

APPENDIX C

Formula for calculating sight stopping distance (SSD)

TRL Report 661

$$SSD = vt + v^2 / 2d$$

- v = speed (m/s)
- t = driver perception - reaction time (secs)
- d = deceleration (m/s²)

Input values:

30 mph

Typical Conditions

- v = **13.41083** m/s
- t = **1.5** (see para 7.5.7 of MfS)
- d = **4.41** (see para 7.5.7 of MfS)

SSD = **40.50746** m

Snow Covered Road

- v = **13.41083** m/s
- t = **1.5** (see para 7.5.7 of MfS)
- d = **2.45** (see para 7.5.6 of MfS)

SSD = **56.82042** m

Input values:

50 mph

Typical Conditions

- v = **22.35139** m/s
- t = **1.5** (see para 7.5.7 of MfS)
- d = **4.41** (see para 7.5.7 of MfS)

SSD = **90.16933** m

Snow Covered Road

- v = **22.35139** m/s
- t = **1.5** (see para 7.5.7 of MfS)
- d = **2.45** (see para 7.5.6 of MfS)

SSD = **135.4831** m

Input values:

60 mph

Typical Conditions

- v = **26.82167** m/s
- t = **1.5** (see para 7.5.7 of MfS)
- d = **4.41** (see para 7.5.7 of MfS)

SSD = **121.7973** m

Snow Covered Road

- v = **26.82167** m/s
- t = **1.5** (see para 7.5.7 of MfS)
- d = **2.45** (see para 7.5.6 of MfS)

SSD = **187.0492** m