

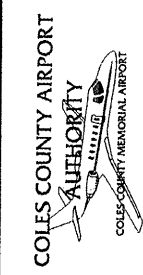
PRECAST 4' x 4' x 4' MANHOLE DETAILS
N.T.S.

PRECAST 4'x4'x4' ELECTRICAL MANHOLE NOTES

- 4'x4'x4' ELECTRICAL MANHOLE SHALL BE CONSTRUCTED TO MEET THE FOLLOWING:
DESIGN CRITERIA:
 - DESIGN SPECIFICATION: ACI 318, AASHTO LOAD FACTOR DESIGN METHOD, AND ASTM C858
 - DESIGN LOADING: AASHTO HS20 (32,000 LB/AXLE)
 - LIVE LOAD SURCHARGE: .5% OF THE WHEEL LOADING APPLIED TO 8'-0" OF DEPTH.
 - CONCRETE COMPRESSIVE STRENGTH: $f'_c = 4500$ PSI
 - REINFORCING STEEL: ASTM A706, $F_y = 60000$ PSI**DESIGN ASSUMPTIONS:**
 - GROUND WATER LEVEL: 3'-6" BELOW GRADE.
 - EARTH COVER: 2'-0" MINIMUM TO 5'-0" MAXIMUM
 - LIVE LOAD IMPACT:
 - 2'-0" $1 = 20\%$
 - 2'-1" TO 2'-11" $1 = 10\%$
 - 3'-0" TO 5'-0" $1 = 0\%$
 - COEFFICIENT OF ACTIVE EARTH PRESSURE: $K_a = 0.3$
 - SPECIFIC WEIGHT OF STD. AGGREGATE CONCRETE: 150 PCF
 - SPECIFIC WEIGHT OF DRY EARTH: 100 PCF
 - SPECIFIC WEIGHT OF SATURATED EARTH: 120 PCF
 - EQUIVALENT FLUID PRESSURE OF DRY EARTH: 30 PSF
 - EQUIVALENT FLUID PRESSURE OF SATURATED EARTH: 80 PSF

THE SUPPLIER SHALL PROVIDE CERTIFICATION THAT THE PRECAST MANHOLES MEET OR EXCEED THESE REQUIREMENTS PRIOR TO INSTALLATION.
- MANHOLE FRAME & LID SHALL BE CAPABLE OF WITHSTANDING MINIMUM 50,000 POUND LOADS. MANHOLE FRAME & LID SHALL BE NEENAH CATALOG NO. R-1640-C OR APPROVED EQUAL. LID FOR HIGH VOLTAGE MANHOLE SHALL BE LABELED "HIGH VOLTAGE". LID FOR LOW VOLTAGE MANHOLE SHALL BE LABELED "LOW VOLTAGE".
- COORDINATE DUCT BANK INTERFACE & OPENINGS WITH THE MANHOLE MFR. CONTRACTOR SHALL SLOPE DUCT BANK TO PRECAST MANHOLE OPENINGS. ALL OPENINGS SHALL BE SEALED WATERTIGHT AFTER DUCT BANK INSTALLATION.
- 4'x4'x4' MANHOLE SHALL BE MANUFACTURED BY HARTFORD CONCRETE PRODUCTS, INC., 1400 N. WABASH AVE., P.O. BOX 660, HARTFORD CITY, IN. 47348, PHONE 765-348-3506 OR 1-800-428-8110, OR APPROVED EQUIVALENT.
- 4'x4'x4' MANHOLE SHALL BE PAID FOR UNDER ITEM AR110710 ELECTRICAL MANHOLE PER EACH.

DATE	REVISION	BY



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HANSON
 Hanson Professional Services Inc.
 1525 South Sixth Street
 Springfield, Illinois 62703-2886
 Offices Nationwide

REPLACE ELECTRICAL DUCT IN FRONTAL AREA
 4' x 4' x 4' ELECTRICAL MANHOLE

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