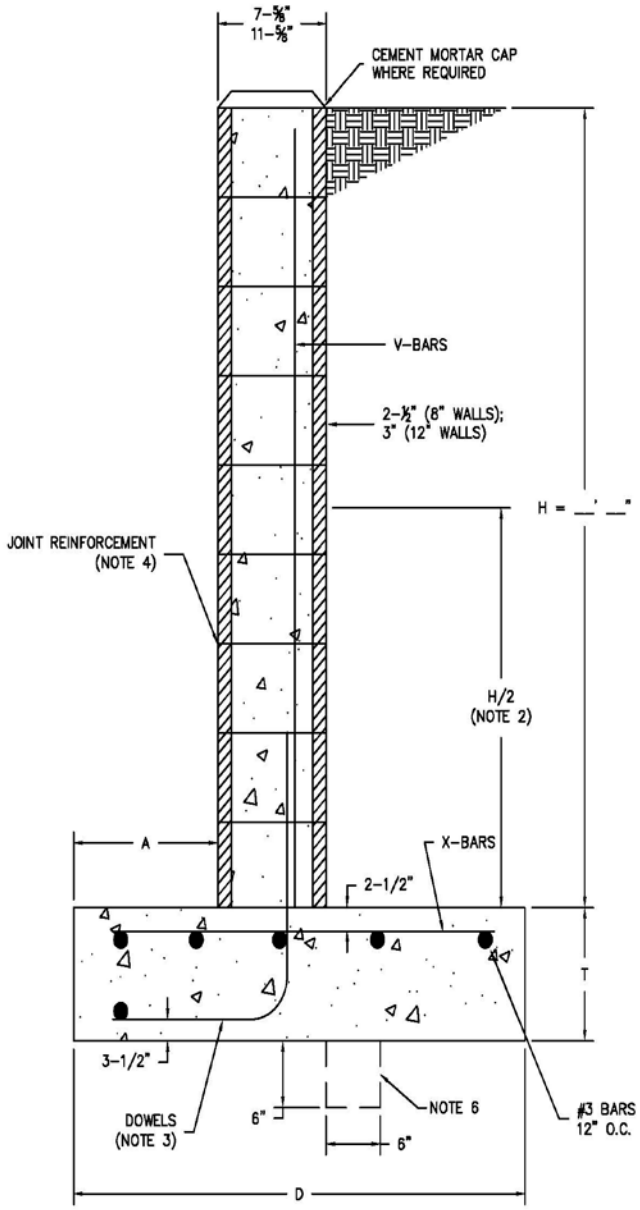
PA-047 R/C Masonry Wall
Standard Drawings Folder



NOT TO SCALE

8 INCH AND 12 INCH RETAINING WALLS

H	A	D	T	V-BARS	X-BARS
FT.-IN.	IN.	FT.-IN.	IN.	(SEE NOTE 2)	
8 INCH REINFORCED CONCRETE MASONRY WALLS					
3'-4"	8"	2'-4"	9"	NO. 3 @ 32"	NO. 3 @ 27"
4'-0"	10"	2'-9"	9"	NO. 4 @ 32"	NO. 3 @ 27"
4'-8"	12"	3'-4"	10"	NO. 5 @ 32"	NO. 3 @ 27"
5'-4"	14"	3'-8"	10"	NO. 4 @ 16"	NO. 4 @ 30"
6'-0"	16"	4'-2"	12"	NO. 6 @ 24"	NO. 4 @ 25"
12 INCH REINFORCED CONCRETE MASONRY WALLS					
5'-4"	14"	3'-8"	10"	NO. 4 @ 24"	NO. 3 @ 25"
6'-0"	15"	4'-2"	12"	NO. 4 @ 16"	NO. 4 @ 30"
6'-8"	16"	4'-6"	12"	NO. 6 @ 24"	NO. 4 @ 22"
7'-4"	18"	4'-10"	12"	NO. 5 @ 16"	NO. 5 @ 26"
8'-0"	20"	5'-4"	12"	NO. 7 @ 24"	NO. 5 @ 21"
8'-8"	22"	5'-10"	14"	NO. 8 @ 8"	NO. 6 @ 26"
9'-4"	24"	6'-2"	14"	NO. 8 @ 8"	NO. 6 @ 21"

NOTES

1. REINFORCEMENT OF A SIZE AND SPACING OTHER THAN GIVEN IN THE TABLE MAY BE USED, PROVIDING SUCH OTHER REINFORCEMENT FURNISHES AN AREA OF STEEL AT LEAST EQUAL TO THAT INDICATED IN THE TABLE.
2. ALTERNATIVE V-BAR MAY BE STOPPED AT THE MID-HEIGHT OF THE WALL (H/2) IF THE SPACING OF THE BARS CONTINUED TO THE TOP DOES NOT EXCEED 36".
3. DOWELS SHALL BE AT LEAST EQUAL IN SIZE AND SPACING TO V-BARS, SHALL PROJECT A MINIMUM OF 30 BAR DIAMETERS INTO THE FILLED BLOCK CORES, AND SHALL EXTEND TO THE TOE OF THE FOOTING.
4. JOINT REINFORCEMENT CONSISTING OF 9 GA. LONGITUDINAL WIRES AND 3/16" CROSS RODS SHALL BE PROVIDED AT 8" CENTERS VERTICALLY.
5. MATERIALS AND CONSTRUCTION PRACTICES SHALL COMPLY WITH ACI 531.
6. PROVIDE KEY FOR WALLS WHERE "H" EXCEEDS 6'-0", UNLESS WALL IS ADJACENT TO RESTRAINING FLOOR.
7. BACKFILLING AGAINST THE WALL SHALL NOT BEGIN UNTIL 14 DAYS AFTER THE CORES HAVE BEEN FILLED WITH CONCRETE. HEAVY EQUIPMENT SHOULD NOT APPROACH CLOSER TO THE WALL THAN A DISTANCE EQUAL TO THE WALL HEIGHT.
8. DRAINAGE AND WATERPROOFING BEHIND THE WALL SHALL BE AS REQUIRED BY THE ENGINEER.

DESIGN PARAMETERS
* REINFORCED CONCRETE MASONRY
  BLOCK GRADE NI OR NII, ASTM C-90
  F'c = 1200 PSI
  MORTAR TYPE M OR S, ASTM C-270
* REINFORCED CONCRETE
  F'c = 4000 PSI
  F'y = 40 KSI
* EARTH
  EQUIVALENT FLUID WEIGHT = 45 PCF
  LEVEL BACKFILL; NO SURCHARGE
  ALLOWABLE BEARING PRESSURE = 2500 PSF
  COEFFICIENT OF FRICTION (BETWEEN SOIL AND FOOTING) = 0.55

* ASSUMED WEIGHTS
  BACKFILL 100 PCF.
  REINF. MASONRY 100 PCF.
  REINF. CONCRETE 150 PCF.
* FACTORS OF SAFETY
  SLIDING = 1.5
  OVERTURNING = 2.0

(ADAPTED FROM NCMA-TEK 4B)

REDRAWN: TJA 7/05

Designed A. WOOD Date 1/96
Drawn S. BURN 1/96
Checked
Approved by

COUNTY, PENNSYLVANIA
R/C MASONRY WALL

NRCS
National Resources Conservation Service
United States Department of Agriculture

File No. PA-047.dwg
Drawing No. PA-047
Sheet ___ of ___