HILFIKER MSE SQUARE PANEL WALL SYSTEM

GENERAL NOTES

1. THE ATTACHED DETAILS ARE BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REMOVED VOLUME, WEAPONS OF CONSTRUCTION AND QUALITY OF PREFABRICATED COMPONENTS MEET THE GOVERNING AGENCY'S SPECIFICATION FOR RETAINING WALL SYSTEMS.

2. MINIMUM DESIGN PARAMETERS


   EXTERNAL STABILITY

   OVERTURNING
   \[ \frac{\text{Lmax}}{\gamma} \]
   SLOPING
   \[ \frac{\text{bmax}}{\gamma} \]
   BEARING PRESSURE
   \[ \frac{\text{pmax}}{\gamma} \]
   INTERNAL STABILITY

   PULLOUT
   \[ \frac{\text{fmax}}{\gamma} \]
   AXIAL STRESS
   \[ \frac{\text{fmax}}{\gamma} \]
   LVE LOAD SURCHARGE
   = 250 PSI

3. THE MAXIMUM ALLOWED BEARING PRESSURE AT THE INTERFACE OF THE FOUNDATION AND SELECT BACKFILL MATERIAL IS SHOWN ON THE PLANS. THE BEARING PRESSURE SHOULD BE ALIGNED WITH THE MAXIMUM FOR THE GIVEN BASE MAT LENGTH. IT IS THE RESPONSIBILITY OF OTHERS TO DETERMINE THAT THE BEARING PRESSURE IS APPROPRIATE FOR THE LOCATION.

4. ANY UNLABLET MATERIAL BELOW THE REMOVED VOLUME IS DETERMINED BY THE ENGINEER AND SHALL BE EXCAVED AND REPLACED WITH SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER.

5. THE DESIGN CONSIDERED IN THESE DRAWINGS IS BASED ON INFORMATION PROVIDED BY OTHERS. THE BASIS OF THIS INFORMATION HELPER RETAINING WALLS IS RESPONSIBLE FOR THE INTERNAL STABILITY OF THE STRUCTURE. EXTERNAL STABILITY DEPENDS ON FOUNDATION AND SLOPE STABILITY IS THE RESPONSIBILITY OF OTHERS.

WALL CONSTRUCTION

1. WALLS FABRICATED IN CURVES SHALL HAVE THEIR DIMENSIONS AS A SERIES OF CHORDS (AS DETERMINED IN SHOP DRAWINGS) IN ORDER TO MATCH THE REQUIRED WALL RADII.

2. FOR LOCATION AND ALIGNMENT OF THE MSE STRUCTURES REFERENCE THE RETAINING WALL DESIGN DRAWINGS.

3. IF MANHOLE AND DRAIN INLETS ARE REQUIRED, THEY SHALL BE LOCATED AS SHOWN ON THE RETAINING WALL ELEVATION DRAWINGS.

4. IFFILES ARE LOCATED WITHIN THE REMOVED VOLUME THEY SHALL BE PLACED TO CONSTRUCTION OF THE WALL UNLESS AN ALTERNATE METHOD IS USED TO ISOLATE THE FILL FROM THE LEVEL OF THE ELEVATION OF THE REQUIRED STABILITY IS APPROVED BY THE ENGINEER.

5. BACKFILL MATERIAL IS REQUIRED TO BE COMPACTED IN ACCORDANCE WITH THE SECTION 4.4.2. ABOVE THE ELEVATION OF THE SOIL REINFORCEMENT ELEMENT. NO SOIL REINFORCEMENT MATERIAL IS ATTACHED TO ANY PANELS BEFORE THE BACKFILL IS PLACED AT THE REQUIRED ELEVATION AND IS COMPACTED.

6. STRUCTURE GRANDEUR THAN 10 FEET SHALL HAVE THE REQUIRED GRADE PLACED AND COMPACTED AT THE FRONT FACE OF THE STRUCTURE BEFORE THE STRUCTURE HEIGHT EXCEEDS 25 FEET. GRADE DEPTH SHALL BE COMPACTED TO 90% OF ASHHTO 1-100 UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY GUARDRAIL POSTS PRIOR TO PLACING THE TOP ROW OF SOIL REINFORCEMENT. THE POST SPACINGS SHALL BE ADJUSTED TO AVOID CONFLICTS WITH THE LONGITUDINAL SOIL REINFORCEMENT WIRE OUTSIDE OF THE LONGITUDINAL WIRE SHALL BE ALLOWED ONLY AS DIRECTED BY THE ENGINEER.

8. IF EXISTING OR FUTURE STRUCTURES ARE TO BE PLACED IN THE REMOVED VOLUME THAT INTERFERE WITH THE PROPER PLACEMENT OF THE SOIL REINFORCEMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR A COURSE OF ACTION.

9. TOP CORNER PANEL'S SKIRTING CAST IN PLACE COPING SHALL HAVE 1/2" SPACES PROPERLY FROM THEIR TOP EDGE.

10. FOR OTHER INFORMATION PERTAINING TO THE CONSTRUCTION OF THE HELPER RETAINING WALL PLEASE REFER TO HELPER RETAINING WALLS Erection MANUAL.

11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DESTROY THE TOP ROW OF SOIL REINFORCEMENT DOWNWARD SO AS TO NOT CONFUSE WITH ROADWAY MINING OPERATIONS AND/OR ROADWAY CONSTRUCTION OPERATIONS. ANY SOIL REINFORCEMENT MATERIAL THAT IS DAMAGED SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

MISCELLANEOUS NOTES

1. NORMAL SOIL REINFORCEMENT GRID LENGTH


2. SELECT BACKFILL QUANTITY

   THE REQUIRED VOLUME OF UNPACKED SELECT BACKFILL IS CALCULATED BY MULTIPLYING THE RETAINING WALL AREA FACE BY THE SOIL REINFORCEMENT LENGTH THIS IS PERFORMED AT EACH INDIVIDUAL SEGMENT OF WALL FOR EACH CORRESPONDING UNIT. THE SELECTED QUANTITY IS GIVEN BY HELPER RETAINING WALLS IS AN ESTIMATE. THE CONTRACTOR IS ULTIMATELY DETERMINATION OF THE QUANTITY OF SELECT BACKFILL MATERIAL THAT IS REQUIRED.

3. PANEL FINISH

   THE CONCRETE PANELS SHALL HAVE A PLAN STEEL FORM FINISH UNLESS OTHERWISE SPECIFIED ON THE RETAINING WALL CONTROL PLANS.

4. THE FOLLOWING MATERIALS ARE SUPPLIED BY HELPER RETAINING WALLS

   - PRECAST CONCRETE PANELS
   - SOIL REINFORCEMENT GORSES
   - WING WALLS
   - 2" DIAMETER ALIMENTATION PINS
   - 2" DIAMETER ALIMENTATION PINS
   - SYNTHETIC GEOTEXTILE AND/IMPLIED GEOTEXTILE FILTER FABRIC

   ANY OTHER MATERIAL REQUIRED TO BUILD THE MSE STRUCTURES ACCORDING TO THE DRAWINGS SPECIFIED BY THE ENGINEER.


** THIS SYSTEM FOR USE IN MODERATELY TO SEVERELY AGGRESSIVE ENVIRONMENTS ONLY. **

DATE: 07-01-05

HILFIKER RETAINING WALLS
1120 9th Street
Eureka, CA 95503
800-762-9963

INTERIM STANDARD: ENGLISH UNITS
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
RETAINING WALL SYSTEM
HILFIKER SQUARE PANEL
INTERIM STANDARD: ENGLISH UNITS
INTERIM STANDARD: ENGLISH UNITS
WILLIAM H. HILFIKER, P.E.
700 NORTH AURORA STREET
SUITE 1200
CHICAGO, ILLINOIS 60610
312-782-9900
NOTES

1. TOP OF PILASTER SHALL BE FINISHED TO A TRUE LEVEL AREA.
2. LIGHT POLE PILASTER AND ADJACENT TRAFFIC RAILING AND MOMENT SLAB AREA SHOWN ON THIS SHEET ARE DESIGNED TO RESIST WORKING LOADS IN ANY DIRECTION FROM THE LIGHT POLE APPLIED AT THE TOP OF THE PILASTER AS FOLLOWS:

   | LOAD |
   --- | --- |
   Transverse Moment | 10 kip - ft |
   Transverse Shear | 0.5 kip |
   Axial | 0.5 kip |

3. If the light pole provides loads in excess of those shown above, the contractor shall redesign the pilaster and submit the design to the Department for review. The contractor’s redesign shall be prepared signed and sealed by a professional engineer registered in the state of Florida and qualified to perform the work.

4. The contractor is responsible for providing anchor bolts that effectively transmit the light pole loads to the pilaster and fit the reinforcing cage. Calculations sized and sealed by a professional engineer registered in the state of Florida shall be submitted to the contractor to the department for review and approval showing that these requirements have been met prior to construction.

5. A watertight plastic liner for each light pole, additional plastic boxes may be required if the spacing between light poles are greater than 300 ft.

PRECAST SLAB DIMENSIONS AND REINFORCING REFERENCE SHEET NO. 7

PRECAST COPING WITH PILASTER SECTION

PILASTER ELEVATION

PILASTER PLAN VIEW

PILASTER REINFORCING SCHEDULE

REBAR SCHEDULE

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