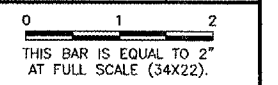


| REVISIONS | | |
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GENERAL STRUCTURAL NOTES

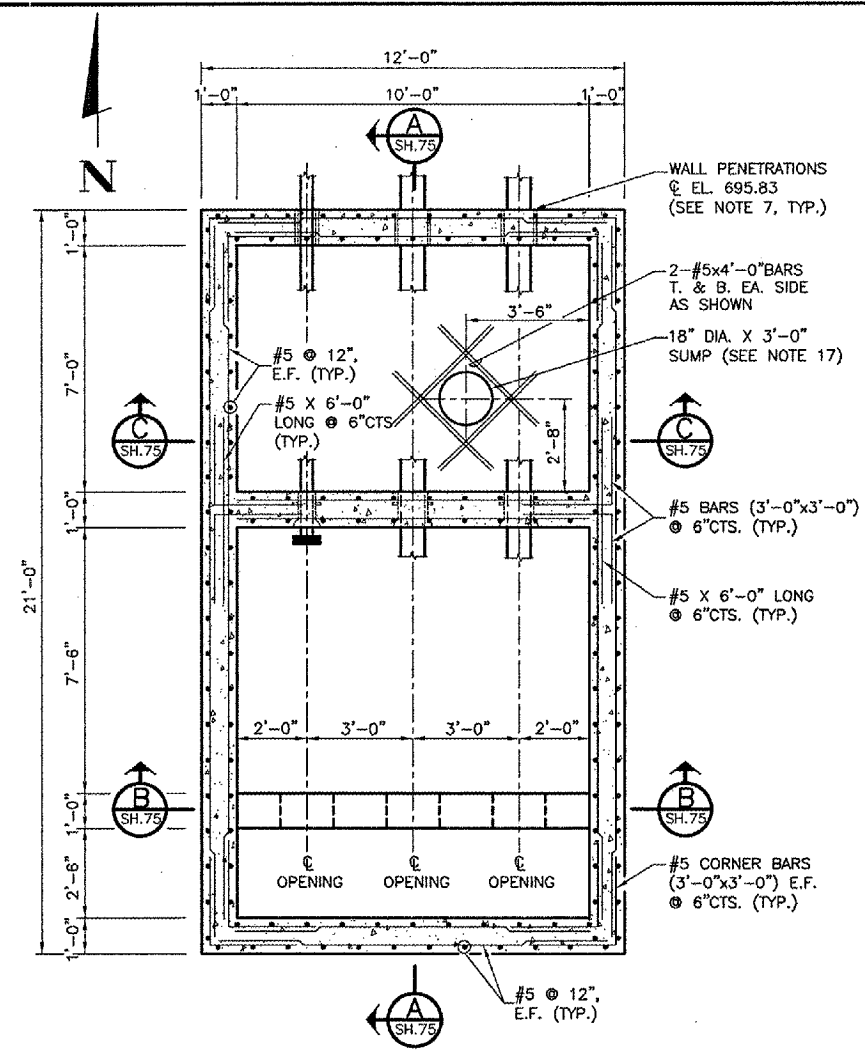
1. DESIGN LOADS - 2003 INTERNATIONAL BUILDING CODE (IBC)
- ALLOWABLE SOIL BEARING PRESSURE 1500 P.S.F. (NET)
- VERIFY DRAWINGS FOR LOCATION OF ALL OPENINGS IN WALLS AND SLABS.
 - ALL ANCHOR BOLTS, NUTS, WASHERS, ETC. SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A-153 UNLESS OTHERWISE NOTED.
 - ALL FILL OR BACKFILL WITHIN THE LIMITS OF A BUILDING OR A STRUCTURE SHALL BE COMPACTED ACCORDING TO THE SPECIFICATIONS.
 - ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL BE COATED WITH UNTHINNED BITUMASTIC PAINT. ALL ALUMINUM SURFACES IN CONTACT WITH STEEL OR DISSIMILAR METAL SHALL BE ISOLATED BY 1/4" MIN. THICKNESS 60 DUROMETER NEOPRENE PADS.
 - ALL MISCELLANEOUS PLATES, ANGLES, ETC SHALL BE ASTM A36. ALL WIDE FLANGE MEMBERS SHALL BE ASTM A992.
 - FOR ALL PIPE PENETRATIONS THROUGH FLOOR SLABS, WALLS, OR RAISED SLABS, SEE MECHANICAL SHEETS FOR TYPE OF SEAL REQUIRED.
 - CONTRACTOR SHALL COORDINATE STRUCTURAL SHEETS WITH ALL OTHER SHEETS FOR PIPE SIZES AND LOCATIONS, BLOCK OUTS, ELECTRICAL REQUIREMENTS AND ANCHOR BOLTED ATTACHMENTS, AND SHALL COORDINATE THE INSTALLATION OF ELECTRICAL AND MECHANICAL EQUIPMENT WITH THE RESPECTIVE SUB-CONTRACTORS PRIOR TO THE PLACEMENT OF THE CONCRETE. SEE HVAC, MECHANICAL, AND ELECTRICAL PLANS FOR SLEEVES, INSERTS, ETC.
 - CONTRACTOR IS RESPONSIBLE FOR ADEQUACY OF TEMPORARY SHORING, TO RESIST ALL LOADING CONDITIONS DURING CONSTRUCTION.
 - SHORING FOR ROOF AND FLOOR SLABS SHALL BE REMOVED IN SUCH A MANNER AS TO MAINTAIN A UNIFORM LOADING ON THE SLAB AT ALL TIMES. REMOVAL OF SHORING SHALL NOT BEGIN UNTIL THE CONCRETE HAS ATTAINED ITS SPECIFIED STRENGTH.
 - UNLESS SPECIFICALLY DETAILED HEREIN, NO PIPES OR SLEEVES SHALL PASS THROUGH STRUCTURAL MEMBERS WITHOUT PERMISSION OF THE ENGINEER.
 - ALL FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE OF DEBRIS, STANDING WATER AND LOOSE SOIL AND SHALL BE INSPECTED BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
 - IN STRUCTURAL AREAS (WHERE STRUCTURES DERIVE SOME OR ALL SUPPORT FROM FILL-SUPPORTED FOUNDATIONS) AND SLABS-ON-GRADE, FILL SHALL BE COMPACTED TO 100 PERCENT OF STD. PROCTOR MAXIMUM DRY DENSITY (ASTM D-698), UNLESS OTHERWISE SPECIFIED.
 - PROTECT SUBGRADE AT ALL TIMES INCLUDING PROPER DRAINAGE OF CONSTRUCTION AREAS, PREVENTION OF STANDING WATER, MINIMIZING CONSTRUCTION TRAFFIC AND PLACING FOUNDATION AS SOON AS POSSIBLE AFTER EXCAVATING (PREFERABLY THE SAME DAY).
 - ALL FILL MATERIAL SHALL BE ACCEPTABLE TO THE ENGINEER FOR USE IN ADVANCE OF PLACEMENT. NO FILL SHALL BE PLACED OVER FROZEN, MUDDY OR OTHER DELETERIOUS MATERIAL. LIFT THICKNESS SHALL BE MINIMIZED TO ALLOW EFFICIENT COMPACTION. NO FILL MAY BE PLACED OVER A PREVIOUS LIFT THAT HAS NOT BEEN ADEQUATELY COMPACTIONED AND HAS NOT BEEN ACCEPTED BY THE ENGINEER. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 - BACKFILL AGAINST GRADE WALLS SHALL BE PLACED EVENLY ON ALL SIDES, UNLESS OTHERWISE NOTED.
 - SUMP BASIN SHALL BE CONSTRUCTED OF FIBERGLASS DESIGNED TO WITHSTAND 120 PCF SOIL PRESSURE. BASIN SHALL BE CAST INTEGRALLY INTO THE VALVE FLOOR TO PREVENT UPLIFT OF THE BASIN DUE TO HYDROSTATIC PRESSURE AND TO PREVENT GROUNDWATER SEEPAGE FROM ENTERING THE VALVE VAULT. A COVER SHALL BE PROVIDED TO PREVENT DEBRIS FROM ENTERING THE BASIN.
 - DO NOT SCALE DIMENSIONS FOR CONSTRUCTION.

CONCRETE NOTES

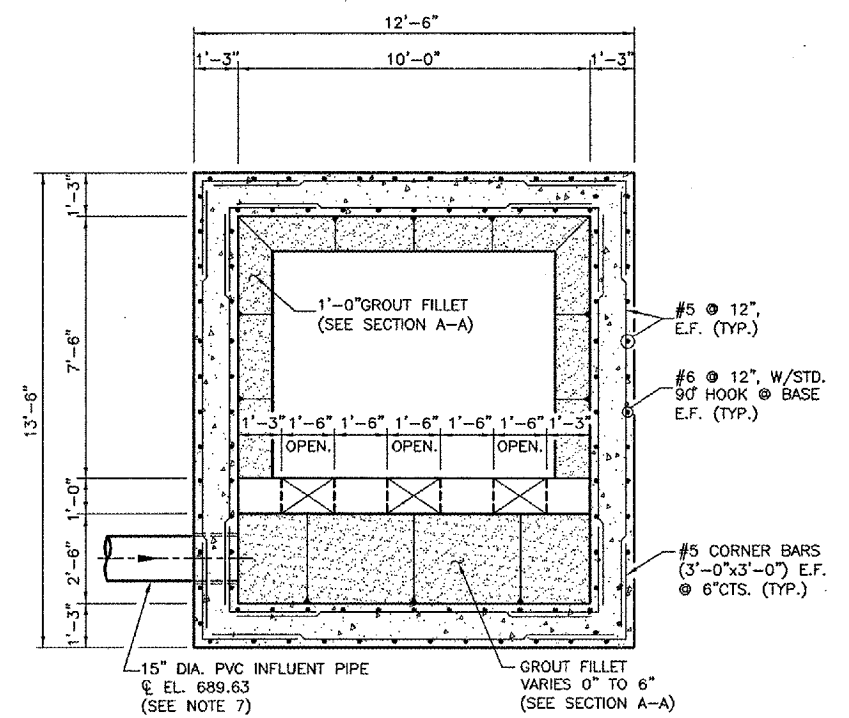
- ALL CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I.
- ALL REINFORCEMENT BARS SHALL CONFORM TO ASTM-A615, GRADE 60.
- ALL WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM-A185. (FLAT STOCK ONLY)
- ALL CONCRETE WORK SHALL CONFORM TO ACI 318-05 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE." ALL REINFORCING DETAILS NOT SHOWN SHALL CONFORM TO ACI 315 "DETAILING MANUAL," LATEST EDITION.
- REINFORCING BAR LAP SPLICES SHALL BE CLASS "B" SPLICES UNLESS SHOWN OTHERWISE ON THE DRAWINGS. MECHANICAL SPLICES MAY BE USED IN LIEU OF LAP SPLICES. MECHANICAL SPLICES SHALL DEVELOP IN TENSION OR COMPRESSION, AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH, f_y OF THE BAR. THE CONTRACTOR SHALL SUBMIT, TO THE ENGINEER, MANUFACTURER'S LITERATURE, PRODUCT SAMPLES AND CERTIFIED TEST REPORTS PRIOR TO RECEIVING APPROVAL OF THE MECHANICAL SPLICES. LOCATIONS OF THE MECHANICAL BAR SPLICES SHALL BE SHOWN ON THE REINFORCING STEEL SHOP DRAWINGS.
- AT CONSTRUCTION JOINTS SHOWN ON THE PLANS, WHERE DOWELS WILL PENETRATE CONSTRUCTION FORMWORK, THE CONTRACTOR MAY USE A MANUFACTURED DOWEL BAR SUBSTITUTION SYSTEM WHEN APPROVED IN WRITING BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S LITERATURE, PRODUCT SAMPLES AND CERTIFIED TEST REPORTS TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL ALSO INCLUDE INFORMATION ON WHERE HE PROPOSES TO USE THEM. TEST REPORTS SHALL SHOW YIELD AND ULTIMATE TENSILE LOAD CAPACITIES.
- CONCRETE PROTECTION (MINIMUM CONCRETE COVER) FOR REINFORCEMENT SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER 2"
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND
 - SLABS 3/4"
 - WALLS, BEAMS, COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS 1-1/2"
- ALL REINFORCEMENT BARS SHALL BE CLEAN AND FREE OF GREASE, SCALING RUST, AND OTHER FOREIGN MATERIALS.
- UNLESS OTHERWISE INDICATED, FOR SLABS ON GRADE, USE 1/2" THICK PREMOLDED JOINT FILLER TO ISOLATE THE SLAB FROM CONTACT WITH THE STRUCTURES ALONG ITS PERIMETER AND APPLY TWO-COMPONENT POLYURETHANE SEALANT, 3/4" MINIMUM DEPTH.
- A LEAN CONCRETE MUD SLAB 3 TO 4 INCHES THICK SHALL BE USED IN THE FOOTING EXCAVATION IF THE BOTTOM OF THE EXCAVATION TENDS TO BECOME MUDDY AND SOFT. LEAN CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 P.S.I.
- ALL EXPOSED EDGES AND EQUIPMENT PADS SHALL BE CHAMFERED 3/4".
- TWO #5 BARS EACH FACE SHALL BE PROVIDED DIAGONALLY AT ALL CORNERS OF DOOR OPENINGS. BARS SHALL BE EXTENDED 24 IN. MINIMUM BEYOND CORNERS OF THE OPENINGS.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- UNLESS NOTED OTHERWISE, PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS-ON-GRADE AT 15'-0" MAXIMUM SPACES EACH DIRECTION OR AS SHOWN ON DRAWINGS. CONTROL JOINTS TO BE SAW CUT 1 1/2" DEEP IN SLAB OR USE A PREFORMED CONTROL JOINT FORMER APPROVED BY THE ENGINEER.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED EXCEPT THOSE SUBMITTED BY THE CONTRACTOR IN WRITING AND ACCEPTABLE TO THE ENGINEER.
- EXPOSED CONCRETE SHALL RECEIVE A SCRUBBED FINISH TO 1'-0" MINIMUM BELOW FINISH GRADE. SEE SECTION 03300 OF SPECIFICATIONS FOR FINISH REQUIREMENTS.

| SIZE | *CLASS "B" SPLICE | | | |
|------|----------------------------|----------|----------------------------|----------|
| | $f'_c = 4,000 \text{ PSI}$ | | $f_y = 60,000 \text{ PSI}$ | |
| | UNCOATED BARS | | EPOXY COATED BARS | |
| | OTHER BARS | TOP BARS | OTHER BARS | TOP BARS |
| #4 | 2'-1" | 2'-9" | 2'-6" | 3'-3" |
| #5 | 2'-7" | 3'-5" | 3'-1" | 4'-1" |
| #6 | 3'-1" | 4'-1" | 3'-9" | 4'-10" |
| #7 | 4'-6" | 5'-11" | 5'-5" | 7'-1" |
| #8 | 5'-2" | 6'-9" | 6'-2" | 8'-1" |
| #9 | 5'-10" | 7'-7" | 7'-0" | 9'-1" |
| #10 | 6'-6" | 8'-5" | 7'-9" | 10'-1" |
| #11 | 7'-1" | 9'-3" | 8'-6" | 11'-1" |

NOTE:
 TOP BARS CONSIST OF HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.
 *PER ACI 318-05 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.



PLAN VIEW ABOVE ELEV. 693.50
 3/8"=1'-0"



PLAN VIEW BELOW ELEV. 693.50
 3/8"=1'-0"

CHICAGO ROCKFORD INTERNATIONAL AIRPORT
 ROCKFORD, ILLINOIS
 SANITARY LIFT STATION
 STRUCTURAL DETAILS - SHEET 1

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| FINAL SUBMITTAL | |
| SHEET | 74 OF 83 SHEETS |