STRUCTURAL NOTES

A. GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS (INCLUDING FIELD VERIFICATIONS OF EXISTING CONDITIONS AND DIMENSIONS) BEFORE STARTING WORK OR FABRICATING ANY REINFORCING STEEL OR STRUCTURAL STEEL. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES FOUND.

2. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF WALL, ROOF AND FLOOR FLOOR OPENINGS, SLEEVES AND CONCRETE PADS UNDER EQUIPMENT. THE CONTRACTOR SHALL VERIFY EXACT SIZE AND LOCATION WITH THE EQUIPMENT FURNISHED.

3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND BRACING OF THE STRUCTURE FOR ALL LOADS THAT MAY BE IMPOSED DURING CONSTRUCTION.

B. FOUNDATIONS

1. FOUNDATION INVESTIGATION HAS NOT BEEN MADE. ASSUMED ALLOWABLE BEARING PRESSURES ARE LISTED BELOW.

2. ALLOWABLE SOIL PRESSURE:
SPREAD FOOTINGS 3000 PSF (DL + LL)
CONTINUOUS FOOTINGS 3000 PSF (DL + LL)

3. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING NECESSARY TO LATERALLY SUPPORT ALL BASEMENT AND RETAINING WALLS.

4. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION OF THE FOOTINGS.

C. UNDERPINNING

1. EXISTING WALLS TO BE UNDERPINNED ARE SO INDICATED ON THE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND INSTALL ALL SUCH CONSTRUCTION. UNDERPINNING SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF GEORGIA TO PERMANENTLY RESIST ALL VERTICAL LOADS AS WELL AS TEMPORARILY RESIST LATERAL LOADS UNTIL COMPLETION OF THE NEW BUILDING.

2. THE METHOD OF UNDERPINNING SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT DETAILED PLANS AND PROCEDURES TO THE ARCHITECT FOR REVIEW SHOWING THE PROPOSED METHOD OF EXCAVATION AND SHORING. REVIEW BY THE ARCHITECT SHALL NOT RELIEVE THE CONTRACTOR FROM FULL RESPONSIBILITY FOR PROTECTING EXISTING STRUCTURES FROM DAMAGE RESULTING FROM THE CONSTRUCTION.

3. ADJACENT STRUCTURES SHALL BE CAREFULLY OBSERVED THROUGH THE CONSTRUCTION PERIOD FOR SIGNS OF MOVEMENT OR DISTRESS. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IF ANY SUCH MOVEMENT OR DISTRESS OCCURS.

D. REINFORCED CONCRETE

1. ALL STRUCTURAL CONCRETE SHALL BE NORMAL WEIGHT (UNLESS OTHERWISE NOTED) WITH A SPECIFIED COMPRESSIVE STRENGTH AS FOLLOWS:

LOCATION	F'c
SLAB ON GRADE, FOOTING, GRADE BEAMS	3,000 PSI
WALLS AND COLUMNS	4,000 PSI
ELEVATED SLABS	3,500 PSI (LIGHTWEIGHT)

2. PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS EXCEPT WHERE MASONRY WALLS ARE LAID FLUSH WITH COLUMN OR BEAM FACE.

3. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL CONFORM WITH ACI 318-89 UNLESS DETAILED OTHERWISE.

4. EXPANSION BOLTS SHALL BE "WEDGE" TYPE (HILTI "KWIK-BOLT") OR "DROP-IN" TYPE (HILTI "DROP-IN ANCHOR"), WITH TYPE AND SIZE AS NOTED IN THE DRAWINGS.

5. CONSTRUCTION JOINTS SHALL BE AS INDICATED ON THE PLANS, BUT IN ANY CASE SHOULD NOT EXCEED AN AREA OF APPROXIMATELY 20? X 20? SQUARE.

6. THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" ACI 315 SHALL BE FOLLOWED, UNLESS OTHERWISE SHOWN.

E. CONCRETE REINFORCING

1. ALL REINFORCING STEEL BARS SHALL BE ASTM A-615 GRADE 60.

2. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

3. PROVIDE LAP SPLICES IN ACCORDANCE WITH ACI 318-89, UNLESS NOTED OTHERWISE.

4. CLEARANCES BETWEEN BARS SHALL NOT BE LESS THAN 1 INCH NOR THE NOMINAL BAR DIAMETER. NON-CONTACT LAP SPLICES SHALL HAVE THE ABOVE MINIMUM CLEARANCE BETWEEN THE BARS AND DOWEL.

5. REINFORCING STEEL, BOLTS, AND OTHER INSERTS SHALL BE POSITIVELY SECURED IN PLACE BEFORE POURING CONCRETE. BAR PLACEMENT AND SUPPORTS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE CRSI.

6. REINFORCEMENT IN WALLS AND COLUMNS SHALL BE DOWELLED INTO SUPPORTING FOOTINGS, BEAMS, COLUMNS OR WALLS WITH BARS OF THE SIZE AND SPACING AS VERTICAL AND HORIZONTAL BARS, UNLESS SHOWN OTHERWISE.

7. ALL CONCRETE SHALL BE CURED FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING. SEE SPECIFICATIONS FOR CURING OF VERTICAL SURFACES.

F. STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL BE A572, GRADE 50, UNLESS OTHERWISE NOTED.

2. STRUCTURAL STEEL SHALL BE DESIGNED IN ACCORDANCE WITH "AISC, SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, 1989".

3. ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4 INCH DIAMETER A-325N BOLTS (BEARING TYPE CONNECTION) UNLESS OTHERWISE NOTED, AND TIGHTENED BY THE "TURN-OF-NUT" METHOD.

4. STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500, GRADE B, WITH A MINIMUM YEILD STRENGTH OF 46,000 PSI.

5. STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A-53, TYPE E OR S, GRADE B.

6. ALL ANCHOR BOLTS SHALL BE ASTM A-307 UNLESS OTHERWISE NOTED.

7. ALL WELDING SHALL BE DONE WITH E70 ELECTRODES IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY AWS D1.1 "STRUCTURAL WELDING CODE".

G. OPEN WEB STEEL JOISTS

1. STEEL JOISTS SHALL BE DESIGNED FOR A BASIC ALLOWABLE FLEXURAL STRESS OF 30,000 PSI.

2. STEEL JOISTS AND BRIDGING SHALL COMPLY WITH "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS" FROM THE STEEL JOIST INSTITUTE.

3. STEEL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT EQUAL TO 20 PSF.

H. METAL DECK

1. METAL DECK SHALL BE DESIGNED FOR A BASIC ALLOWABLE STRESS OF 20,000 PSI.

2. ROOF DECK SHALL BE 1 1/2 INCH, 20 GAGE WIDE RIB METAL DECK. ACCEPTABLE MANUFACTURERS ARE VULCRAFT, USD AND WHEELING.

3. FORM DECK SHALL BE 0.6 INCH, 26 GAGE METAL DECK WITH 2 1/2 INCHES MINIMUM CONCRETE FILL AND 6X6-W1.4XW1.4 REINFORCING AT MID-DEPTH. ACCEPTABLE TYPES AND MANUFACTURERS ARE VULCRAFT, USD AND WHEELING.

4. DIAPHRAGM ACTION SHALL BE PROVIDED IN ALL AREAS WITH WELDING PATTERN IN ACCORDANCE WITH ICBO RESEARCH TO PROVIDE 250 PLF SHEAR CAPACITY AT ROOF DECK AND 250 PLF SHEAR CAPACITY AT FLOOR DECK.

5. ROOF DECK SHALL BE DESIGNED FOR A NET UPLIFT OF10 PSF AT INTERIOR AREAS,23 PSF AT 10 FT PERIMETER EDGE STRIPS, AND 40 PSF AT 10 FT X 10 FT CORNERS.

J. DESIGN CRITERIA

1A. DEAD LOADS: 20 PSF PARTITION LOAD.

1B. LIVE LOADS:

40 PSF CLASSROOMS (NOT INCLUDING PARTITIONS)
50 PSF OFFICES (NOT INCLUDING PARTITIONS)
80 PSF CORRIDORS ABOVE THE FIRST LEVEL
100 PSF STAIRWAYS, LOBBIES, ASSEMBLY AREAS
20 PSF ROOF

LIVE LOAD REDUCTIONS APPLIED AS PER STANDARD BUILDING CODE

2. GROUND SNOW LOAD

Pg = 5 psf

3. INTERIOR WALLS

5 PSF - IN THE ABSENCE OF ANY WIND LOAD EFFECTS.

4. WIND LOADS. APPLIED IN ACCORDANCE WITH IBC 2000.

MWFRS (2a = 10 FT)
V(3s) = 90 mph
Iw = 1.00
EXPOSURE C

ROOF (END) p = 20.8 psf
ROOF (INTERIOR) p = 14.5 psf

WALL (END) p = 17.3 psf
WALL (INTERIOR) p = 11.5 psf

COMPONENTS & CLADDING (a = 5 FT)
ROOF (CORNER) p =19.7 psf
ROOF (EDGE STRIP) p = 32.9 psf
ROOF (INTERIOR) p =50.0 psf

WALL (END) p = 20.4 psf
WALL (INTERIOR) p = 24.6 psf

5. SEISMIC LOADS. APPLIED IN ACCORDANCE WITH IBC 2000.

SDS = 0.312g
SD1 = 0.20g
SEISMIC USE GROUP I
SEISMIC DESIGN CATEGORY C
SITE CLASS D
ORDINARY STEEL BRACED FRAME SYSTEM
EQUIVILENT LATERAL FORCE PROCEDURE

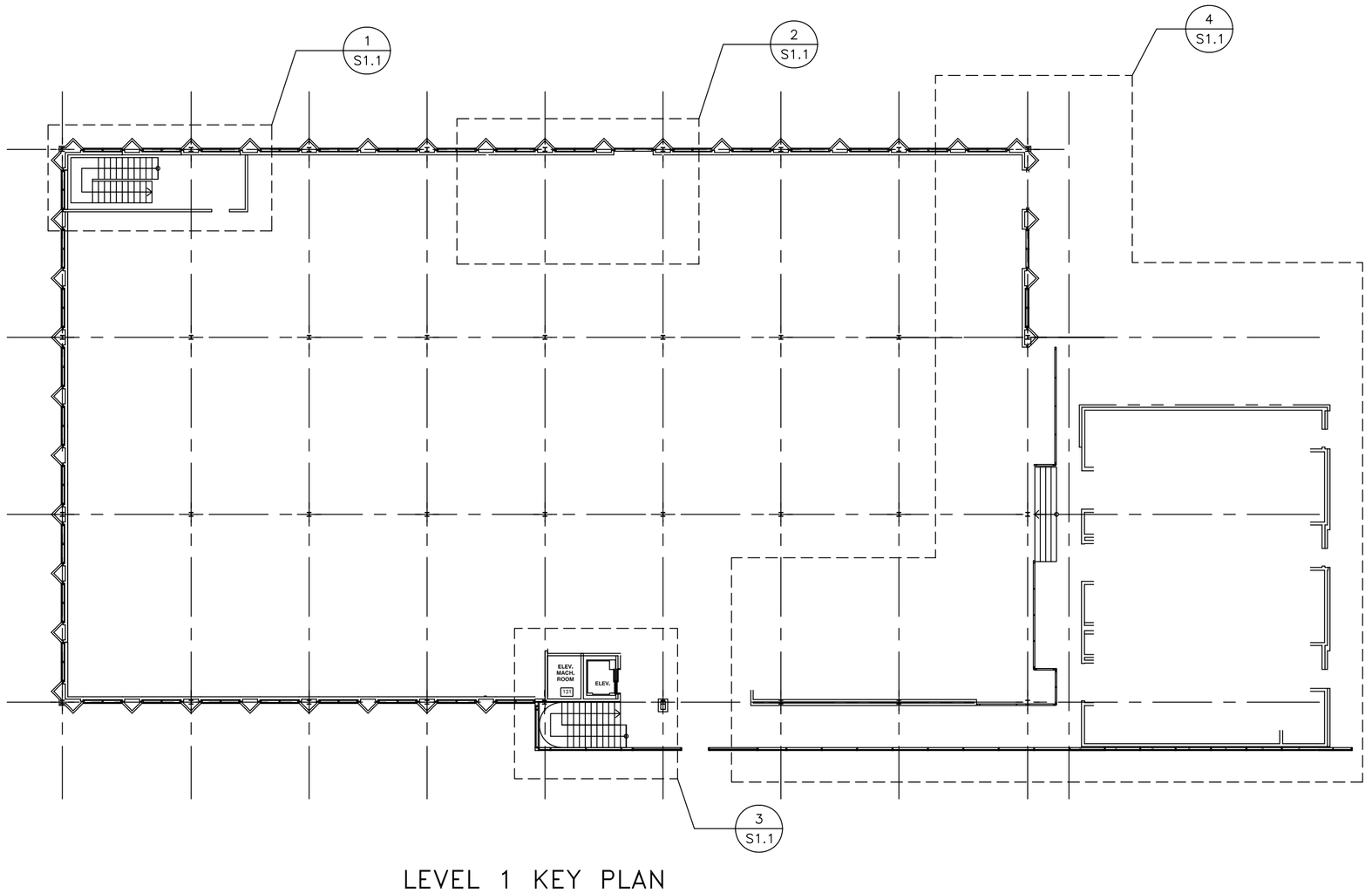
DESIGN BASE SHEAR = 14.1 K

K. BASIS FOR DESIGN

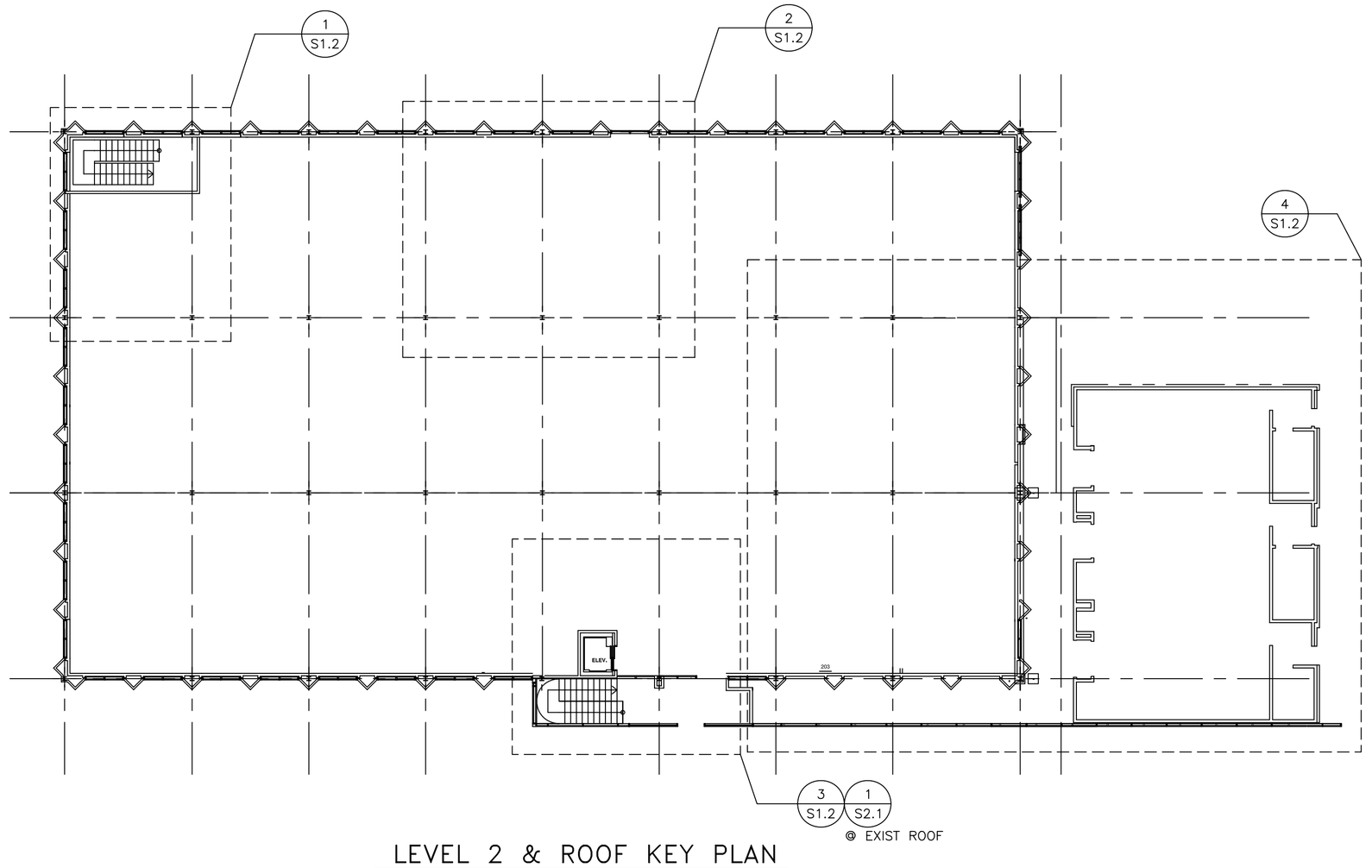
1. SBCCI STANDARD BUILDING CODE (INTERNATIONAL BUILDING CODE), 2000 EDITION.

2. ACI 318-89 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

3. AISC 9TH EDITION - MANUAL OF STEEL CONSTRUCTION (ALLOWABLE STRESS DESIGN).



LEVEL 1 KEY PLAN
SCALE: 1/16" = 1'-0"



LEVEL 2 & ROOF KEY PLAN
SCALE: 1/16" = 1'-0"

ASHARES01
1/8" = 1'-0"

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ASHRAE HEADQUARTERS
ADDITION AND RENOVATION

REVISIONS

#	DATE	DESCRIPTION

General Notes & Key Plans

JOB NUMBER
200614

DATE
5-25-07

SHEET NUMBER
S0.1