# Reducing Undercut Costs with TenCate Mirafi® RS*i*-Series Stabilization Geosynthetics

| Given Information: |
|---|
| Axle Load = 20 kips |
| No. of Passes = 1000 |
| Tire Pressure = 100 psi |
| Rut Depth = 1 ½ in. |
| Base CBR = 20 (min.) |

| | | Unreinforced | | RS280*i* | | RS380*i* | | RS580*i* | |
|---|---|---|---|---|---|---|---|---|---|
| | Soil CBR | Section Depth (in.) | Section Cost ($/yd$^2$) | Section Depth (in.) | Section Cost* ($/yd$^2$) | Section Depth (in.) | Section Cost* ($/yd$^2$) | Section Depth (in.) | Section Cost* ($/yd$^2$) |
| Person sinks 1” - 3” | 1.0 | 31 | $35.65 | 22 ½ | $28.65 | 19 | $25.95 | 16 | $23.40 |
| | 1.5 | 26 | $29.90 | 17 | $22.30 | 14 | $20.20 | 9 | $15.35 |
| | 2.0 | 23 | $26.45 | 13 | $17.70 | 11 | $16.75 | 7 | $13.05 |
| Pick-up ruts ½” - 2” | 2.5 | 22 | $25.30 | 12 | $16.55 | 10 | $15.60 | 6 | $11.90 |
| | 3.0 | 21 | $24.15 | 10 ½ | $14.85 | 9 | $14.45 | 6 | $11.90 |

* Check with your TenCate distributor for the up-to-date RS*i*-series pricing.

Notes: All section costs include estimated installed geosynthetic costs, installed aggregate costs estimated at $20/ton and soil excavation and removal costs estimated at $0.15/SY-in.

TENCATE GEOSYNTHETICS

# TenCate MiraSpec Road Design Software

## Design Inputs

### Unpaved Road Design Analysis

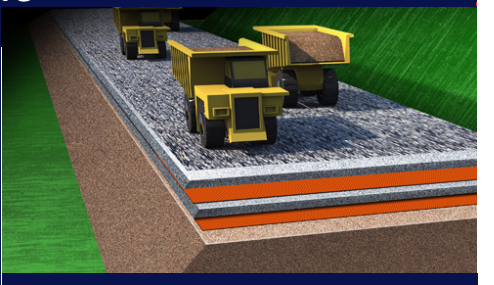
- Subgrade strength (CBR, $C_u$, R-value)
- Vehicle axle load (5,000 – 80,000 lbs)
- Vehicle axle passes (10,000 – 100,000)
- Allowable rut depth (1 ½" – 4")
- Structural fill strength (CBR, $coeff_{struc}$)
- Project factor of safety

**Optimize your roadway designs at:**

**www.miraspec.com**

### Flexible Pavement Design Analysis

- Subgrade strength (Texas Tri, CBR, $M_r$, C, R-value)
- Serviceability inputs
  - Initial serviceability $\rho_o$
  - Terminal serviceability $\rho_t$
  - Serviceability loss $\Delta\rho_{sl}$
- Reliability inputs
  - Reliability % (R)
  - Standard deviation ($S_o$)
- Layer thickness information
  - Asphalt surface
  - Asphalt base
  - Base layer
  - Sub-base layer
- Structural coefficients for layers
- Drainage coefficients for layers



## In-Place Cost Conversion Chart

**(Aggregate unit weight = 133 lbs/ft$^3$)**

| $/ton | $/yd$^3$ | $/yd$^2$-in |
|---|---|---|
| 5.00 | 8.98 | 0.25 |
| 7.50 | 13.47 | 0.38 |
| 10.00 | 17.95 | 0.50 |
| 12.50 | 22.45 | 0.63 |
| 15.00 | 26.93 | 0.75 |
| 20.00 | 35.91 | 1.00 |

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