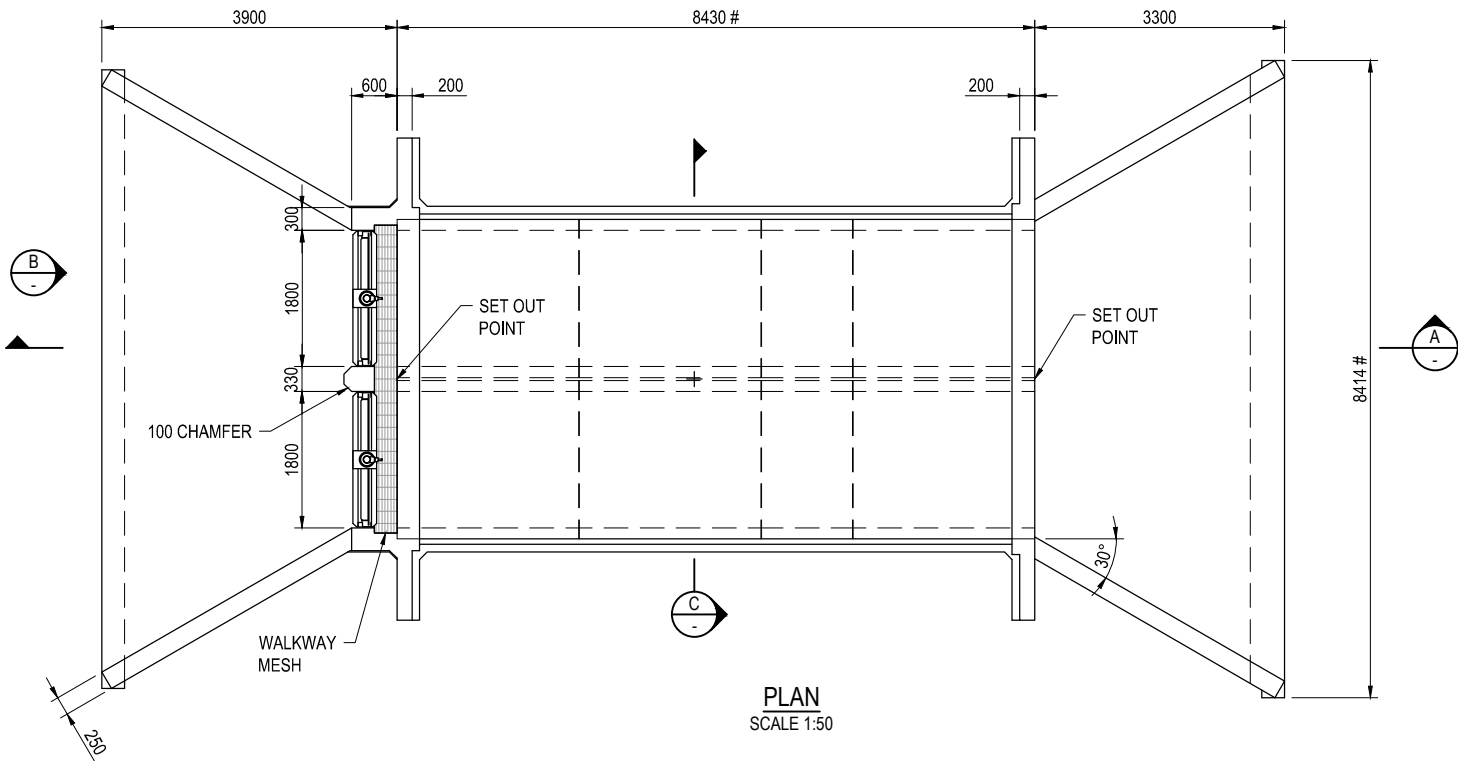
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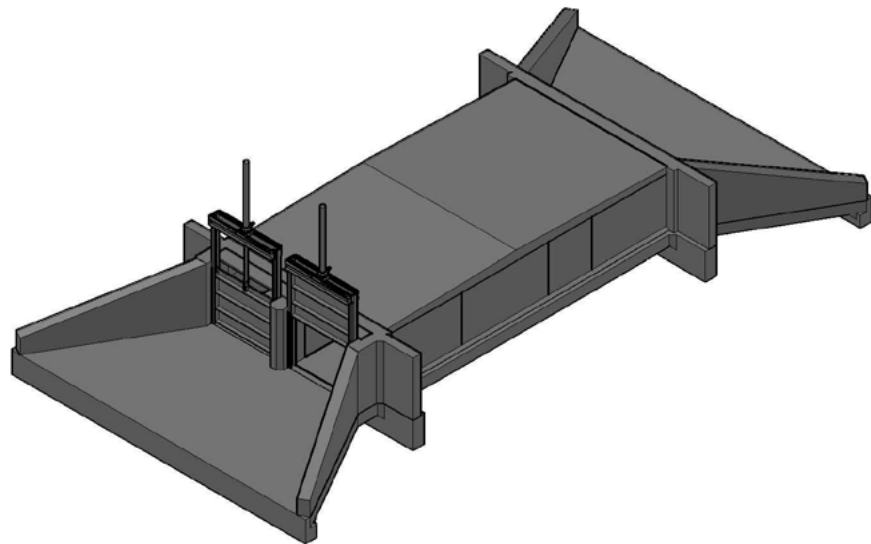
**B** ELEVATION  
SCALE 1:50



**C** SECTION  
SCALE 1:50



**PLAN**  
SCALE 1:50



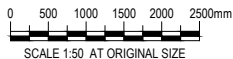
**NOTES:**

- FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-002 AND 00-3070-001-C-003
- THIS STANDARD DESIGN APPLIES TO ALL SINGLE AND MULTI BAY BOX CULVERT REGULATORS UTILISING CULVERTS OF NOMINAL SIZE 1800 WIDE X 1200 HIGH
- THE DESIGN MAY BE ADAPTED BY ALTERING DIMENSIONS AND THE NUMBER OF CULVERT BARRELS AS DESCRIBED BELOW.
- THE LENGTH MAY BE ALTERED BY CHANGING THE NUMBER OF CULVERT UNITS, SUBJECT TO
  - 2400mm NOMINAL LENGTH CULVERTS TO BE ON WATER RETAINING END
  - ADEQUATE TRAFFIC CLEAR ZONE
- SHORTENED STRUCTURES ARE TO BE FITTED WITH FLEXIBLE GUARD FENCE BY ADOPTING THE THROAT LENGTH, WALKWAY MESH AND DYNAMIC DEFLECTION CLEARANCE SHOWN ON DRAWING 00-3072-001-C-011
- # INDICATED DIMENSIONS TO BE VERIFIED BASED ON THE FINAL CULVERT SELECTION. THE DESIGN IS BASED ON METRIC UNITS. IMPERIAL SIZE CULVERTS MAY BE USED, PROVIDED THE DIMENSIONS ARE MODIFIED ACCORDINGLY.
- GATE SIZE AND CHECKING LEVEL ARE TO BE SELECTED ON A SITE SPECIFIC BASIS. THE GATE SIZE SHOWN IS INDICATIVE FOR THIS SIZE STRUCTURE.
- GATE OPERATING HEIGHT PREFERRED RANGE 900 TO 1200, AND MAXIMUM 1500 ABOVE DECK LEVEL

NOT FOR CONSTRUCTION

REVISIONS				
No.	Description	Drawn	Review'd	Approv'd
1	ISSUED FOR REVIEW	MJW		

Original plan page size A1



SURVEY INFORMATION :  
LEVEL DATUM VIDE PM :  
CO-ORDINATE VIDE PM :  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54  
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DESIGNED BY	N.PAYNTER	DATE	16/01/20
DRAWN BY	M.WOOTTEN	DATE	16/01/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE	NTS	SHEET	OF

TITLE	PROJECT WIDE STANDARD DRAWING REGULATOR MULTI BAY CULVERT REGULATOR 1800W x 1200H - TYPICAL DETAILS
DRAWING	00-3072-001-C-013

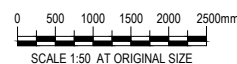
REV  
A





1. FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-002 AND 00-3070-001-C-003
2. THIS STANDARD DESIGN APPLIES TO ALL SINGLE AND MULTI BAY BOX CULVERT REGULATORS UTILISING CULVERTS OF NOMINAL SIZE 1200 WIDE X 1200 HIGH
3. THE DESIGN MAY BE ADAPTED BY ALTERING DIMENSIONS AND THE NUMBER OF CULVERT BARRELS AS DESCRIBED BELOW.
4. THE LENGTH MAY BE ALTERED BY CHANGING THE NUMBER OF CULVERT UNITS, SUBJECT TO
  - 4.1. 2400mm NOMINAL LENGTH CULVERTS TO BE ON WATER RETAINING END
  - 4.2. ADEQUATE TRAFFIC CLEAR ZONE
5. SHORTENED STRUCTURES ARE TO BE FITTED WITH FLEXIBLE GUARD FENCE BY ADOPTING THE THROAT LENGTH, WALKWAY MESH AND DYNAMIC DEFLECTION CLEARANCE SHOWN ON DRAWING 00-3072-001-C-011
6. # INDICATED DIMENSIONS TO BE VERIFIED BASED ON THE FINAL CULVERT SELECTION. THE DESIGN IS BASED ON METRIC UNITS. IMPERIAL SIZE CULVERTS MAY BE USED, PROVIDED THE DIMENSIONS ARE MODIFIED ACCORDINGLY.
7. GATE SIZE AND CHECKING LEVEL ARE TO BE SELECTED ON A SITE SPECIFIC BASIS. THE GATE SIZE SHOWN IS INDICATIVE FOR THIS SIZE STRUCTURE.
8. GATE OPERATING HEIGHT PREFERRED RANGE 900 TO 1200, AND MAXIMUM 1500 ABOVE DECK LEVEL

REVISIONS								Original plan page size A
A	ISSUED FOR REVIEW			MJW				
No.	Description			Drawn	Review'd	Approv'd	Date	
	1		2					
							3	



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GHD GROUP TRADING AS R8 JOINT VENTURE**  
11th Floor, 452 Flinders Street Tel: +61 3 8668 3000  
MELBOURNE, VIC 3000 Australia Fax: +61 3 8668 3001

SURVEY INFORMATION :  
LEVEL DATUM VIDE PM :  
CO-ORDINATE VIDE PM :  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54

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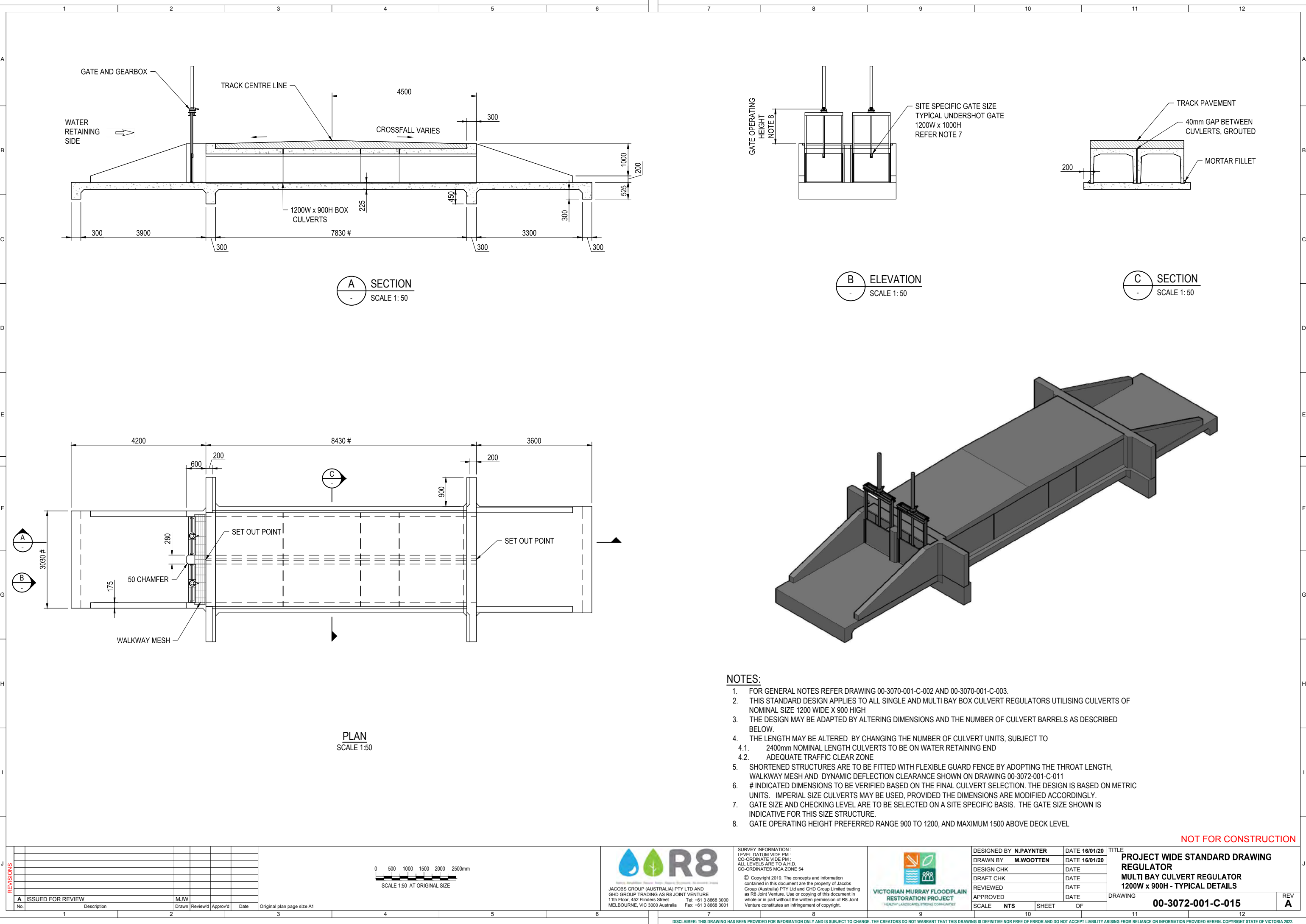


DESIGNED BY	N.PAYNTER	DATE	16/01/20	TITLE <b>PROJECT WIDE STANDARD DRAWING          REGULATOR          MULTI BAY CULVERT REGULATOR          1200W x 1200H - TYPICAL DETAILS</b>
DRAWN BY	M.WOOTTEN	DATE	16/01/20	
DESIGN CHK		DATE		
DRAFT CHK		DATE		
REVIEWED		DATE		
APPROVED		DATE		
SCALE	NTS	SHEET	OF	DRAWING <b>00-3072-001-C-014</b>

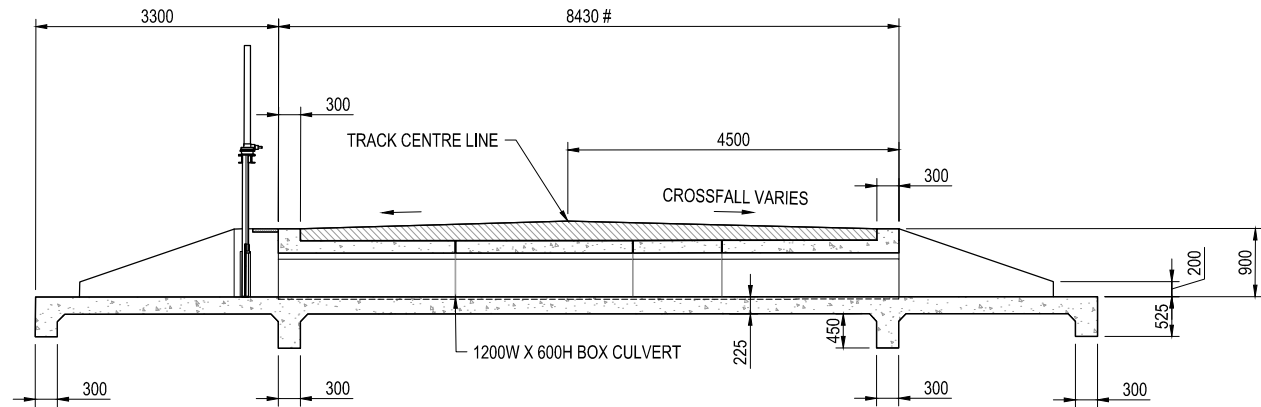
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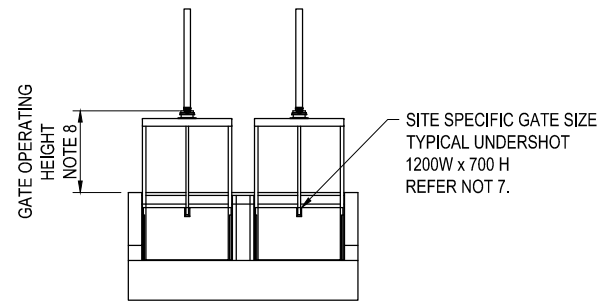




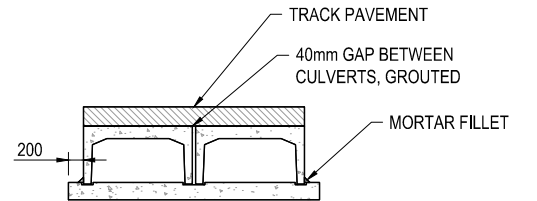




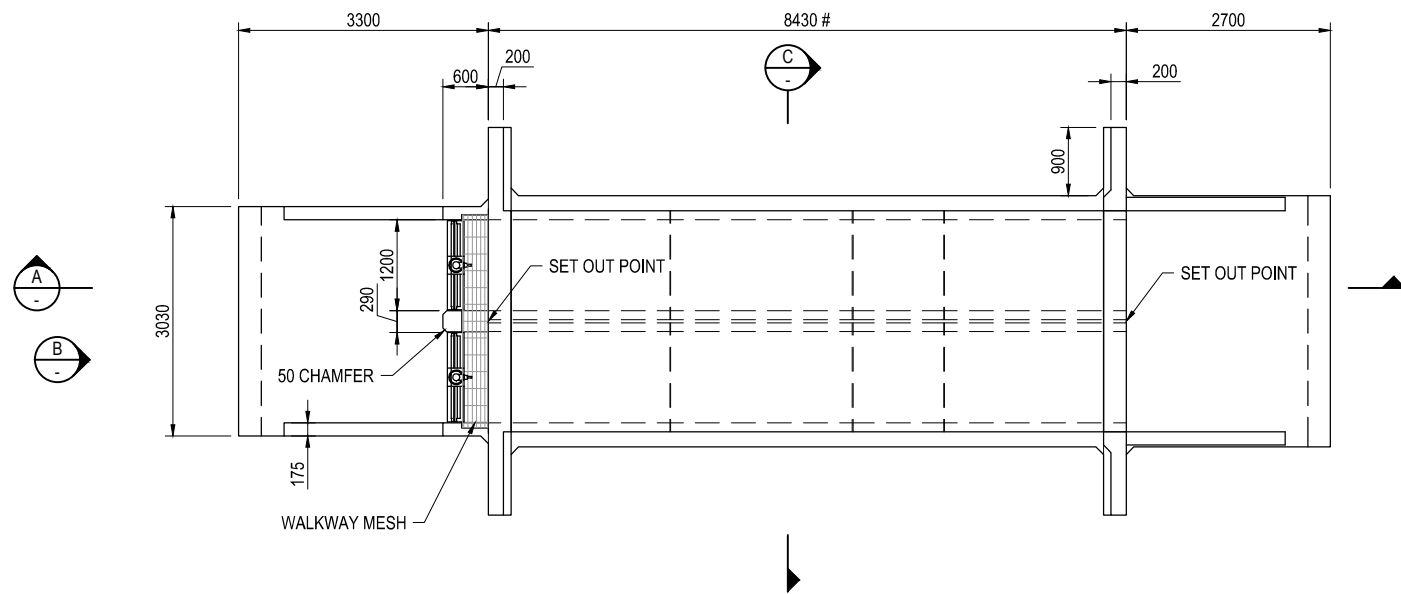
**A** SECTION  
SCALE 1: 50



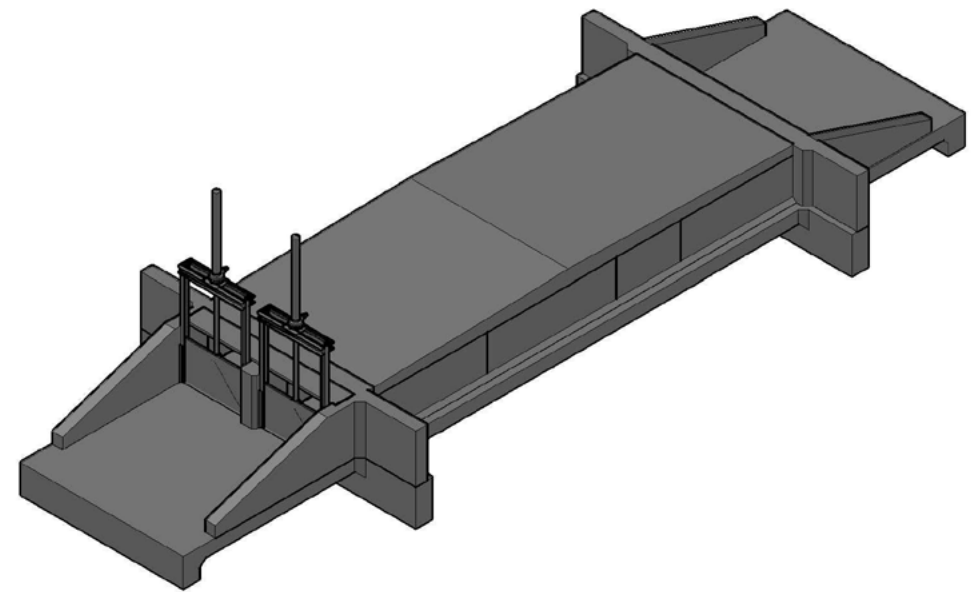
**B** ELEVATION  
SCALE 1: 50



**C** SECTION  
SCALE 1: 50



**PLAN**  
SCALE 1:50

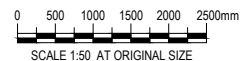


**NOTES:**

- FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-002 AND 00-3070-001-C-003
- THIS STANDARD DESIGN APPLIES TO ALL SINGLE AND MULTI BAY BOX CULVERT REGULATORS UTILISING CULVERTS OF NOMINAL SIZE 1200 WIDE X 600 HIGH
- THE DESIGN MAY BE ADAPTED BY ALTERING DIMENSIONS AND THE NUMBER OF CULVERT BARRELS AS DESCRIBED BELOW.
- THE LENGTH MAY BE ALTERED BY CHANGING THE NUMBER OF CULVERT UNITS, SUBJECT TO
  - 2400mm NOMINAL LENGTH CULVERTS TO BE ON WATER RETAINING END
  - ADEQUATE TRAFFIC CLEAR ZONE
- SHORTENED STRUCTURES ARE TO BE FITTED WITH FLEXIBLE GUARD FENCE BY ADOPTING THE THROAT LENGTH, WALKWAY MESH AND DYNAMIC DEFLECTION CLEARANCE SHOWN ON DRAWING 00-3072-001-C-011
- # INDICATED DIMENSIONS TO BE VERIFIED BASED ON THE FINAL CULVERT SELECTION. THE DESIGN IS BASED ON METRIC UNITS. IMPERIAL SIZE CULVERTS MAY BE USED, PROVIDED THE DIMENSIONS ARE MODIFIED ACCORDINGLY.
- GATE SIZE AND CHECKING LEVEL ARE TO BE SELECTED ON A SITE SPECIFIC BASIS. THE GATE SIZE SHOWN IS INDICATIVE FOR THIS SIZE STRUCTURE.
- GATE OPERATING HEIGHT PREFERRED RANGE 900 TO 1200, AND MAXIMUM 1500 ABOVE DECK LEVEL

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No.	Description	Drawn	Review'd	Approv'd	Date	Original plan page size A1
1	ISSUED FOR REVIEW	MJW				



SURVEY INFORMATION:  
LEVEL DATUM VIDE PM:  
CO-ORDINATE VIDE PM:  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54

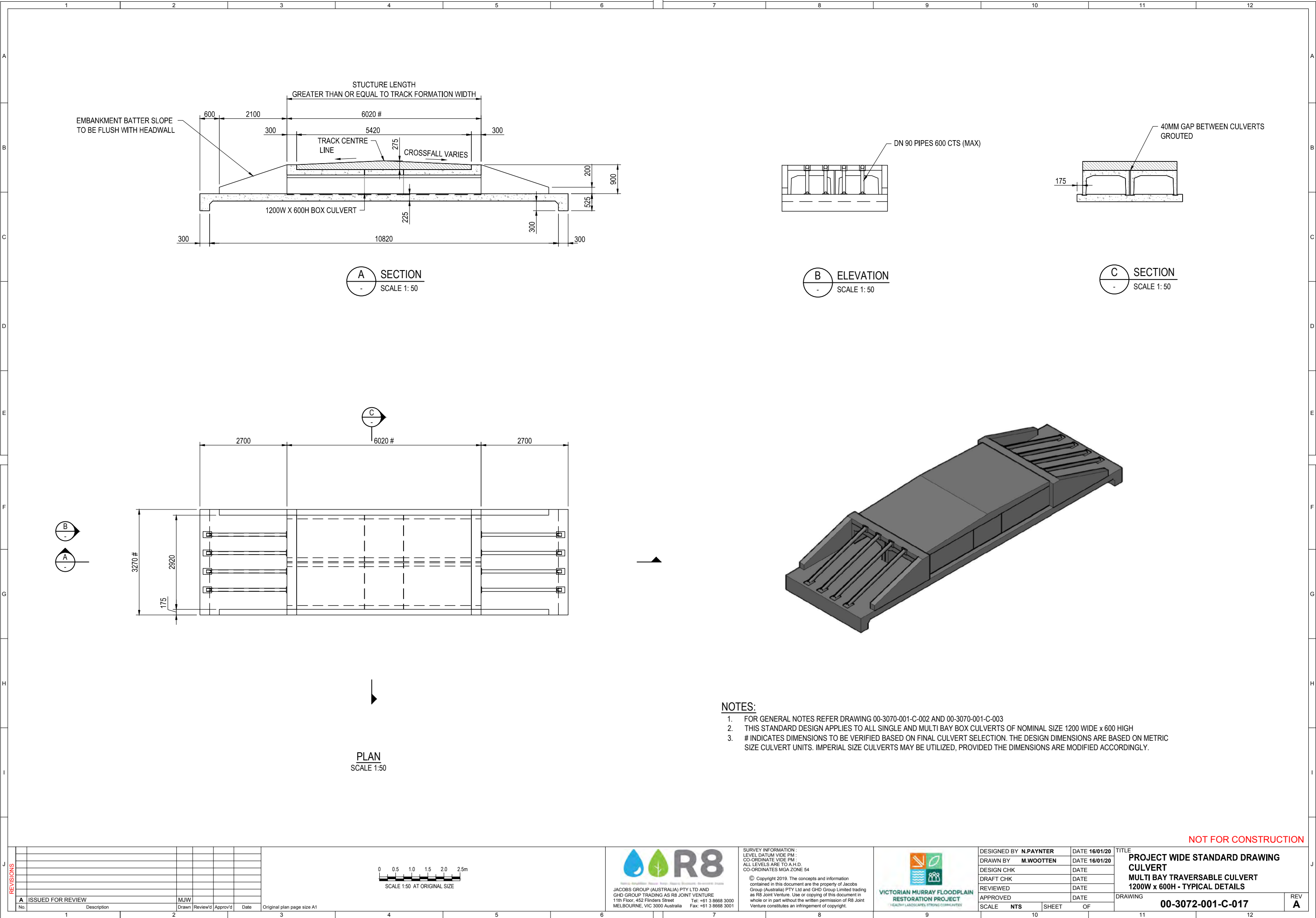
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DRAWN BY	M.WOOTTEN	DATE	16/01/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE	NTS	SHEET	OF

TITLE		DRAWING	F
PROJECT WIDE STANDARD DRAWING			
REGULATOR			
MULTI BAY CULVERT REGULATOR			
1200W x 600H - TYPICAL DETAILS			
00-3072-001-C-016			

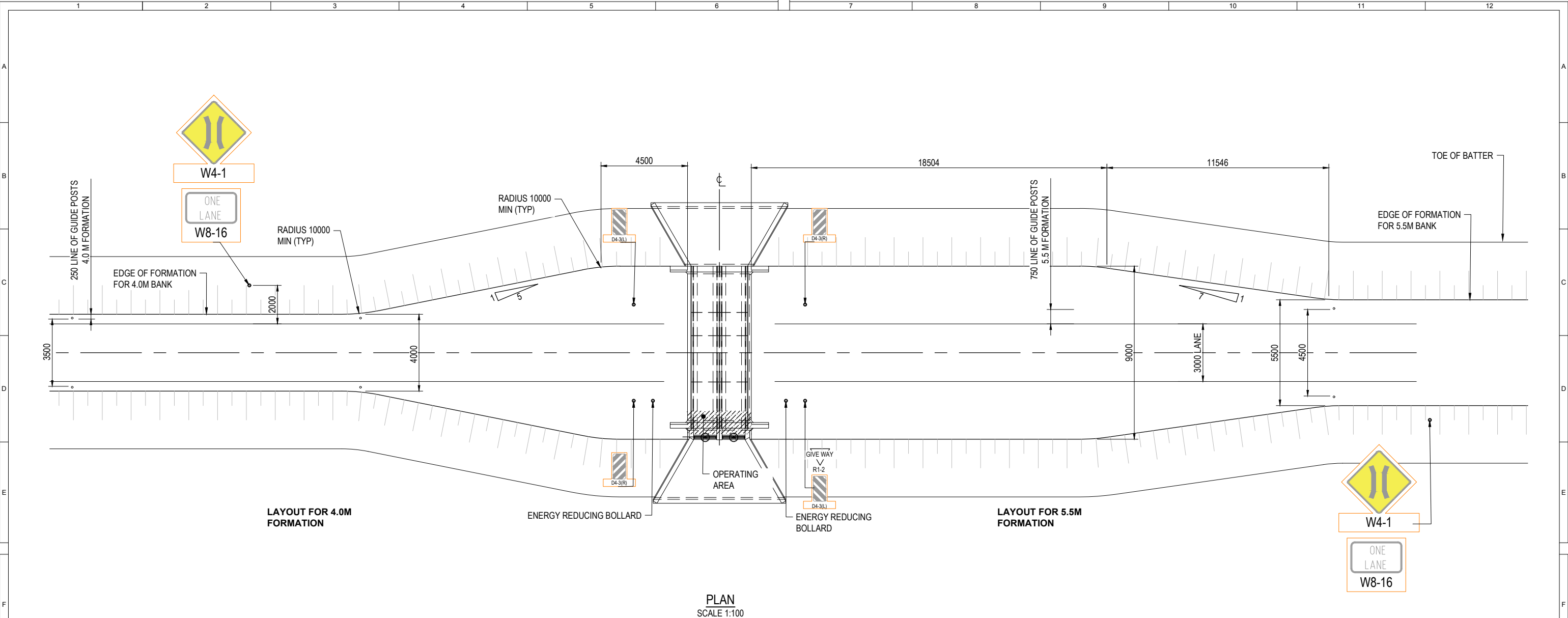






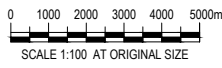






- BASIS OF DESIGN:**
1. REGULATORS WITH VEHICLE PASSING
  2. DESIGN FOR ONCOMING VEHICLES TO PASS:
    - 2.1. DESIGN VEHICLE B99 + CARAVAN
  3. DESIGN SPEED (TYPICAL)
    - 3.1. 4.0M BANK 20 KM/H
    - 3.2. 5.5M BANK 40 KM/H
    - 3.3. VEHICLE GIVE WAY TO PASS
  4. STRUCTURE OPERATION ASSUMES PARKING ON THE STRUCTURE IN THE MIDDLE OF THE TRACK, AND TEMPORARY BLOCKING OF TRAFFIC
  5. PARKING FOR ALL VEHICLES IS POSSIBLE ON THE TRACK WITH TRAFFIC MANAGEMENT.
  6. THERE IS NOT DEDICATED PARKING BAYS.
  7. THE DESIGN RELIES ON ENFORCEMENT OF SINGLE LANE TRAFFIC ON THE STRUCTURE FOR THE CLEAR ZONE TO BE VALID

REV	No.	Description	Drawn	Review'd	Approv'd	Date
A	1	ISSUED FOR REVIEW	TG	ML*	SR*	15/04/20



**R8**

JACOBS GROUP (AUSTRALIA) PTY LTD AND  
GHD GROUP TRADING AS R8 JOINT VENTURE  
11th Floor, 452 Flinders Street  
MELBOURNE, VIC 3000 Australia  
Tel: +61 3 8668 3000  
Fax: +61 3 8668 3001

SURVEY INFORMATION:  
LEVEL DATUM VIDE PM: PM  
CO-ORDINATE VIDE PM: GPS NET / VICPOS  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54

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**VICTORIAN MURRAY FLOODPLAIN  
RESTORATION PROJECT**  
HEALTHY LANDSCAPES. STRONG COMMUNITIES

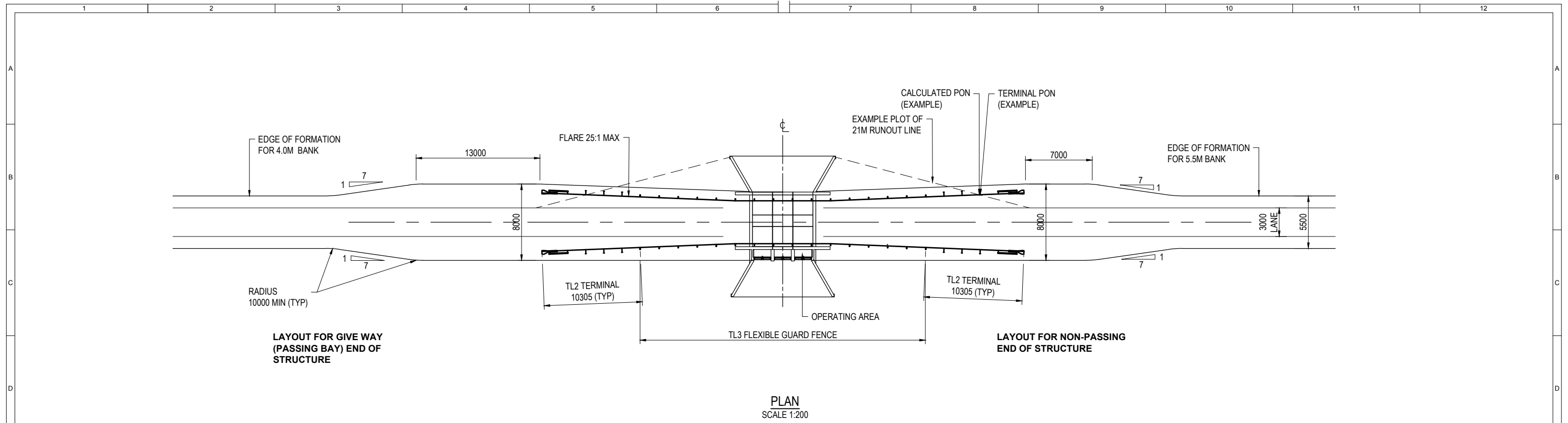
DESIGNED BY	N.PAYNTER	DATE	07/04/20
DRAWN BY	T.GIBELLINI	DATE	07/04/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE		SHEET	OF

**PROJECT WIDE STANDARD DRAWING  
STD REGULATOR APPROACH EMBANKM'T  
ARRANGEMENT WITH VEHICLE PASSING  
ARRANGEMENT**

DRAWING  
**00-3072-001-C-031**

REV  
**A**



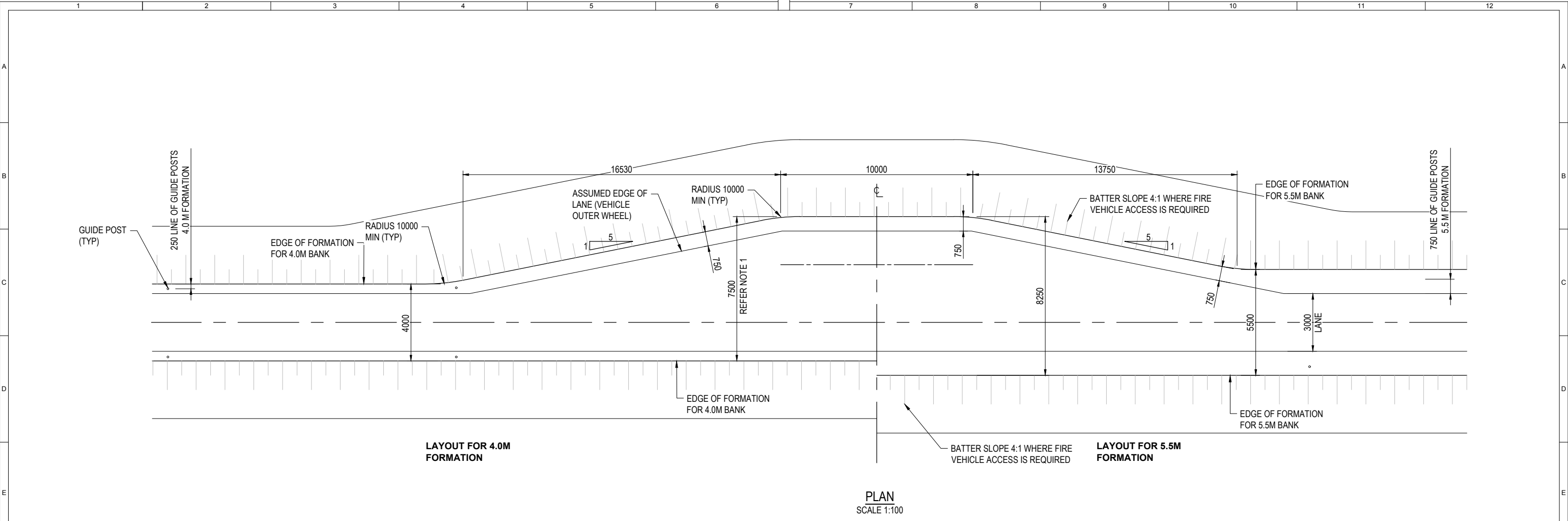


- NOTES:**
1. TL3 FLEXIBLE GUARD FENCE TO BE SELECTED FROM VICROADS APPROVED PRODUCT LIST
  2. TL2 TERMINAL TO BE SELECTED FROM VICROADS APPROVED PRODUCT LIST
  3. GUARD FENCE OVER STRUCTURE TO BE FLEXIBLE, WITH POSTS FIXED TO CONCRETE USING PROPRIETARY BASE PLATES THAT MAINTAIN THE WEAK POST DESIGN ASSUMPTION.

- BASIS OF DESIGN:**
1. THE EMBANKMENT IS DESIGNED FOR ONCOMING VEHICLES TO PASS:
    - 1.1. DESIGN VEHICLE B99 + CARAVAN
    - 1.2. PASSING TO OCCUR AT GIVE WAY END
  2. DESIGN SPEED (TYPICAL)
    - 2.1. 4.0M BANK 20 km/hr
    - 2.2. 5.5M BANK 40 km/hr
  4. THERE ARE NO DEDICATED PARKING BAYS
  5. STRUCTURE OPERATION ASSUMES EITHER:
    - 5.1. PARKING ON THE STRUCTURE IN THE MIDDLE OF THE TRACK, AND TEMPORARY BLOCKING OF TRAFFIC; OR
    - 5.2. PARKING AT THE GIVE WAY END WITH TRAFFIC MANAGEMENT
  6. GUARD FENCE LAYOUT TO BE DESIGNED USING THE RUN OUT METHOD.
  7. AN EXAMPLE CALCULATION IS SHOWN FOR A 50 km/hr MAXIMUM DESIGN SPEED WITH 21m RUN OUT LENGTH.
  8. GUARD FENCE DYNAMIC DEFLECTION ASSUMES TL2 CONTAINMENT LEVEL FOR 70 km/hr MAXIMUM. THE DYNAMIC DEFLECTION AREA IS TO BE CONTAINED ON THE STRUCTURE DECK AND CLEAR OF NON FRANGIBLE HAZARDS.

REVISIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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**NOTES:**  
1. PASSING BAY WIDTH TO 8.25M MINIMUM IF VEHICLE TURNING IS REQUIRED.

**BASIS OF DESIGN:**  
2. DESIGN SPEED (TYPICAL)  
1.1. 4.0M BANK 20 KM/H  
1.2. 5.5M BANK 40 KM/H  
2. DESIGN FOR TWO DESIGN VEHICLES TO OVERTAKE  
1.1. B99 VEHICLE AND CARAVAN PULL OVER  
1.2. SECOND B99 VEHICLE AND CARAVAN PROCEEDS IN ITS LANE  
2. STANDARD 2.5M WIDE VEHICLES CAN PASS THE PARKED VEHICLE WITHOUT MOVING OUT OF THE TRAFFIC LANE  
3. VEHICLE 180 DEGREE TURN:  
1.1. B99 VEHICLE - 3 POINT TURN ON THE 8.25 WIDE FORMATION ONLY  
2. ARTICULATED PRIME MOVER  
1.1. STRAIGHT THROUGH ACCESS ONLY  
1.2. OTHER VEHICLES GIVE WAY  
2. UNIMOG FIRE VEHICLE IS ASSUMED TO BE ABLE TO TURN ONTO THE 4:1 BATTER AT A SLIGHT ANGLE

NOT FOR CONSTRUCTION											
REVISIONS											
A ISSUED FOR REVIEW		TG	ML*	SR*	15/04/20						
No.	Description	Drawn	Review'd	Approv'd	Date	Original plan page size A1					
1						2					
2						3					
3						4					
4						5					
5						6					
6						7					
7						8					
8						9					
9						10					
10						11					
11						12					



JACOBS GROUP (AUSTRALIA) PTY LTD AND  
GHD GROUP TRADING AS R8 JOINT VENTURE  
11th Floor, 452 Flinders Street  
MELBOURNE, VIC 3000 Australia  
Tel: +61 3 8668 3000  
Fax: +61 3 8668 3001

SURVEY INFORMATION:  
LEVEL DATUM VIDE PM: PM  
CO-ORDINATE VIDE PM: GPS NET / VICPOS  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54

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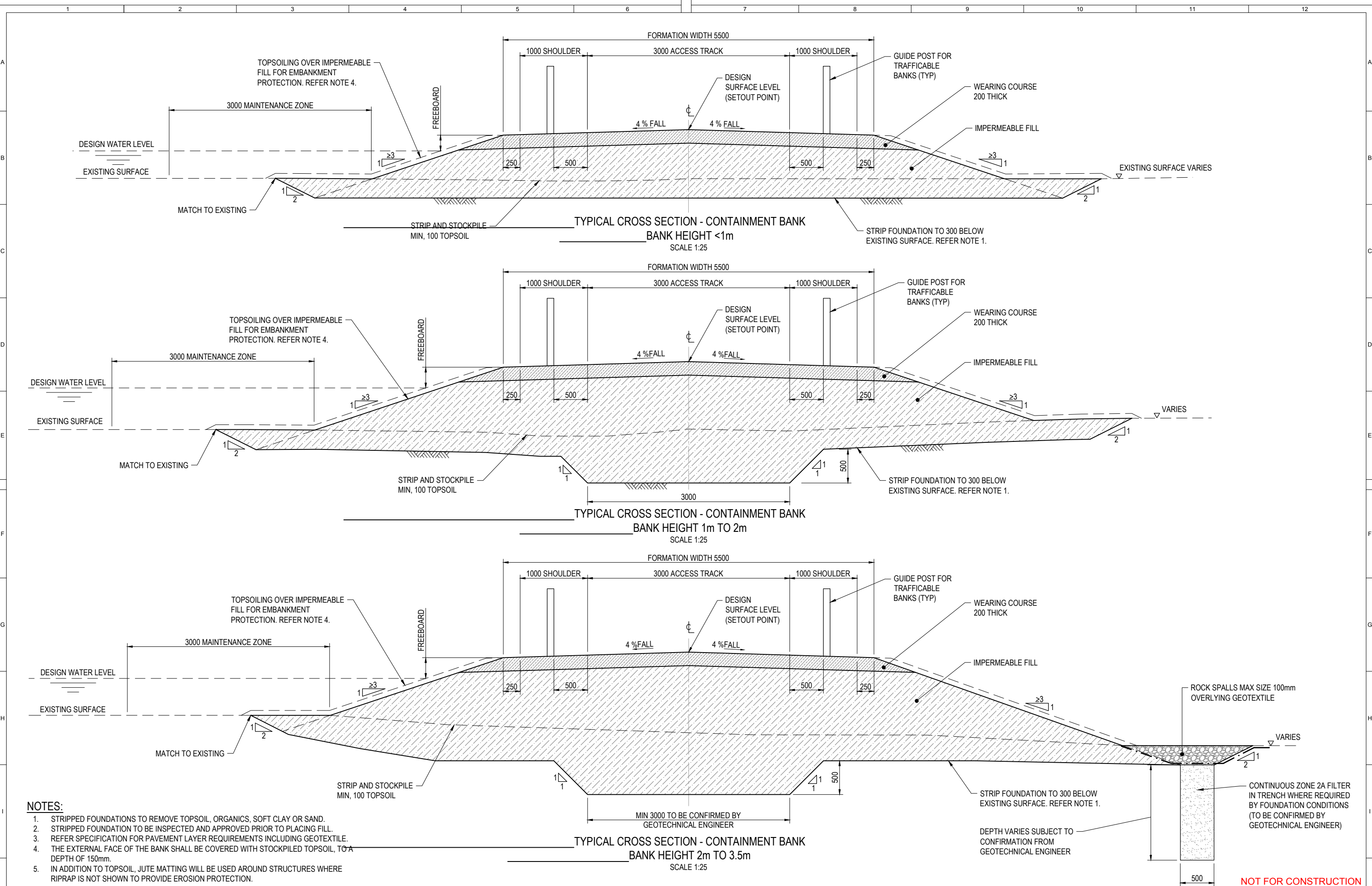
VICTORIAN MURRAY FLOODPLAIN  
RESTORATION PROJECT  
HEALTHY LANDSCAPES. STRONG COMMUNITIES.

DESIGNED BY	N.PAYNTER	DATE	15/04/20
DRAWN BY	T.GIBELLINI	DATE	15/04/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE		SHEET	OF

TITLE	
PROJECT WIDE STANDARD DRAWING	
STANDARD PASSING BAY ARRANGEMENT	
DRAWING	00-3072-001-C-033
REV	A

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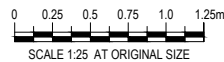


NOTES:

1. STRIPPED FOUNDATIONS TO REMOVE TOPSOIL, ORGANICS, SOFT CLAY OR SAND.
2. STRIPPED FOUNDATION TO BE INSPECTED AND APPROVED PRIOR TO PLACING FILL.
3. REFER SPECIFICATION FOR PAVEMENT LAYER REQUIREMENTS INCLUDING GEOTEXTILE.
4. THE EXTERNAL FACE OF THE BANK SHALL BE COVERED WITH STOCKPILED TOPSOIL, TO A DEPTH OF 150mm.
5. IN ADDITION TO TOPSOIL, JUTE MATTING WILL BE USED AROUND STRUCTURES WHERE RIPRAP IS NOT SHOWN TO PROVIDE EROSION PROTECTION.

REVISIONS						
	No.	Description	Drawn	Review'd	Approv'd	Date
	1					
	2					
B	ISSUED FOR REVIEW	TG	ML*	SR*		15/04/20
A	ISSUED FOR REVIEW	MJW	PM*	SR*		15/04/20

Original plan page size A1



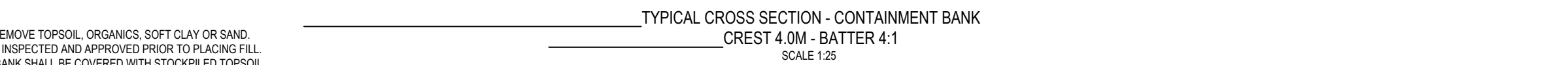
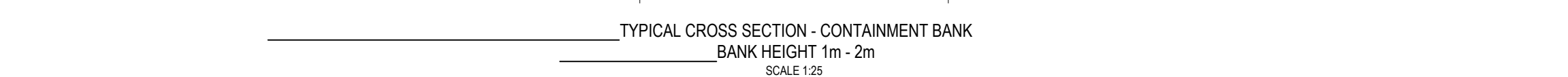
SURVEY INFORMATION:  
LEVEL DATUM VIDE PM:  
CO-ORDINATE VIDE PM:  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54  
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DESIGNED BY	K.BUTLER	DATE	12/12/19
DRAWN BY	M.WOOTTEN	DATE	12/12/19
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE		SHEET	OF

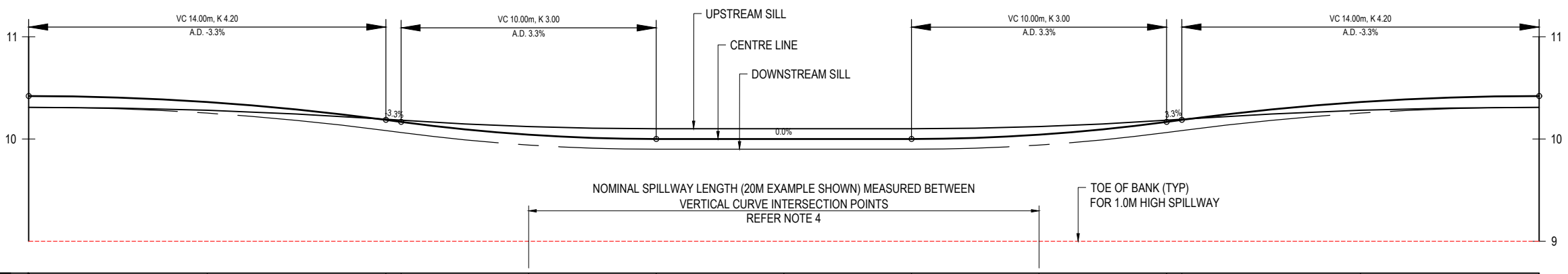
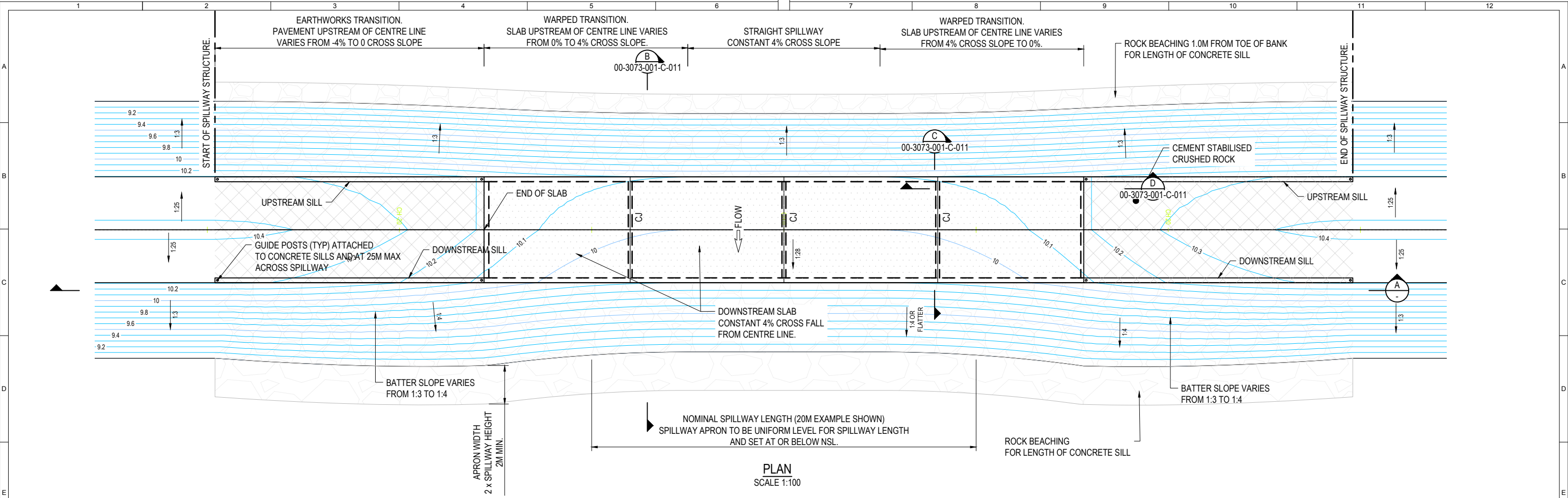
TITLE		DRAWING	00-3073-001-C-001	REV B
PROJECT WIDE STANDARD DRAWING CONTAINMENT BANK				
TYPICAL SECTIONS - SHEET 1				





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DESIGN LEVEL AT UPSTREAM SILL	10.31			10.28			10.19	10.18		10.12			10.10		10.10		10.12			10.18	10.19		10.28	10.31
DESIGN LEVEL AT CENTER LINE	10.42			10.36			10.19	10.17		10.04			10.00		10.00		10.04			10.17	10.19		10.36	10.42
DESIGN LEVEL AT DOWNSTREAM SILL	10.31			10.25			10.08	10.06		9.94			9.90		9.90		9.94			10.06	10.08		10.25	10.31
EXISTING SURFACE	9.00			9.00			9.00	9.00		9.00			9.00		9.00		9.00			9.00	9.00		9.00	9.00
CHAINAGE	-29.60			-22.60			-15.60	-15.00		-10.00			-5.00		0.00		5.00		10.00	15.00	15.60		22.60	29.60

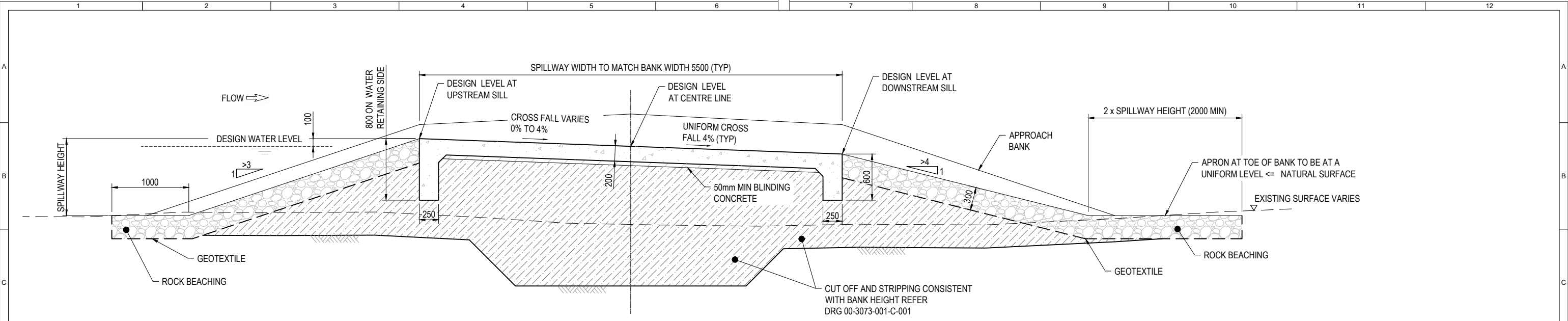
- NOTES:
- FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-001
  - THIS STANDARD DESIGN APPLIES TO CONCRETE SPILLWAYS
  - BASIS OF DESIGN:
    - ONE WAY WATER FLOW WITH WATER RETAINED ON THE UPSTREAM SIDE
    - DESIGN SPEED 40 KM/HR MAXIMUM
    - VERTICAL CREST CURVE K= 4; SAG CURVE, K=3 AT CENTRE LINE

- FOR SPILLWAY LENGTHS OTHER THAN 20m, THE LENGTH SHALL BE DETERMINED BY ADJUSTING CHAINAGES BY:  
PLUS/MINUS (L-20)/2, WHERE:  
L = PROPOSED NOMINAL SPILLWAY LENGTH; AND  
MINIMUM L = 10m

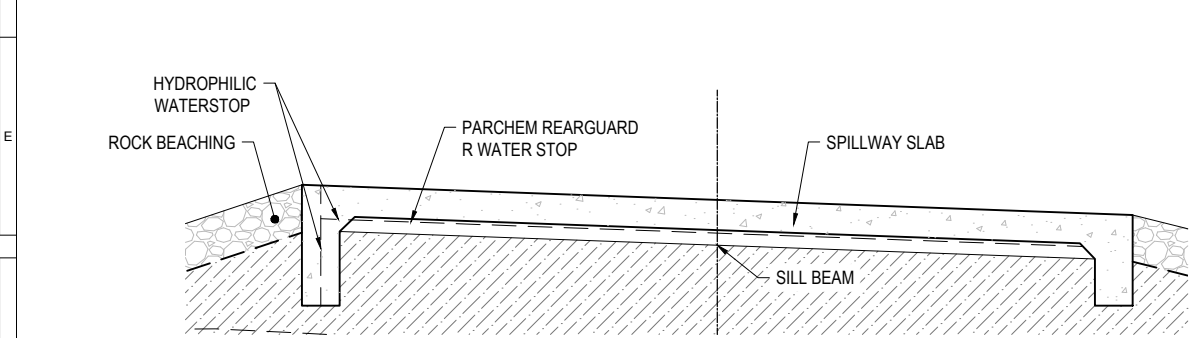
**A** SECTION  
SCALE 1: 100 HORIZ; 1:25 VERT

J																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</
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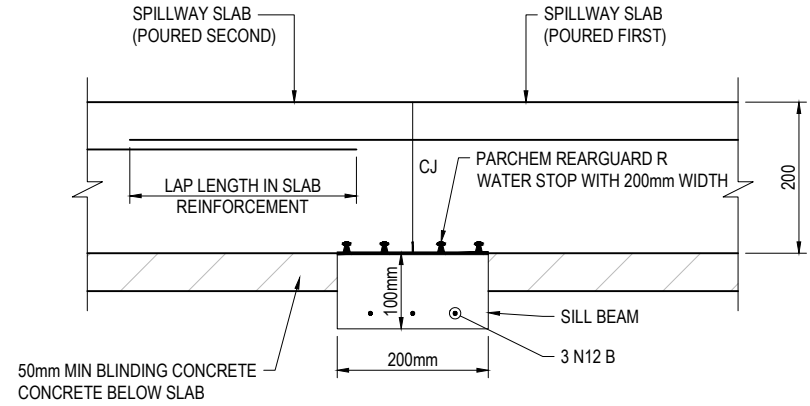




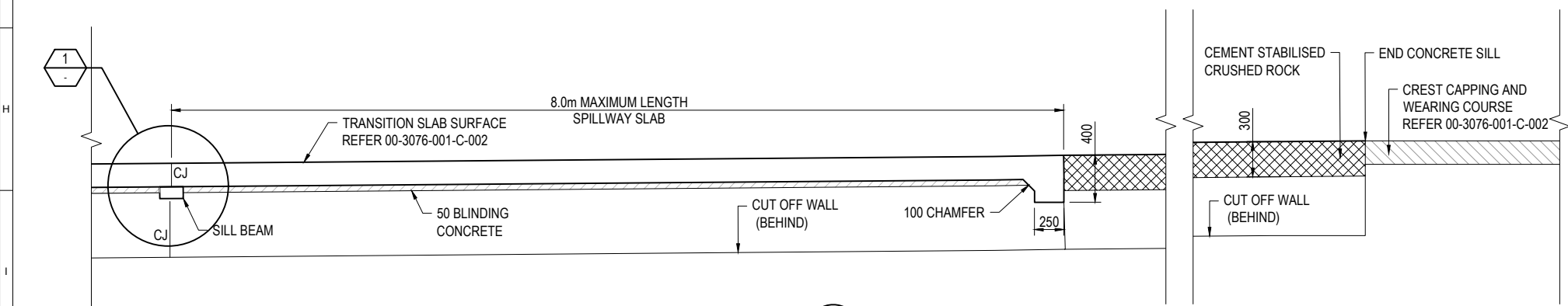
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00-3073-001-C-010 SCALE 1 : 25



**C** SECTION  
00-3073-001-C-010 SCALE 1 : 25



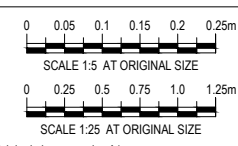
**1** DETAIL  
SCALE 1 : 5



**D** SECTION  
00-3073-001-C-010 SCALE 1 : 25

- NOTES:**
- FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-001
  - BASIS OF DESIGN:
    - THE SPILLWAY AND ROCK SIZE ARE DESIGNED FOR FREE FLOW CONDITIONS UP TO HEAD OF 0.3M MAX
    - THE DESIGN ASSUMES THE WATER LEVELS UPSTREAM AND DOWNSTREAM HAVE EQUALISED TO WITHIN 50mm BEFORE THE UNPROTECTED APPROACH BANKS OVERTOP.
  - SLABS TO BE CAST IN ALTERNATING PANELS TO ENABLE DRYING SHRINKAGE.
  - CONSTRUCTION JOINTS TO BE AT MAX 8.0M SPACING.
  - GEOTEXTILE TO BE BIDIM A34 OR EQUIVALENT
  - ROCK BEACHING TO HAVE D50 = 150mm MIN.

No.	Description	Drawn	Review'd	Approv'd	Date
B	DETAILED DESIGN - DIFT	TG	ML*	SR*	15/04/20
A	ISSUED FOR REVIEW	MJW	VY	SR	19/12/19



**R8**

JACOBS GROUP (AUSTRALIA) PTY LTD AND  
GHD GROUP TRADING AS R8 JOINT VENTURE  
11th Floor, 452 Flinders Street Tel: +61 3 8668 3000  
MELBOURNE, VIC 3000 Australia Fax: +61 3 8668 3001

SURVEY INFORMATION :  
LEVEL DATUM VIDE PM :  
CO-ORDINATE VIDE PM :  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54

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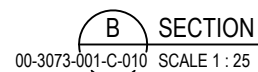
DESIGNED BY	N.PAYNTER	DATE	07/04/20
DRAWN BY	T.GIBELLINI	DATE	07/04/20
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE		SHEET	OF

TITLE	PROJECT WIDE STANDARD DRAWING SPILLWAY CONCRETE SECTION AND DETAILS
DRAWING	00-3073-001-C-011
REV	B









1. FOR GENERAL NOTES REFER DRAWING 00-3070-001-C-001
2. BASIS OF DESIGN:
  - 2.1. THE SPILLWAY AND ROCK SIZE ARE DESIGNED FOR FREE FLOW CONDITIONS UP TO HEAD OF 0.3M MAX
  - 2.2. THE DESIGN ASSUMES THE WATER LEVELS UPSTREAM AND DOWNSTREAM HAVE EQUALISED TO WITHIN 50mm BEFORE THE UNPROTECTED APPROACH BANKS OVERTOP.
3. CUT OFFS TO BE CAST IN ALTERNATING PANELS TO ENABLE DRYING SHRINKAGE.
4. CONSTRUCTION JOINTS TO BE AT MAX 8.0M SPACING.
5. GEOTEXTILE TO BE BIDUM A34 OR EQUIVALENT
6. ROCK BEACHING TO HAVE D50 = 150mm MIN.

0 0.25 0.5 0.75 1.0 1.25m  
SCALE 1:25 AT ORIGINAL SIZE

Original plan page size A1



SURVEY INFORMATION :  
LEVEL DATUM WIDE PM :  
CO-ORDINATE WIDE PM :  
ALL LEVELS ARE TO A.H.D.  
CO-ORDINATES MGA ZONE 54

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DESIGNED BY <b>N.PAYNTER</b>		DATE <b>07/04/20</b>
DRAWN BY <b>T.GIBELLINI</b>		DATE <b>07/04/20</b>
DESIGN CHK		DATE
DRAFT CHK		DATE
REVIEWED		DATE
APPROVED		DATE
SCALE	SHEET	OF

TITLE	PROJECT WIDE STANDARD DRAWING SPILLWAY ROCK SECTION AND DETAILS
DRAWING	00-3073-001-C-016

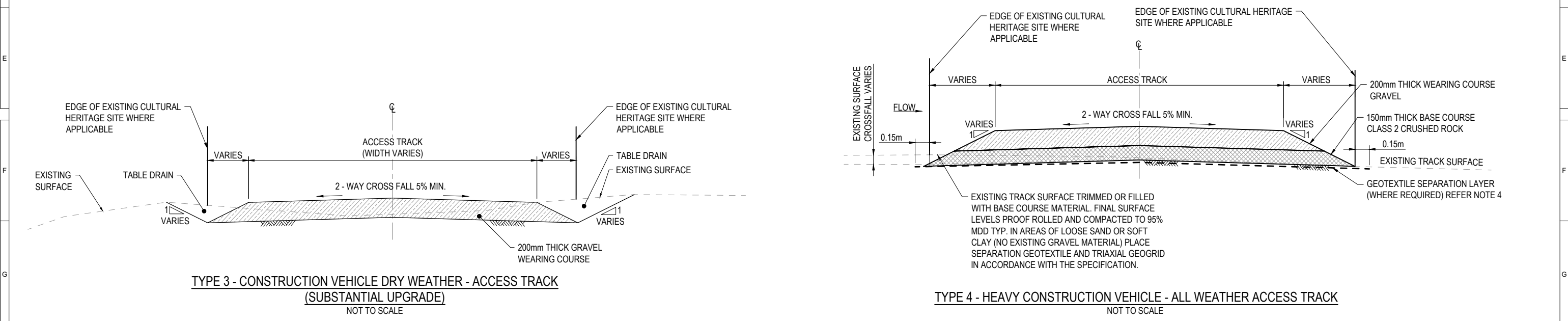
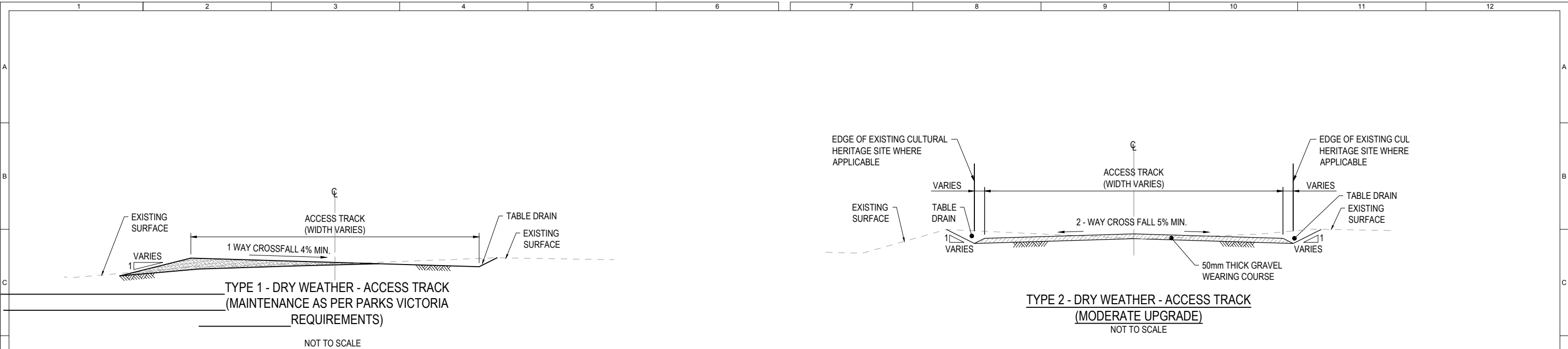
NOT FOR CONSTRUCTION

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- NOTES:**
- REFER TO DRAWING 00-3076-001-C-002 TRACK CLASSES FOR TRACK DIMENSIONS.
  - WEARING COURSE GRAVEL TO COMPLY WITH AGPT06-09 UNSEALED PAVEMENTS.
  - SINGLE CROSS FALL AT 4% FOR TYPE 1 TRACKS.
  - PAVEMENT MATERIALS TO BE VICROADS CLASS 2 AND 3 OR EQUIVALENT FROM LOCALLY SOURCED MATERIALS.

REVISIONS

No.	Description	Drawn	Review'd	Approv'd	Date
B	ISSUED FOR REVIEW	MJW	KM*	*SR	15/04/20
A	ISSUED FOR REVIEW	VJ	KM	SR	18/12/19

JACOBS GROUP (AUSTRALIA) PTY LTD AND GHD GROUP TRADING AS R8 JOINT VENTURE  
11th Floor, 452 Flinders Street  
MELBOURNE, VIC 3000 Australia  
Tel: +61 3 8668 3000  
Fax: +61 3 8668 3001

SURVEY INFORMATION :  
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VICTORIAN MURRAY FLOODPLAIN RESTORATION PROJECT  
HEALTHY LANDSCAPES. STRONG COMMUNITIES

DESIGNED BY	K.McINTOSH	DATE	16/12/19
DRAWN BY	V.JENKINS	DATE	16/12/19
DESIGN CHK		DATE	
DRAFT CHK		DATE	
REVIEWED		DATE	
APPROVED		DATE	
SCALE	NTS	SHEET	OF

TITLE	PROJECT WIDE STANDARD DRAWING
	ACCESS TRACKS - TRACK TYPES
DRAWING	00-3076-001-C-001
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