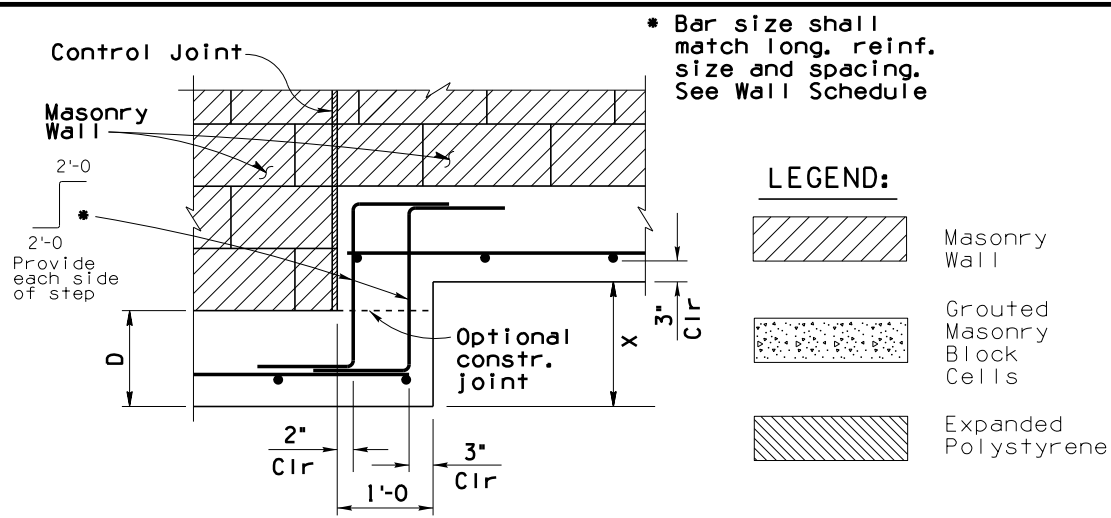


Note to Designer: The information presented in this Standard Drawing has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

PRIOR DISTRIBUTION DATE 01/16

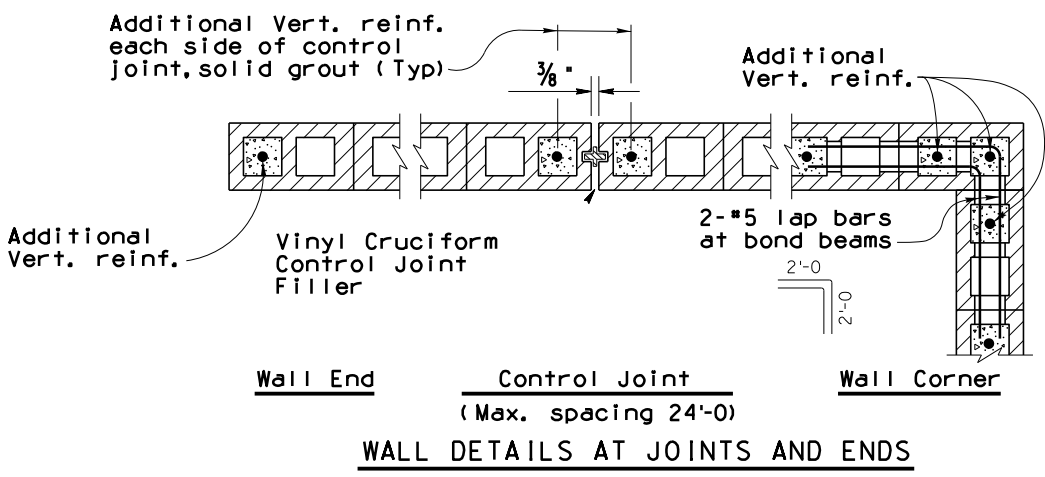


**FOOTING STEP DETAIL**  
See Project Plans for location of footing steps and Dim. X

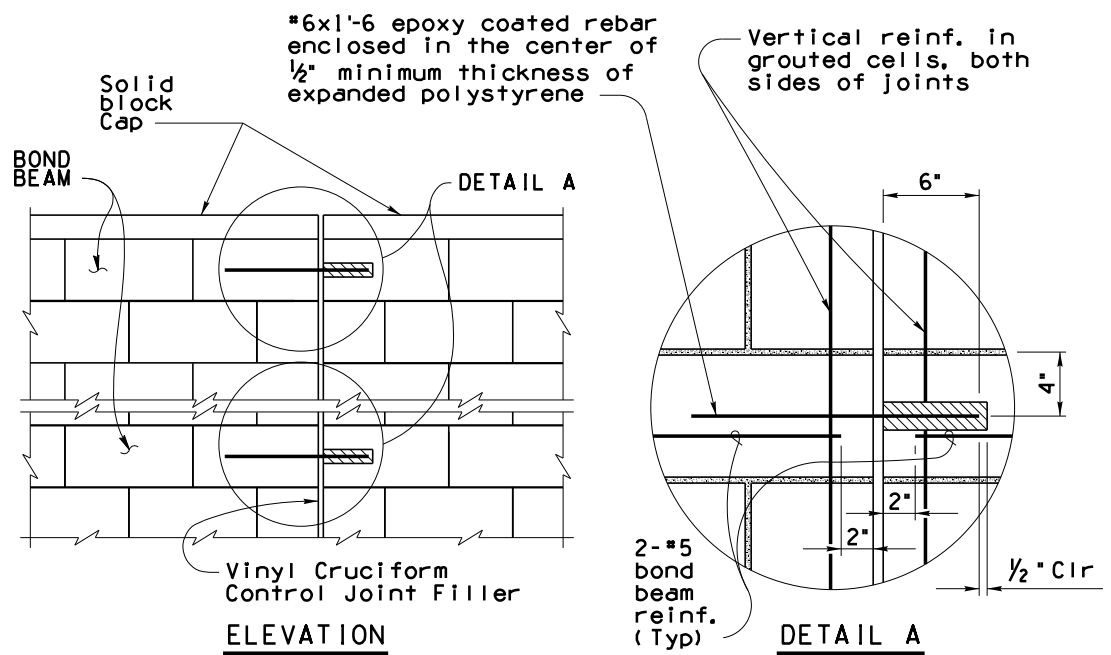
**LEGEND:**

- Masonry Wall
- Grouted Masonry Block Cells
- Expanded Polystyrene

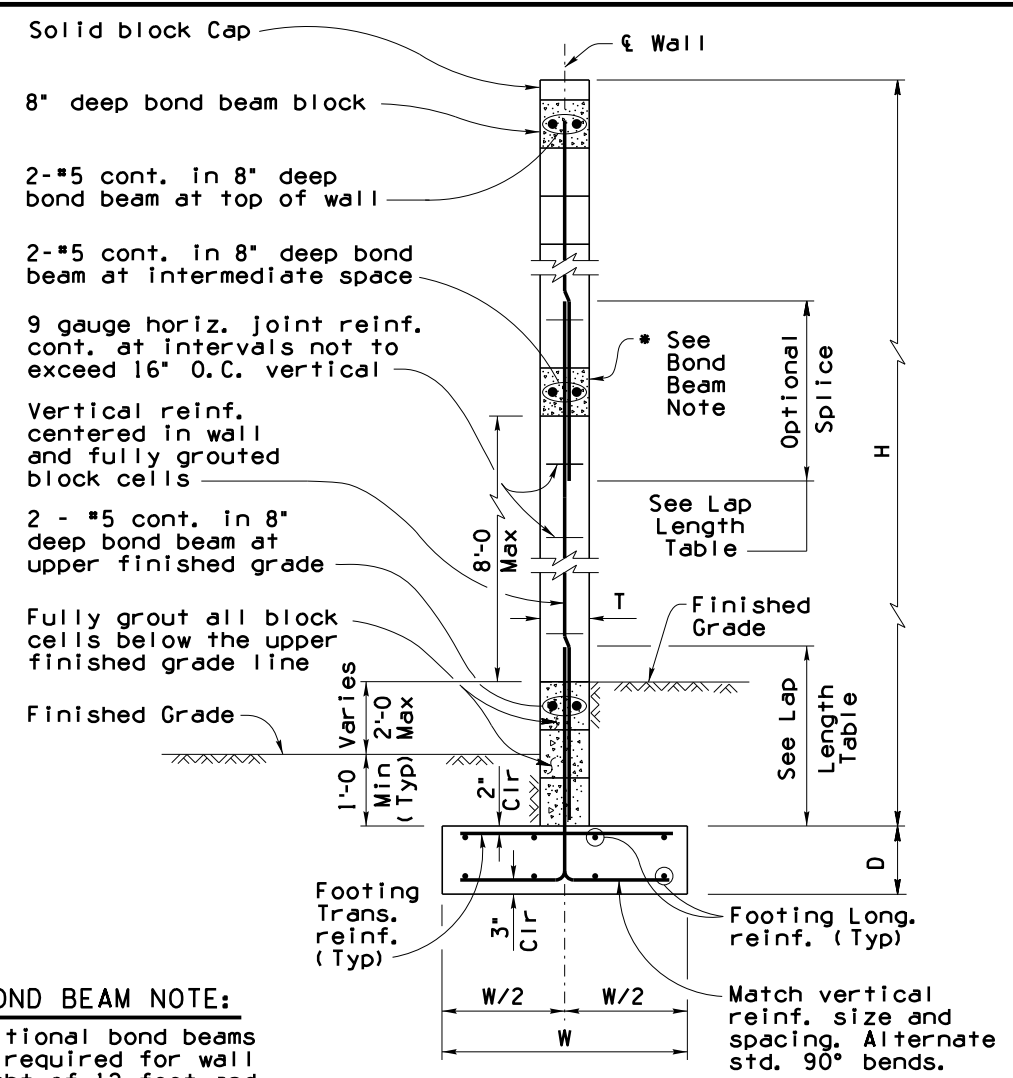
Item	SOUND BARRIER WALL (MASONRY)
Item No.	9140137
Measure	Square Foot



**WALL DETAILS AT JOINTS AND ENDS**



**TYPICAL BOND BEAM DETAIL AT CONTROL JOINT**  
(For bond beams above the upper Finished Grade Line)



**\* BOND BEAM NOTE:**  
Additional bond beams are required for wall height of 12 feet and higher. Equally space bond beams at 8'-0 max.

**TYPICAL WALL SECTION**  
(For Wall Height up to 13'-11)

Design Wall Height H	** Wall Thick T	Footing Depth D	Footing Width W	*** Reinforcing Steel			Factored Average Soil Bearing Pressure (psf)
				Wall	Footing		
				Vert. Reinf.	Trans. Reinf.	Long. Reinf.	
4'-0 to 5'-11	8"	1'-0	3'-6	*5e24"	*5e16"	*5e16"	1,400
6'-0 to 7'-11	8"	1'-0	4'-0	*5e16"	*5e16"	*5e16"	1,500
8'-0 to 9'-11	12"	1'-3	4'-6	*5e16"	*5e16"	*5e16"	1,600
10'-0 to 11'-11	12"	1'-6	5'-0	*6e16"	*6e16"	*5e16"	1,700
12'-0 to 13'-11	12"	1'-6	5'-6	*6e16"	*6e16"	*5e16"	1,800

\*\* Nominal Dimension \*\*\* Additional Reinf. required at Control Joints

Lap Length Table	
Bar Size	Lap Length
*4	2'-1
*5	2'-6
*6	2'-11
*7	3'-5
*8	3'-11

WIND LOADING		
Limit State	Wind velocity (mph)	Pressure (psf)
Service I	70	12.82
Service IV	86.25	19.46
Strength III	115	34.59
Strength V	80	16.74

**NOTE:**

See SD 8.02 (2 of 2) "Typical Sections Through Vertical Wall Reinforcement" for similar details not shown on this sheet.

STANDARDS ENGINEER  
**A. ALZUBI**

RECOMMENDED FOR APPROVAL  
GROUP MANAGER  
**D. EBERHART**

APPROVED  
STANDARDS COMMITTEE APPROVED FOR DISTRIBUTION

ARIZONA DEPARTMENT OF TRANSPORTATION  
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION  
BRIDGE GROUP STANDARD DRAWING

**SOUND BARRIER WALL MASONRY**

DRAWING NO.  
**SD 8.02 (1 of 2)**

06/22  
DATE

**GENERAL NOTES:**

Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, latest Edition.

Design Specifications - AASHTO LRFD Bridge Design Specifications, 8th Edition 2017, with the 2018 Interims, and the TMS 402/602-16 Building Code requirements and specifications for Masonry Structures.

Wind Exposure Category C. For design wind load, see Wind Loading table.

Vehicular collision forces are not included in the design of the sound walls.

Special Inspection is required for all masonry wall construction. Vertical cells containing reinforcements shall be grouted solid full height.

Bond Beams with reinforcements shall be grouted solid full length.

All Concrete shall be Class "S" (f'c = 3,000 psi).

Reinforcing steel shall conform to ASTM A615. All reinforcing shall be furnished as Grade 60.

All bends and hooks shall meet the requirements of AASHTO LRFD Article 5.10. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

Compact backfill for footing and wall base minimum 100 percent of ASTM D698 maximum dry density.

See Project Plans for wall layout, top of footing and finished grade elevations, footing step and wall joint locations. Height of wall may vary ± 2 inches. Control joints shall occur at intervals not to exceed 24'-0. See Project Plans for wall surface treatment and type of block.

Pay item measure of square foot of wall constructed will be measured along the front face of the wall from top of footing to top of wall cap.

Dimensions shall not be scaled from drawings.

**WALL DESIGN NOTES:**

Sound barrier walls selection shall be based on the noise analysis. The wall selected shall account for a future 4 foot wall height extension.

Values shown in the wall schedule represent the design values for each wall height including a future 4 foot extension. No modifications to the wall schedule will be needed to extend the wall a maximum of 4 feet.

Wall designer shall note on the plans that the wall has been designed to allow for a 4 foot extension.

The maximum wall height selected from the wall schedule shall not exceed 26'-0 to allow for a 4 foot future wall extension.