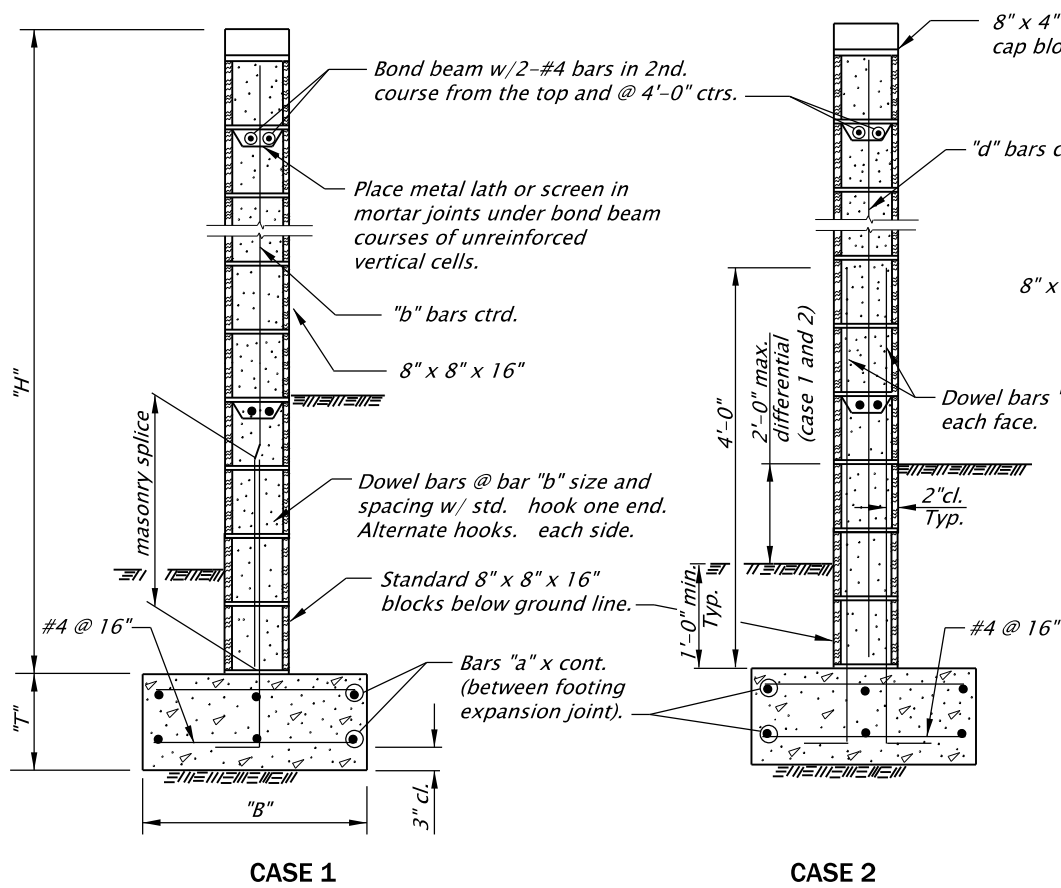




TYPICAL WALL SECTION
NONE

NOTE:
Single wythe joint reinforcement maybe used in-place of a bond beam. Joint reinforcement shall be installed at 8" ctrs., using ladder type cold drawn steel (ASTM A82), 8 gauge side rods and galv. according to ASTM A641 - Class 3.
Footings to be placed on good or average soil types.

SOIL TYPES

GOOD SOIL

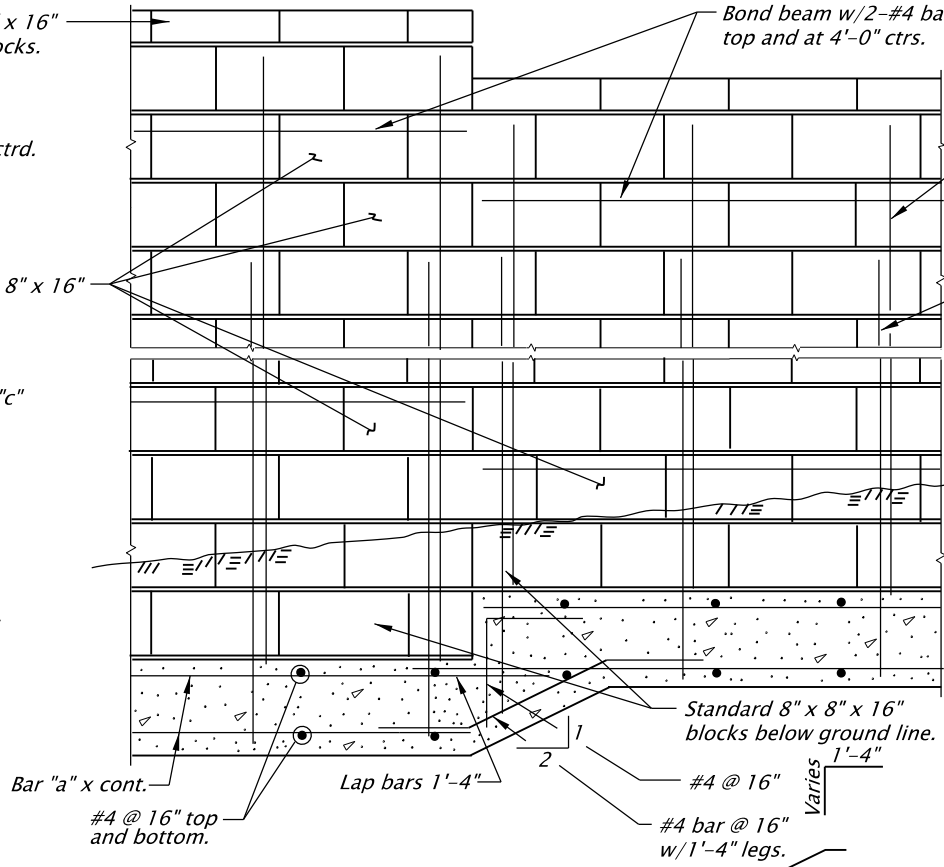
Compact, well graded sand or sand and gravel. Design $\phi = 35^\circ$. Design $Y = 120$ pcf. well drained and not located where water will stand.

AVERAGE SOIL

Compact fine sand, well drained sandy loam, loose coarse sand and gravel, hard or med. clay. Design $\phi = 25^\circ$. Design $Y = 100$ pcf. Soil should drain sufficiently so that water will not stand on the surface.

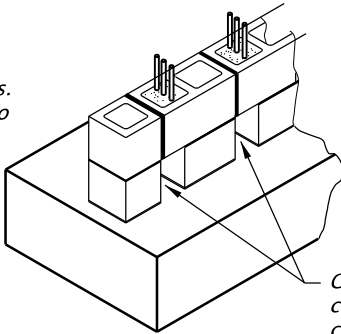
POOR SOIL

(Soil investigation required) Soft clay, loams, poorly compacted sands. Contains large amounts of silt or organic material. Usually found in low lying areas and are subject to standing water.

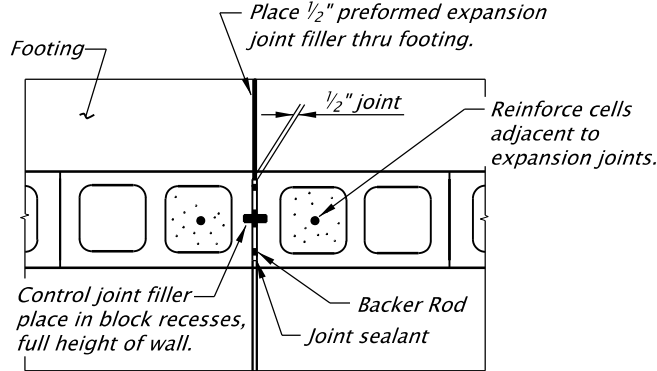


WALL ELEVATION
NONE

NOTE:
Clean out mortar droppings. Form over openings prior to filling cores with grout.



CLEANOUT DETAIL
Cleanout details required for high-lift grouting only.
See Special Provisions.



EXPANSION JOINT DETAIL
NONE

GENERAL NOTES :

1. Sound Walls are designed in accordance with the AASHTO Guide Specifications for Structural Design of Sound Barriers (1989).
2. Heights under 14' designed for 12 psf (80 mph), + 19 psf (90 & 100 mph).
3. Heights 14' to 16' for 17 psf (80mph), 26 psf (90-100 mph). This meets requirements for B1 exposure, and 50 year recurrence interval.
4. Masonry walls designed by working stress design and footings by load factor design method.
5. All reinforcing steel shall conform to ASTM Specification A706, AASHTO M31 (ASTM A615) Grade 60. The following splice lengths shall be used unless shown otherwise:

Bar Size	3	4	5	6	7	8	9	10	11
Uncoated	1'-0"	1'-4"	1'-8"	2'-0"	2'-8"	3'-6"	4'-4"	5'-7"	6'-9"
Splice Length	Epoxy Coated	1'-5"	1'-10"	2'-4"	2'-10"	3'-9"	4'-11"	6'-1"	7'-10"
6. All bars shall have a min. cover of 2" including the masonry unit, unless shown otherwise.
7. Reinforcing steel for the walls shall not be fabricated until final footing elevations have been determined in the field.
8. Concrete in footings shall be Class 3600-1 1/2", 1 or 3/4".
9. All concrete masonry units shall be ASTM C-90 light weight or medium weight classification.
10. The compressive strength on the net-section area of a standard and split-face hollow block shall be 1800 psi for individual unit; 2000 psi average of 3 units.
11. The design strength of the masonry wall (fM) shall be 1500psi. The masonry requires special inspection in accordance with Oregon Structural Specialty Code.
12. The design strength of the mortar shall be 1800 psi at 28 days (ASTM C-270, Type S).
13. The design strength of the concrete grout shall be 2000 psi at 28 days (ASTM C-476).
14. A blend of course and fine aggregate conforming to ASTM C33 and C331 shall be used to fabricate the masonry units. Minimum weight of a hollow masonry unit shall be 95 pcf, dry density.
15. All masonry work and materials shall be as called for in the Special Provisions.
16. All blocks with no exposed faces shall be a standard block shape. All exposed block faces shall be split-face unless shown otherwise.
17. Sound Walls located on bridges, retaining walls or poor soils and in B2 or wind exposure in B2 or C require special design.
18. See plans for location of expansion joints. If not shown, place expansion joints in footing at 80' ctrs. max. and in the wall at changes in wall heights and at 40' ctrs. max.

SOUNDWALL SCHEDULE

80 mph							
Wall Height H	Ftg. Width B	Ftg. Depth T	Cont. bars "a"	Case 1 bars "b"	Case 2 bars "c" * bars "d"	# Courses to Grout Solid **	
≤ 6'-0"	2'-3"	11"	6 - #4	#4@48"	—	1	1
8'-0"	2'-3"	11"	6 - #4	#4@32"	—	1	1
10'-0"	2'-9"	12"	6 - #4	#5@32"	—	1	1
12'-0"	3'-3"	12"	6 - #4	#5@24"	—	1	1
14'-0"	3'-9"	12"	8 - #4	—	#5@24" #4@24"	1	1
16'-0"	4'-3"	12"	8 - #4	—	#5@16" #4@16"	1	1

* Dowel bars "C" each face

** Grout solid bottom # of courses

90-100 mph							
Wall Height H	Ftg. Width B	Ftg. Depth T	Cont. bars "a"	Case 1 bars "b"	Case 2 bars "c" * bars "d"	# Courses to Solid Grout **	
≤ 6'-0"	2'-6"	11"	6 - #4	#4@40"	—	1	1
8'-0"	3'-0"	12"	6 - #4	#5@40"	—	1	1
10'-0"	3'-9"	12"	8 - #4	#5@24"	—	1	1
12'-0"	4'-3"	12"	8 - #4	—	#5@24" #4@24"	1	1
14'-0"	4'-9"	14"	10 - #4	—	#6@16" #5@16"	2	2
16'-0"	5'-6"	14"	10 - #4	—	#6@8" #5@8"	4	4

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
STANDARD REINFORCED CONCRETE MASONRY SOUND WALL DETAILS			
2024			
DATE	REVISION DESCRIPTION		
CALC. BOOK NO.	6402, 6406, 6407	SDR DATE	01-JUL-2020
			BR730