BUCKLING RESTRAINED BRACE SCHEDULE

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BRACE	AREA OF STEEL	TENSILE YIELD	AXIAL BRACE	MAXIMUM ALLOWED	ADJUSTED BRACE STRENGTH (K)	
MARK	CORE, Asc (IN ²)	STRENGTH OF	DEFORMATION,	SLEEVE SIZE	MAXIMUM	MAXIMUM
	·	BRACE, Pysc (K)	∆bm (IN)	(WIDTHxHEIGHT)	TENSION	COMPRESSION
BRB4	4.0	168	0.44	10"x10"	211	215
BRB5	5.0	210	0.55	10"x10"	264	269
BRB6	6.0	252	0.55	10"x10"	317	32 3

NOTES:

1. THE NUMBER FOLLOWING BRB INDICATES THE REQUIRED AREA (Asc) IN SQUARE INCHES OF THE STEEL CORE PLATE
THAT SHALL BE PROVIDED BY THE BRACE MANUFACTURER. SEE SPECIFICATIONS SECTION 05120 FOR ADDITIONAL INFORMATION.

2. Keff = 1.5.

ω = 1.14. ωβ = 1.17. Ry = 1.1.
 Fy = 38KSI MIN TO 46KSI MAX BASED ON COUPON TESTING. COUPON TESTS REQUIRED.
 TENSILE YIELD STRENGTH OF BRACE, Pysc = AREA OF STEEL CORE x Fy, WHERE Fy = 42 ksi.

6. ADJUSTED BRACE STRENGTH IN TENSION = ω Ry Pysc.

7. ADJUSTED BRACE STRENGTH IN COMPRESSION = $\omega\beta$ Ry Pysc.

8. CORE PLATE THICKNESS TO MATCH GUSSET PLATE THICKNESS, SEE SCHEDULE ON DETAILS 1- S4.07, 1-S4.08, & 1-S4.09. LIMITATIONS ABOVE. THE SMALLER DIMENSION IN THE TABLE ABOVE INDICATES THE MAX ALLOWABLE DIMENSION OUT OF PLANE OF THE BRACED FRAME.

BRACE FRAME SHEET NOTES:

1. BRACE CONNECTION DETAIL CALLOUTS REFER TO DETAIL NUMBERS ON SHEETS \$4.07, \$4.08 & \$4.09.

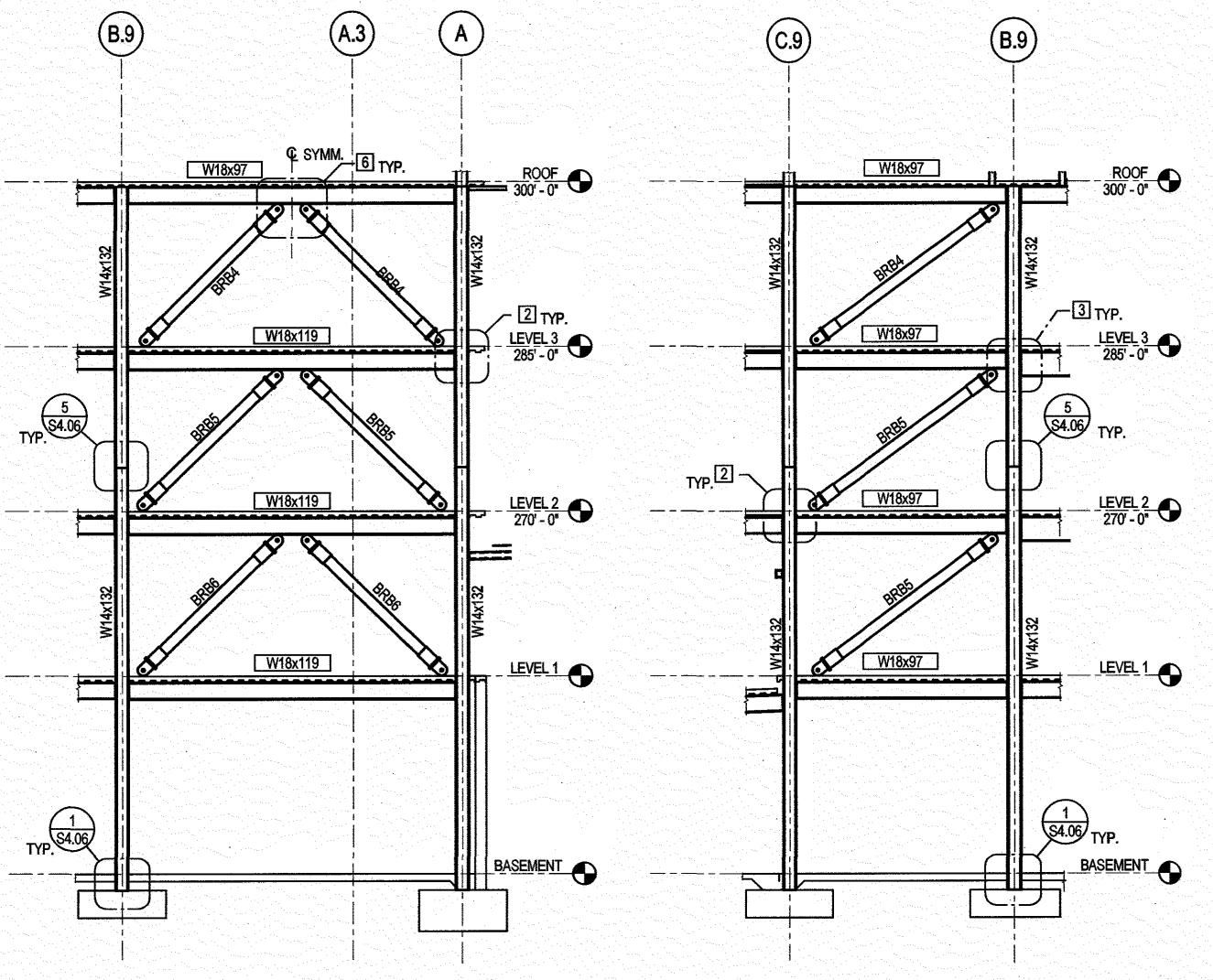
2. SEE SHEETS \$4,07, \$4.08, & \$4.09 FOR BRACE FRAME CONNECTION SCHEDULES AND DETAILS. 3. S4.07 CORRESPOND TO STAR SEISMIC CLEVIS PIN CONNECTION.

4. \$4.08 CORRESPONDS TO NIPPON CRUCIFORM AND CORE BRACE BOLTED CONNECTION.

5. S4.09 CORRESPONDS TO STAR SEISMIC WELDED CONNECTION. 6. SEE 1-S4.06 FOR BASE PLATE DETAILS AT FRAME COLUMNS.

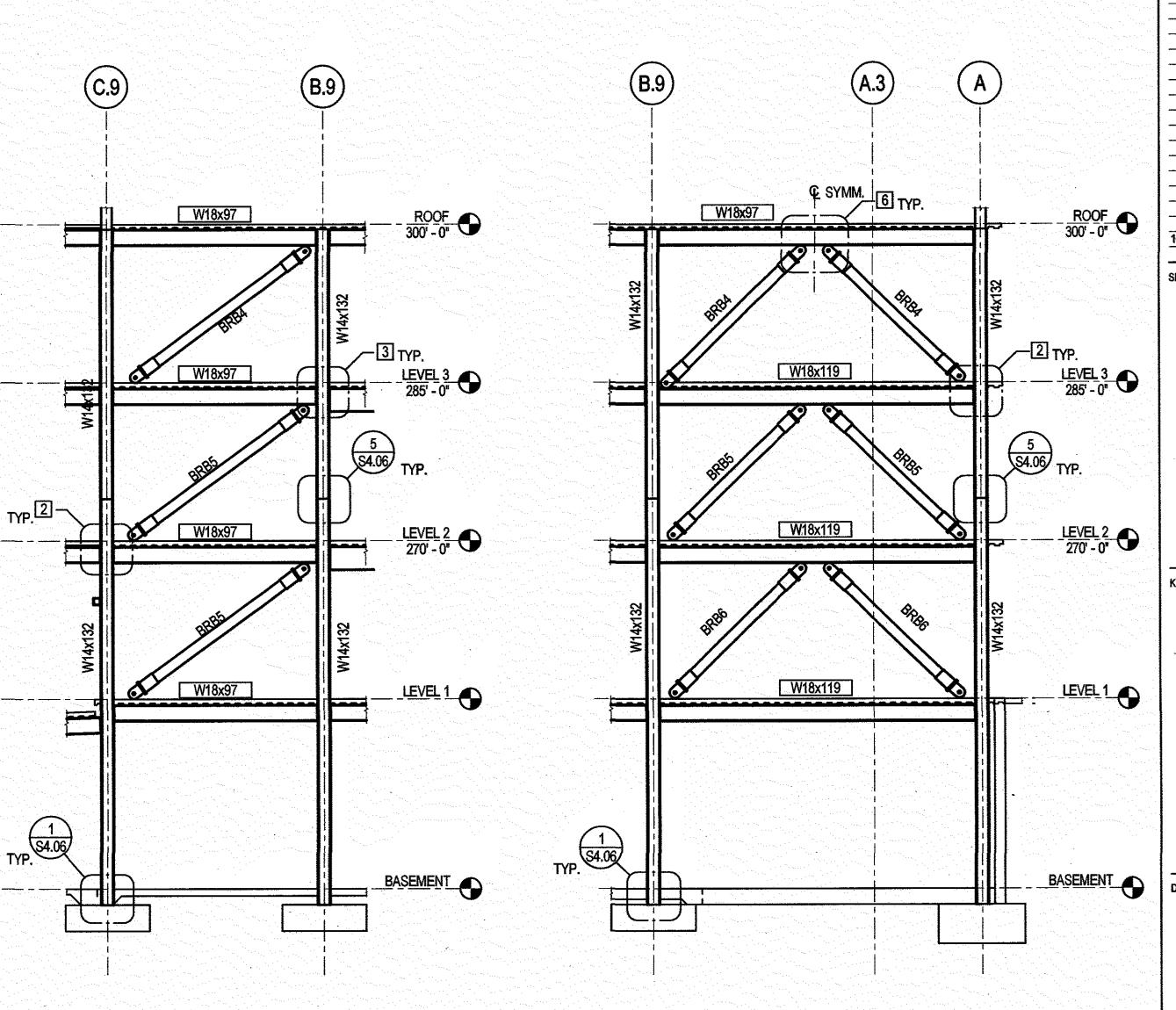
7. SEE 5-S4.06 FOR COLUMN SPLICE DETAIL FOR FRAME COLUMNS. 8. SEE 9-S4.02 FOR PROTECTED ZONES AREA FOR THE BRACE FRAMES.

9. SEE PARAPET ELEVATIONS ON \$5.20 & \$5.21 FOR INFORMATION NOT SHOWN OR NOTED.



BRBF ELEVATION LINE 9

BRBF ELEVATION LINE 4



BRB PROTECTED ZONE (SHADED AREAS)

- 1. THE STEEL CORE OF THE BRACE MEMBER AND THE CONNECTION OF THE BRACE TO THE BEAMS AND COLUMNS ARE CONSIDERED "PROTECTED ZONES" IN ACCORDANCE WITH AISC 341-05, SECTION 16.6. WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING SHALL BE REPAIRED AS REQUIRED BY STRUCTURAL ENGINEER OF RECORD WITH APPROVAL OF OSHPD. NO CONNECTIONS FOR BRACE ANGLES, EXTERNAL FACADES, PARTITIONS, DUCT WORK, PIPING OR OTHER
- CONSTRUCTION SHALL BE PLACED IN THE PROTECTED ZONE. 2. PROTECTED ZONE SHOWN FOR INVERTED-V TYPE BRACE CONFIGURATION. PROTECTED ZONE SIMILAR FOR OTHER BRACE CONFIGURATIONS (V-TYPE, SINGLE DIAGONAL, ETC.)
- 3. CONNECTIONS OF LIGHT GAUGE FRAMING FOR PARTITIONS MAY BE MADE TO THE BRACE CASING. SUCH CONNECTIONS SHALL BE MADE USING WELDS OR SCREW. SHOT PINS TO THE BRACE CASING ARE NOT ALLOWED.

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BRBF ELEVATION LINE 7

BRBF ELEVATION LINE 2

Science + Engineering Building 2

UCMERCED

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UNIVERSITY OF CALIFORNIA Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection.

One set of approved plans shall be available on the project site at all times.

REV DATE

00% CONSTRUCTION DOCUMENTS

SEALS AND SIGNATURES

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT FILE NO. 01-UC MERCED APPL, NO. 01-111533 AC___FLS___SS___ DATE: 06/21/2011

BRACE FRAME **ELEVATIONS AREA A**

As indicated

38354.000 UCM PROJECT NUMBER SG PROJECT NUMBER **S4.02**

DRAWING NUMBER