

SEISMIC BRACKET INSTALLATION

Review of design-build projects and conformity to local building codes must be verified by a registered design professional.

Instructions for installing seismic restraints onto a Zero Zone display case. These instructions are intended to be used with drawing 173-0401. The installer is responsible for purchasing the correct bolts/fasteners from Hilti.

1. Snap a chalk line for the back of the case or lineup. Cases with seismic brackets must be set at least 5" away from a wall.
2. Align the rear seismic brackets (31-0191-XX) on the chalk line.
3. Mark, drill, and install the rear seismic brackets to the floor (See Figure 1). **Follow local seismic building codes.** Purchase the anchor rods, washers, nuts, and adhesive from Hilti (See Drawing 173-0401). Install all rear seismic brackets at the same time for a lineup.
4. Move the first display case into position. Snap a chalk line along the front bases.
5. Align the front seismic brackets (31-0191-XX) against the bases and on the chalk line. Mark the locations for drilling.
6. Move the display case and seismic brackets away. Drill the holes into the floor for the front seismic brackets.
7. Move the display case back into position. Properly level and shim display case according to the Installation & Operation Manual.
8. Attach the rear seismic brackets to the display case using the supplied screws (64-0085) and torque 60 in-lbs (See Figure 4). **Note: A right angle drill/driver will be helpful for the narrow clearance if the case is set along a wall (See Figure 2).**
9. Install the front seismic brackets to the floor. **Follow local seismic codes.**
10. Attach the front seismic brackets to the display case using the supplied screws (64-0085) and torque 60 in-lbs (See Figure 3).
11. Continue with each case if installing a lineup. The rear seismic bracket at a joint (31-0191-01) will be inaccessible on the second case and will only be installed to the first case (See Drawing 173-0401). The front seismic bracket at a joint (31-0191-03) can be installed to both cases.

FIGURE 3: Front Bracket Installed



FIGURE 1: Holes Drilled for Rear Bracket

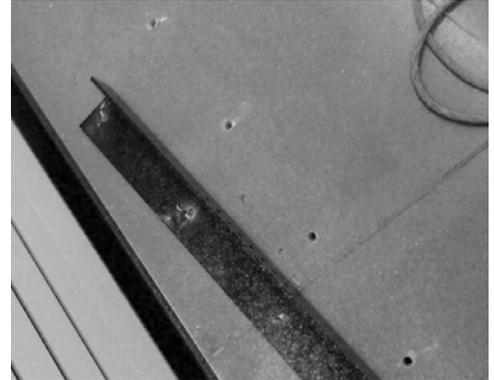


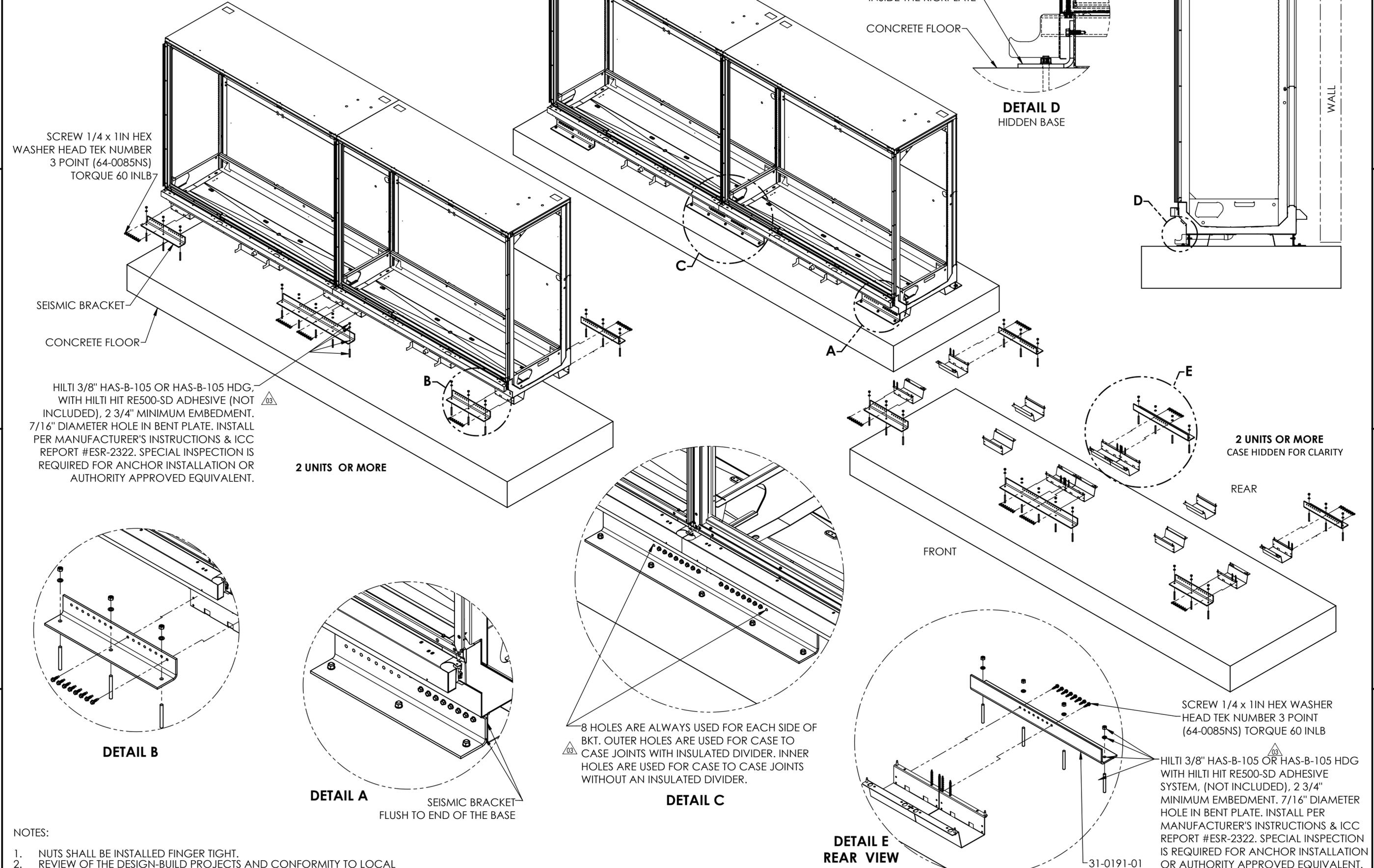
FIGURE 2: Right Angle Drill for Rear Bracket



FIGURE 4: Rear Bracket Installed



Part Number	Part Description	Part Rev
173-0401-001	ASSY Seismic Brackets End Line Up	B
173-0401-002	ASSY Seismic Brackets Center Line Up	B
173-0401-003	ASSY Seismic Brackets 1 Door Stand Alone	B
173-0401-004	ASSY Seismic Brackets 2 Door Stand Alone	B
173-0401-005	ASSY Seismic Brackets 3 thru 5 Door Stand Alone	B



SCREW 1/4 x 11IN HEX
WASHER HEAD TEK NUMBER
3 POINT (64-0085NS)
TORQUE 60 INLB

SEISMIC BRACKET
CONCRETE FLOOR

HILTI 3/8" HAS-B-105 OR HAS-B-105 HDG,
WITH HILTI HIT RE500-SD ADHESIVE (NOT
INCLUDED), 2 3/4" MINIMUM EMBEDMENT.
7/16" DIAMETER HOLE IN BENT PLATE. INSTALL
PER MANUFACTURER'S INSTRUCTIONS & ICC
REPORT #ESR-2322. SPECIAL INSPECTION IS
REQUIRED FOR ANCHOR INSTALLATION OR
AUTHORITY APPROVED EQUIVALENT.

2 UNITS OR MORE

SEISMIC BRACKETS ARE
INSIDE THE KICKPLATE
CONCRETE FLOOR

DETAIL D
HIDDEN BASE

MIN 5" CLEARANCE

2 UNITS OR MORE
CASE HIDDEN FOR CLARITY

REAR

FRONT

DETAIL B

DETAIL A

SEISMIC BRACKET
FLUSH TO END OF THE BASE

8 HOLES ARE ALWAYS USED FOR EACH SIDE OF
BKT. OUTER HOLES ARE USED FOR CASE TO
CASE JOINTS WITH INSULATED DIVIDER. INNER
HOLES ARE USED FOR CASE TO CASE JOINTS
WITHOUT AN INSULATED DIVIDER.

DETAIL C

DETAIL E
REAR VIEW

SCREW 1/4 x 11IN HEX WASHER
HEAD TEK NUMBER 3 POINT
(64-0085NS) TORQUE 60 INLB

HILTI 3/8" HAS-B-105 OR HAS-B-105 HDG
WITH HILTI HIT RE500-SD ADHESIVE
SYSTEM, (NOT INCLUDED), 2 3/4"
MINIMUM EMBEDMENT. 7/16" DIAMETER
HOLE IN BENT PLATE. INSTALL
PER MANUFACTURER'S INSTRUCTIONS & ICC
REPORT #ESR-2322. SPECIAL INSPECTION
IS REQUIRED FOR ANCHOR INSTALLATION
OR AUTHORITY APPROVED EQUIVALENT.

NOTES:

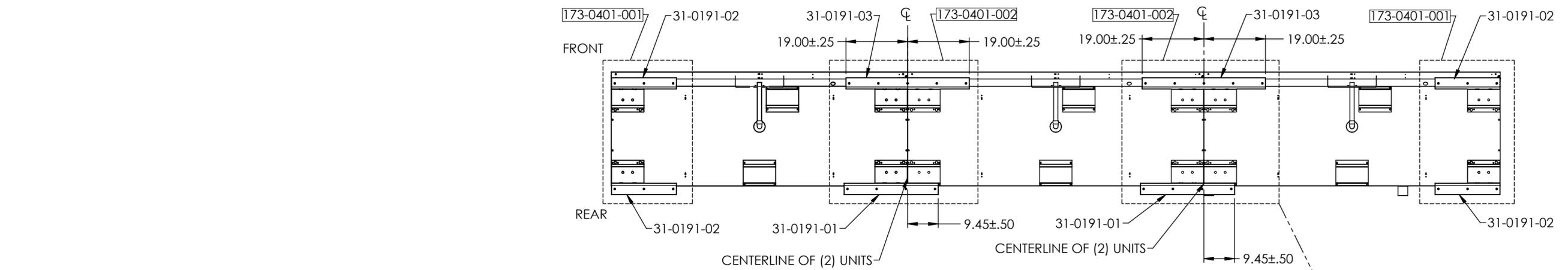
1. NUTS SHALL BE INSTALLED FINGER TIGHT.
2. REVIEW OF THE DESIGN-BUILD PROJECTS AND CONFORMITY TO LOCAL BUILDING CODES IS TO BE DONE BY THE REGISTERED DESIGN PROFESSIONAL.
3. CASES WITH NOMENCLATURE RH ARE SHOWN FOR REF, BUT ALSO APPLY TO RV AND ORMC CASES. (DOES NOT APPLY TO ORMC82D).
4. EXCEPT FOR 1 DOOR RIGHT HAND SWING CASES, BRACKETS MUST BE ATTACHED TO ONE PIECE, 10" LONG SOLID BASES THAT ARE AT LEAST 3-1/2" TALL AND 1" MAXIMUM SHIM HEIGHT UNDER BASES.
5. SEISMIC BRACKETS CANNOT BE USED WITH HAT CHANNELS.

REVISION INFORMATION

No.	DESCRIPTION	CO No.	DATE	BY
03	ADDED CLARIFICATION TO "LAST HOLES..." NOTE. ADD "NOT INCLUDED" TO HILTI FASTENER NOTE. UPDATED HILTI PIN TO CURRENT, ADDED BOMS ON SHEET 2.	4042	2/28/2022	DM

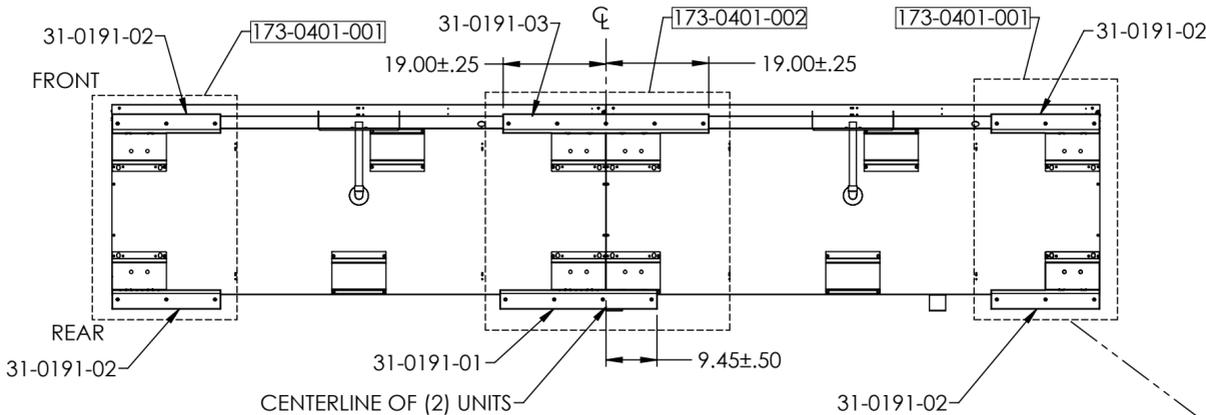
MATERIAL:	NONE
FINISH:	NONE
ZERO ZONE WORKMANSHIP STANDARDS SHALL APPLY PER ES-08-1007 ASME Y14.41-2012 & ASME Y14.5-2009 SHALL APPLY AS REQUIRED. ALL DIMENSIONS IN INCH UNLESS OTHERWISE SPECIFIED.	
SIGNIFICANT DIMENSIONS DENOTED BY (XXX) OR (XXX) AND MUST MEET Cpk ≥ 1.33. CRITICAL DIMENSIONS DENOTED BY (XXX) AND MUST MEET Cpk ≥ 1.66.	
THIS DRAWING AND THE INFORMATION CONTAINED WITHIN IS THE SOLE PROPERTY OF ZERO ZONE, INC. ANY USE OF THIS DOCUMENT OR DISCLOSURE OF ITS CONTENTS, BY REPRODUCTION OR OTHER MEANS, WITHOUT THE WRITTEN CONSENT OF ZERO ZONE, INC. IS STRICTLY PROHIBITED.	

TOLERANCES SHALL APPLY UNLESS OTHERWISE SPECIFIED	ZERO ZONE, INC. 110 NORTH GARBRIDGE DRIVE NORTH PRASIE, WISCONSIN 53193 USA
XX ± .02 XXX ± .005	ASSY Seismic Brackets
SCALE: NOT TO SCALE	DRAWING NO: 173-0401
DATE: 9/7/2021	REVISION: 03
SHEET: 1 OF 2	



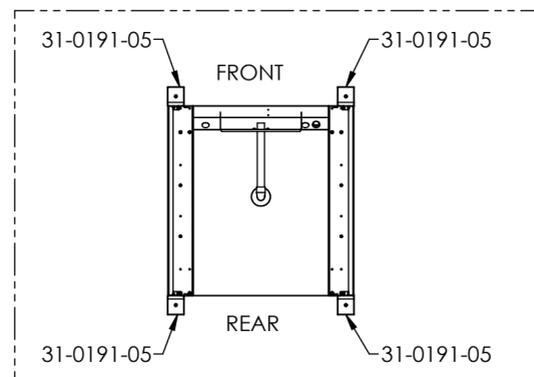
3 UNITS OR MORE
SHOWN STARTING FROM LEFT, CAN BE FROM RIGHT.
BOTTOM VIEW

173-0401-002		
PART NUMBER	DESCRIPTION	QTY.
64-0085NS	SCREW 1/4-14 X 1" HEXWSHRHDTEK #3PT	24
31-0191-03	BRKT SEISMIC	1
31-0191-01	BRKT SEISMIC	1
FIELD SUPPLIED	HILTI 3/8" HAS-B-105 or HAS-B-105 HDG	9



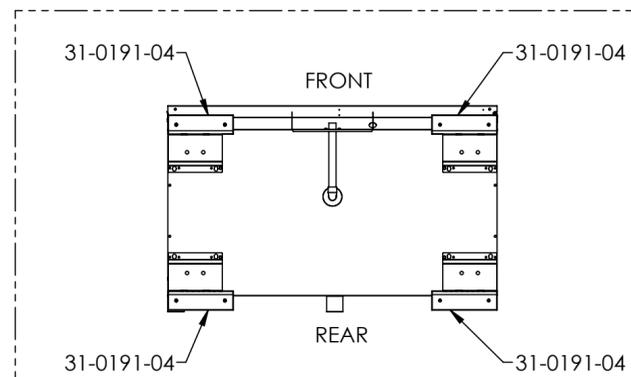
2 UNITS OR MORE
SHOWN STARTING FROM LEFT, CAN BE FROM RIGHT.
BOTTOM VIEW

173-0401-001		
PART NUMBER	DESCRIPTION	QTY.
31-0191-02	BRKT SEISMIC	2
64-0085NS	SCREW 1/4-14 X 1" HEXWSHRHDTEK #3PT	16
FIELD SUPPLIED	HILTI 3/8" HAS-B-105 or HAS-B-105 HDG	6



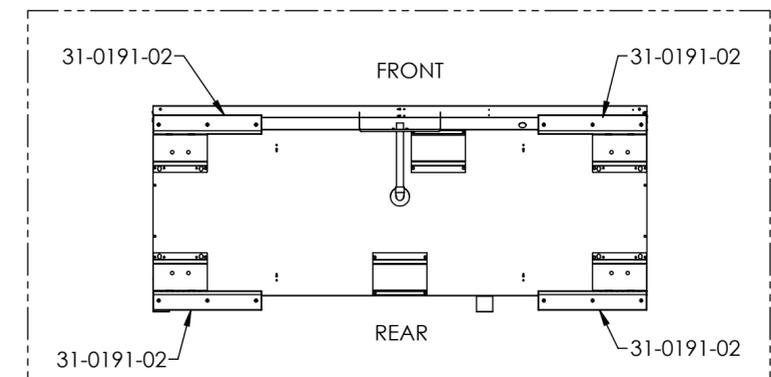
1 UNITS (1 DOOR)
BOTTOM VIEW
173-0401-003 SHOWN

173-0401-003		
PART NUMBER	DESCRIPTION	QTY.
31-0191-05	BRKT SEISMIC	4
64-0085NS	SCREW 1/4-14 X 1" HEXWSHRHDTEK #3PT	20
FIELD INSTALLED	HILTI 3/8" HAS-B-105 or HAS-B-105 HDG	4



1 UNITS (2 DOOR)
BOTTOM VIEW
173-0401-004 SHOWN

173-0401-004		
PART NUMBER	DESCRIPTION	QTY.
31-0191-04	BRKT SEISMIC	4
64-0085NS	SCREW 1/4-14 X 1" HEXWSHRHDTEK #3PT	32
FIELD SUPPLIED	HILTI 3/8" HAS-B-105 or HAS-B-105 HDG	8



1 UNITS 3 DOOR OR MORE
BOTTOM VIEW
173-0401-005 SHOWN

173-0401-005		
PART NUMBER	DESCRIPTION	QTY.
31-0191-02	BRKT SEISMIC	4
64-0085NS	SCREW 1/4-14 X 1" HEXWSHRHDTEK #3PT	32
FIELD SUPPLIED	HILTI 3/8" HAS-B-105 or HAS-B-105 HDG	12

NOTE:
1. BRACKETS ON END OF CASE MUST BE FLUSH TO END OF BASE.

REVISION INFORMATION

No.	DESCRIPTION	CO No.	DATE	BY
03	ADDED CLARIFICATION TO "LAST HOLES..." NOTE. ADD "NOT INCLUDED" TO HILTI FASTENER NOTE. UPDATED HILTI PIN TO CURRENT, ADDED BOMS ON SHEET 2.	4042	2/28/2022	DM

MATERIAL: NONE	TOLERANCES SHALL APPLY UNLESS OTHERWISE SPECIFIED X = ± .1 XX = ± .02 .XXX = ± .005	ZERO ZONE, INC. 110 NORTH OAKRIDGE DRIVE NORTH PRairie, WISCONSIN 53153 USA DESCRIPTION: ASSY Seismic Brackets
FINISH: NONE	ZERO ZONE WORKMANSHIP STANDARDS SHALL APPLY PER ES-08-1007 ASME Y14.41-2012 & ASME Y14.5-2009 SHALL APPLY AS REQUIRED ALL DIMENSIONS IN INCH UNLESS OTHERWISE SPECIFIED COPYRIGHT INFORMATION THIS DRAWING AND THE INFORMATION CONTAINED WITHIN IS THE SOLE PROPERTY OF ZERO ZONE, INC. ANY USE OF THIS DOCUMENT OR DISCLOSURE OF ITS CONTENTS, BY REPRODUCTION OR OTHER MEANS, WITHOUT THE WRITTEN CONSENT OF ZERO ZONE, INC. IS STRICTLY PROHIBITED.	
NOT TO SCALE CAD DRAWING NO MANUAL REVISIONS		DRAWING NO: 173-0401 DATE: 9/7/2021 SHEET: 2 OF 2