GENERAL

1. STRUCTURAL WORK SHALL CONFORM TO THE REQUIREMENTS OF "THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE, SEVENTH EDITION."
2. EXAMINE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR VERIFICATION, LOCATION, AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, WASHES, DRIPS, REVEALS, DEPRESSIONS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.
3. VERIFY AND COORDINATE DIMENSIONS RELATED TO THIS PROJECT.
4. OPENINGS IN SLABS AND WALLS LESS THAN 12" MAXIMUM DIMENSION ARE GENERALLY NOT SHOWN ON STRUCTURAL DRAWINGS. OPENINGS SHOWN ON STRUCTURAL DRAWINGS SHALL NOT BE REVISED WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGNER.
5. ALL CUTTING AND DRILLING THROUGH EXISTING STRUCTURAL SLABS AND WALLS SHALL BE PRECEEDED BY SCANNING WITH REBAR LOCATOR OR GROUND PENETRATING RADAR TO AVOID INTERRUPTING EXISTING STEEL REBARS. PREPARE SCAN LAYOUT SUPERIMPOSED ON STRUCTURAL PLANS AND SUBMIT TO ENGINEER FOR REVIEW AND APPROVAL BEFORE WORK. RELOCATE DRILLED HOLES OR PENETRATIONS AS NECESSARY WHEN IN CONFLICT WITH EXISTING STEEL REBARS.
6. TYPICAL DETAILS AND NOTES SHOWN ON STRUCTURAL DRAWINGS S-2 SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE.
7. DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR THE MOST NEARLY SIMILAR CONDITION AS DETERMINED BY THE DESIGNER.
8. SHOP DRAWINGS FOR REINFORCING STEEL (INCLUDING ACCESSORIES), STRUCTURAL STEEL, AND STEEL DECKING SHALL BE SUBMITTED TO THE ENGINEER, AND A STAMPED APPROVAL RECEIVED BEFORE FABRICATION CAN PROCEED. ERECTION SHALL BE EXECUTED FROM APPROVED SHOP DRAWINGS ONLY.
9. INFORMATION OF EXISTING BUILDING STRUCTURES AS SHOWN ON THESE DRAWINGS ARE BASED ON LIMITED AVAILABLE CONSTRUCTION DOCUMENTS OF THESE BUILDING STRUCTURES. THESE INFORMATION MAY NOT BE ACCURATELY REPRODUCED AND MAY NOT REFLECT THE EXACT AS BUILT EXISTING CONDITIONS OF THE STRUCTURES. THE CONTRACTOR SHALL FIELD VERIFY AND DOCUMENT EXISTING BUILDING STRUCTURES BEFORE NEW WORK AND BRING ANY CONDITION THAT MAY AFFECT THE PROPOSED NEW CONSTRUCTION TO THE ATTENTION OF THE DESIGNER FOR REVIEW AND RESOLUTION.

CONCRETE

1. CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-05)," AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-05)."
2. CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED, AND PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY.
3. UNLESS NOTED OTHERWISE. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AND BE OF A TYPE AS FOLLOWS:

(A) FND. FTGS., FND. WALLS, PIERS, SLABS ON GRADE:	4500 PSI (NORMAL WEIGHT)
(B) CONCRETE ON STEEL DECK:	4000 PSI (NORMAL OR LIGHT WEIGHT)
(C) TOPPING SLABS, HOUSE KEEPING PADS, OTHER:	3000 PSI (NORMAL WEIGHT)

4. CONCRETE TO BE EXPOSED TO THE WEATHER IN THE FINISHED PROJECT SHALL BE AIR ENTRAINED PER ACI CODE REQUIREMENTS.

STEEL REINFORCEMENT

1. REINFORCEMENT WORK OF DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-05)," "ACI DETAILING MANUAL-2004 (SP-66-04)," "CRSI MANUAL OF STANDARD PRACTICE (MSP 1-97)," AND "STRUCTURAL WELDING CODE - REINFORCING STEEL (AWS D1.4-05)."
2. STEEL REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE FOLLOWING:

(A) BARS, TIES, AND STIRRUPS	ASTM A615 GRADE 60 (YIELD STRESS 60,000 PSI)
(B) WELDED WIRE FABRIC (WWF)	ASTM A185

3. PROVIDE ALL NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE: HIGH CHAIRS, 4'-0" O.C. WITH CONTINUOUS #5 SUPPORT BAR; SLAB BOLSTERS, CONTINUOUS AND 3'-6" O.C.; BEAM BOLSTERS, 5'-0" O.C.
4. MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE ONE (1) INCH MINIMUM.

STRUCTURAL STEEL

1. STRUCTURAL STEEL WORK SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360-05)," "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS & BRIDGES (AISC MARCH 18, 2005); "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDING" (AISC 341-05) AND "STRUCTURAL WELDING CODE - STEEL (AWS D1.1-06)."
2. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH "DETAILING FOR STEEL CONSTRUCTION (AISC)" AND, WHERE REQUIRED, DESIGNED IN ACCORDANCE WITH THE CITED REFERENCES.
3. STRUCTURAL STEEL DETAILS NOT SPECIFICALLY SHOWN SHALL BE TAKEN AS BEING SIMILAR TO THOSE SHOWN FOR THE MOST NEARLY SIMILAR CONDITION AS DETERMINED BY THE ENGINEER.
4. STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO THE FOLLOWING:

(A) WIDE FLANGE STEEL BEAMS:	ASTM A992 (Fy= 50 ksi)
(B) WIDE FLANGE STEEL COLUMNS:	ASTM A992 (Fy= 50 ksi)
(C) HOLLOW STRUCTURAL SECTIONS (HSS):	ASTM A500 SHAPED, GRADE B (Fy= 46 ksi)
(D) STEEL PIPES:	ASTM A53 GRADE B (Fy= 35 ksi)
(E) ANCHOR BOLTS:	ASTM F1554 GRADE 36 (U.O.N.)
(F) STEEL PLATE, ANGLE & CHANNEL:	ASTM A36 (Fy= 36 ksi)
(G) HIGH STRENGTH BOLTS:	ASTM A325

5. ANCHOR BOLTS, LEVELING PLATES, OR BEARING PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESET BY TEMPLATES OR SIMILAR METHODS. PLATES SHALL BE SET IN FULL BEDS OF NON-SHRINK GROUT.
6. BOLTED CONNECTIONS SHALL BE AS FOLLOWS:
(A) MINIMUM BOLT DIAMETER - 3/4"; TWO BOLTS MINIMUM PER CONNECTION.
(B) STANDARD, OVERSIZED, OR HORIZONTAL SHORT SLOTTED HOLES IN WEBS OF BEAMS.
(C) SHEAR CONNECTIONS FOR MOMENT CONNECTED MEMBERS - SLIP CRITICAL TYPE HIGH STRENGTH BOLTS IN SINGLE OR DOUBLE SHEAR (ASTM A325).
(D) SHEAR CONNECTIONS FOR OTHER MEMBERS - SIMPLE SHEAR CONNECTIONS WITH EITHER FRICTION TYPE HIGH STRENGTH BOLTS IN SINGLE SHEAR OR BEARING TYPE HIGH STRENGTH BOLTS (THREADS INCLUDED IN SHEAR PLANE) IN SINGLE OR DOUBLE SHEAR (ASTM A325).
(E) SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER AISC REQUIREMENTS FOR "UNRESTRAINED MEMBERS."
7. BEAM CONNECTIONS, UNLESS NOTED OTHERWISE, SHALL PROVIDE CONNECTION CAPACITY AS FOLLOWS, OR AS SHOWN ON THE PLANS, WHICHEVER IS LARGER:
(A) NON-COMPOSITE BEAMS: SUPPORT A REACTION "R" EQUAL TO 1/2 THE TOTAL UNIFORM LOAD CAPACITY OF BEAM FOR A GIVEN SHAPE, SPAN, AND GRADE OF STEEL PER "ALLOWABLE LOADS ON BEAMS" PART 2, AISC MANUAL OF STEEL CONSTRUCTION, 9TH EDITION.
(B) ADD TO "R" THE LOADS OR REACTIONS OF MEMBERS SUPPORTED BY THE BEAM NEAR SUPPORTS AND/OR THE VERTICAL COMPONENTS OF FORCE IN DIAGONAL BRACING MEMBERS FRAMING INTO THE BEAM.
8. ENDS OF COLUMNS AT SPLICES AND AT OTHER BEARING CONNECTIONS SHALL BE "FINISHED TO BEAR" TO COMPLETE TRUE BEARING.
9. PROVIDE STIFFENERS "FINISHED TO BEAR" UNDER ALL LOAD CONCENTRATIONS ON SUPPORTING MEMBERS, OVER COLUMNS, AND WHERE SHOWN ON DRAWINGS.
10. PROVIDE TEMPORARY ERECTION BRACING AND SUPPORTS TO HOLD STRUCTURAL STEEL FRAMING SECURELY IN POSITION. SUCH TEMPORARY BRACING AND SUPPORTS SHALL NOT BE REMOVED UNTIL PERMANENT BRACING HAS BEEN INSTALLED AND CONCRETE FOR FLOOR SLABS HAVE ATTAINED 75% OF SPECIFIED CONCRETE STRENGTH.
11. STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
12. STRUCTURAL STEEL MEMBERS SHALL BE FIREPROOFED PER ARCHITECT'S SPECIFICATIONS.
13. WELDED CONNECTIONS SHALL BE MADE BY APPROVED CERTIFIED WELDERS USING FILLER METAL CONFORMING TO E70XX OR F7X-EXXX WITH LOW HYDROGEN.
14. WELDS SHALL DEVELOP THE FULL STRENGTH OF THE MATERIALS BEING WELDED, UNLESS NOTED OTHERWISE, EXCEPT THAT FILLET WELDS SHALL BE A MINIMUM OF 1/4".
15. FIELD CUTTING OF STRUCTURAL STEEL OR ANY FIELD MODIFICATIONS OF STRUCTURAL STEEL SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY ENGINEER FOR EACH SPECIFIC CASE.
16. STRUCTURAL STEEL ENCASED IN MASONRY SHALL BE COVERED WITH MASTIC COATING PER SPECIFICATIONS.
17. STRUCTURAL STEEL MEMBERS AND CONNECTIONS EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANIZED.
18. SUBMIT SHOP DRAWINGS INCLUDING COMPLETE DETAILS AND SCHEDULES FOR FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS, PROCEDURES, AND DIAGRAMS.
(A) INCLUDE DETAILS OF CUTS, CONNECTIONS, CAMBER, HOLES, AND OTHER PERTINENT DATA. INDICATE WELDS BY STANDARD AWS SYMBOLS AND SHOW SIZE, LENGTH, AND TYPE OF EACH WELD.
(B) PROVIDE SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLATION OF ANCHOR BOLTS AND OTHER ANCHORAGES TO BE INSTALLED.
19. ALLOW 24 HOURS MINIMUM OR LONGER AS REQUIRED BY PRODUCT MANUFACTURER FOR ALL EPOXY ANCHORS WHERE INSTALLED TO SET BEFORE INSTALLING STRUCTURAL STEEL MEMBERS.

MASONRY

1. MASONRY WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-08/ ASCE 5-08/ TMS 402-08)" AND "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-08/ ASCE 6-08/ TMS 602-08)".
2. MORTAR SHALL BE ASTM C270, TYPE S.
3. GROUT SHALL CONFORM TO ASTM C476, MINIMUM COMPRESSIVE STRENGTH SHALL BE 3,000 PSI.
4. ALL UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HEAD, BED (FACE SHELLS), AND WEBS.
5. GROUT SHALL BE PLACED USING LOW OR HIGH LIFT GROUTING PROCEDURES CONFORMING TO ACI/ASCE. TERMINATE GROUT POURS 1.5 INCHES BELOW TOP COURSE OF PLACEMENT. REINFORCING SHALL BE SPLICED A MINIMUM OF 40 BAR DIAMETERS.
6. CORES AND BOND BEAMS WITH REINFORCING SHALL BE FILLED SOLID WITH GROUT. FILLING SUCH CORES AND BOND BEAMS WITH MORTAR IS STRICTLY PROHIBITED. IN ADDITION CARE SHALL BE EXERCISED IN KEEPING CORES FREE FROM MORTAR DROPPINGS.
7. STEEL REINFORCING SHALL CONFORM TO ASTM SPECIFICATIONS A615, GRADE 60.
8. REINFORCING SHALL BE SPLICED A MINIMUM OF 40 BAR DIAMETERS.
9. VERTICAL REINFORCING SHALL BE SECURELY HELD IN PROPER ALIGNMENT AND POSITION DURING GROUTING OPERATIONS BY USING "REBAR POSITIONERS"AS MANUFACTURED BY WIRE BOND OR APPROVED EQUAL. THE PRODUCT, IN ADDITION, SHALL ALLOW FOR GUIDING THE SPLICED REINFORCING DROPPED FROM THE TOP OF THE LIFT.
10. REQUIRED VERTICAL REINFORCING AS SHOWN ON PLAN SHALL BE CONTINUOUS FULL HEIGHT AND SPLICED 3'-0" AT EACH FLOOR LEVEL ONLY. VERTICAL REBARS SHALL AT NO TIME BE SPLICED MORE THAN 50% AT MID HEIGHT OF THE WALL.
11. PLACE HORIZONTAL REINFORCING CONTINUOUSLY THROUGH EXPANSION AND CONTROL JOINTS. WRAP MASTIC TAPE ON HORIZONTAL BOND BEAM REINFORCING FOR 18" ONE SIDE OF EXPANSION JOINT.
12. PRIOR TO GROUTING CELLS, BARS AND CELLS MUST BE INSPECTED BY THE TESTING AGENCY, DOCUMENTED AND REPORTED TO THE CONSTRUCTION ENGINEER.
13. WHEN THE HIGH LIFT GROUTING PROCEDURE IS USED, THE BASE OF EACH CELL IN WHICH A BAR IS PLACED MUST HAVE A CLEANOUT HOLE. PRIOR TO GROUTING CELLS, THE INSPECTION AGENCY SHALL INSPECT AND VERIFY THAT ALL CLEANOUT HOLES ARE CLEAR OF MORTAR DROPPINGS AND CONSTRUCTION DEBRIS.
14. A TEMPORARY LATERAL BRACING SYSTEM DESIGNED BY A LICENSED STRUCTURAL ENGINEER AT THE SERVICE OF THE CONTRACTOR SHALL BE PROVIDED TO BRACE THE MASONRY WALL DURING CONSTRUCTION. THIS BRACING SYSTEM SHALL REMAIN IN PLACE UNTIL ALL PERMANENT STRUCTURAL SYSTEMS ARE COMPLETE. THESE PERMANENT STRUCTURAL SYSTEMS SHALL INCLUDE STEEL ROOF FRAMING, STEEL JOISTS AND METAL ROOF DECKS.
15. UNLESS OTHERWISE NOTED ON PLANS, PROVIDE AND INSTALL STEEL LINTELS FOR OPENINGS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE.

STEEL ANGLE LINTEL SCHEDULE

MAXIMUM MASONRY OPENING	WALL THICKNESS				
	4" WALL	6" WALL	8" WALL	10" WALL	12" WALL
3'-0"	1-L3 1/2x3 1/2x5/16	2-L3x2 1/2x5/16 LLV	2-L3 1/2x3 1/2x5/16	3-L3 1/2x3 x5/16 LLV	3-L3 1/2x3 1/2 x5/16 LLV
4'-0"	1-L4x3 1/2x5/16 LLV	2-L3x2 1/2x5/16 LLV	2-L4x3 1/2x5/16 LLV	3-L4x3x5/16 LLV	3-L4x3 1/2x5/16 LLV
5'-0"	1-L4x3 1/2x5/16 LLV	2-L3 1/2x2 1/2x5/16 LLV	2-L5x3 1/2x5/16 LLV	3-L5x3x5/16 LLV	3-L5x3 1/2x5/16 LLV
6'-0"	1-L5x3 1/2x5/16 LLV	2-L3 1/2x2 1/2x5/16 LLV	2-L5x3 1/2x5/16 LLV	3-L5x3x5/16 LLV	3-L5x3 1/2x5/16 LLV
8'-0"	-	2-L3 1/2x2 1/2x3/8 LLV	2-L6x3 1/2x3/8 LLV	3-L5x3x3/8 LLV	3-L6x3 1/2x3/8 LLV

PROVIDE 6" MIN. BEARING AT EACH END BUT NOT LESS THAN 1" PER FOOT OF SPAN. FILL TWO COURSES OF CMU BELOW BEARING WITH GROUT.
FOR WALLS WITH THICKNESS LARGER THAN THE ABOVE, USE MULTIPLES OF THE PIECES AS SCHEDULED. LINTELS SHALL BE 12" LONGER THAN MASONRY OPENINGS; LONG LEGS OF STEEL ANGLES SHALL BE VERTICAL, WHERE LINTELS ABUT COLUMNS OR WALLS. PROVIDE CONNECTION TO SUCH

RENOVATION AND RESTORATION

1. WORK SHALL CONFORM TO THE REQUIREMENTS OF "THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE SEVENTH EDITION."
2. THE CONTRACTOR SHALL NOTIFY THE DESIGNER WHEN, IN THE COURSE OF CONSTRUCTION OR DEMOLITION, CONDITIONS ARE UNCOVERED WHICH ARE UNANTICIPATED OR OTHERWISE APPEAR TO PRESENT A DANGEROUS CONDITION.
3. VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB. DISCREPANCIES SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THAT PART OF THE WORK.
4. WHERE NEW WORK WILL BE ADJACENT TO OR FRAMING EXISTING CONSTRUCTION, VERIFY DIMENSIONS OF EXISTING CONSTRUCTION. PRIOR TO FABRICATION OF NEW MEMBERS.
5. PROVIDE ALL LABOR AND MATERIAL FOR ANY FRAMING REQUIRED TO CONNECT NEW FRAMING TO EXISTING CONSTRUCTION. WHEREVER IT IS NECESSARY TO REMOVE EXISTING CONSTRUCTION IN ORDER TO CONSTRUCT NEW WORK, THE AFFECTED AREA SHALL BE PATCHED AND REBUILT TO MATCH EXISTING ADJACENT WORK TO SATISFACTION OF THE DESIGNER.
6. DETAILS SHOWN ON ANY DRAWING SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
7. NOTIFY THE DESIGNER OF ANY CONTEMPLATED STRUCTURAL ALTERATION IN REASONABLE TIME TO RENDER AND DOCUMENT HIS DECISION.
8. STRUCTURAL MATERIALS AND COMPONENTS SHALL HAVE PRIOR APPROVAL OF THE DESIGNER.
9. STRUCTURAL ALTERATION SHALL BE PRECEDED BY ADEQUATE SHORING AND BRACING. ENGINEERING OF SHORING AND BRACING SHALL BE PROVIDED BY A QUALIFIED LICENSED ENGINEER TO BE ENGAGED BY THE CONTRACTOR.
10. SCREW-TYPE SHORING POSTS SHALL BE PROVIDED FOR EXISTING WORK DURING THE REMOVAL OF EXISTING BEARING WALLS AND STRUCTURAL MEMBERS AND THE INSTALLATION OF NEW STRUCTURAL WORK.
11. TEMPORARY SHORES SHALL BE PLACED AS CLOSE AS PRACTICABLE TO THE EXISTING STRUCTURAL WORK BEING REMOVED.
12. HEADERS SHALL BE PLACED ACROSS TOP OF SHORING POSTS AND SHALL BE SNUG TIGHT AGAINST UNDERSIDE OF THE STRUCTURE ABOVE.
13. SHORING SHALL BEAR ON SLEEPERS TO PREVENT DAMAGE TO THE STRUCTURE BELOW.
14. TEMPORARY SHORES SHALL BE INDIVIDUALLY DESIGNED, ERECTED, SUPPORTED, BRACED AND MAINTAINED BY THE CONTRACTOR TO SAFELY SUPPORT ALL DEAD LOADS PRESENTLY CARRIED BY THE EXISTING STRUCTURAL WORK BEING REMOVED AND ANY CONSTRUCTION LIVE LOADS.
15. STRUCTURAL STEEL SHALL BE COMPLETELY INSTALLED BEFORE REMOVING ANY SHORES.
16. SHORES SHALL BE RELEASED GRADUALLY AND LEFT LOOSELY IN PLACE FOR AT LEAST 2 DAYS TO ALLOW FOR STRUCTURAL SHAKE OUT.

STRUCTURAL DESIGN LOADS

1. DEAD LOADS
WEIGHT OF BUILDING COMPONENTS

2. SNOW LOAD (PER MASSACHUSETTS STATE BUILDING CODE TABLE 1604.10)
(A) GROUND SNOW LOADS 55 PSF

3. WIND LOAD (PER MASSACHUSETTS STATE BUILDING CODE TABLE 1604.10)
(A) BASIC WIND SPEED 100 MPH

4. SEISMIC DESIGN FACTORS (PER MASSACHUSETTS STATE BUILDING CODE TABLE 1604.10)
(A) S_s _____ 0.23
(B) S_1 _____ 0.067

ABBREVIATIONS

ABBREVIATION	WORD	ABBREVIATION	WORD
AB	ANCHOR BOLT	LWC	LIGHT WEIGHT CONCRETE
ARCHT	ARCHITECT	LLV	LONG LEG VERTICAL
BAL	BALANCE	LP	LOW POINT
BM	BEAM	LL	LOWER LAYER
BRG	BEARING	MFR	MANUFACTURER
BLK	BLOCK	MAS	MASONRY
B or BOT	BOTTOM	MATL	MATERIAL
BEW	BOTTOM EACH WAY	MECH	MECHANICAL
BRKT	BRACKET	MEP	MECHANICAL EQUIPMENT PAD
BTWN	BETWEEN	MEZZ	MEZZANINE
CIP	CAST-IN-PLACE	MID-PT	MIDPOINT
C.L.	CENTERLINE	NWC	NORMAL WEIGHT CONCRETE
CL	CLEAR	NTS	NOT TO SCALE
COL	COLUMN	OC	ON CENTER
CONC	CONCRETE	OPNG	OPENING
CMU	CONCRETE MASONRY UNIT	OH	OPPOSITE HAND
CONN	CONNECTION	OD	OUTSIDE DIAMATER
CJ	CONTRACTION JOINTS	PC	PILE CAP
DEPR	DEPRESSION	PL	PLATE
DET	DETAIL	PT	POINT
DL	DEVELOPMENT LENGTH	PVC	POLYVINYL CHLORIDE
DIA	DIAMETER	P/T	POST-TENSIONED
DIM	DIMENSION	PTB	POST-TENSIONED BAR
DIR	DIRECTION	PSF	POUNDS/SQUARE FOOT
DWLS	DOWELS	PSI	POUNDS/SQUARE INCH
DN	DOWN	P/C	PRECAST CONCRETE
DWG	DRAWING	R	RADIUS
EA	EACH	RCC	ROLLER COMPACTED
EF	EACH FACE	CONCRETE	
ES	EACH SIDE	REF	REFERENCE
EW	EACH WAY	REINF	REINFORCE or
EQ	EQUAL	REINFORCEMENT	
EXP BOLT	EXPANSION BOLT	REM	REMAINDER
EXP JT	EXPANSION JOINT	RETG	RETAINING
EXT	EXTERIOR	SECT	SECTION
FF	FAR FACE	SIM	SIMILAR
FT	FEET or FOOT	SOG	SLAB ON GRADE
FIN	FINISH	SL	SPICE LENGTH
FIN FL	FINISHED FLOOR	SQ	SQUARE
FPRF	FIREPROOF	SS	STAINLESS STEEL
FL	FLOOR	STD	STANDARD
FD	FLOOR DRAIN	STL	STEEL
FTG	FOOTING	SDI	STEEL DECK INSTITUTE
FDN	FOUNDATION	SJI	STEEL JOIST INSTITUTE
GALV	GALVANIZED	SF	STEP FOOTING
GA	GAUGE or GAGE	STIFF	STIFFENER
GENL	GENERAL	STR	STRUCTURAL
GR	GRADE	SYM	SYMMETRICAL
GB	GRADE BEAM	THK	THICK or THICKNESS
GUS PL	GUSSET PLATES	TB	TIE BEAM
HT	HEIGHT	TM	TIMBER
HP	HIGH POINT	T&B	TOP & BOTTOM
HS	HIGH STRENGTH	TOC	TOP OF CONCRETE
HSS	HOLLOW STRUCTURAL SECTIONS	TOS	TOP OF STEEL
H or HORIZ	HORIZONTAL	TOW	TOP OF WALL
HEF	HORIZONTAL EACH FACE	TYP	TYPICAL
HIF	HORIZONTAL INSIDE FACE	UNO	UNLESS NOTED OTHERWISE
HOF	HORIZONTAL OUTSIDE FACE	UL	UPPER LAYER
IN	INCH	V or VERT	VERTICAL
ID	INSIDE DIAMETER	VEF	VERTICAL EACH FACE
INSUL	INSULATION	VIF	VERTICAL INSIDE FACE
JT	JOINT	VOF	VERTICAL OUTSIDE FACE
JST	JOISTS	WPG	WATERPROOFING
K	KIP (1000 POUNDS)	WWF	WELDED WIRE FABRIC
LE	LEFT END	W/	WITH
LW	LIGHT WEIGHT	WIP	WORKING POINT

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REV. NO	DESCRIPTION	BY	APP'D	DATE
-	-	-	-	-
-	ISSUED FOR BID	-	-	08.25.10
-	100 % CONSTRUCTION DOCUMENTS SET	-	-	08.20.10

UNIVERSITY OF MASSACHUSETTS
FACILITIES PLANNING DIVISION

MORRILL II AND III
VENTILATION UPGRADE
GENERAL NOTES

	BY	DATE
DRN	-	-
APP'D	-	-
CKD	-	-
APP'D	-	-

PROJECT NO 08-001594-01
CONTRACT NO UMA 11-04
SCALE AS NOTED
SHEET 25 OF 71
DRAWING NUMBER D-A-127/290-08-001594-S1

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