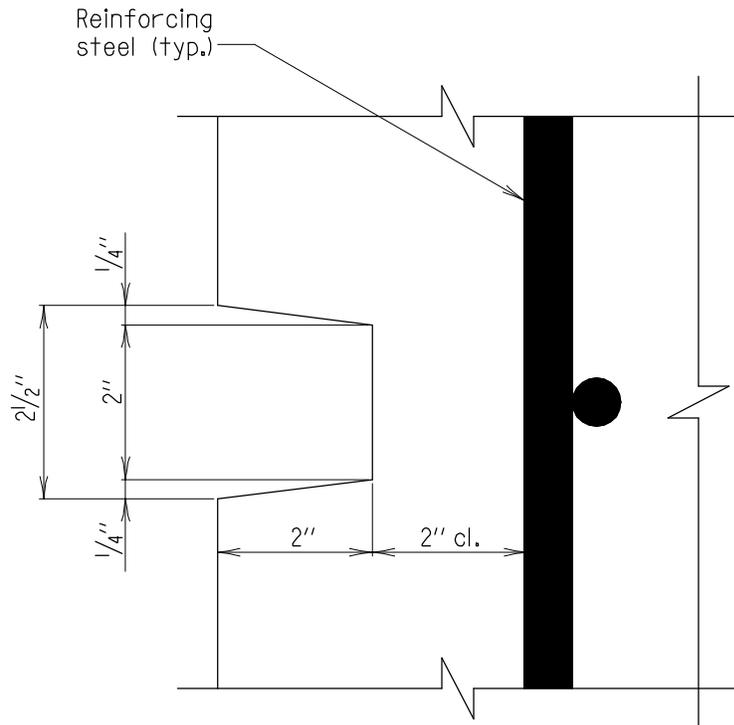


# AESTHETICS

(AES)



GROOVE DETAIL

Scale: None

APPROVAL	
<i>E.S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES	
DATE: 3/14/94	
REVISIONS	
SHA	FHWA

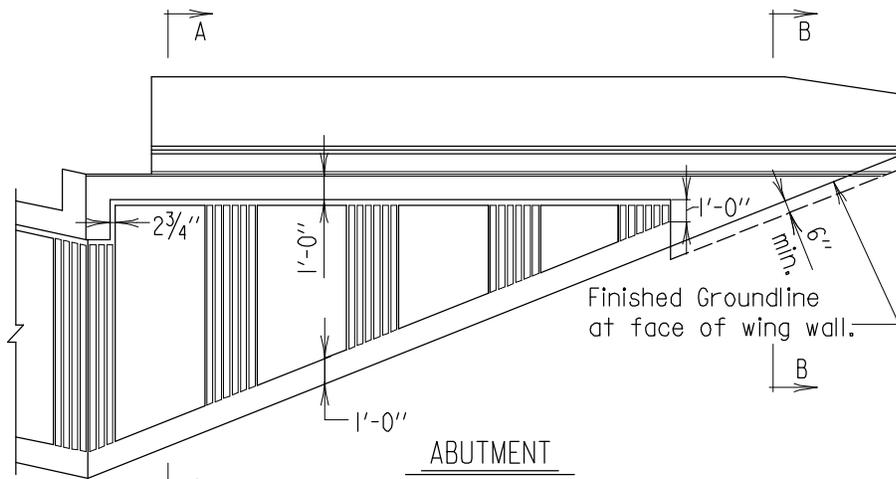
FHWA APPROVAL
DATE:

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

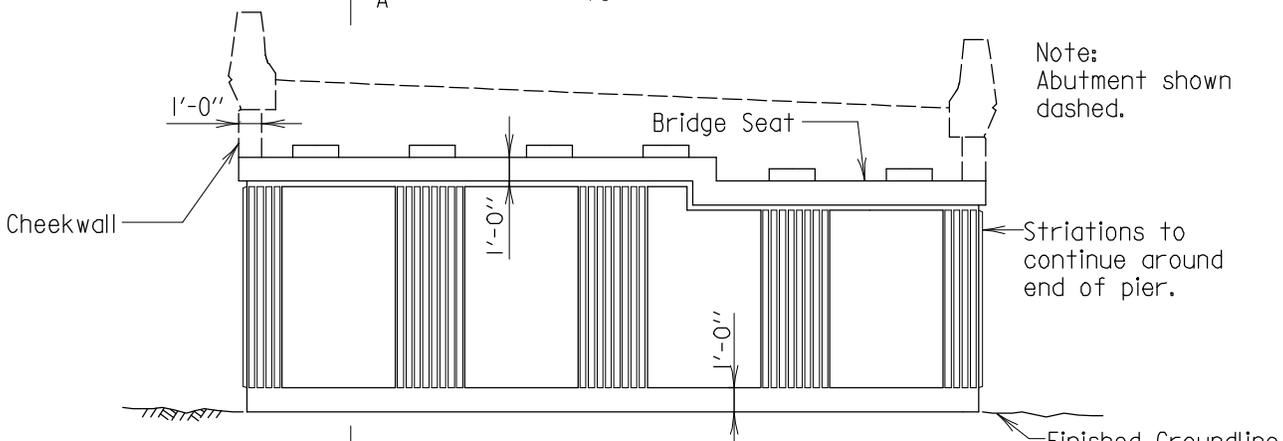
GROOVE DETAIL FOR  
SUBSTRUCTURE ELEMENTS

STANDARD NO. AES-101

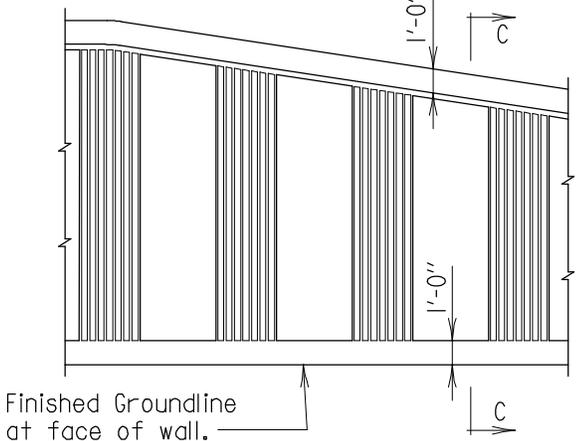
SHEET    OF



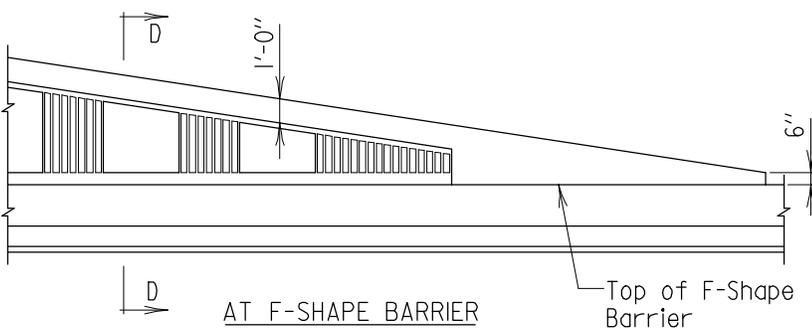
**ABUTMENT  
WING WALL**  
Scale: 1/8" = 1'-0"



**ABUTMENT/PIER**  
Scale: 1/8" = 1'-0"



**AT OTHER LOCATIONS**



**AT F-SHAPE BARRIER**

**RETAINING WALL**  
Scale: 1/8" = 1'-0"

- Notes:
1. Special layouts may be necessary at certain locations. If details are shown on other Contract Drawings such limitations will take priority over these standards.
  2. These striations shall only be used on bridge substructure elements and retaining walls, where specifically called for on Contract Drawings.
  3. Cost of all striations, complete-in-place, to be included in other pertinent Contract items.
  4. Contraction and expansion joints shall always be located in striated areas.

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DATE: 6-8-90

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L.S. Friedman DIRECTOR OFFICE OF STRUCTURES	
DATE: 11/3/86	
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1-22-01	
10-22-03	

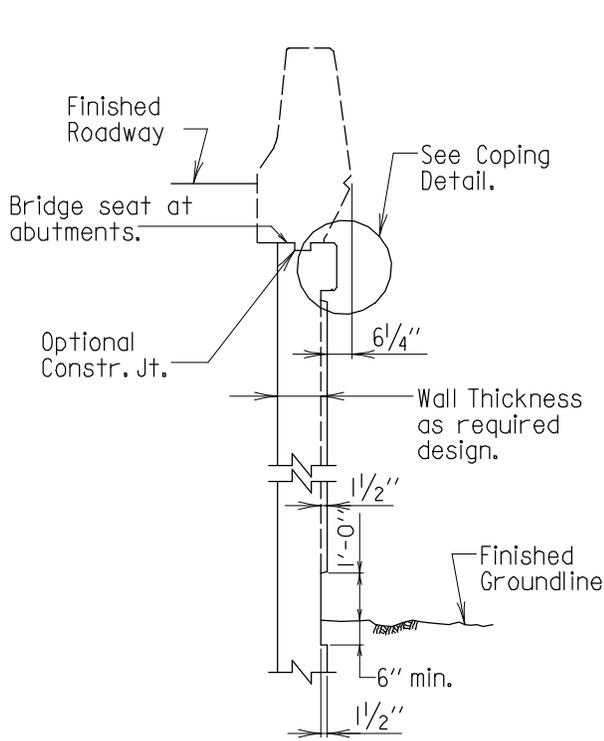
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

TRAPEZOIDAL STRIATION DETAILS FOR  
BRIDGE SUBSTRUCTURE UNITS  
AND RETAINING WALLS

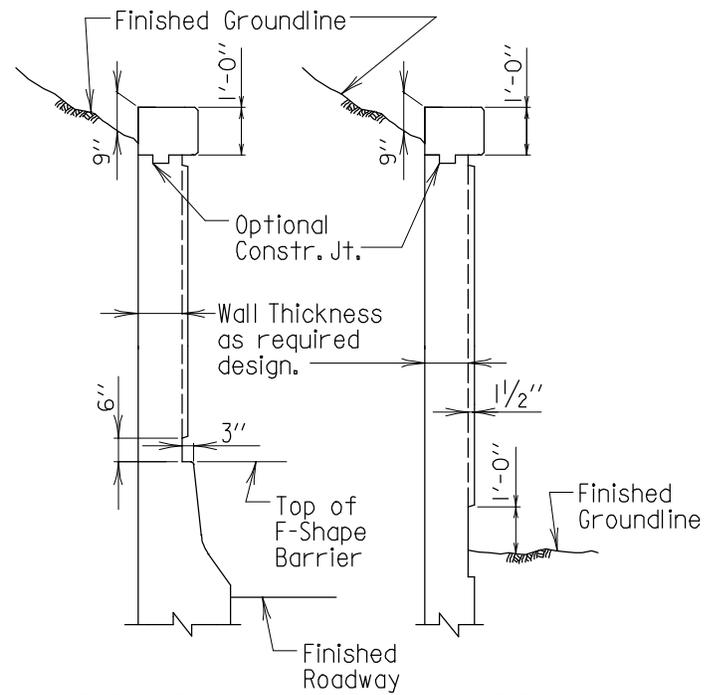
STANDARD NO. AES-201

SHEET 1 OF 2

AESTHETICS

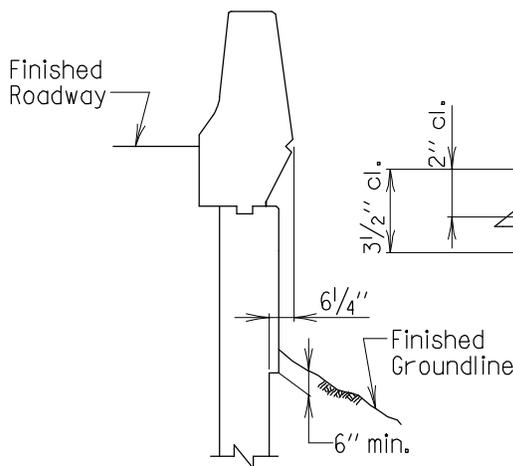


**SECTION A-A**  
Scale: 1/4" = 1'-0"

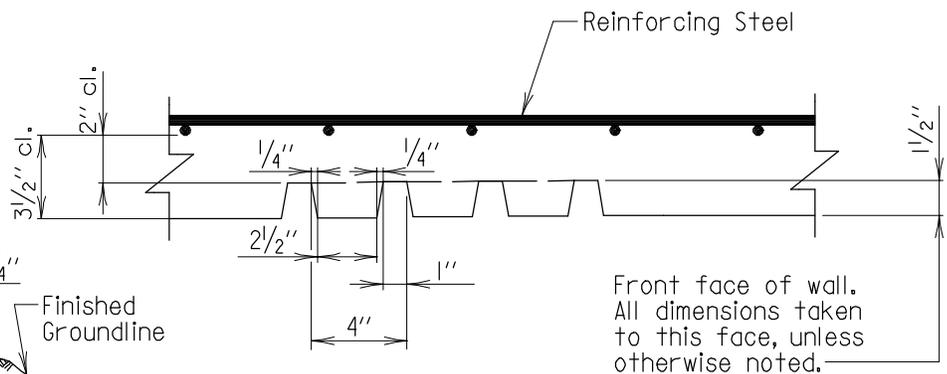


**SECTION D-D**  
**RETAINING WALL**  
**WITH JERSEY BARRIER**  
Scale: 1/4" = 1'-0"

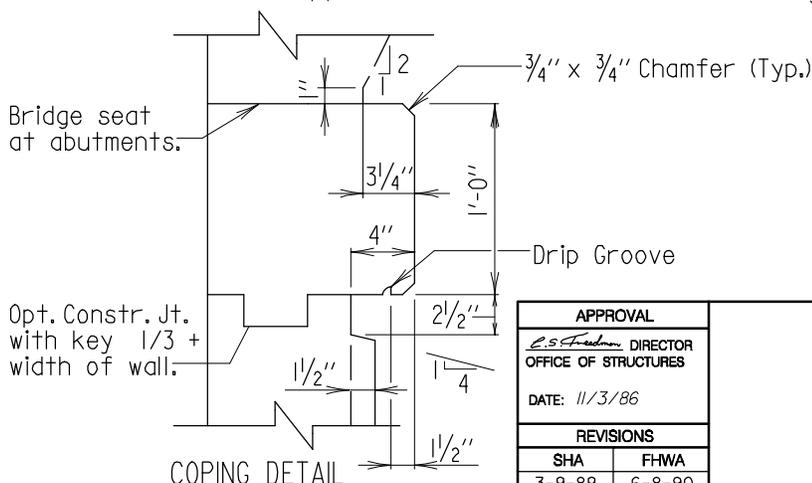
**SECTION C-C**  
**RETAINING WALL**  
**AT OTHER LOCATIONS**  
Scale: 1/4" = 1'-0"



**SECTION B-B**  
Scale: 1/4" = 1'-0"



**FORMBOARD PATTERN DETAIL**  
Scale: 1/2" = 1'-0"



**COPING DETAIL**  
Scale: 1" = 1'-0"

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1-22-01	
FHWA APPROVAL	10-22-03
DATE: 6-8-90	

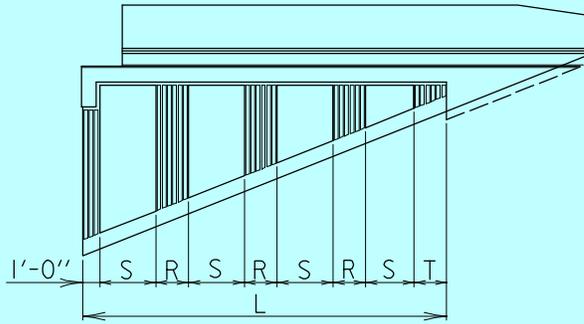
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DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

TRAPEZOIDAL STRIATION DETAILS FOR  
BRIDGE SUBSTRUCTURE UNITS  
AND RETAINING WALLS

**STANDARD NO. AES-201**

SHEET 2 OF 2

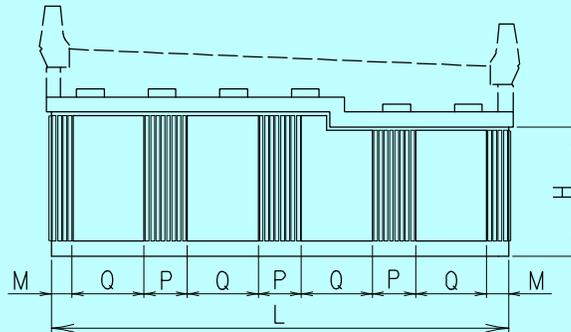
For wing walls  
 $S \approx \frac{4}{3} T \approx 2R$



$S = 1/N (L - 1' - 0'' - T - (N - 1)R)$   
 N=Number of Plain Panels  
 R=Intermediate Striated Panel Dimension  
 T=End Striated Panel Dimension  
 S=Plain Panel Length  
 L=Adjusted Length of Abutment Face (See AES-203)

ABUTMENT  
WING WALL  
 Scale:None

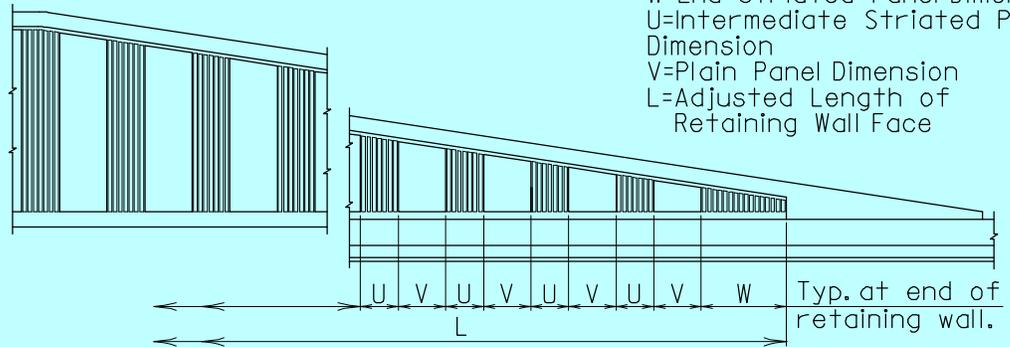
For abutments/piers  
 $Q \approx 2P \approx 4M$



$Q = 1/N (L - 2M - (N - 1)P)$   
 N=Number of Plain Panels  
 M=End Striated Panel Dimension  
 P=Intermediate Striated Panel Dimension  
 Q=Plain Panel Dimension  
 L=Adjusted Length of Abutment Face (See AES-203)

ABUTMENT/PIER  
 Scale:None

For retaining walls  
 $W \approx \frac{5}{4} V \approx \frac{5}{3} U$



$V = 1/N (L - 2W - (N - 1)U)$   
 N=Number of Plain Panels  
 W=End Striated Panel Dimension  
 U=Intermediate Striated Panel Dimension  
 V=Plain Panel Dimension  
 L=Adjusted Length of Retaining Wall Face

RETAINING WALL  
 Scale:None

\* FOR OFFICE USE ONLY \*

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12-21-87	
10-22-03	
FHWA APPROVAL	
DATE:	

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF STRUCTURES

TRAPEZOIDAL STRIATION LAYOUT FOR  
 BRIDGE SUBSTRUCTURE UNITS  
 AND RETAINING WALLS

STANDARD NO. AES-202

SHEET 1 OF 1

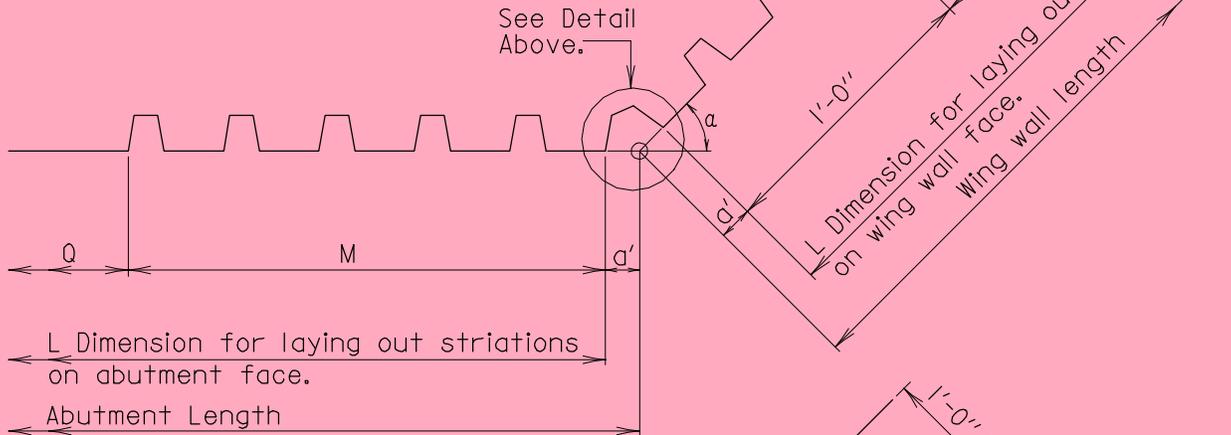
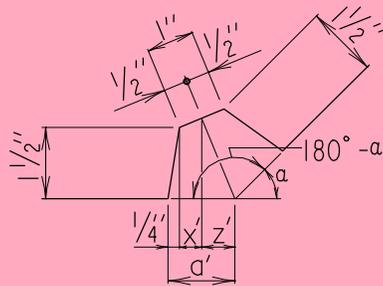
$$a' = x' + z' + \frac{1}{4}''$$

$$x' = \frac{1}{2}'' \cos \alpha / 2$$

$$y' = \frac{1}{2}'' \sin \alpha / 2$$

$$z' = (\frac{1}{2}'' + y') \tan \alpha / 2$$

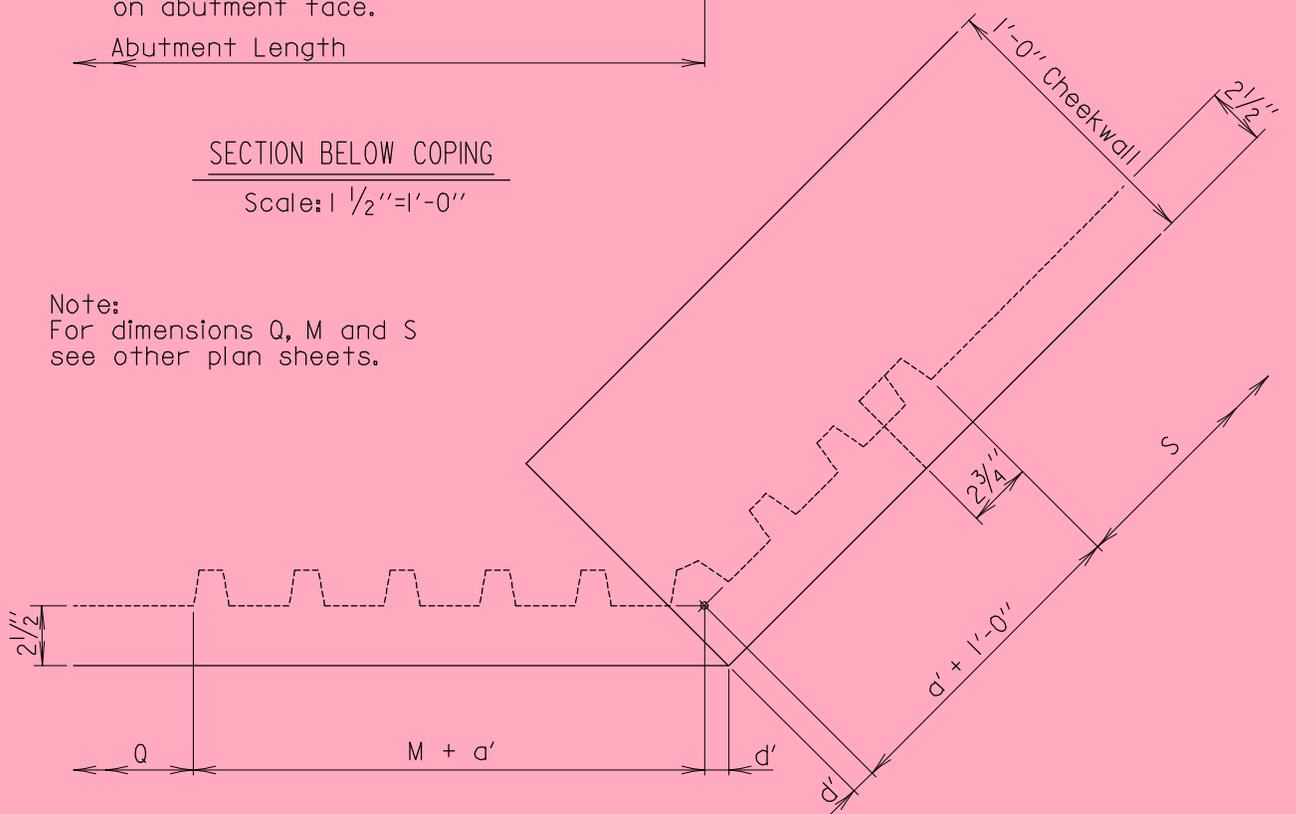
$$d' = 2 \frac{1}{2}'' \tan \alpha / 2$$



**SECTION BELOW COPING**

Scale: 1 1/2" = 1'-0"

Note:  
For dimensions Q, M and S  
see other plan sheets.



**SECTION THRU COPING**

Scale: 1 1/2" = 1'-0"

Location				
a'				
d'				

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10-14-87	6-8-90
5-12-89	6-8-90
FHWA APPROVAL	1-22-01
DATE: 6-8-90	

STATE OF MARYLAND  
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TRAPEZOIDAL STRIATION CORNER DETAILS  
SQUARE AND OBTUSE CORNER

STANDARD NO. AES-203

SHEET 1 OF 2

$$\beta = (90 + a) \div 2$$

$$a = z + x + \frac{1}{4}''$$

$$b = (9'' + a) \div \tan a$$

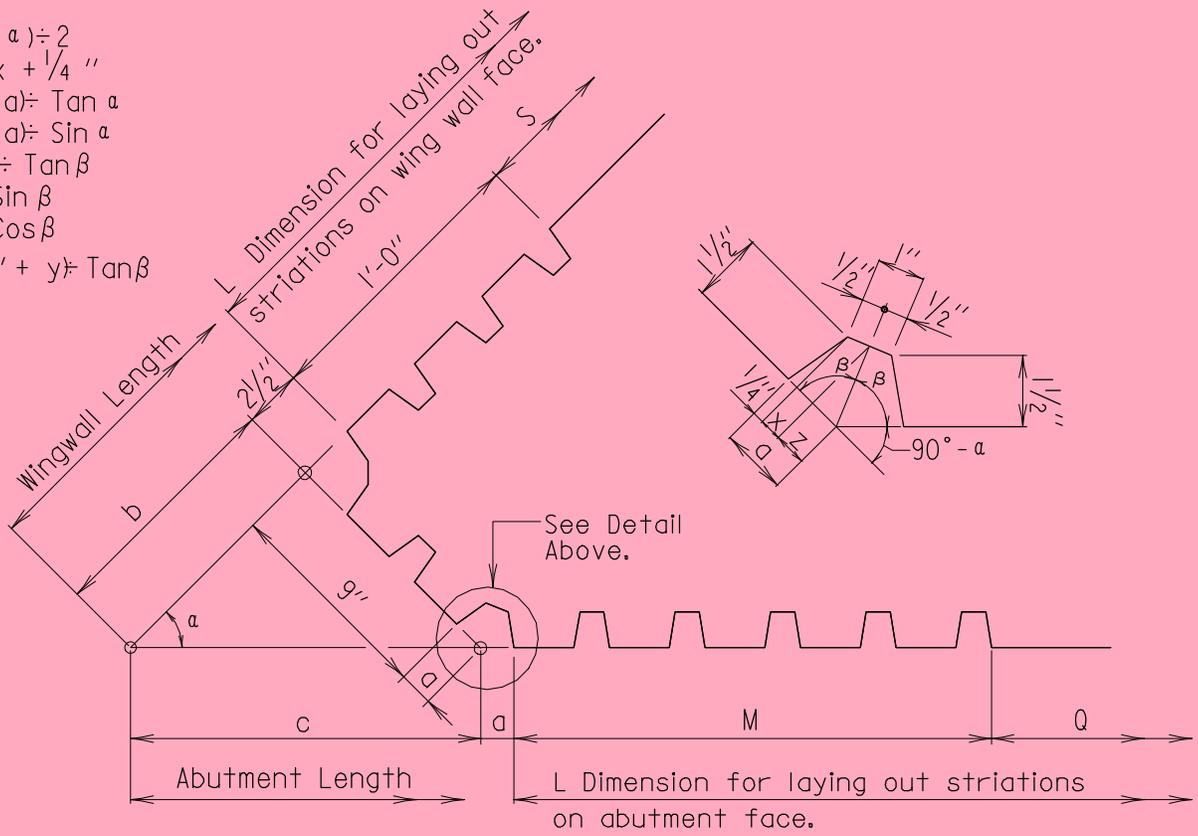
$$c = (9'' + a) \div \sin a$$

$$d = 2\frac{1}{2}'' \div \tan \beta$$

$$x = \frac{1}{2}'' \sin \beta$$

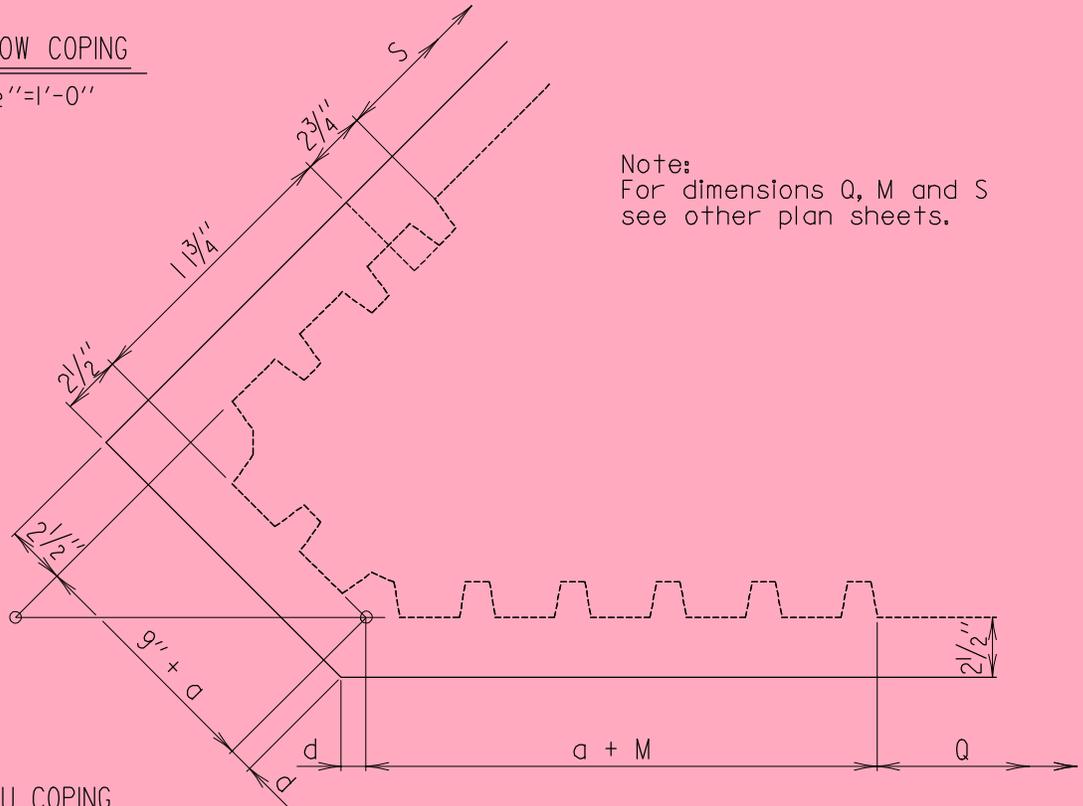
$$y = \frac{1}{2}'' \cos \beta$$

$$z = (1\frac{1}{2}'' + y) \div \tan \beta$$



SECTION BELOW COPING

Scale:  $1\frac{1}{2}'' = 1'-0''$



Note:  
For dimensions Q, M and S see other plan sheets.

SECTION THRU COPING

Scale:  $1\frac{1}{2}'' = 1'-0''$

Location			
a			
b			
c			
d			

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STATE OF MARYLAND  
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TRAPEZOIDAL STRIATION CORNER DETAILS  
ACUTE CORNER

STANDARD NO. AES-203

SHEET 2 OF 2

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DATE: 6-8-90