



## TYPICAL LIVESTOCK UNDERPASS

NOT TO SCALE

### NOTES

- ACTUAL INTERNAL DIMENSIONS OF THE LIVESTOCK UNDERPASS MAY VARY DEPENDANT ON THEIR INTENDED USE. THE FOLLOWING MINIMUM SIZES ARE SUGGESTED:
  - LARGE ANIMALS (CATTLE/HORSES) 2.4m(H) X 3.0m(W)
  - SMALL ANIMALS (SHEEP/GOATS) MIN 2.1m(H) X 2.4m(W)
- PUBLIC VEHICLE ACCESS TO A LIVESTOCK UNDERPASS IS NOT PERMITTED.
- A FULL CARRIAGEWAY WIDTH (I.E. FULL WIDTH OF SHOULDERS AND PAVEMENT) IS REQUIRED. NARROWING OF ROAD SHOULDERS AT UNDERPASS LOCATION IS NOT PERMITTED.
- THE REQUIREMENT FOR ROADSIDE TRAFFIC SAFETY BARRIERS MUST BE DETERMINED IN ACCORDANCE WITH THE AUSTROADS GUIDE TO ROAD DESIGN, PART 6. THE TYPE, LOCATION AND EXTENT OF ROADSIDE TRAFFIC SAFETY BARRIERS, IF REQUIRED, MUST BE IN ACCORDANCE WITH DIT'S RD-BF-D1 DESIGN OF ROADSIDE SAFETY BARRIERS.
- THE TOP SURFACE OF THE UNDERPASS BASE SLAB MUST HAVE A SCREEDED FINISH TO PROVIDE SLIP RESISTANCE IN ACCORDANCE WITH AS4586 TABLE 5 CLASSIFICATION R11.
- IN THE EVENT THAT THE UNDERPASS RECEIVES WATER, A MINIMUM OF 0.3% LONGITUDINAL FALL MUST BE PROVIDED IN THE BASE SLAB.
- ADDITIONAL MEASURES MAY BE REQUIRED TO REMOVE POOLED STORMWATER AT OWNER'S RESPONSIBILITY (E.G. SUMP/PUMP SYSTEMS).
- THE UNDERPASS STRUCTURE MUST BE DESIGNED AND CONSTRUCTED AS A LARGE CULVERT IN ACCORDANCE WITH DIT'S ST-SD-D1 DESIGN OF STRUCTURES, ST-SC-S3 PRECAST CONCRETE UNITS, AND ALL APPLICABLE PARTS OF THE DIT MASTER SPECIFICATION.
- AN EXTENDED CONCRETE APRON OF 3m MINIMUM LENGTH IS REQUIRED TO PREVENT EROSION AT EACH END OF THE UNDERPASS. OTHER LOCALISED TREATMENTS MAY BE REQUIRED TO PREVENT EROSION ON ROAD BATTERS.
- A 250mm MINIMUM HEIGHT CONCRETE HEADWALL MUST BE CONSTRUCTED AT EACH END OF THE UNDERPASS TO RETAIN THE ROAD BATTER FILL. THE HEADWALL MUST NOT SUPPORT ANY TRAFFIC BARRIER CONNECTIONS.

- IF THERE IS INSUFFICIENT DEPTH OF FILL OVER THE UNDERPASS TO ACCOMMODATE POSTS FOR THE PROPOSED ROADSIDE TRAFFIC SAFETY BARRIER (IF REQUIRED), AN ENGINEERED DESIGN TO SUPPORT THE PROPOSED SAFETY BARRIER POSTS MUST BE USED.
- CIVIL DESIGN OF THE WORKS MUST INCLUDE:
  - FULL EXTENT OF WORKS
  - ALL SETTING OUT
  - IF REQUIRED, BARRIER OFFSETS, BARRIER LENGTHS AND END TERMINAL TREATMENTS
  - ROADSIDE APPROACH BATTER TREATMENTS
  - PAVEMENT REINSTATEMENT TREATMENT
  - CONSTRUCTION STAGING TO MAINTAIN TRAFFIC FLOWS (ROAD CLOSURE IS NOT PERMITTED UNLESS AGREED TO BY DIT)
  - GEOTECHNICAL ASSESSMENT
  - ASSESSMENT OF IMPACT ON STORMWATER FLOWS, BOTH OVERLAND AND ALONGSIDE THE ROAD
- THE COMPLETED DESIGN MUST BE THE SUBJECT OF A ROAD SAFETY AUDIT BY A SENIOR ROAD SAFETY AUDITOR WHO IS PREQUALIFIED TO DIT'S PREQUALIFICATION OF ROAD SAFETY AUDITORS REGISTER.
- DESIGNS MUST BE INDEPENDENTLY CERTIFIED IN ACCORDANCE WITH DIT'S PC-EDM3 INDEPENDENT DESIGN CERTIFICATION.
- ALL DESIGN DOCUMENTATION MUST BE SUBMITTED TO DIT FOR APPROVAL. DESIGNS MUST BE UNDERTAKEN BY COMPANIES WHO ARE REGISTERED WITH DIT AS PREQUALIFIED FOR CIVIL - PROFESSIONAL AND TECHNICAL SERVICES, IN THE FOLLOWING DISCIPLINES:
  - GEOSPATIAL SURVEYING - ENGINEERING SURVEYING
  - STRUCTURAL ENGINEERING - STRUCTURAL DESIGN
  - GEOTECHNICAL SERVICES - FOUNDATIONS AND EARTHWORKS DESIGN
  - PAVEMENT ENGINEERING - PAVEMENT DESIGN
  - STORMWATER - STORMWATER DESIGN AND MODELLING
  - TRANSPORT PLANNING AND DESIGN - ROAD DESIGN

- CONSTRUCTION MUST BE UNDERTAKEN BY A COMPANY THAT IS REGISTERED WITH DIT AS PREQUALIFIED FOR CIVIL - ROADWORKS AND BRIDGEWORKS B1 (MINIMUM) CATEGORY. CONSTRUCTION MUST BE INDEPENDENTLY VERIFIED IN ACCORDANCE WITH DIT'S PC-EDM4 CONSTRUCTION VERIFICATION.
- THE OWNER MUST ENTER INTO A DEED OF AGREEMENT WITH DIT TO FACILITATE REGULAR PERIODIC INSPECTION AND ANY MAINTENANCE WORKS REQUIRED ON THE UNDERPASS (AT DIT COST).

No.	AMENDMENT DESCRIPTION	BY	CHECK	ACCEPTANCE	DATE	100 MILLIMETRES ON ORIGINAL A1 DRAWING	ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE	UNCONTROLLED COPY WHEN PRINTED	DESIGNED QUALIFICATION DATE: DD/MM/YYYY REVIEWER QUALIFICATION DATE: DD/MM/YYYY INDEPENDENT DESIGN CERTIFIER (IF REQUIRED) QUALIFICATION DATE: DD/MM/YYYY	 Government of South Australia Department for Infrastructure and Transport	STANDARD DRAWING  LIVESTOCK UNDERPASS	DESIGNED: DU CHECKED: DU	DRAFTED: AM REVIEWED: PM	ACCEPTED FOR USE: PHIL MOLLOY DATE: 14/07/2023	ACCEPTANCE FORM KNET No.: 20205782	DRAWING No.: S-4117 LATITUDE:	SHEET No.: 1 LONGITUDE:	AMEND No.: 0
-----	-----------------------	----	-------	------------	------	----------------------------------------	----------------------------------------------------------	--------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------	-----------------------------	-----------------------------	------------------------------------------------------	---------------------------------------	-------------------------------------	-------------------------------	-----------------