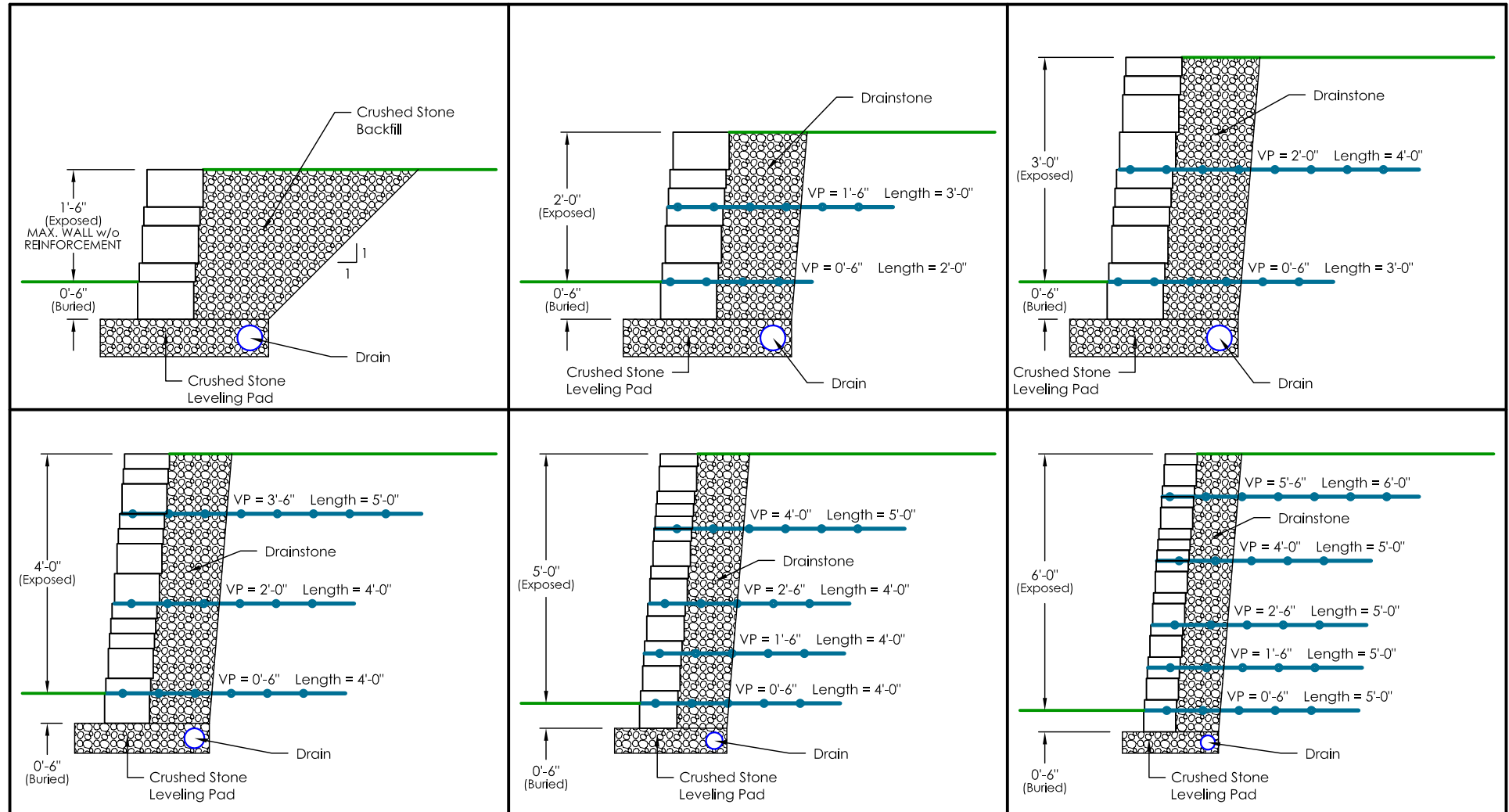


# PRELIMINARY WALL HEIGHT GUIDES

This page shows preliminary guides for soil reinforcement required to construct a wall with Belvedere Collection blocks in the conditions noted below. The geogrid reinforcement is Mirafi Miragrid 2XT. The geogrid layers shall be placed with 100% coverage along the length of the wall (no gaps between sections of grid). See wall installation details for typical construction notes. As always, follow the specific requirements shown in the engineered design for your wall.

**SILTY SAND or CLAYEY SAND ( $\phi = 28^\circ$ ,  $\gamma = 120$  pcf) NO BACKSLOPE NO SURCHARGE**



- These drawings are for reference only.
- Final designs for construction must be prepared by a registered professional engineer, using the actual conditions of the proposed site. Wall stability must be verified for site specific conditions.
- Final wall design must address both internal and external drainage and shall be evaluated by the professional engineer who is responsible for the wall design.
- Seismic conditions are not included in these guides and must be analyzed based on site specific conditions.
- Vertical placement (VP) of geogrid is measured up from the bottom of the blocks/top of the stone leveling pad.
- Length of geogrid is measured from the front of the Belvedere blocks.

- These guides assume a flat "toe" slope at the bottom of the wall. Toe slopes must be analyzed based on site conditions.
- Minimum Factors of Safety for the assumed conditions shown above are 1.5 for sliding, 2.0 for overturning, and 2.0 for bearing capacity.
- Designs are in general accordance with NCMA's Design Manual for Segmental Retaining Walls, 2nd Ed.
- Reinforced and Backfill soils are to be compacted to 95% maximum dry density (Standard Proctor).
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- Block sizes and placement shown are for reference only. Individual Belvedere Collection blocks will vary with installation pattern.

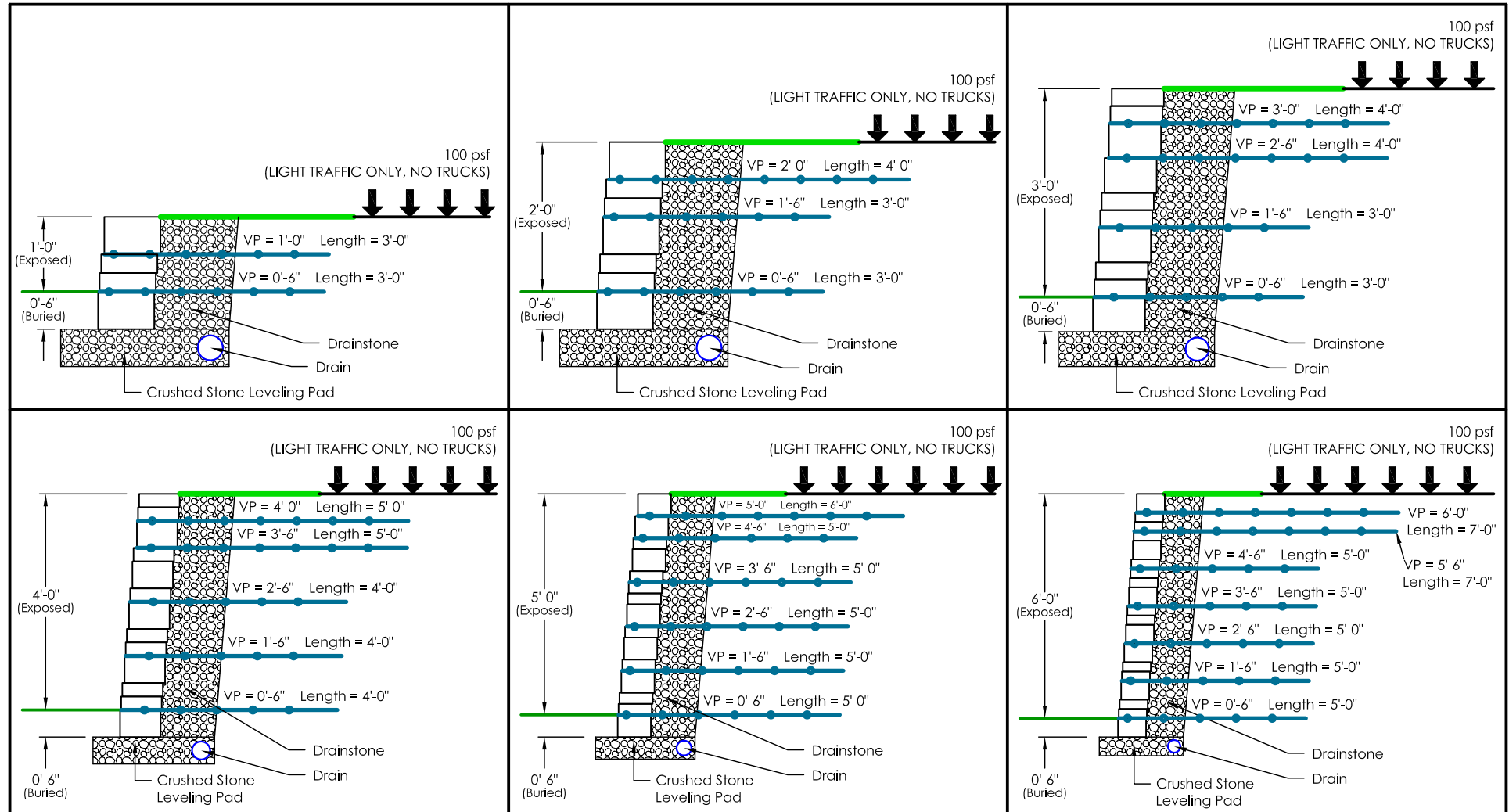
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**SILTY SAND or CLAYEY SAND** ( $\phi = 28^\circ$ ,  $\gamma = 120$  pcf)

**NO BACKSLOPE**

**LIGHT TRAFFIC SURCHARGE (NO TRUCKS)** (100 PSF)



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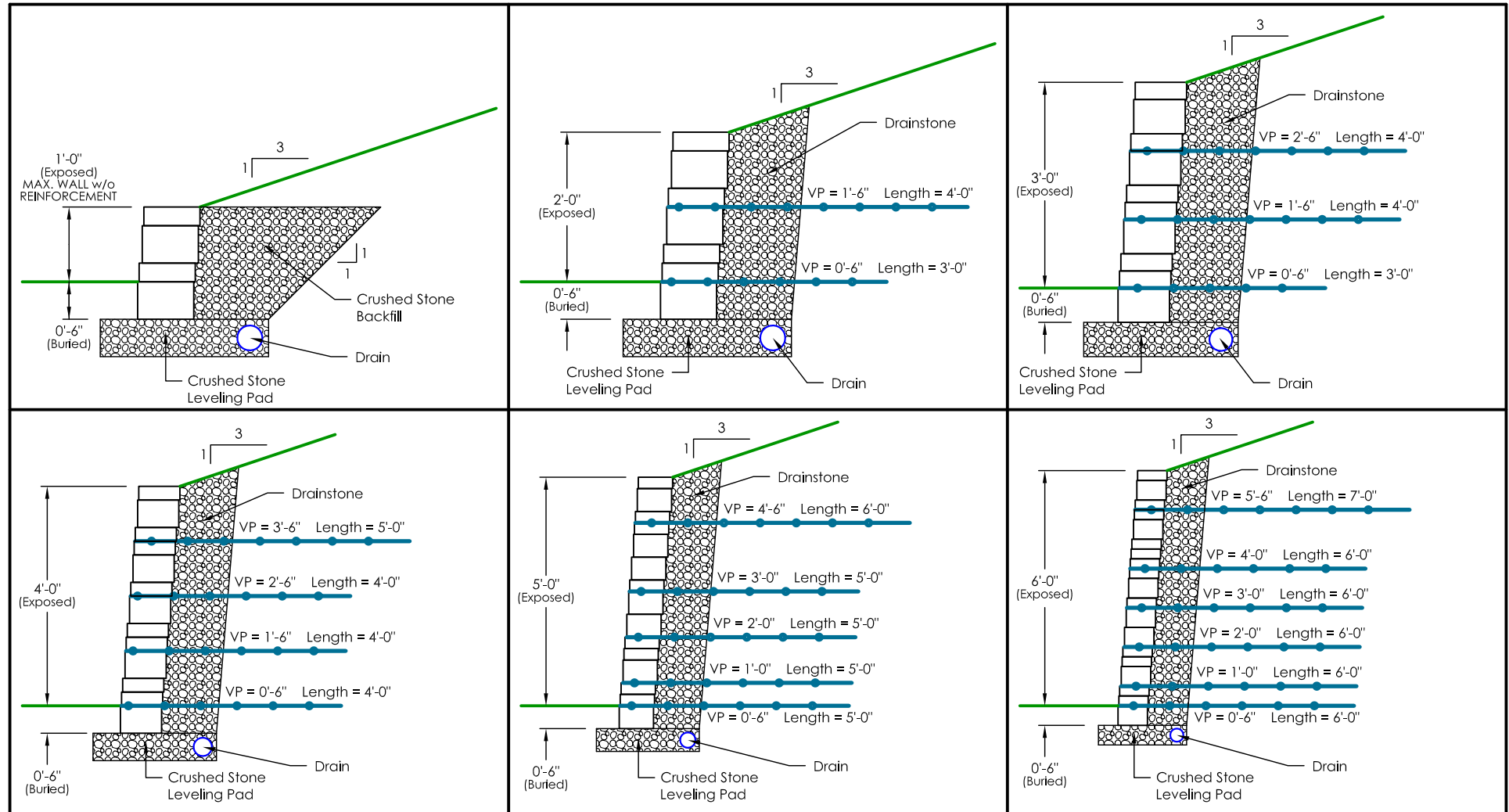
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**SILTY SAND or CLAYEY SAND ( $\phi = 28^\circ$ ,  $\gamma = 120$  pcf) 1 on 3 (18.5°) BACKSLOPE**

**NO SURCHARGE**



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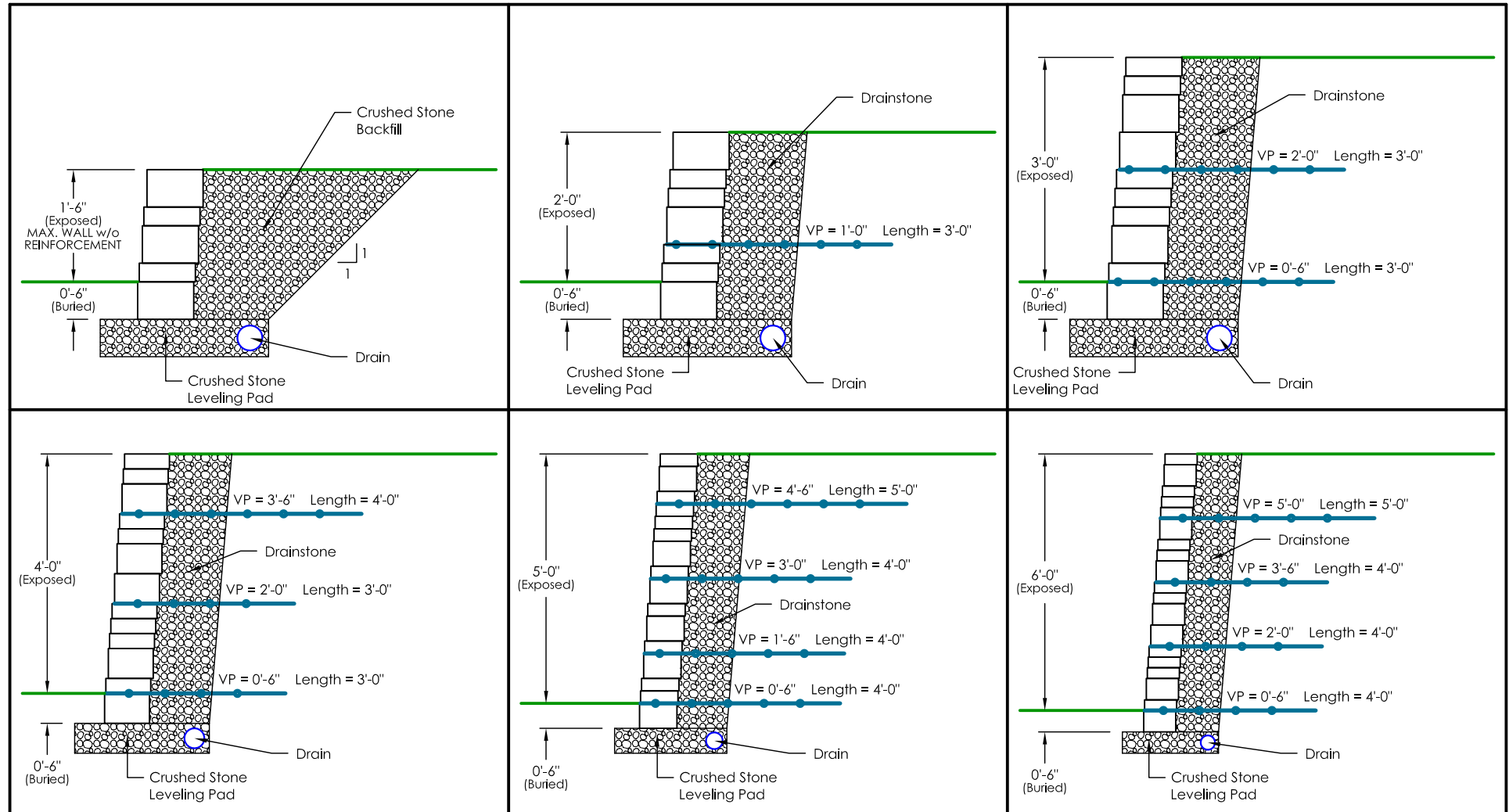
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**FINE TO MEDIUM SAND** ( $\phi = 30^\circ$ ,  $\gamma = 120$  pcf)

**NO BACKSLOPE**

**NO SURCHARGE**



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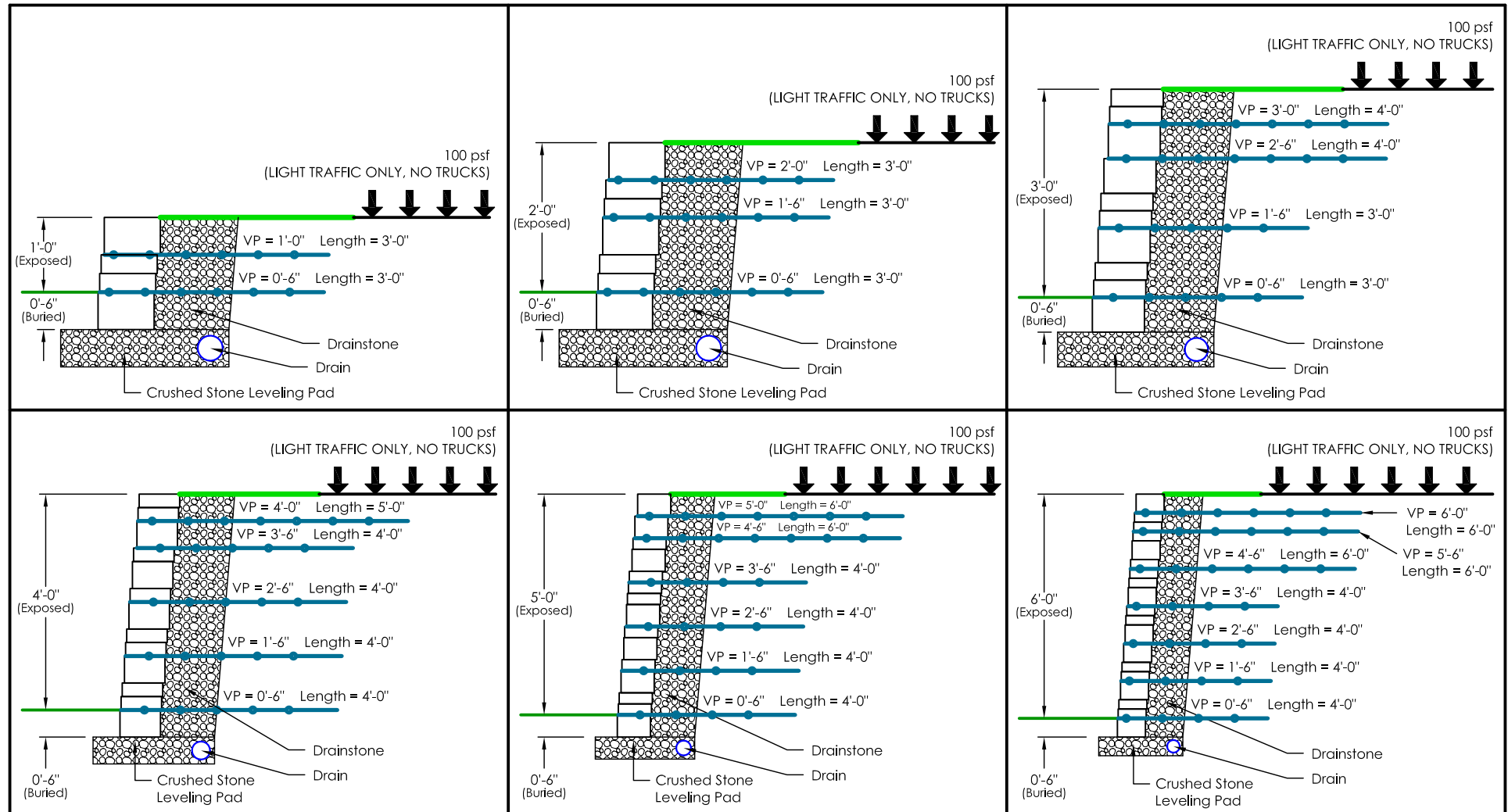
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**FINE TO MEDIUM SAND** ( $\phi = 30^\circ$ ,  $\gamma = 120$  pcf)

**NO BACKSLOPE**

**LIGHT TRAFFIC SURCHARGE (NO TRUCKS)** (100 PSF)



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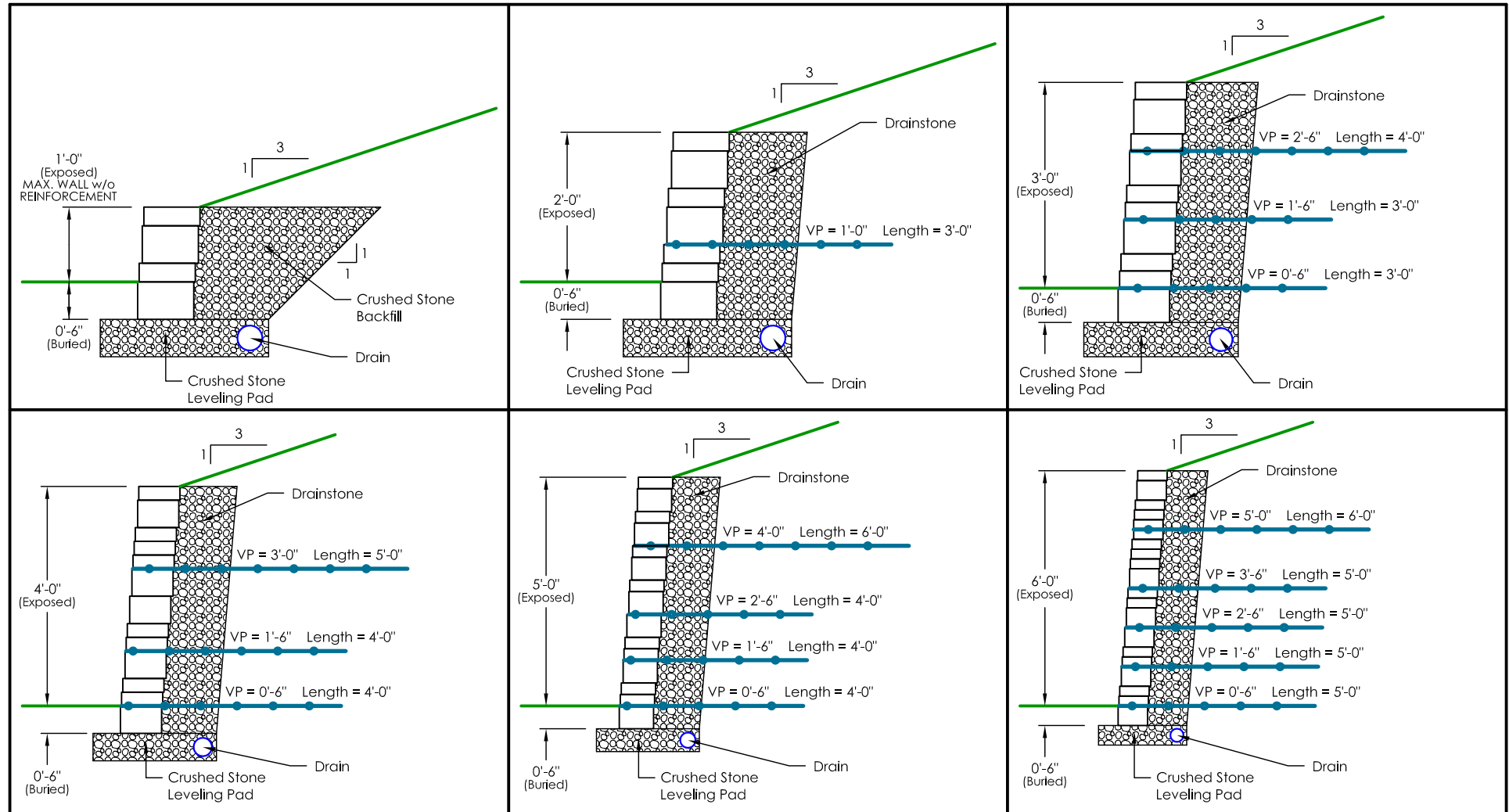
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**1 on 3 (18.5°) BACKSLOPE**

**NO SURCHARGE**



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