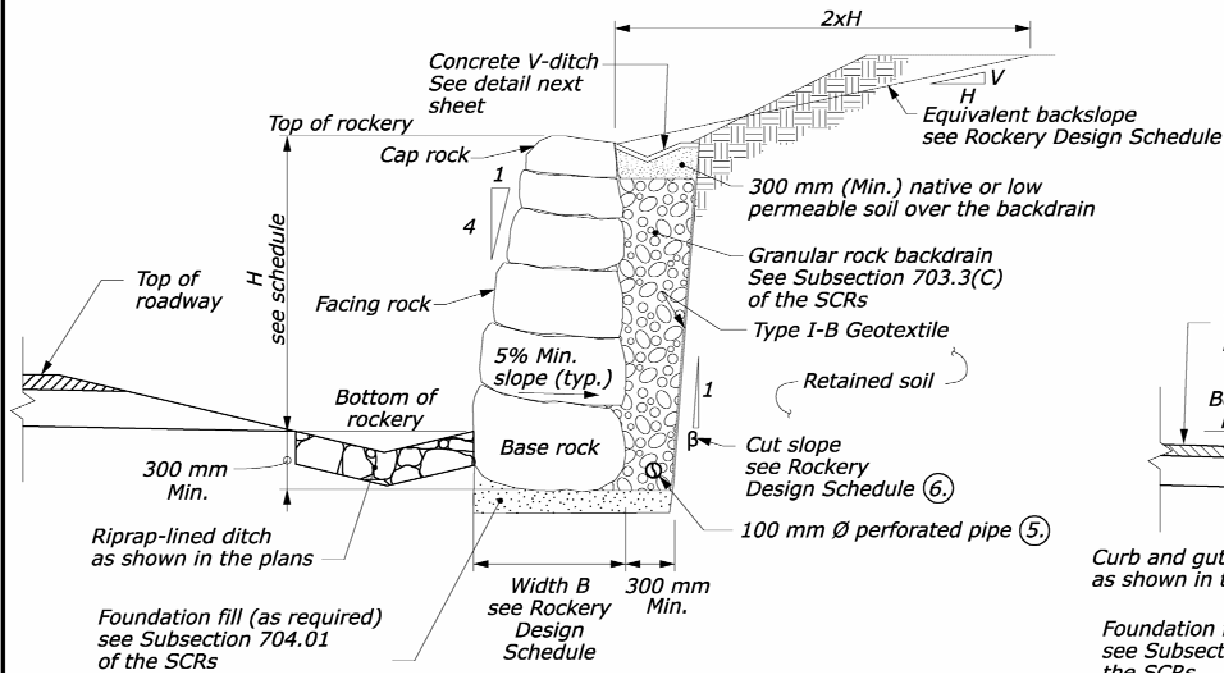


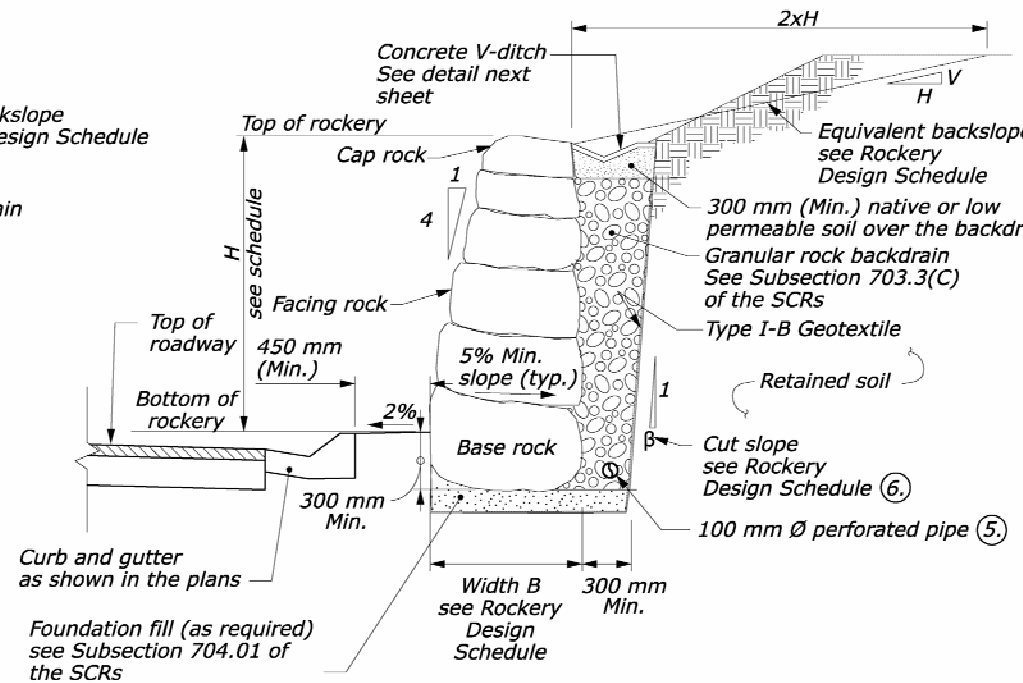
**APPENDIX C – SAMPLE SECTIONS AND DETAILS**

The following sample sections and details have been developed in conjunction with the FLH for use on FLH projects that will include rockery construction. The plans should be used in association with the design methods recommended in Chapter 4 and the guide specifications presented in Chapter 8.





**ROCKERY WITH RIPRAP-LINED DITCH  
TYPICAL SECTION**



**ROCKERY WITH CURB AND GUTTER  
TYPICAL SECTION**

**NOTE:**

- Construct rockery and place base, facing, and cap rocks according to Section 252 of the SCRs. Place each rock individually by equipment suitable for lifting, manipulating, and placing rocks of the size and shape specified. Ensure that each rock is firmly set and supported by underlying materials and adjacent rocks. Reposition or replace loose rocks.
  - A maximum tolerance of 150 mm may be applied toward the total base rock width. Use rock with minimum L of 1700 mm. When L exceeds 1700 mm, two approximately equal size base rocks may be used, provided rocks are in contact at two points or more. Do not consecutively place base rocks with widths less than B.
  - Place base, facing, and cap rocks so that their height dimension is not greater than their width. The longest dimension of the base, facing, and cap rocks is perpendicular to face of rockery.
  - Where loose, soft, or otherwise unsuitable foundation soil conditions are encountered, contact the CO for supplemental recommendations.
- ⑤ Surround the perforated pipe on all sides by at least 100 mm of permeable backfill according to Subsection 703.04.
- Discharge outlet pipes to a protected outlet or other permanent drainage structure at low points in the rockery and at 30 m (max.) spacing. Drain outlets should not empty into storm drains that are designed to back-up during heavy flows.
- ⑥ Stability of temporary cut slopes is the responsibility of the Contractor.
- Do not construct rockeries or slopes exceeding the heights shown on the Rockery Design Schedule without prior written approval by the CO.
  - Construct rockeries parallel to curb grade unless otherwise noted.

**ROCKERY DESIGN SCHEDULE**

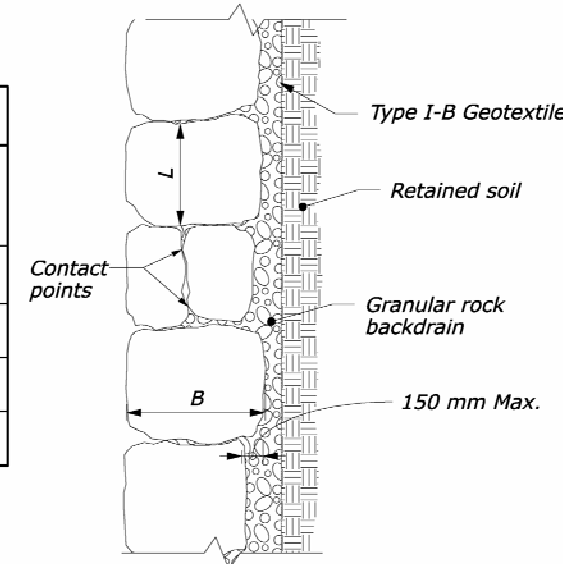
| STATION | LT/RT TIER | MAX. HEIGHT H (m) | MIN. BASE ROCK WIDTH B (m) | MIN. CUT SLOPE BATTER β V:H | MAX. EQUIVALENT BACKSLOPE V:H | MIN. ROCK WEIGHT (kg) |           | DITCH TYPE | SURCHARGE TYPE (B) |
|---------|------------|-------------------|----------------------------|-----------------------------|-------------------------------|-----------------------|-----------|------------|--------------------|
|         |            |                   |                            |                             |                               | CAP ROCK              | BASE ROCK |            |                    |
| BEGIN   | END        |                   |                            |                             |                               |                       |           |            |                    |
|         |            |                   |                            |                             |                               |                       |           |            |                    |
|         |            |                   |                            |                             |                               |                       |           |            |                    |
|         |            |                   |                            |                             |                               |                       |           |            |                    |

**Rockery Design Data:**

Friction angle,  $\phi = \text{---}^\circ$   
 Cohesion,  $c = 0$   
 Bulk unit weight,  $\gamma_R = 23.5 \text{ kN/m}^3$   
 Allowable bearing pressure =  $\text{---} \text{ KPa}$

- ① Minimum cut slope for design purposes only. Actual cut slope batter may be greater ⑥
- ② Where "none" is indicated, no structures, vehicular traffic, or other surcharges can occur within a zone defined by an imaginary plane extending from the back of the base rock at an inclination of 1V:1.5H.

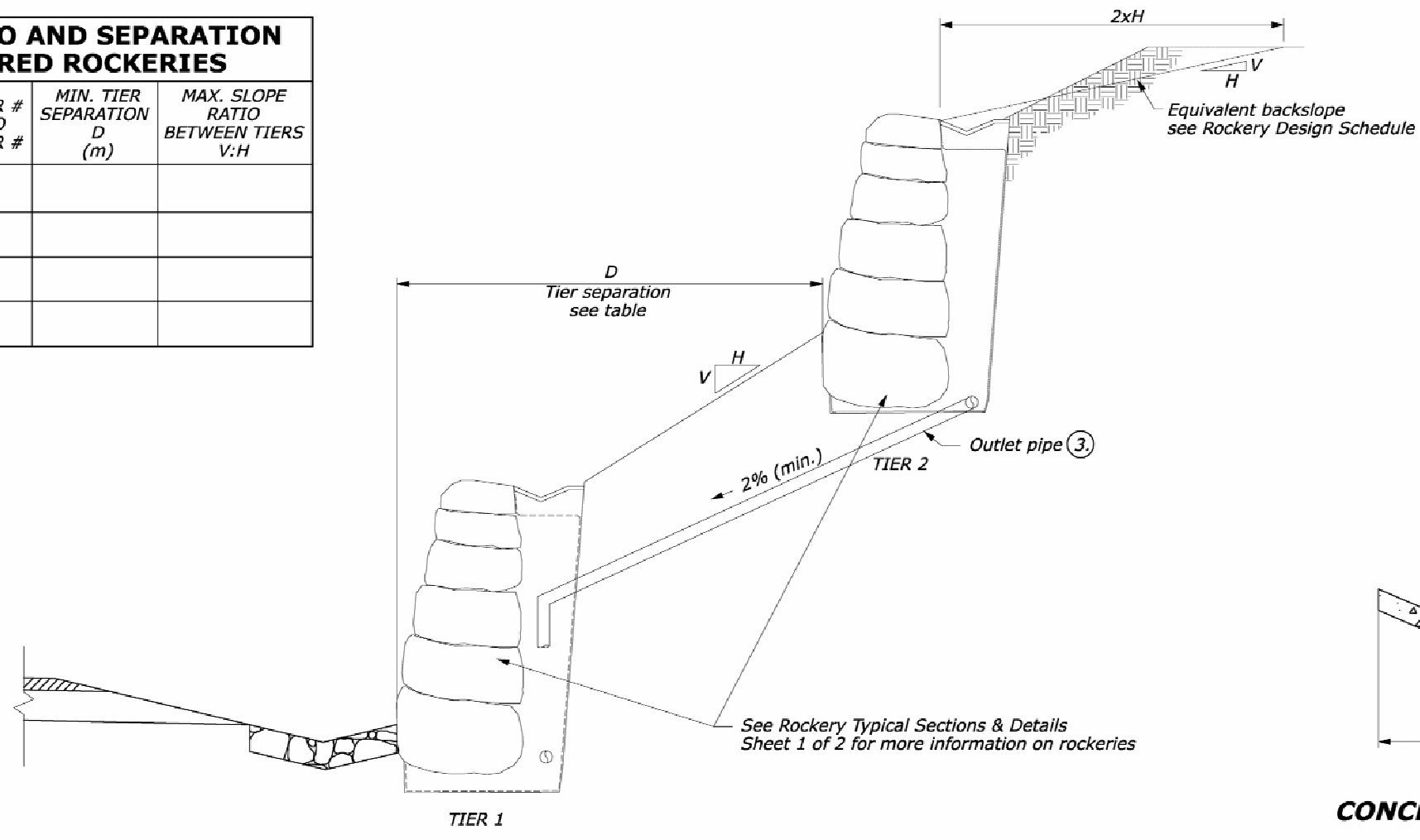
\_\_\_\_\_ surcharge of  $\text{---} \text{ KPa}$  located \_\_\_\_\_ from back face of rockery.



**BASE ROCK  
PLAN VIEW**  
See Note 2

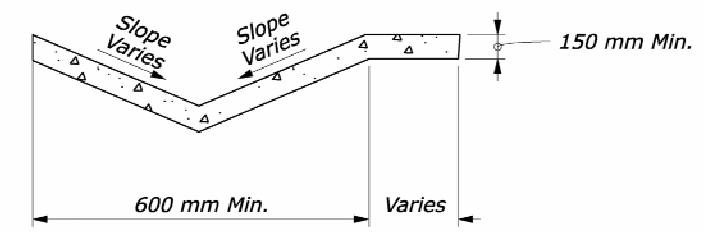
NOT TO SCALE

| SLOPE RATIO AND SEPARATION FOR TIERED ROCKERIES |     |                  |                            |                                    |
|---|-----|------------------|----------------------------|------------------------------------|
| STATION   |     | TIER # TO TIER # | MIN. TIER SEPARATION D (m) | MAX. SLOPE RATIO BETWEEN TIERS V:H |
| BEGIN   | END |                  |                            |                                    |
|   |     |                  |                            |                                    |
|   |     |                  |                            |                                    |
|   |     |                  |                            |                                    |
|   |     |                  |                            |                                    |



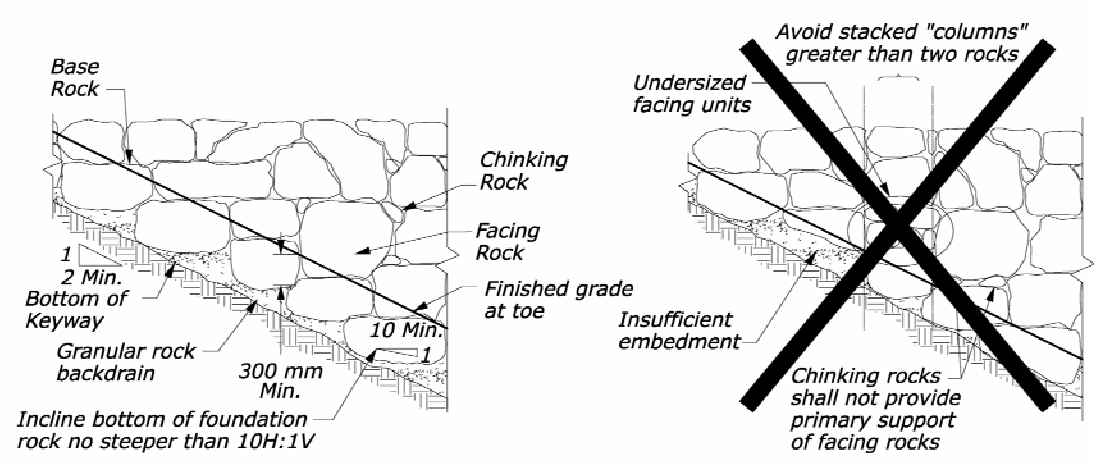
**NOTE:**

1. See Rockery Typical Sections & Details Sheet 1 of 2.
2. Construct riprap rundown at ends of rockery for catchment of V-ditch drainage.
3. Install 100 mm diameter solid outlet pipe at low points in the rockery and at 30 m (max.) spacing. Do not connect to drainage system for lower tier. Drainage systems for the upper and lower tiers outlet independently.



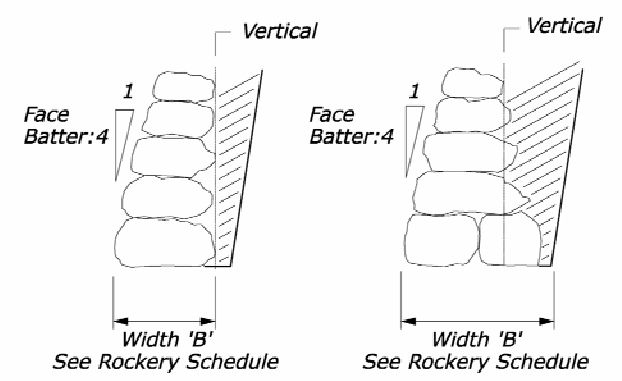
**CONCRETE V-DITCH DETAIL**

**ROCKERY WITH TIERS TYPICAL SECTION**



**CORRECT PARTIAL TYPICAL PROFILE**

**INCORRECT**



**CORRECT**

**CORRECT SECTION PROPERTIES**

**INCORRECT**

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 CENTRAL FEDERAL LANDS HIGHWAY DIVISION

METRIC SPECIAL

**ROCKERY TYPICAL SECTIONS & DETAILS**

Sheet 2 of 2

SPECIAL M252-A

NOT TO SCALE