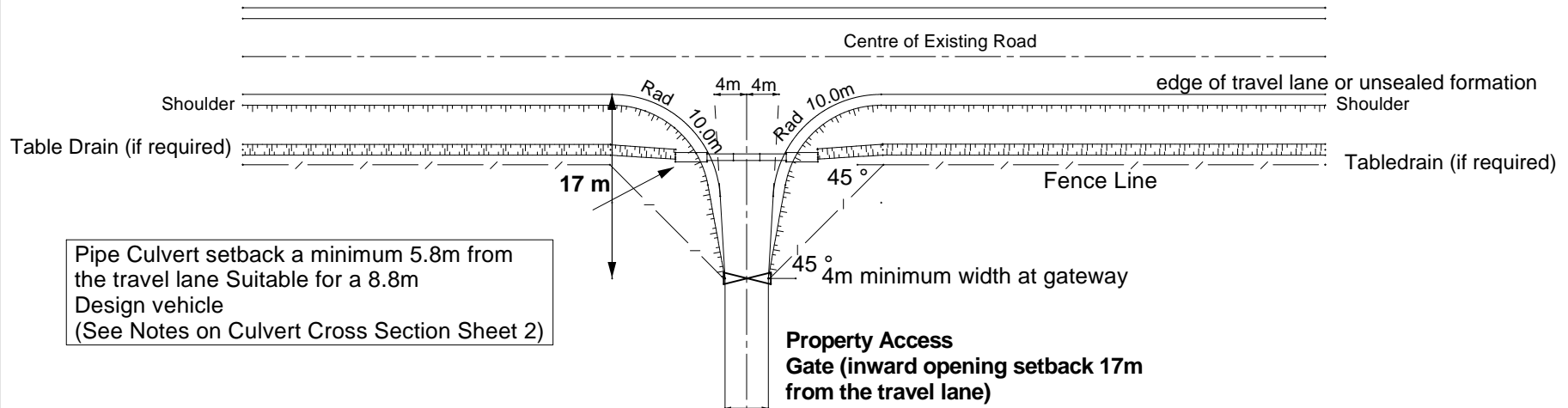


Layout Sketch

Standard 17m Indented Access



Notes

1. Property Access

(a) There must be sufficient length between the edge of the road to store the largest parked design vehicle to allow the occupants to open the entrance.

(b) A minimum length of 17m is required to store a single unit truck .

(c) A stock grid is the alternate control on the boundary where storage length is not available.

(d) If B-Doubles are anticipated then a 25.0m indentation is required.

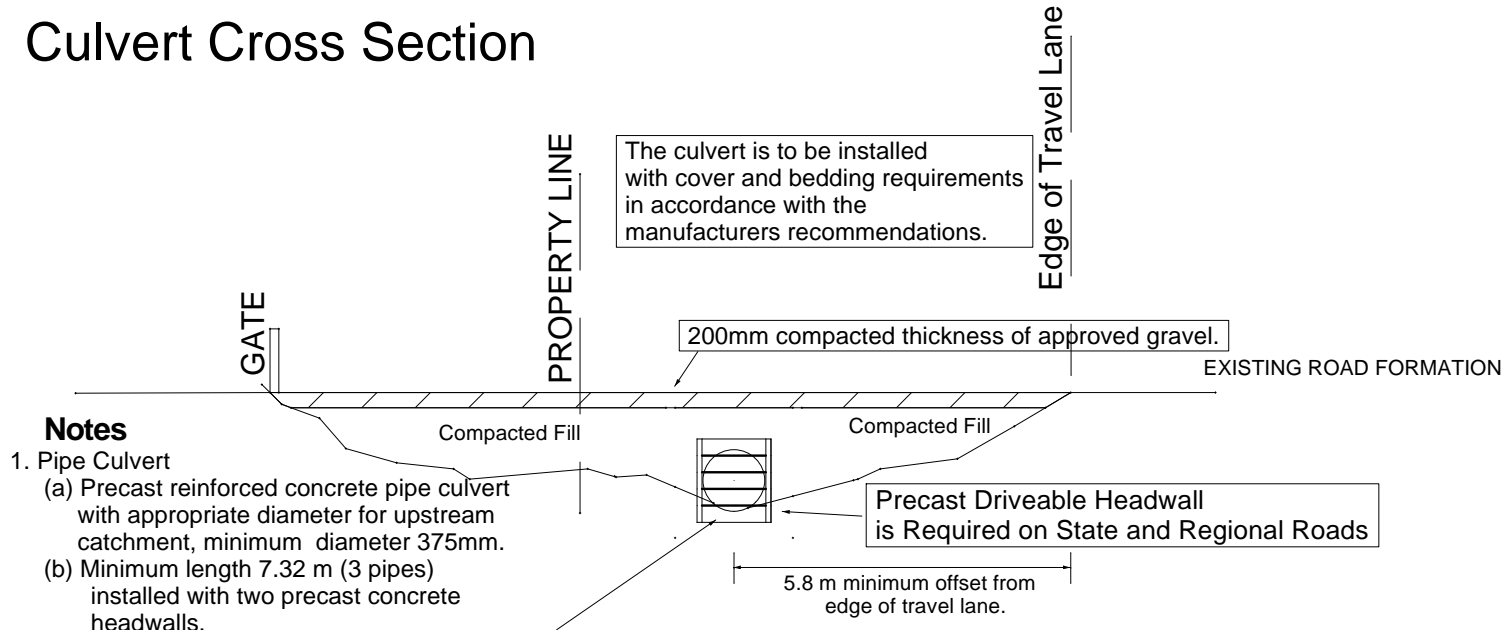
(e) Drivable headwalls

Source : Modified from RTA Road Design Guide Section 4.9.4

C:\civilcad 7\Data\2010\Upper Lachlan Shire Council Rural Property Access ver3.ccx - 1 Layout v5

| STANDARD DRAWING | | | |  UPPER LACHLAN SHIRE COUNCIL 44 Spring Street Crookwell 2583 Ph: (02) 48301000 Fax: (02) 48322066 ABN: 81 011 241 552 | NAME | DATE | APPROVED |
|--|----------------------------------|---------|---------|--|-------------|------------------------|----------|
| | AMENDMENTS | DATE | CHECKED | | DRAWN: | C.Smart | |
| A | ORIGINAL ISSUE | 19-2-10 | RPM | CHECKED: | P.B. Newham | 20-7-10 | |
| B | MODIFIED CULVERT TYPE & LOCATION | 27-5-10 | PN | REDUCTION RATIO: NTS | | | |
| C | MODIFIED NOTES | 20-7-10 | PN | SHEET No. 1 of 4 | | DRAWING NUMBER: 2010-1 | |
| RURAL LOCAL ROAD TYPICAL PROPERTY ACCESS LAYOUT SKETCH | | | | | | | |

Culvert Cross Section



Notes

1. Pipe Culvert
 - (a) Precast reinforced concrete pipe culvert with appropriate diameter for upstream catchment, minimum diameter 375mm.
 - (b) Minimum length 7.32 m (3 pipes) installed with two precast concrete headwalls.
 - (c) The culvert is to be installed to the manufacturers recommendations.
 - (d) Install guideposts at each end of the culvert.
 - (e) Minimum pipe grade 1 in 100 or (1%).
 - (f) The pipe is to cater for a minimum 5 year Average Recurrence Interval (ARI) storm.
 - (g) A 900mm wide concrete dish drain is to be constructed if a culvert is not required.

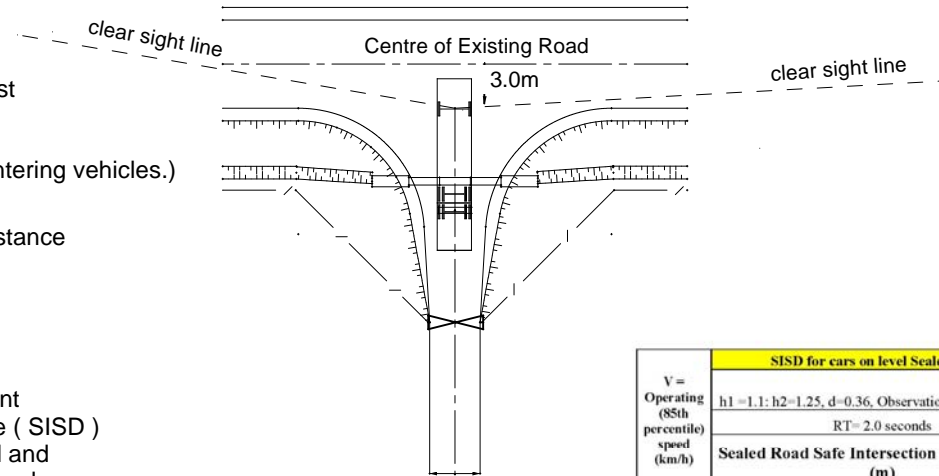
C:\civilcad 7\Data\2010\Upper Lachlan Shire Council Rural Property Access ver3.ccx - 2 Cross Section v5

| STANDARD DRAWING | | | |  UPPER LACHLAN SHIRE COUNCIL 44 Spring Street Crookwell 2583 Ph: (02) 48301000 Fax: (02) 48322066 ABN: 81 011 241 552 | NAME | | DATE | APPROVED  P.B. Newham DIRECTOR OF WORKS & OPERATIONS |
|--|----------------------------------|---------|---------|--|-----------|---------|---------|--|
| | AMENDMENTS | DATE | CHECKED | | DRAWN: | C.Smart | 20-7-10 | |
| A | ORIGINAL ISSUE | 19-2-10 | RPM | CHECKED: | P. Newham | 20-7-10 | | |
| B | MODIFIED CULVERT TYPE & LOCATION | 27-5-10 | PN | DATE: 20-7-10 | | | | |
| C | MODIFIED NOTES | 20-7-10 | PN | | | | | |
| RURAL LOCAL ROAD TYPICAL PROPERTY ACCESS CULVERT CROSS SECTION | | | | | | | | |
| | | | | | | | | |

Sight Distance

Notes

1. Safe Intersection sight distance must be provided for the through traffic and 5 seconds minimum gap sight distance (1.15m to 0.6m for entering vehicles.)
2. There should be adequate sight distance to and from the access point.
3. Roadside landscaping should not restrict horizontal and vertical sight lines.
4. Using Table 1.0 & Table 2.0 adjacent the Safe Intersection Sight Distance (SISD) can be calculated for a given speed and corrected for the road longitudinal grade.



Safe Intersection Sight Distance (SISD)

Where;

SISD = Safe Intersection Sight Distance

D_t = Decision Time (s) = Observation Time (3s) + Reaction time

V = Operating (85th percentile speed (km/h)

d = coefficient of deceleration

a = longitudinal grade in % in direction of travel

(positive for uphill and negative for downhill)

$$SISD = \frac{D_t \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$$

Table 1.0

| V = Operating (85th percentile) speed (km/h) | SISD for cars on level Sealed Roads | SISD for cars on level unsealed roads |
|--|---|---|
| | h1 =1.1: h2=1.25, d=0.36, Observation Time 3 seconds RT= 2.0 seconds | h1 =1.1: h2=1.25, d=0.27, Observation Time 3 seconds RT= 2.0 seconds |
| | Sealed Road Safe Intersection Sight Distance (m) | Unsealed Road Safe Intersection Sight Distance (m) |
| 40 | 73 | 79 |
| 50 | 97 | 106 |
| 60 | 123 | 136 |
| 70 | 151 | 169 |
| 80 | 181 | 204 |
| 90 | 214 | 243 |
| 100 | 248 | 285 |

Table 2.0

| Corrections due to grade (%) | -8% | -6% | -4% | -2% | 2% | 4% | 6% | 8% |
|------------------------------|-----|-----|-----|-----|----|-----|-----|-----|
| 40 | 5 | 3 | 2 | 1 | -1 | -2 | -2 | -3 |
| 50 | 8 | 5 | 3 | 2 | -1 | -3 | -4 | -5 |
| 60 | 11 | 8 | 5 | 2 | -2 | -4 | -6 | -7 |
| 70 | 15 | 11 | 7 | 3 | -3 | -5 | -8 | -10 |
| 80 | 20 | 14 | 9 | 4 | -4 | -7 | -10 | -13 |
| 90 | 25 | 18 | 11 | 5 | -5 | -9 | -13 | -16 |
| 100 | 31 | 22 | 14 | 6 | -6 | -11 | -16 | -20 |

Note: 1. Calculated looking towards the intersection
2. Corrected stopping sight distances should be rounded conservatively to the nearest 5m

Sedimentation and Erosion Control

Notes

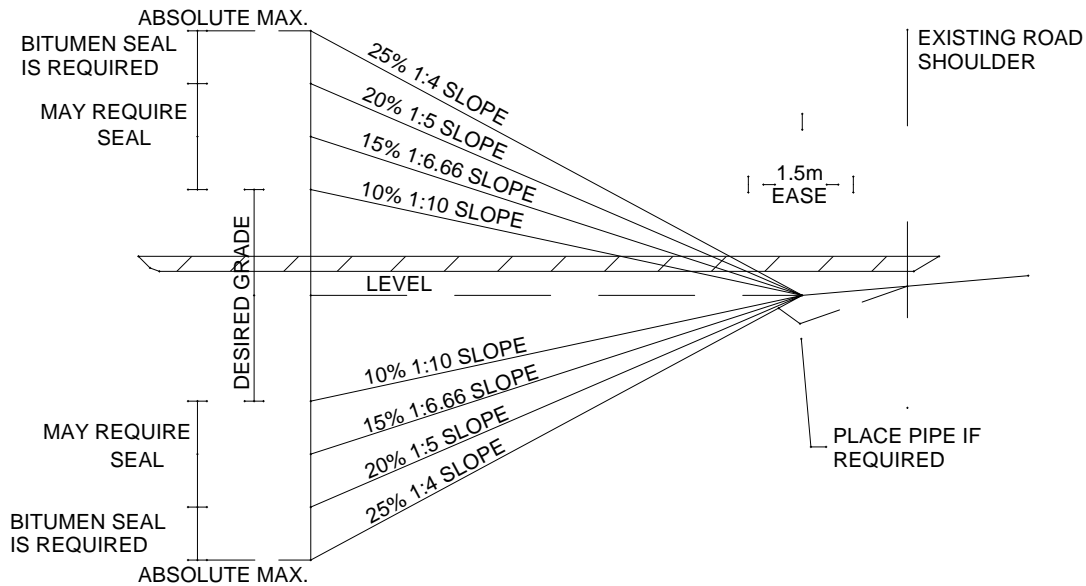
1. The work is to provide for erosion & sedimentation control measures and be in accordance and follow best management practices as outlined in the NSW Department of Housing's "Managing Urban Storm Water: Soils & Construction" March 2004 manual 'The Blue book"
2. The standard drawings shown in this manual are to be adopted and used in the installation for each Property Access.
3. Erosion and sediment control measures are required to be implemented prior to any work commencing and must be maintained for as long as necessary after the completion of works, to prevent sediment and dirty water entering any river system.

C:\civilcad 7\Data\2010\Upper Lachlan Shire Council Rural Property Access ver3.ccx - 3 Sight Distance v5

| | | | | | | | |
|--|----------------------------------|---------|---------|---|----------------|---------------|----------|
| STANDARD DRAWING | | | |  UPPER LACHLAN SHIRE COUNCIL 44 Spring Street Crookwell 2583 Ph: (02) 48301000 Fax: (02) 48322066 ABN: 81 011 241 552 | NAME DATE | | APPROVED |
| AMENDMENTS | | DATE | CHECKED | | DRAWN: C.Smart | 20-7-10 | |
| A | ORIGINAL ISSUE | 19-2-10 | RPM | REDUCTION RATIO: NTS | | DATE: 20-7-10 | |
| B | MODIFIED CULVERT TYPE & LOCATION | 27-5-10 | PN | SHEET No. 3 of 4 | | | |
| C | MODIFIED NOTES | 20-7-10 | PN | DRAWING NUMBER: 2010-1 | | | |
| RURAL LOCAL ROAD TYPICAL PROPERTY ACCESS SIGHT DISTANCE / SEDIMENTATION & EROSION CONTROL | | | | | | | |

Access Slope

NOTE: A Bitumen Seal is required on all accesses onto existing bitumen roads



C:\civilcad 7\Data\2010\Upper Lachlan Shire Council Rural Property Access ver3.ccx - 4 Access Slope v5

| STANDARD DRAWING | | | |  44 Spring Street Crookwell 2583 Ph: (02) 48301000 Fax: (02) 48322066 ABN: 81 011 241 552 | NAME | DATE | APPROVED |
|------------------|----------------------------------|---------|---------|--|-----------------|---------|---------------|
| | AMENDMENTS | DATE | CHECKED | | DRAWN: | C.Smart | |
| A | ORIGINAL ISSUE | 19-2-10 | RPM | CHECKED: | P. Newham | 20-7-10 | |
| B | MODIFIED CULVERT TYPE & LOCATION | 27-5-10 | PN | REDUCTION RATIO: NTS | | | DATE: 20-7-10 |
| C | MODIFIED NOTES | 20-7-10 | PN | SHEET No. | DRAWING NUMBER: | | |
| | | | | 4 of 4 | 2010-1 | | |

RURAL LOCAL ROAD TYPICAL PROPERTY ACCESS ACCESS SLOPE