- B. MAINTAIN THE SAME TEMPERATURE AND HUMIDITY CONDITIONS, AS THE FINAL FLOOR COVERING WILL BE EXPOSED TO, FOR 48 HOURS PRIOR TO AND DURING THE TEST.
- C. MEASURE AT LOCATIONS UNIFORMLY DISTRIBUTED AROUND THE SLAB, WITH THREE TESTS FOR UP TO 1000 SFT AND AN ADDITIONAL TEST FOR EACH ADDITIONAL 1000 SFT OF FLOOR.
- 4. IF ph value of the surface is required by the FCM. Perform tests as PER ASTM F710. "STANDARD PRACTICE FOR PREPARING CONCRETE FLOORS TO RECEIVE RESILIENT FLOORING." OBSERVE THE FOLLOWING DURING TESTING:
- A. CONDUCT A pH TEST AT EVERY LOCATION AND AT EACH TIME A MOISTURE TEST IS PERFORMED.
- B. PLACE SEVERAL DROPS OF DISTILLED WATER ON A CLEAN CONCRETE SURFACE, FORMING A PUDDLE OF ABOUT ONE INCH DIAMETER.
- C. WAIT 60 (±5) SECONDS AFTER THE PUDDLE HAS FORMED.
- D. DIP THE pH PAPER INTO THE WATER AND REMOVE IMMEDIATELY.
- E. COMPARE THE PAPER COLOR TO THAT ON THE CHART TO DETERMINE THE pH
- F. REPORT THE pH READING WITH EACH MOISTURE TEST RESULT.
- 5. IF RELATIVE HUMIDITY OR DRYNESS IS REQUIRED BY THE FCM, PERFORM TESTS AS PER ASTM F2170, "STANDARD TEST METHOD FOR DETERMINING RELATIVE HUMIDITY IN CONCRETE FLOOR SLABS USING IN SITU PROBES." OBSERVE THE FOLLOWING DURING TESTING:
- A. RAPID RH^{\circledR} RELATIVE HUMIDITY AND TEMPERATURE SENSOR KIT AS MANUFACTURED BY WAGNER ELECTRONICS (PHONE: 800-634-9961), OR
- B. QUANTIFICATION OF RH SHALL BE AT 40% THICKNESS OF FLOOR SLAB FROM THE SURFACE TO RECEIVE MOISTURE SENSITIVE FLOOR COVERING (MSFC). HOWEVER, IF THE FLOOR SLAB IS ELEVATED AND IS NOT PLACED OVER METAL DECK, THE RH SHALL BE MEASURED AT 20% THICKNESS OF THE FLOOR SLAB FROM THE SURFACE TO RECEIVE MSFC.
- C. THE TEST SITE SHALL BE MAINTAINED AT THE SAME TEMPERATURE AND HUMIDITY CONDITIONS AS THOSE ANTICIPATED DURING NORMAL OCCUPANCY THIS TEMPERATURE AND HUMIDITY SHALL BE MAINTAINED FOR 48 HOURS PRIOR TO AND DURING THE TEST PERIOD.
- D. MINIMUM NUMBER OF TEST HOLES SHALL BE THREE FOR THE FIRST 1000 SFT OF FLOOR SPACE AND ONE PER EACH ADDITIONAL 1000 SFT.
- E. DRILLING INTO THE SLAB, PREPARING THE TEST HOLES BEFORE INSERTING THE PROBES, ACCLIMATIZING THE TEST SITE, READING THE GAGES AND RECORDING SHALL BE PER TEST EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- F. RECORD ALL TEST RESULTS AS WELL AS PREPARE A CHECK LIST TO DEMONSTRATE THAT THE TEST PROCEDURE, ENVIRONMENT AND RESULTS ARE IN CONFORMANCE WITH ASTM F2170.
- 6. THE SURFACE FINISH TO RECEIVE COVERINGS SHALL BE EITHER BULL FLOAT/ STRAIGHTEDGE/LIGHT BROOM FINISH OR LIGHT POWER TROWEL FINISH WITH A LIGHT BROOM TEXTURE UNLESS NOTED OTHERWISE IN ARCHITECTURAL PLANS. CONSULT WITH THE ARCHITECT FOR ACCEPTABLE CONCRETE SURFACE FINISHES.
- 7. THE ULTIMATE STRENGTH OF CONCRETE SHALL BE 4000.00 PSI WITH WATER/CEMENT RATIO NOT TO EXCEED 0.40. THE RECOMMENDED MINIMUM DRYING TIME FOR THIS CONCRETE MIX SHALL BE NINETY DAYS. SILICA FUME MAY BE ADDED TO ACCELERATE THE DRYING TIME. APPROXIMATELY 10% SILICA FUME BY WEIGHT OF CEMENT MAY BE ADDED TO SHORTEN DRYING
- 8. CONCRETE SHALL BE CURED BY A BLANKET OF PLASTIC SHEET LEFT IN-PLACE FOR A PERIOD OF THREE DAYS.
- 8 FLOOR COVERING ADHESIVES SHALL BE SUITABLE FOR APPLICATION ON A SURFACE WITH PH VALUE BETWEEN 9 AND 10.
- 9. CONCRETE SURFACE REPAIRS HAVE AN ADVERSE EFFECT ON FLOORING-ADHESIVE BOND. CONSULT WITH THE COVERING/ADHESIVE MANUFACTURER'S REPRESENTATIVE FOR ACCEPTABLE PATCHING METHODS AND SUBSEQUENT DRYING PERIOD BEFORE APPLYING ADHESIVE.

3.4 CONCRETE TESTING

1. GENERAL: UNLESS SPECIFICALLY NOTED OTHERWISE, QUALITY ASSURANCE OF CONCRETE IN PLACE SHALL COMPLY WITH THE PROVISIONS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE", CURRENT EDITION.

- 2. SLUMP: ASTM C143; ONE TEST AT POINT OF DISCHARGE FOR EACH POUR SESSION FOR EACH TYPE OF CONCRETE; ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY SEEMS TO HAVE CHANGED. THE TESTING TECHNICIAN SHALL MONITOR THE QUALITY OF CONCRETE SUPPLIED FOR THE ENTIRE POUR TO ASSURE THAT THE CONCRETE IN-PLACE REPRESENTS THE SPECIMENS CAST. OBTAIN THE DELIVERY TICKETS FOR EACH TRUCK AND SEND COPIES TO THE ARCHITECT ALONG WITH TEST REPORTS.
- 3. AIR CONTENT: ASTM C173 VOLUMETRIC METHOD FOR LIGHT WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE; ONE FOR EACH POUR SESSION FOR EACH TYPE OF AIR-ENTRAINED CONCRETE.
- 4. CONCRETE TEMPERATURE: TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEGREES F (4 DEGREES C) AND BELOW; AND WHEN 80 DEGREES F (27 DEGREES C) AND ABOVE; AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS ARE MADE. 5. COMPRESSION TEST SPECIMEN: ASTM C31; ONE SET OF (4) STANDARD CYLINDERS FOR

EACH COMPRESSIVE STRENGTH TEST, UNLESS OTHERWISE DIRECTED. MOLD AND STORE

CYLINDERS IN LABORATORY FOR LABORATORY CURED TEST SPECIMENS EXCEPT STORE IN

FIELD IF FIELD-CURED TEST SPECIMENS ARE REQUIRED. 6. COMPRESSIVE STRENGTH TESTS: ASTM C39; ONE SET FOR EACH POUR SESSION EXCEEDING (5) CUBIC YARDS AND LESS THAN (25) CUBIC YARDS FOR EACH CLASS OF CONCRETE. MAKE ADDITIONAL SETS FOR EACH (50) CUBIC YARDS OVER AND ABOVE THE FIRST (25) CUBIC YARDS OF EACH CONCRETE CLASS PLACED IN ANY ONE SESSION: ONE SPECIMEN SHALL BE TESTED AT (7) DAYS, TWO SPECIMENS TESTED AT (28) DAYS, AND ONE SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED. TESTING SEQUENCE: (5) C.Y. TO (25) C.Y. = ONE SET; (26) C.Y. TO (75) C.Y. = TWO SETS;

(76) C.Y. TO (125) C.Y. = THREE SETS; (126) C.Y. TO (175) C.Y. = FOUR SETS;

3.5 CHEMICAL ANCHORS AND DRILL-AND-DOWEL REBAR

- (NOTE: CHEMICALLY ANCHORED HARDWARE AND DOWELS MAY NOT BE DETAILED IN THE PLANS BUT SHOULD THEIR USE BE DEEMED NECESSARY, & APPROVED BY THE ARCHITECT OR ENGINEER, THEY SHALL BE AS FOLLOWS:)
- 1. HILTI HIT RE 500 SD BY HILTI CORP., OR APP'D EQUIV., SHALL BE USED FOR DOWELS AND ANCHORS INTO CONCRETE AND SHALL BE INSTALLED IN ACCORDANCE WITH THE SELECTED PRODUCT MANUFACTURER'S RECOMMENDATIONS.
- 2. HILTI HIT HY 150 MAX BY HILTI CORP., OR APP'D EQUIV., SHALL BE USED FOR DOWELS AND ANCHORS INTO SOLID MASONRY WALLS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE SELECTED PRODUCT MANUFACTURER'S RECOMMENDATIONS. 3. HILTI HIT HY 20 BY HILTI CORP., OR APP'D EQUIV., SHALL BE USED FOR DOWELS AND ANCHORS INTO HOLLOW MASONRY WALLS AND SHALL BE INSTALLED IN

ACCORDANCE WITH THE SELECTED PRODUCT MANUFACTURER'S RECOMMENDATIONS. 4.1 CONCRETE MASONRY NOTES

1. ALL MASONRY MATERIALS, CONSTRUCTION AND SHOP DRAWINGS SHALL BE IN ACCORDANCE WITH "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-08/ASCE 6-08/TMS 602-08)." MASONRY CONTRACTOR SHALL PURCHASE AND MAINTAIN A COPY OF THIS SPECIFICATION AT THE FIELD OFFICE FOR REVIEW BY OTHERS. THIS SPECIFICATION SHALL GOVERN MASONRY THROUGHOUT THIS

2. ALL BLOCKS SHALL BE LIGHTWEIGHT, MOISTURE CONTROLLED (ASTM C90-TYPE 1),

- AND SHALL BE LAID IN RUNNING BOND, UNLESS NOTED OTHERWISE. NOTHING IN THE STRUCTURAL PLANS IS INTENDED TO DICTATE BOND PATTERNS. VERIFY BOND PATTERN REQUIREMENTS WITH THE ARCHITECT. 3. UNLESS NOTED OTHERWISE, PROVIDE GALVANIZED LADDER-TYPE JOINT REINFORCEMENT AT ALTERNATE COURSES, SIMILAR TO DUR-O-WAL LADUR,
- WITH NO. 9 GAGE SIDE RODS. IN COMPOSITE WALLS, THE JOINT REINFORCEMENT SHALL EXTEND THROUGHOUT THE ENTIRE WALL WIDTH, WITH THE CAVITY (COLLAR JOINT) BEING COMPLETELY FILLED WITH MORTAR OR GROUT.
- 4. FILL ALL CORES OF CONCRETE BLOCKS SOLID WITH 3000 psi CONCRETE OR GROUT WHERE PLACED PERMANENTLY BELOW GRADE AND/OR SLAB LEVEL. 5. FILL CORES OF CONCRETE BLOCKS SOLID WITH 3000 psi CONCRETE, OR USE SOLID BLOCKS, FOR A DISTANCE OF 16 INCHES BELOW ALL LINTEL AND/OR BEAM BEARINGS SUPPORTED BY UNIT MASONRY, UNLESS OTHERWISE

THE DRAWINGS:-

6. REINFORCING BARS IN MASONRY SHALL BE LAPPED IN ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY". (ACI 318, CURRENT EDITION). BARS SHALL BE EITHER SEPARATED BY ONE BAR DIÀMETER OR WIRED TOGETHER AND SHALL BE HELD IN POSITION USING DUR-O-WAL, OR APPROVED EQUIVALENT, GALVANIZED 9 GAGE BAR POSITIONERS, ALL CMU CORES AND BOND BEAMS CONTAINING REINFORCEMENT SHALL BE FILLED WITH 3000 psi SELF-CONSOLODATING CONCRETE GROUT. BAR LAPS SHALL COMPLY WITH THE FOLLOWING, UNLESS NOTED OTHERWISE ON

- A. VERTICAL BARS IN THE END-MOST CORES OF WALLS DESIGNATED ON THE PLANS AS 'SHEAR WALLS': 57 BAR DIAMETERS FOR BAR SIZES UPTO AND INCLUDING #6. 71 BAR DIAMETERS FOR BAR SIZES LARGER THAN #6.
- B. ALL VERTICAL BARS, EXCEPT AS NOTED IN 'A', ABOVE." 40 BAR DIAMETERS, WITH 24" MIN. LAP LENGTH. C. HORIZONTAL BARS IN BOND-BEAMS: 44 BAR DIAMETERS FOR BAR SIZES UPTO AND INCLUDING #6.
- 7. UNLESS SHOWN OTHERWISE, PROVIDE (2) #5 BARS IN ALL BOND BEAMS. 8. UNLESS NOTED OTHERWISE, MASONRY WYTHE TIES SHALL BE PLACED AT ALTERNATE COURSES (16" C/C) WITH HORIZONTAL SPACING NOT TO EXCEED
- 9. THE LOCATIONS OF CRACK-CONTROL JOINTS DICTATED BY THE ESTHETICS OF THE BUILDING ARE SHOWN IN THE ARCHITECTURAL ELEVATIONS. CRACK-CONTROL JOINTS ARE ALSO TO BE PROVIDED, BY THE CONTRACTOR, TO SATISFY THE CRITERIA OUTLINED IN THE 'TYPICAL CMU CONTROL JOINT LOCATION AND REINFORCEMENT DETAILS' SHOWN IN STRUCTURAL DRAWINGS, AND AS OTHERWISE INDICATED IN THE PLANS. A COMPREHENSIVE LAYOUT OF ALL REQUIRED JOINT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND BE SUBMITTED TO THE ARCHITECT FOR REVIEW. SHOP DRAWINGS MUST INDICATE THE LOCATION OF THE MASONRY CRACK-CONTROL JOINTS, AND INCLUDE APPROPRIATE DETAILS FOR THE ACCURATE PLACEMENT OF ASSOCIATED DOWEL-BARS IN THE R.C. FOUNDATION SYSTEM. NO MASONRY CONSTRUCTION, INCLUDING THE PLACEMENT OF THE DOWEL-BARS, SHALL START PRIOR TO REVIEW AND RELEASE OF THE SHOP DRAWINGS BY THE ARCHITECT.
- 10. THE LOCATION OF CONTROL JOINTS IN VENEER MASONRY SHALL BE GENERALLY COINCIDENT WITH THE LOCATION OF CMU CONTROL JOINT, WHERE BACKED WITH CMU, IF VENEER IS BACKED WITH OTHER STRUCTURAL SYSTEMS. THE LOCATION OF CONTROL JOINTS SHALL BE BASED ON THE LAYOUT REQUIREMENTS INDICATED IN "TYPICAL CONTROL JOINT LOCATION AND REINFORCEMENT DETAILS". SUBMIT SHOP DRAWINGS. INDICATING THE LOCATION OF THE CONTROL JOINTS AND THEIR DETAILS, FOR REVIEW BY THE ARCHITECT NO VENEER MASONRY CONSTRUCTION SHALL START PRIOR TO REVIEW AND RELEASE OF THE SHOP DRAWINGS BY THE ARCHITECT.
- 11. WYTHES OF CAVITY WALLS SHALL BE REINFORCED & TIED TOGETHER USING 3/16" DIAMETER LADDER-TYPE JOINT REINFORCEMENT WITH ADJUSTABLE WALL-TIE EYE SECTIONS SIMILAR TO LADUR-EYE AS MANUFACTURED BY DUR-O-WAL, INC. OR ARCHITECT APPROVED EQUIVALENT.
- 12. UNLESS NOTED OTHERWISE, CONCRETE UNIT MASONRY SHALL BE ANCHORED TO THE STEEL COLUMNS USING DUR-O-WAL, INC. D/A 2200 JOINT STABILIZING ANCHORS, OR APPROVED EQUIVALENT, AT 16" O.C.
- 13. PROVIDE ANCHORAGE AT WALL INTERSECTIONS & CORNERS AS FOLLOWS: A. LOAD BEARING & EXTERIOR WALL OPTIONS:
- 1. LAY EVERY OTHER COURSE IN AN OVERLAPPING BONDING PATTERN.
- 2. PROVIDE RIGID STEEL ANCHORS AT MAXIMUM 48" SPACINGS. ANCHORS ARE TO BE 1/4" THICK x 1 1/2" WIDE x 2'-0" LONG WITH 2" LONG BENT ENDS AS PER DUR-O-WAL 301Z OR APPROVED EQUIVALENT.
- 3. PROVIDE PRE-FABRICATED LADDER-TYPE "TEE" OR "CORNER" JOINT REINFORCING AT MAXIMUM 8" SPACINGS. "TEE" SHALL BE A MINIMUM OF 30" LONG IN BOTH DIRECTIONS AS PER DUR-O-WAL D/A 320 LADUR OR APPROVED EQUIVALENT.
- B. INTERIOR NON-LOAD BEARING WALL OPTIONS:
- 1. PROVIDE PRE-FABRICATED LADDER-TYPE "TEE" OR "CORNER" JOINT REINFORCING AT MAXIMUM 16" SPACINGS. "TEE" SHALL BE A MINIMUM OF 30" LONG IN BOTH DIRECTIONS AS PER DUR-O-WAL D/A 320 LADUR OR APPROVED EQUIVALENT.
- 2. PROVIDE 16 GAUGE x 1/2" SQUARE GALVANIZED WIRE-MESH STRIPS AT MAXIMUM 16" SPACINGS. WIRE-MESH STRIPS SHALL BE MINIMUM 3" WIDE x MINIMUM 20" LONG AS PER DUR-O-WAL D/A WMT, OR APPROVED EQUIVALENT.
- INTERSECTIONS OF NON-LOADBEARING TO LOADBEARING WALLS:
- 1. PROVIDE 16 GAUGE x 1/2" SQUARE GALVANIZED WIRE-MESH STRIPS AT MAXIMUM 16" SPACINGS. WIRE-MESH STRIPS SHALL BE MINIMUM 3" WIDE x MINIMUM 20" LONG AS PER DUR-O-WAL D/A WMT, OR APPROVED EQUIVALENT.
- 14. ALL MASONRY ACCESSORIES, INCLUDING MASONRY JOINT REINFORCEMENT, SHALL BE HOT-DIP GALVANIZED.
- 15. CRITICAL VERTICAL REINFORCEMENT REQUIRED FOR UNIT MASONRY WALLS IS SHOWN ON PLANS WITHIN AN ELLIPSE OR RECTANGLE. REFER TO 'TYPICAL DETAILS' SHEETS FOR EXPLANATION AND FOR ADDITIONAL BAR REQUIREMENTS.
- 16. VENEER ANCHOR TO STEEL STUD FRAMING SHALL BE X-SEAL/BYNA-LOK ANCHOR AS MANUFACTURED BY HOHMANN & BARNARD OF HAUPPAUGE, N.Y. OR APPROVED EQUIVALENT. DOVETAIL ANCHOR TO CONCRETE WALL SHALL BE D/A 720QT, AS APPROPRIATE, MANUFACTURED BY DUR-O-WAL, INC. OF ARLINGTON HEIGHTS, IL OR APPROVED EQUIVALENT. VENEERS SHALL BE ANCHORED TO CONCRETE SURFACES IN A SIMILAR MANNER, AND ON SAME SPACINGS AS VENEER ANCHORAGE TO CMU.
- 17. THE MASONRY WALLS ARE DESIGNED TO BE STABLE ONLY AT FINAL SERVICE CONFIGURATION. WITH ALL STRUCTURAL ELEMENTS SUCH AS BEAMS, JOISTS. BRIDGING AND BRACINGS THAT ARE SHOWN IN PLANS. IN PLACE. PROPER BRACING FOR THE MASONRY WALLS, DURING CONSTRUCTION, SHALL BE PROVIDED BY THE CONTRACTOR & SUCH BRACINGS SHALL BE KEPT IN PLACE UNTIL ALL STRUCTURAL ELEMENTS ATTACHED TO THE WALL, AS DETAILED IN PLANS, ARE INSTALLED. BRACING SHALL COMPLY WITH TEK 3-4B OF THE NATIONAL CONCRETE MASONRY ASSOCIATION TITLED "BRACING CONCRETE MASONRY WALLS DURING CONSTRUCTION".
- 18. ALL MATERIALS USED IN THE MASONRY CONSTRUCTION SHALL BE NEW MATERIAL. REINFORCING STEELS SHALL BE CONTINUOUS BETWEEN SPLICES. LOCATION OF ALL SPLICES SHALL BE PER PLANS OR AS APPROVED BY THE ARCHITECT. RUSTED REINFORCING STEEL AND DAMAGED OR DISTORTED MATERIALS RECLAIMED FROM PREVIOUS INSTALLATION (EXCEPT FORMS AND SCAFFOLDS AS ALLOWED IN THE SPECIFICATIONS) SHALL NOT BE USED IN THE CONSTRUCTION. ALL REJECTED MATERIALS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER OR OWNER'S AGENTS.
- 19. WHERE STEEL BEAMS OR LINTELS ARE USED TO CARRY THE MASONRY OVER OPENINGS, PROVIDE CONTROL JOINTS ON ONE END OF THE BEAM OR LINTEL IF THE WIDTH OF OPENING IS LESS THAN 6'-0" AND ON BOTH SIDES FOR OPENINGS GREATER THAN 6'-0". CONTROL JOINTS SHALL BE LOCATED 8" FROM THE EDGE OF OPENING AND SHALL EXTEND FROM THE BEARING LEVEL OF THE BEAM OR LINTEL TO THE TOP OF THE MASONRY WALL.
- 20. ALL CONTROL JOINTS SHALL UTILIZE SPECIFICALLY MANUFACTURED CMU CONTROL-JOINT (SASH) BLOCKS AND INCLUDE CROSS-TYPE PRE-MOLDED PVC OR EXTRUDED RUBBER CONTROL-JOINT INSERTS FOR THE ENTIRE HEIGHT OF THE JOINT, TO RESTRAIN DIFFERENTIAL LATERAL MOVEMENT OF THE MASONRY AT THE JOINTS. ALL CONTROL-JOINTS SHALL BE RAKED CLEAN OF MORTAR, TO ALLOW FOR EXPANSION AND CONTRACTION, AND SHALL BE CAULKED ON BOTH SIDES OF THE MASONRY, WITH BACKER ROD. THE HORIZONTAL BED JOINT AT THE LEVEL OF THE BEARING OF LINTEL OR BEAM, DIRECTLY BELOW THE BEARING, SHALL BE BOND-BROKEN TO FACILITATE MOVEMENT, USING PLASTIC OR POLYETHYLENE SHEET OF MINIMUM 20 MIL. THICK.
- 21. SELF-CONSOLODATING CONCRETE CORE-FILL, GROUT AND MORTAR SHALL BE SAMPLED AND TESTED PER ASTM C-1019 AND THE RESULTS REPORTED TO THE ARCHITECT WITHIN THREE DAYS OF TESTING. ONE SET OF FOUR TEST SPECIMENS SHALL BE CAST, ON A TWICE WEEKLY BASIS, APPROXIMATELY THREE DAYS APART, TO REPRESENT EACH OF THE CONCRETE CORE-FILL, MORTAR AND GROUT MIXES. ONE SPECIMEN FROM EACH SET SHALL BE TESTED AT SEVEN DAYS, FOR EARLY DETERMINATION OF COMPRESSIVE STRENGTH, AND TWO SPECIMENS SHALL BE TESTED AT 28 DAYS OF AGE. THE REMAINING SPECIMEN SHALL BE RETAINED AS A SPARE AND MAY BE TESTED AT 56 DAYS IF ONE OF THE 28 DAY SPECIMENS FAILS TO MEET THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH. A MINIMUM OF THREE SPECIMENS, OF THE FOUR CAST, SHALL BE TESTED TO ASCERTAIN THE COMPRESSIVE STRENGTH OF THE MIXTURES, AND NO SAMPLES SHALL BE DISCARDED WITHOUT THE ARCHITECT'S APPROVAL, COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:

MORTAR - 1275 psi (+/- 400psi)

- GROUT AND S-C CONCRETE, USED FOR FILLING CORES 3000psi MIN. SAMPLING, MOLDING AND TESTING SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND/OR THE OWNER'S AGENTS.
- 22. SHOP DRAWINGS SHALL BE VERY EXPLICIT. EACH BAR WITH ITS SIZE, SPACING, AND CLEARANCES SHOWN IN THREE BASIC ORTHOGONAL VIEWS. SHOP DRAWINGS WILL BE THE ONLY REFERENCE USED TO ERECT THE REINFORCING STEEL AND WILL BE TH ONLY DOCUMENT THAT WILL BE USED BY THE SPECIAL INSPECTOR OF RECORD T VERIFY THE REINFORCEMENT IN THE FEILD. HENCE, THE STANDARD OF CARE TO BE EXERCISED IN PREPARING THE SHOP DRAWINGS SHALL BE VERY HIGH. EACH BAR SHALL BE NUMBERED, NOTED IN THE "BAR SCHEDULE". AND MUST BE SHOWN IN THE DRAWINGS IN ALL THREE VIEWS WITH BAR DESIGNATION. NON-EXPLICIT SHOP DRAWINGS THAT ARE NOT IN ACCORDANCE WITH ACI SP-66 WILL NOT BE REVIEWED AND WILL BE SENT BACK TO THE CONTRACTOR FOR RE-SUBMITTAL. REFER TO GENERAL PROVISION SECTION 1.4 FOR FURTHER INSTRUCTIONS FOR PREPARING THE SHOP DRAWINGS.
- 23. ALL MASONRY DOWELS FOR VERTICAL REINFORCING SHALL BE EPOXY SET FROM THE CONCRETE FOUNDATIONS, CONCRETE WALLS OR CONCRETE SLABS. ALL DOWELS FROM CONCRETE SLABS SHALL BE EMBEDDED THE SLAB THICKNESS MINUS ONE INCH. SEE THE TYPICAL DETAILS FOR EMBED DEPTHS & LAP LENGTHS WHEN DOWELING INTO FOOTINGS OR WALLS. THE MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL & LABOR COSTS ASSOCIATED WITH THE LAYOUT AND INSTALLATION OF THE EPOXY SET MASONRY DOWELS. REFER TO OTHER GENERAL PROVISION SECTIONS FOR ACCEPTABLE EPOXY, AND INSTALL DOWELS PER THE EPOXY MANUFACTURER'S RECOMMENDATIONS.

4.2 CMU LINTEL NOTES (U.N.O.)

1. CONCRETE BLOCK LINTEL SCHEDULE: 8" MIN. BEARING EACH END

| OPENING WIDTH | MIN. LINTEL UNIT | REINFORCEMENT |
|-----------------|--------------------------------|---------------|
| LESS THAN 3'-4" | WALL WIDTH x 8" DP | (2)#4 |
| 3'-4" BUT LESS | WALL WIDTH x 8" DP | (2)#5 |
| THAN 5'-6" | WALL WIDTH x 16" DP | (2)#4 |
| 5'-6" BUT LESS | WALL WIDTH x 16" DP | (2)#5 |
| THAN 7'-0" | (2) WALL WIDTH x 8" DP STACKED | (2)#5 IN EACH |
| 7'-0" BUT LESS | WALL WIDTH x 16" DP | (2)#6 |
| THAN 8'-6" | (2) WALL WIDTH x 8" DP STACKED | (2)#6 IN EACH |

、55 STEFL LINTFLS NOTES (LINIO)

| ک ح | .5 STEEL LINI | ELS NOTES (U | .14.0) |
|--------------|--|--|--|
| \} 1. | STEEL LINTELS SCHEDULE: 8" MIN. BEARING EACH EN L.L.V. — LONG LEG VERTIC | | |
| { | OPENING WIDTH | NUMBERS OF MEMBERS PER THICKNESS OF MSRY. | MIN. MEMBER SZ. |
| > | LESS THAN 3'-4" | 1 PER 4" THICK | L3-1/2 x 3-1/2 x 3/8 |
| > | 3'-4" BUT LESS THAN 5'- | -6" 1 PER 4" THICK | L5 x 3-1/2 x 3/8 (L.L.V.) |
| > | 5'-6" BUT LESS THAN 8'- | -6" 1 PER 4" THICK | L6 x 3-1/2 x 3/8 (L.L.V.) |
| > | 8'-6" BUT LESS THAN 10 | '-6" 1 PER OPENING | W8 x 21 + 3/8" PLATE ® BOT. FLG. FOR 6" CMU |

SEE THE TYPICAL DETAILS FOR STEEL LINTEL VARIATIONS, OPTIONS, BEARINGS, ETC.

W8 x 28 + 3/8" PLATE

W8 x 35 + 3/8" PLATE

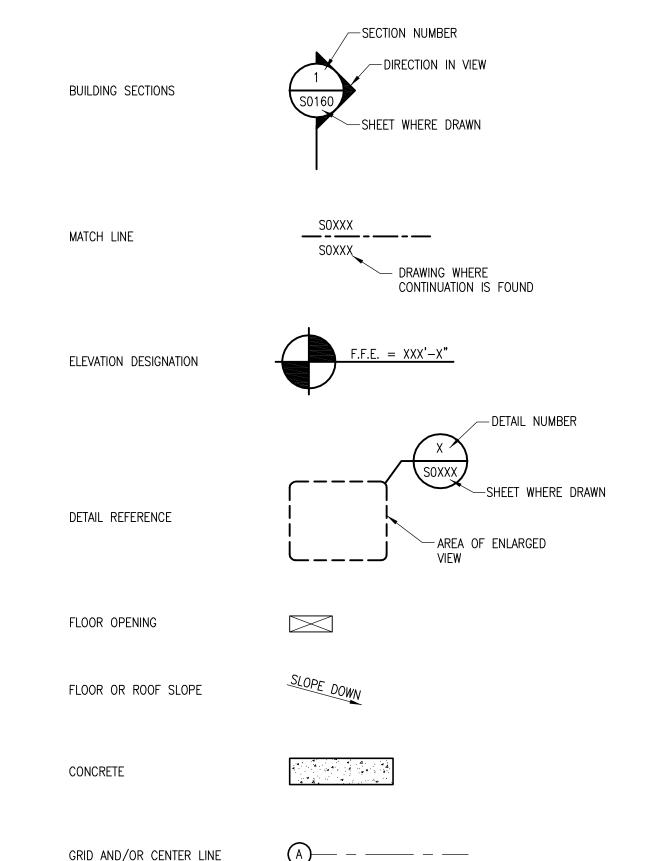
@ BOT. FLG. FOR 12" CMU

@ BOT. FLG. FOR 8" CMU

6.1 ABBREVIATIONS

| \.B. | | ANCHOR BOLT | IN. | | INCH/INCHES |
|-------------------|---|----------------------------------|-------------------|---|-----------------------------------|
| .DD'L. F.F. | _ | ADDITIONAL ABOVE FINISHED FLOOR | INV. | _ | INVERT |
| λ.τ | | ALTERNATE/ | JNT. | | JOINT |
| | | ALTERNATIVE | JST. | _ | |
| ALUM. | - | ALUMINUM | J.B.E | _ | JOIST BEARING ELEVATION |
| APPROX. | - | APPROXIMATE | | | |
| ARCH. | - | ARCHITECT/ ARCHITECTURAL | L.L.V. | | LONG LEG VERTICAL |
|) | _ | AT | L.L.H. LONGIT. | | LONG LEG HORIZONTAL LONGITUDINAL |
| y | _ | Al | L.P. | | LOW POINT |
| B./BOTT./BOT. | _ | ВОТТОМ | LYR. | | LAYER/LAYERS |
| 3.F.F. | _ | BELOW FINISHED FLOOR | | | |
| BLDG. | - | BUILDING | MAX. | - | |
| BM. | _ | BEAM | MACH. | _ | WINTOTHINE / WINTOTHINE |
| 3.0. | _ | BOTTOM OF | M.C. | _ | MECHANICAL CONTRACTOR |
| 3.0.S. | _ | BOTTOM OF STEEL | MCJ | - | MASONRY CONTROL JOINT |
| BRDG. B.S. | _ | BRIDGING BRICK SHELF | MECH. MFGR. | | |
| 3.3. BRG. | _ | BEARING | I WII GIV. | _ | MANUFACTURING |
| <u> </u> | | DDWWW | MAT'L. | _ | |
| 2/0 - /- | _ | CENTER TO CENTER | MID. | _ | MIDDLE/ MID-POINT |
| C/C, c/c | | (IN INCHES U.N.O.) | MIN. | _ | MINIMUM |
| CANT. | _ | CANTILEVER | MSRY. | _ | MASONRY |
| C.I.P. | - | CAST IN PLACE | MTL. | _ | METAL |
| C.J. | _ | CONTROL JOINT | l lies | | |
| <u>Ĺ</u> | _ | CENTER LINE | NEC. | - | NECESSARY |
| CLR. , CL. CMU | _ | CLEAR CONCRETE | N.F. N.T.S. | _ | NEAR FACE NOT TO SCALE |
| JIVI U | _ | MASONRY UNIT | 14.1.3. | _ | NOT TO SUALE |
| COL. | _ | COLUMN | 0.D. | | OUTSIDE DIAMETER |
| CONC. | _ | CONCRETE | 0.F. | _ | OUTSIDE FACE |
| CONSTR. | _ | CONSTRUCTION | OPNG. | _ | OPENING |
| CONN. | _ | CONNECTION | OPP. | | OPPOSITE |
| CONT. | _ | CONTINUOUS | OR EQ. | - | on Edonich Edonine |
| CORP. | _ | CORPORATION | 0.0.0.0 | | (SEE NOTE BELOW) |
| CTR. | _ | CENTER | o.c. OR O/C | _ | ON CENTERS |
| | | DETAIL | DEDIM | | DEDIMETED |
| DET. DIA. OR Ø | _ | DETAIL DIAMETER | PERIM. | _ | PERIMETER PLATE |
| DIM. | _ | DIMENSION | PRO. | _ | PROPOSED |
| ON. | _ | DOWN | P.R.V. | | PRESSURE RELIEF VALVE |
| 00. | _ | DITTO | PT. | _ | |
| OP. | _ | DEEP | | | |
| DWG. | _ | DRAWING | R.C. | - | REINFORCED CONCRETE |
| OWL. | _ | DOWEL | REINF. | - | |
| | | | | | REINFORCEMENT |
| EA. | | EACH | REQ'D. | _ | REQUIRED |
| EL., ELEV. | | ELEVATION | REQ'T. | | REQUIREMENT |
| E.F. E.J. | _ | EACH FACE EXPANSION JOINT | SIM. SEC. | _ | SIMILAR SECTION |
| ELEC. | | ELECTRIC/ELECTRICAL | S.C.J. | _ | SAWN CONTROL JOINT |
| EMB./EMBED. | _ | EMBEDMENT | 3.0.0. | | SAWIN CONTINUE JUINI |
| EQ. | _ | EQUAL/EQUIVALENT | S.J.I. | _ | STEEL JOIST INSTITUTE |
| =.W. | _ | EACH WAY | SP. | _ | , |
| EXP. | _ | EXPANSION | SPEC. | _ | SPECIFY/SPECIFICATIONS |
| EXTG. | _ | EXISTING | SQ. OR ф | - | |
| | | | S.S. | _ | STAINLESS STEEL |
| F.D. | _ | FLOOR DRAIN | STAG. | - | OTHOGENY OTHOGENED |
| F.F. | _ | FAR FACE | STIFF. | _ | STIFFENER |
| FIN. FLG. | _ | FINISH/FINISHED FLANGE | STD. STIRR. | _ | STANDARD STIRRUP |
| -LG. -LR. | _ | FLOOR | STL. | _ | STEEL |
| FND. | _ | FOUNDATION | STR. | _ | |
| न. | _ | FOOT/FEET | | _ | |
| -TG. | _ | FOOTING | T. | _ | TOP |
| F.F.E. | - | FINISHED FLOOR | TH., THK. | _ | THICK/THICKNESS |
| | | ELEVATION | THRU | _ | THROUGH |
| <u> </u> | | 0405 | T.O. | _ | TOP OF STEEL |
| GA. G.C. | _ | GAGE GENERAL | T.O.S. TRANS. | | TOP OF STEEL TRANSVERSE |
| <i>3</i> .∪. | _ | CONTRACTOR | TYP. | _ | TYPICAL/TYPICALLY |
| GR. | _ | GRADE/GROUND | T.O.F. / T/F | _ | TOP OF FOOTING |
| GRTG. | _ | GRATING | T/W | _ | TOP OF WALL |
| | | | <u> </u> | | |
| ┥. | _ | HORIZONTAL | U.N.O. | _ | UNLESS NOTED OTHERWIS |
| | | REINFORCING | | | |
| HK. | - | HOOK | V., VERT. | _ | VERTICAL |
| HORIZ. | _ | HORIZONTAL | V.I.F. | | VERIFY IN FIELD |
| ł.P. | _ | HIGH POINT | V.W.A. | _ | VERIFY WITH ARCHITECT |
| ℲR. | _ | HANDRAIL | / | | WITH |
| 11 | - | HIGH/HEIGHT | w/ | | WITH WIDE/WIDTH |
| HT. | | | . 10(1) | _ | VVII.7E / VVII.7.E |
| .D. | | INSIDE DIAMETER | WD. W.P. | _ | WORK POINT |

7.1 SYMBOLS AND NOTATIONS



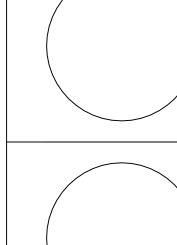
END OF GENERAL PROVISIONS

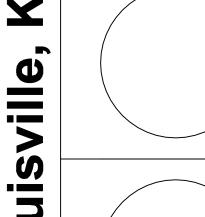
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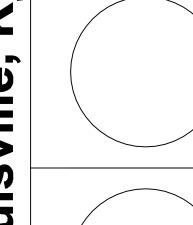
DISCLAIMER NOTE:

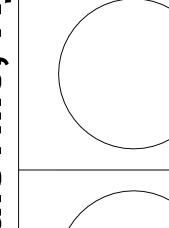
OVERLOOKED AND NOT INCLUDED IN THIS SET.

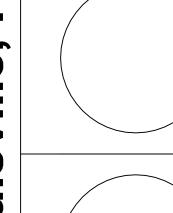
THIS SET OF CONSTRUCTION DRAWINGS HAS BEEN UPDATED TO INCLUDE ANY CHANGES ISSUED THROUGH ADDENDUM OR OTHER MEANS. EVERY EFFORT HAS BEEN TAKEN TO INCLUDE ALL CHANGES TO DATE. THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING ANY ITEMS THAT WERE SHOWN AS PART OF THE ORIGINAL BID SET THAT MAY HAVE BEEN

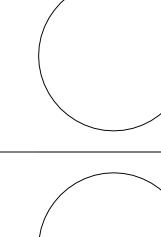


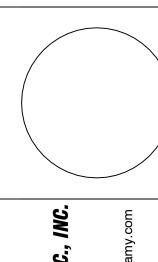












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