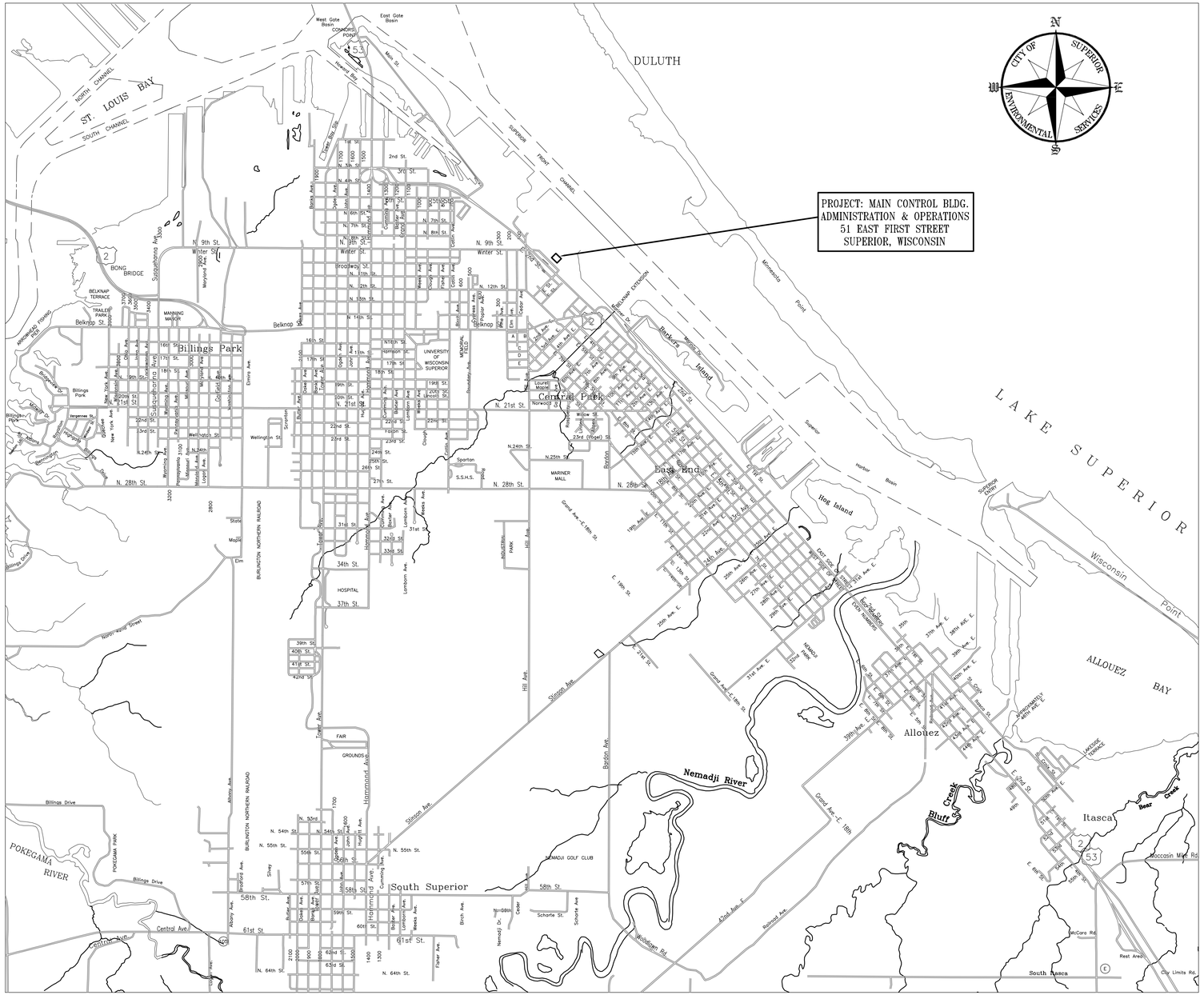

LOCATION PLAN

2000'

CERTIFICATIONS	
ARCHITECTURAL	MECHANICAL
ELECTRICAL	STRUCTURAL

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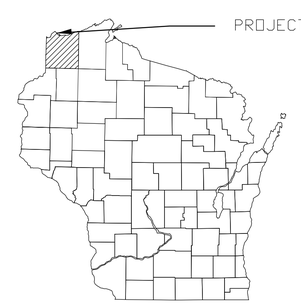
LHB PROJECT NO. 060565

OFFICE & STORAGE MEZZANINE

INDEX

REVISION DATE: 09/05/07

PROJECT LOCATION



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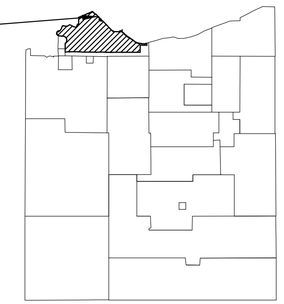

SCALE AS NOTED FOR 22"×34" SHEETS			MAIN CONTROL BUILDING ADMINISTRATION & OPERATIONS	OFFICE & STORAGE MEZZANINE		SUPERIOR, WISCONSIN SEPTEMBER 5, 2007	SURVEY N/A DRAWN DRH DESIGN AJV APPROV'D AJV RECORD DRAWINGS DATE: 06/26/2008	SHEET 1/14

ENVIRONMENTAL SERVICES DIVISION OF PUBLIC WORKS

MAIN CONTROL BUILDING - ADMINISTRATION & OPERATIONS
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LHB PROJECT NO. 060565

ABBREVIATIONS

A.B.	Anchor Bolt	EXP.	Expansion, Exposed	MET.	Metal	T.	Tread, Toilet
AC.	Acoustic	EXP.JT.	Expansion Joint	MFR.	Manufacturer	TEMP.	Tempered
AC.BD.	Acoustic Board	EXP.MAT'L.	Expansion Material	MTG.	Mounting, Meeting	T & G	Tongue and Groove
AC.T.	Acoustic Tile	EXT.	Exterior			TYP.	Typical
ADJ.	Adjustable	EXIST.	Existing	N, E, S, W, etc.	North, East, South West, etc.	U.	Urinal
A.F.F.	Above Finished Floor			N.I.C.	Not In Contract		
ALT.	Alternate	F.B.P.	Finish Birch Plywood	N.T.S.	Not To Scale	V.C.T.	Vinyl Composition Tile
ALUM.	Aluminum	F.D.	Floor Drain	NO.	Number	VERT.	Vertical
A.P.	Access Panel	FDN.	Foundation				
		F.E.	Fire Extinguisher	O.C.	On Center	W/	With
BD.	Board	FIN.	Finish	O.D.	Outside Diameter	W/O	Without
BIT.	Bituminous	FL., FLR.	Floor	OPG.	Opening	W.C.	Water Closet
BLDG.	Building	F.P.	Fireproofing	OPP.	Opposite	WD.	Wood
BLK.	Block	FR.	Frame			WDW.	Window
BLKG.	Blocking	FTG.	Footing	PERF.	Perforated	W.GL.	Wire Glass
B.M.	Bench Mark			P.T.H.	Paper Towel Holder	WPG.	Waterproofing
BM.	Beam	GA.	Gauge	PL.	Plate	W.W.M.	Welded Wire Mesh
		G.B.	Grab Bar	PLAS.	Plaster	@	At
C.B.	Catch Basin	GALV.	Galvanized	PLAS.LAM.	Plastic Laminate	∠	Angle
CBT.	Cabinet	GEN'L.	General	PLYWD.	Plywood	℄	Center Line
C.I.	Cast Iron	G.I.	Galvanized Iron	P.T.D.	Paper Towel Dispenser	[	Channel
C.J.	Control Joint	GL.	Glass	PTN.	Partition	ℙ	Plate
C.T.	Ceramic Tile	GYP.BD.	Gypsum Board	PTCL.BD.	Particle Board	'	Feet
CEM.	Cement			PT., PTD.	Paint, Painted	"	Inches
CEM. PLAS.	Cement Plaster	H.C.	Hollow Core	Q.T.	Quarry Tile	#	Number
CLG.	Ceiling	HDBD.	Hardboard			⊡	Square
CLR.	Clear	HDRL.	Handrail	R.	Riser, Radius	Ø	Round, Diameter
COL.	Column	HDW.	Hardware	R.D.	Roof Drain		
COMP.	Composition	HDWD.	Hardwood	REINF.	Reinforce, Reinforcing		
CONC.	Concrete	HT.	Height	REQD.	Required		
CONC. BLK.	Concrete Block	H.M.	Hollow Metal	REV.	Reverse		
CONT.	Continuous	HORIZ.	Horizontal	RM.	Room		
CONTR.	Contractor			R.O.	Rough Opening		
CPT.	Carpet	I.D.	Inside Diameter	R.S.	Rough Sawn		
		INSUL.	Insulation	RUBB.	Rubber		
DBL.	Double	INT.	Interior				
DET.	Detail			S.C.	Solid Core		
D.F.	Drinking Fountain	JAN.	Janitor	S.G.T.	Structural Glazed Tile		
DIA.	Diameter	JST.	Joist	SIM.	Similar		
DIM.	Dimension	JT.	Joint	SPEC.	Specification, Special		
DN.	Down			SQ.FT.	Square Foot		
DR.	Door	LAV.	Lavatory	STL.	Steel		
D.S.	Down Spout			STOR.	Storage		
		MAT'L.	Material	STRUCT.	Structural		
EA.	Each	MAX.	Maximum	SUSP.AC.B.	Suspended Acoustic Board		
E.F.	Each Face	MECH.	Mechanical				
ELEC.	Electrical	M.H.	Manhole	SUSP.AC.T.	Suspended Acoustic Tile		
EL., ELEV.	Elevation, Elevator	MIN.	Minimum, Minute				
EQUIP.	Equipment	MIN'L.	Mineral	SUSP.GYP. BD.	Suspended Gypsum Board		
E.W.	Each Way	M.O.	Masonry Opening				
E.W.C.	Elect. Water Cooler	M.R.	Moisture Resistant				

MATERIALS SYMBOLS

- FACE BRICK
- CONCRETE BLOCK
- WOOD STUD PARTITION
- METAL STUD PARTITION
- BATT INSULATION
- EXTERIOR RIGID INSULATION
- RIGID INSULATION
- PLYWOOD
- WOOD BLOCKING
- FINISH WOOD
- GYPSUM BOARD OR PLASTER
- METAL-LARGE SCALE
- STONE
- EXISTING (DETAILS/SECTIONS)

GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE SITE AND APPRAISE HIMSELF/HERSELF OF THE EXISTING CONDITIONS AND SEQUENCE FOR INSTALLATION. DRAWINGS ARE NOT TO BE SCALED. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND FIELD CONDITIONS PRIOR TO COMMENCING THE WORK.
2. MATERIALS COMMON TO SEVERAL DRAWINGS MAY BE NOTED ON ONLY ONE DRAWING.
3. CONTRACTOR RESPONSIBLE FOR ENTIRE SET OF DOCUMENTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE WORKING CONDITIONS OR AREAS FOR EMPLOYEES AND ALL OTHER PERSONS AT THE SITE.
5. ALL WORK TO CONFORM TO STATE AND LOCAL CODES.
6. REPORT ANY DISCREPANCIES TO OWNER.
7. BEFORE STARTING ANY OPERATION, EACH CONTRACTOR SHALL EXAMINE WORK PERFORMED BY OTHERS TO WHICH HIS OR HER WORK ADJOINS OR IS APPLIED & WILL REPORT TO THE OWNER ANY CONDITIONS THAT WILL PREVENT SATISFACTORY ACCOMPLISHMENT OF THE CONTRACT.
8. CLEAN UP - UPON COMPLETION OF THE WORK, THE BUILDING, THE PREMISES & THE ADJOINING AREAS SHALL BE MADE NEAT, DELIVERED CLEAN, WHOLE, TIGHT, & FIT FOR IMMEDIATE OCCUPANCY. EACH INDIVIDUAL CONTRACTOR IS RESPONSIBLE AFTER THEIR WORK COMPLETION TO CLEAN UP & MAKE AREAS NEAT THAT WERE AFFECTED BY THEIR WORK.
9. CONTRACTOR FOR THE PROJECT SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED BUILDING PERMITS.

FINISH NOTES

1. ALL PAINT FINISH OF METAL PARTS FOR DUCTS, FRAMES, DOORS, HANDRAILS, ETC, SHALL BE BENJAMIN MOORE'S PORCH & FLOOR URETHANE REINFORCED ALKYD ENAMEL - HAMILTON BLUE. MATCH EXISTING DOOR & HANDRAIL PAINT.
2. ALL CEILING DIFFUSERS AND REGISTERS SHALL BE PAINTED TO MATCH CEILING, UNLESS OTHERWISE NOTED.
3. FLAME SPREAD RATINGS FOR INTERIOR FINISHES TO BE CLASS THREE (3) OR BETTER.
4. ALL PAINT SHALL BE QUALITY TYPE CALLED FOR BY THE OWNER APPLIED IN ACCORDANCE WITH FOR MFR SPECIFICATIONS FOR THE PARTICULAR SURFACE. WALL PAINT TO BE SHERWIN - WILLIAMS SW1032 CITY LOFT (LATEX). MATCH EXISTING WALL PAINT.
5. ALL WALL FINISH SURFACES TO BE DUSTED OF ALL FOREIGN MATERIAL AND PROPERLY PREPARED PRIOR TO APPLICATION OF WALL FINISH.
6. ALL PAINTS TO BE APPLIED WITH (2) COATS OF FINISH PAINT OVER 2 COATS OF PRIMER OR BLOCK FILLER AS REQUIRED ON WALLS AND CEILING.
7. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CLEAN TRANSITION AT POINTS WHERE NEW AND EXISTING CONSTRUCTION INTERSECT.
8. PAINTING CONTRACTORS APPLICATION OF WALL FINISH CONSTITUTES ACCEPTANCE OF WALL CONDITION AND RESPONSIBILITY FOR IMPERFECTION CORRECTION.
9. CLEAN SEAL EXISTING CONCRETE FLOORING AT AREAS OF WORK FOR NEW FLOOR FINISH. INSTALL RESILIENT COVE BASE 4" RUBBER AT PERIMETER OF EACH ROOM.
10. PATCH AND REPAIR ANY AND ALL FLOORS, WALLS, CEILINGS, ETC IN A WORKMANSHIP LIKE MANNER TO MATCH THE SURROUNDING SURFACE AREAS WHERE THERE IS DAMAGE BECAUSE OF REMOVAL OR REPLACEMENT OF EXISTING CONDITIONS.
11. ALL FIRE RATED WALLS PENETRATED ARE REQUIRED TO BE FIRESTOPPED
12. CONTRACTOR FOR THE PROJECT SHALL TAKE CARE TO PROTECT NEWLY INSTALLED MATERIALS AND FINISHES
13. MATERIAL AND FINISHES SHALL BE APPLIED TO ALL SURFACES WITHIN THE CONSTRUCTION LIMITS, INCLUDING 103 NORTH END, 103A, 103B, AND 103C AND MEZZANINE LEVEL, AND AS REQUIRED IN CORRIDOR OUTSIDE DOOR 103. ALL WALL AND CEILING SURFACES TO BE FINISHED TO MATCH EXISTING.

DOOR SCHEDULE

DOOR					FRAME		DETAILS			HARDWARE	GLASS	RATING	REMARKS
NUMBER	DOOR LOCATION	DOOR SIZE	MATERIAL	TYPE	MATERIAL	TYPE	HEAD/JAMB	THRESHOLD	LINTEL	GROUP			
103	LARGE VEHICLE STORAGE	3'-0"x6'-8"	H.M.	1	H.M.	F1	–	–	–	–	4"x24"	90 MIN.	SEE NOTES BELOW
103A	OFFICE	3'-0"x6'-8"	H.M.	1	H.M.	F1	–	–	–	–	4"x24"	N.A.	SEE NOTES BELOW
103B	SAFETY SUPPLY STORAGE	3'-0"x6'-8"	H.M.	1	H.M.	F1	–	–	–	–	4"x24"	N.A.	SEE NOTES BELOW

HARDWARE NOTES:

INTERIOR METAL DOORS - TYPE 1:
MANUFACTURER - CURRIES ESSEX - MASON CITY, IA 50401.
R 6666, 36" METAL DOOR W/ 45 MIN. FIRE RATING (C), SWINGING FIRE DOOR.
GRADE III, EXTRA HEAVY DUTY, MODEL 1 - FULL FLUSH, W/ $\frac{3}{4}$" THICK 4"x24" DIAMOND WIRE GLASS. PRIMED. DOOR IN ACCORDANCE WITH REQUIREMENT OF SDI 100.
MATCH EXISTING INTERIOR METAL DOORS.

STEEL DOORS & FRAMES - TYPE F1:
CONSTRUCTION MITERED AND WELDED CORNERS, MINIMUM THICKNESS 16 GAUGE.
DRILL STOPS TO RECEIVE SILENCERS. PRIMED.
MATCH EXISTING INTERIOR METAL FRAMES

LOCKS, LATCHES & BOLTS
MANUFACTURER - SARGENT. LEVER HANDLE STYLE LNH, SERIES 8100, SATIN FINISH. (630)
MATCH EXISTING LOCK, LATCH AND BOLTS. RE-KEY EXISTING GARGAGE HALL DOOR (FOR PARTS ROOM) AND NEW OFFICE DOOR TO ESDPW MASTER, SUB-MASTER AND NEW KEY.
NEW GARAGE HALL DOOR AND SAFETY SUPPLY ROOM DOORS TO ESDPW MASTER, SUB-MASTER AND EXISTING OUTSIDE DOOR KEY.

HINGES:
MANUFACTURER - HAGER, INTERIOR DOOR BALL BEARING BUTT HINGES BB1279.
MATCH EXISTING HINGES.

CLOSER:
MANUFACTURER - SARGENT, SERIES 350 CLOSER. 180 DEGREE SWING.
MATCH EXISTING CLOSERS

KICKPLATE:
STAINLESS STEEL, 0.050 INCH THICK, SATIN FINISH (630)
10 INCHES HIGH x 2" LESS THAN DOOR WIDTH.
MATCH EXISTING KICKPLATES

CODE ANALYSIS OF EXISTING BUILDING

CONSTRUCTION TYPE:	IIA
OCCUPANCY TYPE:	S1
FIRE PROTECTION:	NONE
NEW SF:	526
OCCUPANCY SEPARATIONS:	NO NEW (ACCESSORY USE)
FIRE WALLS:	2 HR EXISTING, INDICATED ON PLAN
EGRESS:	UNCHANGED

BRIEF DESCRIPTION:

526 SF MEZZANINE CONSTRUCTED ABOVE NEW ENCLOSED ACCESSORY OFFICE SPACE. ALL CONSTRUCTION OCCURS WITHIN EXISTING BUILDING LIMITS.

CLIENT

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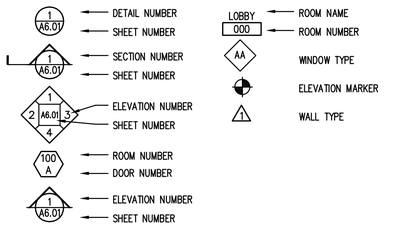
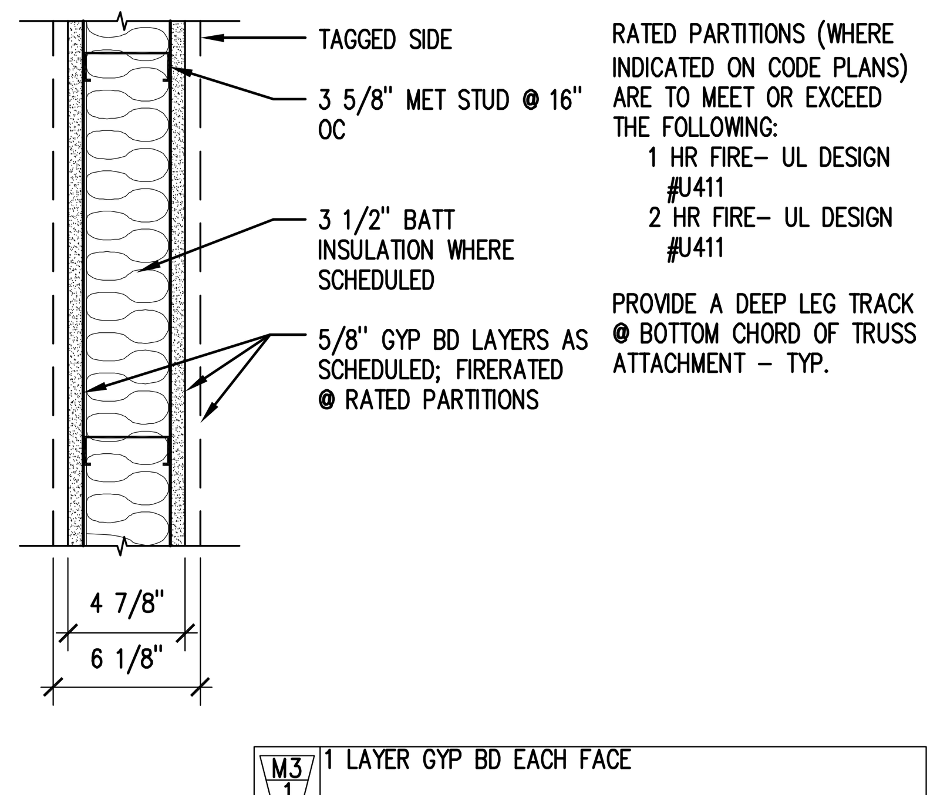
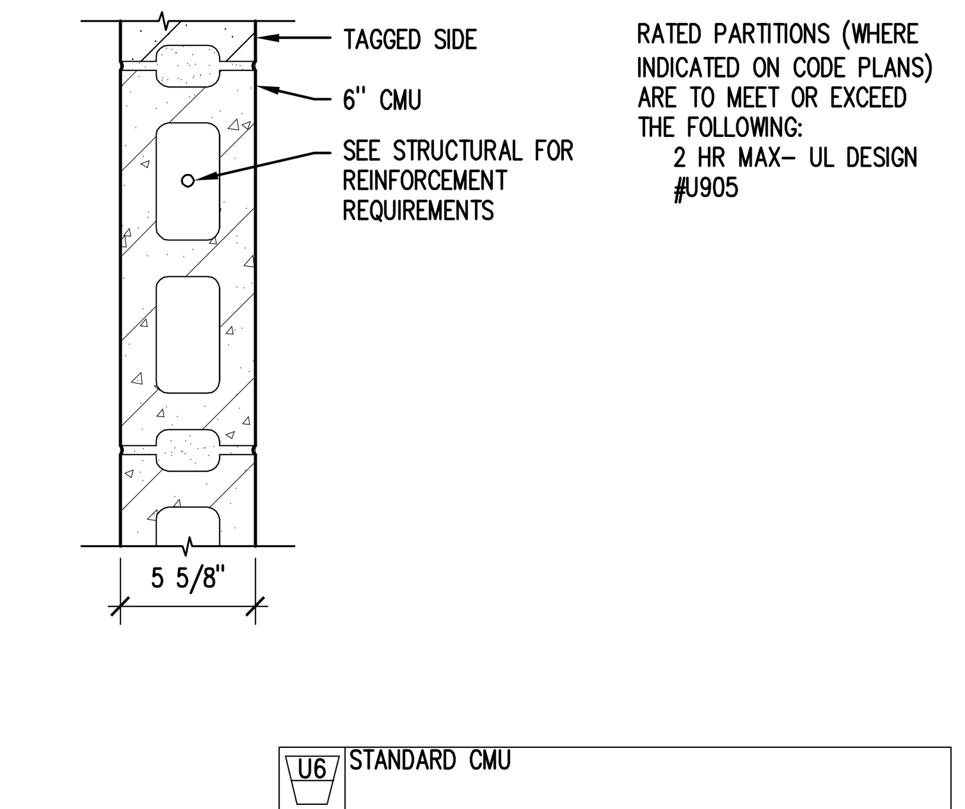
REFERENCE SYMBOLS

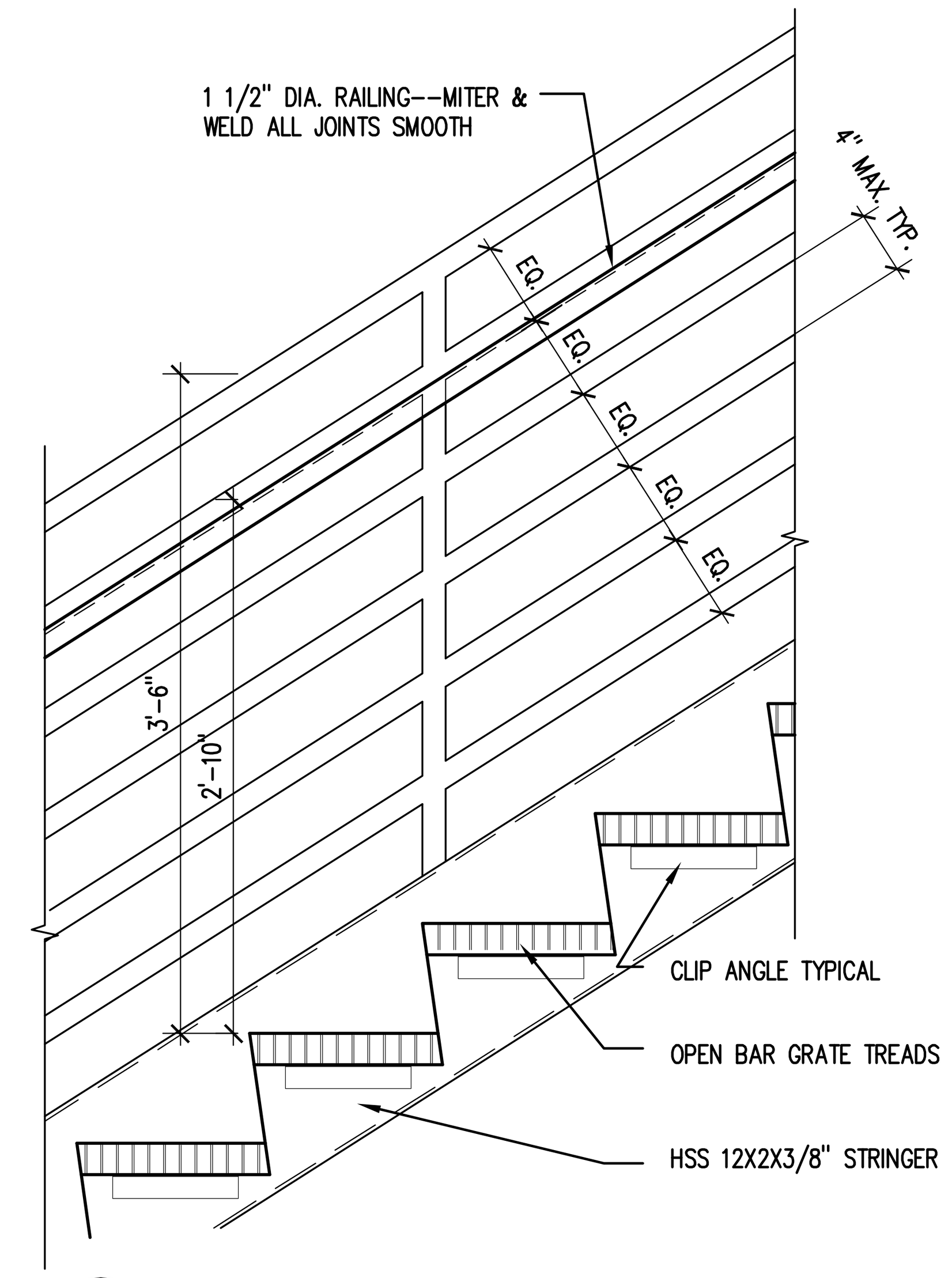




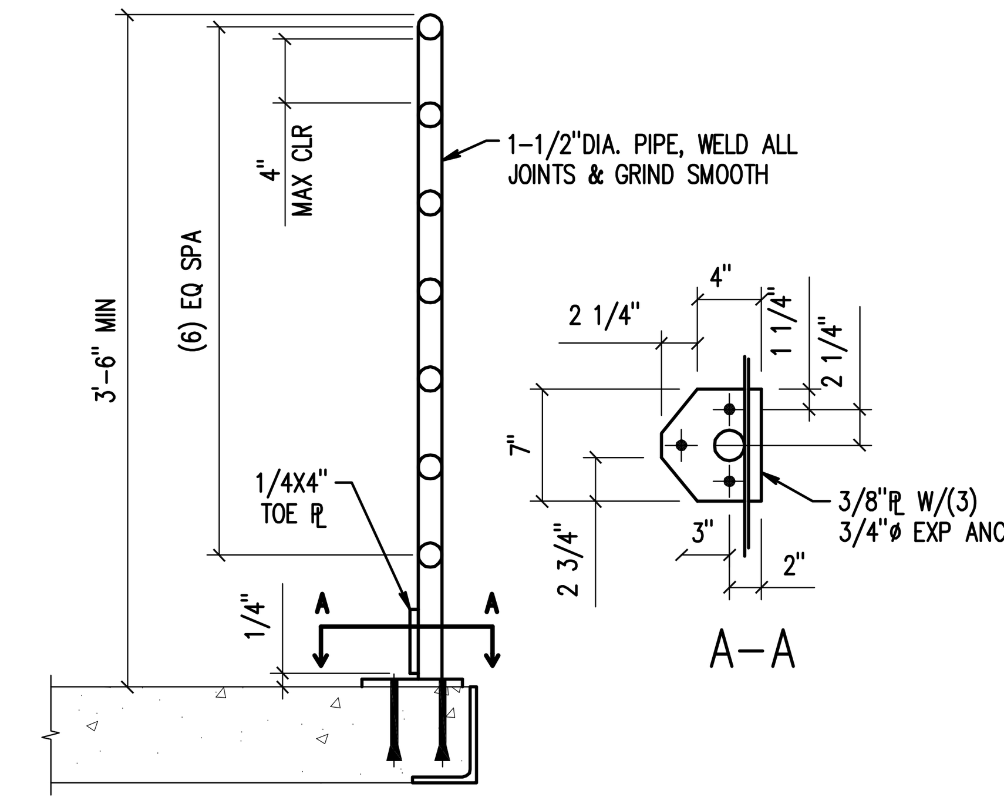
M3 WALL TYPE M3
1 1/2"=1'-0"



U6 WALL TYPE U6
1 1/2"=1'-0"



3 TYPICAL PIPE RAILING DETAIL
1"=1'-0"



4 TYPICAL GUARD RAIL DETAIL
1"=1'-0"

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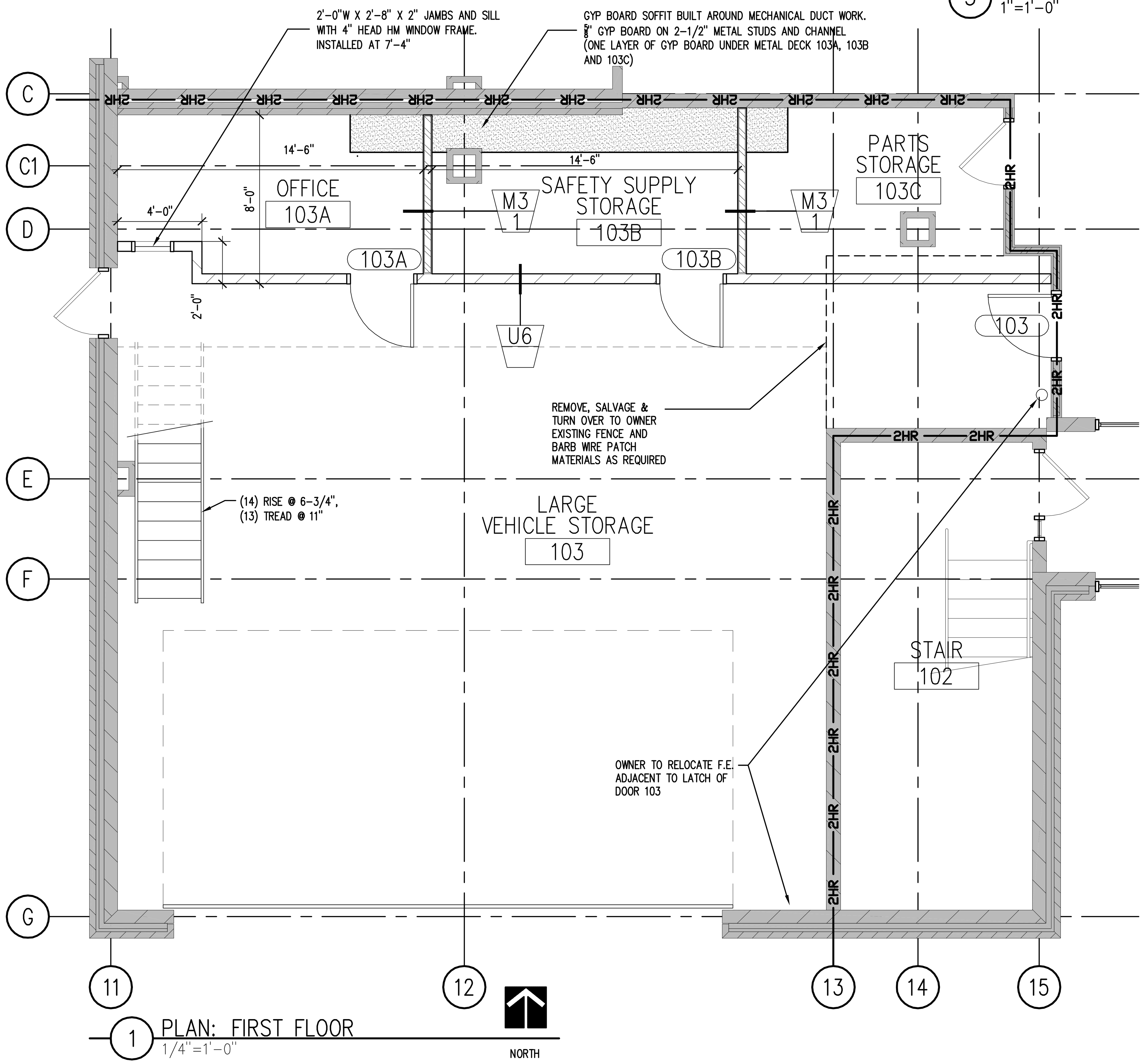
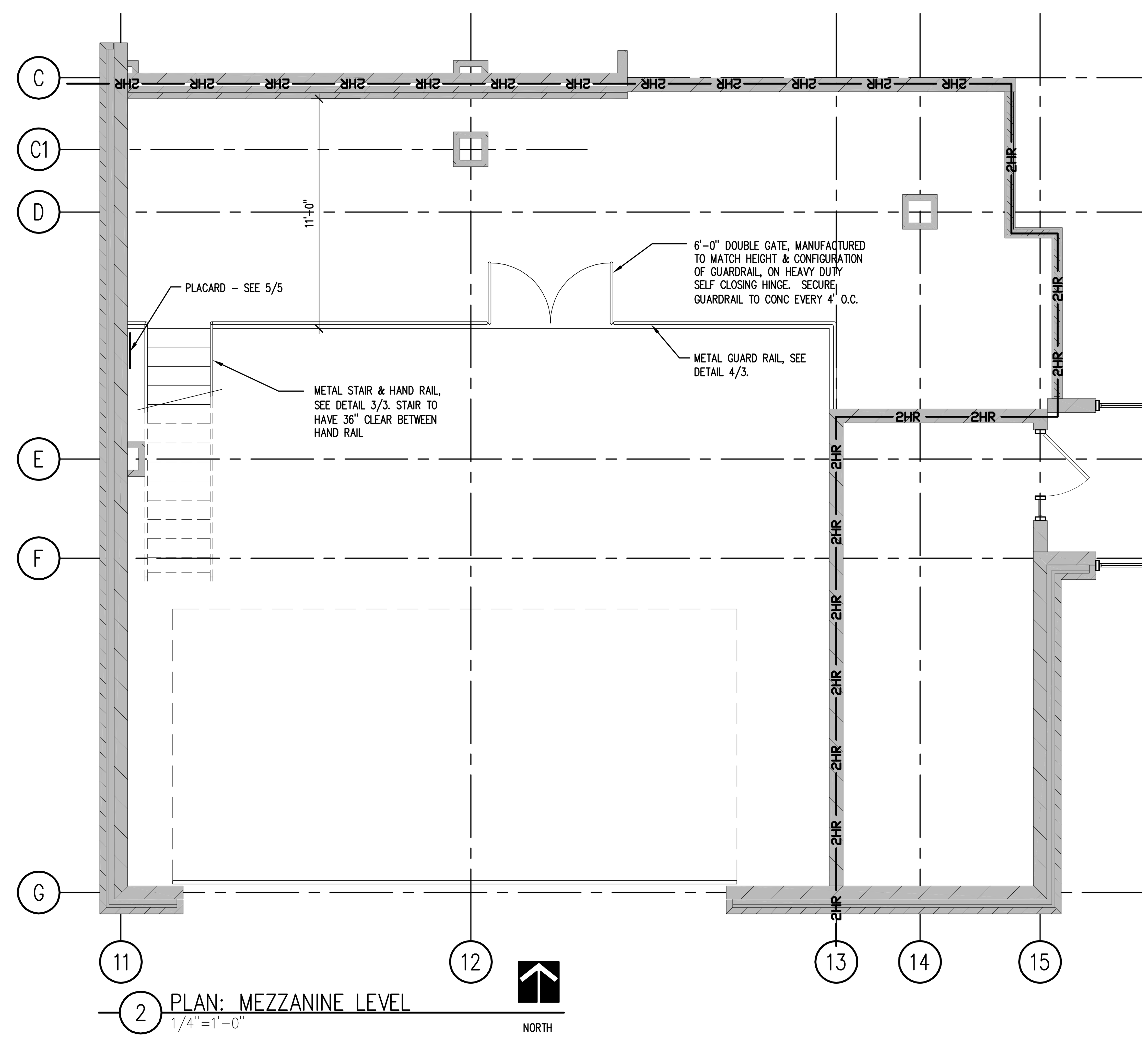


1 PLAN: FIRST FLOOR
1/4"=1'-0"



2 PLAN: MEZZANINE LEVEL
1/4"=1'-0"

SCALE AS NOTED FOR 22"x34" SHEETS			FLOOR PLAN AND DETAILS	OFFICE & STORAGE MEZZANINE		SUPERIOR, WISCONSIN SEPTEMBER 5, 2007	SURVEY N/A DRAWN ARH DESIGN KCH APPROV'D KCH

RECORD DRAWINGS
DATE: 06/26/2008
SHEET 3 / 14

GENERAL DESIGN AND CONSTRUCTION NOTES

A. BUILDING CODE

1. 2002 WISCONSIN ENROLLED COMMERCIAL BUILDING CODE
2. 2000 INTERNATIONAL BUILDING CODE (IBC).

B. DESIGN LIVE LOADS

1. WIND LOAD: NOT APPLICABLE
2. SEISMIC LOAD: NOT APPLICABLE (MSBC).
3. ROOF LIVE LOAD: NOT APPLICABLE
4. FLOOR LIVE LOAD: UNIFORM (PSF) CONCENTRATED (LB)

   LIGHT STORAGE ___ ___ ___ ___ 125 ___ ___ ___ 0
5. LOADS PROVIDED ON DRAWINGS ARE ALLOWABLE STRESS DESIGN LOADS. 1.33 ALLOWABLE STRESS INCREASE FOR SHORT-TERM LOADING IS NOT ALLOWED.

C. FOOTINGS AND FOUNDATIONS

1. BEARING WALL WILL REST DIRECTLY ON EXISTING CONCRETE SLAB. EXISTING SLAB IS 8" THICK WITH #5 @ 12" O.C. EACH WAY ACCORDING TO LHB PROJECT #94064 DRAWING S1, AND CONFIRMED BY AMERICAN ENGINEERING TESTING REPORT DATED MAY 14, 2007. EXISTING SLAB f'c = 4000 PSI. ASSUMED SUBGRADE k = 50 PCI.

D. CONSTRUCTION NOTES

1. ALL DIMENSIONS INVOLVING COORDINATION OF NEW WORK WITH EXISTING CONSTRUCTION SHALL BE FIELD CHECKED BY THE CONTRACTOR AND FURNISHED TO THE SUBCONTRACTORS PRIOR TO FABRICATION OF ANY WORK. THE VERIFIED DIMENSIONS SHALL APPEAR AND BE NOTED ON THE SHOP DRAWINGS SUBMITTED.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF EXISTING BUILDINGS, UTILITIES, STREETS, ETC. DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND INSTALLATION OF ALL NECESSARY TEMPORARY BRACING.
3. ANY HOLES CUT IN NEW OR EXISTING CONSTRUCTION THAT ARE NOT DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE REVIEWED WITH THE STRUCTURAL ENGINEER. COORDINATE ALL HOLES AND PENETRATIONS WITH OTHER DISCIPLINES.
4. THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED DURING ERECTION AGAINST WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR IN-PLACE LOADS.
5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF DISCREPANCIES FOUND BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS.

STRUCTURAL STEEL

MATERIAL PROPERTIES

A. 1. STEEL PROPERTIES:

	Fy (PSI)	Fu (PSI)	ASTM
W SHAPES: ___ ___ ___	50,000	65,000	A992, A572
OTHER SHAPES, PLATES: ___	36,000	58,000	A36, A283
HOLLOW STRUCTURAL SECTIONS:	46,000	58,000	A500, GR B
STEEL PIPES: ___ ___ ___	35,000	60,000	A53, GR B
HIGH STRENGTH BOLTS, U.N.O., BEARING CONNECTIONS: ___	92,000	120,000	A325N
HIGH STRENGTH BOLTS, SLIP CRITICAL CONNECTIONS, (WHERE NOTED): ___ ___	92,000	120,000	A325 SC CLASS A
NUTS ___ ___ ___ ___	–	–	A563 HEAVY HEX
WASHERS ___ ___ ___ ___	–	–	F436 HARDENED STEEL
ANCHOR BOLTS: __ ___ __	36,000	58,000	F1554 OR A36
WELDING ELECTRODES: __ __	–	E70XX	A233

2. GROUT: NONSHRINK, NON-METALLIC AGGREGATE TYPE, COMPLYING WITH ASTM C1107 AND CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI AT 28 DAYS.

B. STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL DESIGN AND CONSTRUCTION SHALL CONFORM TO AISC ASD (1989).

CAST-IN-PLACE CONCRETE

A. MATERIAL PROPERTIES

1. CONCRETE PROPERTIES: *

	f'c (PSI) 28 DAYS	MAX. SLUMP INCHES	MAX. AGGR.	ENTR. AIR (%)	MAX. W/C
INT. ELEV. SLAB (NW): __ __	4,000	4	3/4"	0	–

2. REINFORCING PROPERTIES:

	FY (PSI)	ASTM
ALL BARS UNLESS NOTED OTHERWISE: ___ ___	60,000	A615
TIES & STIRRUPS: ___ ___ ___ ___ ___	60,000	A615
WELDED WIRE FABRIC (SMOOTH, SHEETS): __ __	65,000	A185

3. IF CONCRETE SUPPORT BLOCKS ARE USED, THEIR STRENGTH SHALL BE EQUAL TO OR GREATER THAN THAT OF THE CONCRETE BEING PLACED.
4. THE FOLLOWING MATERIALS SHALL NOT EXCEED THE FOLLOWING PERCENT OF TOTAL CEMENTITIOUS MATERIAL BY WEIGHT:

FLY ASH: ___ ___ ___ ___	15% SLABS, 25% ELSEWHERE
SILICA FUME: __ ___ ___ __	5%
SOLUBLE CHLORIDE: ___ ___	0.1%

5. CONCRETE COMPONENTS SHALL MEET THE FOLLOWING:

	ASTM
FLY ASH__ ___ ___ ___ ___ ___ ___ ___ ___	C618
FINE AND COARSE AGGREGATES: __ ___ ___ ___ __	C33
LIGHTWEIGHT AGGREGATES: ___ ___ ___ ___ ___	C330
PORTLAND CEMENT: ___ ___ ___ ___	C150, TYPE I OR III
AIR ENTRAINING ADMIXTURES: ___ ___ ___ ___ ___	C260
OTHER CHEMICAL ADMIXTURES: ___ ___ ___ ___	C494, TYPE A-G
WATER: CLEAN AND NOT DETRIMENTAL TO CONCRETE___ ___	N/A

B. CONCRETE NOTES

1. PERFORM WORK IN ACCORDANCE WITH ACI 301-89 AND ACI 318-99.
2. CONCRETE CLEAR COVER OVER REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF ACI 318-99.
3. PROVIDE LAP SPLICES AT ALL CORNERS AND INTERSECTIONS, SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.
4. PROVIDE SUPPORTS AND SPACERS FOR ALL REINFORCING, INCLUDING WWF.
5. CONSOLIDATE ALL CONCRETE, INCLUDING SLABS, BY VIBRATING.
6. ALL CONCRETE SHOWN SHALL BE REINFORCED. PLANS, SECTIONS AND DETAILS SHOWN WITHOUT REINFORCEMENT ARE INTENDED TO SHOW DIMENSIONS AND DETAILS OF CONSTRUCTION ONLY. REINFORCEMENT OF THESE SECTIONS SHALL BE PROVIDED IN ACCORDANCE WITH THE DETAILS SHOWING REINFORCEMENT.
7. MIX DESIGNS SHALL INCORPORATE ADMIXTURES AS APPROPRIATE FOR ENVIRONMENTAL CONDITIONS.
8. ALL REINFORCING SHALL BE DETAILED, FABRICATED & PLACED IN ACCORDANCE WITH CRSI "MANUAL OF STANDARD PRACTICE".
9. CONCRETE SLABS SHALL NOT DEVIATE MORE THAN 1/8" IN FLATNESS IN ANY DIRECTION WHEN CHECKED WITH A 10 FOOT STRAIGHTEDGE.
10. USE SONNEBORN "KURE-N-SEAL CURING/SEALING/DUST-PROOFING COMPOUND OR APPROVED ALTERNATE ON ALL CONCRETE SLABS. CONTRACTOR SHALL VERIFY COMPATIBILITY WITH ALL PROPOSED FLOOR FINISHES AND FLOORING ADHESIVES. USE 7-DAY MOIST CURE WITH POLYETHYLENE WHEN COMPATIBILITY IS A CONCERN.
11. SAWCUT ALL CONTROL JOINTS WITHIN 8 HOURS OF PLACEMENT. CONSTRUCTION AND CONTROL JOINTS SHALL BE AS INDICATED ON THE DRAWINGS
12. JOINT SEALANT SHALL BE SILICONE (ASTM D5893-96) UNLESS NOTED OTHERWISE.
13. ALL SLABS SHALL HAVE STEEL TROWEL FINISH.
14. FORMED CONCRETE SURFACES SHALL BE SMOOTH FORM FINISH. EXPOSED SURFACES SHALL BE SMOOTH RUBBED FINISH.
15. PROVIDE EXTRA REINFORCING AROUND ALL OPENINGS 24" OR LARGER IN SLAB EQUAL TO (1) #5 BAR ON ALL FOUR SIDES AND EXTEND 2 FEET BEYOND OPENINGS.
16. PROVIDE ISOLATION JOINTS AROUND COLUMNS.

MASONRY

A. MATERIAL PROPERTIES

1. MASONRY PROPERTIES :

	STRENGTH (PSI)	ASTM
HOLLOW MASONRY UNITS (INDIVIDUAL): ___ ___	1,900	C90-N
HOLLOW MASONRY UNITS (AVERAGE NET) f'm: ___	1,500	
BRICK MASONRY (ASSY.): ___ ___ ___ ___	1,400	C216-SW
MORTAR TYPE S (ABOVE GRADE): ___ ___ ___	1,800	C270
MORTAR TYPE M (BELOW GRADE): ___ ___ ___	2,500	C270
GROUT (COREFILL): ___ ___ ___ ___ ___	3,000	C476
GROUT (BOND BEAMS): ___ ___ ___ ___ ___	3,000	C476
REINFORCING BARS: ___ ___ ___ ___ ___	60,000	A615
COLD DRAWN STEEL WIRE: ___ ___ ___ ___	70,000	A82, GALV.

B. MASONRY NOTES

1. DESIGN AND CONSTRUCTION SHALL COMPLY WITH ACI 530/ASCE 5/TMS 402-99 AND ACI 530.1/ASCE 6/TMS 602-99.
2. ALL REINFORCEMENT SPLICES SHALL BE 48 BAR DIAMETERS U.N.O.
3. MASONRY WALLS SHALL HAVE CONTROL JOINTS AT A MAXIMUM OF 20 FEET UNLESS SPECIFICALLY NOTED OTHERWISE. IF CONTROL JOINTS ARE NOT SPECIFICALLY SHOWN ON THE DRAWINGS, CONTRACTOR SHALL FOLLOW LOCALLY ACCEPTED PRACTICES. CONTROL JOINTS SHALL BE PLACED ABOVE JOINTS IN FOUNDATION OR SUPPORTING FLOOR SLABS, WITHIN 15 FEET OF CORNERS AND AT ONE SIDE OF DOOR AND WINDOW OPENINGS, DEPENDING ON THE WIDTH AND LOCATION OF THE OPENING. JOINTS AT OPENINGS SHALL JOG 8" AT THE TOP OF OPENINGS TO ALLOW FOR LINTEL BEARING.
4. ALL MASONRY WALLS SHALL HAVE A MINIMUM OF #5's AT 48" ON CENTER MAX. SPACING, UNLESS NOTED OTHERWISE. (PROVIDE (1) #5 BAR FULL HEIGHT AT EACH SIDE OF MASONRY OPENINGS AND AT CORNERS UNLESS NOTED OTHERWISE.)
5. PROVIDE CONTINUOUS BOND BEAM REINFORCEMENT WITH (2) #5 BARS OR AS NOTED. DISCONTINUE BARS AT CONTROL JOINTS U.N.O.
6. ALL GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION OR PUDDLING. RECONSOLIDATE GROUT POURS EXCEEDING 12" IN HEIGHT.
7. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1 1/2" BELOW THE TOP OF THE UPPERMOST UNIT. IF UPPERMOST UNIT IS A BOND BEAM, STOP POUR 1/2" BELOW THE TOP OF MASONRY.
8. GROUT LIFTS SHALL NOT EXCEED 5 FEET WITHOUT APPROVAL OF THE ENGINEER.
9. SECURE VERTICAL REINFORCING IN REQUIRED ALIGNMENT BEFORE GROUTING.
10. ALL HOLLOW UNIT BLOCK COMPRESSION TEST STRENGTHS REQUIRED TO ACHIEVE THE f'm STATED ABOVE SHALL BE ACCORDING IBC SECTION 2105.2.2.2 PRISM TEST METHOD.
11. SUBMIT SHOP DRAWINGS TO ARCHITECT/ENGINEER FOR REVIEW CLEARLY SHOWING REINFORCEMENT LAYOUT, SIZE, SPACING AND DETAILS.
12. PROVIDE 9 GA. HOT-DIP GALVANIZED HORIZONTAL JOINT REINFORCEMENT (DUR-O-WALL OR EQUAL) EVERY COURSE IN STACK BOND WALLS AND EVERY OTHER COURSE IN RUNNING BOND WALLS. WALLS SHALL BE RUNNING BOND UNLESS NOTED OTHERWISE.

LINTEL SCHEDULE L-X

MARK	TYPE	ELEVATION OR DETAIL / SHT.
L-1	6"X8" BB	3/5

NON-COMPOSITE STEEL DECK

A. ALL STEEL DECK, FORM DECK AND NON-COMPOSITE FLOOR DECK SHALL BE DESIGNED AND SELECTED IN ACCORDANCE WITH THE SDI DESIGN MANUAL.

B. STEEL DECK SHALL BE MANUFACTURED FROM STEEL CONFORMING TO ASTM A1008 OR ASTM A653, GRADE 33 OR HIGHER (33 KSI YIELD STRENGTH).

C. DECK ANCHORAGE SHALL BE MADE WITH 5/8" DIAMETER PUDDLE WELDS AT SUPPORTS AND EDGES, AND #10 TEK SCREWS AT SIDELAPS. FASTENER PATTERNS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

1. FLOOR DECK: 36/4 PATTERN (12" ON CENTER) AT SUPPORTS AND 12" ON CENTER AT EDGES. PROVIDE TWO SIDELAP FASTENERS PER DECK SPAN.

D. NON-COMPOSITE FLOOR DECK SHALL BE GALVANIZED, TYPE C, CONFORM, DEPTH AND GAUGE AS INDICATED ON THE DRAWINGS.

E. SUBMIT SHOP DRAWINGS FOR DECK PLACEMENT SHOWING DECK CHARACTERISTICS, ANCHORAGE DETAILS AND ACCESSORIES.

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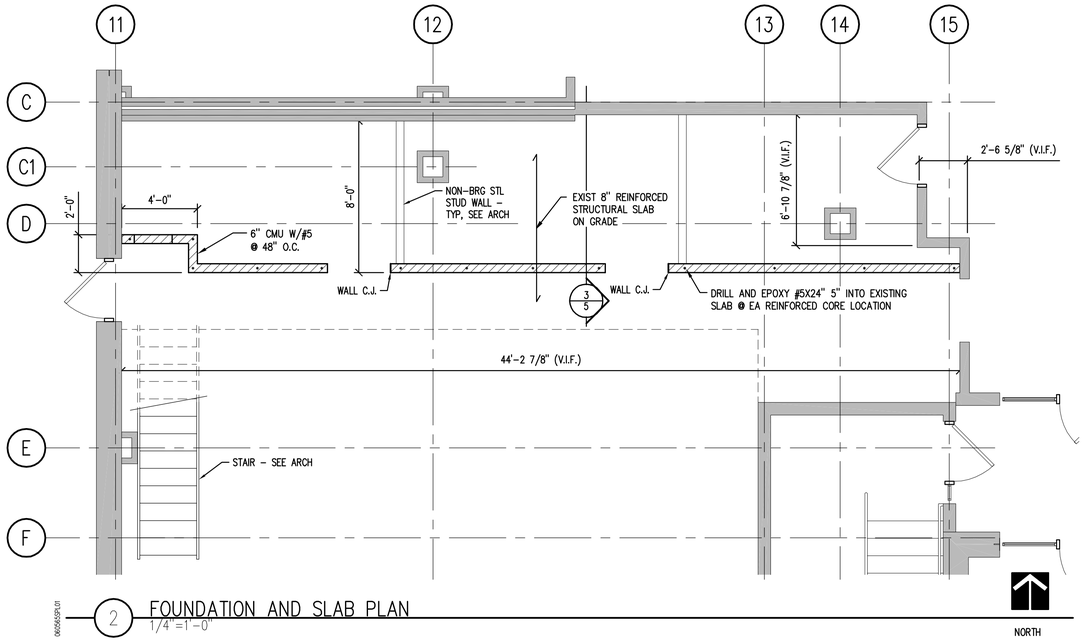

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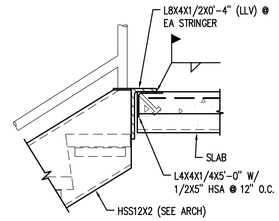
2 FOUNDATION AND SLAB PLAN
1/4" =1'-0"



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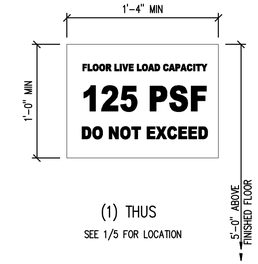
4 DETAIL - STAIR ATTACHMENT
1" =1'-0"



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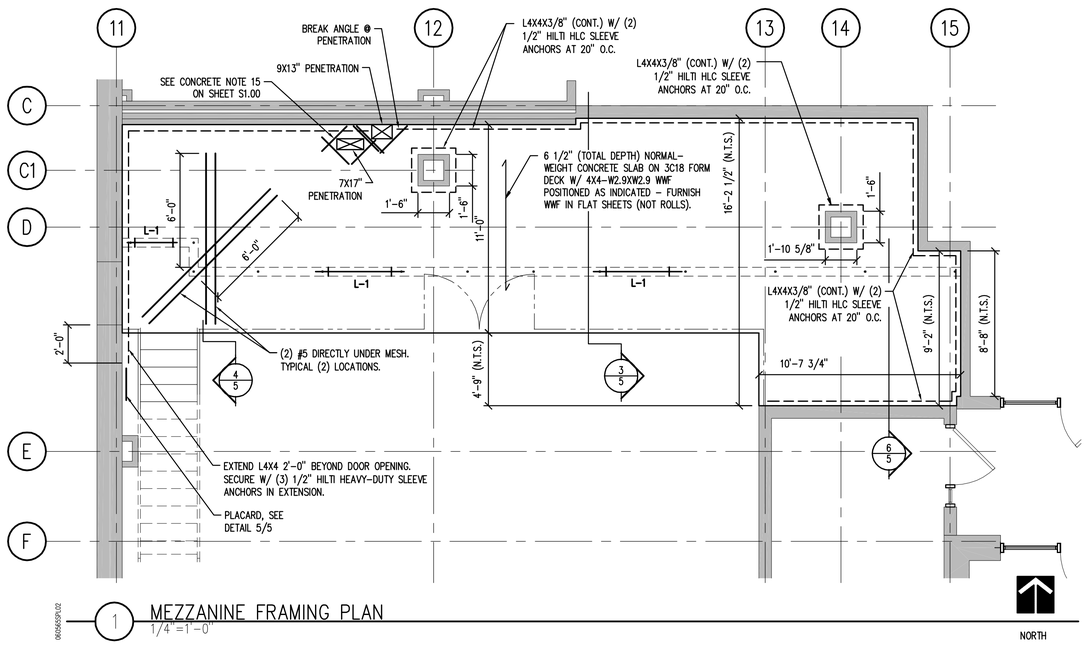
5 DETAIL - PLACARD
NO SCALE



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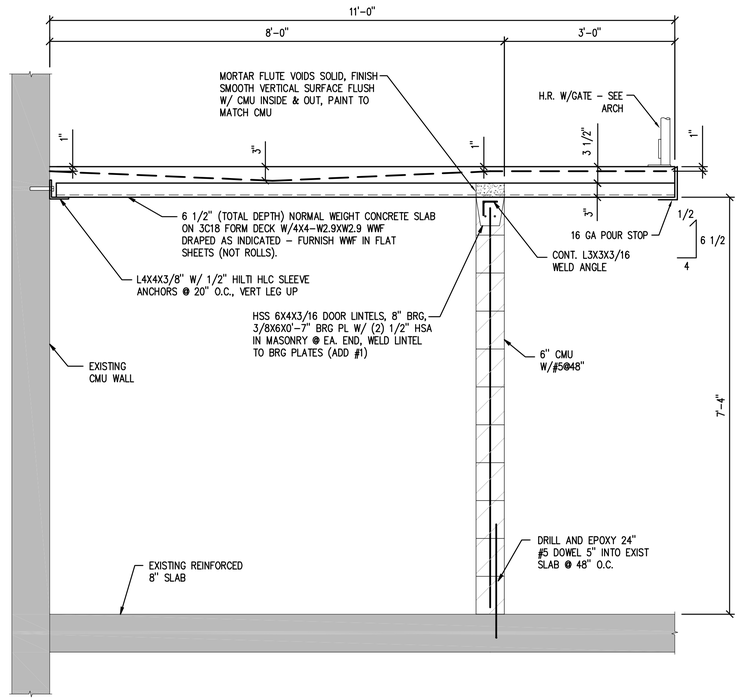
1 MEZZANINE FRAMING PLAN
1/4" =1'-0"



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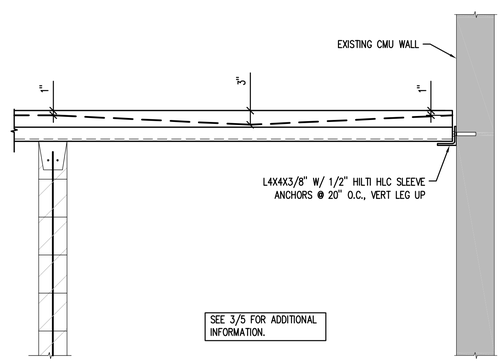
3 SECTION @ MEZZANINE
3/4" =1'



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6 SECTION @ MEZZANINE
3/4" =1'

SCALE AS NOTED FOR 22"x34" SHEETS			PLANS AND SECTIONS	OFFICE & STORAGE MEZZANINE		SUPERIOR, WISCONSIN SEPTEMBER 5, 2007	SURVEY N/A DRAWN IRH DESIGN AJV APPROV'D AJV RECORD DRAWINGS DATE: 06/26/2008	SHEET S/14

EQUIPMENT ABBREVIATIONS

ACC	AIR COOLED CONDENSER	FP	FIRE PUMP
ACCU	AIR COOLING CONDENSING UNIT	FUR	FURNACE
ACP	AIR COMPRESSOR	GEN	GENERATOR
AF	AIR FILTER	HUM	HUMIDIFIER
AFMS	AIR FLOW MEASURING STATION	HC	HEATING COIL
AHU	AIR HANDLING UNIT	HRU	HEAT RECOVERY UNIT
AS	AIR SEPARATOR	HTR	HEATER
B	BOILER	HX	HEAT EXCHANGER
CC	COOLING COIL	HP	HEAT PUMP
CF	CABINET FAN	MAU	MAKE-UP AIR UNIT
CF	CHEMICAL FEEDER	P	PUMP
CFP	CHEMICAL FEED PUMP	PRV	POWER ROOF VENTILATOR
CH	CHILLER	RF	RETURN FAN
CP	CONDENSATE PUMP	RHC	REHEAT COIL
CRAC	COMPUTER ROOM AIR CONDITIONER	RTU	ROOF TOP UNIT
CRU	CONDENSATE RETURN UNIT	SAT	SOUND ATTENUATOR
CSG	CLEAN STEAM GENERATOR	SAV	SUPPLY AIR VALVE
CT	COOLING TOWER	SEP	SEWAGE EJECTOR PUMP
CUH	CABINET UNIT HEATER	SF	SUPPLY FAN
CWP	CONDENSER WATER PUMP	SP	SUMP PUMP
DBP	DOMESTIC WATER BOOSTER PUMP	UH	UNIT HEATER
EAV	EXHAUST AIR VALVE	US	UTILITY SET
EF	EXHAUST FAN	UV	UNIT VENTILATOR
ERU	ENERGY RECOVERY UNIT	VAV	VARIABLE AIR VOLUME BOX
ET	EXPANSION TANK	WF	WATER FILTER
FCU	FAN COIL UNIT	WFMS	WATER FLOW MEASURING STATION
		WH	WATER HEATER

FIXTURE ABBREVIATIONS

XX-XX
FIXTURE - MODIFIER

BT	BATH TUB	LV	LAVATORY
DF	DRINKING FOUNTAIN	MB	MOP BASIN
DISP	GARBAGE DISPOSAL	OB	WASHING MACHINE OUTLET BOX
DW	DISHWASHER CONNECTIONS	SH	SHOWER
EC	ELECTRIC WATER COOLER	SK	SINK
ES	EMERGENCY SHOWER	SS	SERVICE SINK
EW	EYE WASH	TD	TRENCH DRAIN
FD	FLOOR DRAIN	UR	URINAL
HB	HOSE BIB	WB	WASH BASIN
HY	HYDRANT	WC	WATER CLOSET
LT	LAUNDRY TUB	WH	WALL HYDRANT
LG	LAB GAS HOSE BIBB		

FIXTURE MODIFIER ABBREVIATIONS

1C	ONE COMPARTMENT	EL	ELECTRONIC	WF	WALL FLANGE
2C	TWO COMPARTMENT	FA	FLOOR SET ACCESSIBLE	BM	BENCH MOUNT
3C	THREE COMPARTMENT	FJ	FLOOR SET JUVENILE	FH	FUME HOOD
1D	ONE DEEP COMPARTMENT	FS	FLOOR SET		
2D	TWO DEEP COMPARTMENT	FT	FLUSH TANK		
3D	THREE DEEP COMPARTMENT	FV	FLUSH VALVE		
BS	BAR SINK	GP	GROUP		
BP	BED PAN LUGS/WASHER	KS	KITCHEN SINK		
CS	CLINICAL SINK	RE	RECESSED		
DH	DUAL HEIGHT	SH	SINGLE HEIGHT		
EH	ACCESSIBLE	WA	WALL HUNG		

GENERAL SYMBOLS

- △ (A) — REVISION NUMBER, SHOWN ON PLAN
- TIE IN POINT
- ⬡ (X) — KEYED NOTE
- (X / Y.Z) — X: NO. OF DETAIL; Y.Z: NUMBER OF SHEET WHERE DETAIL APPEARS.

CONTROL SYMBOLS

- (T) THERMOSTAT
- (T) RA — THERMOSTAT REVERSE ACTING
- (T) S — THERMOSTAT WITH SECURITY COVER
- (H) HUMIDISTAT
- [T] TEMPERATURE SENSOR
- [H] HUMIDITY SENSOR
- [S] XXX — SENSOR (OTHER) (REFER TO GEN ABBREV FOR SENSOR TYPE)

PLUMBING AND PIPING SYMBOLS

DOMESTIC COLD WATER	CHECK VALVE
DOMESTIC HOT WATER	SHUT-OFF VALVE
DOMESTIC HOT WATER, CIRCULATING	GLOBE VALVE
VENT	CIRCUIT BALANCING VALVE
A — AIR	TWO-WAY CONTROL VALVE
AV — ACID VENT	THREE-WAY CONTROL VALVE
AW — ACID WASTE	PRESSURE REDUCING VALVE
AW — ACID WASTE, BELOW SLAB	STRAINER
BBD — BOILER BLOW DOWN	TRIPLE DUTY VALVE
BFW — BOILER FEED WATER	UNION
CHWR — CHILLED WATER RETURN	PRESSURE GAUGE
CHWS — CHILLED WATER SUPPLY	STEAM TRAP
CLPS — CLEAN LOW PRESSURE STEAM	FLOW DIRECTION ARROW
CMPS — CLEAN MEDIUM PRESSURE STEAM	FLOW CONTROL VALVE
COND — CONDENSATE RETURN	WATER FLOW MEASURING STATION
CWR — CONDENSER WATER RETURN	METER
CWS — CONDENSER WATER SUPPLY	PUMP
D — INDIRECT DRAIN	DROP IN PIPE
DI — DEIONIZED WATER	RISE IN PIPE
DW — DISTILLED WATER	PIPE CONNECTION
F — FIRE PROTECTION MAIN	EXPANSION JOINT
FOR — FUEL OIL RETURN	BACK FLOW PREVENTER
FOS — FUEL OIL SUPPLY	AUTO AIR VENT
FOV — FUEL OIL VENT	MANUAL AIR VENT
G — GAS	RELIEF VALVE
GR — GLYCOL RETURN	FIN-TUBE RADIATION ELEMENT
GS — GLYCOL SUPPLY	3" FD — FLOOR DRAIN (SIZE AS INDICATED)
HPC — HIGH PRESSURE STEAM CONDENSATE	HOSE BIB OR WALL HYDRANT
HPS — HIGH PRESSURE STEAM	PIPING, HEAT TRACED
HPWR — HEAT PUMP WATER RETURN	PIPING PITCH, DOWN
HPWS — HEAT PUMP WATER SUPPLY	
HRR — HEAT RECOVERY WATER RETURN	
HRS — HEAT RECOVERY WATER SUPPLY	
HWR — HEATING WATER RETURN	
HWS — HEATING WATER SUPPLY	
LPC — LOW PRESSURE STEAM CONDENSATE	
LPG — LIQUID PETROLEUM GAS	
LPS — LOW PRESSURE STEAM	
MPC — MEDIUM PRESSURE STEAM CONDENSATE	
MPS — MEDIUM PRESSURE STEAM	
N — NITROGEN	
NO — NITROUS OXIDE	
NP — NON-POTABLE WATER	
O — OXYGEN	
OVFL — OVERFLOW STORM DRAIN	
PC — PUMPED CONDENSATE	
RD — REFRIGERANT DISCHARGE (HOT GAS)	
RL — REFRIGERANT LIQUID	
RS — REFRIGERANT SUCTION	
SW — SOFTENED WATER	
SD — STORM DRAIN	
SD — STORM DRAIN, BELOW SLAB	
TWR — TEMPERED WATER RETURN	
TWS — TEMPERED WATER SUPPLY	
VAC — VACUUM	
W — SANITARY WASTE	
W — SANITARY WASTE, BELOW SLAB	
WC — WASTE CONDENSATE (COLD COND.)	

GENERAL ABBREVIATIONS

ϕ	DIAMETER	EXT	EXTERIOR	O	OXYGEN
A	AIR	F or °F	DEGREES FAHRENHEIT	OA	OUTSIDE AIR
AC	AIR CONDITIONING	FA	FRESH AIR	OAD	OUTSIDE AIR DAMPER
AD	ACCESS DOOR	FD	FIRE DAMPER	OAT	OUTSIDE AIR TEMERATURE
AFF	ABOVE FINISHED FLOOR	FLEX	FLEXIBLE	OC	ON CENTER
AG	ABOVE GROUND	FLG	FLANGE	OF	OVERFLOW
ALT	ALTERNATE	FOB	FLAT ON BOTTOM	OFD	OVERFLOW ROOF DRAIN
ALUM	ALUMINUM	FOF	FUEL OIL FILL	PD	PRESSURE DROP
AP	ACCESS PANEL	FOV	FUEL OIL VENT	PG	PROPYLENE GLYCOL
APPROX	APPROXIMATE	FOR	FUEL OIL RETURN	PIV	POST INDICATOR VALVE
ARCH	ARCHITECT/ARCHITECTURAL	FOS	FUEL OIL SUPPLY	PLBG	PLUMBING
AV	ACID VENT	FOT	FLAT ON TOP	PR	PAIR
AW	ACID WASTE	FPM	FEET PER MINUTE	PREL	PRELIMINARY
AUTO	AUTOMATIC	FRP	FIBERGLASS REINFORCED PIPE	PRESS	PRESSURE
BLDG	BUILDING	FT	FOOT (FEET)	PRS	PRESSURE REDUCING STATION
BOD	BOTTOM OF DUCT	FTG	FOOTING	PRV	PRESSURE REDUCING VALVE
BOT	BOTTOM	FTR	FIN TUBE RADIATION	PSI	POUNDS PER SQUARE INCH
BSMT	BASEMENT	GA	GAUGE	PSIG	POUNDS PER SQUARE INCH GAUGE
BTU	BRITISH THERMAL UNITS	GAL	GALLON	PW	POTABLE WATER
BTUH	BTU PER HOUR	GALV	GALVANIZED	PWR	POWER
CAP	CAPACITY	GC	GENERAL CONTRACTOR	RA	RETURN AIR
CAV	CONSTANT AIR VOLUME	GPH	GALLONS PER HOUR	RAD	RETURN AIR DAMPER
CB	CATCH BASIN	GR	GRADE	RAT	RETURN AIR TEMPERATURE
CF	CENTER FLARED (SYMMETRICAL)	GPM	GALLONS PER MINUTE	RCP	RADIANT CEILING PANEL
CFCV	CONSTANT FLOW CONTROL VALVE	HD	HEAD	RD	ROOF DRAIN
CFM	CUBIC FEET PER MINUTE	HHW	HEATING HOT WATER	REC	RECESSED
CHW	CIRCULATING HOT WATER	HORZ	HORIZONTAL	RECT	RECTANGULAR
CI	CAST IRON	HP	HORSE POWER	RED	REDUCER
CLG	CEILING	HP	HIGH PRESSURE	REFR	REFRIGERATION
CLG	COOLING	HPC	HIGH PRESSURE CONDENSATE	RH	RELATIVE HUMIDITY
CLP	CENTERLINE OF PIPE	HTG	HEATING	REQD	REQUIRED
CO	CLEAN OUT	HVAC	HEATING, VENT, AND AC	RLA	RELIEF AIR
CO	CARBON MONOXIDE	HW	HOT WATER	RLD	RELEIF AIR DAMPER
CO2	CARBON DIOXIDE	IN	INCH	RM	ROOM
COL	COLUMN	INL	INLET	RND	ROUND
COMB	COMBINATION	INSUL	INSULATION	RPM	REVOLUTIONS PER MINUTE
CONC	CONCRETE	INT	INTERIOR	RW	RAIN WATER
COND	CONDENSATE	INV	INVERT	SA	SUPPLY AIR
CONN	CONNECT	INWG	INCHES WATER GAUGE	SAN	SANITARY
CONST	CONSTRUCT	KBTU	ONE THOUSAND BTU PER HOUR	SCHED	SCHEDULE
CONT	CONTINUE, CONTINUATION	LAB	LABORATORY	SECT	SECTION
CONTR	CONTRACTOR	LB	POUND	SF	SQUARE FEET
COORD	COORDINATE	LB/HR	POUNDS PER HOUR	SD	SMOKE DAMPER
CTR	CENTER	LAT	LEAVING AIR TEMPERATURE	SHT	SHEET
CUFT	CUBIC FEET	LF	LINEAL FEET	SIM	SIMILAR
CV	CHECK VALVE	LOC	LOCATION	SLV	SLEEVE
CW	COLD WATER	LP	LOW PRESSURE	SP	STATIC PRESSURE
°	DEGREE	LPG	LIQUIFIED PETROLEUM GAS	SPEC	SPECIFICATION
DA	DISCHARGE AIR	LVR	LOUVER	SPS	STATIC PRESSURE STATION
DAT	DISCHARGE AIR TEMPERATURE	LWT	LEAVING WATER TEMPERATURE	SQ	SQUARE
DB	DRY BULB	MA	MIXED AIR	SRV	SAFETY RELIEF VALVE
DI	DEIONIZED WATER	MAD	MIXED AIR DAMPER	SS	STAINLESS STEEL
DIA	DIAMETER	MAN	MANUAL	STD	STANDARD
DIAG	DIAGONAL	MAT	MIXED AIR TEMPERATURE	STM	STEAM
DIM	DIMENSION	MATL	MATERIAL	STRUCT	STRUCTURAL
DISCH	DISCHARGE	MAV	MANUAL AIR VENT	SUCT	SUCTION
DIR	DEIONIZED WATER RETURN	MAX	MAXIMUM	SUSP	SUSPENDED
DIS	DEIONIZED WATER SUPPLY	MBD	MOTORIZED BYPASS DAMPER	T	THERMOSTAT
DIV	DIVISION	MBH	ONE THOUSAND BTU PER HOUR	TCP	TEMPERATURE CONTROL PANEL
DN	DOWN	MCF	ONE THOUSAND CUBIC FEET	TD	TEMPERATURE DROP
DOAS	DEDICATED OUTSIDE AIR SYSTEM	MD	MOTORIZED DAMPER	TEFC	TOTALLY ENCLOSED FAN COOLED
DP	DIFFERENTIAL PRESSURE	MECH	MECHANICAL	TEMP	TEMPERATURE
DR	DRAIN	MFR	MANUFACTURER	TOD	TOP OF DUCT
DW	DISTILLED WATER	MH	MANHOLE	TSP	TOTAL STATIC PRESSURE
DWG	DRAWING	MIN	MINIMUM	TWS	TEMPERED WATER SUPPLY
EA	EACH	MISC	MISCELLANEOUS	TYP	TYPICAL
EAT	ENTERING AIR TEMPERATURE	MMBH	ONE MILLION BTU PER HOUR	UG	UNDERGROUND
EL	ELBOW	MTR	MOTOR	VAC	VACUUM
ELEC	ELECTRICAL	MUA	MAKE-UP AIR	V	VENT
ELEV	ELEVATION	NC	NOISE CRITERIA	VEL	VELOCITY
EQ	EQUAL	NC	NORMALLY CLOSED	VENT	VENTILATION
EQUIP	EQUIPMENT	NIC	NOT IN CONTRACT	VERT	VERTICAL
ESP	EXTERNAL STATIC PRESSURE	NO	NUMBER	VFD	VARIABLE FREQUENCY DRIVE
EWT	ENTERING WATER TEMPERATURE	NO	NORMALLY OPEN	VOL	VOLUME
EX	EXHAUST AIR	NOM	NOMINAL	VTR	VENT THROUGH ROOF
EXIST	EXISTING	NTS	NOT TO SCALE	W	WASTE
EXP	EXPANSION			WB	WET BULB

AIRSIDE SYMBOLS

- HORIZONTAL FIRE DAMPER
- VERTICAL FIRE DAMPER
- F/S — FIRE/SMOKE DAMPER (TYPICAL)
- S — SMOKE DAMPER (TYPICAL)
- VD — MANUAL/VOLUME DAMPER
- (M) — MOTORIZED DAMPER
- BDD — BACKDRAFT DAMPER
- VARIABLE AIR VOLUME VALVE
- VARIABLE AIR VOLUME VALVE W/REHEAT COIL
- SUPPLY AIR OUTLET
- RETURN AIR INLET
- EXHAUST AIR INLET
- RECTANGLE TO ROUND TRANSITION
- STRAIGHT TAP
- 45° ENTRY TAP
- HIGH EFFICIENCY TAP, RECTANGLE TO ROUND
- SUPPLY DUCT TOWARD VIEWER
- SUPPLY DUCT AWAY FROM VIEWER
- RETURN DUCT TOWARD VIEWER
- RETURN DUCT AWAY FROM VIEWER
- EXHAUST DUCT TOWARD VIEWER
- EXHAUST DUCT AWAY FROM VIEWER
- R — CHANGE IN DUCT ELEVATION-RISE INDICATED BY "R"
- D — CHANGE IN DUCT ELEVATION-DROP INDICATED BY "D"
- AD — SIDE ACCESS DOOR (VERTICAL)
- AD — TOP ACCESS DOOR (HORIZONTAL)
- AD — BOTTOM ACCESS DOOR (HORIZONTAL)
- FC — FLEXIBLE CONNECTION
- DUCT LINING
- SIDEWALL OUTLET, REGISTERS AND GRILLES
- SIDEWALL INLET, REGISTERS AND GRILLES
- UC, H — UNDERCUT DOOR (H=CLEARANCE)

AIR INLET AND OUTLET TAG

XXX-X

CFM - DIFFUSER TYPE

GENERAL MECHANICAL NOTES

1. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTORS TO COORDINATE THE WORK OF THEIR TRADE WITH ALL OTHER TRADES PRIOR TO PROCEEDING WITH THEIR WORK. ANY WORK REQUIRING REMOVAL AND REINSTALLATION DUE TO LACK OF COORDINATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS.
2. PRIOR TO PERFORMING WORK REQUIRED, INSPECT ALL EXISTING CONDITIONS AND INSTALLED WORK OF OTHER TRADES AND VERIFY THAT ALL CONDITIONS AND ALL SUCH WORK IS COMPLETE TO THE POINT WHERE MECHANICAL WORK CAN PROPERLY COMMENCE.
3. PERFORM CUTTING, FITTING, AND PATCHING OF MECHANICAL EQUIPMENT AND MATERIALS REQUIRED TO REMOVE EXISTING WORK AND TO INSTALL EQUIPMENT AND MATERIALS IN EXISTING STRUCTURES.
4. PROTECT NEW WORK AND EXISTING WORK TO REMAIN.
5. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY LOCATIONS OF EXISTING WORK TO REMAIN.
6. ALL EQUIPMENT SHALL BE INSTALLED TRUE, LEVEL, AND IN THE LOCATION SHOWN ON THE DRAWINGS.
7. ALL EQUIPMENT SHALL BE INSTALLED IN A MANNER THAT PROVIDES ADEQUATE MAINTENANCE ACCESS.
8. PROTECT EQUIPMENT AND MATERIALS FROM THE WEATHER AND CONSTRUCTION DUST DURING CONSTRUCTION AND LEAVE ALL EQUIPMENT AND DUCT INTERIORS CLEAN.

MECHANICAL SHEET INDEX

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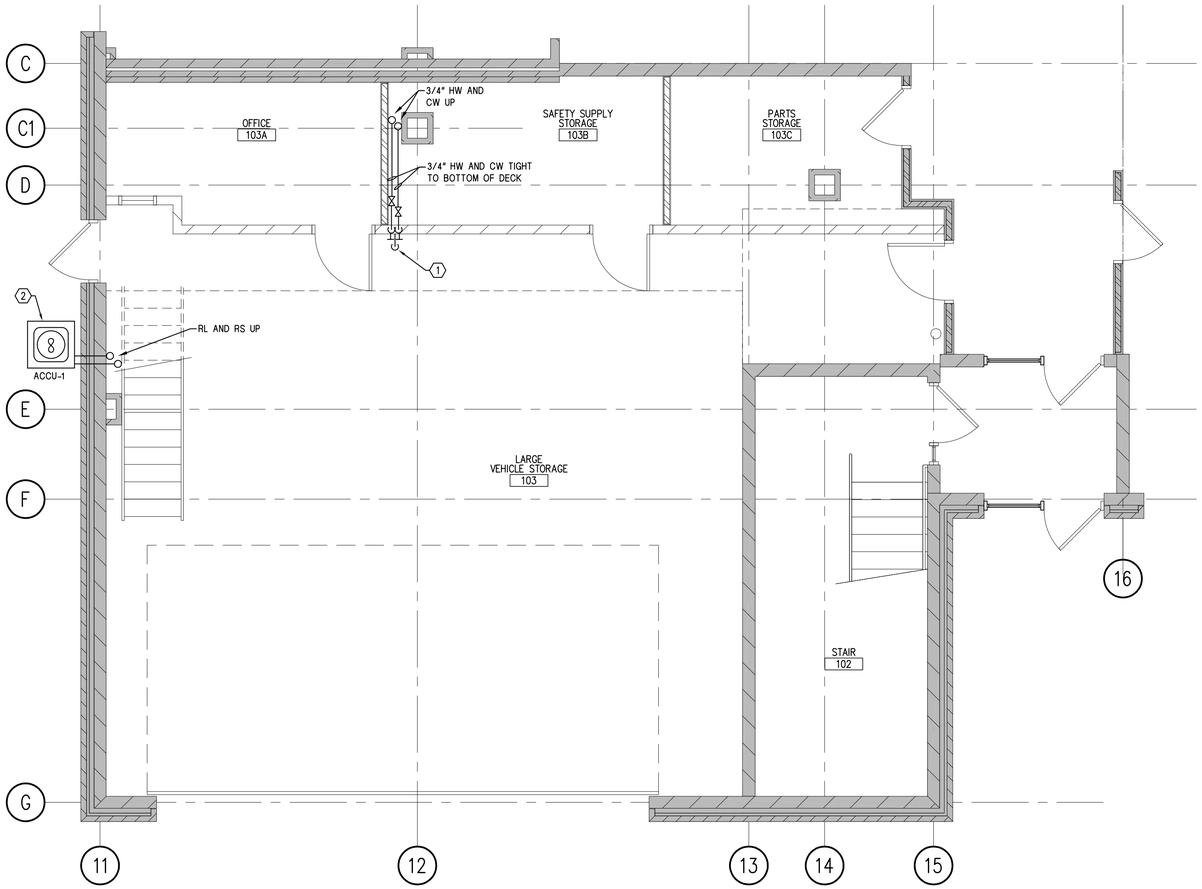

1 FIRST FLOOR PIPING PLAN
1/4"=1'-0"

NORTH

KEYED SHEET NOTES

1. RELOCATE SERVICE FAUCET WITH VACUUM BREAKER, CHECK VALVES, AND HOSE.
2. PROVIDE PRECAST CONDENSING UNIT PAD.

MECHANICAL SPECIFICATIONS

1. PIPING INSULATION: ASTM C 547; RIGID MOLDED, NONCOMBUSTIBLE.
   A. MAXIMUM MOISTURE ABSORPTION: 0.2 PERCENT BY VOLUME.
   B. VAPOR BARRIER JACKET FOR COLD PIPES: WHITE KRAFT PAPER WITH GLASS FIBER YARN BONDED TO ALUMINIZED FILM.
   C. CANVAS JACKET ON ALL HOT AND COLD PIPES: UL LISTED 6 oz/sq yd PLAIN WEAVE COTTON FABRIC TREATED WITH DILUTE FIRE RETARDANT LAGGING ADHESIVE.
   D. PAINT ALL NEW INSULATION TO MATCH EXISTING PIPE INSULATION FOR PIPES PROVIDING IDENTICAL SERVICE.

2. DUCT INSULATION: EXPOSED SUPPLY AND RETURN DUCTWORK ON MEZZANINE LEVEL
   A. 1" THICK RIGID GLASS FIBER WITH GLASS CLOTH, CANVAS, OR FOIL JACKET.

3. HOT AND COLD DOMESTIC WATER PIPING:
   A. ASTM B88, TYPE L, HARD DRAWN TUBE.
   B. FITTINGS: ASME B16.18 CAST COPPER ALLOY OR ASME B16.22 WROUGHT COPPER AND BRONZE.
   C. JOINTS: SOLDERED ASTM B32 ALLOY SN95 SOLDER.
   D. INSULATION: 1/2" THICK.

4. EQUIPMENT DRAIN PIPING:
   A. ASTM B88, TYPE L, HARD TEMPER TUBE.
   B. FITTINGS: ANSI B16.23 CAST BRONZE AND WROUGHT, DWV FITTINGS.
   C. JOINTS: SOLDERED ASTM B32 ALLOY SN95 SOLDER.
   D. INSULATION: 1/2" THICK.

5. HOT WATER HEAT PIPING:
   A. ASTM B88, TYPE L, HARD DRAWN TUBE.
   B. FITTINGS: ASME B16.18 CAST COPPER ALLOY OR ASME B16.22 WROUGHT COPPER AND BRONZE.
   C. JOINTS: SOLDERED ASTM B32 ALLOY SN95 SOLDER.
   D. INSULATION: 1" THICK.

6. REFRIGERATION PIPING AND SPECIALTIES:
   A. TUBE: ASTM B88, TYPE K, ANNEALED.
   B. FITTINGS: ASME B16.26 CAST COPPER.
   C. JOINTS: FLARED.
   D. REFRIGERANT: R-22.
   E. INSULATION: FLEXIBLE ELASTOMERIC CELLULAR INSULATION, 1 INCH THICK. REQUIRED FOR SUCTION LINE.
   F. EXPANSION VALVE: ANGLE OR STRAIGHT THROUGH TYPE SUITABLE FOR R-22, BRASS BODY, EQUALIZER, BLEED HOLE, ADJUSTABLE SUPERHEAT SETTING, REPLACEABLE INLET STRAINER, WITH NON-REPLACEABLE CAPILLARY TUBE AND REMOTE SENSING BULB AND REMOTE BULB WELL.

7. AIR COOLED CONDENSING UNIT, ACCU-1: 12,000 BTUH TOTAL CAPACITY RATED IN ACCORDANCE WITH ARI STANDARD 110, 208/230/1/60 ELECTRICAL, ROTARY COMPRESSOR, 13 SEER, R-22. YORK AY012MA322 OR EQUIVALENT MANUFACTURED BY CARRIER, TRANE, OR LENNOX.

8. FAN COIL UNIT, FCU-1: 400 CFM AT 0.3 INCHES OF EXTERNAL STATIC PRESSURE, 120/1/60 ELECTRICAL, LOW PROFILE PLENUM STYLE WITH RETURN AND SUPPLY DUCT CONNECTIONS. MAXIMUM HEIGHT OF 12 INCHES. ENVIRO-TEC HLP 40 OR EQUIVALENT MANUFACTURED BY CARRIER OR TRANE.
   A. HEATING COIL: SINGLE ROW HOT WATER, 15 MBH, 180F EWT, 65F EAT.
   B. COOLING COIL: 3 OR 4 ROW DX, 12,000 BTUH TOTAL COOLING, 78/65 EAT.

9. DUCTWORK: MINIMUM 26 ga. GALVANIZED FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA-HVAC DUCT CONSTRUCTION STANDARDS.
   A. SUPPLY REGISTERS (S1): 12x8 TITUS 300RL OR EQUIVALENT, DOUBLE DEFLECTION WITH OPPOSED BLADE DAMPER.
   B. RETURN GRILLES (R1): 12x6 TITUS 350 RL OR EQUIVALENT, 35 DEGREE FIXED WITH OPPOSED BLADE DAMPER.

10. CONTROLS: 7 DAY/ 4 EVENT PROGRAMMABLE THERMOSTAT FOR HEATING AND COOLING. FURNISH AND INSTALL ALL NECESSARY LOW VOLTAGE CONTROL WIRING.

21 W. Superior Street
Suite 500
Duluth, MN 55802

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LHB PROJECT NO. 060565

SCALE AS NOTED FOR 22"x34" SHEETS

FIRST FLOOR PIPING PLAN AND MECHANICAL SPECIFICATIONS

OFFICE & STORAGE MEZZANINE

SUPERIOR, WISCONSIN
SEPTEMBER 5, 2007

SURVEY	N/A
DRAWN	AWL
DESIGN	SDC
APPRDV'D	SDC

RECORD DRAWINGS

DATE: 06/26/2008

SHEET 7/14

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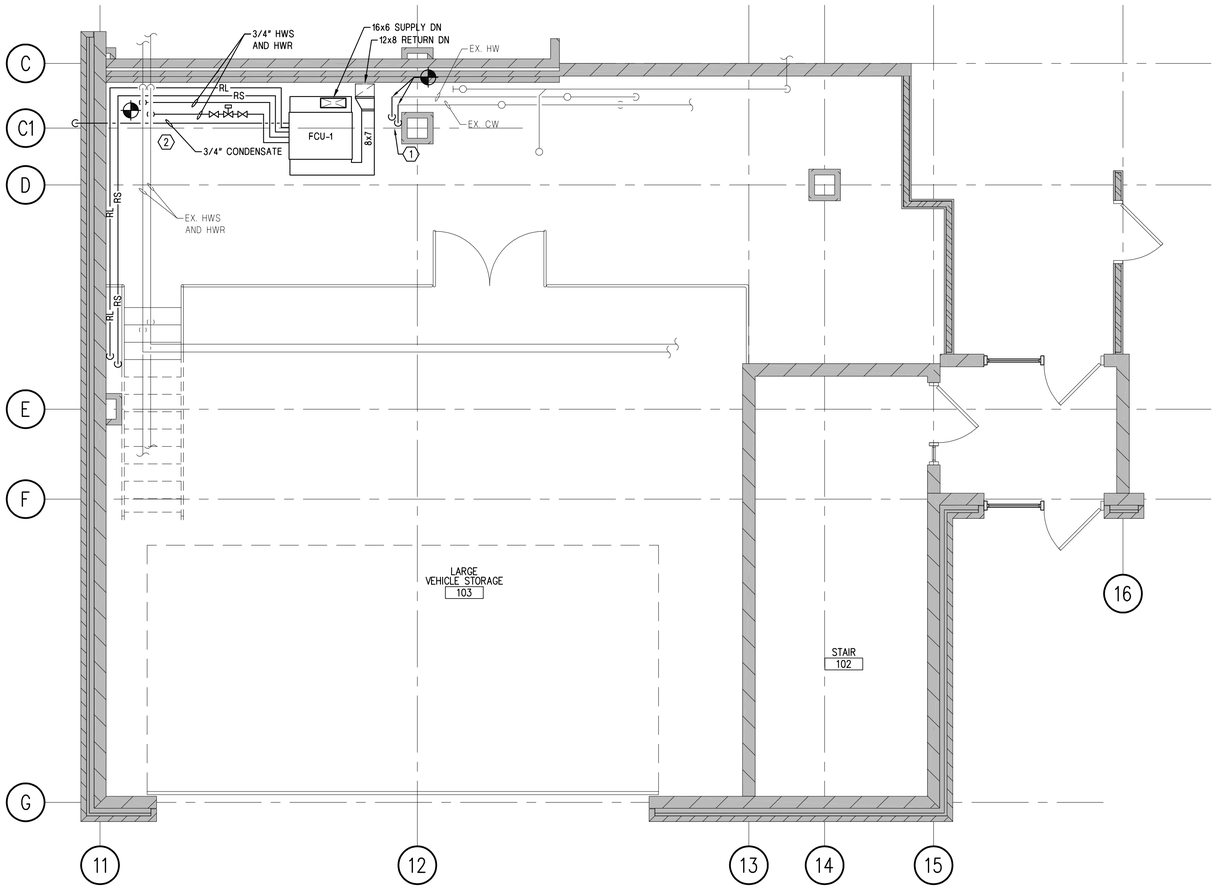
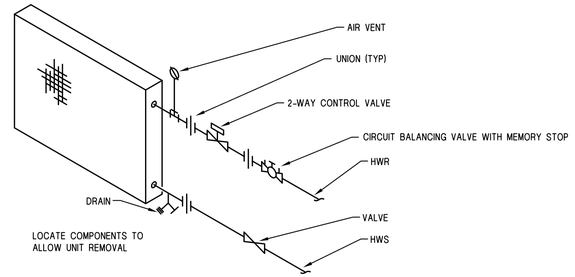


1 MEZZANINE LEVEL PIPING PLAN
1/4"=1'-0"

NORTH

KEYED SHEET NOTES

1. RELOCATE EXISTING VERTICAL HW AND CW PIPING DOWN TO FIRST FLOOR TO ACCOMMODATE FOR NEW DUCTWORK.
2. ROUTE NEW PIPING ALONG NORTH WALL AND AS HIGH AS POSSIBLE. COORDINATE PIPE ROUTING WITH LIGHTING AND SHELVING LAYOUT.



2 HOT WATER COIL HOOK-UP DETAIL
NO SCALE

SCALE AS NOTED FOR 22"x34" SHEETS			MEZZANINE LEVEL MECHANICAL PLAN	OFFICE & STORAGE MEZZANINE		SUPERIOR, WISCONSIN SEPTEMBER 5, 2007	SURVEY N/A DRAWN AML DESIGN SDC APPROV'D SDC	RECORD DRAWINGS DATE 06/26/2008	SHEET 8/14

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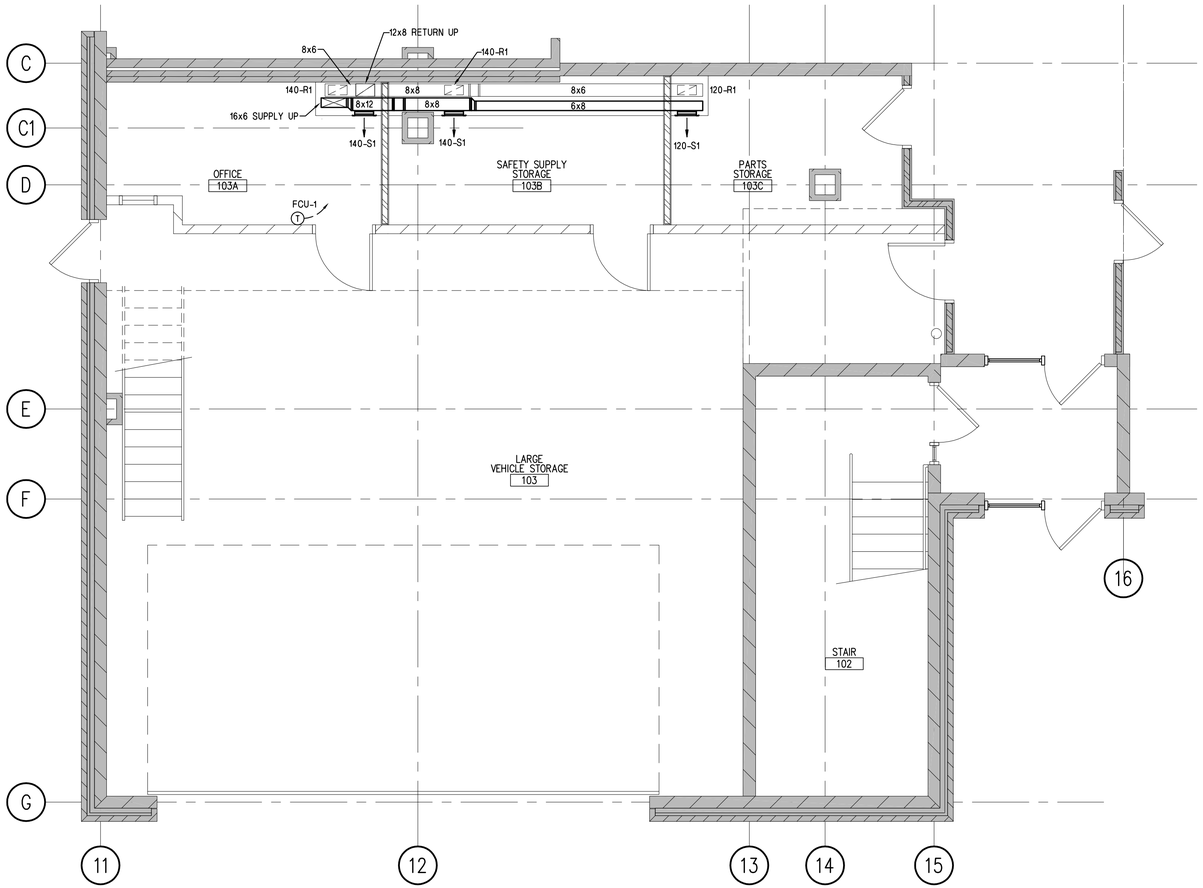

1 FIRST FLOOR VENTILATION PLAN
1/4"=1'-0"

NORTH

SCALE AS NOTED FOR 22"x34" SHEETS			FIRST FLOOR VENTILATION PLAN	OFFICE & STORAGE MEZZANINE		SUPERIOR, WISCONSIN SEPTEMBER 5, 2007	SURVEY N/A DRAWN AML DESIGN SDC APPROV'D SDC	RECORD DRAWINGS DATE 06/26/2008	SHEET 9/14

ELECTRICAL SYMBOL LEGEND

HT AFF	SYMBOL	DESCRIPTION
AS NOTED	(A) (B)	SURFACE INCANDESCENT LIGHT (TYPE DENOTED)
AS NOTED	(C) (D)	SURFACE H.I.D. LIGHT (TYPE DENOTED)
AS NOTED	F	WALL MOUNTED FLOODLIGHT (TYPE DENOTED)
	R	RECESSED LIGHT (TYPE DENOTED)
PER SCHED	FA	POLE MOUNTED LIGHT (TYPE DENOTED)
PER SCHED	88	POLE MOUNTED FLOODLIGHT (TYPE DENOTED)
	G	SURFACE FLUORESCENT LIGHT (TYPE DENOTED)
P1	P2	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)
	H	RECESSED FLUORESCENT LIGHT (TYPE DENOTED)
	ST1	FLUORESCENT STRIP LIGHT (TYPE DENOTED)
AS NOTED	ST2 ST3 T1	TRACK AND TRACK LIGHT (TYPES DENOTED)
96"	EM	EMERGENCY BATTERY LIGHT (TYPE DENOTED)
12"•		EXIT SIGN (TYPE DENOTED)
AS NOTED		LIGHT FIXTURE ON (EM) LIFE SAFETY BRANCH
AS NOTED		LIGHT FIXTURE ON (EM) CRITICAL BRANCH
AS NOTED		LIGHT FIXTURE ON EMERGENCY CIRCUIT
AS NOTED		LIGHT FIXTURE WITH EMERGENCY BALLAST
	CH3	LIGHT ON CORD REEL (TYPE DENOTED)
AS NOTED		LIGHTING CHANNEL WIRE (TYPE DENOTED)
48"		SINGLE POLE SW.
48"	2	2 POLE SINGLE THROW SW.
48"	3	3-WAY SW.
48"	4	4-WAY SW.
48"	K	KEYED SW.
48"	P	SW. W/PILOT
48"		SEPARATE PILOT LIGHT
48"	D	DIMMER SWITCH
48"	OS	OCCUPANCY SENSOR SWITCH
48"	MC	MOMENTARY CONTACT SWITCH
48"	T	TIMER SWITCH
48"	TD	TIME DELAY SWITCH
48"	SP	FAN SPEED CONTROL
48"	M	MOTOR HORSEPOWER RATED SWITCH
48"		PUSH BUTTON
18"		SINGLE RECEPT.
18"		DUPLEX RECEPT.
18"		SPLIT DUPLEX RECEPT.
18"		ISOLATED GROUND RECEPTACLE (DUPLEX SHOWN)
18"		RECEPTACLE ON EMERGENCY CIRCUIT (DUPLEX SHOWN)
18"		DOUBLE DUPLEX RECEPT.
18"		240 VOLT RECEPT.
		FLOOR RECEPT. (DUPLEX SHOWN)
AS NOTED		RECEPT ON DROP CORD (DUPLEX SHOWN)
		RECEPT ON CORD REEL (DUPLEX SHOWN)
		EQUIPMENT PLUG

HT AFF	SYMBOL	DESCRIPTION
18"	A B	MULTIOUTLET ASSEMBLY (TYPE DENOTED)
18"	A B	MULTIOUTLET ASSEMBLY (TYPE DENOTED)
84"	A	CLOCK (TYPE DENOTED)
		POWER POLE (OPEN OFFICE STYLE)
		SURGERY SERVICE COLUMN
		STATIC GROUND RECEPTACLE (TYPE DENOTED)
		LIGHTNING PROTECTION AIR TERMINAL
		LIGHTNING PROTECTION CONDUCTOR SPLICE
		GROUND ROD (PLAN VIEW)
		GROUND CONNECTION TO STEEL OR STRUCTURE
		GROUND CONNECTION – EXOTHERMIC WELD
		UTILITY SERVICE POWER POLE (SITE)
AS NOTED		SPECIAL RECEPT. OR CONN. (SEE SCHEDULE)
	PB	PULL BOX
AS NOTED	J	JUNCTION BOX
	HH	HAND HOLE
72"••		CIRCUIT BREAKER PANEL
72"••		POWER OR DISTRIBUTION PANEL
72"••		SPECIAL CABINET
	T1	TRANSFORMER (TYPE DENOTED)
	25 KVA	GENERATOR (KVA DENOTED)
	SF-1	MOTOR (SEE SCHEDULE)
		DAMPER MOTOR
48"		MANUAL MTR. STR. (W/OVERLOADS)
72"••		MAG. MOTOR STARTER OR CONTACTOR
72"••		COMB. MOTOR STARTER (NON-FUSED)
72"••		COMB. MOTOR STARTER (FUSED)
72"••		SAFETY DISC. SW. (NON-FUSED)
72"••		SAFETY DISC. SW. (FUSED)
AS NOTED		BUS DUCT WITH PLUG UN DISCONNECT (FUSED)
72"••	R	RELAY
72"••		ENCLOSED CIRCUIT BREAKER
	PS	PRESSURE SWITCH
	FS	FLOAT SWITCH
	OS IR	OCCUPANCY SENSOR – TYPE DENOTED
	LS A	LIGHT LEVEL SENSOR – TYPE DENOTED
AS NOTED	PC	PHOTOCELL
48"	TC	TIME CONTROL SWITCH (TIME SWITCH)
48"	H	HUMIDISTAT
48"	T	THERMOSTAT
PER SCHED	H1	BASEBOARD HEATER (TYPE DENOTED)
PER SCHED	H2	WALL HEATER (TYPE DENOTED)
PER SCHED	H3	HAND OR HAIR DRYER (TYPE DENOTED)
	SOL	SOLENOID VALVE
		DASHED SYMBOL INDICATES EXISTING
		HATCHED SYMBOL INDICATES REMOVED

HT AFF	SYMBOL	DESCRIPTION
		CONDUIT CONCEALED IN WALL OR OVERHEAD
		CONDUIT CONCEALED BELOW FLOOR
		CONDUIT EXPOSED
	SR	SURFACE RACEWAY
		CONDUIT TRANSITION UP
		CONDUIT TRANSITION DOWN
		CONDUIT STUBBED OUT
	LV	LOW VOLTAGE POWER WIRING
	EX	EXISTING CONDUIT
	UE	UNDERGROUND ELECTRICAL
	UHVE	UNDERGROUND HIGH VOLTAGE ELECTRICAL
	UT	UNDERGROUND TELEPHONE
	UCOM	UNDERGROUND COMMUNICATIONS
	UTV	UNDERGROUND CABLE TELEVISION (CATV OR CCTV)
	UFBR	UNDERGROUND FIBER OPTIC
	OHE	OVERHEAD ELECTRIC
	OHT	OVERHEAD TELEPHONE
		BRANCH CIRCUIT HOME RUN
		FLEXIBLE CONDUIT OR FIXTURE WHIP
		UNDERFLOOR RACEWAY SYSTEM
		CABLE TRAY (TYPE DENOTED)
18"		TELEPHONE OUTLET (TYPE DENOTED)
48"•••	W	WALL TELEPHONE OUTLET (TYPE DENOTED)
18"		INFORMATION OUTLET (TYPE DENOTED)
18"		INTERCOM OUTLET LOCATION
48"•••	W	WALL INTERCOM OUTLET LOCATION
18"		TELEVISION OUTLET
18"		MULTIPLE SERVICE OUTLET (TYPE DENOTED)
18"	D	DICTATION OUTLET LOCATION
48"•••	W	WALL DICTATION OUTLET LOCATION
18"	M	MASS SPECTROMETER OUTLET
18"	G	EQUIPOTENTIAL GROUND OUTLET
AS NOTED	MFV-4x2	X-RAY FILM VIEWER (SEE SPECIFICATIONS)
84"		BELL
84"		BUZZER
48"•••	D	DOOR SIGNAL – APT. UNIT
AS NOTED		SCRAMBLE STROBE STACK LIGHT
84"	S S	SPEAKER (WALL OR CEILING MT.)
84"	S S	HORN TYPE SPEAKER
	S	SURFACE MT SPEAKER SUSPENDED FROM CEILING
	V	VOLUME CONTROL
18"	M	MICROPHONE OUTLET
18"	A	AUXILIARY OUTLET
18"	P	PROJECTOR CONTROL OUTLET
		ANTENNA
		WEATHERHEAD
	1	KEYED NOTE (SEE SCHEDULE)

HT AFF	SYMBOL	DESCRIPTION
90"••	H	FIRE ALARM HORN
90"••	H 110cd	FIRE ALARM HORN W/STROBE (CANDELAS)
90"••	H	FIRE ALARM BELL
90"••	H 110cd	FIRE ALARM BELL W/STROBE (CANDELAS)
90"••	H	FIRE ALARM CHIME
90"••	H 110cd	FIRE ALARM CHIME W/STROBE (CANDELAS)
90"••	H 110cd	FIRE ALARM STROBE (CANDELAS)
90"••	H 110cd	FIRE ALARM SPEAKER W/STROBE (CANDELAS)
8"••••	H P	SMOKE DETECTOR (TYPE DENOTED)
8"••••	H R/F135 R/F135	HEAT DETECTOR (TYPE & TEMPERATURE DENOTED)
		LINEAR HEAT DETECTOR
	H P	DUCT SMOKE DETECTOR (TYPE DENOTED)
48"	H	REMOTE TEST/STATUS STATION
8"••••	H UV/IR	FLAME DETECTOR (TYPE DENOTED)
8"••••	H CO	GAS DETECTOR (TYPE DENOTED)
48"•••	H	F.A. PULLSTATION
	Z	F.A. ZONE ADDRESSABLE MODULE
	I	F.A. INDIVIDUAL ADDRESSABLE MODULE
	H	F.A. DOOR HOLDER
	H	F.A. DOOR CLOSER
	FR	FIRE ALARM SHUT DOWN RELAY
		SPRINKLER FLOW SWITCH
		SPRINKLER VALVE TAMPER SWITCH
		SPRINKLER LEVEL SWITCH
		SPRINKLER PRESSURE SWITCH
	T	SPRINKLER TEMPERATURE SWITCH
	ELR	END OF LINE RESISTOR
	ES	ELECTRIC STRIKE
	DC	DOOR CONTACTS
48"•••	CR	CARD READER
48"•••	KP	KEYPAD
	C	COMBINATION LOCK
144"•	MD	MOTION DETECTOR
48"		NURSE CALL EMERG. STATION
48"		NURSE CALL CODE BLUE EMERG. STATION
48"•••		NURSE CALL DUTY STATION
48"•••		NURSE CALL STAFF STATION
48"		NURSE CALL SINGLE PATIENT STATION
48"		NURSE CALL DUAL PATIENT STATION
12"•	N	NURSE CALL DOME LIGHT (1 LAMP)
12"•	N	NURSE CALL DOME LIGHT (2 LAMP)
48"•••	NC	NURSE CALL MASTER STATION
48"•••	AP	NURSE CALL ANNUNCIATOR PANEL
72"••	EQ	NURSE CALL EQUIPMENT CABINET
AS NOTED		CCTV CAMERA
AS NOTED		CCTV CAMERA WITH PAN/TILT DRIVE

ALL DISTANCES ARE TO CENTER OF DEVICE OR EQUIPMENT UNLESS OTHERWISE NOTED. DEVICES INDICATED AT 48" MAY NOT BE INSTALLED WITH ANY OPERABLE PART HIGHER THAN 48". DEVICES MAY BE INSTALLED IN CONCRETE MASONRY UNITS WITH THE TOP OF THE DEVICE AT 48".

• DISTANCE ABOVE TOP OF DOOR FRAME •• DISTANCE TO TOP OF EQUIPMENT OR DEVICE ••• DISTANCE TO HIGHEST OPERABLE PART OF EQUIPMENT •••• DISTANCE BELOW CEILING ••••• DISTANCE TO BOTTOM OF DEVICE

ELECTRICAL SYMBOL NOTES

A / 12b — THE LIGHTING FIXTURE TYPE IS INDICATED BY AN UPPER CASE LETTER. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: LIGHTING FIXTURE TYPE "A" IS CONNECTED TO CIRCUIT 12 AND CONTROLLED BY SWITCH "b".

H E / 14 — EXIT LIGHTS. STEM INDICATES WALL MOUNTING. NO STEM INDICATES CEILING MOUNTING. SHADED AREA INDICATES ILLUMINATED FACE(S). ARROW INDICATES DIRECTIONAL ARROW ON ILLUMINATED FACE(S). THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. EXAMPLE: THE WALL MOUNTED EXIT LIGHT TYPE "E" WITH SINGLE FACE AND DIRECTIONAL ARROW IS CONNECTED TO CIRCUIT 14.

16c — DEVICES. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SPLIT DUPLEX RECEPTACLE IS CONNECTED TO CIRCUIT 16 AND ONE RECEPTACLE OUTLET IS CONTROLLED BY SWITCH "c".

H d — THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "d" TO CONTROL LIGHTING FIXTURES INDICATED BY "d".

D600 H e — WALL BOX DIMMER WITH SIZE AS INDICATED AT DEVICE. EXAMPLE: 600 WATT WALL BOX DIMMER TO CONTROL LIGHTING FIXTURES INDICATED BY "e". SEE SPECIFICATIONS FOR WATTAGE IF NOT INDICATED.

1 / 1,3,5 — SPECIAL CONNECTIONS. THE EQUIPMENT IS INDICATED BY A NUMBER IN A CIRCLE. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. 1; 3 PHASE CONNECTION TO CIRCUITS 1,3,5.

SF-1 / 2,4,6 — MOTOR CONNECTIONS. THE MOTOR IS INDICATED BY A NUMBER WITHIN OR CHARACTERS ADJACENT TO THE MOTOR SYMBOL. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE MOTOR DESCRIPTION AND ELECTRICAL REQUIREMENTS. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: MOTOR SF-1; 3 PHASE CONNECTION TO CIRCUITS 2,4,6.

7,9 H1 — ELECTRIC HEATER CONNECTIONS. THE HEATER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "H". SEE THE HEATER SCHEDULE FOR ELECTRICAL REQUIREMENTS. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE HEATER. EXAMPLE: ELECTRIC BASEBOARD HEATER TYPE "H1" CONNECTED TO CIRCUITS 7,9.

T1 — TRANSFORMERS. THE TRANSFORMER TYPE IS INDICATED BY A NUMBER FOLLOWING THE UPPER CASE LETTER "T". SEE THE TRANSFORMER SCHEDULE OR THE SINGLE LINE DIAGRAM FOR THE TRANSFORMER DESCRIPTION AND REQUIREMENTS. EXAMPLE: TRANSFORMER TYPE "T1".

LPN–102 — PANELBOARDS. PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION CODES.

1 — SPECIAL NOTE. SEE THE SPECIAL NOTES ON THAT SHEET FOR THE NOTE NUMBER INDICATED IN THE HEXAGON.

— CONDUIT SHOWN WITHOUT SLASH MARKS SHALL CONTAIN 2 # 12 CONDUCTORS IN 1/2" CONDUIT UNLESS SPECIFIC EQUIPMENT REQUIRES A DIFFERENT SIZE.

#10 — CONDUIT SHOWN WITH SLASH MARKS SHALL CONTAIN 1 # 12 CONDUCTOR PER SLASH MARK IN 1/2" CONDUIT UNLESS A CONDUCTOR AND CONDUIT SIZE IS SHOWN ADJACENT TO THE SLASH MARKS. PHASE CONDUCTORS ARE INDICATED BY SHORT SLASH MARKS, NEUTRAL CONDUCTORS ARE INDICATED BY LONG SLASH MARKS, SWITCH LEGS ARE INDICATED BY SHORT BENT SLASH MARKS, AND GROUND CONDUCTORS ARE INDICATED BY A LONG SLASH MARK WITH A DOT.

LPN–102 1,3,5 — HOME RUN TO BRANCH CIRCUIT PANELBOARD. THE PANELBOARD DESIGNATION IS SHOWN ADJACENT TO THE HOME RUN ARROW AS A NUMERATOR AND THE CIRCUIT DESIGNATION IS SHOWN AS THE DENOMINATOR. CIRCUIT BREAKER SIZES (AMPS/NUMBER OF POLES) ARE SHOWN IN THE PANELBOARD SCHEDULE WITH THE CORRESPONDING PANELBOARD AND CIRCUIT DESIGNATION. EXAMPLE: HOME RUN TO PANELBOARD LPN–102; CIRCUITS 1,3,5.

SYMBOL NOTATIONS: UPPER CASE LETTERS ADJACENT TO SYMBOLS INDICATE A UNIT TYPE. SEE APPROPRIATE SCHEDULE OR SPECIFICATIONS.

SPECIFIC CODE NOTES

FIRE PROTECTION REQUIREMENTS

A. PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.

1. CONDUITS MAY PENETRATE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRE–STOPPED.
2. OPENINGS FOR STEEL ELECTRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION.
3. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.

B. LIGHT FIXTURES AND OTHER APPARATUS SUPPORTED BY THE ACOUSTICAL CEILING GRID MUST MEET THE REQUIREMENTS OF NEC SECTION 410.16, MEANS OF SUPPORT.

C. RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILING ASSEMBLIES SHALL BE FIRE RATED FIXTURES BEARING THE UL FIRE RATED LABEL. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY, AND SHALL INCLUDE A FIRE RATED ENCLOSURE INSTALLED OVER THE FIXTURE THAT MEETS THE REQUIREMENTS OF THE UL FIRE RESISTANCE DIRECTORY.

PANELBOARD IDENTIFICATION

EQUIPMENT DESIGNATION	CODE
HIGH VOLTAGE 3ø4W. 277/480	HP4
HIGH VOLTAGE 3ø3W. 480	HP3
HIGH VOLTAGE 1ø3W. 277/480	HP1
LOW VOLTAGE 3ø4W. 120/208	LP4
LOW VOLTAGE 3ø3W. 208	LP3
LOW VOLTAGE 1ø3W. 120/240	LP2
LOW VOLTAGE 1ø3W. 120/208	LP1
SYSTEMS DESIGNATION	**CODE**
NORMAL	N
EMERGENCY	E
POWER CONDITIONED	C
ISOLATED GROUND	IG
UNINTERUPTABLE POWER SOURCE	UPS

SYSTEM DESIGNATION / EQUIPMENT DESIGNATION — FLOOR OF STRUCTURE / PANEL NO. — LPAN–102

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)	DET	DETAIL	HTR	HEATER	NFDS	NON–FUSED SAFETY SWITCH
		DIA	DIAMETER	HV	HIGH VOLTAGE	NIC	NOT IN CONTRACT
A	AMPERE	DISC	DISCONNECT	HWP	HYDRONIC WATER PUMP	NL	NIGHT LIGHT
AC	ABOVE COUNTER OR AIR CONDITIONER	DIST	DISTRIBUTION			N.O.	NORMALLY OPEN
		DN	DOWN	IC	INTERRUPTING CAPACITY	NPF	NORMAL POWER FACTOR
ACLG	ABOVE CEILING	DPR	DAMPER	IG	ISOLATED GROUND	NTS	NOT TO SCALE
ADO	AUTOMATIC DOOR OPENER	DS	SAFETY DISCONNECT SWITCH	IMC	INTERMEDIATE METAL CONDUIT		
AFF	ABOVE FINISHED FLOOR	DT	DOUBLE THROW	INCAND	INCANDESCENT	N.C.	NORMALLY CLOSED
AFG	ABOVE FINISHED GRADE	DWG	DRAWING	IR	INFRARED	NEC	NATIONAL ELECTRICAL CODE
AFI	ARC FAULT CIRCUIT INTERRUPTER			I/W	INTERLOCK WITH	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
		EC	ELECTRICAL CONTRACTOR				
AHU	AIR HANDLING UNIT	ELEC	ELECTRIC, ELECTRICAL	J–BOX	JUNCTION BOX		
AL	ALUMINUM ALT ALTERNATE	ELEV	ELEVATOR				
AMP	AMPERE	EM	EMERGENCY	KV	KILOVOLT	NFDS	NON–FUSED SAFETY DISCONNECT SWITCH
AMPL	AMPLIFIER	EMS	ENERGY MANAGEMENT SYSTEM	KVA	KILOVOLT–AMPERE		
ANNUN	ANNUNCIATOR	EMT	ELECTRICAL METALLIC TUBING	KVAR	KILOVOLT–AMPERE REACTIVE	NIC	NOT IN CONTRACT
APPROX	APPROXIMATELY	EP	ELECTRIC PNEUMATIC	KW	KILOWATT	NL	NIGHT LIGHT
AQ–STAT	AQUASTAT	EQUIP	EQUIPMENT	KWH	KILOWATT HOUR	N.O.	NORMALLY OPEN
ARCH	ARCHITECT, ARCHITECTURAL	EWC	ELECTRIC WATER COOLER			NPF	NORMAL POWER FACTOR
ATS	AUTOMATIC TRANSFER SWITCH	EXIST	EXISTING	LOC	LOCATE OR LOCATION	NTS	NOT TO SCALE
AUTO	AUTOMATIC	EXH	EXHAUST	LT	LIGHT		
AUX	AUXILIARY	EXP	EXPLOSION PROOF	LTG	LIGHTING	OH	OVERHEAD
AV	AUDIO VISUAL			LTNG	LIGHTNING	OL	OVERLOADS
AWG	AMERICAN WIRE GAUGE	FA	FIRE ALARM	LV	LOW VOLTAGE		
		FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL			PA	PUBLIC ADDRESS
BATT	BATTERY			MAX	MAXIMUM	PB	PULL BOX OR PUSHBUTTON
BD	BOARD	FACP	FIRE ALARM CONTROL PANEL	MAG.S	MAGNETIC STARTER	PE	PNEUMATIC ELECTRIC
BLDG	BUILDING	FCU	FAN COIL UNIT	M/C	MOMENTARY CONTACT	PED	PEDESTAL PF POWER FACTOR
BMS	BUILDING MANAGEMENT SYSTEM	FIXT	FIXTURE	MC	MECHANICAL CONTRACTOR	PH	PHASE
		FLR	FLOOR	MCB	MAIN CIRCUIT BREAKER	PNL	PANEL
		FLUOR	FLUORESCENT	MCC	MOTOR CONTROL CENTER	PP	POWER POLE
C	CONDUIT	FU	FUSE	MDC	MAIN DISTRIBUTION CENTER	PR	PAIR
CAB	CABINET	FUDS	FUSED SAFETY DISCONNECT SWITCH	MDP	MAIN DISTRIBUTION PANEL	PRI	PRIMARY
CATV	CABLE TELEVISION			MFR	MANUFACTURER	PROJ	PROJECTION
CB	CIRCUIT BREAKER			MFS	MAIN FUSED DISCONNECT SWITCH	PRV	POWER ROOF VENTILATOR
CCTV	CLOSED CIRCUIT TELEVISION	GA	GAUGE			PT	POTENTIAL TRANSFORMER
CKT	CIRCUIT	GAL	GALLON	MH	MANHOLE	PVC	POLYVINYL CHLORIDE (CONDUIT)
CLG	CEILING	GALV	GALVANIZED	MIC	MICROPHONE		
COMB	COMBINATION	GC	GENERAL CONTRACTOR	MIN	MINIMUM	PWR	POWER
COMPR	COMPRESSOR	GEN	GENERATOR	MISC	MISCELLANEOUS		
CONN	CONNECTION	GFI	GROUND FAULT CIRCUIT INTERRUPTER	MLO	MAIN LUGS ONLY	QUAN	QUANTITY
CONST	CONSTRUCTION			MMS	MANUAL MOTOR STARTER		
CONT	CONTINUATION OR CONTINUOUS	GFP	GROUND FAULT PROTECTOR	MOA	MULTIOUTLET ASSEMBLY	RCPT	RECEPTACLE
		GND	GROUND	MSP	MOTOR STARTER PANELBOARD	REQD	REQUIRED
CONTR	CONTRACTOR	GRS	GALVANIZED RIGID STEEL (CONDUIT)	MSBD	MAIN SWITCHBOARD	RSC	RIGID STEEL CONDUIT
CONV	CONVECTOR			MT	MOUNT	RTU	ROOF TOP UNIT
CP	CIRCULATING PUMP	GYP	GYPSUM BOARD	MT.C	EMPTY CONDUIT		
CRT	CATHODE–RAY TUBE			MTS	MANUAL TRANSFER SWITCH	SC	SURFACE CONDUIT
CT	CURRENT TRANSFORMER	HOA	HAND–OFF–AUTOMATIC SWITCH	MTR	MOTOR, MOTORIZED	SEC	SECONDARY
CTR	CENTER					SHT	SHEET
CU	COPPER	HORIZ	HORIZONTAL	N.C.	NORMALLY CLOSED	SIM	SIMILAR
		HP	HORSEPOWER	NEC	NATIONAL ELECTRICAL CODE	S/N	SOLID NEUTRAL
DCP	DOMESTIC WATER CIRCULATING PUMP	HPF	HIGH POWER FACTOR	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	SPEC	SPECIFICATION
		HT	HEIGHT			SPKR	SPEAKER
DEPT	DEPARTMENT	HTG	HEATING			SP	SPARE

SR	SURFACE RACEWAY		
SS	STAINLESS STEEL		
SSW	SELECTOR SWITCH		
S/S	STOP/START PUSHBUTTONS		
STA	STATION		
STD	STANDARD		
SURF	SURFACE MOUNTED		
SW	SWITCH		
SWBD	SWITCHBOARD		
SYM	SYMMETRICAL SYS SYSTEM		
TEL	TELEPHONE		
TERM	TERMINAL		
TL	TWIST LOCK		
TR	TAMPER RESISTANT		
T–STAT	THERMOSTAT		
TTC	TELEPHONE TERMINAL CABINET		
TV	TELEVISION		
TVTC	TELEVISION TERMINAL CABINET		
TYP	TYPICAL		
UE	UNDERGROUND ELECTRICAL		
UG	UNDERGROUND		
UH	UNIT HEATER		
UT	UNDERGROUND TELEPHONE		
UV	UNIT VENTILATOR OR ULTRAVIOLET		
V	VOLT		
VA	VOLT–AMPERES		
VDT	VIDEO DISPLAY TERMINAL		
VERT	VERTICAL		
VFD	VARIABLE FREQUENCY DRIVE		
VOL	VOLUME		
W	WATT		
W/	WITH		
WG	WIRE GUARD		
WH	WATER HEATER		
W/O	WITHOUT		
WP	WEATHERPROOF		
XFMR	TRANSFORMER		
XFR	TRANSFER		
∠	ANGLE		
@	AT		
'	FEET		
"	INCHES		
#	NUMBER		
ø	PHASE		
℄	CENTER LINE		
℘	PLATE		

GENERAL ELECTRICAL NOTES

A. ALL CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY. ALL RACEWAY WITHIN THE STRUCTURE ABOVE THE FLOOR SLAB SHALL BE METAL. RACEWAY BELOW THE FLOOR SLAB AND UNDERGROUND RACEWAY OUTSIDE THE STRUCTURE SHALL BE PVC.

B. ALL LOW VOLTAGE CABLES OR CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN METAL RACEWAY WHERE INSTALLED WITHIN WALLS OR INACCESSIBLE SPACES. LOW VOLTAGE CABLES MAY BE RUN IN CABLE TRAY WHERE NOTED. LOW VOLTAGE CABLES MAY BE RUN IN CABLE SUPPORT HOOKS ABOVE ACCESSIBLE CEILINGS WHERE NOTED.

C. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND DETAILS. ARCHITECTURAL ELEVATIONS AND DETAILS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ELECTRICAL DRAWINGS.

D. WHERE CONNECTED TO A 20A. BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

E. CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITMES SHOWN ON THIS DRAWINGS, EXCEPT INFORMATION OUTLETS.

F. FURNISH AND INSTALL CONDUIT FROM BACK BOXES FOR THE FOLLOWING DEVICES INTO THE ACCESSIBLE CEILING SPACE IN THE CORRIDOR, UNLESS NOTED OTHERWSE:

¾"C INFORMATION OUTLETS

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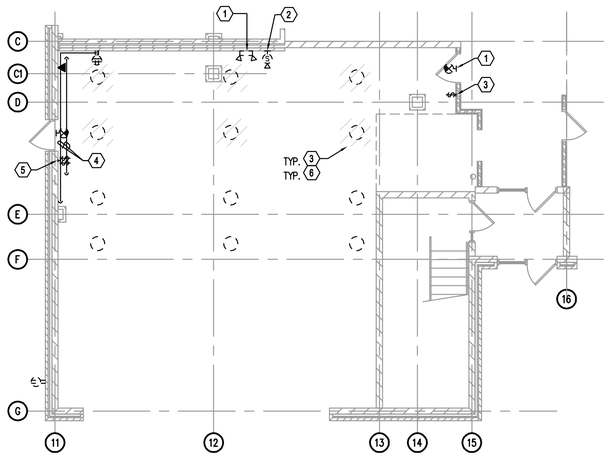

1 ELECTRICAL DEMOLITION PLAN
1/8" = 1'-0"

GENERAL SHEET NOTES

A. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONSTRUCTION.

B. DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES IN WALLS TO BE DEMOLISHED. WALLS TO BE DEMOLISHED ARE SHOWN DASHED. DISCONNECT AND REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO LAST REMAINING DEVICE. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF CIRCUIT(S) TO ANY EXISTING DEVICES TO REMAIN. COORDINATE AND VERIFY REQUIREMENTS WITH NEW WORK IN AREA.

C. FURNISH AND INSTALL CONDUIT AND WIRE AS NECESSARY FOR CONTINUITY OF ANY FEEDERS OR BRANCH CIRCUITS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

D. FURNISH AND INSTALL CONDUIT AND/OR COMMUNICATIONS/ DATA WIRING AS NECESSARY FOR CONTINUITY OF ANY WIRING ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY COMMUNICATIONS/DATA EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

E. DISCONNECT AND REMOVE LIGHT SWITCHES IN PROJECT AS NECESSARY TO ACCOMMODATE NEW DOOR CONFIGURATIONS.

F. DISCONNECT AND REMOVE ANY EXISTING ELECTRICAL DEVICES AND BACK BOXES AS NECESSARY WHERE NEW WALL CONSTRUCTION WILL INTERSECT AN EXISTING WALL. FURNISH AND INSTALL CONDUIT AND WIRE AS REQUIRED FOR CONTINUITY OF CIRCUIT(S). H. FURNISH AND INSTALL BLANK COVER PLATES OVER ALL EXISTING UNUSED OPENINGS.

KEYED SHEET NOTES

1. RELOCATE FIXTURE. SEE E3.01 FOR NEW LOCATION.
2. RELOCATE SPEAKER. SEE E4.01 FOR NEW LOCATION. EXTEND WIRING AS REQUIRED TO NEW LOCATION.
3. DISCONNECT AND REMOVE DEVICE OR FIXTURE. MAINTAIN LIGHTING CIRCUIT FOR CONNECTION OF NEW LIGHTING FIXTURES.
4. EXISTING POWER AND COMMUNICATION WIRING AND DEVICES TO REMAIN.
5. REPLACE EXISTING SWITCH FEEDING FIXTURES BEING REMOVED WITH A BLANK. REMOVE ASSOCIATED WIRING. FIELD VERIFY.
6. SALVAGE EXISTING LIGHTING FIXTURE. TURN OVER TO OWNER.

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LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LENS/LOUVER	MOUNTING	LAMP	BALLAST	VOLT	WATTS	MFR.	CATALOG SERIES	NOTES
AM	8.5" X 4' ARCHITECTURAL SURFACE MOUNT FLUORESCENT FIXTURE, WHITE TEXTURE POWDER COAT CROSS BLADE LOUVER, MASTER UNIT WITH (1) 4 LAMP AND (1) 2 LAMP BALLAST FOR MULTI-LEVEL SWITCHING	MATTE WHITE ACRYLIC	SURFACE	(3) F032 T8 20,000 HR 3500 DEG. K.	ELECTRONIC (1) 4 LAMP (2) 2 LAMP	UNV	90	WILLIAMS APPROVED EQUAL	ASM SERIES	
AS	8.5" X 4' ARCHITECTURAL SURFACE MOUNT FLUORESCENT FIXTURE, WHITE TEXTURE POWDER COAT CROSS BLADE LOUVER, SATTELITE UNIT WITHOUT BALLAST FOR MULTI-LEVEL SWITCHING	MATTE WHITE ACRYLIC	SURFACE	(3) F032 T8 20,000 HR 3500 DEG. K.	---	UNV	90	WILLIAMS APPROVED EQUAL	ASM SERIES	
C	4' X 10" FLUORESCENT WRAPAROUND WITH WHITE HOUSING, INJECTION MOLDED END CAPS, AND SPRING LATCHES.	FLAT BOTTOM PRISMATIC ACRYLIC .125" NOMINAL	CHAIN SUSPENDED	(2) F032 T8 3500 DEG. K.	ELECTRONIC (1) 2 LAMP	UNV	60	WILLIAMS METALUX LITHONIA	23 SERIES WB SERIES BW SERIES	
D	4' LONG FLUORESCENT WALL MOUNT WITH 8" X 5" PROFILE.	PRISMATIC ACRYLIC	WALL SURFACE	(2) F032 T8 3500 DEG. K.	ELECTRONIC (1) 2 LAMP	UNV	60	WILLIAMS APPROVED EQUAL	29 SERIES	

GENERAL NOTES:

A. EC SHALL REFER TO SPECIFICATIONS REGARDING PROVIDING ADDITIONAL SPARE LAMPS, LENSES AND GLOBES.

SCHEDULE NOTES:

GENERAL SHEET NOTES

A. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.

B. ALL MOUNTING HEIGHTS FOR LIGHTING FIXTURES ARE TO THE BOTTOM OF THE FIXTURES UNLESS INDICATED OTHERWISE.

C. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.

D. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.

E. CIRCUIT NUMBERS AT DEVICES DO NOT CORRESPOND TO PANELBOARD BREAKERS. BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

F. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET, UNLESS SPECIFICALLY INDICATED OTHERWISE. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.

KEYED SHEET NOTES

1. WALL MOUNT TYPE "D" LIGHTING FIXTURE TIGHT TO BOTTOM OF MEZZANINE.
2. MOUNT TYPE "C" LIGHTING FIXTURE WITH BOTTOM OF FIXTURE FLUSH WITH BOTTOM OF BEAMS. FIELD COORDINATE LOCATIONS WITH MECHANICAL AND SHELVING UNITS.
3. RELOCATE EXISTING FIXTURE TO THIS LOCATION. CONNECT INTO UNSWITCHED LEG OF NEW LIGHTING CIRCUIT INDICATED.
4. CONNECT TO EXISTING UNSWITCHED LIGHTING CIRCUIT.
5. CONNECT TO SPARE CIRCUIT IN PANEL LP1-L.
6. ADJUST OCCUPANCY SENSOR SWITCH TO 10 MIN. DELAY PRIOR TO LIGHTS TURNING OFF.

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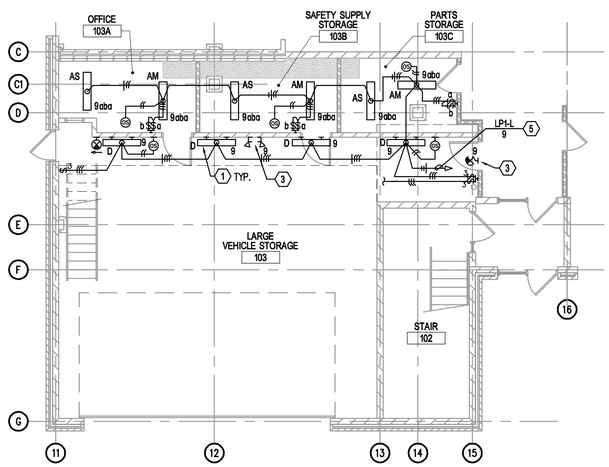
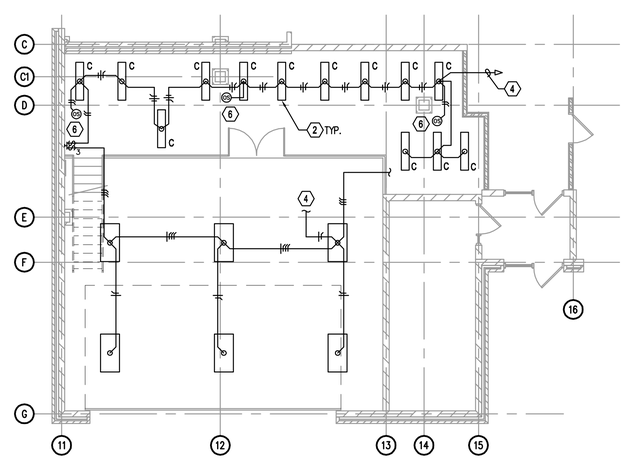


1 ELECTRICAL LIGHTING MAIN LEVEL
1/8" = 1'-0"



1 ELECTRICAL LIGHTING MEZZANINE LEVEL
1/8" = 1'-0"

ELECTRICAL EQUIPMENT SCHEDULE

No.	DESCRIPTION	ROOM	LOAD	VOLT	#	CONDUIT & WIRE SIZE	STARTER COMPONENT	STARTER FURN. INST.	CONTROL DEVICE COMPONENT	CONTROL DEVICE FURN. INST.	DISCONNECT COMPONENT	DISCONNECT FURN. INST.	NOTES
FCU-1	FAN COIL UNIT		2.5 A	120	1	16(1/2"}C-2#12	1P. 120 V. RELAY	TC	TEMP. CONTROL	TC	1P HP RATED	EC	
							24V. COIL	EC		TC	SNAP SWITCH	EC	
ACCU-1	CONDENSING UNIT	EXT.	8.8 MCA	208	1	16(1/2"}C-2 #12 #12 GND	PACKAGED EQUIPMENT	W/EQUIP W/EQUIP	TEMP. CONTROL	TC TC	WP 30A 2P FUSE AT 15A	EC EC	

STARTER TYPES:		COMBINATION DISC. TYPES:		CONTROL DEVICES:		ABBREVIATIONS:	
FVNR	FULL VOLTAGE NON-REVERSING	FS	FUSED SWITCH	HOA	HAND-OFF-AUTO SWITCH	EC	ELEC. CONTR.
FVR	FULL VOLTAGE REVERSING	NFS	NON-FUSED SWITCH	RP	RED (RUN) PILOT LT.	MC	MECH. CONTR.
2-SPD	TWO SPEED	MCP	MOTOR CIRCUIT PROTECTOR	GP	GREEN (POWER) PILOT LT.	GC	GENERAL CONTR.
VFD	VARIABLE FREQUENCY DRIVE	CB	CIRCUIT BREAKER	O/O	ON-OFF SELECTOR SWITCH	TC	TEMP. CONTROL
RVS	REDUCED VOLTAGE			S/S	STOP-START PUSHBUTTONS	OWN	OWNER

GENERAL NOTES:

A. VERIFY ROUGH-IN LOCATIONS AND EQUIPMENT REQUIREMENTS WITH EQUIPMENT SUPPLIER SHOP DRAWINGS PRIOR TO INSTALLATION OF WIRING, BOXES, OR ELECTRICAL COMPONENTS.

GENERAL SHEET NOTES

A. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.

B. WHERE CONNECTED TO A 20A. BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

C. VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN.

D. CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.

E. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.

F. CIRCUIT NUMBERS AT DEVICES DO NOT CORRESPOND TO PANELBOARD BREAKERS AND ARE GIVEN ONLY TO INDICATE NUMBER OF CIRCUITS NEEDED. BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

G. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET, UNLESS SPECIFICALLY INDICATED OTHERWISE. THIS SHALL BE REQUIRED FOR THE ENTIRE LENGTH OF THE CIRCUIT.

KEYED SHEET NOTES

1. REPLACE 2 EXISTING SPARE 20A, 1P BREAKERS IN PANEL LB2-P WITH NEW, 20A 2P HACR RATED BREAKER. ADJUST LOCATION OF OTHER BREAKERS IN PANEL AS REQUIRED TO ALLOW ROOM FOR 2 POLE ADJACENT TO EACH OTHER. CONNECT CIRCUIT TO NEW BREAKER. FIELD COORDINATE.
2. CONNECT TO AVAILABLE 120V, 20A SPARE CIRCUIT BREAKER(S) IN PANEL LP2-L,
3. RELOCATE EXISTING SPEAKER TO THIS LOCATION. EXTEND WIRING. MOUNT AT CEILING, ABOVE MEZZANINE FOR ACCESS. FIELD COORDINATE.
4. PROVIDE ADDITIONAL SWITCH TO SWITCH BOTTOM HALF OF DUPLEX RECEPTACLE.
5. RELOCATE EXISTING GARAGE DOOR OPENER SWITCH TO THIS LOCATION.

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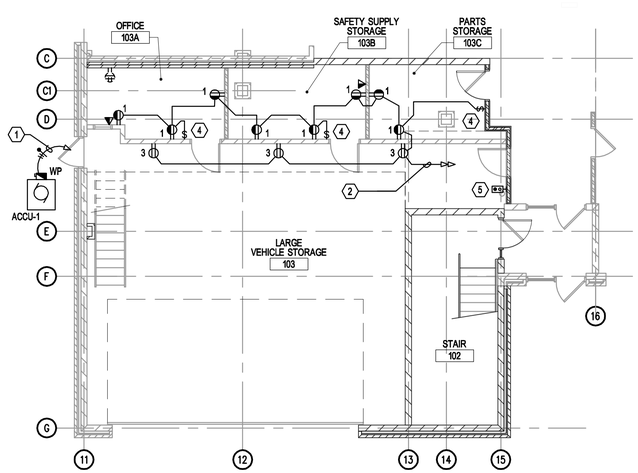
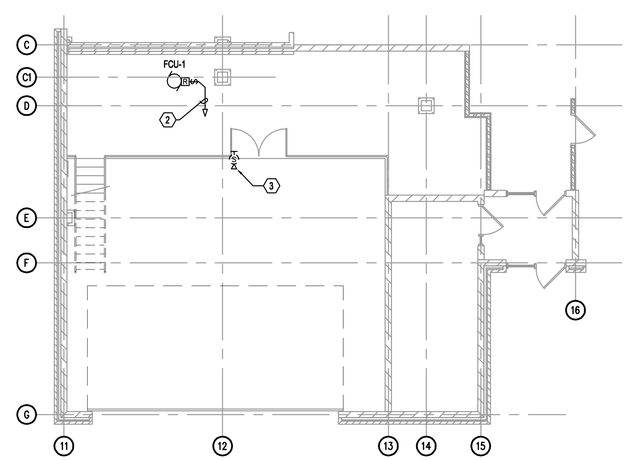


1 ELECTRICAL POWER AND SYSTEMS PLAN MAIN LEVEL
1/8" = 1'-0"



1 ELECTRICAL POWER AND SYSTEMS PLAN MEZZANINE LEVEL
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ELECTRICAL SPECIFICATIONS

1. NOT USED.
2. **DRAWINGS AND MEASUREMENTS:**
   THE DRAWINGS ARE NOT INTENDED TO BE SCALED FOR ROUGHING-IN MEASUREMENTS NOR TO SERVE AS SHOP DRAWINGS.
3. **ORDINANCES AND CODES:**
   ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE NATIONAL, STATE, AND LOCAL CODES. ALL FEES, PERMITS, LICENSES, ETC., NECESSARY IN ORDER TO COMPLETE THE WORK OF THIS SECTION SHALL BE PAID BY THIS CONTRACTOR.
4. **GUARANTEE:**
   THIS CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DEFECTS WHICH MAY DEVELOP IN ANY PART OF HIS WORK FOR A PERIOD OF ONE YEAR.
5. **QUALITY ASSURANCE:**
   ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF BEST QUALITY, OF THE TYPE BEST SUITED FOR THE PURPOSE INTENDED, AND BE MADE BY NATIONALLY RECOGNIZED AND SUBSTANTIALLY ESTABLISHED MANUFACTURERS.
6. **SHOP DRAWINGS:**
   SHOP DRAWING SUBMITTALS SHALL CONTAIN SIX (6) COPIES OF EACH DRAWING. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL MAJOR PIECES OF EQUIPMENT.
7. **DEMOLITION AND DISPOSAL:**
   EXISTING EQUIPMENT REMOVED AND NOT SPECIFICALLY CALLED OUT TO BE RE-USED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE FROM THE SITE AND DISPOSE OF ALL ITEMS NOT TO BE RE-USED OR SALVAGED. FLUORESCENT LAMPS, OTHER HID LAMPS AND PCB BALLASTS SHALL BE PROPERLY DISPOSED BY THIS CONTRACTOR IN ACCORDANCE WITH THE APPLICABLE LAWS AND REGULATIONS PERTAINING TO THE DISPOSAL OF HAZARDOUS WASTE.
8. **CUTTING AND PATCHING:**
   IN EXISTING CONSTRUCTION THIS CONTRACTOR SHALL PERFORM ALL CUTTING REQUIRED AND ALL NECESSARY PATCHING AFTER COMPLETION TO RESTORE THE SURFACE TO ITS ORIGINAL CONDITION, UNLESS OTHERWISE INDICATED. THIS CONTRACTOR SHALL NOT ENDANGER THE STABILITY OF THE STRUCTURE BY CUTTING, DIGGING OR OTHERWISE, AND SHALL NOT AT ANY TIME CUT OR ALTER WORK OF ANY OTHER CONTRACTOR.
9. **ELECTRICAL METALLIC TUBING:**
   EMT MAY BE USED IN FURRED CEILING AREAS, INTERIOR PARTITIONS, AND SURFACE MOUNTED IN EQUIPMENT ROOMS. EMT SHALL NOT BE USED IN SLAB ON GRADE OR WHERE EXPOSED TO MOISTURE OR EARTH.
10. **IMC CONDUIT:**
    IMC MAY BE USED IN UNDERGROUND INSTALLATIONS, AND IN SLAB ON GRADE. USE IMC IN EXTERIOR LOCATIONS AND WHERE EXPOSED TO MOISTURE OR EARTH.
11. **FLEXIBLE METAL CONDUIT:**
    FLEXIBLE METAL CONDUIT SHALL BE USED FOR CONNECTIONS TO MOTORS, FIXED AND APPLIANCES, RECESSED LUMINAIRES WHERE REQUIRED. IN KITCHENS, WELLS, SUMP PITS, TRANSFORMER CONNECTIONS AND AREAS OF HIGH MOISTURE CONTENT, LIQUID-TIGHT CONDUIT WITH LIQUID-TIGHT FITTINGS SHALL BE USED.
12. **FITTINGS:**
    FITTINGS FOR EMT SHALL BE DIE-CAST SET SCREW TYPE.
13. **GENERAL INSTALLATION:**
    CONDUITS SHALL BE SIZED AS NOTED OR AS REQUIRED BY NEC FOR NUMBER AND SIZE OF CONDUCTORS INSTALLED.
14. **BOXES:**
    OUTLET BOXES SHALL BE AT LEAST 1-1/2 INCHES DEEP, SINGLE OR GANG STYLE TYPE OF SIZE TO ACCOMMODATE DEVICES NOTED.
15. **WIRE AND CABLE (600 VAC):**
    ALL WIRE AND CABLE FOR FEEDER AND BRANCH CIRCUITS SHALL BE COPPER AND CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE NEC. MINIMUM CONDUCTOR SIZE BE NO. 12 UNLESS OTHERWISE NOTED. WIRE SHALL BE TYPE THHN OR THWN.
16. **REMODELING WORK:**
    THIS CONTRACTOR SHALL VISIT EXISTING BUILDING BEFORE STARTING THE PROJECT AND BECOME FAMILIAR WITH EXISTING CONDITIONS. ANY ABANDONED WIRING SHALL BE REMOVED.
17. **WIRING DEVICES:**
    DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, 15 AMPS, 120 VOLT, 2 WIRE GROUNDING TYPE WITH GROUNDING TERMINAL. RECEPTACLES SHALL BE IVORY COLOR. EACH SWITCH OUTLET SHALL BE EQUIPPED WITH A TOGGLE SWITCH, 20 AMP, 120/277 VOLT A.C. RATED, QUIET TYPE. SWITCHES SHALL BE IVORY COLOR. (DEVICES IN REMODELED AREAS SHALL MATCH COLOR AND TYPE OF EXISTING DEVICES IN THE AREA BEING REMODELED.) ALL OUTLET PLATES IN FINISHED AREAS SHALL BE BRUSHED ALUMINUM STYLE WITH OPENINGS FOR DEVICES INTENDED. PLATES IN UNFINISHED AREAS MAY BE CADMIUM PLATED STEEL.
18. **MOTORS & EQUIPMENT:**
    THIS CONTRACTOR SHALL MAKE CONNECTIONS TO ALL MOTORS AND EQUIPMENT SHOWN ON THE DRAWINGS. DISCONNECT SWITCHES SHALL BE GENERAL DUTY NON-FUSED TYPE UNLESS NOTED OTHERWISE. FINAL CONNECTION TO MOTORS AND EQUIPMENT SHALL BE WITH FLEXIBLE METAL CONDUIT OR LIQUID-TIGHT.
19. **TELEPHONE AND DATA CONDUIT AND OUTLET SYSTEM:**
    THE CONTRACTOR SHALL FURNISH AND INSTALL PHONE AND DATA OUTLETS WITH 3/4" CONDUIT STUBBED INTO ACCESSIBLE CEILING SPACE. OUTLET SYSTEM SHALL BE A TWO GANG BOX TO TERMINATE CONDUIT. PROVIDE SINGLE GANG MUD RING AND BLANK COVERPLATE.
20. **LIGHTING FIXTURES:**
    FURNISH AND INSTALL ALL LIGHTING FIXTURES, INCLUDING LAMPS AND MOUNTING EQUIPMENT, AS SHOWN ON THE DRAWINGS. SEE LIGHTING FIXTURE SCHEDULE FOR TYPES.