GENERAL NOTES:
1. Construct Perimeter Walls in accordance with Specification Section 534.
2. Choice of either Precast Option or Masonry Option is at the discretion of the Contractor.
   Contractor must also select the desired foundation type. Modifications to this Index is restricted
   to those required for geometric needs only.
3. Post spacing is measured from the centerline to the centerline of foundation element. For this Index,
   posts and foundation elements have been designed for 20 ft. spacings. Use post spacings
   less than 20 feet only at changes in horizontal alignment, wall terminations or to accommodate
   street grades.
4. See "Perimeter Wall Data Tables" in the plans for project requirements.
5. Field verify the locations of all overhead and underground utilities shown in the Wall Control
   Drawings.

MASONRY OPTION NOTES (CONT.):
D. Fully Grout all cells with horizontal or vertical reinforcing bars.
E. Use reinforcing bar positioners to maintain vertical and horizontal bar placement.
F. Fully grout first three courses of the wall.
G. Joint Reinforcement: Use W-1.2 (9mm) galvanized ladder reinforcing spaced at 16" vertically. Provide special accessories
   for corners, intersections, etc. Joint reinforcing shall be continuous except it shall not pass through vertical masonry
   control joints. Lap joint reinforcing a minimum of 6".
H. Construct expansion joints in the foundation at 90 foot maximum intervals, and directly below a wall control joint.
I. Dowel Load Transfer Devices will be ASTM A 35 round bars hot-dip galvanized in accordance with Specification
   Section 962. Install Dowel Load Transfer Devices in accordance with Specification Section 250.
J. For spread footings, use a walk-behind compactor of at least 600 lbs. in weight. Obtain a minimum density of 95% of
   the maximum dry density as determined by FM 1 T-180. Perform soil density tests at 100 foot intervals.
K. Protect walls during construction from soil, grout or mortar stains. Clean wall as work progresses by dry brushing to
   remove mortar fins and smears before tooling joints.
L. Use soap and potable water to clean walls. If stain removal is necessary, use a cleaning method indicated in NCMA
   TEK 8-2A applicable to the type of stain on the exposed surface.
M. During construction, cover tops of walls, with waterproof sheeting at the end of each day's work, or when construction
   is not in progress. Extend sheeting a minimum of 2 feet down each side and secure in place.
N. Comply with Hot Weather Requirements in ACI 530.1.

13. MATERIALS:
A. Concrete Masonry Units (CMU): Provide normal weight blocks.
B. Cast-In-Place Concrete: Class II for slightly to moderate aggressive environments or Class IV for extremely aggressive
   environments.
C. Mortar: Type S meeting requirements of ASTM C1329
D. Grout: Type S, coarse grout.
E. Aggregate for Grout: Meet the requirements of ASTM C404 or Specification Section 901 size 8 or 89.

14. STORAGE OF MATERIALS:
A. Store CMUs on elevated platforms in a dry location or under cover.
B. Store masonry accessories and reinforcing to prevent corrosion and accumulation of dirt and oil.
C. Store concrete accessories and reinforcing to prevent corrosion and accumulation of dirt and oil.
D. Do not use cementitious materials that have become damp or exceeded the manufacturers shelf life.
E. Do not use cementitious materials that have become damp or exceeded the manufacturers shelf life.
F. Do not use cementitious materials that have become damp or exceeded the manufacturers shelf life.

GENERAL WALL ELEVATION
(Precast Option with Single Height Panel Shown, Others Similar)
DRAINAGE HOLES TYPES A, B, C & D

* Hole Types A, B, C, & D refer to distance from bottom of panel/wall to center of the pipe.

NOTES:
1. Drainage holes may be formed with 4" NPS PVC pipe that may remain in place.
2. See Wall Control drawings for number, Type and location/spacing of drainage holes.
**ELEVATION STEP AT TOP OF WALL**

Precast Panel Cap not Shown

3" (Typ.)

**Bottom Panel**

**ELEVATION STEP AT BOTTOM OF WALL**

Auger Cast Pile (Typ.)

**Top Panel**

**PIVOTING JOINT DETAILS**

NOTE: Shop Drawings shall include specific pivoting point details of panel ends at locations where the deflection angle (2¬°) between panels exceeds 20°.

**SECTION D-D**

**SECTION E-E**

**TYPICAL ELEVATION**

(Front Face Shown, Textured Finish not Shown for Clarity)

**Typical Plan**

Non-roadway face of wall/Back Face of Panel

Roadway face of wall/Front Face of Panel

3" Nominal embedment (not including tolerances)

**TYPICAL PLAN**

**ELEVATION STEP AT TOP OF WALL**

(Precast Panel Cap not Shown)

**ELEVATION STEP AT BOTTOM OF WALL**

Precast Cap (Type "C" Shown)

Step Varies (1'-4" Max.)

**NOTE:** Shop Drawings shall include specific pivoting point details of panel ends at locations where the deflection angle (2¬°) between panels exceeds 20°.
NOTE: At the Contractors Option, Smooth or Deformed Welded Wire Reinforcement may be used (equal area).

* Vertical Steel - #4 Bars @ 10" (As=0.24 in²/ft²) (Typ.)

Horizontal Steel - #4 Bars @ 7½" (As=0.32 in²/ft²) (Typ.)

* Vertical Steel - #4 Bars @ 10" (As=0.24 in²/ft²) (Typ.)

Panel Height (H)

Panel Length (L)

207 L

586 L

207 H

207 L

MAX. PANEL LENGTH (L) (19'-2" MAX.)

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

Pick up points

TEXTURE "CHAMFER" (Typ.)

DETAIL "B" - TOP-INSTALLED
(Typ. Both Ends)

DETAIL "B" - SIDE-INSTALLED
(Typ. Both Ends)

SECTION G-G

SECTION F-F

PRECAST OPTION - TYPICAL PANEL DETAILS

Note: In lieu of utilizing the standard pick up points below, panels may be cast vertically or cast horizontally then tilted upright using lift-cables 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/ft²).
TYPICAL POST SECTION

SECTION H-H
(H Section - Above Collar)

Roadway face of wall
Front Face Post
Texture (Formed)

MAX.

7"

BAR P1 (Typ.)
BAR P2 (Typ.)


BAR P2 (Typ.)
BAR P2 (Typ.)


LOW CLEARANCE OPTION

NOTES:
1. See Shop Drawing for Post Lengths.

TYPICAL POST
STANDARD POST REINFORCEMENT

SECTION I-I
(Precast Collar)

MAX.

1'-6"

H

3"

BAR P1 (Typ.)
BAR P1 (Typ.)


SECTION J-J
(Typ.)

MAX.

1'-6"

H

3"

BAR P1 (Typ.)
BAR P1 (Typ.)


TABLE 1

<table>
<thead>
<tr>
<th>Wind Speed (MPH)</th>
<th>Pile Length</th>
<th>Bars A</th>
<th>Bars P1 thru P6</th>
<th>Bars S1</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>12'-0&quot;</td>
<td>#3</td>
<td>#3</td>
<td>#4</td>
</tr>
<tr>
<td>150</td>
<td>13'-6&quot;</td>
<td>#5</td>
<td>#3</td>
<td>#4</td>
</tr>
<tr>
<td>170</td>
<td>15'-6&quot;</td>
<td>#6</td>
<td>#3</td>
<td>#4</td>
</tr>
</tbody>
</table>

BAR BENDING DETAILS

BAR P1
Bar Length = 2'-30"
All bar dimensions in bending diagrams are out-to-out.
All bars not shown in the bending diagrams are straight.

BAR P2
Bar Length = 0'-0"

LOW CLEARANCE OPTION

TYPICAL POST
STANDARD POST REINFORCEMENT

SECTION I-I
(for Low Clearance Option)

MAX.

1'-6"

H

3"

BAR P1 (Typ.)
BAR P1 (Typ.)


MAX.

1'-6"

H

3"

BAR P1 (Typ.)
BAR P1 (Typ.)


MAX.

1'-6"

H

3"

BAR P1 (Typ.)
BAR P1 (Typ.)


PRECAST OPTION - STANDARD POST DETAILS

INDEX

PERIMETER WALLS

FY 2019-20
STANDARD PLANS

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

REVISION

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:

REVISIO

534-250

6 of 10

LAST

INDEX

PERIMETER WALLS

STANDARD PLANS

FY 2019-20

11/01/17

DESCRIPTION:
STANDARD POST PLACEMENT IN AUGER CAST PILE
(Standard Post Shown, 45° and 90° Corner Posts Similar)

LOW CLEARANCE OPTION

SECTION H-H
(Reinforcing not Shown for Clarity)

SECTION I-I
(Typical Post Option)

SECTION I-I
(Low Clearance Option)

SECTION J-J
(Low Clearance Option)

1. For Reinforcing Steel Sizes and Pile Lengths, see Table 1, Sheet 6.
2. For Corner Posts, see Sheet 8.
3. For Typical Post Section Dimensions, see Sheet 6.
NOTES:
1. For Reinforcing Steel Sizes, and Foundation Dimensions, see Table 1 Sheet 6.
2. For location of Section H-H and I-I, see Sheet 6.
3. The Bearing area beneath Neoprene Pads is formed by top of Auger Cast Pile Grout.

SPECIAL POSTS FOR 90° CORNERS

SPECIAL POSTS FOR 45° CORNERS

PRECAST OPTION - SPECIAL CORNER POSTS

All bar dimensions in bending diagrams are out-to-out. All bars not shown in the bending diagrams are straight.
**Notes:**

1. End vertical reinforcing bars 1½" from top of bond beam blocks and horizontal bars 1½" from edge of control joints.
2. Do not continue horizontal #4 bond beam reinforcing through control joint.
3. Use stainless steel joint stabilizing anchors spaced at 16" vertically at all control joints, install per manufacturers instructions.
4. Seal Control Joints with backer rod and Type "A" silicone sealant (top and both sides).
5. See Sheet 10 for Bar placement details.
6. For Pilaster Cap Details, see Sheet 2.

**Table 2 (Masonry Walls (8x8x16))**

<table>
<thead>
<tr>
<th>Wind Speed Category</th>
<th>Masonry Walls (8x8x16)</th>
<th>Foundations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bars V1</td>
<td>2'-8&quot;</td>
</tr>
<tr>
<td>REV</td>
<td>#5</td>
<td>2'-8&quot;</td>
</tr>
<tr>
<td>170</td>
<td>#5</td>
<td>1'-8&quot;</td>
</tr>
</tbody>
</table>

**MASONRY OPTION**

**Table 2**

<table>
<thead>
<tr>
<th>Wind Speed Category</th>
<th>Masonry Walls (8x8x16)</th>
<th>Foundations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bars V1</td>
<td>2'-8&quot;</td>
</tr>
<tr>
<td>REV</td>
<td>#5</td>
<td>2'-8&quot;</td>
</tr>
<tr>
<td>170</td>
<td>#5</td>
<td>1'-8&quot;</td>
</tr>
</tbody>
</table>

**Notes:**

1. End vertical reinforcing bars 1½" from top of bond beam blocks and horizontal bars 1½" from edge of control joints.
2. Do not continue horizontal #4 bond beam reinforcing through control joint.
3. Use stainless steel joint stabilizing anchors spaced at 16" vertically at all control joints, install per manufacturers instructions.
4. Seal Control Joints with backer rod and Type "A" silicone sealant (top and both sides).
5. See Sheet 10 for Bar placement details.
6. For Pilaster Cap Details, see Sheet 2.