1. Provide Plain or Fiber Reinforced Bearing Pads meeting the requirements of Specification Section 932 for Ancillary Structures.
   A. For Collar Bearing Points provide:
      1. 4” x 4” x ⅝” Fiber Reinforced Pads;
      2. Plain Pads may be substituted for Fiber Reinforced Pads when sufficient bearing area is available on the concrete collar for the following:
         a. 10’ Post Spacing: 4” x 4” x ⅝”
         b. 20’ Post Spacing and Wall Height < 17 feet: 4” x 4” x ⅝”
         c. 20’ Post Spacing and Wall Height ≥ 17 feet: 4” x 5” x ⅝”
   B. At panel bearing points between stacked panels, use Plain or Fiber Reinforced Bearing Pads.

5. Post Spacing in this Index are nominal, and are measured from centerline to centerline of the auger cast piles. Actual post spacing may vary as shown in the Wall Control Drawings.

6. Panels:
   A. The sum of the individual stacked panel heights is the Wall Height plus 1’-0” (embedment depth).
   B. Where special graphics are required, locate the horizontal panel joints outside of the graphics. Where possible, hold horizontal panel joints at a constant elevation.
   C. Side Installed Panels are only permitted when reduced overhead clearance between posts prohibits installing panels from the top.
      1. For Flush Face panels, install panel into posts from the back face of the wall. Recessed panels may be installed from the front or back face of the wall.
      2. After panels are installed and centered between posts, grout between both panel ends and the adjoining posts (see Sheets 4 and 5 for details).
   D. Individual panel heights should be between 6’-0” and 12’-0” tall. The minimum panel height is 4’-0” and may be used where overhead clearance is limited, or where graphic panels are required on shorter walls.

7. Concrete And Grout:
   A. Concrete Class and Compressive Strength for:
      1. Precast Panels, Posts, and Post Caps: Class IV
      2. Cast-In-Place Collars: Class IV
   B. Minimum Compressive Strength for form removal and handling of posts and panels:
      1. 2,500 psi for horizontally cast post and panels
      2. 2,000 psi for vertically cast panels or when tilt-up tables are used for horizontally cast panels.
   C. Grout for Auger Cast Piles:
      1. Maximum Working Compressive Strength = 2,000 psi
      2. Minimum 28 day strength = 5,000 psi

8. Reinforcing Steel:
   A. In addition to the requirements of Specification Section 415, tie post and pile stirrups at the following locations as a minimum:
      1. Post Stirrups Tie at all four corner bars and at every third interior bar intersection.
      2. Pile Stirrups Tie to the main vertical reinforcing at alternate intersections for circular configurations and at the four corners and at every third interior bar intersection for rectangular configurations.
   B. Provide 2” concrete cover unless noted otherwise.

9. Casting Tolerances for precast panels and posts:
   A. Overall Height and Width: +/- ⅛”
   B. Thickness: +/- ⅛”
   C. Plane of side mold: +/- ⅛/1”
   D. Openings: +/- ⅛”
   E. Out of Square: 1/8” per 6 ft., but not more than 3/8” total along any side
   F. Warping: 1/16” per foot distance to nearest corner
   G. Bowing: 1/240 panel dimension
   H. Surface Smoothness for Type “A” Smooth Surface Texture Option: +/- 1/16”
Type "A"   SMOOTH

Type "B"   ASHLAR STONE

Type "C"   RUNNING BOND BLOCK

Type "D"   FRACTURED GRANITE

Type "E"   WIRE-CUT BRICK

Type "F"   CUT CORAL BLOCK

Type "E"   PEA GRAVEL

Type "G"   VERTICAL FRACTURED FIN

Type "H"   TRAPEZOID VERTICAL FINS W/ FRACTURED FACE

Type "I"   PEDESTAL VERTICAL FINS

NOTES:

1. Surfaces shall be formed, rolled, or pressed using form liners in accordance with the Plans and Specifications for Class 2 Surface Finish.

2. See Noise Wall Data Tables for project aesthetic requirements.
NOTES:
1. Submit specific form liner samples for approval by the Engineer.
2. Textures and graphics shown are for demonstration purposes only. See Noise Wall Data Tables in the plans for project specific texture and graphic requirements.
NOTE:
At the Contractor's option, Smooth or Deformed Welded Wire Reinforcement may be used (equal area).

<table>
<thead>
<tr>
<th>Vertical Steel</th>
<th>#4 Bars @ 10&quot; (As=0.24 in²/ft.) (Typ.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal Steel</td>
<td>#4 Bars @ 8&quot; (As=0.30 in²/ft.) (Typ.)</td>
</tr>
</tbody>
</table>

In lieu of utilizing the standard pick-up points below, panels may be cast vertically or cast horizontally then tilted upright using tilt-tables prior to lifting from form. In this case, pick points must be placed in the top of panels only and transported maintaining the vertical orientation. If these criteria are met, the vertical steel may be reduced to #4 Bars @ 1'-3" (As=0.16 in²/ft.).

STANDARD PICK UP POINTS FOR PANELS
(Panel shall be rotated about long axis only)

Notes:
1. See Sheet 3 for allowable methods of applying textures.
2. See plans for panel type and aesthetic requirements.
3. For equal post spacing, side-installed panel length will be shorter than top-installed Panel length.

TYPICAL PANEL ELEVATION

SECTION D-D
(Showing Flush Type Panel)

SECTION D-D
(Showing Recessed Type Panel)

SECTION C-C

TYPICAL PANEL DETAILS

NOTE:

1. See Sheet 3 for allowable methods of applying textures.
2. See plans for panel type and aesthetic requirements.
3. For equal post spacing, side-installed panel length will be shorter than top-installed Panel length.
NOTE:
The shop drawings shall include specific pivoting details of panel ends at locations where the deflection angle (2Δ°) between panels exceeds 7°.

NOTE:
The shop drawings shall include specific pivoting details of panel ends at locations where the deflection angle (2Δ°) between panels exceeds 20°.

PIVOTING DETAILS
(Flush Type Panel)

PIVOTING DETAILS
(Recessed Type Panel)

TYPICAL PANEL DETAILS
DRAINAGE HOLES TYPES A, B, C & D
(Front Face of Wall Shown)
(Two Holes Shown, One Hole Similar)

Bar A2 (Pair)
Bar Length = 4'-4"

BAR BENDING DETAILS (#3 Bars)

GRATING NOTES:
1. Grating shall be ASTM A36 steel welded in accordance with the current edition of ANSI/AWS D1.1
   Steel Welding Code. Hot-dip galvanize grate after fabrication in accordance with Specification
   Section 962.
2. Expansion Anchors: Use 1/2" Ø x 2" min. corrosion resistant (zinc/aluminum alloy or stainless steel)
   expansion anchors to connect grates to panels.
3. Blockout textured concrete surface for a strip 2" wide around drainage hole to enable secure
   attachment of the drainage grate.
DESCRIPTION:

STANDARD POST DETAILS

1. For Post Reinforcing see Sheets 15 and 16.
2. For Pile Lengths Tables see Sheets 15 and 16.
**REVISION DESCRIPTION:**

STANDARD PLANS FY 2020-21

**INDEX:**

NOISE WALLS - (PRECAST)

**POST PLACEMENT & PILE REINFORCING STEEL DETAILS**

**NOTE:**

1. For Pile Length Tables, see Sheets 15 and 16.

**LOW CLEARANCE OPTION**

STANDARD POST PLACEMENT IN AUGER CAST PILE

(H-Post Shown, 45° Corner Posts Similar)

**SECTION M-M**

**SECTION N-N**

**SECTION P-P**

Low Clearance Option

10 - #9 Bars (Typ.) around Bar P3 spaced equally

30" Ø Auger Cast Pile

Post, Pile & Wall

Projected Location of Bearing Pad (Typ.)

(See Sheet 1, Note H)

NOTE:

1. For Pile Length Tables, see Sheets 15 and 16.

**TYPICAL POST**

STANDARD POST PLACEMENT IN AUGER CAST PILE

(H-Post Shown, 45° Corner Posts Similar)

**LOW CLEARANCE OPTION**

STANDARD POST PLACEMENT IN AUGER CAST PILE

(H-Post Shown, 45° Corner Posts Similar)
45° POST DETAILS

SECTION H-H
(45° Corner Post)

SECTION K-K
(Collar Section, 45° Corner Post)

SECTION L-L
(45° Corner Post)

SECTION N-N
(45° Corner Post)

SECTION P-P
(45° Corner Post)

45° POST NOTES:
1. Reference Sheets 8 & 9 for location of Sections.
   Space Bars P7 as shown for Bars P1.
   Space Bars P8 as shown for Bars P2.
2. Match texture thickness with appropriate Panel face.
3. For Post Reinforcing, see sheets 15 & 16.
4. For Pile Length Tables, see sheets 15 & 16.

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NOISE WALLS - (PRECAST)
90° CORNER POST NOTES:
1. For Post Reinforcing, see Sheets 15 and 16.
2. For Pile Length Tables, see Sheets 15 and 16.
3. Reduce typical panel length or adjust pile spacing at each 90° Corner Post.
4. Match texture thickness with appropriate Panel Face.

90° CORNER POST DETAILS

TYPICAL POST

LOW CLEARANCE OPTION

* Extend Post 2" above top of high side wall panel when post caps are shown in plans. See Sheet 4, "ELEVATION STEP AT TOP OF WALL".

SECTION R-R

SECTION S-S

(Not Surface Features Not Shown For Clarity)

90° CORNER POST REINFORCEMENT

(Not Surface Features Not Shown For Clarity)
NOTES:
1. For Pile Length Tables, see Sheets 15 and 16.
2. Trowel finish top of Collar to allow placement of Bearing Pads.
* Extend Post 2" above top of high side wall panel when post caps are shown in plans. See Sheet 4, "ELEVATION STEP AT TOP OF WALL".

SECTION T-T
C-I-P COLLAR

SECTION U-U

90° CORNER TYPICAL POST PLACEMENT DETAILS

4" Cover (Typ.)
Bars P6 (Pairs)
30" Ø Auger Cast Pile
Top of Auger Cast Pile
Top of Collar, Elev. A (see Note 2)
Projected Location of Bearing Pad (Typ.)
(See Sheet 1, Note 10)

SECTION U-U

Cover (Typ.)
Bars P6 (Pairs)
30" Ø Auger Cast Pile
Top of Auger Cast Pile
Top of Collar, Elev. A (see Note 2)
Projected Location of Bearing Pad (Typ.)
(See Sheet 1, Note 10)

NOTES:
1. For Pile Length Tables, see Sheets 15 and 16.
2. Trowel finish top of Collar to allow placement of Bearing Pads.

* Extend Post 2" above top of high side wall panel when post caps are shown in plans. See Sheet 4, "ELEVATION STEP AT TOP OF WALL".

SECTION T-T
C-I-P COLLAR

SECTION U-U

4" Cover (Typ.)
Bars P6 (Pairs)
30" Ø Auger Cast Pile
Top of Auger Cast Pile
Top of Collar, Elev. A (see Note 2)
Projected Location of Bearing Pad (Typ.)
(See Sheet 1, Note 10)
**NOTES:**

1. For Pile Length Tables, see Sheets 15 and 16.

2. Trowel Finish top of auger cast pile to allow placement of Bearing Pads.

* Extend Post 2" above top of high side wall panel when post caps are shown in plans. See Sheet 4, "ELEVATION STEP AT TOP OF WALL".
**REVISION DESCRIPTION:**

**LAST REVISION:** 07/01/14

**STANDARD PLANS FY 2020-21**

**NOISE WALLS - (PRECAST)**

**PRECAST POST CAPITAL**

**INDEX:** 534-200

**SHEET:** 14 of 16
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<th>POST LENGTHS (Feet)</th>
<th>WIND SPEED = 150 MPH</th>
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**Table 2A - Table of Post Reinforcing Steel**

- **Bars A, B, D, E**: Various sizes indicated for different wall heights and post lengths.
- **NOMINAL HEIGHT**: Heights vary from 13'-0" to 23'-0".
- **POST SPACING**: Measurements are provided for different post lengths.

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<th>WIND SPEED = 170 MPH</th>
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**Table 3A - Table of Post Reinforcing Steel**

- **Bars A, B, D, E**: Various sizes indicated for different wall heights and post lengths.
- **NOMINAL HEIGHT**: Heights vary from 13'-0" to 24'-0".
- **POST SPACING**: Measurements are provided for different post lengths.