R E V I S I O N S

THE ENTIRE LENGTH OF ANCHOR BOLTS AND THREADED RODS ARE GALVANIZED.

FASTENERS:

GALVANIZING:  GALVANIZE ALL STRUCTURAL STEEL, BASE PLATES, ANCHOR
ADMIXTURE AND 15% BY WEIGHT FLY ASH OR 15-30% GROUND GRANULATED BLAST
THE CONCRETE MIX DESIGN  FOR PANELS SHALL CONTAIN A WATER REPELLANT
709.00 OR GALVANIZED AS PER CMS 709.16
REINFORCING STEEL SHALL BE EPOXY-COATED AS PER CMS

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE CURRENT VERSION
DESIGN SPECIFICATIONS:
ON THE PROJECT PLANS.
PROVISIONS AND  IN CONFORMITY  WITH THE DIMENSIONS, LINES AND GRADES SHOWN
MANUFACTURING, TESTING, TRANSPORTING, STORING, AND INSTALLING NOISE
MATERIALS (PAPER, ROPE AND OPEN CELL FOAM) ARE NOT ACCEPTABLE.  FURNISH
WASHERS SHALL BE ASTM F436
NUTS SHALL BE ASTM A563, GRADE DH
THREADED RODS SHALL BE DEFORMED, ONE-END THREADED, ASTM A615, GRADE 60
ANCHOR BOLTS SHALL BE ASTM F1554, GRADE 105

PCI TRANSPORTING LOAD CASE
PCI STRIPPING LOAD CASE
"SERVICE I" LOAD CASE
"SERVICE II" LOAD CASE
"SERVICE III" LOAD CASE
"SERVICE IV" LOAD CASE
"SERVICE V" LOAD CASE
"SERVICE VI" LOAD CASE
"SERVICE VII" LOAD CASE
"SERVICE VIII" LOAD CASE
"SERVICE IX" LOAD CASE

THE WIND LOAD IS BASED ON AN 80 MPH BASE WIND VELOCITY.
APPLIED WIND LOAD ON POSTS IS 25 PSF (14' < BH < 25'),

"ACCEPTED AS NOTED" OR "NOT ACCEPTED" DRAWINGS ARE NON-EXCUSABLE ACCORDING
"ACCEPTED AS NOTED" OR "NOT ACCEPTED" DRAWINGS.  DELAYS RESULTING FROM
IDENTIFY AND DATE ALL REVISIONS ON RESUBMITTED SHOP DRAWINGS THAT RESOLVE
IDENTIFY AND DATE ALL REVISIONS ON RESUBMITTED SHOP DRAWINGS THAT RESOLVE
THIS ACCEPTANCE ARE NON-EXCUSABLE ACCORDING TO C&MS 108.06.E.

FOR INCORRECT FABRICATION AS A RESULT OF FAILURE TO COORDINATE OR PERFORM
BY OTHER FABRICATORS AND ENTITIES ON THE PROJECT.  DELAYS TO THE CONTRACTOR
BEEN COORDINATED AND VERIFIED WITH THE DETAILS OF THE WORK TO BE PERFORMED
REQUIREMENTS.  THE CONTRACTOR FURTHER REPRESENTS THAT THESE DRAWINGS HAVE
MATERIALS REQUIREMENTS, CONSTRUCTION REQUIREMENTS AND CONTRACT
LETTER THAT DOCUMENTS ACCEPTANCE OF THE SHOP DRAWINGS INCLUDING CONFIRMATION
THE CONTRACTOR SHALL ALSO PROVIDE AN ELECTRONIC COPY OF A WRITTEN ACCEPTANCE
4733-35. DEPARTMENT ACCEPTANCE OF THE SUPPORTING CALCULATIONS IS NOT REQUIRED.

HARDWARE SPECIFICATIONS:
SOUND ABSORPTIVE MATERIAL:
ASTM C423 AND ASTM E795
MINIMUM STC (SOUND TRANSMISSION CLASS) = 30
ASTM E90 AND ASTM E413
ACOUSTICAL:
DETERIORATION OR DELAMINATING FOR ALL NON-PREAPPROVED MATERIALS.
THE SOUND ABSORPTIVE MATERIAL SHALL BE INTEGRAL WITH THE PRECAST
STRUCTURAL CONCRETE/ABSORPTIVE MATERIAL INTERFACE.

ALL DOCUMENTS SHALL BE IN PORTABLE DOCUMENT FORMAT (PDF). SHOP DRAWINGS SHALL BE POSTED AND ACCEPTANCE
LETTERS SHALL BE SUBMITTED IN 8½" X 11" SHEET SIZE.

CONCRETE NOISE BARRIER PANELS AND POSTS
EVERY PRODUCER OF CONCRETE NOISE BARRIER PANELS AND POSTS WHO SUPPLIES PRODUCT COMPONENTS SUPPLIED TO THE
PROJECT SHALL BE CERTIFIED IN ACCORDANCE WITH SUPPLEMENT 1073. THE DEPARTMENT WILL NOT ACCEPT MATERIALS FROM
THE CONCRETE SUPPLIER FOR CONCRETE PANELS AND POSTS SHALL MEET THE
REQUIREMENTS SPECIFIED ABOVE UNDER SECTION B, MATERIAL SPECIFICATIONS.
NOISE BARRIERS REQUIRE A REINFORCED CONCRETE PANEL BUT THIS PANEL MAY BE
TREATED AS BOTH THE TOP AND BOTTOM PANELS. EACH PANEL MAY BE OF
DIFERENT MATERIAL AND COLOR. THE PANELS SHOWN ON THE PROJECT PLANS
SHALL CORRESPOND TO THE ORIGINAL DETAILS SHOWN IN THE PROJECT PLANS.
THE CONCRETE SUPPLIER FOR CONCRETE PANELS AND POSTS SHALL MEET THE
REQUIREMENTS SPECIFIED ABOVE UNDER SECTION B, MATERIAL SPECIFICATIONS.

FABRICATED NOISE BARRIER PANEL AND POST FABRICATION REQUIREMENTS SHOULD BE CONSISTENT WITH THE
NOTES TO DRAWINGS OR SPECIFICATIONS. THE CONTRACTOR SHALL PREPARE A CONCRETE NOISE BARRIER PANEL AND POST
FABRICATION SCHEDULE FOR ALL NOISE BARRIER WALL COMPONENTS. ALL REQUIRED DRAWINGS ARE TO BE SUBMITTED TO THE
ENGINEERING TO DETERMINE IF THE DRILLED SHAFT EMBEDMENT SHOULD BE
REVEALED BY THE BORINGS, CONTACT THE ODOT OFFICE OF GEOPLANNING AND ENVIRONMENT.
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REVEALED BY THE BORINGS, CONTACT THE ODOT OFFICE OF GEOPLANNING AND ENVIRONMENT.
METHOD OF MEASUREMENT

NOISE BARRIER (REFLECTIVE), 10' HEIGHT AND UNDER

HOME BARRIERS

NOISE BARRIER (REFLECTIVE), OVER 14’ TO 20’ HEIGHT

DESCRIPTION

NOISE BARRIER (ABSORPTIVE), OVER 10’ TO 14’ HEIGHT

SQ. FT.

NOISE BARRIER (ABSORPTIVE), OVER 20’ TO 25’ HEIGHT

7.

REFER TO CMS 105.07 FOR REQUIREMENTS TO COOPERATE WITH UTILITIES.

CONSTRUCTION METHODS

BACKFILL ALL EXCAVATION ACCORDING TO C&Ms 105.08 AND RESTORE SLOPES TO PROPERTY IN ACCORDANCE WITH THE RESIDENTIAL PROVISIONS OF 659.

IN THE AREA BETWEEN THE BACK OF THE NOISE BARRIER AND EXISTING FENCE, WHERE

WILL APPLY.

WILL WAIVE THE RESTRICTION FROM SOWING CROWN VETCH DURING THE MONTHS OF

BY THE NOISE BARRIER CONSTRUCTION TO THEIR ORIGINAL CONDITION. RESTORATION

PANELS.

WILL EXCEED ONE DAY. INSTALL THIS FENCE IMMEDIATELY AFTER THE EXISTING

INSTALL TEMPORARY FENCE WHEN THE TIME BETWEEN THE REMOVAL OF THE

FOR NOISE BARRIERS THAT ARE BUILT ON TOP OF EARTH BERMS, CONSTRUCT THE

ABOVE MENTIONED WORK, REPLACE THE DAMAGED SECTIONS OF THE SEWER OR CULVERT

BARRIERS SHALL MATCH THE TOP OF WALL DESIGN ELEVATIONS, WITH NO VARIATION

SUFFICIENT SUPPORT TO THE NOISE PANELS, AND BE SECURED TO THE POST OR

POSTS AND INSTALLATION METHODS SHALL BE STRUCTURALLY ADEQUATE, GIVE

NO VISIBLE OPENINGS FOR SOUND TRANSMISSION. NOISE PANEL ATTACHMENTS TO

JOINTS AND CONNECTIONS IN SUCH A MANNER AS TO BE STRUCTURALLY ADEQUATE WITH

DO NOT INSTALL COMPONENTS THAT ARE DEFECTIVE. THE DEPARTMENT WILL CONSIDER

DEVICES THAT CHIP OR SPALL THE CONCRETE.

DUE TO MISHANDLING OR OVERLOADING OF THE COMPONENTS. DO NOT USE LIFTING

CAPS, AND PANELS, USE EXTREME CARE TO NOT CAUSE SPALLING OF THE CONCRETE

LOCATIONS OTHER THAN THOSE SHOWN IN THE STANDARD DRAWINGS. TRANSPORT AND

PERFORM ALL NECESSARY SHOP DRAWINGS AND ORDERING FABRICATION OF THE

PROPOSED NOISE BARRIER LOCATIONS. REMOVE ONLY THOSE TREES THAT ARE

DEVELOPING ANY NECESSARY SHOP DRAWINGS AND ORDERING FABRICATION OF THE

SPECIAL REQUIREMENTS AS SHOWN IN THESE STANDARDS AT NO ADDITIONAL COST

TO THE DEPARTMENT.

THE DEPARTMENT WILL PAY FOR CONSTRUCTING EARTH BERMS UNDER

THE NOISE BARRIER.

CONTRACTOR IS GOING TO SUPPLY. THE ENGINEER WILL EVALUATE WHETHER BOTH

ADDITIONAL FULL SIZE NOISE BARRIER PANEL AND ONE ADDITIONAL FULL SIZE

(POST-TO-POST) WITH PANELS AND CAPS. THE CONTRACTOR SHALL DELIVER ONE

THE CONTRACTOR SHALL DELIVER TO THE JOB SITE AND ERECT ONE FULL BAY

STANDARDS, NOISE BARRIERS SHALL ALSO COMPLY WITH THE FOLLOWING AESTHETIC

TOLERANCES

CONSTRUCT ALL MEMBERS TO CONFORM TO THE FOLLOWING TOLERANCES.

1. POST DIMENSIONAL TOLERANCES

A. POST HEIGHT = +’”, - 0”
B. FLOOR ELEVATION AND DEPTH = +’”, - ½”
C. SLOT DEPTH AND LOCATION = ½”
D. POST TO-SLOT INCHES AND DEPTH = +’”, - 0”
E. POSITION OF LIFTING INSERTS = ±’”
F. POSITION OF LIFTING INSERTS = ±’”, ±’” IN ANY DIRECTION

2. PANEL DIMENSIONAL TOLERANCES

A. PANEL WIDTH AND HEIGHT = +’”, - 0”
B. PANEL, STRUCTURAL THICKNESS = +’”, - 0”
C. PANEL, MASONRY THICKNESS = +’”, - 0”
D. HORIZONTAL SLOPE = ±’”

REVEAL SAMPLES THAT WILL NOT INTERLOCK AT KEYWAYS
E. PANEL CAMBER = ±’” PER 10’, 0” MAX.
F. POSITION ON MOLDING DUE TO INSTALLATION DAYS EXCEEDING 60
G. POSITION OF LIFTING INSERTS:
H. A) LONG PANEL LENGTH
I. ∆’” ALONG PANEL THICKNESS
J. ∆’” ALONG PANEL THICKNESS

3. REINFORCE STEEL TOLERANCES

A. CLIP HEIGHT = ±’”, ±’”
B. SPACING STANDARDS FROM STANDARD LAP SPILLAGE REQUIREMENT
C. SPACING STANDARDS FROM STANDARD LAP SPILLAGE REQUIREMENT

4. BASE PLATE DIMENSIONAL TOLERANCES

A. FURNISH STEEL BASE PLATES ACCORDING TO CMS 85.

5. NOISE BARRIER CONSTRUCTION TOLERANCES

A. POSITION AN INDIVIDUAL DRILLED SHAFT WITHIN ’” OF THE PLAN LOCATION ON THE PLAN ELEVATION FOR THE TOP OF THE SHAFT.
B. POSITION ADJACENT DRILLED SHAKTS WITHIN ’” OF THE CENTER-TO-CENTER VERTICAL BORE CENTERS.
C. POSITION THE DRILLED SHAFT WITHIN ’” OF THE PLAN ELEVATION SHOWN IN THE PLANS.
D. POSITION OF THE DRILLED SHAFT:
E. POSITION BASE PLATE ANDOR BOX IS = ’”
F. INSTALL NOISE BARRIERS IN THE DIRECTION PARALLEL TO THE SHORT SLOT
G. INSTALL NOISE BARRIERS IN THE DIRECTION NORMAL TO THE SHORT SLOT
H. INSTALL NOISE BARRIERS SO THE FINAL TOP OF BARRIER ELEVATION IS WITHIN ’” OF HEIGHT FROM THE PLAN ELEVATION.

ACCEPTANCE REQUIREMENTS

IN ADDITION TO CONFORMING WITH THE STRUCTURAL REQUIREMENTS AS SHOWN IN THESE STANDARDS, NOISE BARRIERS SHALL ALSO COMPLY WITH THE FOLLOWING NON-STRUCTURAL REQUIREMENTS.

1. THE CONTRACTOR SHALL DELIVER TO THE JOB SITE AND ERECT ONE FULL BAY (POST-TO-POST) WITH PANELS AND CAPS. THE CONTRACTOR SHALL DELIVER ONE ADDITIONAL FULL SIZE NOISE BARRIER PANEL AND ONE ADDITIONAL FULL SIZE (POST-TO-POST) WITH PANELS AND CAPS. THE CONTRACTOR SHALL DELIVER ONE ADDITIONAL FULL SIZE NOISE BARRIER PANEL AND POSTS.

THE DEPARTMENT WILL DETERMINE THE AREA OF INDIVIDUAL NOISE BARRIER SEGMENTS.

THE DEPARTMENT WILL MEASURE THE NOISE BARRIER BY THE NUMBER OF SQUARE FEET.


THE CALCULATED NOISE BARRIER AREA IN THE PROJECT PLAN IS BASED UPON 1"-THICK PANEL HEIGHTS. THE DEPARTMENT WILL NOT ADJUST PAY QUANTITIES FOR NOISE BARRIER HEIGHTS OR LENGTHS GREATER THAN PROJECT PLAN REQUIREMENTS.

BASIS OF PAYMENT

PAYMENT FOR NOISE BARRIERS IS FULL COMPENSATION FOR FURNISHING AND INSTALLING THE NOISE BARRIER. NO PAYMENT WILL BE MADE FOR ANY OTHER DRILLING, BORING, CORE DRILLS, OR STEEL MASONRY MOISTURE TREATMENTS, SAMPLE POSTS AND PANELS, BEARING FOOT, EXCAVATION, SPILLAGE, AND BACKFILL, AND OTHER ITEMS THAT DO NOT HAVE SEPARATE PAY ITEMS BUT ARE NECESSARY TO COMPLETE THE NOISE BARRIER.

THE DEPARTMENT WILL PAY FOR THE ADDITIONAL LENGTH OF DRILLED SHAFTS CONSTRUCTED AT THE DIRECTION OF THE ENGINEER IN UNEXPECTED AREAS OF POOR SOIL AS EXTRA WORK IN ACCORDANCE WITH CMS 105.05.

THE DEPARTMENT WILL PAY FOR THE ADDITIONAL FOUNDATIONS, POSTS, AND PANELS FURNISHED AND INSTALLED IN UNEXPECTED AREAS OF POOR SOIL AS EXTRA WORK IN ACCORDANCE WITH CMS 105.05.

THE DEPARTMENT WILL PAY FOR CLEANING AND CRUMBING AND TRIMMING TREES UNDER ITEM 201 - CLEANING AND CRUMBING.

THE DEPARTMENT WILL PAY FOR CONSTRUCTING EARTH BERRS UNDER ITEM 202 - EMBREMENT.

THE DEPARTMENT WILL PAY FOR FURNISHING, ERECTING, MAINTAINING, AND REMOVING TEMPORARY PRECAST EMBREMENTS - FENCE, POSTS, CAPS, STEEL MASONRY MOVEMENT, AND CONNECTIONS, CONCRETE SEALANT/COUNTING, FORM LINERS OR OTHER ARCHITECTURAL SURFACE TREATMENTS, SAMPLE POSTS AND PANELS, BEARING FOOT, EXCAVATION, SPILLAGE, AND BACKFILL, AND OTHER ITEMS THAT DO NOT HAVE SEPARATE PAY ITEMS BUT ARE NECESSARY TO COMPLETE THE NOISE BARRIER.

THE DEPARTMENT WILL PAY FOR LAYING OUT AND STAKING THE NOISE BARRIER UNDER ITEM 623 - CONSTRUCTION LAYOUT STAKES.

IF THE CONTRACT INCLUDES A QUANTITY FOR ITEM 659 - SEEDING AND MACHING. THE DEPARTMENT WILL PAY FOR RESTORING THE WORK AREA UNDER ITEM 659. IF THE CONTRACT DOES NOT INCLUDE A QUANTITY FOR ITEM 659 - SEEDING AND MACHING. THE DEPARTMENT WILL PAY FOR THE ROCK SOIL AND SUBSOILS AS EXTRA WORK IN ACCORDANCE WITH CMS 105.05.

THE DEPARTMENT WILL NOT PAY FOR REPAIRED OR REPAIRED COMPONENTS DAMAGED BY IMPROPER HANDLING, TRANSPORTING, STORING, OR ERECTING.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICES AS

ITEM UNIT DESCRIPTION

SPECIAL SF. NOISE BARRIER REFLECTIVE, OVER 10’ TO 15’ HEIGHT.
SPECIAL SF. NOISE BARRIER REFLECTIVE, OVER 15’ TO 20’ HEIGHT.
SPECIAL SF. NOISE BARRIER REFLECTIVE, OVER 20’ TO 25’ HEIGHT.
SPECIAL SF. NOISE BARRIER ABSORBENT, OVER 10’ TO 15’ HEIGHT
SPECIAL SF. NOISE BARRIER ABSORBENT, OVER 15’ TO 20’ HEIGHT
SPECIAL SF. NOISE BARRIER ABSORBENT, OVER 20’ TO 25’ HEIGHT
REQUIREMENTS:

ONE COAT OF ANY OF THE APPROVED SEALERS SHALL MEET THE FOLLOWING PERFORMANCE REQUIREMENTS.

MATERIALS: SELECT AND USE PRODUCTS ONLY FROM THE OFFICE OF MATERIALS MANAGEMENT. THE NOISE WALL PLANS. IF THERE IS NO NUMBER, THE ENGINEER WILL SPECIFY THE COLOR.

DESCRIPTION:

NOISE BARRIER SEALER

1. SLING SEALER INCLUDING PSYCHROMETRIC TABLES USED TO RELATIVE HUMIDITY AND DEW POINT TEMPERATURE.

2. MPETER THERMOMETER CAPABLE OF RECORDING THE DATE, TIME AND HUMIDITY AND DEW POINT TEMPERATURE.

3. SLING PSYCHROMETER INCLUDING PSYCHOMETRIC TABLES USED TO RELATIVE HUMIDITY AND DEW POINT TEMPERATURE.

4. MIXING EQUIPMENT RECOMMENDED BY THE SEALER MANUFACTURER.

5. USE APPLICATION EQUIPMENT RECOMMENDED BY THE SEALER MANUFACTURER.

6. USE CLEANING EQUIPMENT FITTED WITH SUITABLE TRAPS, FILTERS, DRIP PANS AND OTHER FOREIGN MATERIALS.

7. PROVIDE WRITTEN ACCEPTANCE FROM THE SEALER MANUFACTURER.

8. ENGINEER TO DETERMINE IF THE CONCRETE COMPONENT IS STILL ACCEPTABLE. IF THE ENGINEER APPROVES THE PIECE, RE-CLEAN THE AREA TO REMOVE RUST STAINED AREAS ON THE CONCRETE TWICE.

9. EXPOSED STEEL IS REINFORCING, REMOVE THE CONCRETE COMPONENT AND CONSIDER IT REJECTED. IF THE ENGINEER APPROVES THE PIECE, PREPARE THE AREA TO REMOVE RUST STAINED AREAS ON THE CONCRETE TWICE.

MATERIALS APPROVAL:

SUBMIT CERTIFIED TEST DATA TO THE ENGINEER THAT SHOWS THE SEALER MEETS THE MATERIAL REQUIREMENTS.

PROCESS OF MATERIALS MANAGEMENT:

APPLY THE SEALER TO ACCELERATED CURED PRECAST AFTER THE CONCRETE HAS REACHED THE DESIGN STRENGTH GAINING REQUIRED FOR NEW CONCRETE HAS AIR DRIED FOR AT LEAST 30 DAYS IN ADDITION TO THE REQUIRED CURED TIMES. DRY SHREDDER GAINS THE SAME AS THE NEW CONCRETE AND AIR DRY FOR THREE DAYS.

APPLICATION:

APPLY THE SEALER AFTER NEW CONCRETE HAS AIR DRIED FOR AT LEAST 30 DAYS IN ADDITION TO THE REQUIRED CURED TIMES. DRY SHREDDER GAINS THE SAME AS THE NEW CONCRETE AND AIR DRY FOR THREE DAYS.

AIR DRYING:

DO NOT APPLY SEALER IF RAIN IS ANTICIPATED WITHIN 4 HOURS AFTER APPLICATION.

DO NOT APPLY SEALER TO A MEASURED TEST COVERAGE AREA OF DIFFERENT STAGE MATERIALS. APPLY THE SEALER TO A MEASURED TEST COVERAGE AREA OF DIFFERENT STAGE MATERIALS. APPLY THE SEALER TO A MEASURED TEST COVERAGE AREA OF DIFFERENT STAGE MATERIALS.

BASIS OF PAYMENT:

BASIS OF PAYMENT:

BUILDING CONSTRUCTION:

BUILDING CONSTRUCTION:

ENVIRONMENTAL REQUIREMENTS:

ENVIRONMENTAL REQUIREMENTS:

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APPLICATION:

APPLICATION:
NOTES:

1. FOR GENERAL NOTES REFER TO SHEETS 1-3/13.
2. INTEGRAL CAP DETAILS MAY VARY. REFER TO PROJECT PLANS FOR SPECIFIC DETAILS. BOTTOM OF CAP MUST HAVE RUSTICATION GROOVES OR OVERHANGS; PAINTED LINES ARE NOT ALLOWED.
3. THICKNESS OF ABSORPTIVE MATERIAL VARIES ACCORDING TO THE MATERIAL PROPERTIES USED BY THE MANUFACTURER.
4. THE RUSTICATION GROOVE SHALL COINCIDE WITH THE TOP OF THE HIGHEST ADJACENT PANEL.

LEGEND:
* AS REQUIRED BY DESIGN AND SHOWN ON PROJECT PLANS

DETAIL A - REFLECTIVE PANEL WITH INTEGRAL CAP

DETAIL B - REFLECTIVE PANEL KEYWAY DETAIL

DETAIL A - ABSORPTIVE PANEL WITH INTEGRAL CAP

DETAIL B - ABSORPTIVE PANEL KEYWAY DETAIL
ELEVATION, REINFORCING, AND STORAGE PLAN

TYPICAL POST

DETAIL C - INTEGRAL POST CAP DETAIL

(16" TYPE A POST SHOWN, OTHERS SIMILAR)

NOTES:
1. FOR GENERAL NOTES REFER TO SHEETS 1-3/13.
2. CAST REINFORCING & INSERTS INTO NON-SHRINK GROUT AS PER CMS 515.19.
3. NON-INTEGRAL CAP ANCHOR BOLT SHALL BE GALVANIZED ASTM A325; 1" THRU HOLE (CAST INTO CAP) FOR 1½" ANCHOR BOLT.
4. BOTTOM OF INTEGRAL CAP MUST HAVE RUSTICATION.

LEGEND:
- CENTER OF DRILLED SHAFT

NOTE:
1. FOR GENERAL NOTES REFER TO SHEETS 1-3/13.
2. CAST REINFORCING & INSERTS INTO NON-SHRINK GROUT AS PER CMS 515.19.
3. NON-INTEGRAL CAP ANCHOR BOLT SHALL BE GALVANIZED ASTM A325; 1" THRU HOLE (CAST INTO CAP) FOR 1½" ANCHOR BOLT.
4. BOTTOM OF INTEGRAL CAP MUST HAVE RUSTICATION.

FOR INTEGRAL CAP SEE DETAIL C
FOR NON-INTEGRAL CAP SEE DETAIL D

VIEW F-F

SECTION G-G

SECTION H-H

TYPICAL POST
ELEVATION, REINFORCING, AND STORAGE PLAN
1. FOR GENERAL NOTES REFER TO SHEETS 1-3/13.

2. "B" THREADED RODS ARE USED FOR THE STEEL BASE PLATE CONNECTIONS. IN LIEU OF PROVIDING SEPARATE THREADED RODS, THE "B" THREADED RODS ARE USED ALONG WITH UNEVEN ENDS TO CONNECT THE STEEL BASE PLATE TO THE BOTTOM OF THE POST. REFER TO SHEET 7/13 FOR DETAILS ON SHEET 7/13.

3. INSTALL REINFORCING STEEL WITH A MINIMUM CLEARANCE OF 1" FROM ALL CONCRETE SURFACES UNLESS NOTED OTHERWISE.

4. FOR ADDITIONAL POST DETAILS REFER TO SHEET 7/13.

5. WORKING POINT IS DEFINED AS THE POINT OF INTERSECTION OF THE WALL ALIGNMENT AND THE POST AXES.

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2. "B" THREADED RODS ARE USED FOR THE STEEL BASE PLATE CONNECTIONS. IN LIEU OF PROVIDING SEPARATE THREADED RODS, THE "B" THREADED RODS ARE USED ALONG WITH UNEVEN ENDS TO CONNECT THE STEEL BASE PLATE TO THE BOTTOM OF THE POST. REFER TO SHEET 7/13 FOR DETAILS ON SHEET 7/13.

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4. FOR ADDITIONAL POST DETAILS REFER TO SHEET 7/13.

5. WORKING POINT IS DEFINED AS THE POINT OF INTERSECTION OF THE WALL ALIGNMENT AND THE POST AXES.
**STEEL BASE PLATE PLAN**

(* TYPE A POST SHOWN; OTHERS SIMILAR *)

**NOTES:**

1. FOR GENERAL NOTES REFER TO SHEETS 1-3/13.
2. PROVIDE HEADED ANCHOR BOLTS WITH STANDARD CIRCULAR WASHERS; HOOKED ENDS ARE NOT ALLOWED.
3. FOR SECTION I-I, SEE SHEET 12/13.
4. PROVIDE HEADED ANCHOR BOLTS WITH STANDARD CIRCULAR WASHERS; HOOKED ENDS ARE NOT ALLOWED.
5. IN LIEU OF PROVIDING SEPARATE THREADED RODS, THE "A" REBARS MAY BE FABRICATED WITH THREADED ENDS AND EXTENDED TO CONNECT THE BASE PLATE TO THE BOTTOM OF THE POST. EXTENDED "A" REBARS SHALL BE CALIBRATED FULL LENGTH, FABRICATOR TO DETAIL HOLE LOCATIONS AND SIZES ON SHOP DRAWINGS.
6. INSTEAD OF A BOLTED PLATE CONNECTION, THE BASE PLATE HOLES MAY BE TAPPED TO ACCOMMODATE THE THREADED RODS OR REBARS. THREADED "A" REBARS OR "B" THREADED RODS SHALL BE INSERTED INTO THE BASEPLATE (TYP.) AND TACK WELDED IN PLACE. THE ASSEMBLY SHALL BE CAST INTO THE ROSS.
7. FABRICATOR SHALL DETAIL ANCHOR BOLT PROJECTION (P) ON SHOP DRAWINGS. WHEN INSTALLED, THE END OF THE BOLT SHALL PROJECT AT LEAST TWO THREAD LENGTHS OUTSIDE THE FACE OF THE NUT.

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**BASE PLATE DATA FOR 16" PRECAST CONCRETE POSTS**

<table>
<thead>
<tr>
<th>GEOMETRY</th>
<th>TYPE A POST</th>
<th>TYPE B POST</th>
<th>TYPE D POST</th>
<th>TYPE E POST</th>
<th>TYPE C POST</th>
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</thead>
<tbody>
<tr>
<td><strong>BARRIER HEIGHT</strong></td>
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<td><strong>MIN</strong></td>
<td><strong>MAX</strong></td>
<td><strong>MIN</strong></td>
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<td><strong>STD</strong></td>
<td><strong>GALVANIZED</strong></td>
<td><strong>STD</strong></td>
<td><strong>GALVANIZED</strong></td>
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<tr>
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**BASE PLATE DATA FOR 20" PRECAST CONCRETE POSTS**

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<td><strong>PLATE L. X W.</strong></td>
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<td><strong>STD</strong></td>
<td><strong>GALVANIZED</strong></td>
<td><strong>STD</strong></td>
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**BASE PLATE DATA FOR 25" PRECAST CONCRETE POSTS**

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<td><strong>GALVANIZED</strong></td>
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<td><strong>GALVANIZED</strong></td>
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PANEL SEAT ELEVATION

LEGEND:
+ CENTER OF DRILLED SHAFT

PANEL SEAT PLAN WITH INTEGRAL STEP BLOCK
(16", TYPE E POST SHOWN; OTHER POSTS SIMILAR)

NOTES:
1. FOR GENERAL NOTES REFER TO SHEETS 1-3/13.
2. NON-INTEGRAL PRECAST CONCRETE STEP BLOCKS SHALL BE USED FROM A MINIMUM HEIGHT OF 3" TO A MAXIMUM HEIGHT OF 4'-0" UP TO AND INCLUDING 4'-0", AS DETAILED ON THIS SHEET.
3. ENSURE THAT STEP BLOCK ANCHOR LOCATIONS DO NOT INTERFERE WITH PRECAST CONCRETE POST SHEAR REINFORCING. REFER TO DETAIL F ON THIS SHEET FOR ANCHOR LOCATION REQUIREMENTS.

POST & DRILLED SHAFT AXIS

DRILLED SHAFT

1" Ø HOLE CAST THRU STEP BLOCK

THIN SLAB FERRULE INSERT (F" ANCHOR BOLTS TO PRECAST CONCRETE POST, STEEL BASE PLATE AND CONNECTED BLOCK PLACED DIRECTLY ON 7" X 5" PRECAST CONCRETE STEP BLOCK)

PRECAST CONCRETE POST

STEEL BASE PLATE

ANCHOR LOCATION REQUIREMENTS.

CONCRETE POST SHEAR REINFORCING. REFER TO "DETAIL F" ON THIS SHEET FOR CONCRETE POST SHEAR REINFORCING.
1. FOR GENERAL NOTES REFER TO SHEETS 1-3/13.
2. REFER TO THE REINFORCING STEEL LIST IN THE PROJECT PLANS FOR THE REINFORCING STEEL DETAILS FOR EACH DRILLED SHAFT DESIGN.
1. Construct a trench with a minimum longitudinal slope of 1.0% under the noise barrier panels as shown in the typical elevation.

2. Provide underdrain slope of 1% minimum or as specified in project plans. Install in accordance with Item 605.

3. Outlet conduit to be spaced at 500' max. Install in accordance with Item 605.

4. At sag points, specify raised panel section.

SLOPED SECTION DRAINAGE NOTES: