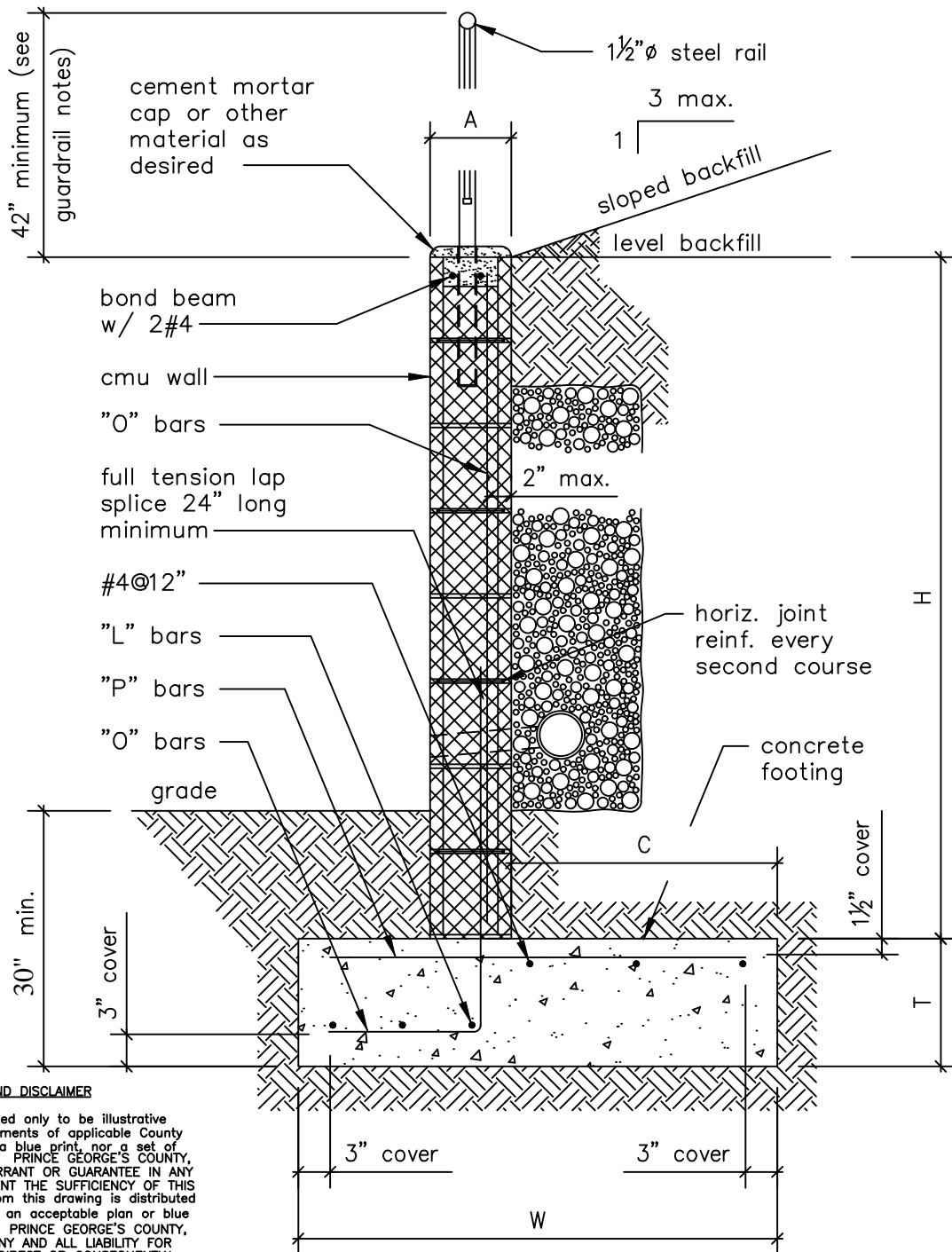


# MASONRY RETAINING WALL DIMENSIONS AND REINFORCEMENT

dimensions					reinforcing steel		
level backfill							
H*	A	C	W	T	O	P	L
3'-4"	8"	1'-6"	2'-6"	10"	#4@24"	#4@14"	#4@14"
4'-0"	8"	1'-9"	2'-10"	12"	#4@16"	#4@12"	#4@14"

sloped backfill							
H*	A	C	W	T	O	P	L
3'-4"	12"	1'-8"	3'-0"	10"	#4@24"	#4@14"	#4@12"
4'-0"	12"	2'-2"	4'-0"	12"	#4@16"	#4@12"	#4@12"

\* wall height is measured from top of footing



**WARNING AND DISCLAIMER**

This drawing is intended only to be illustrative of the minimum requirements of applicable County ordinances. It is not a blue print, nor a set of plans and specifications. PRINCE GEORGE'S COUNTY, MARYLAND DOES NOT WARRANT OR GUARANTEE IN ANY MANNER OR TO ANY EXTENT THE SUFFICIENCY OF THIS DRAWING. Persons to whom this drawing is distributed should not rely on it as an acceptable plan or blue print for any structure. PRINCE GEORGE'S COUNTY, MARYLAND DISCLAIMS ANY AND ALL LIABILITY FOR DAMAGES OR INJURIES, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF THIS DRAWING.

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D-029

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## MASONRY RETAINING WALL STRUCTURAL DETAILS



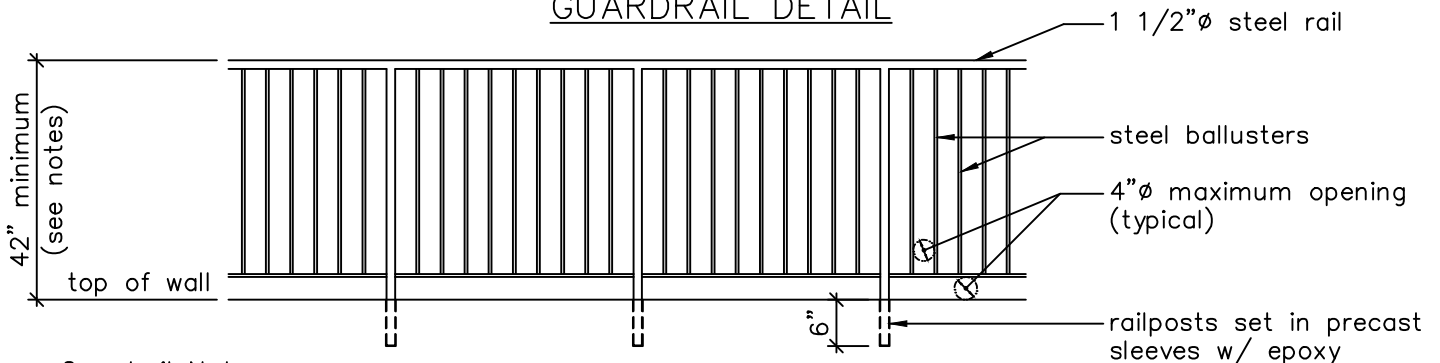
Prince George's County Government  
Department of Permitting, Inspections and Enforcement



# CONCRETE MASONRY UNIT (CMU BLOCK) RETAINING WALL SPECIFICATIONS

- 1) the maximum unbalanced fill height is five feet; in no case shall the wall retain more than five feet of earth.
- 2) the details contained may not be used in a problem soil area; problems soil is a soil type that may have, but is not limited to, a high water table, expansive clays, low bearing capacities, frost heave potential, or other behavioral problems. contractor must field verify the soil(s) type(s) during the inspections process and if problem soils are encountered, then a geotechnical engineer, licensed in maryland, must investigate the soil and engineer the wall design.
- 3) footings shall extend a minimum of 24-inches below finish grade and bear on suitable undisturbed soil. where soil under footing is soft clay, place 4" to 6" of crushed stone or gravel as shown in the detail below.
- 4) the minimum concrete compressive strength at 28 days shall be 3500 psi. design, mix and place concrete in accordance with the requirements of the latest edition of ACI 318.
- 5) reinforcing steel shall comply with the requirements of ASTM A615 and shall have a yield strength of 60,000 psi.
- 6) concrete masonry units (cmu block) shall comply with the requirements of ASTM C90.
- 7) all joint reinforcement, ties and other accessories shall be resistant to corrosion. joint reinforcement shall be 9 gauge truss type.
- 8) all head and bed joints shall be 3/8" thick. bed joints of the starting course over the concrete footing may be between 1/4" and 3/4" thick.
- 9) mortar for masonry construction shall conform to the requirements of ASTM C270.
- 10) backfilling against reinforced masonry retaining walls shall not be permitted until at least seven days after placing concrete or grout in respective cores. where heavy equipment is used in backfilling, equipment shall not approach closer to the top of the wall than a distance equal to the height of the wall. care shall also be taken to avoid exerting large impact forces on the wall as caused by a large mass of moving earth.
- 11) provide expansion joints at 80-feet on center maximum spacing.

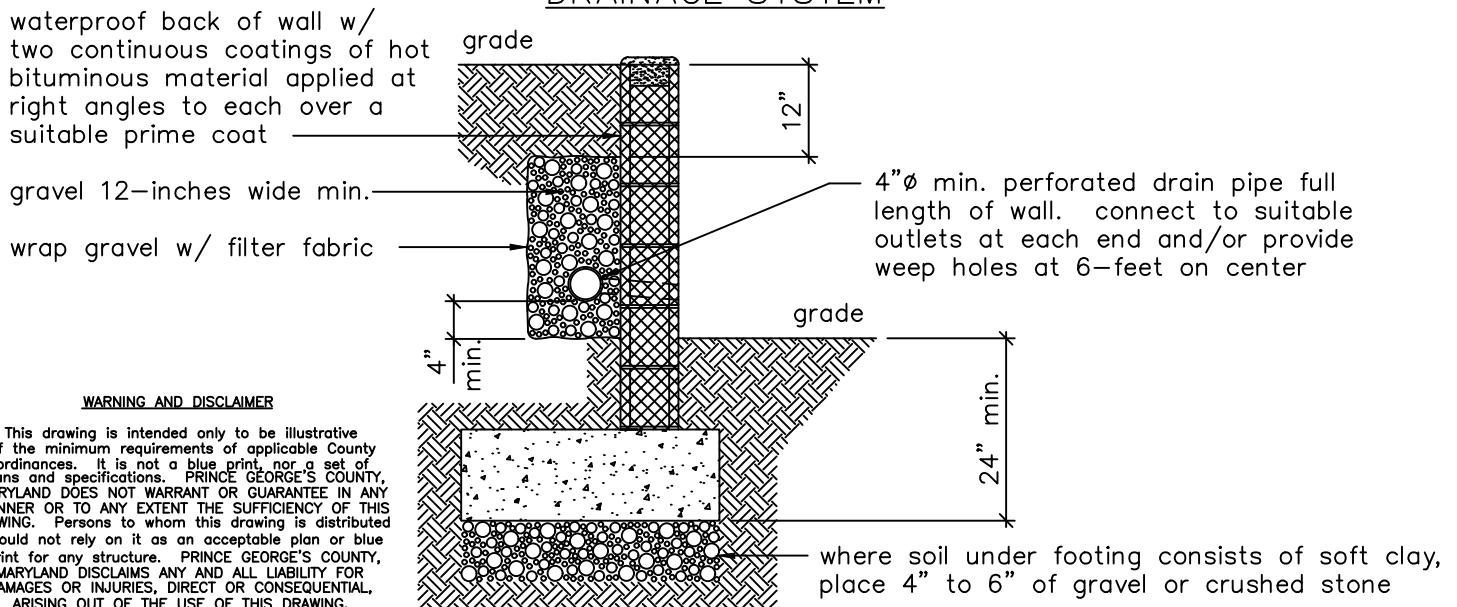
## GUARDRAIL DETAIL



### Guardrail Notes:

- 1.) guardrails are required when the top of the wall is 30-inches or more above the grade below.
- 2.) the guardrail height is reduced to 36-inches minimum in one and two family dwellings.

## DRAINAGE SYSTEM



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Drawing No.

D-030

Sheet 2 of 2

MASONRY RETAINING WALL  
SPECIFICATIONS, DRAINAGE  
SYSTEM & GUARDRAIL



Prince George's County Government  
Department of Permitting, Inspections and Enforcement

