



4'x4'x6' AIRPORT MANHOLE DETAILS
N.T.S. (NOT TO SCALE)

PRECAST 4'x4'x6' AIRPORT MANHOLE NOTES

- 4'x4'x6' AIRPORT MANHOLE SHALL BE CONSTRUCTED TO MEET THE FOLLOWING:

DESIGN CRITERIA:

 - DESIGN SPECIFICATIONS: ACI 318, ASTM C857 AND C858, FAA AC 150/5320-6D APPENDIX 3
 - DESIGN LOADING:
 - B727-200, 97,600 LBS. MAIN GEAR
 - B747-400ER, 213,600 LBS. MAIN GEAR
 - LIVE LOAD SURCHARGE: 24.5% OF THE WHEEL LOAD SOIL PRESSURE
 - CONCRETE COMPRESSIVE STRENGTH: $f'_c = 5,000$ PSI AT 28 DAYS
 - REINFORCING STEEL: ASTM A706, 60,000 PSI

DESIGN ASSUMPTIONS:

 - GROUND WATER LEVEL: 3'-6" BELOW GRADE
 - EARTH COVER: 0'-8" - 2'-0"
 - LIVE LOAD IMPACT: $I = 20\%$
 - 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
- AIRPORT MANHOLE FRAME & LID SHALL BE CAPABLE OF WITHSTANDING MINIMUM 100,000 POUND LOADS AS CALLED FOR IN FAA ADVISORY CIRCULAR AC 150/5320-6D APPENDIX 3 ITEM 2.d. (1). AIRPORT MANHOLE FRAME & LID SHALL BE NEENAH CATALOG NO. R-3492-A OR APPROVED EQUAL. LID FOR HIGH VOLTAGE MANHOLE SHALL BE LABELED "HIGH VOLTAGE". LID FOR LOW VOLTAGE MANHOLE SHALL BE LABELED "LOW VOLTAGE" OR "0V-600V ELECTRIC". LID FOR FAA REILS SHALL BE LABELED "FAA REILS".
- 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'x6' AIRPORT MANHOLE SHALL BE MANUFACTURED BY A CONCRETE ELECTRICAL MANHOLE PRODUCER ON THE ILLINOIS DEPARTMENT OF TRANSPORTATION APPROVED LIST OF CERTIFIED PRECAST CONCRETE PRODUCERS.
- 4'x4'x6' AIRPORT MANHOLE SHALL BE PAID FOR UNDER ITEM AR110715 ELECTRICAL MANHOLE SPECIAL PER EACH.
- CABLE RACKS SHALL BE HEAVY DUTY CORROSION RESISTANT NYLON MATERIAL WITH CORROSION RESISTANT STAINLESS STEEL MOUNTING HARDWARE; UNDERGROUND DEVICES, INC. CAT. NO. 3SR1N, 3SR2N OR 3SR3N OR EQUAL. PROVIDE AT LEAST TWO TRIPLE HOOK CABLE RACKS ON EACH MANHOLE WALL, SPACED TO SUPPORT RESPECTIVE CABLES.
- COORDINATE INSTALLATION OF MANHOLES WITH RESPECTIVE FINISHED GRADE ELEVATIONS.
- INCLUDE FLOOR SUMP OR DRAINAGE PIPE.
- ALL CORING, INTERFACE, AND LABOR ASSOCIATED WITH CONDUIT, DUCT, CABLE IN UNIT DUCT, AND/OR CABLE ENTRIES WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE MANHOLE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

REVISION	DATE

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency
BLOCK GRANT PROJ.: 3-17-0039-B29
ILL PROJ.: CPS-4210

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Scale	1" = 50'H 1" = 5'V	REVIEWED	BSS	03/08/13
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GRADE DITCH PARALLEL TO MAIN RUNWAY

4'x4'x6' AIRPORT MANHOLE DETAIL

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