

**APPLICATION FOR OSHPD PREAPPROVAL** 

# OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

OFFICE USE ONLY

OF MANUFACTURER'S CERTIFICATION (OPM) APPLICATION #: OPM-0377-13
OSHPD Preapproval of Manufacturer's Certification (OPM)
Type:  ☐ New ☐ Renewal ☐ Update to Pre-CBC 2013 OPA Number:
Manufacturer Information
Manufacturer: 2 Way Industries Itd
Manufacturer's Technical Representative: Jason Way
Mailing Address: 23 Patiki Rd, Avondale, Auckland 1026, New Zealand
+64 9 828 0045 Telephone:
Product Information OSHPD
Product Name: BRACELOK RETRO
Product Type: Partition wall brace system OPM-0377-13
Product Model Number: SPT 10-R BY: Jeffrey Kikumoto
General Description: Rigid brace system designed to be used with steel stud and track partition wall systems
DATE: 07/16/2019
Applicant Information
Applicant Company Name: BRACELOK® IP ltd BUILDING
Contact Person: Scott Simpson
Mailing Address: P.O Box 31270, Milford, Auckland 0620, New Zealand
Telephone: +64211708734 Email: scott.simpson@bracelok.com
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.
Signature of Applicant: Date: 03/21/19
Title: Chief Technical Officer Company Name: BRACELOK® IP Ltd

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"







# OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT **FACILITIES DEVELOPMENT DIVISION**

Registered Design Professional Preparing Engineering Recommendations								
Company Name: Degenkolb Engineers								
Name: Alvaro Celestino California License Number: S5580								
Mailing Address: 225 Broadway Ste. 1325, San Diego, CA 92101								
Telephone: 619-814-7004 Email: acelestino@degenkolb.com								
OSHPD Special Seismic Certification Preapproval (OSP)								
<ul> <li>□ Special Seismic Certification is preapproved under OSP- (Separate application for OSP is required)</li> <li>□ Special Seismic Certification is not preapproved</li> </ul>								
Certification Method(s)								
<ul> <li>☐ Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-16</li> <li>☐ Other* (Please Specify): AISI S100</li> </ul>								
ODM 0377-13								
*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2016 may be used when approved by OSHPD prior to testing.								
Experience Data								
Combination of Testing, Analysis, and/or Experience Data (Please Specify):								
List of Attachments Supporting the Manufacturer's Cartification								
List of Attachments Supporting the Manufacturer's Certification  ☐ Test Report ☐ Drawings ☐ Calculations ☐ Manufacturer's Catalog ☐ Other(s) (Please Specify):								
OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS								
Signature:         Date:         7/16/2019								
Print Name: Bate: Print Name: Jeffrey Kikumoto								
Title: Structural Engineer								
Condition of Approval (if applicable):								

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





# **GENERAL NOTES**

### **GENERAL**

- THIS OSHPD PRE-APPROVAL OF MANUFACTURE'S CERTIFICATION (OPM) IS BASED ON 8. THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
- THIS PRE-APPROVAL IS VALID FOR THE SYSTEM DESCRIBED IN THESE DRAWINGS 2. THROUGHOUT THE STATE OF CALIFORNIA, AND IS VALID FOR INTERIOR WALLS INSTALLED AT ANY HEIGHT WITHIN THE BUILDING, SEE Sps LIMITATIONS ON SHEET S3

#### II. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

- VERIFY MATERIALS AND WORKMANSHIP TO CONFORM WITH THE 2016 EDITION OF THE CALIFORNIA BUILDING CODE AND THE REQUIREMENTS OF THIS PRE-APPROVAL DOCUMENT.
- VERIFY THE ADEQUACY OF THE EXISTING FRAMING TO SUPPORT THE LOADS 2. INDICATED ON THIS SHEET, IN ADDITION TO ALL OTHER LOADS.
- VERIFY ANCHORS ARE AT ADEQUATE DISTANCES FROM OPENINGS AND EDGES OF 3. SLABS AS NOTED IN THE GENERAL NOTES SECTION IV.
- VERIFY ANCHORS ARE AT ADEQUATE DISTANCES FROM NEW OR EXISTING ANCHORS AS NOTED IN THE GENERAL NOTES SECTION IV.
- DESIGN ANY SUPPLEMENTARY MEMBER AND THEIR ATTACHMENTS OTHER THAN 5. THOSE DETAILED WITHIN THIS PRE-APPROVAL.
- VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2016 CBC AND WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL.
- VERIFY THAT THE SITE SEISMIC PARAMETERS DON'T EXCEED WHAT IS PERMITTED 7. **UNDER THIS OPM**

### **COLD-FORMED METAL FRAMING**

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AND CELES, AND

No. S 5580

F OF CALIFO

- STUDS: ASTM C955 AND ASTM A1003, "C" SHAPED WITH LIPPED FLANGES AND PUNCHED WEB. PROVIDE G60 COATING MINIMUM.
  - 43 MIL (18 GAGE) AND LIGHTER: GRADE 33 TYPE H
  - 54 MIL (16 GAGE) AND HEAVIER: GRADE 50 TYPE H
- TRACK: ASTM C955 AND ASTM A1003, "U" SHAPED WITH UN-PUNCHED WEB. PROVIDE 2. G60 COATING MINIMUM.
  - MATCH DEPTH, THICKNESS AND GRADE OF STUDS.
- FRAMING DESIGNATIONS ON PLANS ARE BASED ON THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA) PRODUCT TECHNICAL GUIDE (ICC-ESR-3064P).
- INSTALL STUDS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ASTM 4. C1007.
- SHEET METAL SCREWS: SELF-DRILLING, SELF-TAPPING, HDG PER ASTM A153, PAN OR HEX WASHER HEAD AS REQUIRED BY FINISH.
  - PRODUCTS: ITW-BUILDEX TEKS SELECT (ICC-ESR-3223), GRABBER DRIVALL (ICC-ESR-1271)
- MINIMUM SCREW SPACING AND EDGE DISTANCE TO BE 3/4". 6.

7/15/2019

POWDER ACTUATED FASTENERS: HILTI LOW-VELOCITY FASTENERS (ICC-ESR-2269).

<u>BASE</u>	<u>FASTENERS</u>	MINIMUM	MINIMUM EDGE	MINIMUM
MATERIAL		EMBEDMENT	DISTANCE	SPACING
STEEL	HILTI X-U	PER MANUF	1/2"	5 1/2"
CONCRETE	HILTI X-P	1"	3"	

PAF SHALL NOT BE USED IN PRE-STRESSED CONCRETE UNLESS NON-DESTRUCTIVE TESTING METHODS ARE USED TO LOCATE STRAND AND REINFORCEMENT PRIOR TO FASTENER INSTALLATION.

TENSION TESTING IS NOT REQUIRED FOR POWDER ACTUATED FASTENERS USED TO ATTACH TRACKS OF INTERIOR NON-SHEAR WALL PARTITIONS FOR SHEAR ONLY. WHERE THERE ARE AT LEAST THREE FASTENERS PER SEGMENT OF TRACK.

#### IV. MECHANICAL ANCHORS

- EXPANSION OR WEDGE ANCHORS INTO CONCRETE: HILTI KB-TZ (ICC ESR-1917), SIMPSON STRONG-BOLT 2 (ICC-ESR-3037) OR DEWALT POWER-STUD+ SD2 (ICC-
- SCREW ANCHORS, HILTI HUS-EZ (ICC-ESR-3027), SIMPSON STRONG-TIE TITEN-HD (ICC-ESR-2713), OR DEWALT SCREW-BOLT + (ICC-ESR-3889)
- INSTALL ANCHORS IN ACCORDANCE WITH LATEST ICC-ESR REPORT AND MANUFACTURER INSTRUCTIONS.
- IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT APPROVED BY THE ENGINEER OF RECORD. NOTIFY THE ENGINEER OF RECORD IF ANY REINFORCING IS DAMAGED.
- ANCHORS WILL BE PROOF-TESTED BY OWNER'S TESTING AND INSPECTION AGENCY. WITH A REPORT OF THE TEST RESULTS SUBMITTED TO OSHPD.
- IF ANY ANCHOR FAILS TESTING, REPLACE ANCHOR AND TEST ADDITIONAL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE PASS, THEN RESUME INITIAL TESTING FREQUENCY.
- TEST ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATION.
- TEST WEDGE ANCHORS PER THE FOLLOWING METHOD:
  - TORQUE WRENCH METHOD: TEST ANCHORS TO THE TORQUE LOAD INDICATED IN THE TABLE BELOW WITHIN THE FOLLOWING LIMITS:
    - ONE-HALF TURN OF THE NUT.

A	WEDGE					
	ANCHOR DIA. (IN)	TORQUE LOAD (FT-LBS)				
	3/8	25				

TENSION TEST SCREW ANCHORS PER THE FOLLOWING METHOD: A. HYDRAULIC RAM METHOD: THE ANCHOR SHALL MAINTAIN THE TEST LOAD (AS DEFINED BELOW) FOR A MINIMUM OF 15 SECONDS AND SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. IN THE CASE WHERE OTHER THAN BOND IS BEING TESTED. THE TESTING DEVICE SHALL NOT RESTRICT THE CONCRETE SHEAR CONE TYPE FAILURE MECHANISM FROM OCCURRING

SCREW				
ANCHOR DIA. (IN)	TENSION LOAD (LBS)			
3/8	566			

FOR POST INSTALLED ANCHORS USED FOR NONSTRUCTURAL APPLICATIONS, 50 PERCENT OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED.

WHERE POST-INSTALLED ANCHORS ARE USED FOR SILL PLATE BOLTING APPLICATIONS, 10 PERCENT OF THE ANCHORS SHALL BE TESTED.

- MINIMUM EDGE DISTANCE: 11.
  - A. 3/8" EXPANSION ANCHOR = 6"
  - B. 3/8" SCREW ANCHOR = 3 3/4"
- MINIMUM SPACING (FROM NEW OR EXISTING ADJACENT ANCHORS):
  - A. 3/8" EXPANSION ANCHOR = 6"
  - B. 3/8" SCREW ANCHOR = 3"

# VI. STRUCTURAL TESTS, INSPECTIONS, AND OBSERVATIONS

- AN INDEPENDENT APPROVED TESTING AGENCY AND SPECIAL INSPECTORS, CONFORMING TO 2016 CBC SECTION 1703A, WILL BE RETAINED BY THE OWNER TO PERFORM THE FOLLOWING TESTS AND INSPECTIONS. PROVIDE ACCESS AND FURNISH SAMPLES TO THE AGENCY AS REQUIRED.
- THE FOLLOWING ITEMS REQUIRE TESTS AND INSPECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CHAPTER "STRUCTURAL TESTS AND INSPECTIONS" OF THE CODE.
- **MECHANICAL ANCHORS:** 3.
  - VERIFY TYPE OF ANCHOR, ANCHOR DIMENSIONS, CONCRETE TYPE AND COMPRESSIVE STRENGTH. PREDRILLED HOLE DIMENSIONS. ANCHOR SPACING, EDGE DISTANCE, SLAB THICKNESS AND ANCHOR EMBEDMENT.
  - PROOF-TEST AS INDICATED IN THE MECHANICAL ANCHORS SECTION OF THESE GENERAL NOTES.

### VII. DESIGN CRITERIA

- APPLICABLE CODE: 2016 CALIFORNIA BUILDING CODE.
- 2. SEISMIC DESIGN:

SEISMIC FORCE F (LRFD) =  $0.4 * S_{DS} * a_{p} (1 + 2* Z/h) Wp$ 

FOR ANY FLOOR

WHE	RE:						
_		_		-	_	_	-

MAX ACCEL. (SEE S3)  $S_{DS} = 195\% G$ lp = 1.5

Z/h = 1.0Rp = 2.5

> ap = 1.00 = 2.0

## VIII. HOW TO USE THIS PRE-APPROVAL

- REVIEW AND UNDERSTAND ALL GENERAL NOTES AND FIGURES BEFORE PROCEEDING.
- FOR THE SELECTED INTERIOR WALL CONDITION AND SEISMICITY (SDS) DETERMINE THE TOP TRACK CONDITION, BRACE AND WALL STUD SECTIONS. AND BRACELOK SPACING FROM THE TABLES ON S3.
- BASED ON THE STRUCTURE TYPE, SELECT A BRACE CONNECTION AND WALL BASE CONNECTION FROM THE TABLE ON S4.
- DETERMINE THE IMPACT ON THE EXISTING STRUCTURE FROM THE BRACELOK FROM THE TABLE ON S3. AND VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE WITH THE STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING.

#### SHEET LIST

S1	GENERAL NOTES	S9	BRACELOK PARTS
S2	BRACING LAYOUT PLANS	S10	OPD-0001-13 DETAILS (ST2.00, ST2.02)
S3	WALL SECTION & SCHEDULES	S11	OPD-0001-13 DETAILS (ST2.03, ST2.04)
S4	TOP & BOTTOM CONNECTIONS	S12	OPD-0001-13 DETAILS (ST4.00, ST4.01)
S5	BRACELOK CONNECTIONS	S13	OPD-0001-13 DETAILS (ST6.08, ST6.09)
S6	BRACE CONNECTIONS	S14	OPD-0001-13 DETAILS (ST1.00, ST5.00)
S7	BRACE CONNECTIONS	S15	OPD-0001-13 DETAILS (ST5.01, ST5.02)
S8	BRACELOK PARTS		

**DEGENKOLB ENGINEERS** 225 Broadway, Suite 1325 Degenkold San Diego, CA 92101 619.515.0299 PHONE www.degenkolb.com

BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R

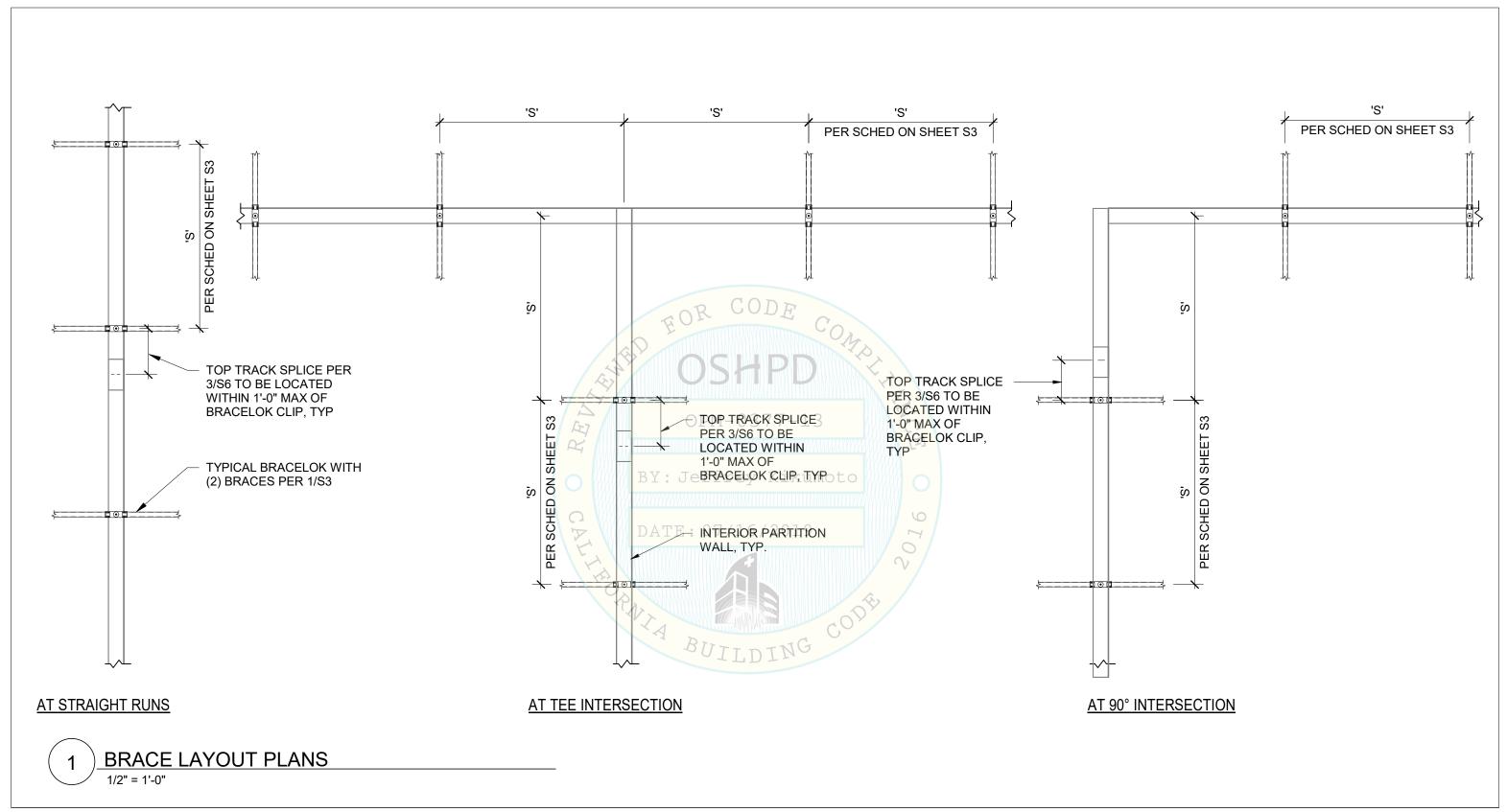
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**GENERAL NOTES** 

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Date	07/10/19	

**S**1 OF Sheets

OPM-0377-13: Reviewed for Code Compliance by Jeffrey Kikumoto





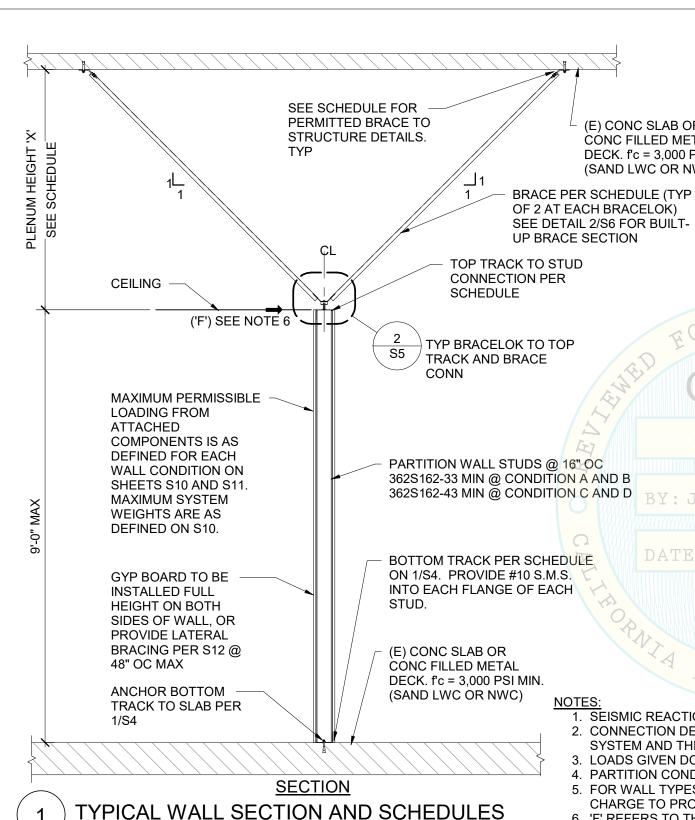
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**BRACING LAYOUT PLANS** 

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Date	07/10/19		

Sheet **S2** OF Sheets



	CONDITION A FOR 9 FT MAX INTERIOR WALL (SEE NOTE 4)														
Sds	TOP TRACK TO STUD CONN DETAIL	BRACELOK SPACING, 'S'	MAX ASD TOP TRACK REACTION (PLF)	ASD HORIZ LOAD AT BRACE (LB) ('F')	PLENUM HEIGHT	BRACE SIZE	BRACE TO STRUCTURE CONN DETAIL								
0.25-0.99	2/S4 OR 3/S4	8'-0"	17	136	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,								
0.25-0.99	2/34 OK 3/34	8-0	17	130	5'-0" < 'X' < 7'-3"	362S162-33	1/S13								
1.00-1.25	2/S4 OR 3/S4	8'-0"	22	176	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,								
1.00-1.25	2/34 OK 3/34	0-0	22	22	22	22	22	22	22	22	22 170	170	5'-0" < 'X' < 7'-3"	362S162-33	1/S13
1 26 1 45	2/S4 OR 3/S4	8'-0"	26	208	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,								
1.20-1.43	2/34 UK 3/34	0-0	20	200	5'-0" < 'X' < 7'-3"	362S162-33	1/S13								
1 46 4 05	2/04 OD 2/04	0' 0"	24	070	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,								
1.46-1.95	2/S4 OR 3/S4	8'-0"	34	272	5'-0" < 'X' < 7'-3"	362S162-33	1/S13								

	CONDITION B FOR 9 FT MAX INTERIOR WALL (SEE NOTE 4)								
3	C Sps	TOP TRACK TO STUD CONN DETAIL	BRACELOK SPACING, 'S'	MAX ASD TOP TRACK REACTION (PLF)	ASD HORIZ LOAD AT BRACE (LB) ('F')	PLENUM HEIGHT	BRACE SIZE	BRACE TO STRUCTURE CONN DETAIL	
	0.25-0.99	2/S4 OR 3/S4	8'-0"	29	232	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,	
	0.25-0.99	2/34 UR 3/34	0-0	29	232	5'-0" < 'X' < 7'-3"	362S162-33	1/S13	
	1 00 1 05 0/0	2/S4 OR 3/S4	8'-0"	36	288	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,	
	1.00-1.25	2/34 UK 3/34	0-0	30		5'-0" < 'X' < 7'-3"	362S162-33	1/S13	
	100 1/15	2/9/JOD 2/9/	7'-3"	42	305	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,	
PIM-	1.26-1.45	2/\$4 OR 3/\$4	OK 3/34 / /-3	42	303	5'-0" < 'X' < 7'-3"	362S162-33	1/S13	
	1.46-1.95	2/S4 OR 3/S4	5'-6"	56	308	'X' < 5'-0"	250S162-33	1/S6, 1/S7, 2/S7,	
	1.40-1.95	2/34 OR 3/34	3-0	30	306	5'-0" < 'X' < 7'-3"	362S162-33	1/S13	
ffr	ey Ki 1.26-1.45	3/S4	8'-0"	42	336	'X' < 5'-0"	250S162-33	1/S7, 2/S7, 2/S13	
MANIE	1.20-1.43	3/34	0-0	42	330	5'-0" < 'X' < 7'-3"	362S162-33	1/37, 2/37, 2/313	
	1.46.1.05	2/5/	01.01	448	'X' < 5'-0"	250S162-33	1/S7, 2/S7, 2/S13		
07/	1.46-1.95	19 <sup>3/S4</sup>	8'-0"	56	440	5'-0" < 'X' < 7'-3"	362S162-33	1/31, 2/31, 2/313	

					-				
	CONDITION C AND D FOR 9 FT MAX INTERIOR WALL (SEE NOTE 4)								
	SDS	TOP TRACK TO STUD CONN DETAIL	BRACELOK SPACING	MAX ASD TOP TRACK REACTION (PLF)	ASD HORIZ LOAD AT BRACE (LB) ('F')	PLENUM HEIGHT	BRACE SIZE	BRACE TO STRUCTURE CONN DETAIL	
I	0.25-0.99	JG 3/S4	8'-0"	77	616	'X' < 5'-0" 5'-0" < 'X' < 8'-6"	362S162-33 (2)-362S162-33	1/S7, 2/S7, 2/S13	

(E) CONC SLAB OR

**CONC FILLED METAL** 

DECK. f'c = 3,000 PSI MIN. (SAND LWC OR NWC)

- 1. SEISMIC REACTIONS AT THE TOP AND BOTTOM CONNECTION ARE FOR A WALL HEIGHT OF 9'-0".
- 2. CONNECTION DEMANDS ARE PROVIDED TO ALLOW RDP IN RESPONSIBLE CHARGE TO VERIFY NON PRE-APPROVED COMPONENTS OF THE FRAMING SYSTEM AND THE SUPPORTING STRUCTURE.
- 3. LOADS GIVEN DO NOT INCLUDE OVER-STRENGTH FACTOR (OMEGA). FOR CONCRETE ATTACHMENTS SEE ASCE 7-10 W/ SUPPLEMENT #1 TABLE 13.5-1.
- 4. PARTITION CONDITIONS A, B, C, AND D ARE AS DEFINED ON SHEET \$10 AND \$11.
- 5. FOR WALL TYPES THAT DO NOT MEET THE CRITERIA OF CONDITIONS A. B. C. OR D AS DEFINED ON SHEETS S10 AND S11: RDP IN RESPONSIBLE CHARGE TO PROVIDE JUSTIFICATION THAT THE TOP TRACK DEMAND IS LOWER THAN THOSE IN THE TABLE ABOVE.
- 6. 'F' REFERS TO THE FORCE BEING RESISTED BY EACH BRACELOK RETRO CONNECTOR, DEMANDS CALCULATED IN ACCORDANCE WITH ASCE 7-10.
- 7. NOTES & DETAIL CALLOUTS IN SPECIFIC DETAILS TAKE PRECEDENCE OVER THE "OPD" DETAILS.

7/15/2019 Degenkolb San Diego, CA 92101

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No. S 5580

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BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R

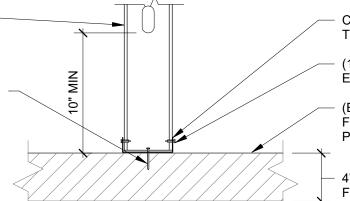
**WALL SECTION & SCHEDULES** 

Drawn:	JEB	Job number:	B8769007.01
Design:	PGM	Rev:	
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Date	07/10/19		

Sheet **S**3



ANCHOR AND SPACING PER SCHEDULE BELOW. PROVIDE ANCHOR 3" MAX FROM END OF TRACK, TYP SEE GENERAL NOTES FOR SPACING AND EDGE DISTANCE **REQUIREMENTS** 



CONTINUOUS BOTTOM TRACK TO MATCH STUD THICKNESS

(1) #10 S.M.S. MINIMUM @ EÁCH SIDE @ EACH STUD

(E) CONC SLAB OR CONC FILLED METAL DECK. f'c = 3,000 PSI MIN. (SAND LWC OR NWC)

4" MIN AT CONC SLAB. AT CONC FILLED METAL DECK 3 1/4" MIN FILL ABOVE UPPER FLUTE

	MAXIMUM FASTENER SPACING AT BOTTOM CONNECTION (INCHES) CONDITION A					
Sps	BOTTOM REACTION (PLF)		3/8" DIA EXP ANCHOR W/ 2" EMBED	3/8" DIA SCREW ANCHOR W/ 2 1/2" EMBED		
0.25-0.99	17	32	32	32		
1.00-1.25	22	24	32	32 E		
1.26-1.45	26	16	32	32		
1.46-1.95	34	16	32	32		

# SCHEDULE ON S3. TYP CL **BRACELOK CLIP AND CONNECTIONS PER S5** 3/4" GAP 18 GA MIN DEEP LEG (2 1/2") TRACK TO MATCH STUD SIZE. WITH NO DO NOT CONNECT GYP CONNECTION TO STUDS. BOARD TO TOP TRACK, STUDS PER 1/S3

**BRACES PER** 

# TOP TRACK DETAIL (NO CONNECTION)

**BRACES PER** SCHEDULE ON S3,

TYP

# **CONDITION A FOR 9 FT INTERIOR WALL**

	MAXIMUM FASTEN	ER SPACING AT BO	OTTOM CONNECTION (INCHES)	CONDITON B
Sps	BOTTOM REACTION (PLF)	0.145"DIA PAF W/ 1 1/4" EMBED	3/8" DIA EXP ANCHOR W/ 2" EMBED	3/8" DIA SCREW ANCHOR W/ 2 1/2" EMBED
0.25-0.99	25	16	32	32
1.00-1.25	32	16	32	32
1.26-1.45	37	8	32	32 DATE
1.46-1.95	50	8	32	32

# **CONDITION B FOR 9 FT INTERIOR WALL**

- 1						
	MAXIMUM FASTENER SPACING AT BOTTOM CONNECTION (INCHES) CONDITION C AND D					
	Sds	BOTTOM REACTION (PLF)	0.145"DIA PAF W/ 1 1/4" EMBED	3/8" DIA EXP ANCHOR W/ 2" EMBED	3/8" DIA SCREW ANCHOR W/ 2 1/2" EMBED	
	0.25-0.99	101	-	32	32	

# CONDITION C AND D FOR 9 FT INTERIOR WALL

NOTES:

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1. LOADS ABOVE DO NOT INCLUDE  $\Omega_0$  FOR CONCRETE ATTACHMENT.

# **BOTTOM TRACK CONNECTION**

1 1/2" = 1'-0"



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ffre16 GA MIN DEEP LEG (2 1/2") SLOTTED TRACK TO MATCH STUD SIZE. 07/16/2019

CODF

OPM - 0377 - 13

DO NOT CONNECT GYP BOARD TO TOP TRACK. TYP

Z Z **ELEVATION A-A** 

**BRACELOK CLIP AND CONNECTIONS PER S5** 

#10 S.M.S. FROM SLOTTED TRACK TO EACH FLANGE OF EACH STUD.

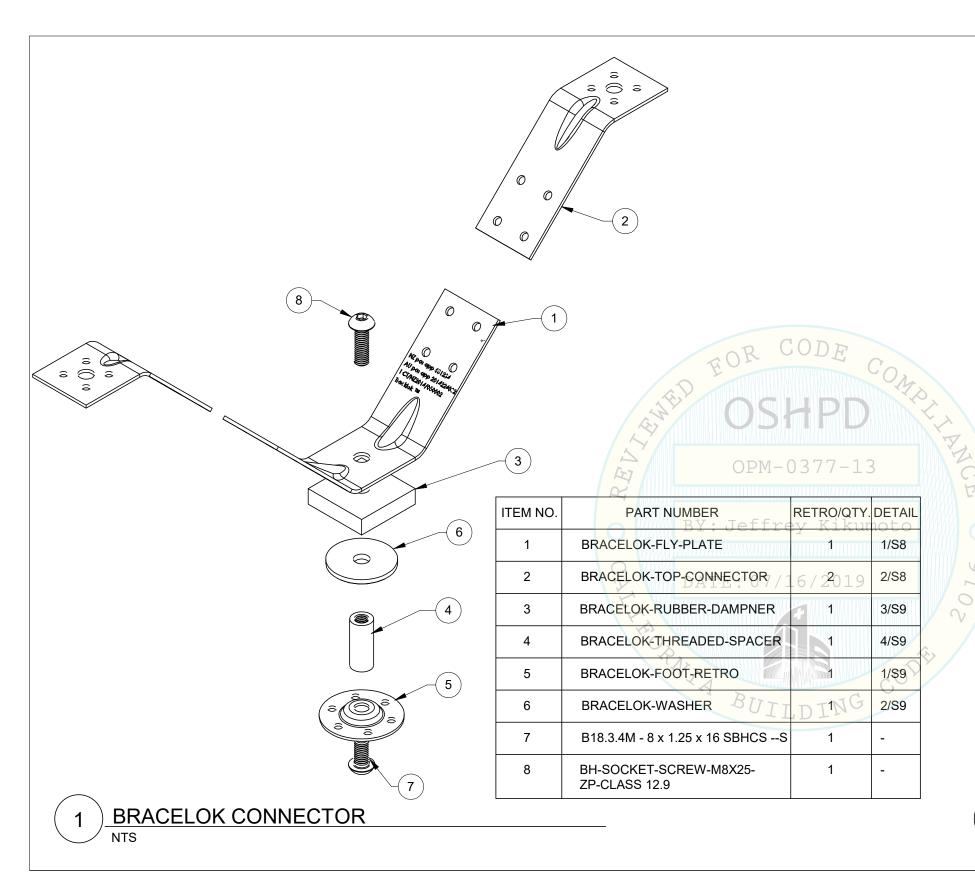
STUDS PER 1/S3

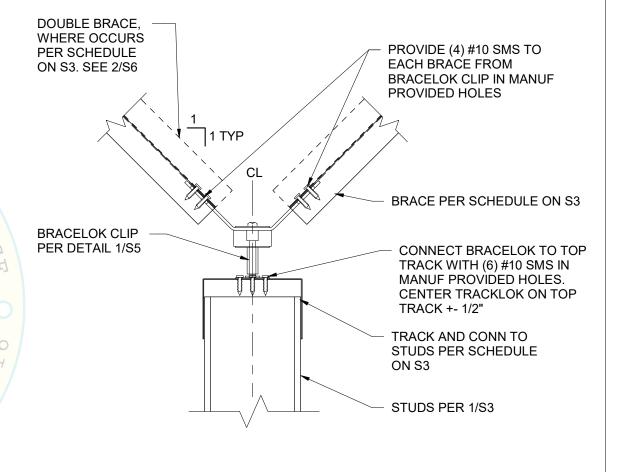
# TOP TRACK CONNECTION (SLOTTED CONNECTION)

BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R

**TOP & BOTTOM CONNECTIONS** 

Drawn:	JEB	Job numb	er: B8769007.01
Design:	PGM	Rev:	
Check:	AC	Scale:	As indicated
Date	07/10/19		





**BRACELOK CLIP CONNECTION** 3" = 1'-0"

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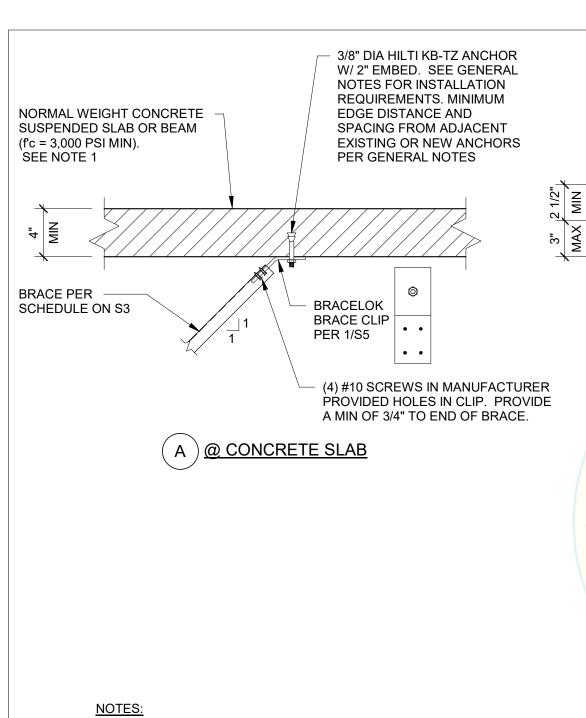
BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R

**BRACELOK CONNECTIONS** 

Drawn:	JEB	Job numb	oer:	B8769007.01
Design:	PGM	Rev:		
Check:	AC	Scale:	Α	s indicated
Date	07/10/19			

Sheet **S5** OF Sheets

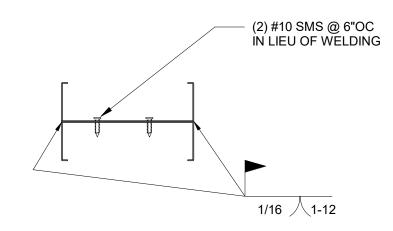
OPM-0377-13: Reviewed for Code Compliance by Jeffrey Kikumoto



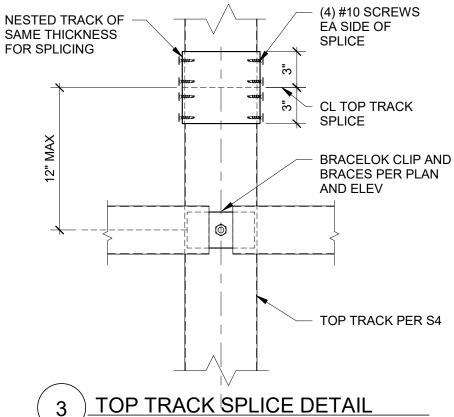
SAND LWC OR NWC FILLED METAL DECK (f'c = 3,000 PSI MIN) 1" MIN SEE NOTE 1 **∤** TYP 1'-0" MIN 20 GA 1" MAX /CL WEB STEEL W-DECK CL WEB TYP @ 4 1/2" WIDE UD A FLUTE 3 7/8" MIN OWER FLUTE (RIDGE) 4 1/2" MAX В

SAND LWC OR NWC FILLED METAL DECK (f'c = 3,000 PSI MIN) **SEE NOTE 1** 3 1/2" 3/4" MIN MIN 6" -2 1/2" MIN MIN, TYP MIN 20 GA STEEL B-DECK

@ CONC FILLED METAL DECK - B DECK



**BACK-TO-BACK BRACE SECTION** 



1 1/2" = 1'-0"

Drawn: JEB Job number: B8769007.01 **PGM** Design: AC As indicated Check Date 07/10/19

**S6** OF Sheets

Sheet

1. DETAIL MAY ONLY BE USED WHERE INDICATED ON THE SCHEDULE ON SHEET S3.

# **BRACE TO SLAB CONNECTION** 1 1/2" = 1'-0"

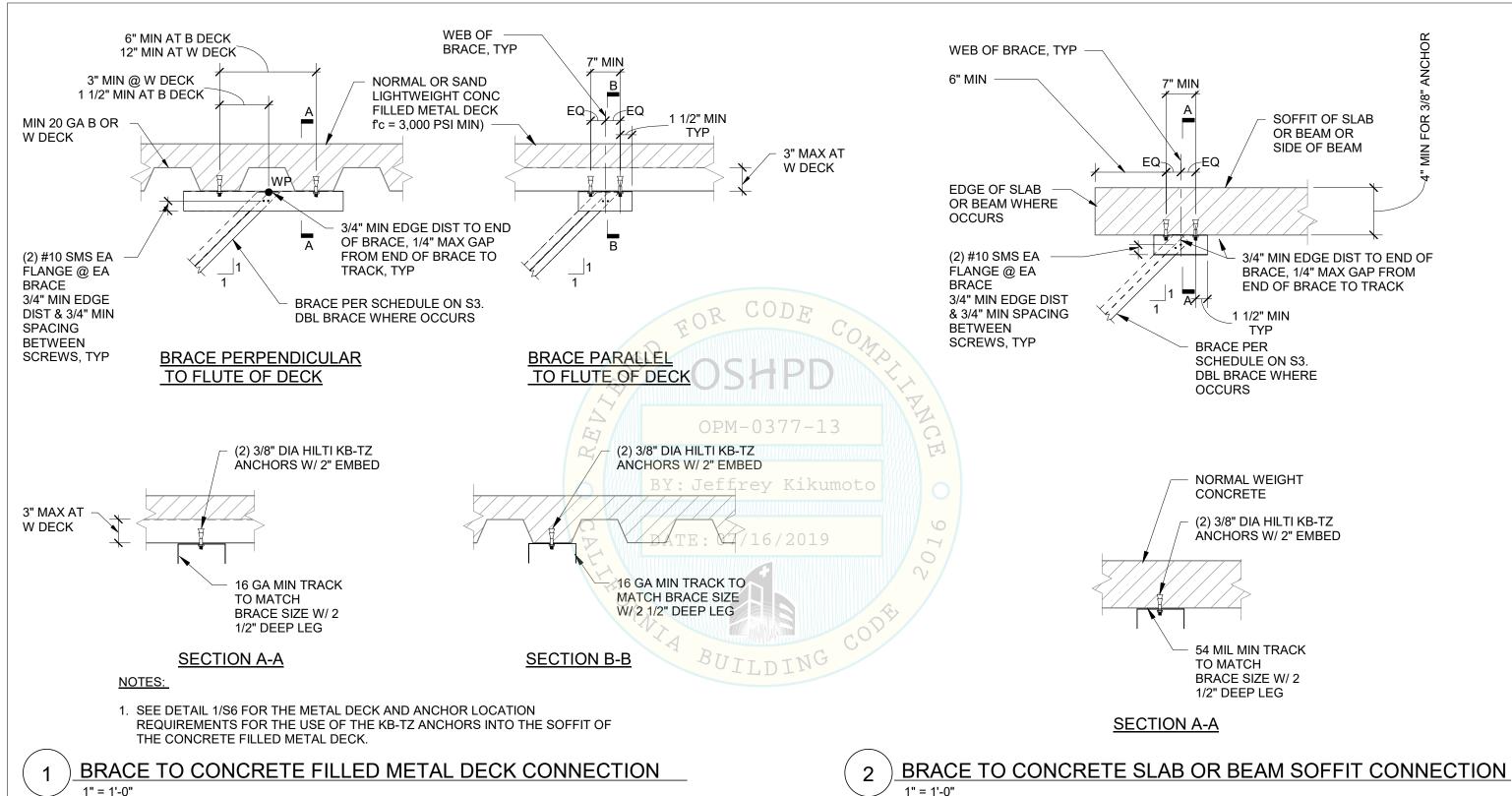
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**BRACE CONNECTIONS** 



1" = 1'-0"

BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R

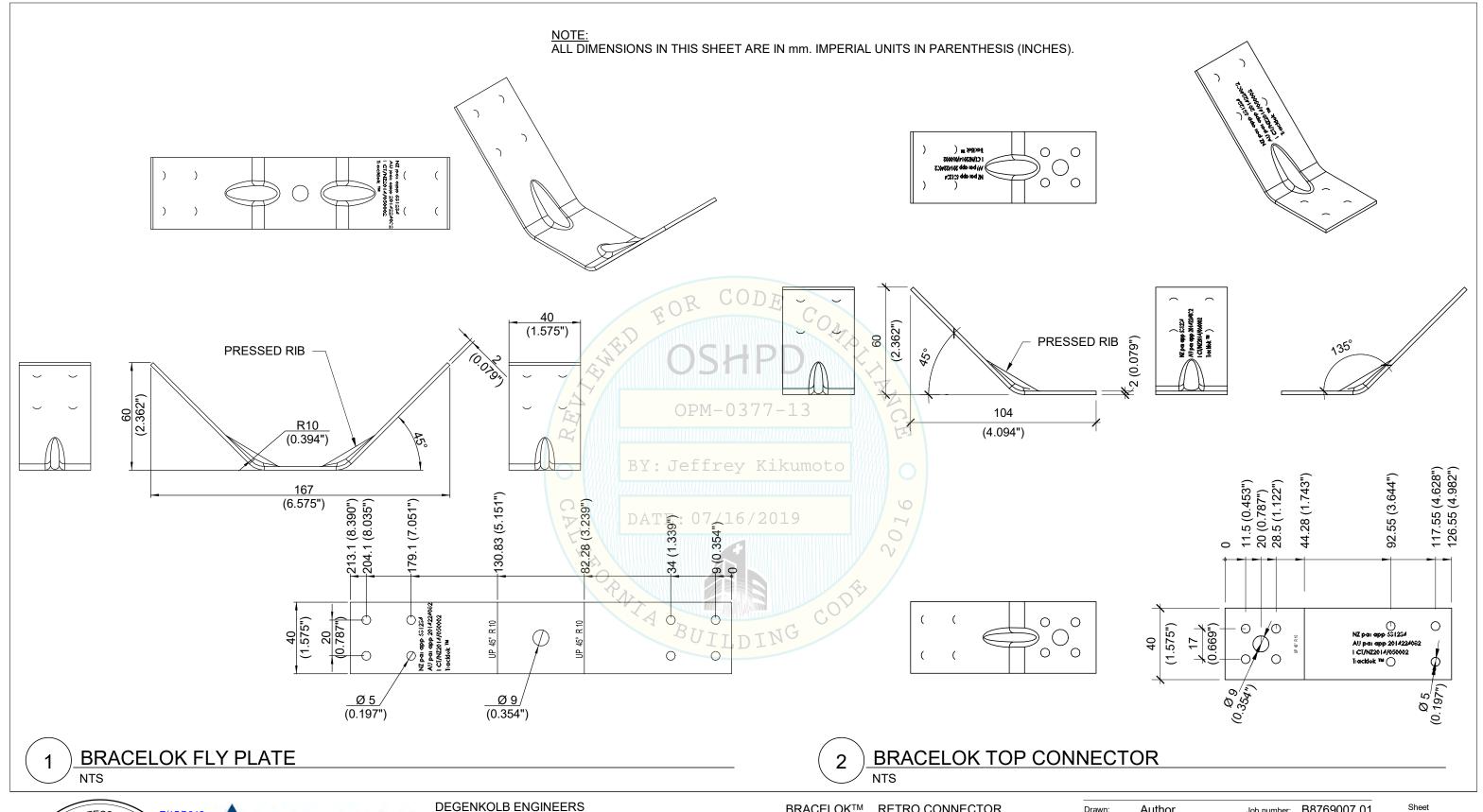
**BRACE CONNECTIONS** 

Drawn:	JEB	Job number:	B8769007.01
Design:	PGM	Rev:	
Check:	AC	Scale:	1" = 1'-0"
Date	07/10/19		

Sheet **S7** OF Sheets



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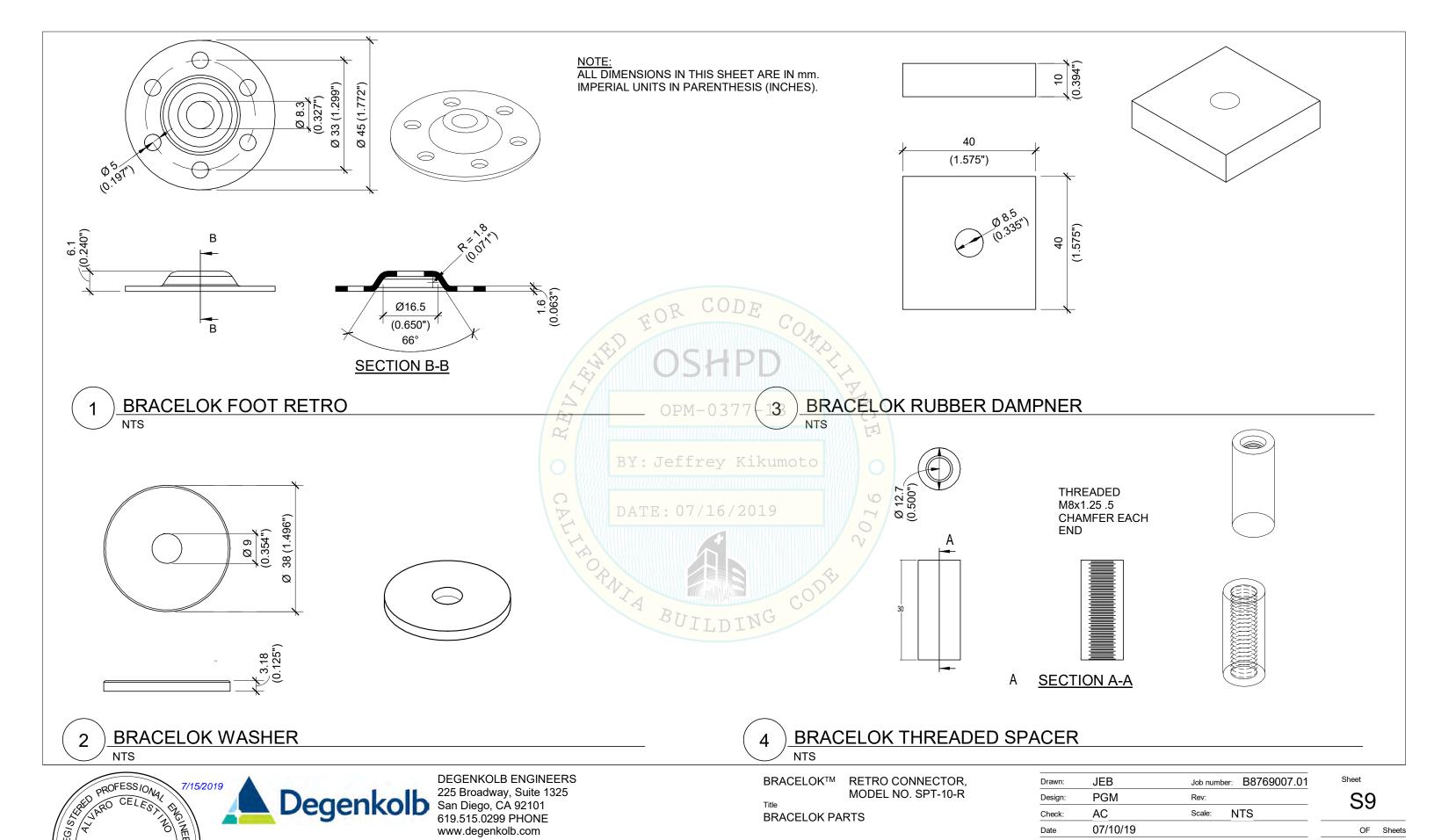
San Diego, CA 92101
619.515.0299 PHONE
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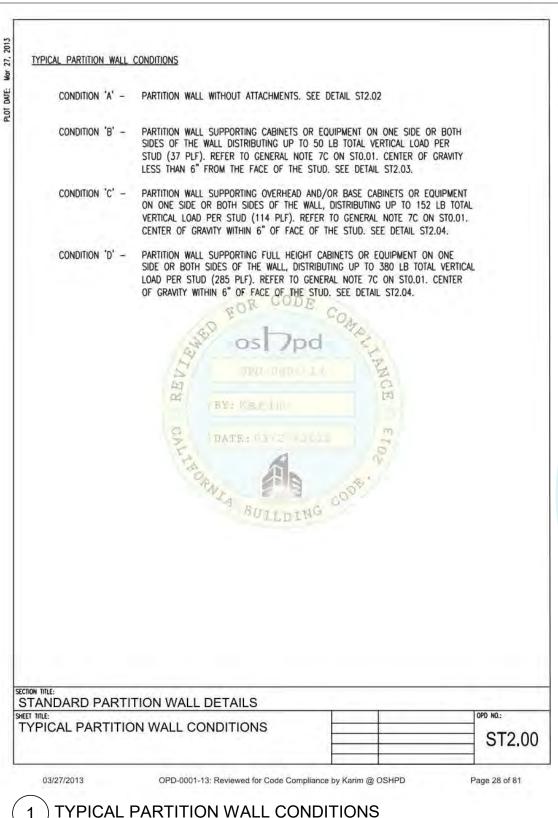
BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R

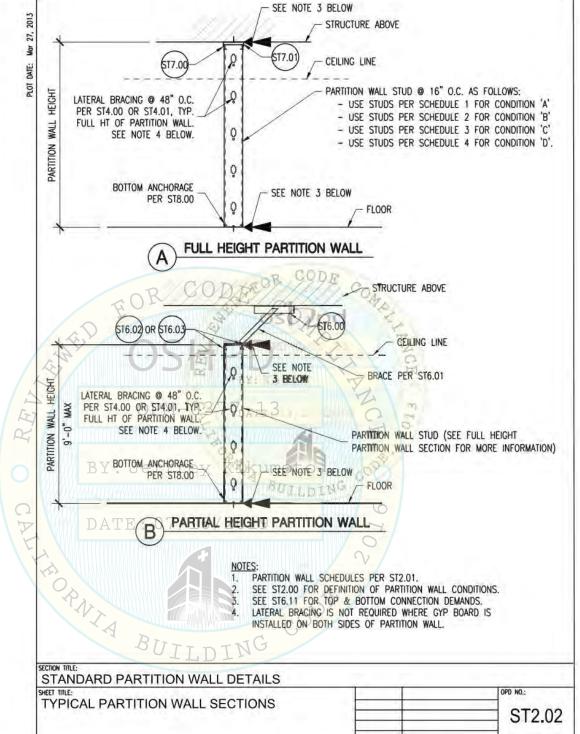
BRACELOK PARTS

Drawn:	Author	Job number: B8769007.01
Design:	Designer	Rev:
Check:	Checker	Scale: NTS
Date	07/10/19	

S8	
OF	Sheets
OF	Sheets







- 1. THIS OPM IS BASED ON THE FOLLOWING SYSTEM WEIGHTS:
  - PARTITION WALLS=7.5 psf [INCLUDES METAL STUDS, (2) LAYERS OF GYPBD, (2) LAYERS ON (1) SIDE OR (1) LAYER ON BOTH SIDES, & 1 psf FOR **INSULATION & FINISHESI**
  - CABINETS=38 pcf (INCLUDES CONTENTS AT 33 pcf PER 2016 CBC TABLE 1607A.1 & CABINET SELF WT OF 5 pcf)
  - EQUIPMENT=38 pcf (EQUIPMENT LOAD IS ASSUMED TO BE THE SAME AS CABINET LOAD)
- 2. NOTES & DETAIL CALLOUTS IN SPECIFIC DETAILS TAKE PRECEDENCE OVER THE "OPD" DETAILS CALLED OUT ON THIS SHEET.
- 3. SEE SCHEDULE ON SHEET S3 FOR APPLICABLE STUD AND BRACE SIZE INFORMATION.

# TYPICAL PARTITION WALL SECTIONS

03/27/2013

7/15/2019

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No. S 5580

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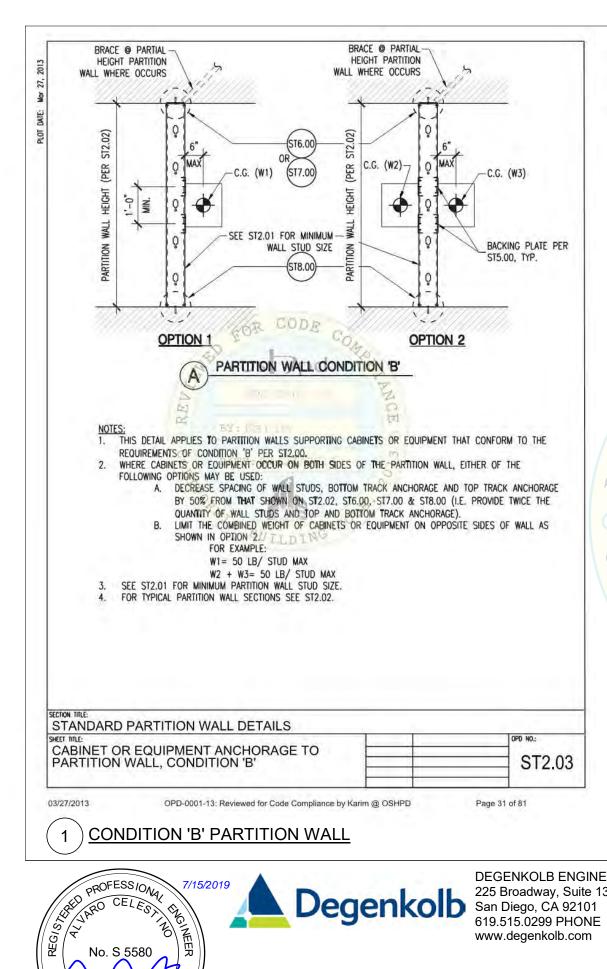
BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R Page 30 of 81

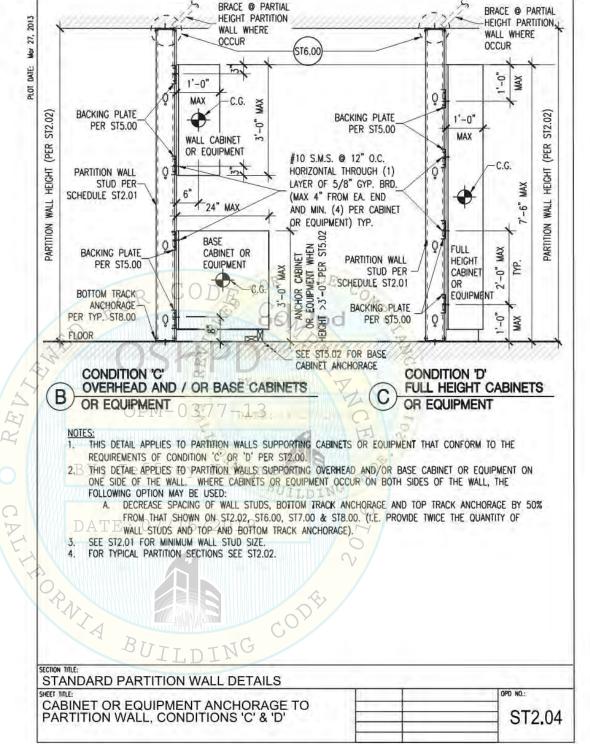
OPD-0001-13: Reviewed for Code Compliance by Karim @ OSHPD

OPD-0001-13 DETAILS (ST2.00, ST2.02)

Drawn:	JEB	Job number:	B8769007.01
Design:	PGM	Rev:	
Check:	AC	Scale:	
Date	07/10/19		

**S10** 





- 1. NOTES & DETAIL CALLOUTS IN SPECIFIC DETAILS TAKE PRECEDENCE OVER THE "OPD" DETAILS CALLED OUT ON THIS SHEET.
- 2. SEE GENERAL NOTES FOR EXPANSION ANCHOR. SCREW ANCHOR, SHEET METAL SCREW, AND PAF REQUIREMENTS.
- 3. SEE SCHEDULE ON SHEET S3 FOR APPLICABLE STUD AND BRACE SIZE INFORMATION.

CONDITION 'C' & 'D' PARTITION WALL

03/27/2013

7/15/2019

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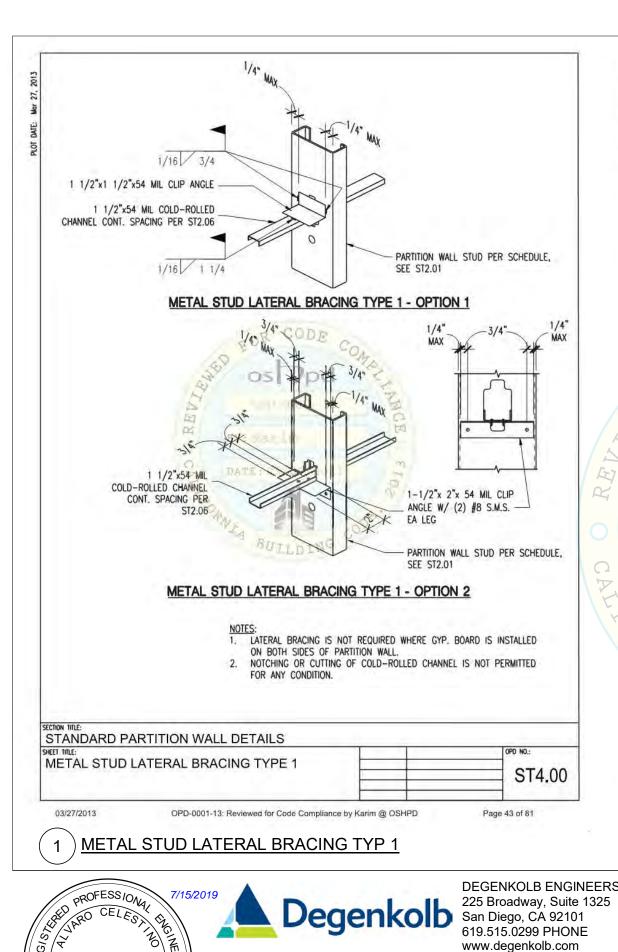
BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R Page 32 of 81

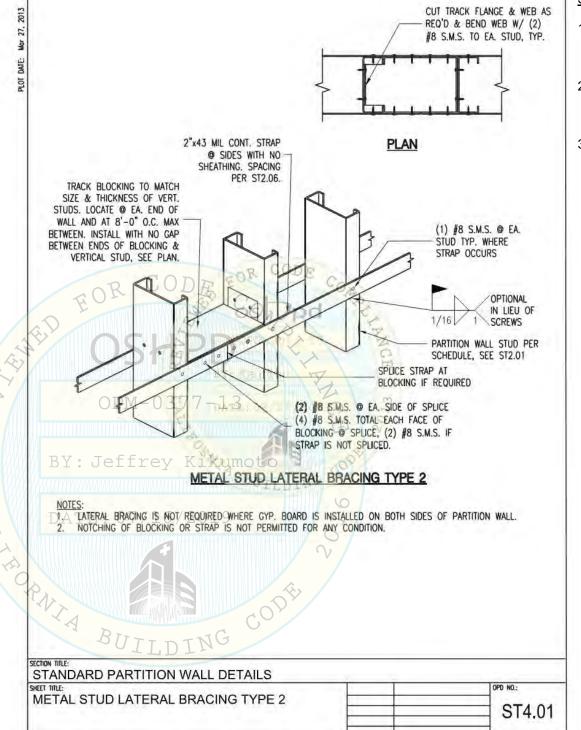
OPD-0001-13 DETAILS (ST2.03, ST2.04)

OPD-0001-13: Reviewed for Code Compliance by Karim @ OSHPD

Drawn:	JEB	Job number:	B8769007.01
Design:	PGM	Rev:	
Check:	AC	Scale:	
Date	07/10/19		

**S11** 





- 1. NOTES & DETAIL CALLOUTS IN SPECIFIC DETAILS TAKE PRECEDENCE OVER THE "OPD" DETAILS CALLED OUT ON THIS SHEET.
- 2. SEE GENERAL NOTES FOR EXPANSION ANCHOR. SCREW ANCHOR, SHEET METAL SCREW, AND PAF REQUIREMENTS.
- 3. SEE SCHEDULE ON SHEET S3 FOR APPLICABLE STUD AND BRACE SIZE INFORMATION.

# METAL STUD LATERAL BRACING TYP 2 2

7/15/2019 Degenkolb San Diego, CA 92101

No. S 5580

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OPD-0001-13: Reviewed for Code Compliance by Karim @ OSHPD

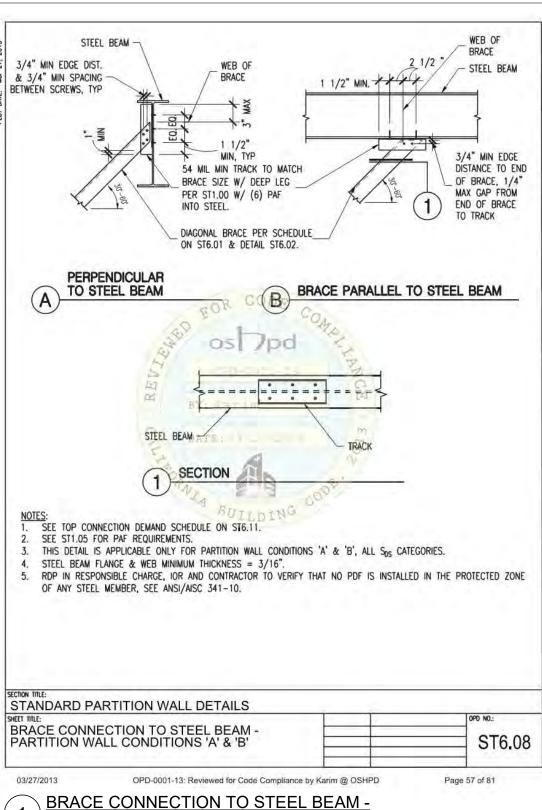
OPD-0001-13 DETAILS (ST4.00, ST4.01)

JEB	Job number:	B8769007.01
PGM	Rev:	
AC	Scale:	
07/10/19		
	PGM AC_	PGM Rev: AC Scale:

**S12** 

OF Sheets

03/27/2013



PARTITION WALL CONDITIONS 'A' & 'B'

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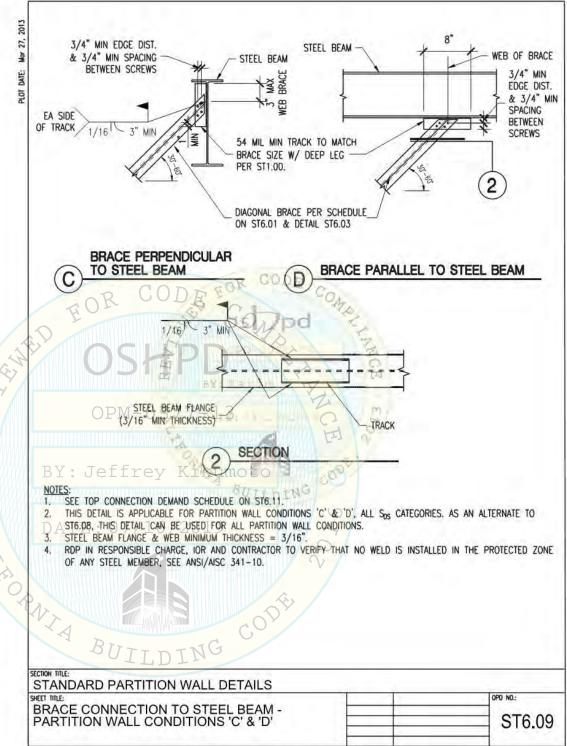
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No. S 5580

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03/27/2013



# SHEET NOTES:

- 1. NOTES & DETAIL CALLOUTS IN SPECIFIC DETAILS TAKE PRECEDENCE OVER THE "OPD" DETAILS CALLED OUT ON THIS SHEET.
- 2. SEE GENERAL NOTES FOR EXPANSION ANCHOR, SCREW ANCHOR, SHEET METAL SCREW, AND PAF REQUIREMENTS.
- 3. SEE SCHEDULE ON SHEET S3 FOR APPLICABLE STUD AND BRACE SIZE INFORMATION.

BRACE CONNECTION TO STEEL BEAM -PARTITION WALL CONDITIONS 'C' & 'D'

> BRACELOK™ RETRO CONNECTOR, MODEL NO. SPT-10-R

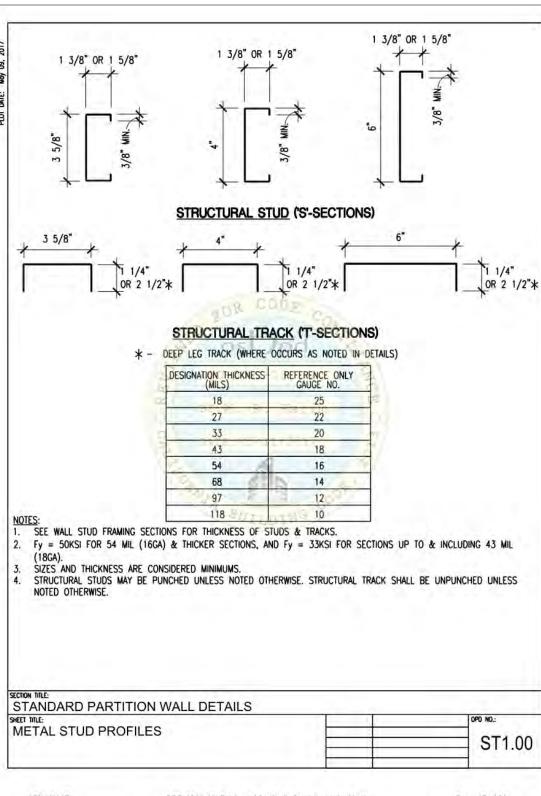
Page 58 of 81

OPD-0001-13: Reviewed for Code Compliance by Karim @ OSHPD

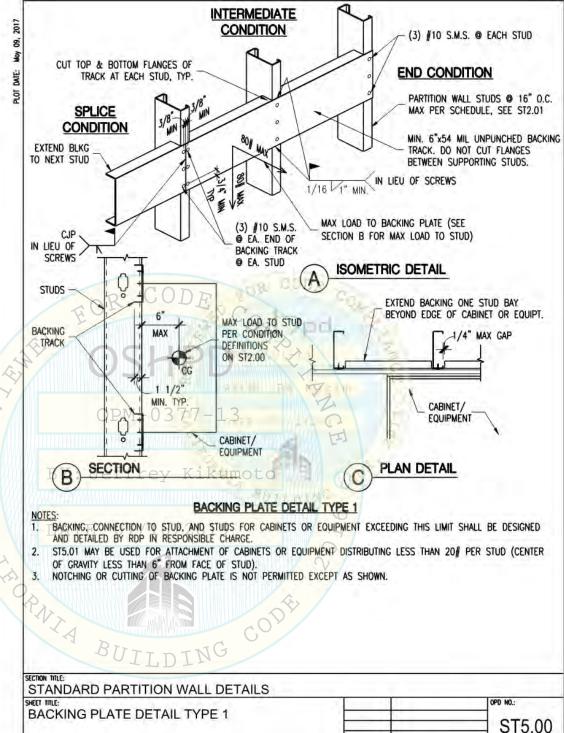
OPD-0001-13 DETAILS (ST6.08, ST6.09)

Drawn:	JEB	Job number:	B8769007.01
Design:	PGM	Rev:	
Check:	AC	Scale:	
Date	07/10/19		

**S13** 







- NOTES & DETAIL CALLOUTS IN SPECIFIC DETAILS TAKE PRECEDENCE OVER THE "OPD" DETAILS CALLED OUT ON THIS SHEET.
- SEE GENERAL NOTES FOR EXPANSION ANCHOR, SCREW ANCHOR, SHEET METAL SCREW, AND PAF REQUIREMENTS.
- 3. SEE SCHEDULE ON SHEET S3 FOR APPLICABLE STUD AND BRACE SIZE INFORMATION.

2 BACKING PLATE DETAIL TYPE 1

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OPD-0001-13 DETAILS (ST1.00, ST5.00)

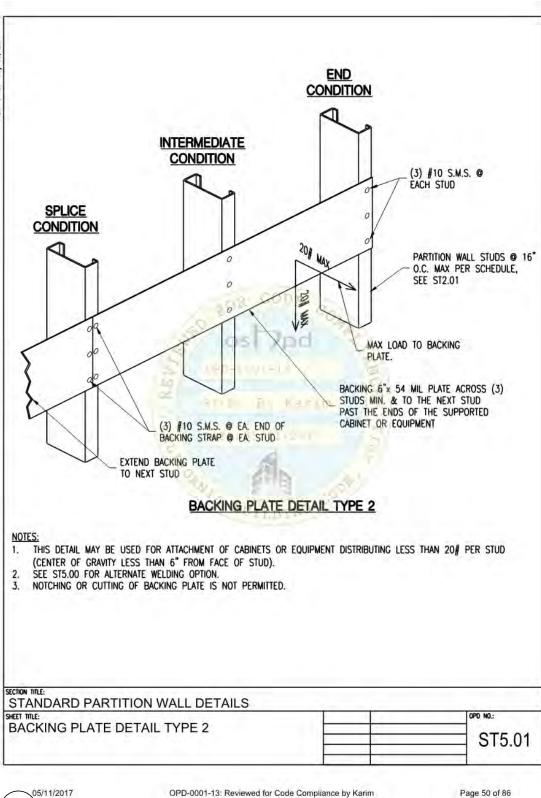
Drawn:	JEB	Job number:	B8769007.01
Design:	PGM	Rev:	
Check:	AC	Scale:	
Date	07/10/19		

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OF Sheets

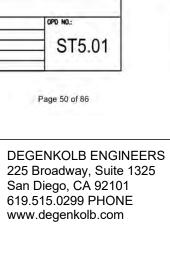
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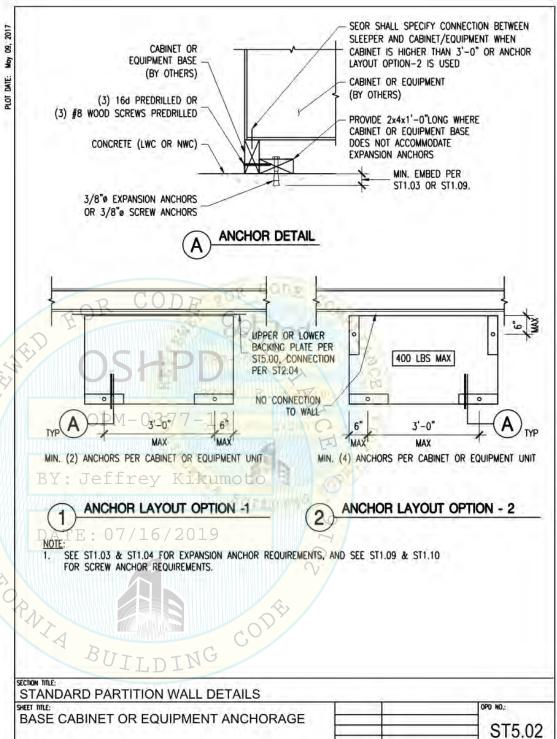


**BACKING PLATE DETAIL TYPE 2** 

7/15/2019

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SHEET NOTES:

- 1. NOTES & DETAIL CALLOUTS IN SPECIFIC DETAILS TAKE PRECEDENCE OVER THE "OPD" DETAILS CALLED OUT ON THIS SHEET.
- SEE GENERAL NOTES FOR EXPANSION ANCHOR, SCREW ANCHOR, SHEET METAL SCREW, AND PAF REQUIREMENTS.
- 3. SEE SCHEDULE ON SHEET S3 FOR APPLICABLE STUD AND BRACE SIZE INFORMATION.

2 BASE CABINET OR EQUIPMENT ANCHORAGE

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OPD-0001-13 DETAILS (ST5.01, ST5.02)

Drawn:	JEB	Job number:	B8769007.01
Design:	PGM	Rev:	
Check:	AC	Scale:	
Date	07/10/19		

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OF Sheets

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