

GENERAL NOTES

- FIELD TOLERANCE IS IN ACCORDANCE WITH "THE ERECTOR'S MANUAL - STANDARDS & GUIDELINES FOR THE ERECTION OF PRECAST CONCRETE PRODUCTS" PER SECTION 8.2 OF THE PCI MANUAL (CURRENT EDITION).
- ERECTION TOLERANCES IN ACCORDANCE WITH "PCI RECOMMENDED PRACTICE FOR ERECTION OF PRECAST CONCRETE" & SECTION 8.3 OF THE PCI MANUAL (CURRENT EDITION).
- ITEMS PROVIDED BY THE INSTALLATION CONTRACTOR:
 - SHIMS
 - GROUT
 - STRUCTURAL CAULK AND BACKER RODS
 - NON-STRUCTURAL CAULK
 - ANCHOR BOLTS
 - ANCHOR BOLT NUTS
 - ANCHOR BOLT WISHERS
- ITEMS PROVIDED BY PRECAST SUPPLIER:
 - STEEL POSTS
 - PRECAST PANELS
- STAIN SHALL BE A NON-FILM FORMING, PENETRATING CONCRETE STAIN (OR COMPARABLE) APPLIED IN SHOP PER MANUFACTURER'S RECOMMENDATIONS BY SUPPLIER AND PROJECT SPECIFICATIONS. COLOR: FEDERAL STANDARD 595-B. TOUCH UP IN FIELD WITH SAME MATERIAL AS NECESSARY.
- TEST CYLINDERS SHALL BE PREPARED FOR PANELS FORMED PER DOT SPECIFICATIONS.
- REPAIR OF PANELS IS PER MANUFACTURER'S SPECIFICATIONS.
- PANEL CAP SHALL BE SMOOTH FINISH. PANEL WILL BE ASHLAR STONE FORM LINER FINISH ON SIDE FACING IL RTE 394 AND A PRESSED-IN VERTICAL PLANK FORM LINER PATTERN ON SIDE FACING RESIDENTIAL PER THE SPECIFICATIONS. (SEE PANEL DETAILS)
- THE MINIMUM REINFORCEMENT BAR COVER SHALL BE 38 (1 1/2).
- ALL REINFORCEMENT SHALL BE EPOXY COATED.
- PANEL DIMENSIONS SHALL BE WITHIN 6 (1/4).
- ANGULAR DISTORTION WITH REGARD TO PANEL SQUARENESS, DEFINED AS THE DIFFERENCE BETWEEN THE TWO DIAGONALS, SHALL NOT EXCEED 13 (1/2).
- SURFACE DEFECTS ON FORMED SURFACES MEASURED ON A LENGTH OF 1.52m (5'-0") SHALL NOT BE MORE THAN 3 (0.10) PRIOR TO LOADING PANELS ON TRUCK FOR DELIVERY.
- POSTS SHALL BE INSTALLED PLUMB TO WITHIN 13 (1/2) OF VERTICAL FOR EVERY 4.57m (15'-0") OF HEIGHT AND TO WITHIN 13 (1/2) OF THE STATION AND OFFSET INDICATED.
- DRILLED SHAFT FOUNDATIONS SHALL BE PLACED WITHIN 51 (2) OF THE STATION AND OFFSET INDICATED.
- ALL LIFTING INSERTS CAST INTO THE PANELS SHALL BE HOT DIPPED GALVANIZED & SHALL BE INSTALLED INTO THE TOP EDGE OF EACH PANEL AT QUARTER POINTS AS SHOWN IN STEP (3) OF DETAIL 1/52.00.

MATERIAL SPECIFICATIONS (PER DOT SPECIFICATIONS)

- PRECAST CONCRETE (NOISE ABATEMENT WALL, GROUND MOUNTED) CLASS PC
 - $f_c = 41.4 \text{ MPa (6,000 PSI)} @ 28 \text{ DAYS}$
 - DENSITY = $2403 \text{ kg/m}^3 (150 \text{ PCF})$
- GROUT (BY OTHERS)
 - GROUT STRENGTH: $41,369 \text{ kPa} @ 28 \text{ DAYS}$
 - $27,580 \text{ kPa} @ 3 \text{ DAYS}$

(DO NOT ALLOW GROUT TO FREEZE PRIOR TO REACHING 34,474 kPa)
- CONCRETE AND STEEL COLORS PER FEDERAL STANDARD 595-B COLOR COLOR OF NOISE ABATEMENT WALL SYSTEM = COLOR #30340
- CAISSON CONCRETE: CLASS DS, $f_c = 27.5 \text{ MPa} @ 14 \text{ DAYS}$
- WELDED WIRE FABRIC: ASTM A497 (ASHTO M55), $F_y = 483 \text{ MPa MIN. EPOXY COATED}$
- STEEL POSTS: ASHTO M270 GRADE 345 (GRADE 50), $F_y = 345 \text{ MPa}$
- LIFTING INSERTS: UNIVERSAL BUILDING PRODUCTS DFFA58712G 51x7 1/8" DROP FORGED FOOT ANCHOR (RMC LIFT SYSTEM) OR EQUAL.
- SHIMS: VERSA-A-SHIM HIGH IMPACT PLASTIC SHIMS PER ASTM D792 & ASTM D695
- STRUCTURAL CAULK: SIKADUR 51 NS FLEXIBLE EPOXY CONTROL-JOINT SEALER/ADHESIVE OR EQUAL
- BACKER ROD: MILE HIGH FOAM PRODUCT SIZED PER BACKER ROD MANUFACTURING, INC. OR EQUAL
- NON-STRUCTURAL CAULK SEALANT: AC-20 FTR PER PCORNA CORPORATION SPECIFICATIONS AND MANUFACTURING STANDARDS OR EQUAL
- REBAR (CONCRETE REINFORCEMENT): ASTM A706M, GRADE 420

*IF USED IN PLACE OF #10 TEMP/SHRINKAGE EPOXY COATED REINFORCEMENT
 **BASE PLATES AND STEEL POSTS SHALL BE GALVANIZED ACCORDING TO ASTM A305 AND ASHTO M111

INSTALLATION

DRILLED CAISSON SHAFT INSTALLATION

- AUGER HOLE TO REQUIRED DEPTHS. SEE PRECAST SHOP DRAWINGS FOR PIER LOCATIONS. DENAYER AS NECESSARY.
- PLACE REBAR PER DRILLED PIER/CAISSON DETAILS.
- PLACE $f_c = 27,580 \text{ MPa}$ CONCRETE IN AUGURED HOLE TO THE DEPTH AND ELEVATIONS SPECIFIED ON PLAN AND ELEVATION SHEETS AND FOOTING SCHEDULE OF THESE PRECAST SHOP DRAWINGS.
- DRILLED CAISSON FOUNDATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARTICLE 516.02 OF THE DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- IF SOIL IS UNSATURABLE, A CORRUGATED LINER OR SONOTUBE SHALL BE INSTALLED PRIOR TO PLACEMENT OF CONCRETE.

PANEL INSTALLATION (NOISE ABATEMENT WALL, GROUND MOUNTED)

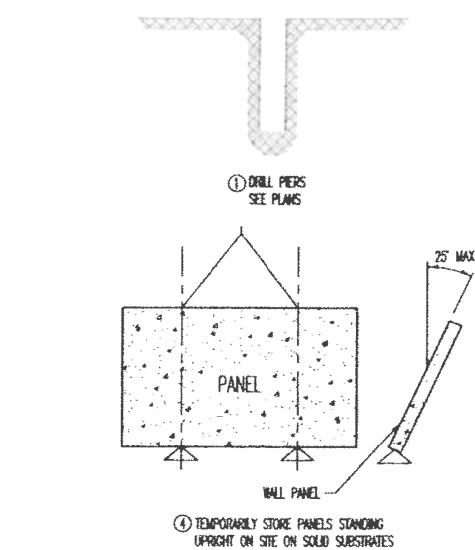
- PRESET STEEL POSTS TO THE NECESSARY ELEVATION TO OBTAIN TOP OF ELEVATIONS SPECIFIED ON THE PLAN AND ELEVATION DRAWINGS. SEE 344/52.00 FOR SHM DETAILS.
- ERECT PRECAST PANEL ON THE SHIMS AND INTO SLOT PROVIDED IN STEEL POST BETWEEN PANELS AND CLIP ANGLES. SEE COLUMN DETAILS ON SHEET 54.00
- FULLY CAULK JOINTS BETWEEN PANELS ALONG CENTERLINE OF PANEL WIDTH SO THAT JOINT FILLER IS NOT VISIBLE TO HINDER THE AESTHETIC APPEARANCE OF THE WALL. CLEAN OUT ANY JOINT FILLER THAT PROTRUDES BEYOND STRUCTURAL WIDTH OF PANEL.
- RELEASE PANEL FROM THE CRANE.

DRILLED CAISSONS

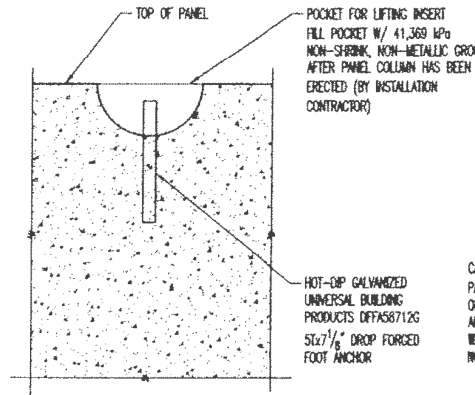
- THIS ITEM SHALL CONSIST OF CONSTRUCTING CONCRETE SHAFT FOUNDATIONS CAST IN DRILLED HOLES IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, DETAILS SHOWN ON THE PLANS AND FURTHER DESCRIBED HEREIN.
- CAISSON DESIGN IS BASED UPON SOIL TYPES AND PROPERTIES PROVIDED ON SHEETS 4 THRU 10 OF THE NOISE ABATEMENT WALL PLANS (136 THRU 145 OF THE COMPLETE DESIGN DRAWINGS). IF SOIL CONDITIONS IN FIELD DEVIATE FROM THOSE INDICATED IN THE DESIGN DRAWINGS, THE RESIDENT ENGINEER SHALL CONTACT LARSON ENGINEERING, INC PRIOR TO CONTRACTOR COMPLETING THE CAISSON.
- THE DRILLING OF THE HOLES SHALL BE ACCOMPLISHED BY MEANS OF EITHER TRUCK MOUNTED OR CRANE MOUNTED EARTH AUGERS. THE DRILL UNIT USED SHALL BE SUCH THAT THE SHAFTS CAN BE EXCAVATED TO THE DIAMETERS AND ALIGNMENT REQUIRED BY THE PLANS. THE DRILL UNIT SHALL HAVE ADEQUATE CAPACITY TO CREATE A SHAFT EXCAVATION TO A DEPTH OF 20 PERCENT BEYOND THE DEPTHS INDICATED ON THE PLANS.
- IF BOULDERS OR MASONRY FOUNDATIONS SHOULD BE ENCOUNTERED BELOW THE NATURAL GROUND DURING DRILLING, THE HOLES SHOULD CONTINUE THROUGH THESE OBSTRUCTIONS. ALL LOOSE MATERIAL EXISTING AT THE BOTTOM OF THE HOLE AFTER DRILLING OPERATIONS AND EXCAVATION SHALL BE REMOVED BEFORE PLACING CONCRETE IN THE HOLES.
- ALL EXCAVATIONS SHALL BE INSPECTED PRIOR TO CONCRETE PLACEMENT BY AN OWNER'S REPRESENTATIVE TO VERIFY SUITABLE BEARING MATERIAL OF CAPACITY AS SPECIFIED IN THE DESIGN DRAWINGS. THE CONTRACTOR SHALL HAVE AVAILABLE A SUITABLE LIGHT FOR THE INSPECTION OF THE DRILLED HOLES FOR ITS ENTIRE DEPTH. ALL HOLES SHALL BE EXAMINED FOR STRAIGHTNESS. THE ALIGNMENT OF THE SHAFT SHALL NOT VARY FROM VERTICAL BY MORE THAN 1.5X.
- NOTIFY THE OWNER'S REPRESENTATIVE AND LARSON ENGINEERING, INC WHEN ADDITIONAL EXCAVATION IS REQUIRED TO MEET SUITABLE BEARING MATERIAL.
- SURFACE WATER SHALL NOT BE PERMITTED TO ENTER THE HOLE AND ALL WATER WHICH MAY HAVE INFILTRATED INTO THE HOLE SHALL BE REMOVED PRIOR TO PLACING CONCRETE THEREIN. A DRAINAGE SYSTEM OF SUFFICIENT CAPACITY SHALL BE INSTALLED AND OPERATED TO MAINTAIN THE CONSTRUCTION AREA FREE OF WATER AT ALL TIMES. IF DRAINING OF THE HOLE CANNOT BE READILY ACCOMPLISHED WITHOUT LOSS OF GROUND OR CREATING QUICK CONDITIONS, THEN THE HOLE SHALL BE LINED AND TRENCHED CONCRETE SHALL BE USED.
- IF UNSUITABLE SOILS ARE FOUND, IN ORDER TO PREVENT CAVING OF THE HOLE BEFORE CONCRETE IS PLACED THEREIN, DRILLED CAISSON SHAFTS SHALL BE SLEEVED TO A DEPTH OF AT LEAST 10' BELOW TOP OF FINISHED GRADE TO PREVENT CREEP.
- THE METHOD OF PLACING CONCRETE IN THE SHAFTS SHALL BE PRE-APPROVED BY THE RESIDENT ENGINEER. THE METHOD USED SHALL BE ONE THAT WILL PROVIDE A CONTINUOUS FLOW WITH NO SEGREGATION OF THE CONCRETE MATERIALS.

ELECTRICAL

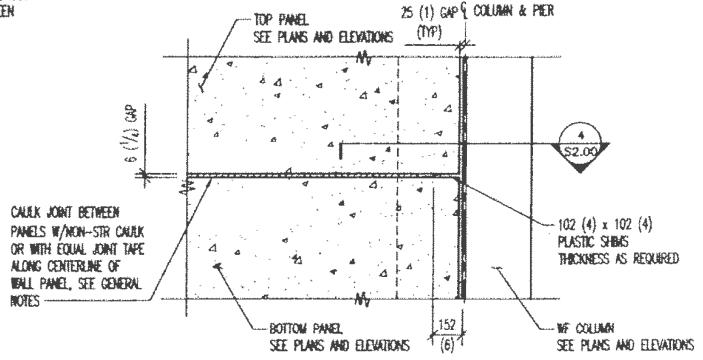
- WHEN WORKING IN THE VICINITY OF COMED'S ELECTRIC TRANSMISSION LINES DURING THE INSTALLATION, OSHA REQUIRES THAT A MIN. 6.10m (20'-0") WORKING CLEARANCE DISTANCE MUST BE MAINTAINED BETWEEN THE BOOMS, ARMS OR OTHER PARTS THAT CAN BE RAISED ON THE EQUIPMENT FOR THE PETITIONER'S CONTRACTOR AND COMED'S EXISTING SOUTHERLY 345,000 VOLT ELECTRIC TRANSMISSION CONDUCTORS. OSHA REQUIRES A MINIMUM OF 4.27m (14'-0") WORKING CLEARANCE DISTANCE MUST BE MAINTAINED BETWEEN THE BOOMS, ARMS OR OTHER PARTS THAT CAN BE RAISED ON THE EQUIPMENT FOR THE PETITIONER'S CONTRACTOR AND COMED'S EXISTING NORTHERLY 138,000 VOLT ELECTRIC TRANSMISSION CONDUCTORS. UNDER NO CIRCUMSTANCES, SHOULD TRUCK BEDS BE RAISED UNDERNEATH COMED TRANSMISSION LINES.



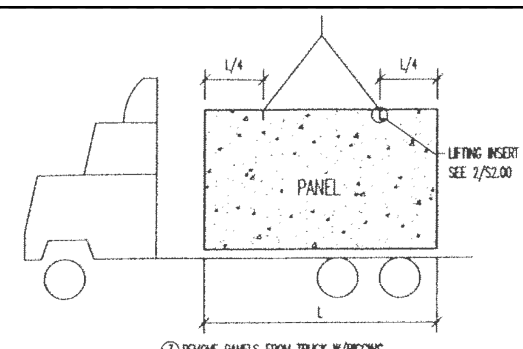
1 TYPICAL NOISE ABATEMENT WALL INSTALLATION SEQUENCE & PROCEDURES
 \$2.00 N.T.S.



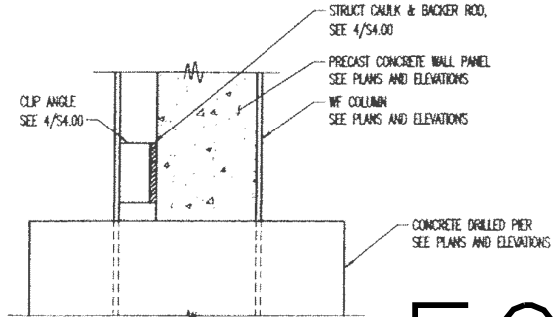
2 TYPICAL LIFTING INSERT DETAIL
 \$2.00 N.T.S.



3 HORIZONTAL JOINT DETAIL
 \$2.00 N.T.S.



4 PANEL CONNECTION TO COLUMN DETAIL
 \$2.00 N.T.S.



5 CLIP ANGLE DETAIL
 \$2.00 N.T.S.

NOTE:
 1) THESE DRAWINGS HAVE BEEN PREPARED FOR THE FABRICATION OF THE PRECAST NOISE ABATEMENT WALLS AND PROVIDE GENERAL INSTALLATION SEQUENCE AND PROCEDURES FOR THE CONTRACTOR. THE CONTRACTOR SHALL RETAIN SOLE RESPONSIBILITY FOR THE MEANS, METHODS, AND TECHNIQUES OF CONSTRUCTION OF THE NOISE ABATEMENT WALLS FOR COMPLIANCE WITH LAWS, REGULATIONS, AND CODES, AND FOR THE SAFETY OF CONSTRUCTION APPLICABLE TO THIS WORK.
 2) THIS IS A METRIC PROJECT.
 3) DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS NOTED OTHERWISE.

FOR INFORMATION ONLY

FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		TYPICAL CONCRETE NOISE ABATEMENT WALL REPAIR DETAILS AND NOTES (IL 394)		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	Default	DRAWN -	REVISED -					VAR.	2013-0411	VARIOUS	44	14
		CHECKED -	REVISED -					CONTRACT NO. 60W86				
		DATE -	REVISED -			SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT				