

KODAH PRELIMINARY GEOGRID REINFORCEMENT GUIDE

This page shows preliminary guides for soil reinforcement required to construct a wall with Kodah blocks in the conditions noted below. The geogrid reinforcement is Mirafi Miragrid 3XT.

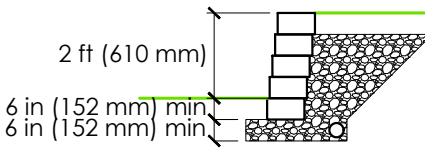
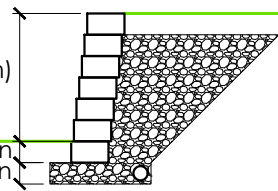
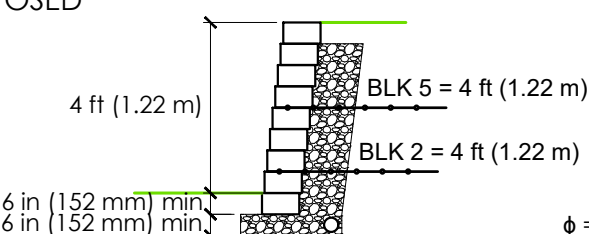
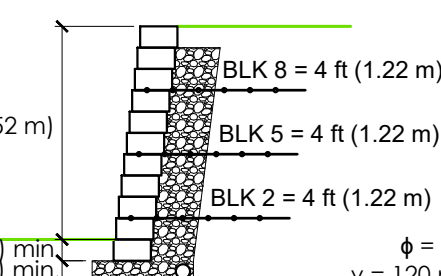
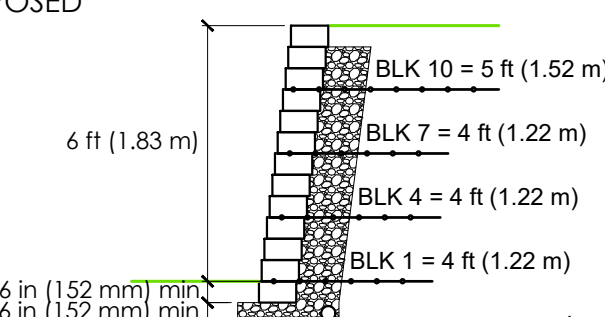
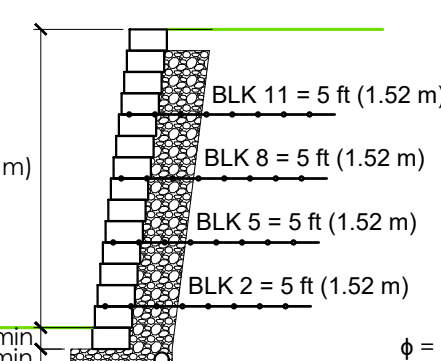
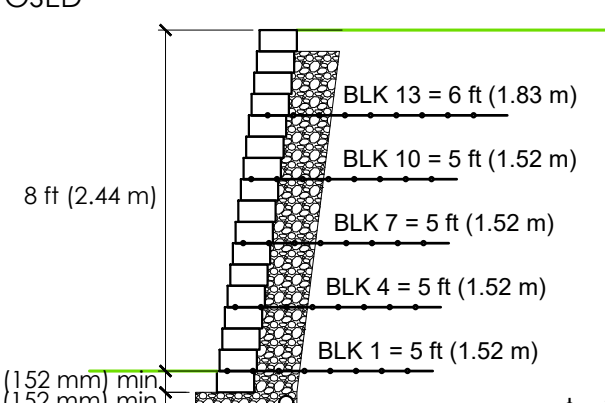
DENSE WELL-GRADED SAND, SAND AND GRAVEL

$$\phi = 34^\circ, \gamma = 120 \text{ pcf (19 kN/m}^3\text{)}$$

NO BACK SLOPE

NO TOE SLOPE

NO SURCHARGE

<p>2 ft (610 mm) EXPOSED</p>  <p>2 ft (610 mm)</p> <p>6 in (152 mm) min. 6 in (152 mm) min.</p> <p>NO GEOGRID. STONE BACKFILL REQUIRED</p> <p>$\phi = 34^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>3 ft (914 mm) EXPOSED</p>  <p>3 ft (914 mm)</p> <p>6 in (152 mm) min. 6 in (152 mm) min.</p> <p>NO GEOGRID. STONE BACKFILL REQUIRED</p> <p>$\phi = 34^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>4 ft (1.22 m) EXPOSED</p>  <p>4 ft (1.22 m)</p> <p>6 in (152 mm) min. 6 in (152 mm) min.</p> <p>BLK 5 = 4 ft (1.22 m) BLK 2 = 4 ft (1.22 m)</p> <p>$\phi = 34^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>5 ft (1.52 m) EXPOSED</p>  <p>5 ft (1.52 m)</p> <p>6 in (152 mm) min. 6 in (152 mm) min.</p> <p>BLK 8 = 4 ft (1.22 m) BLK 5 = 4 ft (1.22 m) BLK 2 = 4 ft (1.22 m)</p> <p>$\phi = 34^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
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DENSE WELL-GRADED SAND, SAND AND GRAVEL
NO BACK SLOPE

NO TOE SLOPE

$\phi = 34^\circ$, $\gamma = 120 \text{ pcf}$ (19 kN/m^3)
100 psf (5 kPa) SURCHARGE

<p>2 ft (610 mm) EXPOSED</p> <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>2 ft (610 mm)</p> <p>6 in (152 mm) min. 6 in (152 mm) min.</p> <p>BLK 2 = 4 ft (1.22 m)</p> <p>$\phi = 34^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<p>3 ft (914 mm) EXPOSED</p> <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>3 ft (914 mm)</p> <p>6 in (152 mm) min. 6 in (152 mm) min.</p> <p>BLK 4 = 4 ft (1.22 m) BLK 1 = 4 ft (1.22 m)</p> <p>$\phi = 34^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>
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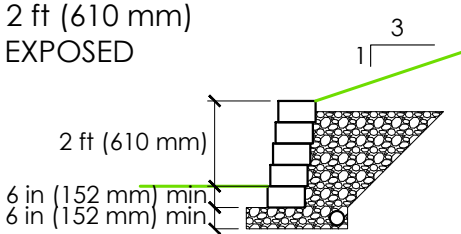
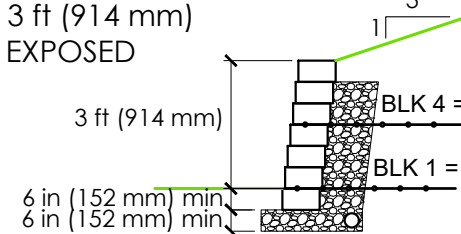
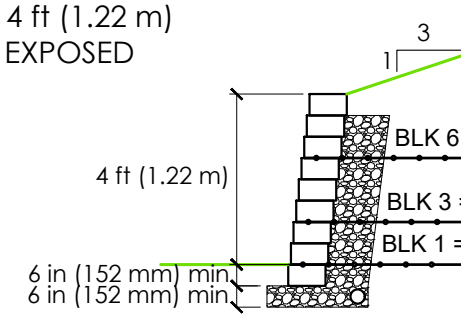
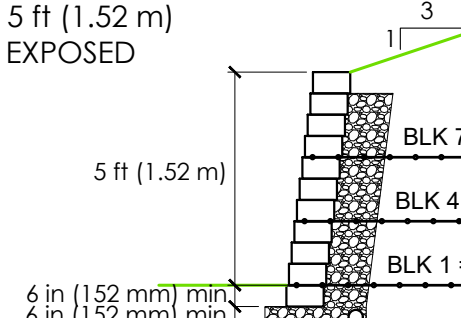
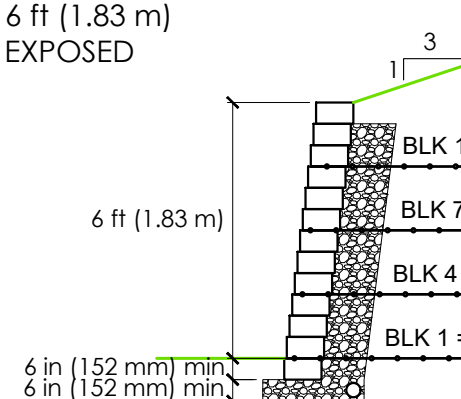
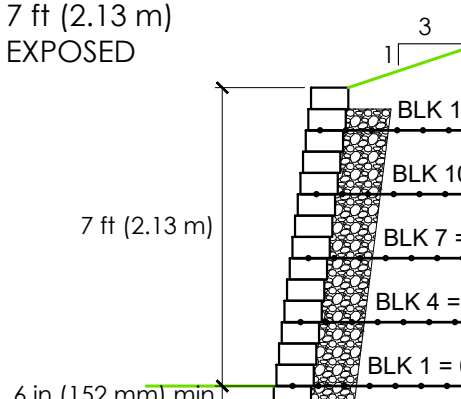
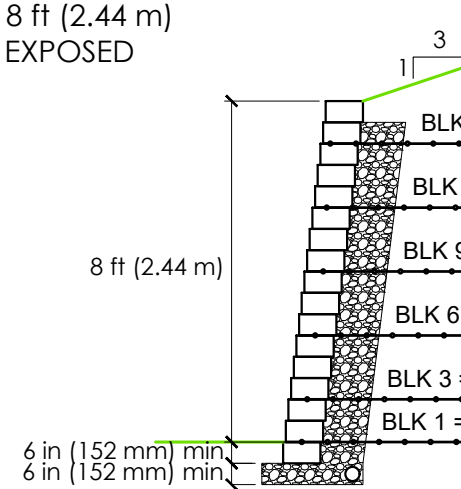
DENSE WELL-GRADED SAND, SAND AND GRAVEL

1:3 (18.4°) BACK SLOPE

NO TOE SLOPE

$\phi = 34^\circ$, $\gamma = 120 \text{ pcf}$ (19 kN/m³)

NO SURCHARGE

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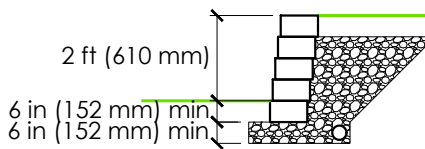
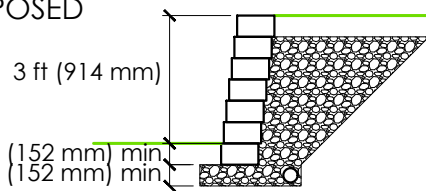
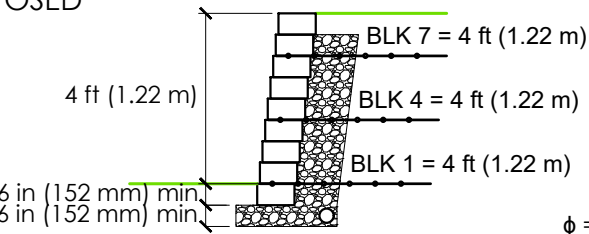
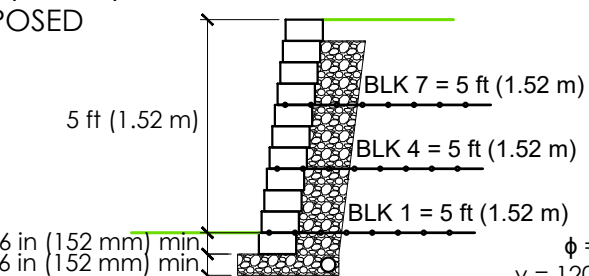
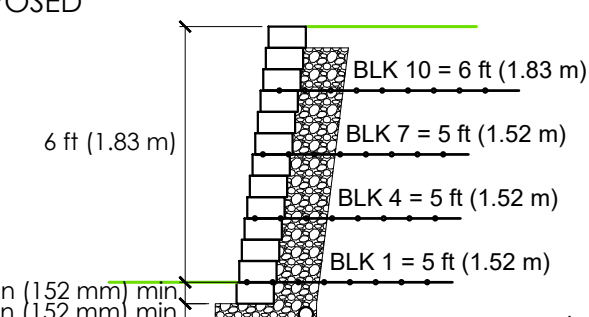
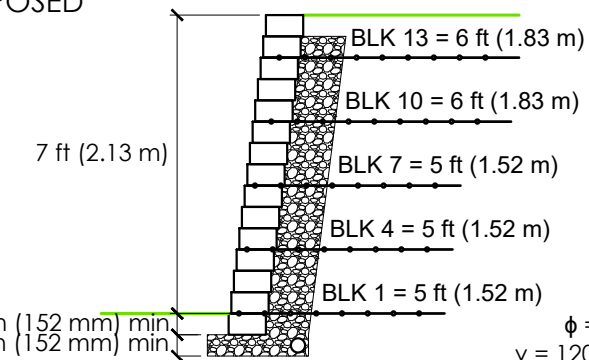
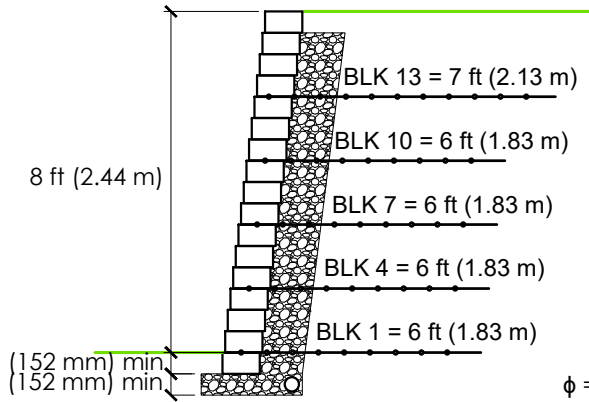
FINE TO MEDIUM SAND

$$\phi = 30^\circ, \gamma = 120 \text{ pcf (19 kN/m}^3\text{)}$$

NO BACK SLOPE

NO TOE SLOPE

NO SURCHARGE

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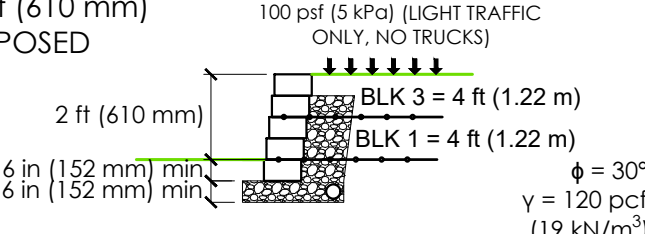
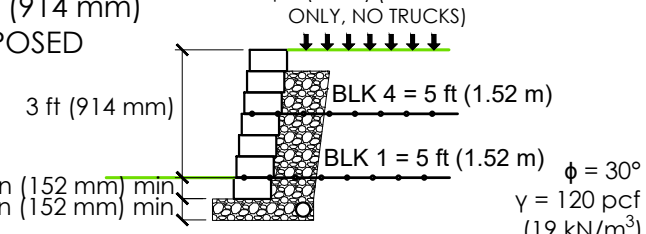
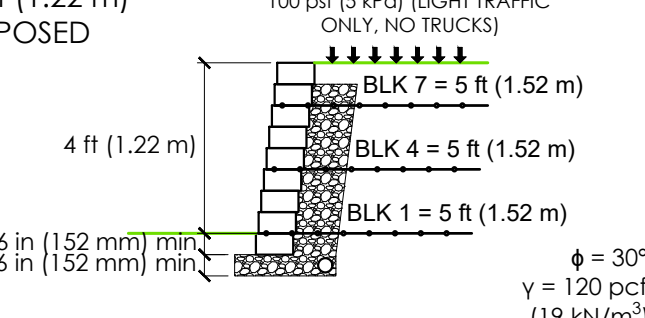
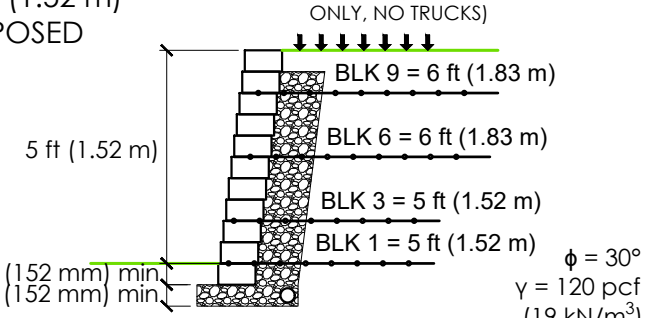
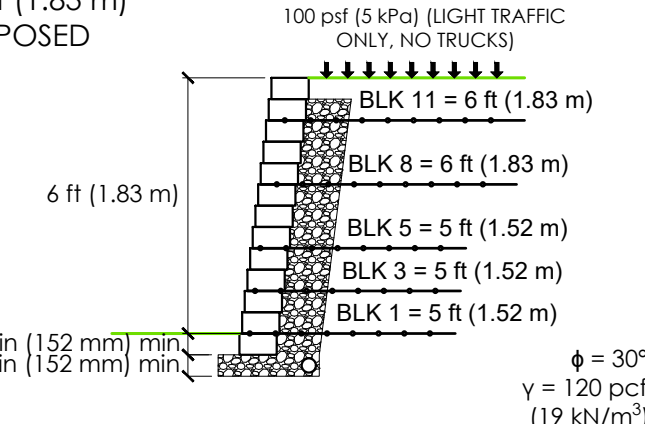
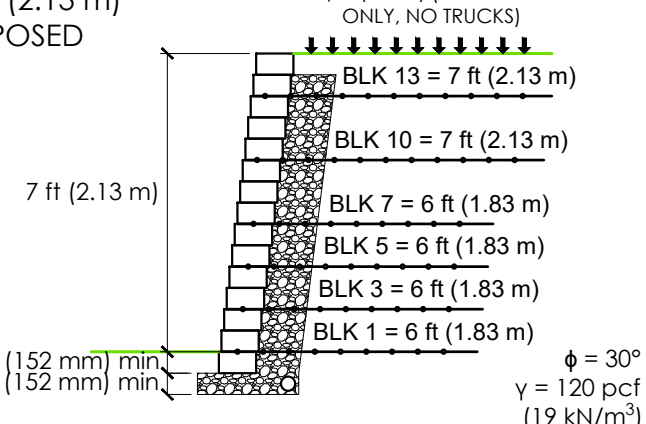
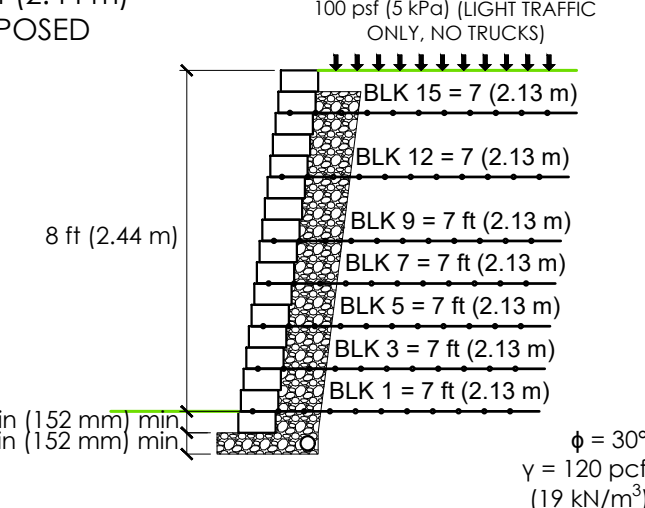
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$\phi = 30^\circ$, $\gamma = 120 \text{ pcf}$ (19 kN/m^3)
100 psf (5 kPa) SURCHARGE

<p>2 ft (610 mm) EXPOSED</p>  <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>2 ft (610 mm)</p> <p>6 in (152 mm) min</p> <p>6 in (152 mm) min</p> <p>BLK 3 = 4 ft (1.22 m)</p> <p>BLK 1 = 4 ft (1.22 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<p>3 ft (914 mm) EXPOSED</p>  <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>3 ft (914 mm)</p> <p>6 in (152 mm) min</p> <p>6 in (152 mm) min</p> <p>BLK 4 = 5 ft (1.52 m)</p> <p>BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>
<p>4 ft (1.22 m) EXPOSED</p>  <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>4 ft (1.22 m)</p> <p>6 in (152 mm) min</p> <p>6 in (152 mm) min</p> <p>BLK 7 = 5 ft (1.52 m)</p> <p>BLK 4 = 5 ft (1.52 m)</p> <p>BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<p>5 ft (1.52 m) EXPOSED</p>  <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>5 ft (1.52 m)</p> <p>6 in (152 mm) min</p> <p>6 in (152 mm) min</p> <p>BLK 9 = 6 ft (1.83 m)</p> <p>BLK 6 = 6 ft (1.83 m)</p> <p>BLK 3 = 5 ft (1.52 m)</p> <p>BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>
<p>6 ft (1.83 m) EXPOSED</p>  <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>6 ft (1.83 m)</p> <p>6 in (152 mm) min</p> <p>6 in (152 mm) min</p> <p>BLK 11 = 6 ft (1.83 m)</p> <p>BLK 8 = 6 ft (1.83 m)</p> <p>BLK 5 = 5 ft (1.52 m)</p> <p>BLK 3 = 5 ft (1.52 m)</p> <p>BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<p>7 ft (2.13 m) EXPOSED</p>  <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>7 ft (2.13 m)</p> <p>6 in (152 mm) min</p> <p>6 in (152 mm) min</p> <p>BLK 13 = 7 ft (2.13 m)</p> <p>BLK 10 = 7 ft (2.13 m)</p> <p>BLK 7 = 6 ft (1.83 m)</p> <p>BLK 5 = 6 ft (1.83 m)</p> <p>BLK 3 = 6 ft (1.83 m)</p> <p>BLK 1 = 6 ft (1.83 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>
<p>8 ft (2.44 m) EXPOSED</p>  <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>8 ft (2.44 m)</p> <p>6 in (152 mm) min</p> <p>6 in (152 mm) min</p> <p>BLK 15 = 7 (2.13 m)</p> <p>BLK 12 = 7 (2.13 m)</p> <p>BLK 9 = 7 ft (2.13 m)</p> <p>BLK 7 = 7 ft (2.13 m)</p> <p>BLK 5 = 7 ft (2.13 m)</p> <p>BLK 3 = 7 ft (2.13 m)</p> <p>BLK 1 = 7 ft (2.13 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<ol style="list-style-type: none"> 1. These drawings are for reference only. 2. Final designs for construction must be prepared by a registered professional engineer using the actual conditions of the proposed site. Wall stability, incl. global stability, must be verified for site specific conditions. 3. 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. 4. Geogrid Layers are to be placed on TOP of the course of blocks shown. For example, BLK 2 = 5 ft (1.52 m) indicates that you place a 5 ft (1.52 m) long layer of geogrid on top of the 2nd course of blocks. 5. Length of geogrid is measured from the front of the Kodah blocks. 6. Seismic conditions are not included in these guides and must be analyzed based on site specific conditions. 7. These guides assume a flat "toe" slope at the bottom of the wall. Toe slopes must be analyzed based on site conditions. 8. Minimum Factors of Safety for the assumed conditions shown above are 1.5 for sliding, 2.0 for overturning (1.5 for non-reinforced section), and 2.0 for bearing capacity. 9. Designs are in general accordance with NCMA's <i>Design Manual for Segmental Retaining Walls</i>, 3rd Ed. 10. Reinforced and Backfill soils are to be compacted to 95% maximum density (Standard Proctor). 11. All Kodah Specifications are to be followed.

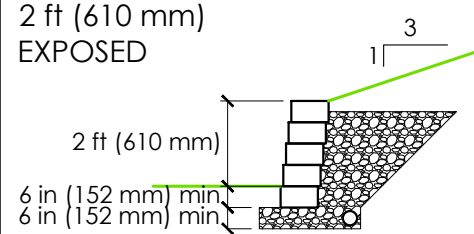
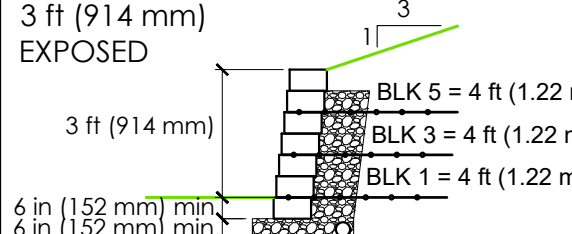
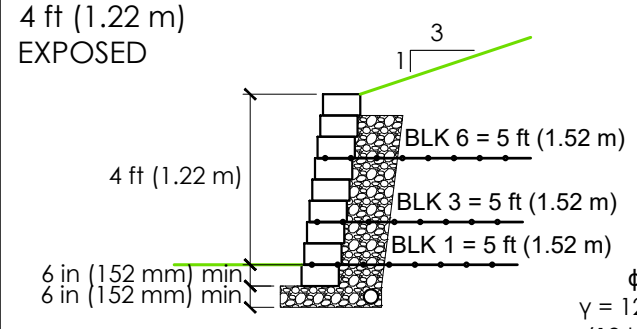
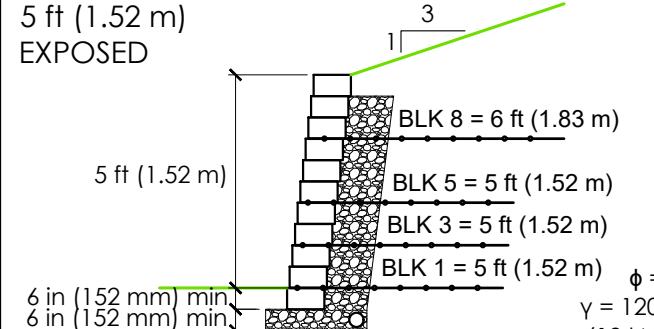
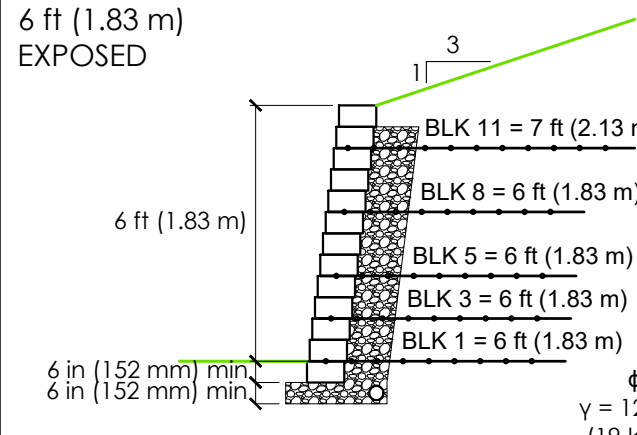
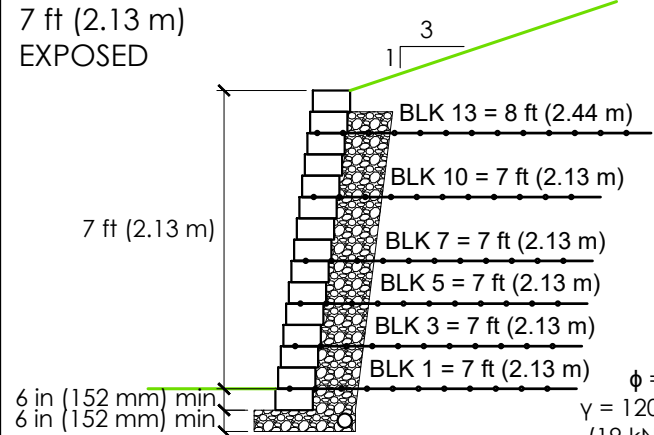
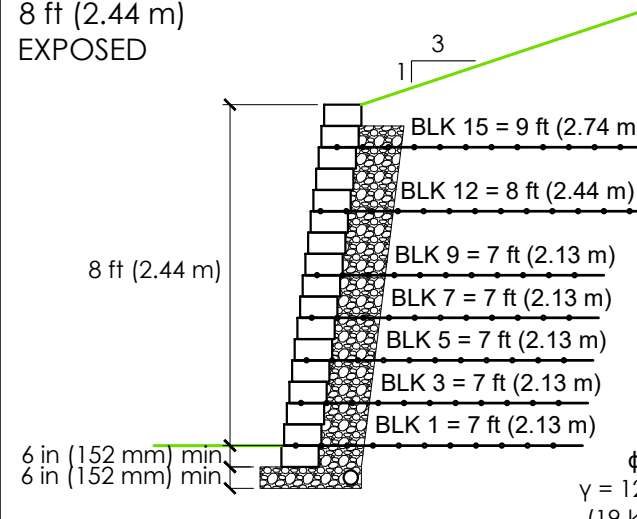
KODAH PRELIMINARY GEOGRID REINFORCEMENT GUIDE

This page shows preliminary guides for soil reinforcement required to construct a wall with Kodah blocks in the conditions noted below. The geogrid reinforcement is Mirafi Miragrid 3XT.

FINE TO MEDIUM SAND
1:3 (18.4°) BACK SLOPE

NO TOE SLOPE

$\phi = 30^\circ$, $\gamma = 120 \text{ pcf}$ (19 kN/m³)
NO SURCHARGE

<p>2 ft (610 mm) EXPOSED</p>  <p>NO GEOGRID. STONE BACKFILL REQUIRED</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>3 ft (914 mm) EXPOSED</p>  <p>BLK 5 = 4 ft (1.22 m) BLK 3 = 4 ft (1.22 m) BLK 1 = 4 ft (1.22 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>4 ft (1.22 m) EXPOSED</p>  <p>BLK 6 = 5 ft (1.52 m) BLK 3 = 5 ft (1.52 m) BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>5 ft (1.52 m) EXPOSED</p>  <p>BLK 8 = 6 ft (1.83 m) BLK 5 = 5 ft (1.52 m) BLK 3 = 5 ft (1.52 m) BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>6 ft (1.83 m) EXPOSED</p>  <p>BLK 11 = 7 ft (2.13 m) BLK 8 = 6 ft (1.83 m) BLK 5 = 6 ft (1.83 m) BLK 3 = 6 ft (1.83 m) BLK 1 = 6 ft (1.83 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>7 ft (2.13 m) EXPOSED</p>  <p>BLK 13 = 8 ft (2.44 m) BLK 10 = 7 ft (2.13 m) BLK 7 = 7 ft (2.13 m) BLK 5 = 7 ft (2.13 m) BLK 3 = 7 ft (2.13 m) BLK 1 = 7 ft (2.13 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>8 ft (2.44 m) EXPOSED</p>  <p>BLK 15 = 9 ft (2.74 m) BLK 12 = 8 ft (2.44 m) BLK 9 = 7 ft (2.13 m) BLK 7 = 7 ft (2.13 m) BLK 5 = 7 ft (2.13 m) BLK 3 = 7 ft (2.13 m) BLK 1 = 7 ft (2.13 m)</p> <p>$\phi = 30^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<ol style="list-style-type: none"> 1. These drawings are for reference only. 2. Final designs for construction must be prepared by a registered professional engineer using the actual conditions of the proposed site. Wall stability, incl. global stability, must be verified for site specific conditions. 3. 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. 4. Geogrid Layers are to be placed on TOP of the course of blocks shown. For example, BLK 2 = 5 ft (1.52 m) indicates that you place a 5 ft (1.52 m) long layer of geogrid on top of the 2nd course of blocks. 5. Length of geogrid is measured from the front of the Kodah blocks. 6. Seismic conditions are not included in these guides and must be analyzed based on site specific conditions. 7. These guides assume a flat "toe" slope at the bottom of the wall. Toe slopes must be analyzed based on site conditions. 8. Minimum Factors of Safety for the assumed conditions shown above are 1.5 for sliding, 2.0 for overturning (1.5 for non-reinforced section), and 2.0 for bearing capacity. 9. Designs are in general accordance with NCMA's <i>Design Manual for Segmental Retaining Walls</i>, 3rd Ed. 10. Reinforced and Backfill soils are to be compacted to 95% maximum density (Standard Proctor). 11. All Kodah Specifications are to be followed.

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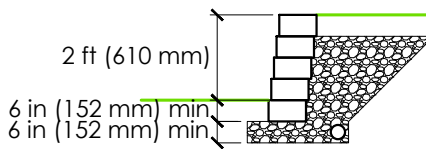
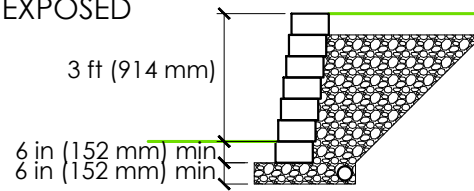
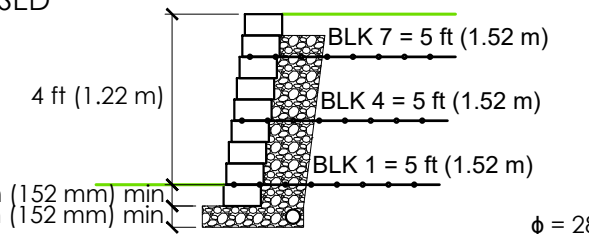
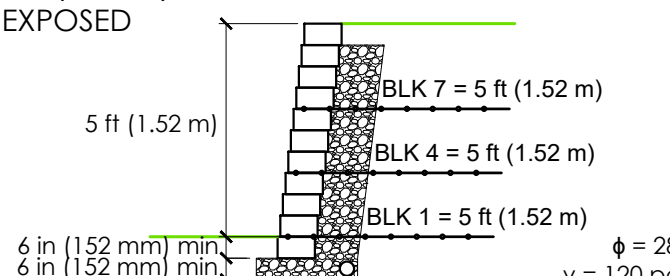
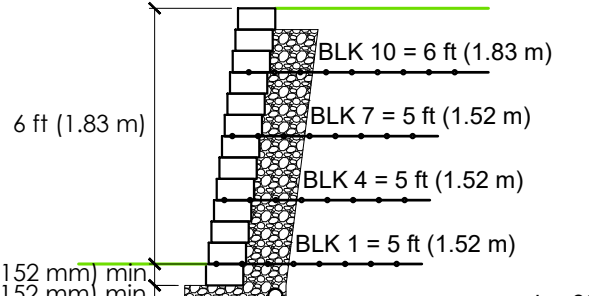
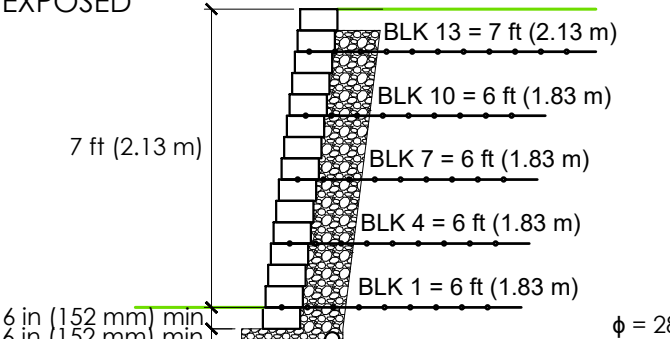
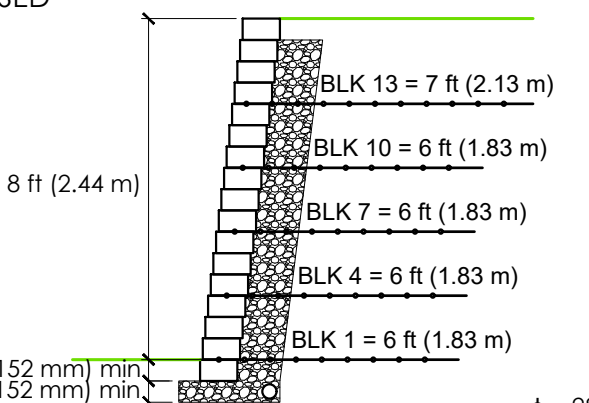
SILTY SAND, CLAYEY SAND

$$\phi = 28^\circ, \gamma = 120 \text{ pcf (19 kN/m}^3\text{)}$$

NO BACK SLOPE

NO TOE SLOPE

NO SURCHARGE

<p>2 ft (610 mm) EXPOSED</p>  <p>NO GEOGRID. STONE BACKFILL REQUIRED</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>3 ft (914 mm) EXPOSED</p>  <p>NO GEOGRID. STONE BACKFILL REQUIRED</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>4 ft (1.22 m) EXPOSED</p>  <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>5 ft (1.52 m) EXPOSED</p>  <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>6 ft (1.83 m) EXPOSED</p>  <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>7 ft (2.13 m) EXPOSED</p>  <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>8 ft (2.44 m) EXPOSED</p>  <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<ol style="list-style-type: none"> 1. These drawings are for reference only. 2. Final designs for construction must be prepared by a registered professional engineer using the actual conditions of the proposed site. Wall stability, incl. global stability, must be verified for site specific conditions. 3. 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. 4. Geogrid Layers are to be placed on TOP of the course of blocks shown. For example, BLK 2 = 5 ft (1.52 m) indicates that you place a 5 ft (1.52 m) long layer of geogrid on top of the 2nd course of blocks. 5. Length of geogrid is measured from the front of the Kodah blocks. 6. Seismic conditions are not included in these guides and must be analyzed based on site specific conditions. 7. These guides assume a flat "toe" slope at the bottom of the wall. Toe slopes must be analyzed based on site conditions. 8. Minimum Factors of Safety for the assumed conditions shown above are 1.5 for sliding, 2.0 for overturning (1.5 for non-reinforced section), and 2.0 for bearing capacity. 9. Designs are in general accordance with NCMA's <i>Design Manual for Segmental Retaining Walls</i>, 3rd Ed. 10. Reinforced and Backfill soils are to be compacted to 95% maximum density (Standard Proctor). 11. All Kodah Specifications are to be followed.

KODAH PRELIMINARY GEOGRID REINFORCEMENT GUIDE

This page shows preliminary guides for soil reinforcement required to construct a wall with Kodah blocks in the conditions noted below. The geogrid reinforcement is Mirafi Miragrid 3XT.

SILTY SAND, CLAYEY SAND
NO BACK SLOPE

NO TOE SLOPE

$\phi = 28^\circ$, $\gamma = 120 \text{ pcf}$ (19 kN/m^3)
100 psf (5 kPa) SURCHARGE

<p>2 ft (610 mm) EXPOSED</p> <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>BLK 3 = 4 ft (1.22 m) BLK 1 = 4 ft (1.22 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<p>3 ft (914 mm) EXPOSED</p> <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>BLK 5 = 5 ft (1.52 m) BLK 3 = 5 ft (1.52 m) BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>
<p>4 ft (1.22 m) EXPOSED</p> <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>BLK 7 = 5 ft (1.52 m) BLK 5 = 5 ft (1.52 m) BLK 3 = 5 ft (1.52 m) BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<p>5 ft (1.52 m) EXPOSED</p> <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>BLK 9 = 6 ft (1.83 m) BLK 7 = 6 ft (1.83 m) BLK 5 = 6 ft (1.83 m) BLK 3 = 6 ft (1.83 m) BLK 1 = 6 ft (1.83 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>
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<p>8 ft (2.44 m) EXPOSED</p> <p>100 psf (5 kPa) (LIGHT TRAFFIC ONLY, NO TRUCKS)</p> <p>BLK 15 = 8 ft (2.44 m) BLK 13 = 8 ft (2.44 m) BLK 11 = 8 ft (2.44 m) BLK 9 = 8 ft (2.44 m) BLK 7 = 8 ft (2.44 m) BLK 5 = 8 ft (2.44 m) BLK 3 = 8 ft (2.44 m) BLK 1 = 8 ft (2.44 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m^3)</p>	<ol style="list-style-type: none"> 1. These drawings are for reference only. 2. Final designs for construction must be prepared by a registered professional engineer using the actual conditions of the proposed site. Wall stability, incl. global stability, must be verified for site specific conditions. 3. 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. 4. Geogrid Layers are to be placed on TOP of the course of blocks shown. For example, BLK 2 = 5 ft (1.52 m) indicates that you place a 5 ft (1.52 m) long layer of geogrid on top of the 2nd course of blocks. 5. Length of geogrid is measured from the front of the Kodah blocks. 6. Seismic conditions are not included in these guides and must be analyzed based on site specific conditions. 7. These guides assume a flat "toe" slope at the bottom of the wall. Toe slopes must be analyzed based on site conditions. 8. Minimum Factors of Safety for the assumed conditions shown above are 1.5 for sliding, 2.0 for overturning (1.5 for non-reinforced section), and 2.0 for bearing capacity. 9. Designs are in general accordance with NCMA's Design Manual for Segmental Retaining Walls, 3rd Ed. 10. Reinforced and Backfill soils are to be compacted to 95% maximum density (Standard Proctor). 11. All Kodah Specifications are to be followed.

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SILTY SAND, CLAYEY SAND
1:3 (18.4°) BACK SLOPE

NO TOE SLOPE

$\phi = 28^\circ$, $\gamma = 120 \text{ pcf}$ (19 kN/m³)
NO SURCHARGE

<p>2 ft (610 mm) EXPOSED</p> <p>BLK 3 = 4 ft (1.22 m) BLK 1 = 4 ft (1.22 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>3 ft (914 mm) EXPOSED</p> <p>BLK 5 = 5 ft (1.52 m) BLK 3 = 5 ft (1.52 m) BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
<p>4 ft (1.22 m) EXPOSED</p> <p>BLK 7 = 5 ft (1.52 m) BLK 5 = 5 ft (1.52 m) BLK 3 = 5 ft (1.52 m) BLK 1 = 5 ft (1.52 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<p>5 ft (1.52 m) EXPOSED</p> <p>BLK 9 = 6 ft (1.83 m) BLK 7 = 6 ft (1.83 m) BLK 5 = 6 ft (1.83 m) BLK 3 = 6 ft (1.83 m) BLK 1 = 6 ft (1.83 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>
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<p>8 ft (2.44 m) EXPOSED</p> <p>BLK 15 = 9 ft (2.74 m) BLK 13 = 9 ft (2.74 m) BLK 11 = 9 ft (2.74 m) BLK 9 = 9 ft (2.74 m) BLK 7 = 9 ft (2.74 m) BLK 5 = 9 ft (2.74 m) BLK 3 = 9 ft (2.74 m) BLK 1 = 9 ft (2.74 m)</p> <p>$\phi = 28^\circ$ $\gamma = 120 \text{ pcf}$ (19 kN/m³)</p>	<ol style="list-style-type: none"> 1. These drawings are for reference only. 2. Final designs for construction must be prepared by a registered professional engineer using the actual conditions of the proposed site. Wall stability, incl. global stability, must be verified for site specific conditions. 3. 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. 4. Geogrid Layers are to be placed on TOP of the course of blocks shown. For example, BLK 2 = 5 ft (1.52 m) indicates that you place a 5 ft (1.52 m) long layer of geogrid on top of the 2nd course of blocks. 5. Length of geogrid is measured from the front of the Kodah blocks. 6. Seismic conditions are not included in these guides and must be analyzed based on site specific conditions. 7. These guides assume a flat "toe" slope at the bottom of the wall. Toe slopes must be analyzed based on site conditions. 8. Minimum Factors of Safety for the assumed conditions shown above are 1.5 for sliding, 2.0 for overturning (1.5 for non-reinforced section), and 2.0 for bearing capacity. 9. Designs are in general accordance with NCMA's <i>Design Manual for Segmental Retaining Walls</i>, 3rd Ed. 10. Reinforced and Backfill soils are to be compacted to 95% maximum density (Standard Proctor). 11. All Kodah Specifications are to be followed.