City of Aurora
Building Codes Division
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DESIGN CRITERIA

1. CODES AND STANDARDS USED IN DESIGN:

A. INTERNATIONAL BUILDING CODE 2006.

2. SEISMIC LOADS PER IBC 2006
OCCUPANCY CATEGORY IV
EARTHQUAKE IMPORTANCE FACTOR, IE 1.5
SEISMIC LATERAL SYSTEM . . . . . ORDINARY CMU BEARING WALLS
SEISMIC DESIGN CATEGORY . . . . . B

3. WIND LOADS PER IBC 2006 WITH AURORA AMENDMENTS
OCCUPANCY CATEGORY. IV
WIND IMPORTANCE FACTOR, IW 1.15
BASIC WIND SPEED (3-SECOND GUST WIND SPEED),. . . . 100 MPH
EXPOSURE CATEGORY. C
INTERNAL PRESSURE COEFFICIENT, GCpi . . . . . + 0.18

4. GRAVITY LOADS

A. RE: GRAVITY LOADS TABLE

GRAVITY LOADS TABLE

LOCATION	SUPERIMPOSED DEAD LOAD (PSF)	LIVE LOAD (PSF)	LIVE LOAD REDUCTION	PARTITION LOAD (PSF)	REMARKS
ROOF	15 (INCLUDES 5 PSF ROOFING LOAD)	30 MIN UNIFORM LOAD	No	--	--
LOBBIES, EXIT FACILITIES	10	100	No	--	--
TYPICAL OFFICE FLOORS	10	50	Yes	15	--

NOTES: SUPERIMPOSED DEAD LOAD EXCLUDES STRUCTURE SELF WEIGHT BUT INCLUDES THE WEIGHT OF ALL OTHER PERMANENT MATERIALS SUCH AS CEILINGS, M.E.P, FINISHES, ROOFING, ETC.

GENERAL NOTES

SECTION 1 - GENERAL REQUIREMENTS

1.0 DEFINITIONS:

A. ENGINEER: REFERENCES ON THE STRUCTURAL DRAWINGS TO 'ENGINEER' MEAN THE STRUCTURAL ENGINEER OF RECORD. OTHER ENTITIES ARE SPECIFICALLY NOTED AS "CONTRACTOR'S ENGINEER", "MECHANICAL ENGINEER", ETC.

1.1.1 THESE NOTES SUPPLEMENT THE SPECIFICATIONS, WHICH SHALL BE REFERRED TO FOR ADDITIONAL REQUIREMENTS.

1.1.2 UNDERGROUND UTILITIES: LOCATE EXISTING UTILITIES, AND NOTIFY ARCHITECT OF EXISTING UTILITIES OR SUBGRADE CONDITIONS WHICH INTERFERE WITH WORK.

1.1.3 EXISTING STRUCTURES:

A. CONTRACT DOCUMENTS HAVE BEEN PREPARED USING AVAILABLE DRAWINGS AND SITE OBSERVATION AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
B. DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT NOW KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION (DISCOVERY). CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL CONDITIONS NOT PER THE CONTRACT DOCUMENTS. EXAMPLES INCLUDE:
- SIZES OR DIMENSIONS OTHER THAN THOSE SHOWN.
- DAMAGE OR DETERIORATION TO MATERIALS AND COMPONENTS.
- CONDITIONS OF INSTABILITY OR LACK OF SUPPORT.
- ITEMS NOTED AS EXISTING ON THE DRAWINGS BUT NOT FOUND IN THE FIELD.
C. PREPARE DIMENSIONAL DRAWINGS OF ALL DISCOVERED ITEMS.
D. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS.
E. CONTRACTOR SHALL MAKE ALLOWANCE FOR THE RESOLUTION OF SUCH DISCOVERIES IN THE CONSTRUCTION SCHEDULE.
F. SUBMIT A DIMENSIONED DRAWING OF ALL NEW OPENINGS THROUGH EXISTING STRUCTURE, AND SECURE APPROVAL PRIOR TO CUTTING. DRAWING SHALL SHOW SIZE OF PROPOSED OPENING AND IT'S VERTICAL AND HORIZONTAL LOCATION.

1.1.4 USE OF DRAWINGS:

A. DO NOT SCALE DRAWINGS.

B. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED TYPICAL APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PROJECT.

1.1.5 TEMPORARY CONDITIONS:

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.

1.1.6 SUBMITTALS AND SUBSTITUTIONS:

A. SUBMITTALS:
1. IF THE CONTRACTOR REQUESTS A CHANGE FROM THE STRUCTURAL DRAWINGS, IT SHALL BE APPROVED BY THE ARCHITECT AND DESIGNED BY MARTIN/MARTIN, INC. PRIOR TO SUBMITTING SHOP DRAWINGS. VARIATION SHALL BE INDICATED ON THE SHOP DRAWINGS. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR MAKING THE CHANGE.
2. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE IN SUBMITTALS.
3. ALL SHOP DRAWINGS SHALL REFERENCE THE STRUCTURAL DRAWING NUMBER AND DETAIL USED TO PREPARE THE SUBMITTAL.
B. SUBSTITUTIONS: ARCHITECTS APPROVAL SHALL BE SECURED FOR ALL SUBSTITUTIONS.
C. NONCONFORMANCE: NOTIFY ARCHITECT OF CONDITIONS NOT CONSTRUCTED PER THE CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH CORRECTIVE WORK. SUBMIT PROPOSED REPAIR TO THE ARCHITECT FOR ACCEPTANCE. CONTRACTOR SHALL COMPENSATE MARTIN/MARTIN, INC. FOR DESIGNING THE REPAIR.
D. ALL SHOP DRAWINGS SHALL BE SUBMITTED IN 24X36, 11X17 AND 8-1/2X11 FORMAT ONLY.

E. THE FOLLOWING SUBMITTALS ARE REQUIRED:

1. CONCRETE
A. CONCRETE DESIGN MIXTURES: FOR EACH CONCRETE AND GROUT MIXTURE. SUBMIT ALTERNATE DESIGN MIXTURES WHEN CHARACTERISTICS OF MATERIALS, PROJECT CONDITIONS, WEATHER, TEST RESULTS, OR OTHER CIRCUMSTANCES WARRANT ADJUSTMENTS.
B. MECHANICAL CONNECTIONS (IF USED)FOR CONCRETE OR MASONRY REINFORCING BARS.
2. STEEL SUBMITTALS
A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
B. SHOP DRAWINGS: SHOW FABRICATION OF STRUCTURAL-STEEL COMPONENTS.
1. INCLUDE DETAILS OF CUTS, CONNECTIONS, SPLICES, HOLES, AND OTHER PERTINENT DATA.
2. INDICATE WELDS BY STANDARD AWS SYMBOLS, DISTINGUISHING BETWEEN SHOP AND FIELD WELDS, AND SHOW SIZE, LENGTH AND TYPE OF EACH WELD.
3. INDICATE TYPE, SIZE, AND LENGTH OF BOLTS, DISTINGUISHING BETWEEN SHOP AND FIELD BOLTS.
C. ERECTION DRAWINGS.
1. SUBMIT ERECTION DRAWINGS DEFINING LOCATION OF EACH ASSEMBLY OR PIECE WITHIN THE STRUCTURE. PROVIDE SUFFICIENT DETAILS TO DESCRIBE ALL FIELD WELDING.
D. WELD CERTIFICATES
E. QUALIFICATION DATA: FOR INSTALLER AND FABRICATOR.

1.1.7 OSHA STANDARDS:

THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. NOTHING SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSTRUED AS ELIMINATING THE NEED FOR THE CONTRACTOR TO COMPLY WITH ALL OSHA REQUIREMENTS.

THE CONTRACTOR SHALL ADD ALL NECESSARY BOLTS, ANCHOR BOLTS, PLATES, STIFFENER PLATES, STABILIZER PLATES, BRACING, ETC., AS WELL AS CLOSURES FOR OPENINGS. IN ADDITION, FIELD WELD ANYTHING THAT MAY BE CONSIDERED A TRIP HAZARD.

WHERE THE STRUCTURAL DRAWINGS APPEAR TO CONFLICT WITH OSHA REQUIREMENTS, THE STRUCTURAL DRAWINGS REPRESENT FINAL CONDITIONS ONLY; THE CONTRACTOR SHALL ADD ALL ERECTION FRAMING AS MAY BE NECESSARY TO COMPLY WITH OSHA.

1.2.1 CONSTRUCTION ENGINEERING:

THE STRUCTURE DEFINED ON THE CONTRACT DOCUMENTS HAS BEEN DESIGNED ONLY FOR LOADS ANTICIPATED ON THE STRUCTURE DURING ITS SERVICE LIFE. PROVIDE ALL REQUIRED ENGINEERING AND OTHER MEASURES TO ACHIEVE THE MEANS, METHODS, AND SEQUENCES OF WORK. SUCH ENGINEERING MAY INCLUDE, BUT IS NOT LIMITED TO:
- LAYOUT.
- DESIGN FOR SHORING.
- DESIGN OF CONCRETE MIXES.
- ERECTION PROCEDURES WHICH ADDRESS STABILITY OF THE FRAME.
- WELD PROCEDURES.
- SURVEYING TO VERIFY CONSTRUCTION TOLERANCES.
- EVALUATION OF TEMPORARY LOADS ON STRUCTURE DUE TO EQUIPMENT AND MATERIALS DURING CONSTRUCTION.
- STRUCTURAL ENGINEERING TO RESIST ANY OTHER LOADS NOT IDENTIFIED ON DESIGN DRAWINGS.

1.3.1 COORDINATION:

A. STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO SHOP DRAWINGS AND WORK.
B. COORDINATE DIMENSIONS OF ALL OPENINGS, BLOCKOUTS, DEPRESSIONS, ETC., WITH ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, PROJECT SHOP DRAWINGS, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL.
C. SEE ARCHITECTURAL PLANS FOR INTERIOR PARTITIONS. PARTITION FRAMING SHALL BE CONNECTED TO THE PRIMARY STRUCTURE IN SUCH A WAY SO AS TO ALLOW FOR VERTICAL LIVE LOAD DEFLECTIONS OF SPAN/360 OF THE FLOOR FRAMING. DO NOT MAKE RIGID VERTICAL AND HORIZONTAL CONNECTIONS TO THE PRIMARY STRUCTURE IN THE PLANE OF THE WALL.

1.3.3 SPECIAL INSPECTION:

1. TESTING AGENCY: OWNER WILL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS, COMPLYING WITH THE GOVERNING BUILDING CODE, INDICATED BELOW AND PREPARE TEST REPORTS:
A. PAYMENT FOR THESE SERVICES WILL BE MADE BY OWNER FROM TESTING AND INSPECTING ALLOWANCE, AS AUTHORIZED BY CHANGE ORDERS.
B. RETESTING OF MATERIALS FAILING TO COMPLY WITH SPECIFIED REQUIREMENTS SHALL BE DONE AT CONTRACTOR'S EXPENSE.
C. PREPARE TEST SPECIMENS IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNING BUILDING CODE.
2. SPECIAL INSPECTION SHALL BE PROVIDED PER IBC 2006 SECTION 109 AND CHAPTER 17. THE LIST BELOW IS A SUMMARY OF REQUIRED TESTS.
3. DAILY REPORTS OF ALL SPECIAL INSPECTIONS SHALL BE PREPARED AND DISTRIBUTED AS SPECIFIED IN SECTION 01400 QUALITY CONTROL WITHIN 48 HOURS OF THE TIME OF INSPECTION.

SOILS:
- HELICAL PIER SHAFTS - AS REQUIRED BY MANUFACTURER'S ICC REPORT VERIFICATION OF MATERIAL AND APPLIED TORQUE MINE.

CONCRETE:
- STRUCTURAL CONCRETE
- INSTALLATION OF EMBEDDED BOLTS AND PLATES SUPPORTING STRUCTURE
- REINFORCING STEEL PLACEMENT
- ANCHORED REBAR INTO HARDENED CONCRETE

STRUCTURAL MASONRY:
- GROUT TEST (COMPRESSIVE STRENGTH): FOR EACH MIX PROVIDED, PER ASTM C1019.
- SPECIAL INSPECTION SHALL BE PERFORMED FOR COMPLIANCE WITH DRAWINGS AND STANDARDS CITED HEREIN. SPECIAL INSPECTION SHALL INCLUDE THE FOLLOWING:
- OBSERVE PREPARATION OF ALL GROUT AND MORTAR SPECIMENS.
- VERIFY ALL EMBEDDED BOLTS, PLATES, AND DOWELS ARE INSTALLED, ARE THE CORRECT SIZE, HAVE THE PROPER EMBEDMENT, AND ARE OTHERWISE AS SPECIFIED.
- VERIFY MASONRY UNITS, REINFORCEMENT, CEMENT LIME, AGGREGATE AND ALL OTHER MATERIALS MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. VERIFY ALL MATERIALS ARE PROPERLY STORED.
- FOR MASONRY OBSERVE THE FOLLOWING:
- OBSERVE PROPORTIONING, MIXING, AND PLACING OF MORTAR AND GROUT. OBSERVE GROUT CONSOLIDATION AND RECONSOLIDATION.

STRUCTURAL STEEL
- WELDED CONNECTIONS: 100% VISUAL INSPECTION IN THE SHOP AND IN THE FIELD. SHOP AND FIELD-WELDED CONNECTIONS WILL BE TESTED AND INSPECTED ACCORDING TO AWS D1.1 AND THE FOLLOWING INSPECTION PROCEDURES, AT TESTING AGENCY'S OPTION:
- ALL FULL OR PARTIAL PENETRATION GROOVE WELDED CONNECTIONS AND SPLICES: 100% ULTRASONIC.
- ALL OTHER WELDS: 10% MAGNETIC PARTICLE.
- ASCERTAINMENT THAT ELECTRODES USED FOR MANUAL SHIELDED METAL-ARC WELDING AND THE ELECTRODES AND FLUX USED FOR SUBMERGED ARE WELDING CONFORM TO THE REQUIREMENTS HEREIN.
- ASCERTAINMENT THAT THE WELDING IS PERFORMED ONLY BY WELDING OPERATORS AND WELDERS WHO ARE PROPERLY CERTIFIED. THE TESTING AGENCY SHALL WITNESS SUCH QUALIFICATION TESTING OF WELDING OPERATOR AND WELDERS, AS MAY BE REQUIRED.
- ASCERTAINMENT THAT THE FIT-UP, JOINT PREPARATION, SIZE, CONTOUR, EXTENT OF REINFORCEMENT, AND LENGTH AND LOCATION OF WELDS CONFORM TO SPECIFIED REQUIREMENTS AND THE CONTRACT DRAWINGS, AND THAT NO SPECIFIED WELDS ARE OMITTED OR UN SPECIFIED WELDS ADDED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER-OF-RECORD.
- DRILLED-IN ANCHORS
- SELF-EXPANDING ANCHORS: THE TESTING AGENCY SHALL INSPECT SELF-EXPANDING DRILLED-IN ANCHORS SHOWN ON THE STRUCTURAL DRAWINGS AS FOLLOWS:
- PRIOR TO INSTALLATION, THE TESTING AGENCY SHALL DETERMINE THAT THE INSTALLING CONTRACTOR HAS THE PROPER MATERIALS AND EQUIPMENT FOR DRILLING HOLES IN THE RECEIVING SURFACE OF REQUIRED DIAMETER AND LENGTH.
- ALL ANCHORS SHALL BE VISUALLY INSPECTED AFTER INSTALLATION TO ENSURE THAT THEY HAVE BEEN INSTALLED PERPENDICULAR TO THE RECEIVING SURFACE AND TO PROPER DEPTH.
- PULL TEST THE FIRST 3 AND 1% OF ALL REMAINING ANCHORS FOR TENSION LOAD OF 100% OF THE MANUFACTURER'S RECOMMENDED ALLOWABLE WORKING LOADS IN TENSION.
- ADHESIVE-BONDED ANCHORS/REBAR: THE TESTING AGENCY SHALL INSPECT ADHESIVE BONDED, DRILLED-IN ANCHORS AS FOLLOWS:
- THE TESTING AGENCY SHALL BE PRESENT AT THE SITE TO OBSERVE THE INSTALLATION OF THE FIRST 50 ANCHORS/REBAR PLACED. SUCH OBSERVATION SHALL BE TO ENSURE THAT DRILLED HOLES ARE OF REQUIRED DIAMETER AND DEPTH, HOLES ARE PROPERLY CLEANED PRIOR TO INSTALLATION OF THE ANCHORS, AND THAT HOLES ARE COMPLETELY FILLED WITH PROPERLY MIXED ADHESIVE AFTER INSTALLATION.
- ALL ANCHORS/REBAR SHALL BE VISUALLY INSPECTED AFTER INSTALLATION TO ENSURE THAT THE ANCHOR HAS BEEN INSTALLED PERPENDICULAR TO THE RECEIVING SURFACE AND TO PROPER DEPTH.
- PULL TEST THE FIRST 3 AND 1% OF ALL REMAINING ANCHORS FOR A TENSION LOAD OF 100% OF THE MANUFACTURER'S RECOMMENDED ALLOWABLE WORKING LOADS IN TENSION.

CONCRETE NOTES

3.1.1 ALL WORK SHALL CONFORM WITH ACI 301-99 UNLESS NOTED OTHERWISE IN DRAWINGS OR PROJECT SPECIFICATIONS.

3.2.1 REINFORCING:

A. REINFORCING: ASTM A615/A615M, GRADE 60 (GRADE 420) DEFORMED
B. WELDED AND FIELD BENT REINFORCING: ASTM A706/A706M, GRADE 60 (GRADE 420) DEFORMED
C. WELDED WIRE FABRIC: ASTM 185 PLAIN OR ASTM 497 DEFORMED, 70 KSI
D. SPLICES:
1. NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED ON DRAWINGS. WHERE PERMITTED, SPLICES MAY BE MADE BY CONTACT LAPS.
2. LAP WELDED WIRE FABRIC A MINIMUM OF ONE MESH SPACING.

3.2.2 STRUCTURAL CONCRETE MIX REQUIREMENTS:

A. RE:CONCRETE MIX TABLE

CONCRETE MIX TABLE

CONC MIX TYPE	INTENDED USE	28 DAY STRENGTH, f'c (KSI)	CONCRETE WEIGHT	MAX W/C RATIO, INCLUDING FLY ASH	MIN CEMENT MATERIAL (#/CY), INCLUDING FLY ASH	MAX AGGREGATE SIZE (IN), NOTE a	SLUMP LIMITS (IN), TOLERANCE = +1 1/2" -1 1/2"	TOTAL AIR CONTENT (%), NOTE b	CEMENT TYPE	REQUIRED ADMIXTURES, NOTE c	OTHER REQUIREMENTS, NOTE d
1	INTERIOR SLAB ON GRADE WITH MOISTURE SENSITIVE FLOORING	3.5	NW	0.49	517	1	4	N	I / II	WRA	SOG

NOTES:

(1) FOR THE MAXIMUM COARSE AGGREGATE SIZE INDICATED, USE THE FOLLOWING AGGREGATE SIZE NUMBERS PER ASTM C33:
1" #57 AGGREGATE
(2) TOTAL AIR CONTENT LIMITS INCLUDE BOTH ENTRAINED AND ENTRAPPED AIR +/- 1 1/2%. 'N' IN COLUMN INDICATES ADDITION OF ENTRAINED AIR IS NOT PERMITTED.
(3) ABBREVIATIONS FOR OTHER REQUIREMENTS AS FOLLOWS:
SOG = CONTRACTOR TO VERIFY ALKALINITY OF CONCRETE SURFACE, SLAB VAPOR TRANSMISSION, AND SLAB FLATNESS/LEVELNESS ARE COMPATIBLE WITH FLOORING SYSTEM AND ADHESIVES PRIOR TO INSTALLING FLOORING. AMOUNT OF CEMENTITIOUS MATERIALS LISTED SHALL BE PROVIDED, DO NOT USE LESS AND DO NOT SUPPLY OVER 5% MORE
(4) FOR CONCRETE PLACED BY PUMPING PROVIDE CONCRETE MIX FLOWABILITY TO FACILITY PUMPING.

3.6.1 NON-SHRINK GROUT: CONFORM TO ASTM C1107, GRADES B, OR C. ACHIEVE 6000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.

MASONRY NOTES

4.1.1 DEFINITIONS: STRUCTURAL MASONRY IS DEFINED AS BEING EITHER LOAD BEARING OR SERVING AS THE LATERAL LOAD RESISTING SYSTEM.

4.1.2 DESIGN STRENGTH: DEVELOP 1500 PSI COMPRESSIVE STRENGTH (F'M) IN 28 DAYS.

4.2.1 STEEL REINFORCING:

A. PRIMARY REINFORCING: ASTM A615, 60 KSI.
B. HORIZONTAL JOINT REINFORCING: ASTM A82, PREFABRICATED, LADDER TYPE.

4.3.1 MASONRY AND GROUT PRODUCTS:

A. GENERAL: DO NOT USE ADMIXTURES, INCLUDING PIGMENTS, AIR-ENTRAINING AGENTS, ACCELERATORS, RETARDERS, WATER-REPELLENT AGENTS, ANTI-FREEZE COMPOUNDS, OR OTHER ADMIXTURES, UNLESS OTHERWISE INDICATED.
1. DO NOT USE CALCIUM CHLORIDE IN MORTAR OR GROUT.
B. GROUT FOR UNIT MASONRY: COMPLY WITH ASTM C 476.
1. USE GROUT OF TYPE (FINE OR COARSE0 THAT WILL COMPLY WITH TABLE 1.15.1 IN ACI 530.1/ASCE6/TMS 602 FOR DIMENSIONS OF GROUT SPACES AND POUR HEIGHT.
2. PROVIDE GROUT WITH A SLUMP OF 8 TO 11 INCHES (200 TO 280 MM) AS MEASURED ACCORDING TO ASTM C143/C 143M.
3. FINE AND COURSE GROUT: MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI.
4. FINE GROUT: PROPORTION BY VOLUME. ONE PART PORTLAND CEMENT, WITH NOT MORE THAN ONE-TENTH PARTY HYDRATED LIME OR LIME PUTTY ADDED, AND TWO AND ONE-FORTH TO THREE PARTS SAND.
5. COARSE GROUT: PROPORTIONED BY VOLUME. ONE PARTY PORTLAND CEMENT WITH NOT MORE THAN ONE-TENTH PARTY HYDRATED LIME OR LIME PUTTY ADDED, TWO TO THREE PARTS SAND AND NOT MORE THAN TWO PARTS GRAVEL.

4.3.2 INSTALLATION REQUIREMENTS:

A. GROUT SOLID ALL CELLS CONTAINING REINFORCING AND ALL OTHER CELLS NOTED ON THE CONTRACT DOCUMENTS.
B. FILL CELLS AND VOIDS SOLIDLY WITH GROUT A DISTANCE OF 24" BENEATH AND 12" EACH SIDE OF BEAM REACTIONS AND OTHER CONCENTRATED LOADS UNLESS NOTED OTHERWISE

METAL NOTES

5.1.1 CONNECTION DESIGN: PROVIDE CONNECTIONS AS SHOWN IN THE CONTRACT DOCUMENTS.

5.1.2 WELDING REQUIREMENTS:

A. WELDERS: HAVE IN POSSESSION CURRENT EVIDENCE OF PASSING THE APPROPRIATE A.W.S. QUALIFICATION TESTS.
B. MINIMUM WELDS: AISC SPECIFICATION, NOT LESS THAN 3/16" FILLET, CONTINUOUS UNLESS OTHERWISE NOTED.
1. WELD SIZES AND LENGTHS CALLED FOR ON THE DRAWINGS ARE THE NET EFFECTIVE REQUIRED. INCREASE WELD SIZE IF GAPS EXIST AT THE FAYING SURFACE.
2. WELD SIZES SHALL BE AS SHOWN UNLESS A GREATER SIZE IS REQUIRED BY AISC ASD-1989; J2.1.b AND J2.2.b.

5.2.1 STRUCTURAL STEEL MATERIAL: PROVIDE THE FOLLOWING UNLESS NOTED:

A. WIDE FLANGE AND WT SHAPES:
ASTM A992/A992M GRADE 50 (345) . . . . . Fy = 50 KSI
B. S, M, HP SHAPES, ANGLES, CHANNELS, AND OTHER STEEL NOT IDENTIFIED: ASTM A36/A36M . . . . . Fy = 36 KSI
C. PLATES AND BARS ASTM A36/A36M. . . . . Fy = 36 KSI
D. PRIMER
1. FABRICATOR'S STANDARD LEAD AND CHROMATE-FREE, NONASPHALTIC , RUST-INHIBITING PRIMER.
E. GROUT
1. METALLIC, SHRINKAGE-RESISTANT GROUT: ASTM C 1107, FACTORY-PACKAGED, METALLIC AGGREGATE GROUT, MIXED WITH WATER TO CONSISTENCY SUITABLE FOR APPLICATION AND A 30-MINUTE WORKING TIME.
F. SHOP PRIMING
1. SHOP PRIME STEEL SURFACES EXCEPT THE FOLLOWING:
A. SURFACES EMBEDDED IN CONCRETE OR MORTAR. EXTEND PRIMING OF PARTIALLY EMBEDDED MEMBERS TO A DEPTH OF 2 INCHES (50 MM).
B. SURFACES TO BE FIELD WELDED.
C. SURFACES TO RECEIVED FIRE-RESISTIVE MATERIALS.

5.2.2 CONNECTION MATERIAL:

A. WELDING ELECTRODES: AWS D1.1, E70 SERIES UNLESS NOTED OTHERWISE.
B. EXPANSION ANCHORS: WEDGE TYPE, REFER TO SPECIFICATIONS FOR MATERIAL, GRADE, AND FINISH. SUBMIT ICBO REPORT.
C. ADHESIVE ANCHORS: THREADED ROD ASTM A307,.

STRUCTURAL PLAN REVIEW IS LIMITED TO A GENERAL SURVEY FOR CODE COMPLIANCE. NO REVIEW IS IMPLIED NOR WAS UNDER - TAKEN TO VERIFY STRUCTURAL ADEQUACY.

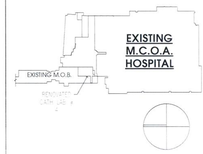
CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 12/14/09
09-443744
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KEY PLAN
FIRST FLOOR





Revisions

No	Date	By

Sheet Information

Date	12-09-2009
Job Number	21825.S.01
Drawn	DNE
Checked	LK
Approved	LK

Title
NOTES

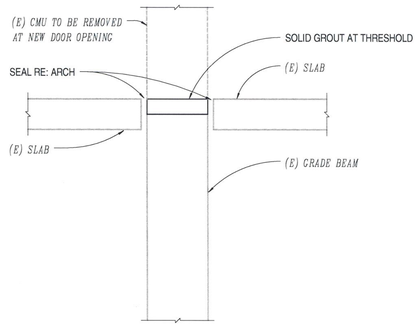
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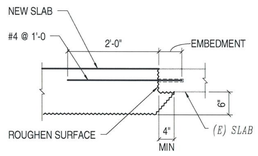
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MM JOB #: 21825.S.01
PRINCIPAL: LARRY KEMP
EOR:
PROJECT MANAGER: LARRY KEMP
DESIGNERS:
DATE PRINTED: 12/8/2009 10:38:03 AM

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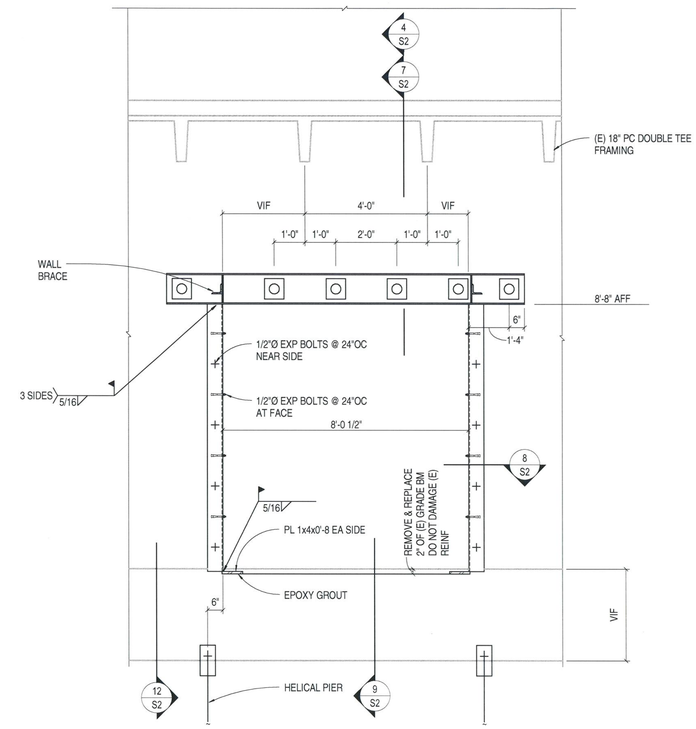
9 1 1/2" = 1'-0" THRESHOLD



EMBEDMENT IN CONCRETE (UNO)		
REBAR SIZE	HILTI 'HIT RE 500' EPOXY ADHESIVE	HILTI 'HY 150' EPOXY ADHESIVE
#4	5"	5 1/2"

NOTES:
1. INSTALL PER MNFR'S RECOMMENDATIONS

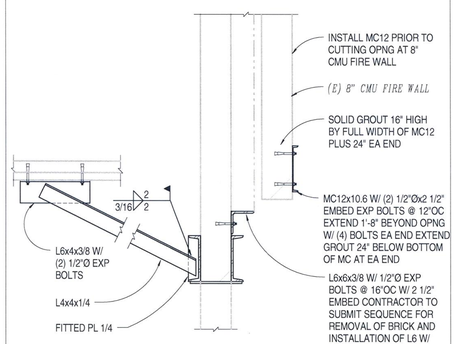
10 3/4" = 1'-0" SLAB REPAIR



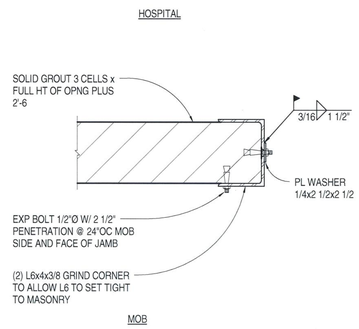
6 1/2" = 1'-0" WALL ELEVATION



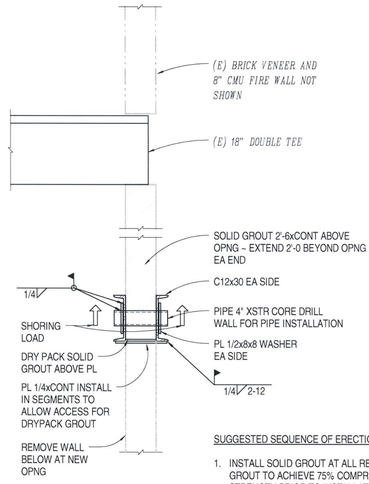
12 3/4" = 1'-0" HELICAL PIER AT EXISTING FOUNDATION



7 3/4" = 1'-0" WALL SECTION-1



8 1 1/2" = 1'-0" VERTICAL JAMB PLATE



SUGGESTED SEQUENCE OF ERECTION

1. INSTALL SOLID GROUT AT ALL REQD CELLS GROUT TO ACHIEVE 75% COMPRESSIVE STRENGTH PRIOR TO INSTALLATION OF STEEL SUPPORTS
2. PROVIDE SUPPORT FOR BRICK VENEER & CMU FIRE WALL
3. INSTALL C12, PIPE 4"XSTR & 1/2" PL WASHER
4. INSTALL WALL BRACING
5. APPLY UPWARD SHORING LOAD OF 15k MAX AT EA PIPE 4" MONITOR WALL DURING LOADING. DO NOT OVER LOAD WALL.
6. SAW CUT AND REMOVE WALL BELOW NEW OPENING. CORE DRILL AT CORNERS. DO NOT OVER CUT.
7. INSTALL PL 1/4xCONT W/ DRY PACK AND L6 JAMB ANGLES.
8. RELEASE SHORING LOADS.

09-443744

09-443746

STRUCTURAL PLAN REVIEW IS LIMITED TO A GENERAL SURVEY FOR CODE COMPLIANCE. NO REVIEW IS IMPLIED NOR WAS UNDER-TAKEN TO VERIFY STRUCTURAL ADEQUACY.

CITY OF AURORA
BUILDING DIVISION
APPROVED AS NOTED
DATE 12/14/09

4 3/4" = 1'-0" WALL SECTION

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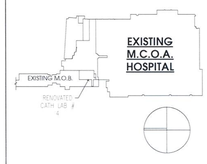
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KEY PLAN

FIRST FLOOR



COLORADO REGISTERED 28355 PROFESSIONAL ENGINEER

Revisions

NO.	ISSUE	DATE

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Title

ELEVATION AND DETAILS

Sheet

S2

Issued for Construction

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MM JOB #: 21825.S.01
PRINCIPAL: LARRY KEMP
EOR:
PROJECT MANAGER: LARRY KEMP

DESIGNERS:
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