Prescriptive Standards for Design, Installation and Inspection of Rockeries

City of Sparks
Community Development Department
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www.cityofsparks.us

This document must be reviewed, approved and signed by a state of Nevada licensed engineer and submitted with grading and/or subdivision civil plans that include rockery walls. If this document is not submitted and approved with the grading or civil plans, a separate plan review and permit will be required prior to the installation of rockery wall(s).
**Introduction**

Rockeries have been included in the design and construction of civil works projects in the City of Sparks for years. Proper rockery installation is the key to their long-term stability and safety. This document is not to be construed as plan approval but is provided as reference for licensed professional engineers producing civil plans for City of Sparks review.

**Retaining Walls**

The Community Development Department for the City of Sparks does not consider rockeries to be retaining walls. Rockeries require firm, stable soil to provide part of their support and do not have sufficient structural strength to act as retaining walls or hold back a surcharge. As such, rockeries shall not be used with slopes constructed with fill. Stricter design, construction and inspection standards than those presented herein apply to retaining walls. As such, these standards apply only to rockeries, not used as retaining walls. Separate plan review and permits are required for retaining walls.

**Height and Terracing**

All rockeries shall have a maximum height of 6 feet as measured from the mid-point of the bottom rock to the top of the top rock. Terracing of slopes using staged rockeries is allowed. The design of staged rockeries will include a minimum horizontal separation of 6 feet with a maximum slope of 3 horizontal to 1 vertical (3H:1V) between stages.

**Angle of Rockery Face**

The face of the rockery shall include a minimum batter of 15 degrees from the vertical.

**Rock Sizes**

For a rockery between four and six feet in height, the prescriptive standard requires that the lower half be constructed of four-man or larger rocks as defined below. For the upper half, progressively smaller rocks may be used, with a minimum size of two-man for the uppermost course. The plans must include the rock sizes to be used in the installation.

<table>
<thead>
<tr>
<th>Approximate Rock Sizes</th>
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<tbody>
<tr>
<td>Size</td>
</tr>
<tr>
<td>1-man</td>
</tr>
<tr>
<td>2-man</td>
</tr>
<tr>
<td>3-man</td>
</tr>
<tr>
<td>4-man</td>
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<tr>
<td>5-man</td>
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<tr>
<td>6-man</td>
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**Rock Placement**

To provide a secure footing for the rockery, the base course of rocks must be embedded into firm undisturbed earth a minimum depth of 12 inches. The long dimension of the rocks must extend into the slope behind the rockery to provide maximum stability. Subsequent courses of rocks must be placed to lock into the rocks in the lower course or tier.
**Drainage**
A minimum of 18 inches of granular drainage material shall be placed between the undisturbed soil or engineered fill and the rockery. The drainage material must be composed of gravel with particle sizes ranging from 3/8 inches to 3 inches. At the base of the rockery, a perforated drain pipe with at least a four-inch diameter shall be installed within the drainage material. The drain pipe must drain to a point of discharge indicated on the grading or civil plans.

**Inspections**
A special inspector working under the direct supervision of a licensed professional engineer (civil structural, or geologic) shall verify the selection of rock for durability, the proper placement of rocks and backfill, the specified size of rock, and installation of drainage piping. Licensed engineers must apply their signature and seal to all inspection reports as required by Nevada Administrative Code (NAC 625.612).

**Figure R1**
Prescriptive Design Standards
INSPECTION AGREEMENT

By signing this document, I certify that I am a professional engineer licensed by the State of Nevada and have the necessary knowledge and training to inspect the proposed rockery wall(s). I further agree that I or an authorized representative will be present during the construction of the wall(s) and to provide regular reports to the City of Sparks Community Development Department certifying that the wall(s) has/have been constructed in substantial conformance to the approved plans including but not limited to:

- Height and terracing
- Location
- Surcharge
- Angle of rockery face
- Rock material and size
- Rock placement
- Drainage rock, piping, and discharge

Print Name: ___________________________  Agency: ___________________________

Signature: ___________________________  Date: ___________________________

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Reviewed and approved by: ____________________________________________

Building Official or Engineering Manager

Date: ___________________________  

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Project Name: ___________________________  Permit Number:___________

Legal Name  Map or Grading Permit