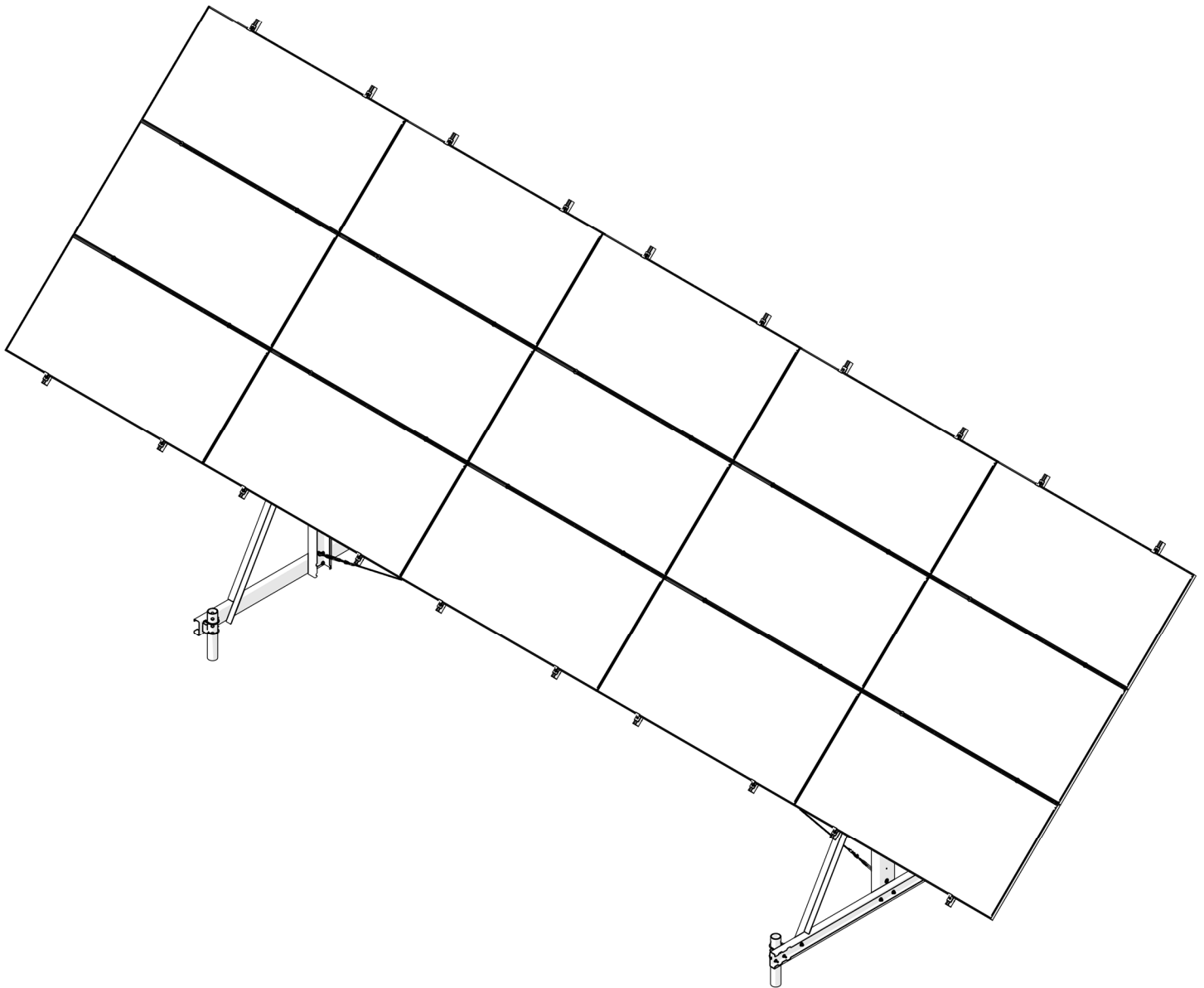


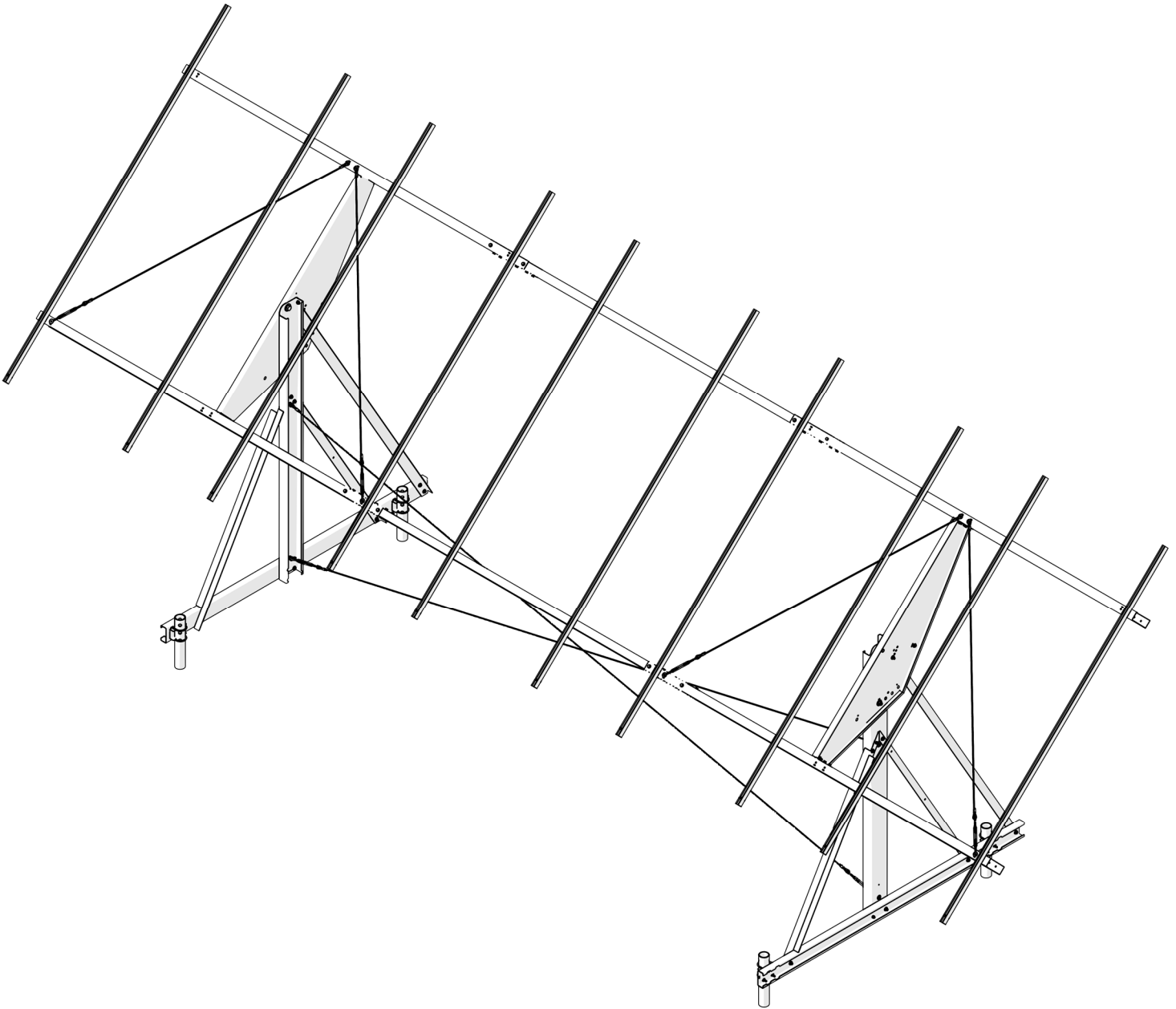
ASSEMBLY INSTRUCTIONS

SunRanger® ST-15L



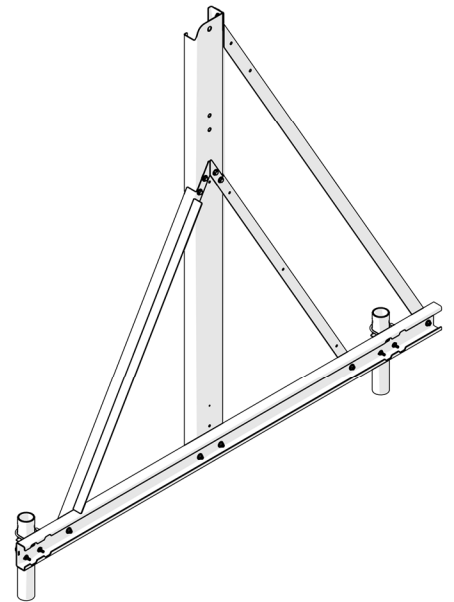
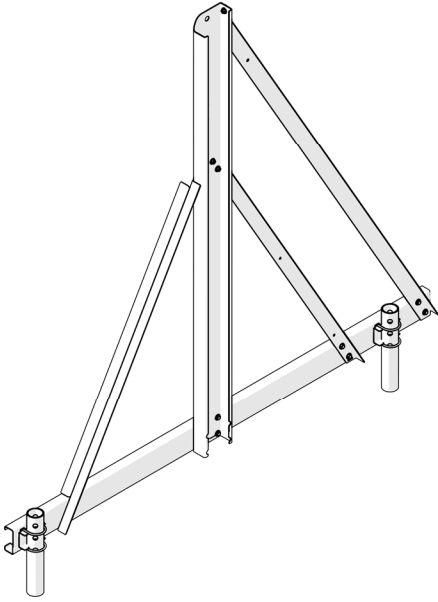
WITHOUT SOLAR PANELS

Assembled View



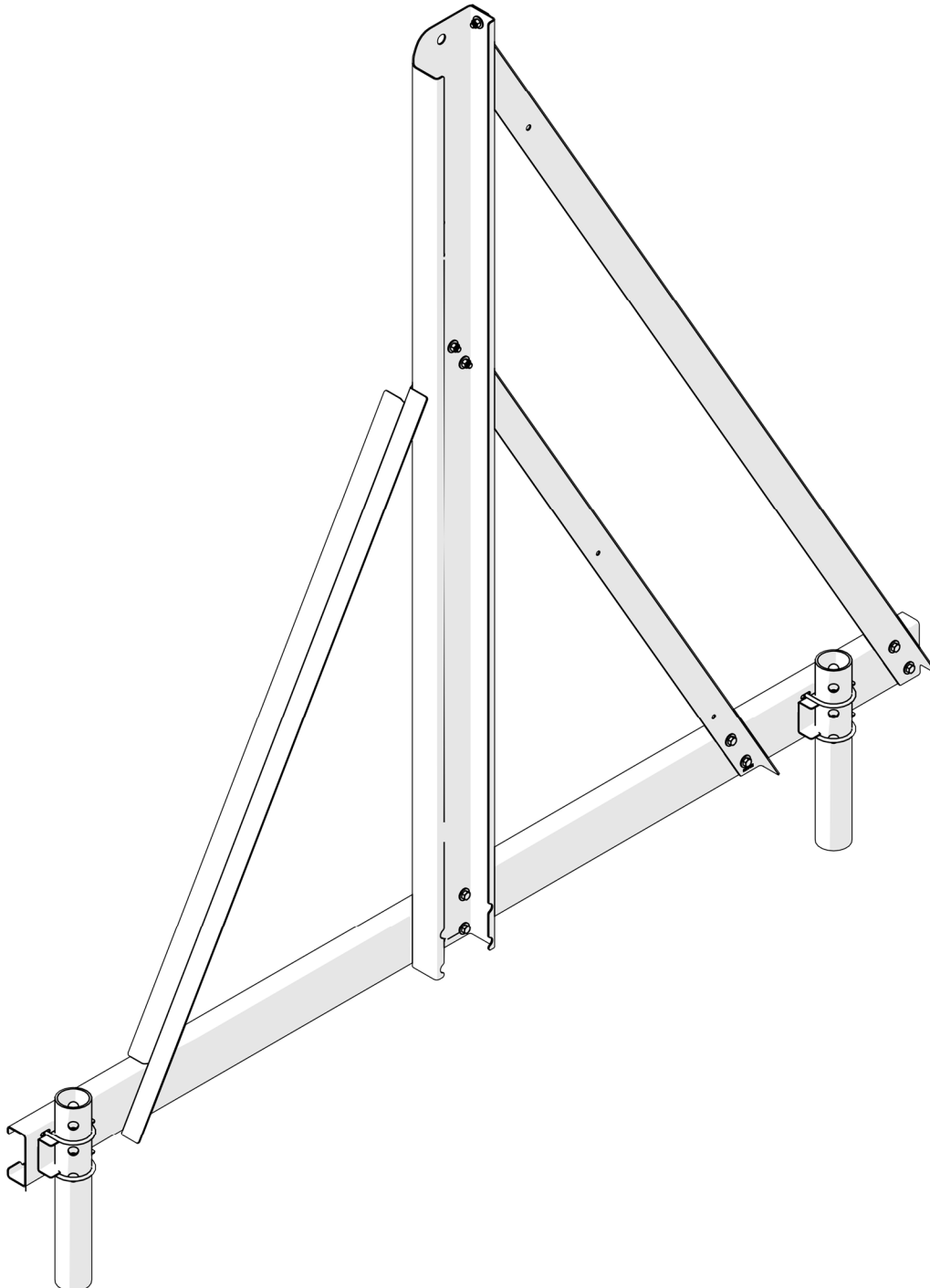
LEGS

East & West Assembled View



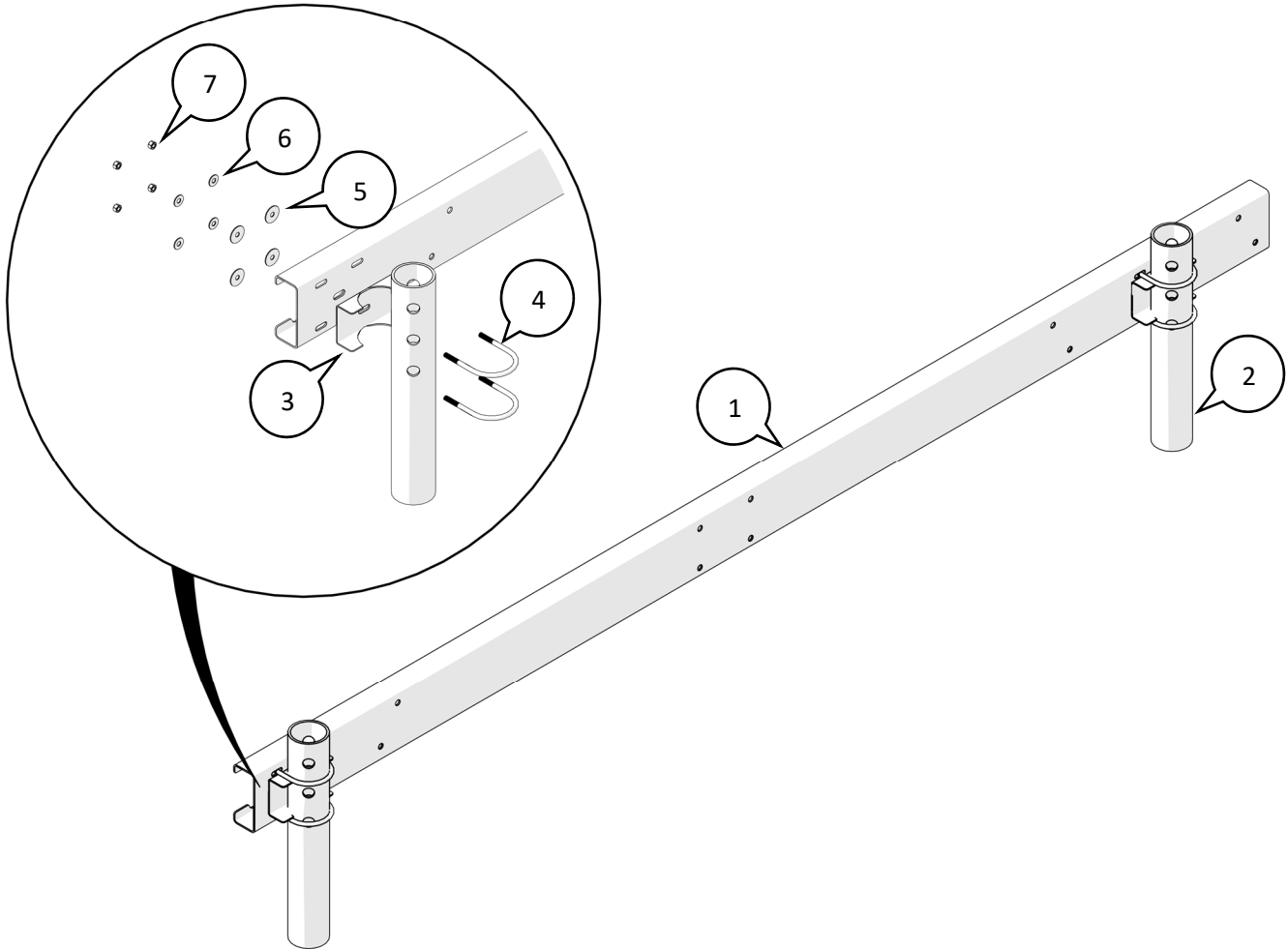
WEST LEG

Assembled View



WEST LEG

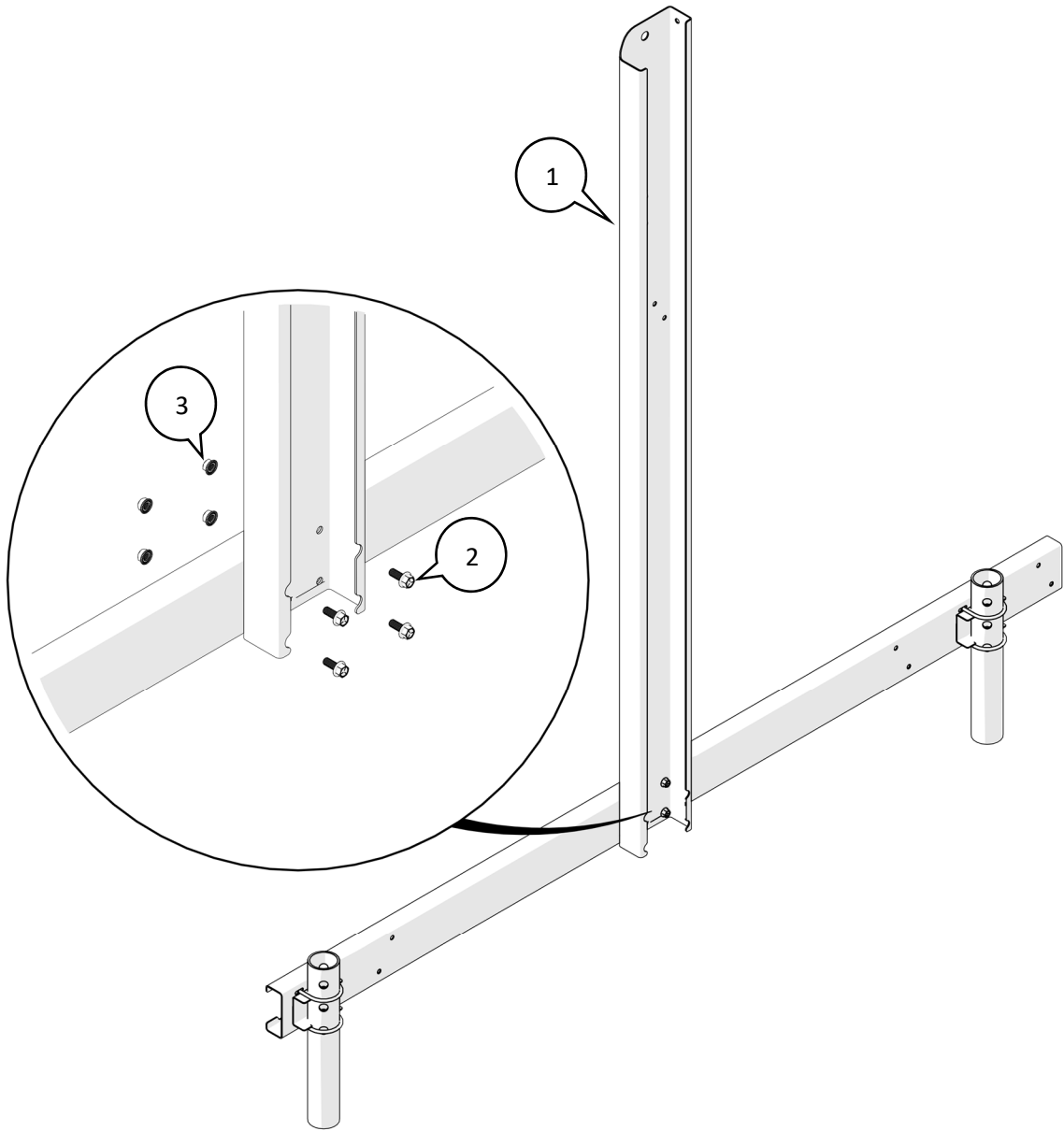
Base Beam Assembly View



ITEM NO.	DESCRIPTION	QTY
1	BASE BEAM - WEST	1
2	HELICAL SCREW PILE	2
3	PILE ADAPTER	2
4	U-BOLT	4
5	3/8" FENDER WASHER	8
6	3/8" WASHER	8
7	3/8" NUT	8

WEST LEG

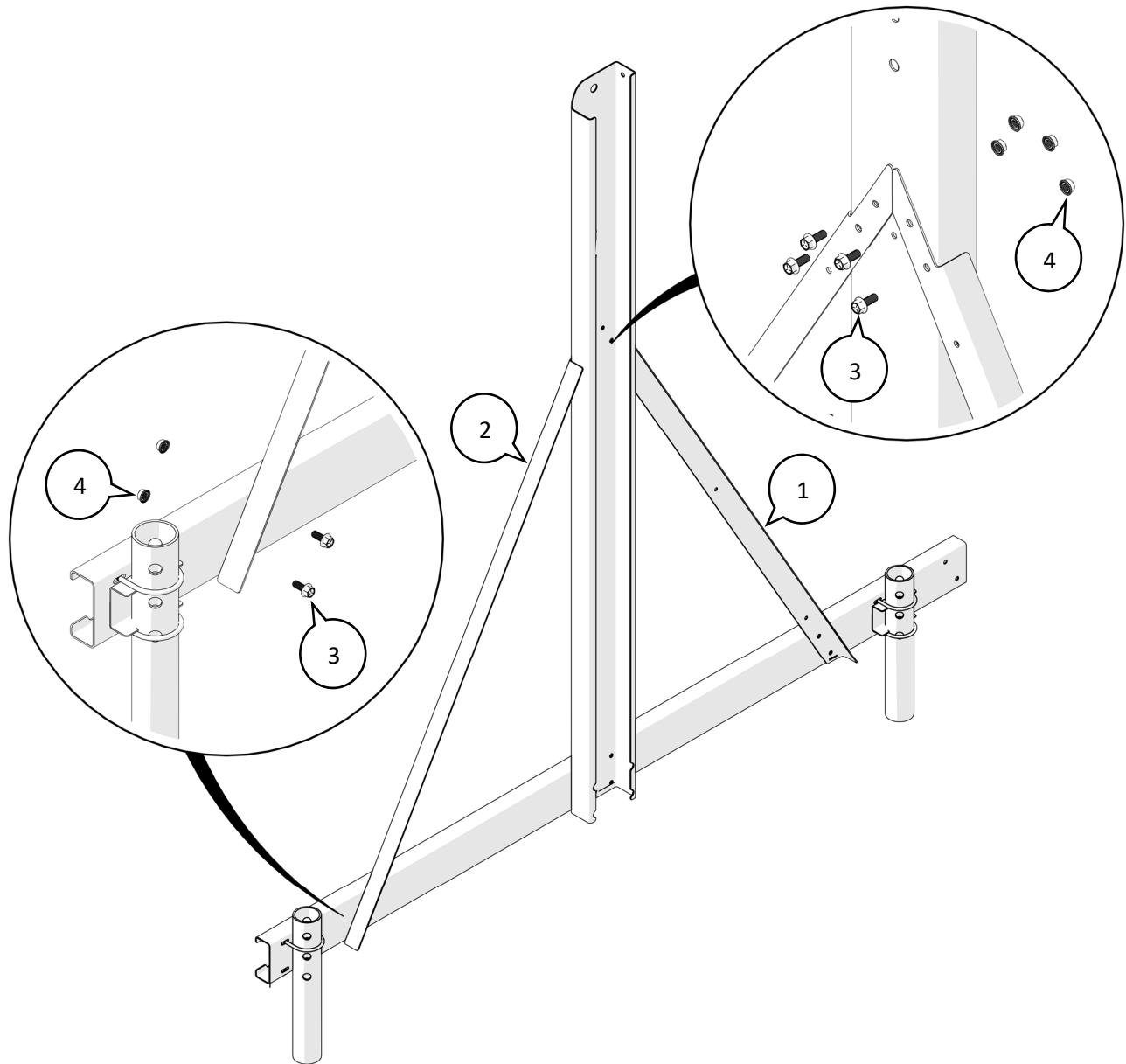
Leg Assembly View



ITEM NO.	DESCRIPTION	QTY
1	LEG - WEST	1
2	1/2" x 1 1/4" SERRATED FLANGE BOLT	4
3	1/2" SERRATED FLANGE NUT	4

WEST LEG

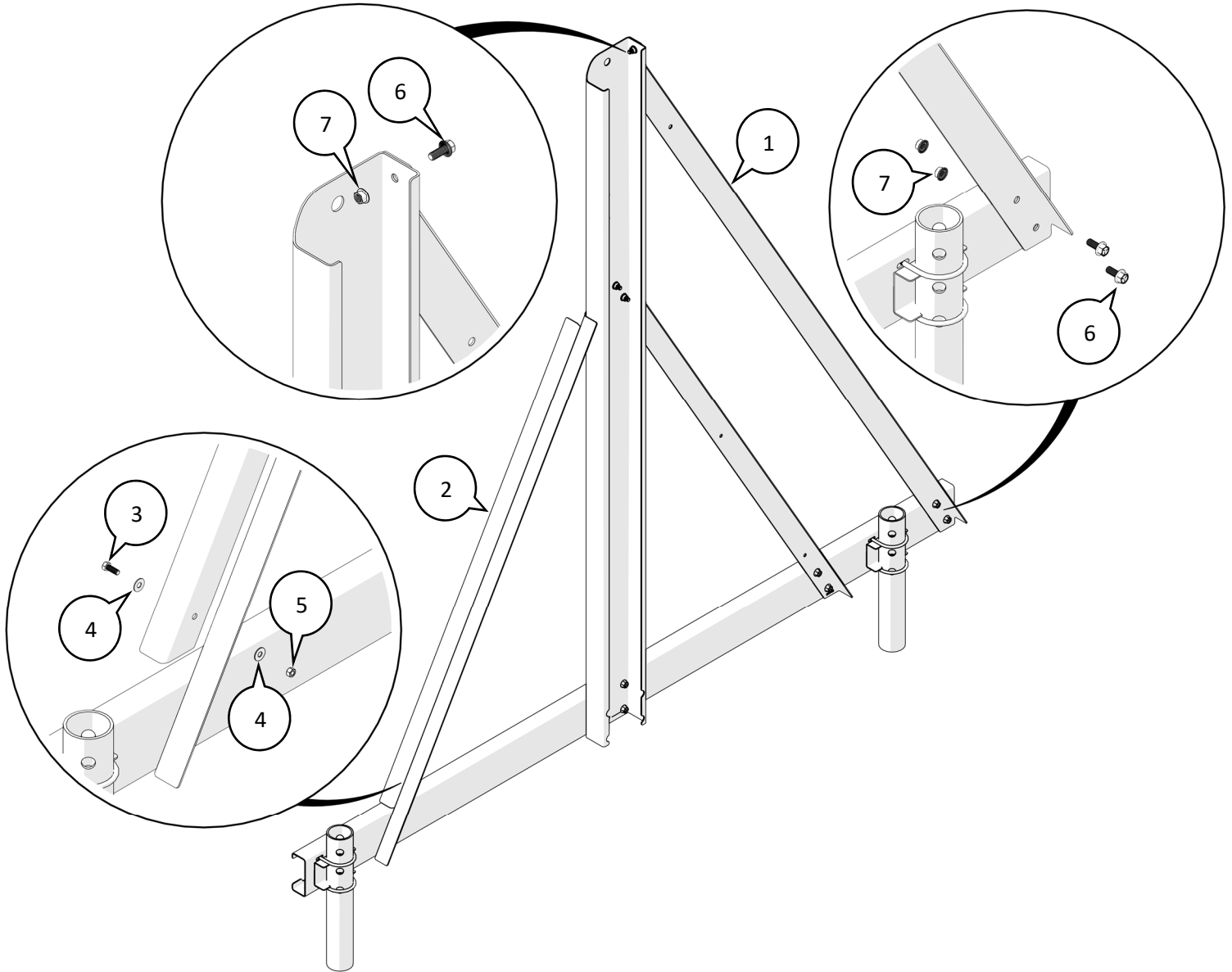
Braces Assembly View



ITEM NO.	DESCRIPTION	QTY
1	BRACE – NW/SE	1
2	BRACE – NE/SW	1
3	1/2" x 1 1/4" SERRATED FLANGE BOLT	8
4	1/2" SERRATED FLANGE NUT	8

WEST LEG

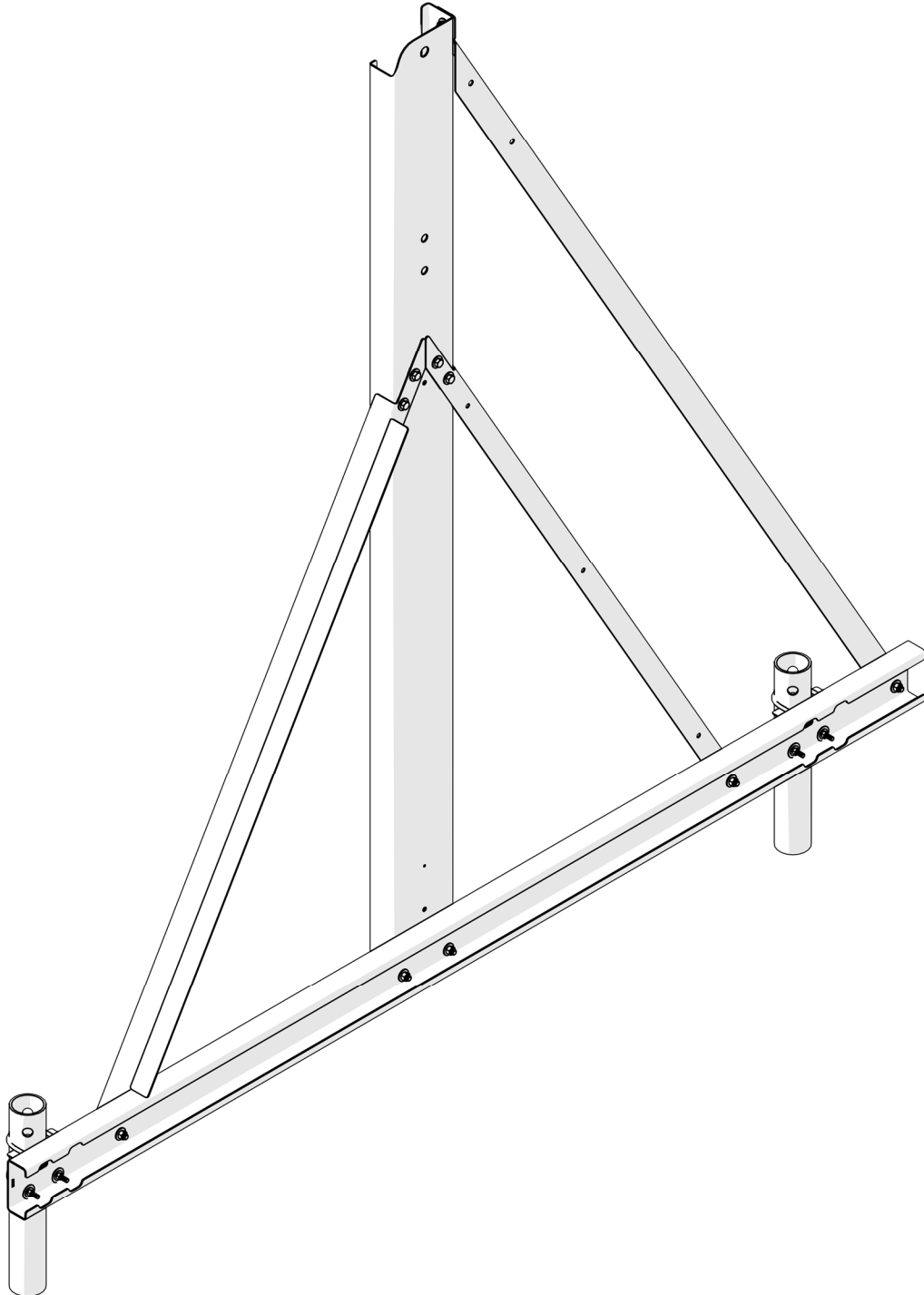
High Wind Assembly View



ITEM NO.	DESCRIPTION	QTY
1	HIGH WIND BRACE – WEST (OPTIONAL)	1
2	REINFORCEMENT BRACE (OPTIONAL)	1
3	3/8" x 1" BOLT	3
4	3/8" WASHER	6
5	3/8" NUT	3
6	1/2" x 1 1/4" SERRATED FLANGE BOLT	3
7	1/2" SERRATED FLANGE NUT	3

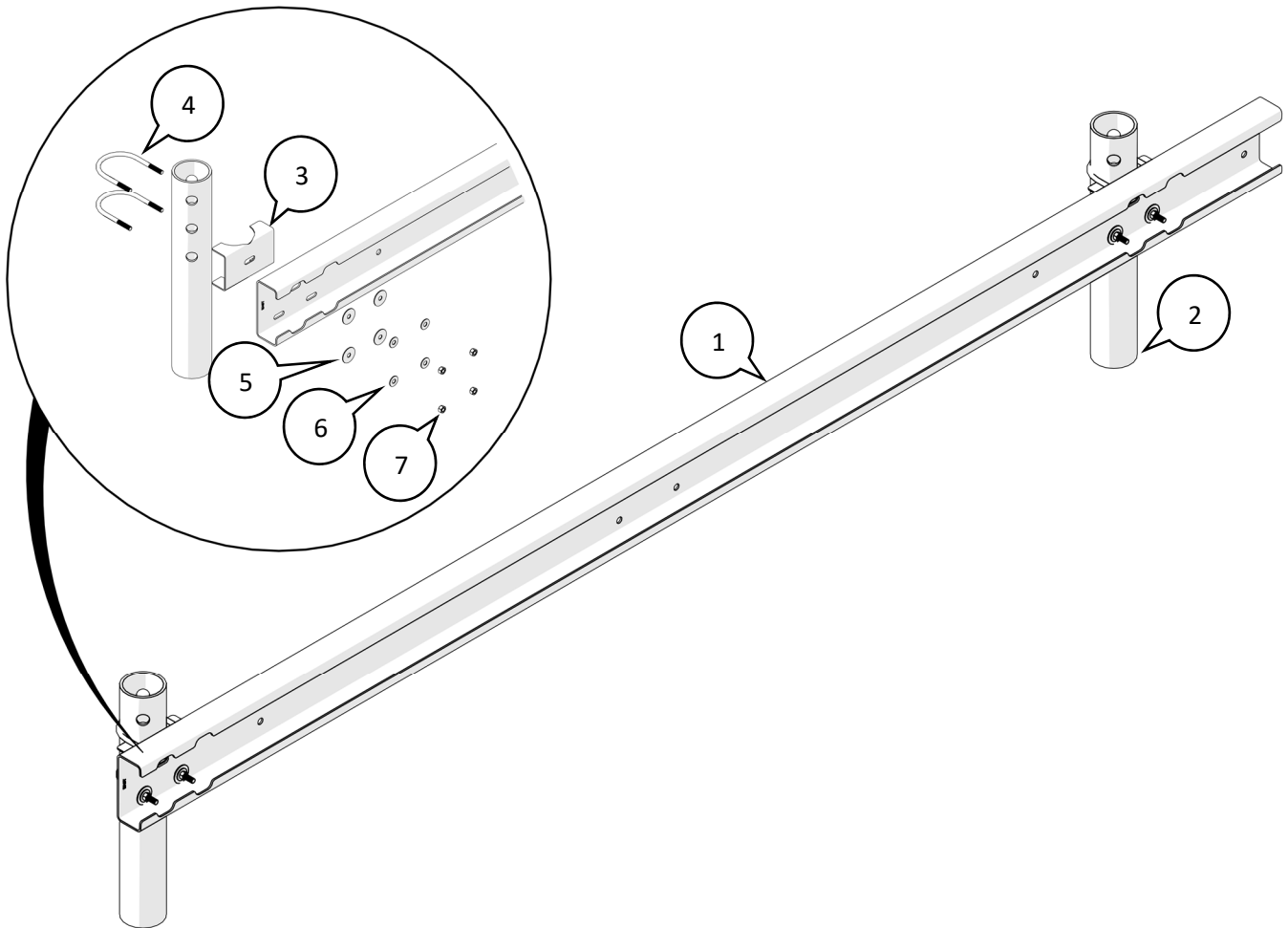
EAST LEG

Assembled View



EAST LEG

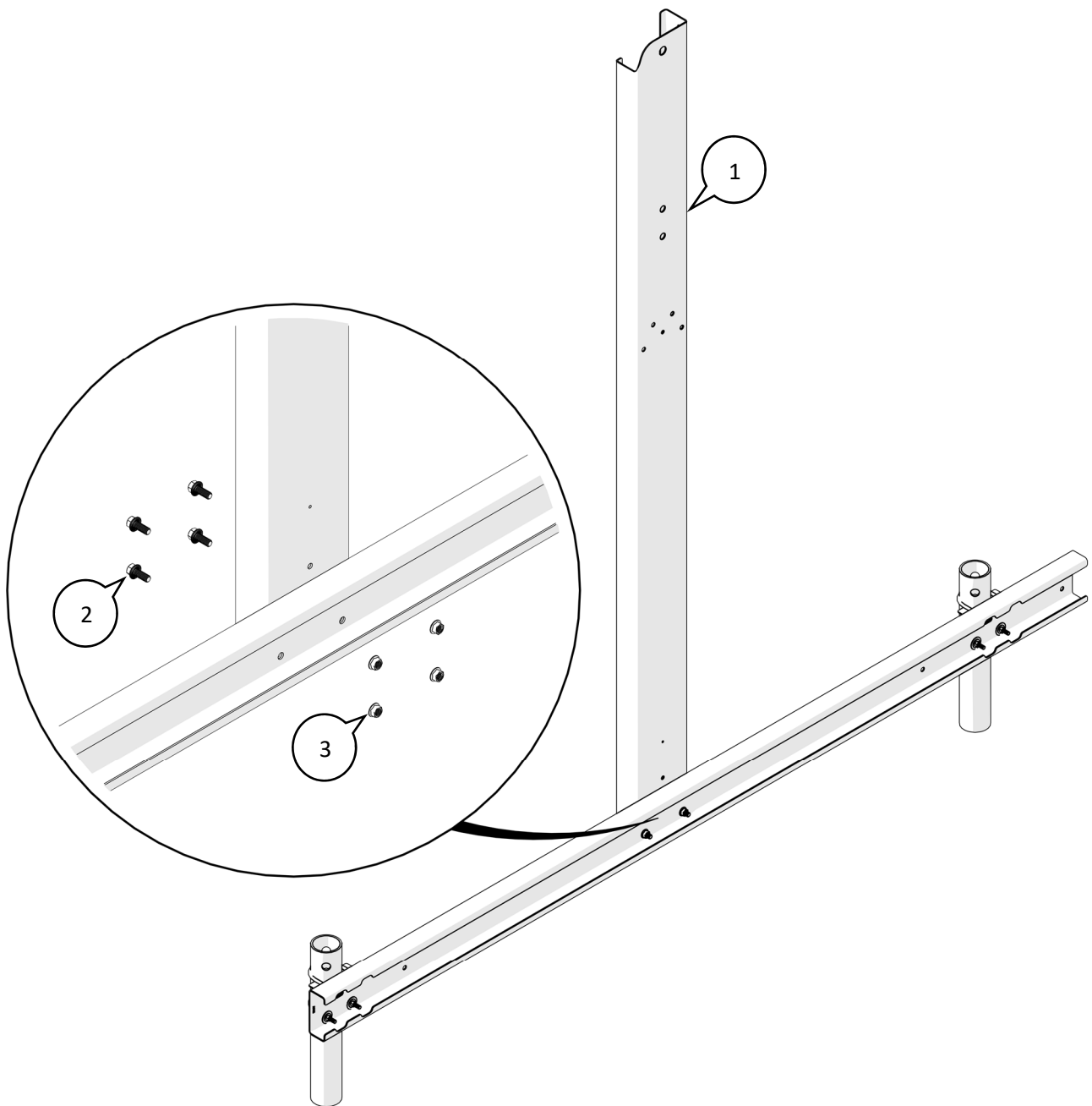
Base Beam Assembly View



ITEM NO.	DESCRIPTION	QTY
1	BASE BEAM - EAST	1
2	HELICAL SCREW PILE	2
3	PILE ADAPTER	2
4	U-BOLT	4
5	3/8" FENDER WASHER	8
6	3/8" WASHER	8
7	3/8" NUT	8

EAST LEG

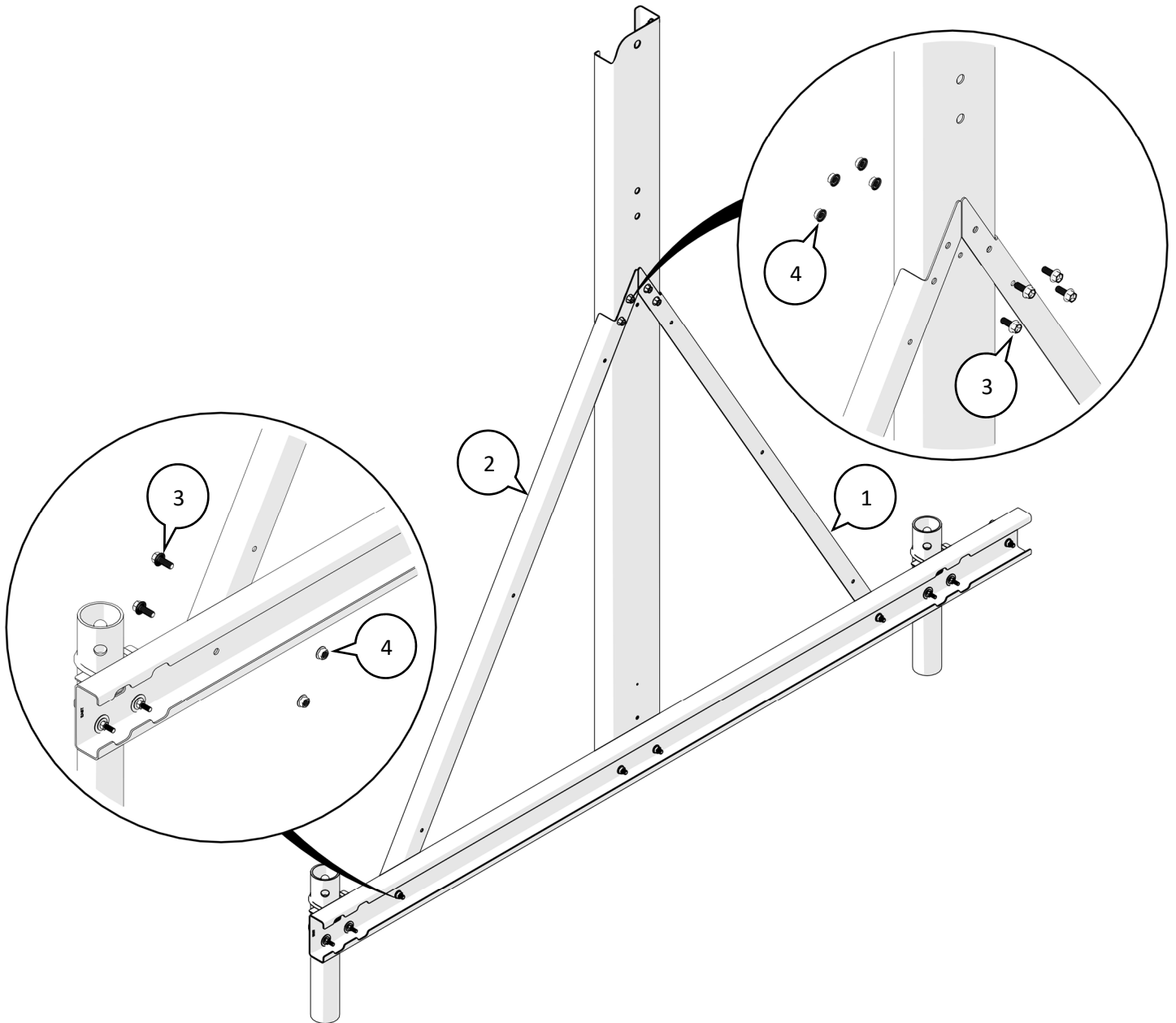
Leg Assembly View



ITEM NO.	DESCRIPTION	QTY
1	LEG - EAST	1
2	1/2" x 1 1/4" SERRATED FLANGE BOLT	4
3	1/2" SERRATED FLANGE NUT	4

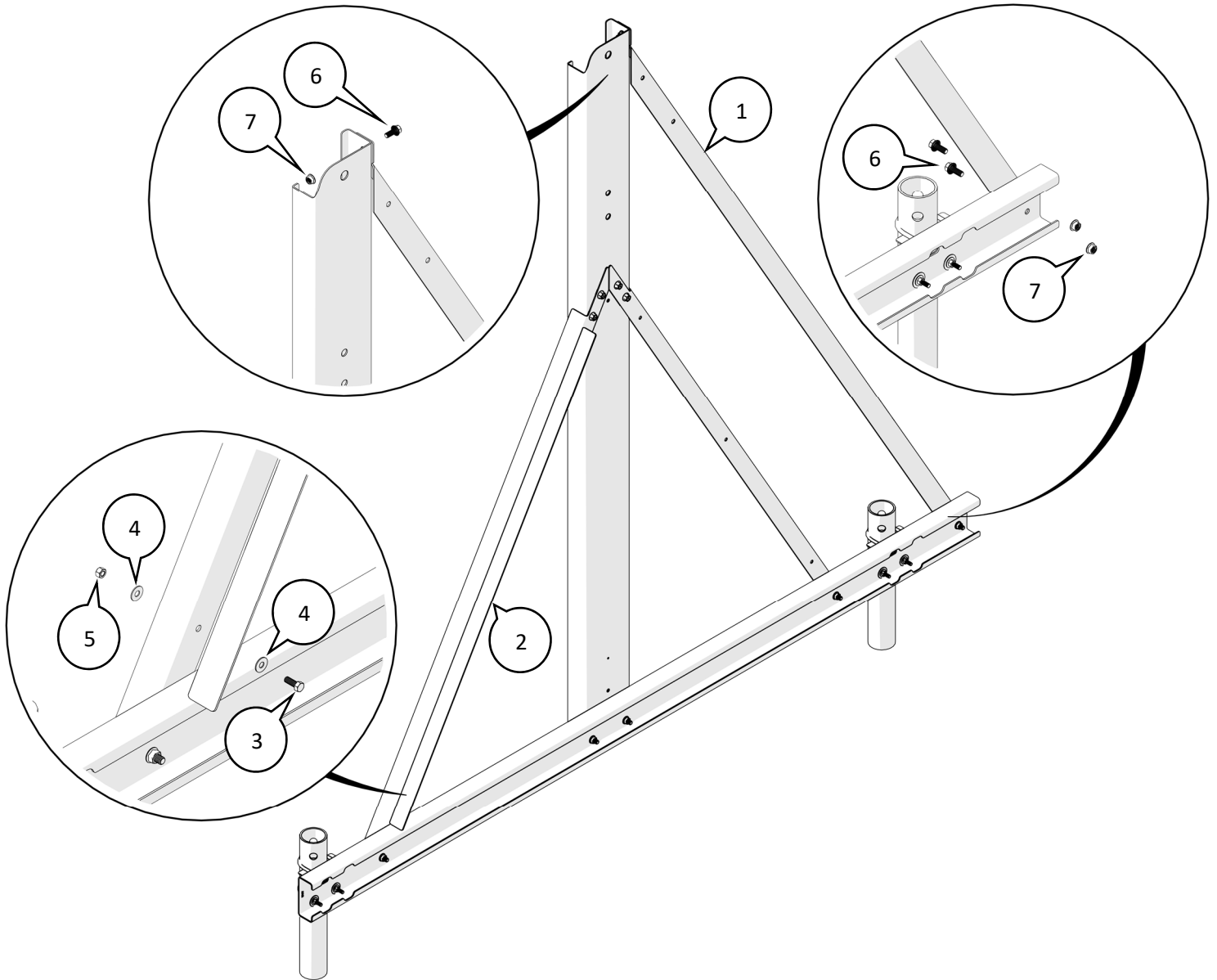
EAST LEG

Braces Assembly View



ITEM NO.	DESCRIPTION	QTY
1	BRACE – NE/SW	1
2	BRACE – NW/SE	1
3	1/2" x 1 1/4" SERRATED FLANGE BOLT	8
4	1/2" SERRATED FLANGE NUT	8

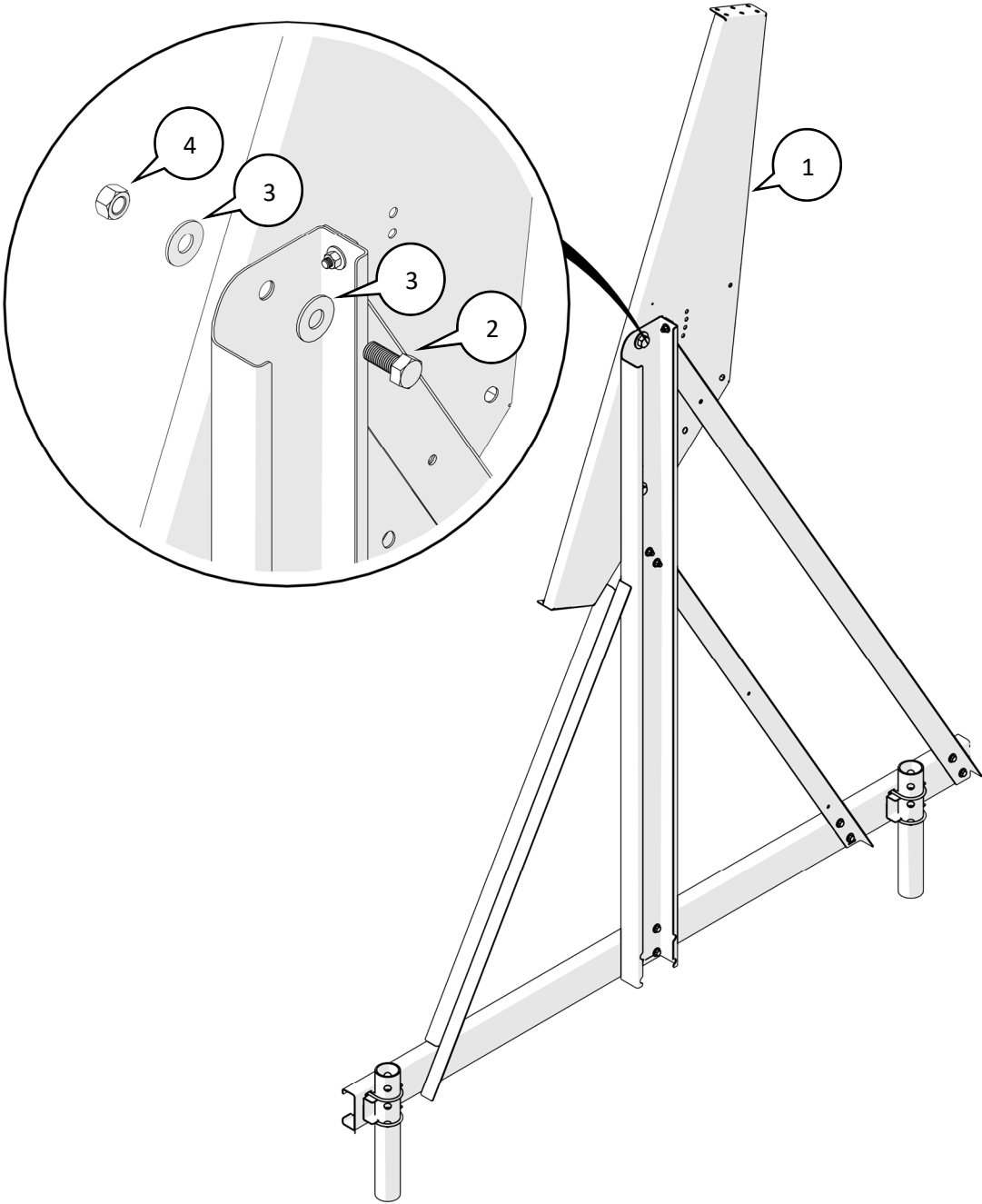
EAST LEG High Wind Assembly View



ITEM NO.	DESCRIPTION	QTY
1	HIGH WIND BRACE – EAST (OPTIONAL)	1
2	REINFORCEMENT BRACE (OPTIONAL)	1
3	3/8" x 1" BOLT	3
4	3/8" WASHER	6
5	3/8" NUT	3
6	1/2" x 1 1/4" SERRATED FLANGE BOLT	3
7	1/2" SERRATED FLANGE NUT	3

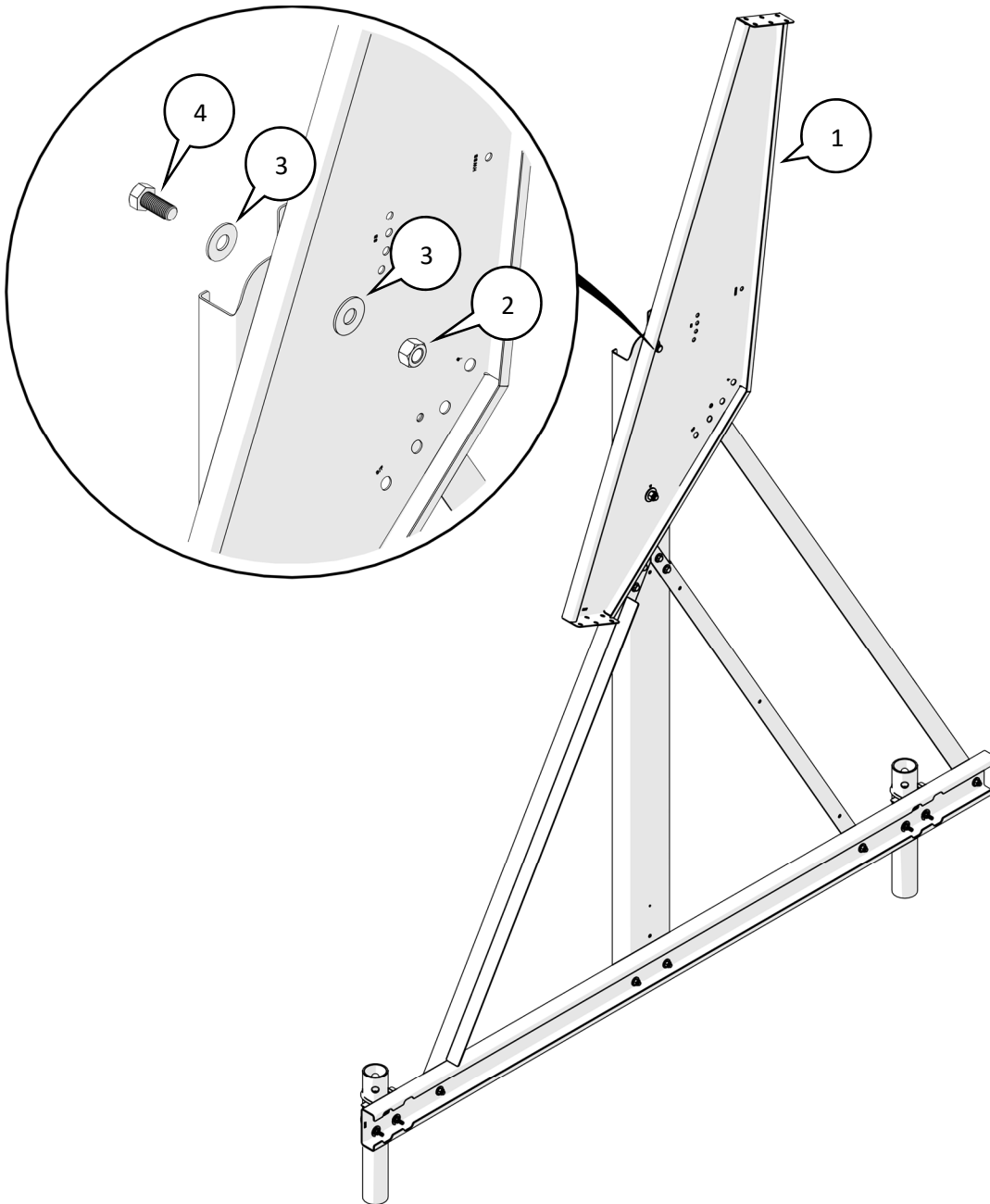
WEST PIVOT PLATE

Assembly View



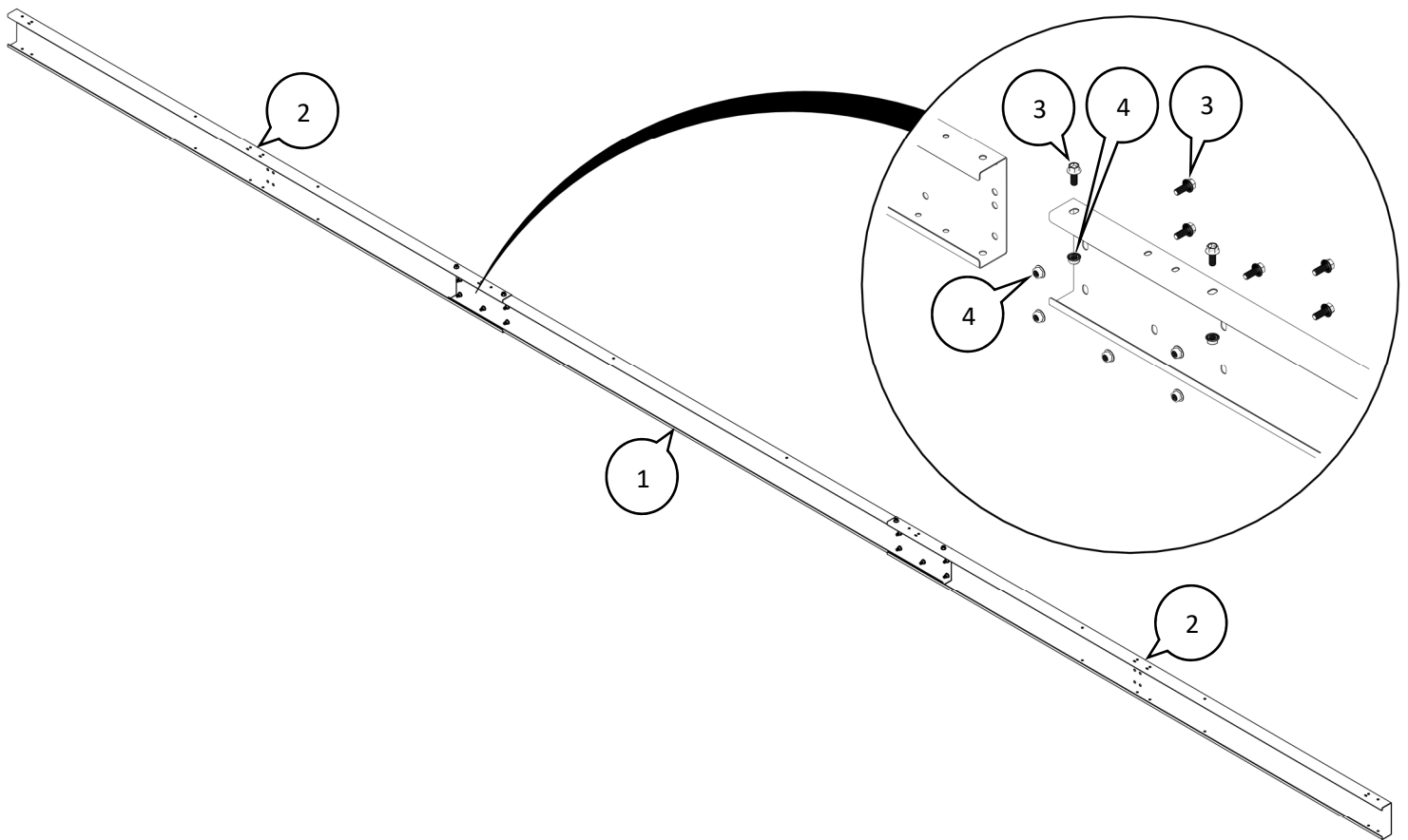
ITEM NO.	DESCRIPTION	QTY
1	PIVOT PLATE – WEST	1
2	1" x 2 ¼" BOLT	1
3	1" WASHER	2
4	1" NUT	1

EAST PIVOT PLATE Assembly View



ITEM NO.	DESCRIPTION	QTY
1	PIVOT PLATE – EAST	1
2	1" x 2 1/4" BOLT	1
3	1" WASHER	2
4	1" NUT	1

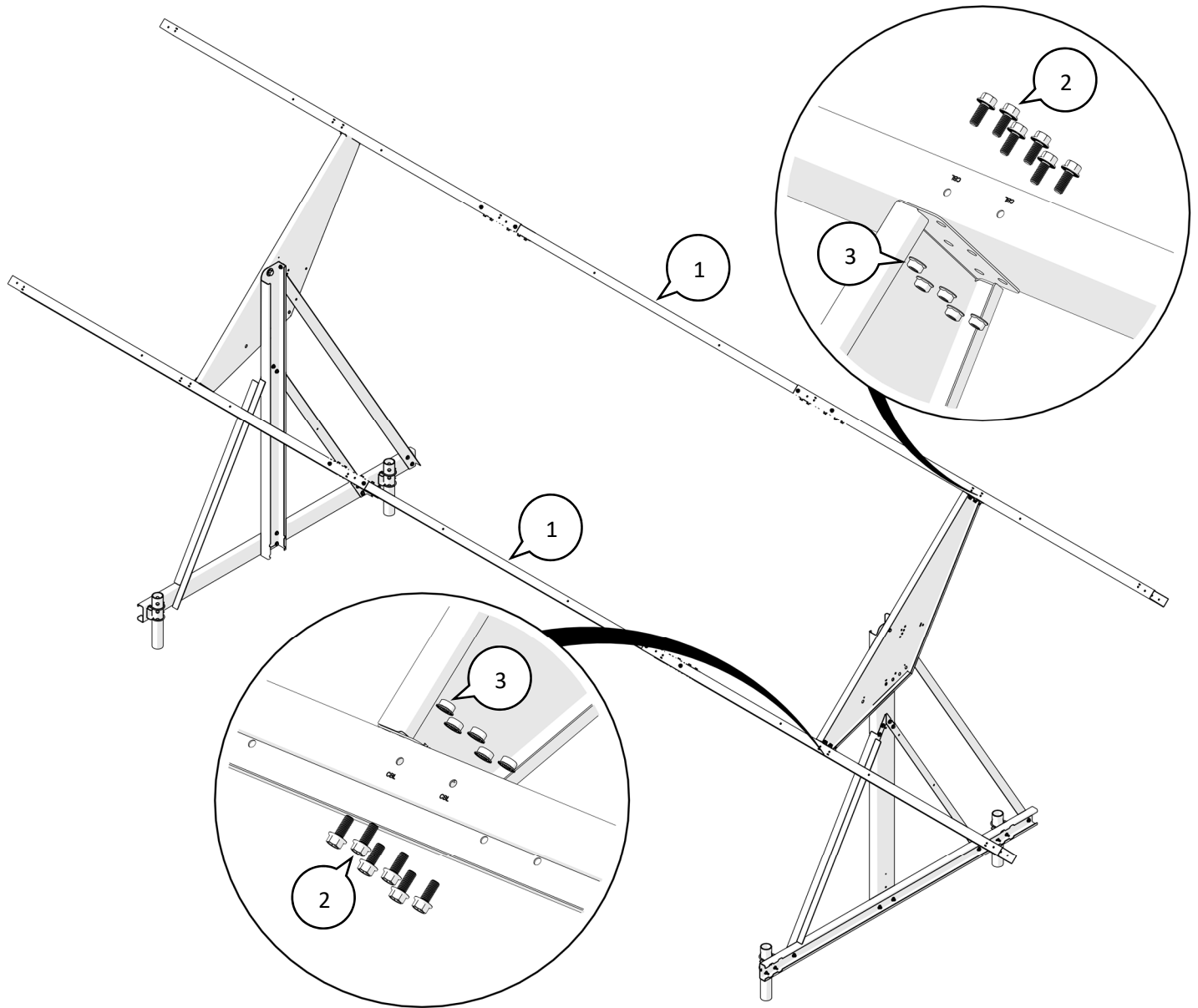
MAIN BEAM Pre-Assembly View



**2 of Main Beam Assemblies Required*

ITEM NO.	DESCRIPTION	QTY
1	MAIN BEAM 3PC - INNER	1
2	MAIN BEAM 3PC - OUTER	2
3	1/2" x 1 1/4" SERRATED FLANGE BOLT	14
4	1/2" SERRATED FLANGE NUT	14

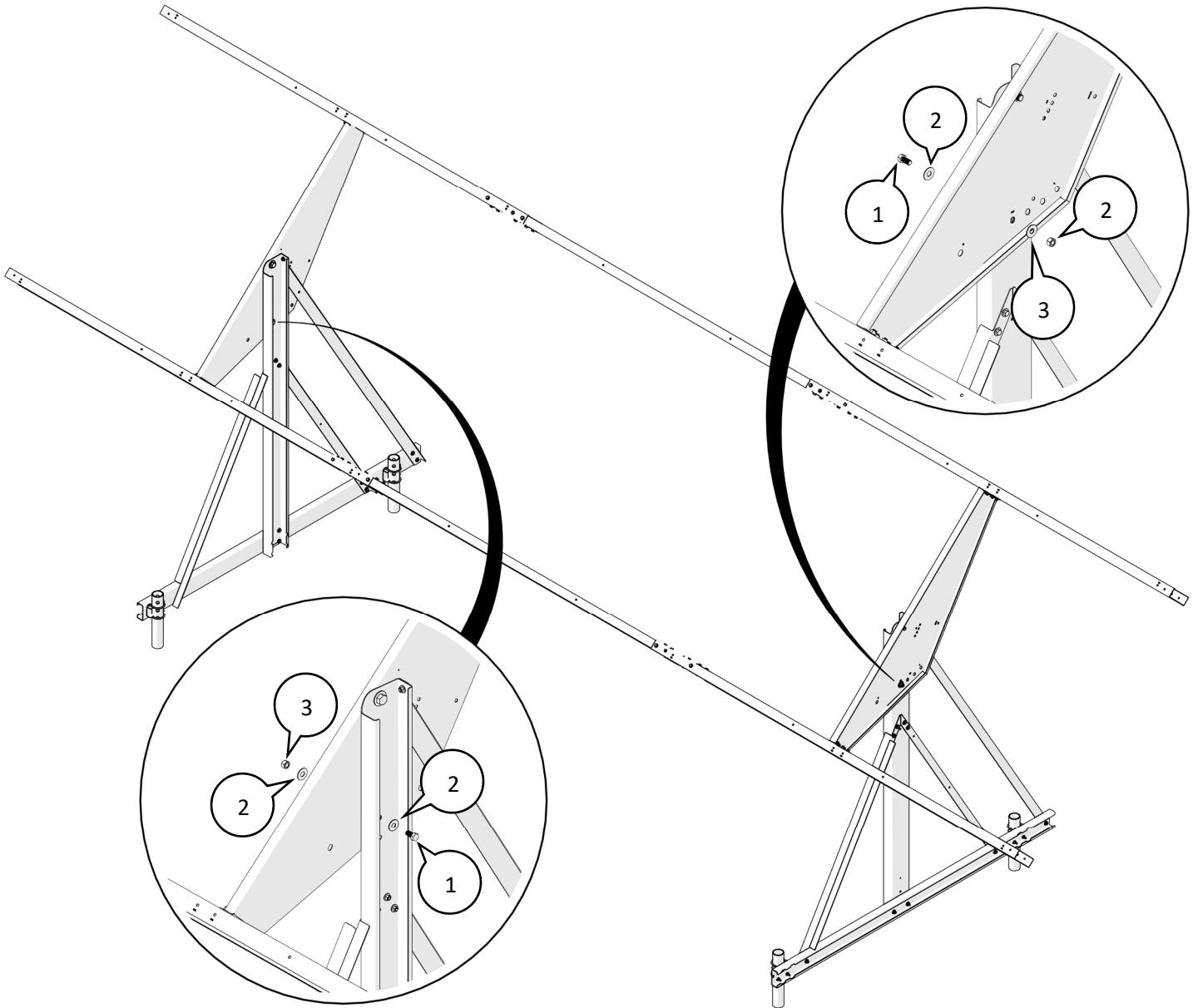
MAIN BEAM Assembly View



ITEM NO.	DESCRIPTION	QTY
1	MAIN BEAM 3PC ASSEMBLY	2
2	1/2" x 1 1/4" SERRATED FLANGE BOLT	24
3	1/2" SERRATED FLANGE NUT	24

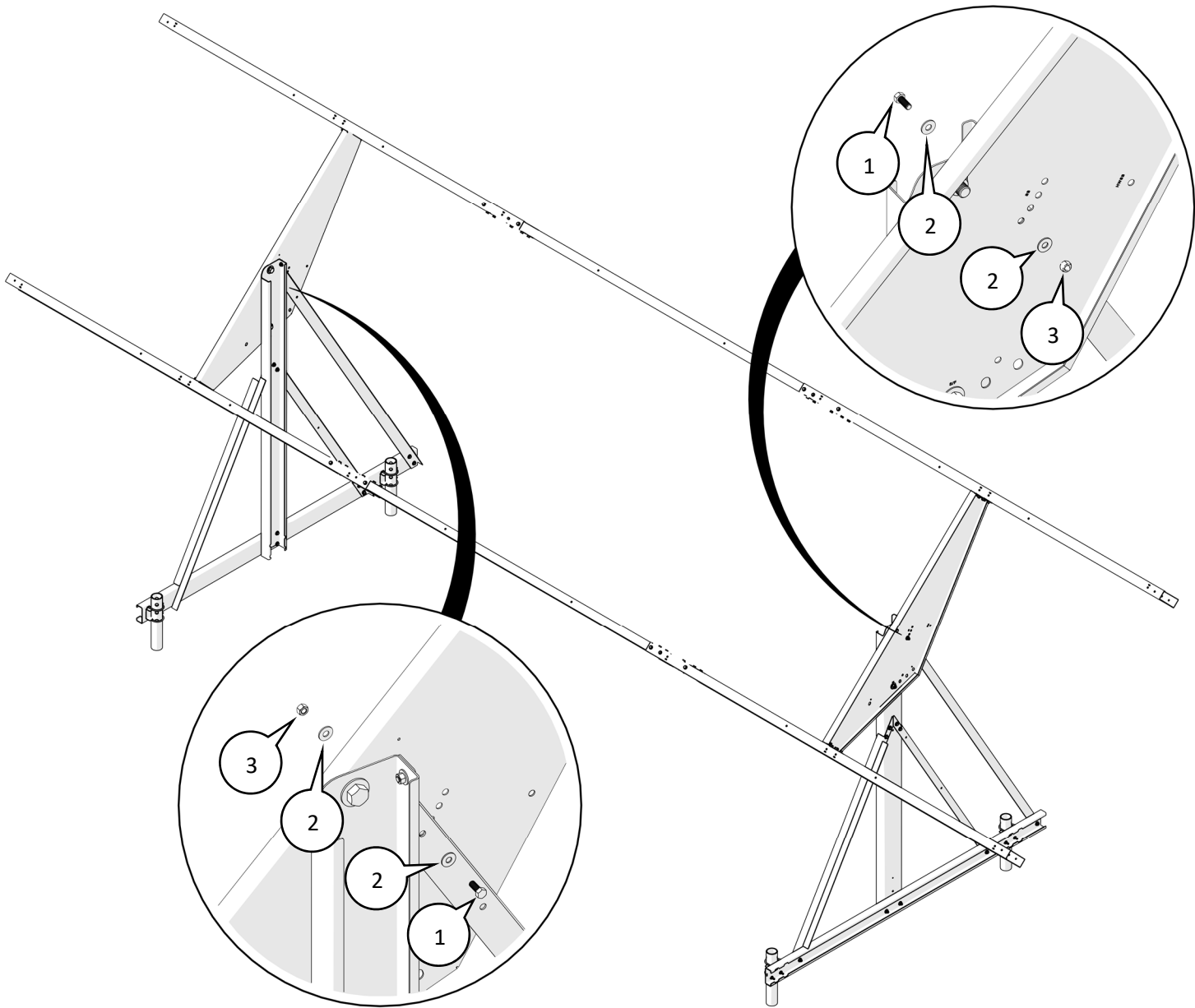
PIVOT PLATE

Seasonal Tilt Primary Bolt



ITEM NO.	DESCRIPTION	QTY
1	3/4" x 1 1/2" BOLT	2
2	3/4" WASHER	4
3	3/4" NUT	2

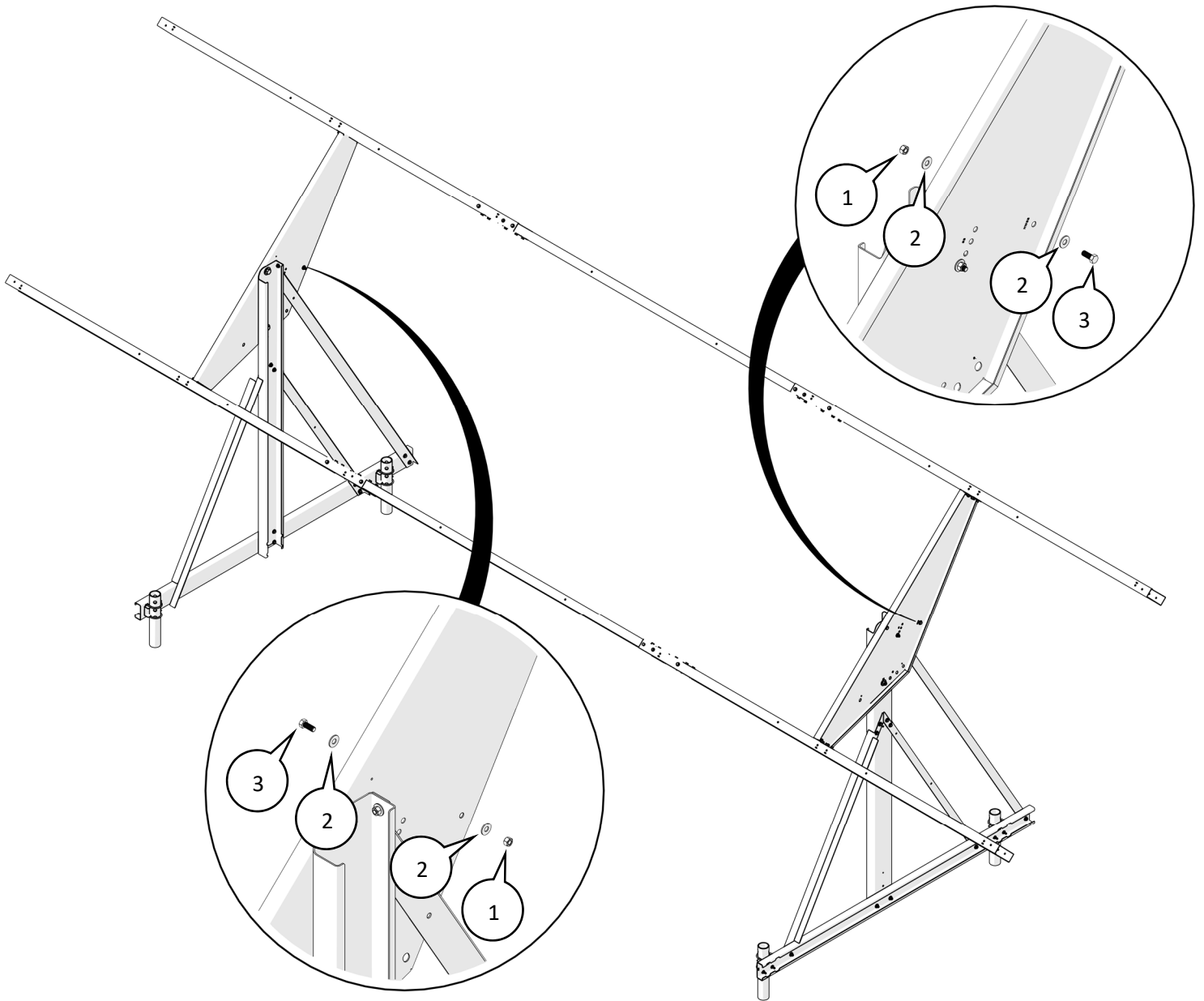
PIVOT PLATE
Seasonal Tilt Secondary Bolt



ITEM NO.	DESCRIPTION	QTY
1	1/2" x 1 1/4" BOLT	2
2	1/2" WASHER	4
3	1/2" NUT	2

PIVOT PLATE

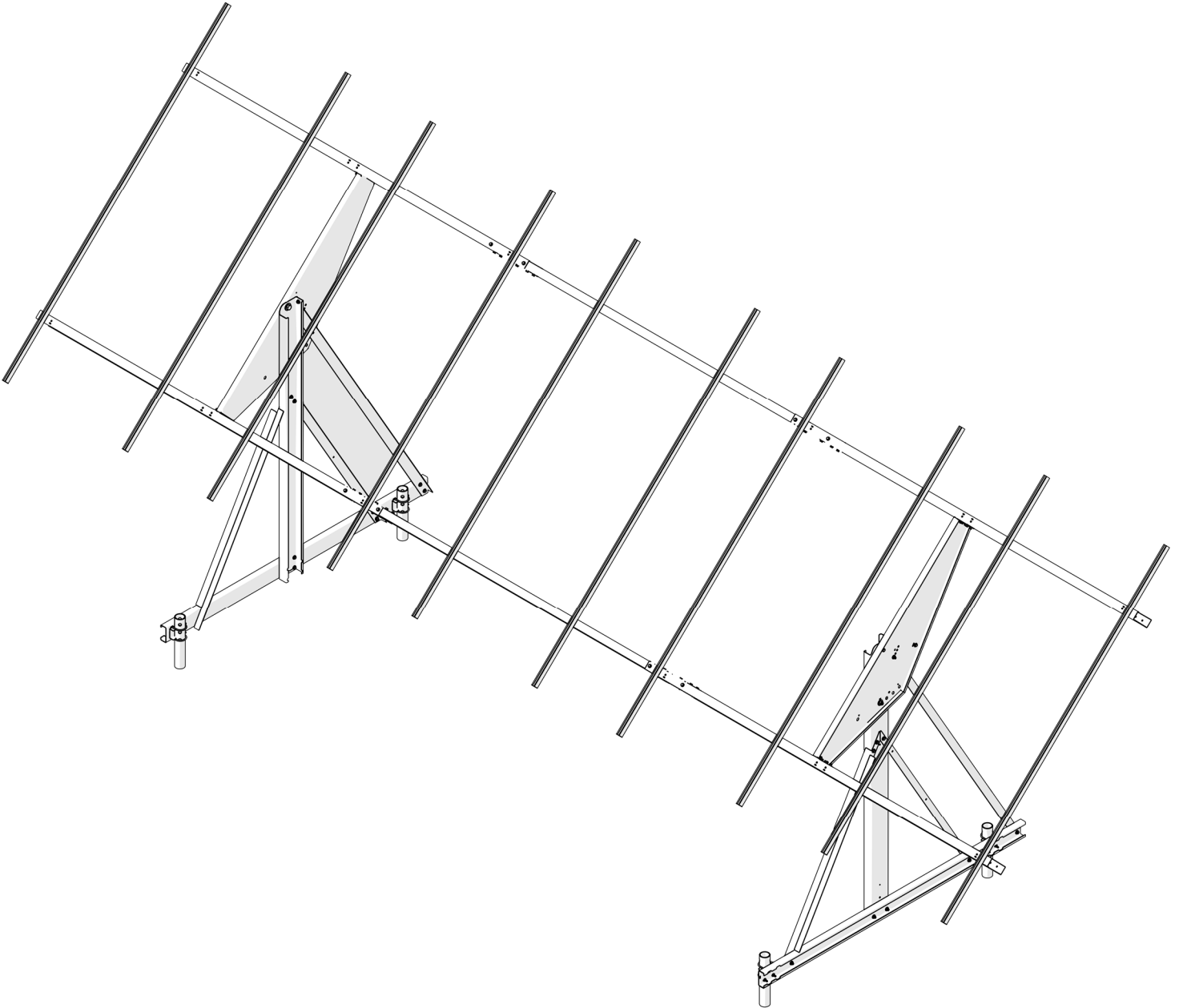
High Wind Safety Bolt



ITEM NO.	DESCRIPTION	QTY
1	1/2" x 1 1/4" BOLT	2
2	1/2" WASHER	4
3	1/2" NUT	2

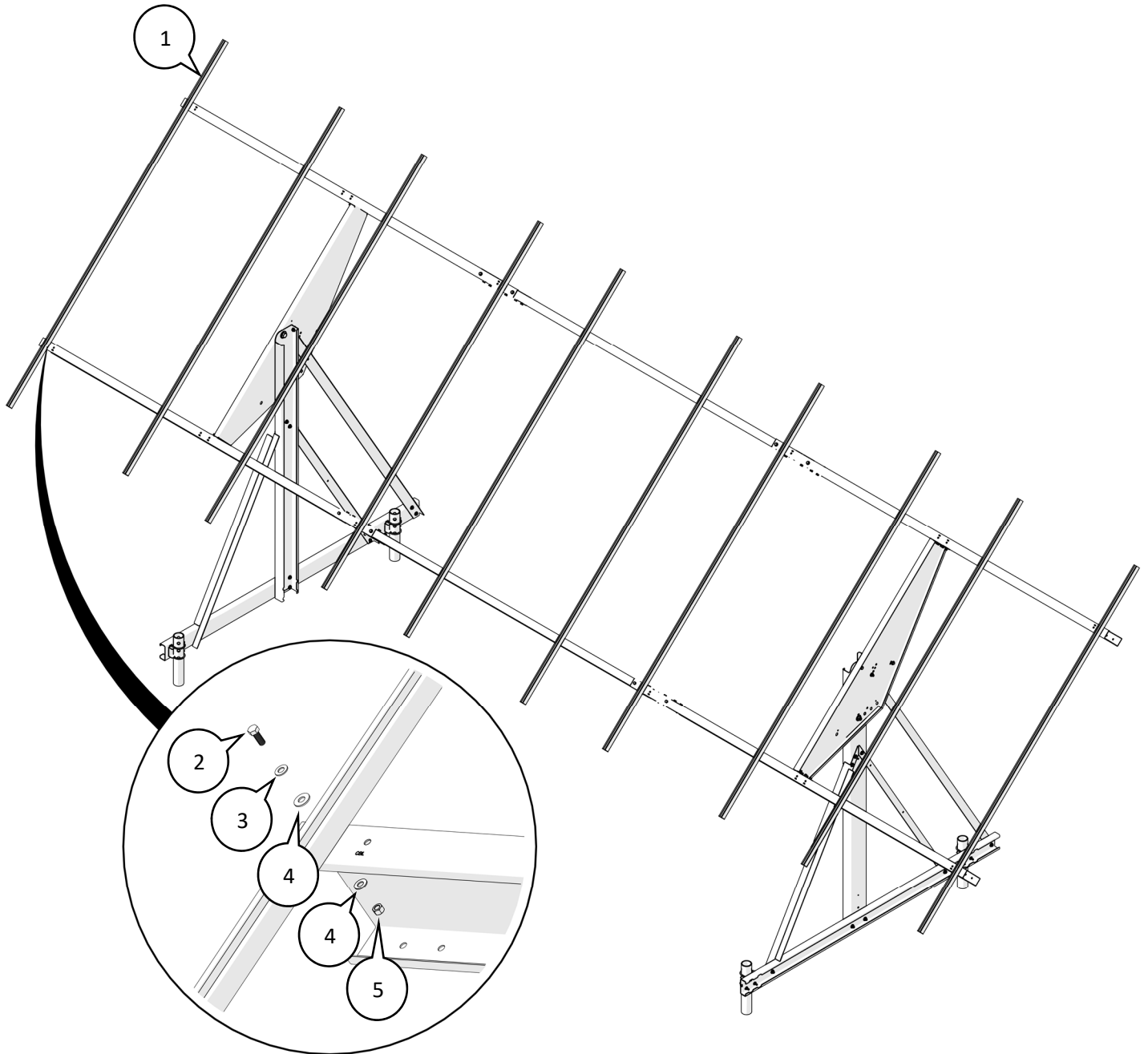
PURLINS

Assembled View



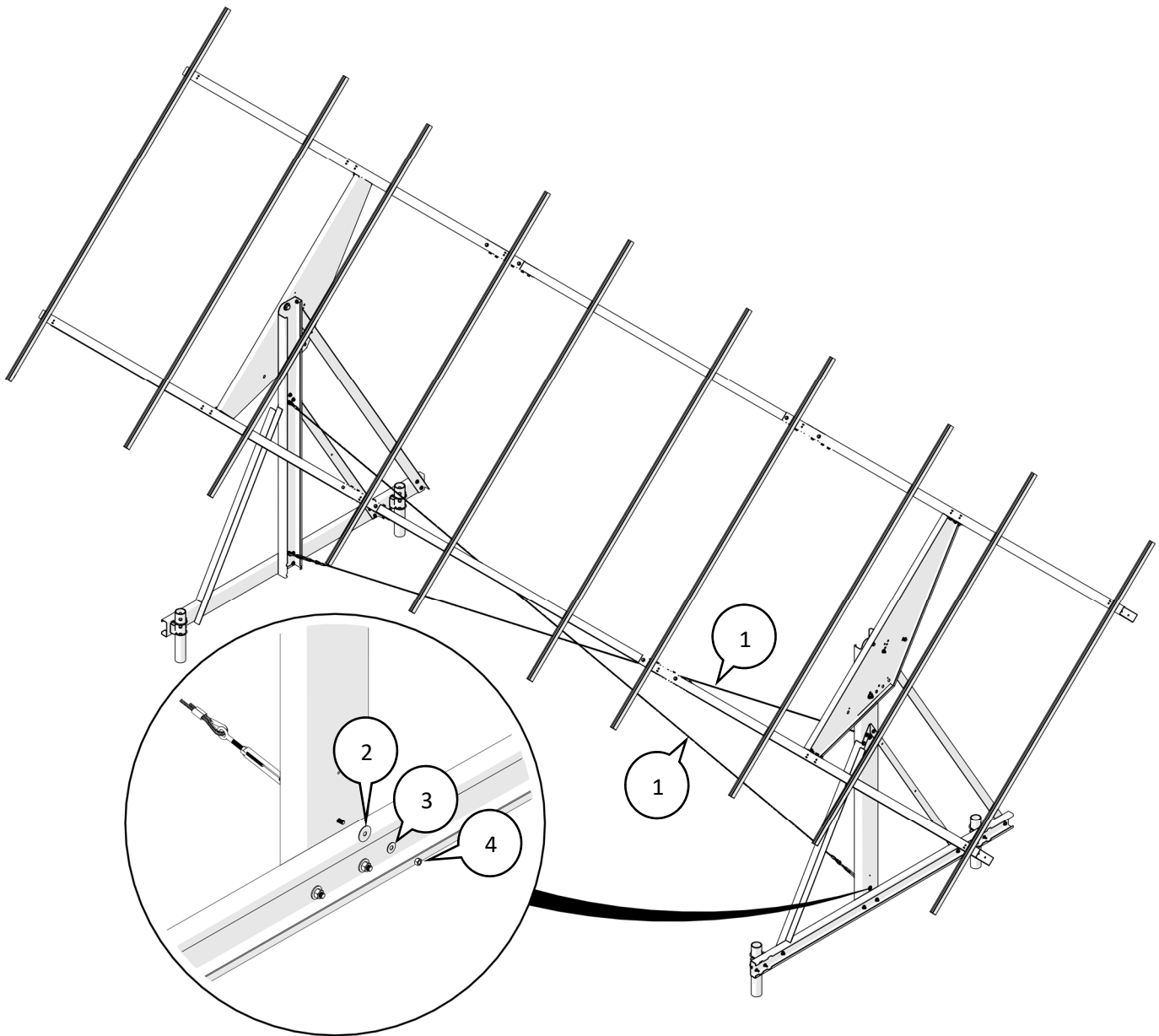
**purlins must project past the top and bottom main beams at equal length*

PURLINS Assembly View



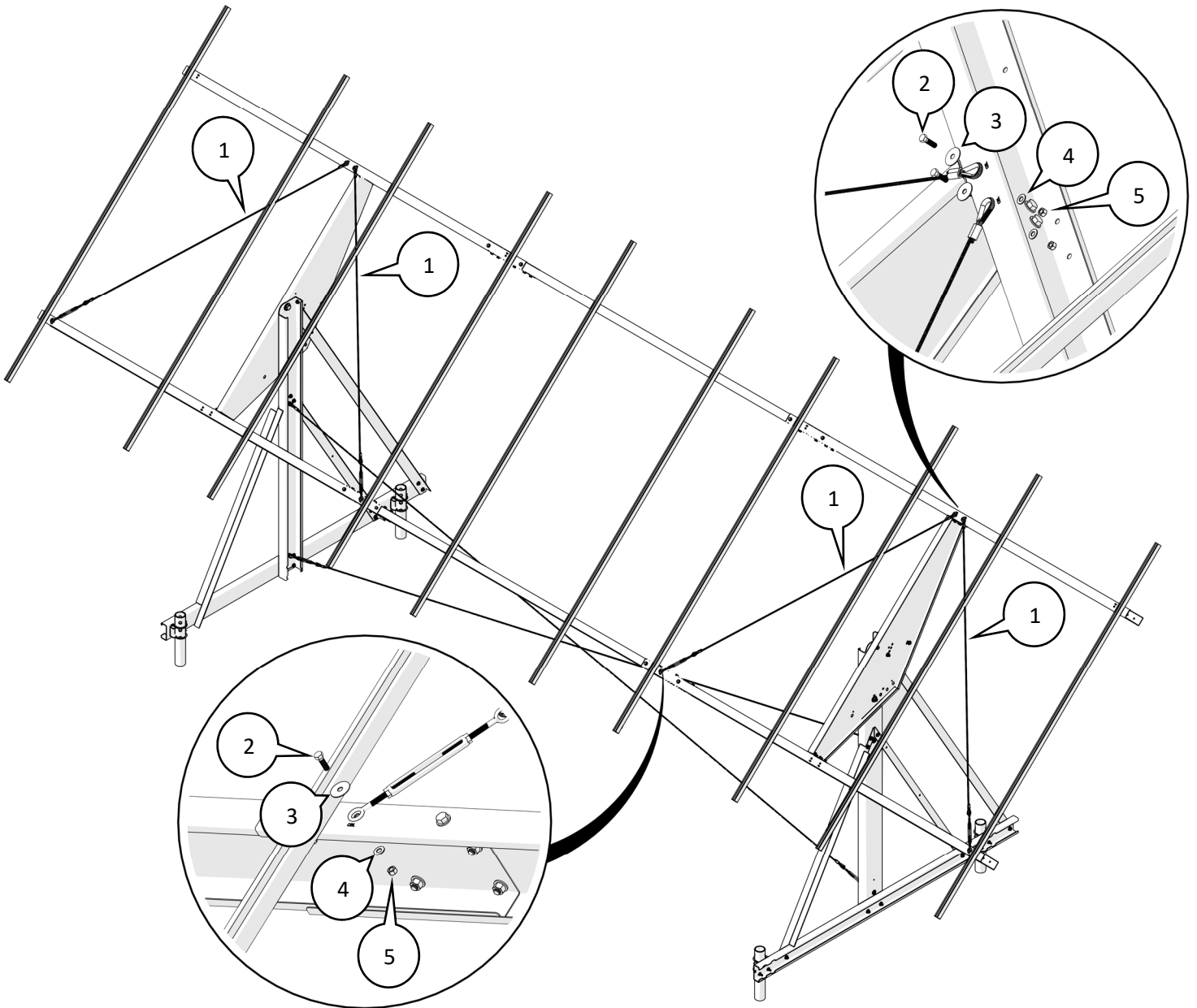
ITEM NO.	DESCRIPTION	QTY
1	PURLIN	10
2	3/8" x 1 1/4" BOLT	20
3	3/8" WASHER (Gr8 YELLOW COLOR)	20
4	3/8" WASHER	40
5	3/8" NUT	20

LOWER CROSS CABLES Assembly View



ITEM NO.	DESCRIPTION	QTY
1	LOWER CABLE ASSEMBLY w/ TURNBUCKLE & EYE BOLTS	2
2	3/8" FENDER WASHER	4
3	3/8" WASHER	4
4	3/8" NYLOCK NUT	4

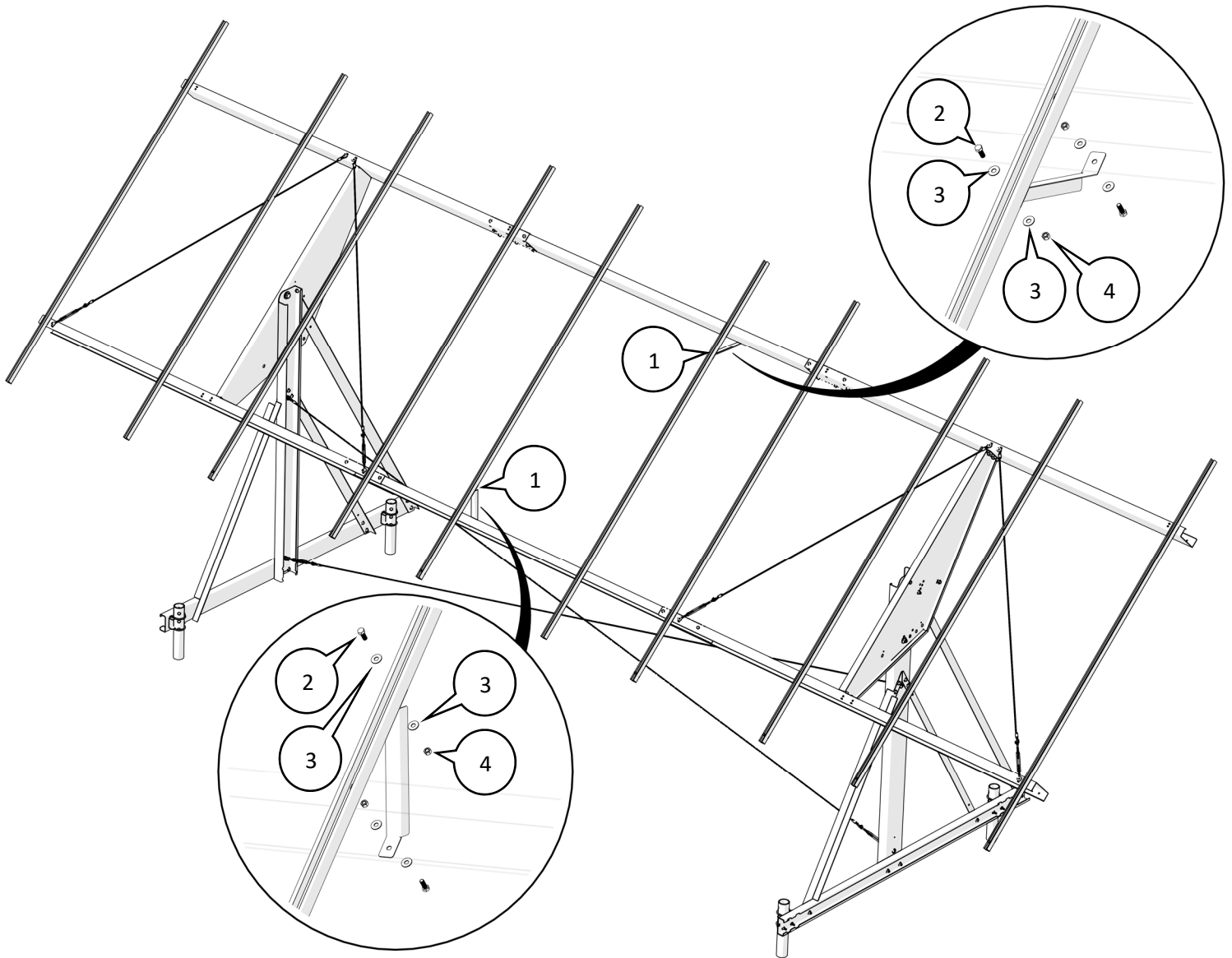
UPPER TRUSS CABLES Assembly View



ITEM NO.	DESCRIPTION	QTY
1	UPPER CABLE ASSEMBLY (LONG) w/ TURNBUCKLE	4
2	3/8" x 1 1/4" BOLT	8
3	3/8" FENDER WASHER	8
4	3/8" WASHER	8
5	3/8" NUT	8

BEAM FLANGE BRACE

Assembly View

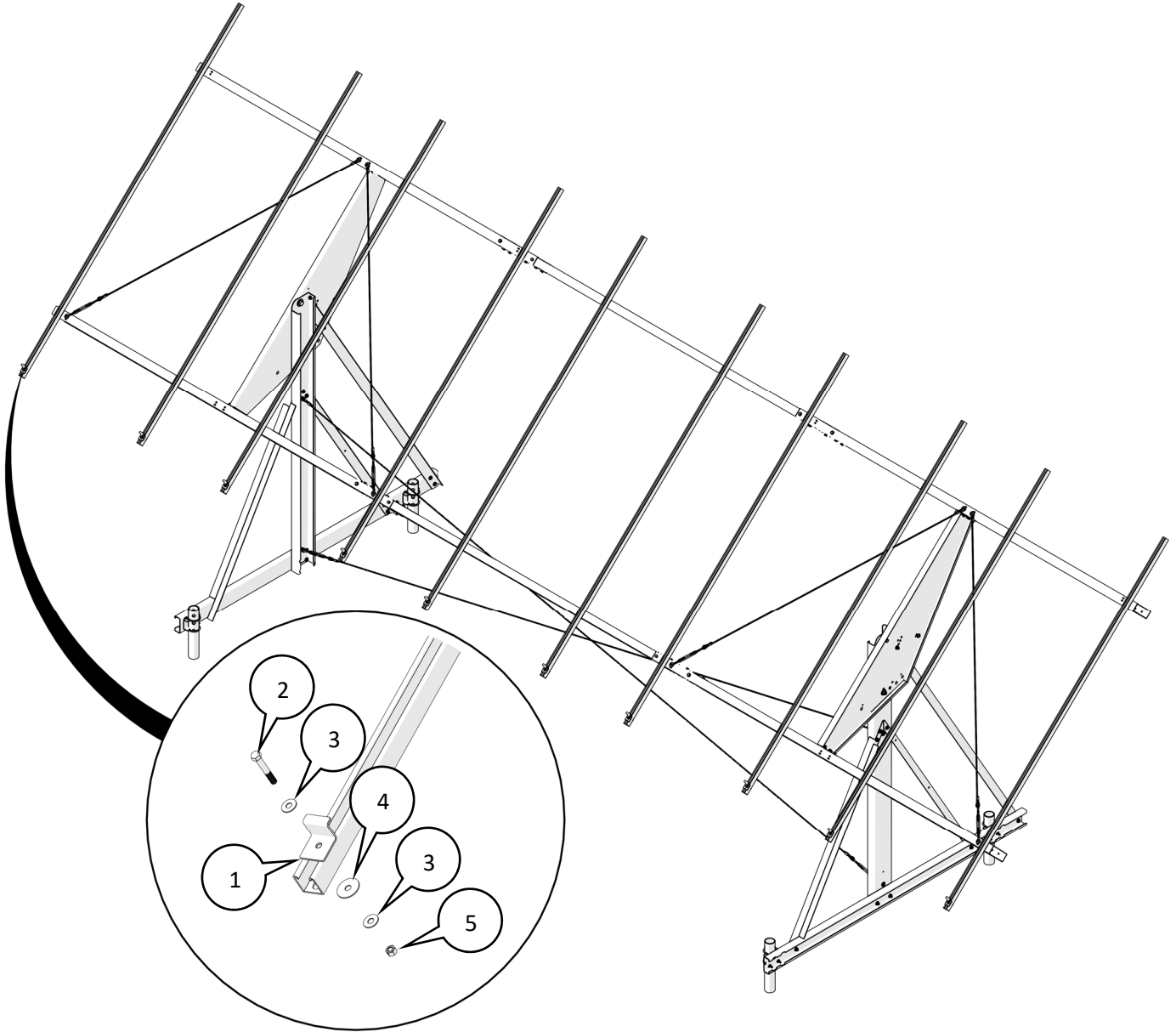


** 7/16" hole may need to be drilled in the Main Beam*

ITEM NO.	DESCRIPTION	QTY
1	BEAM FLANGE BRACE (OPTIONAL)	2
2	3/8" x 1" BOLT	4
3	3/8" WASHER	8
4	3/8" NUT	4

SOLAR PANELS

Bottom Z-Clip Assembly View

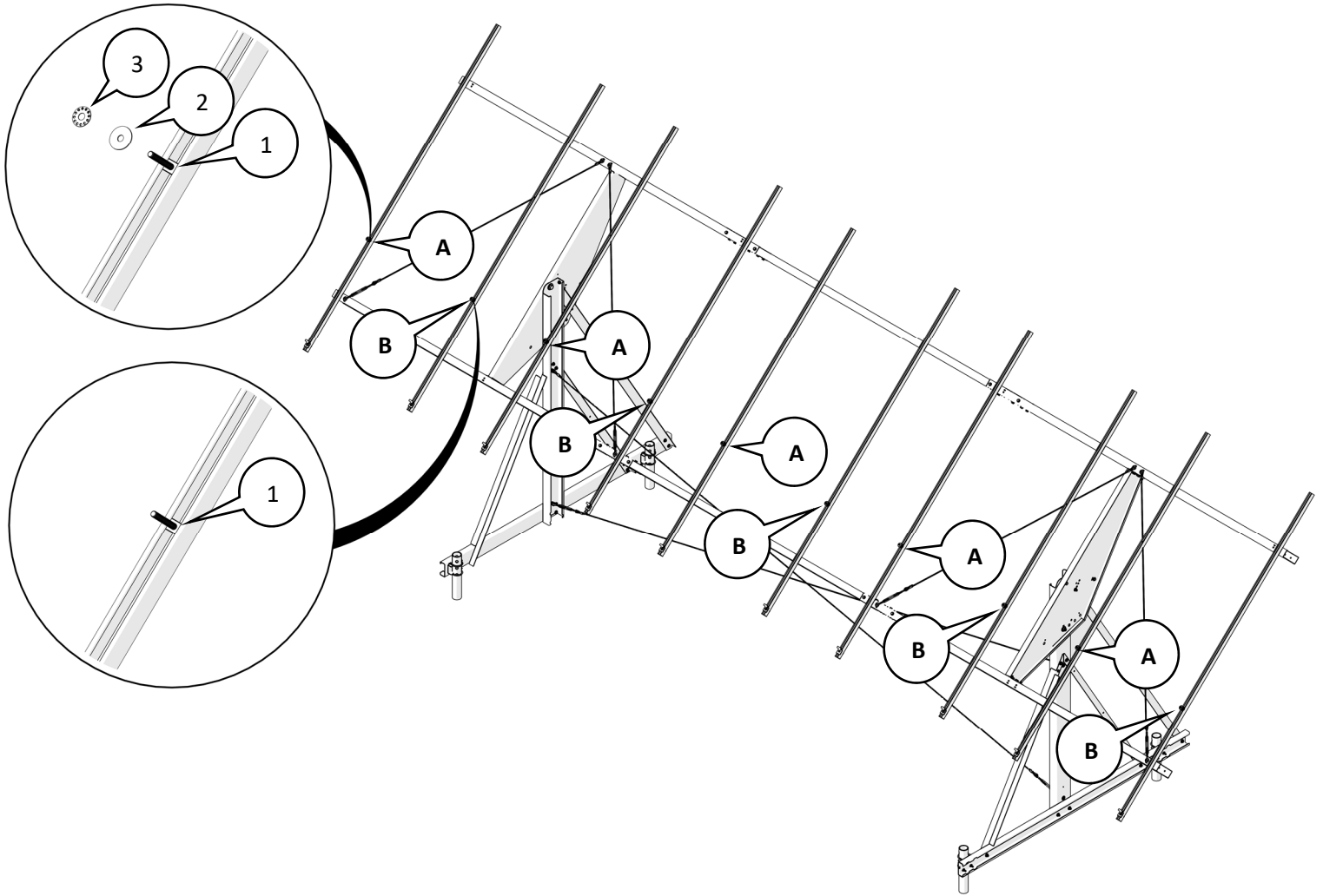


Note: z-clip hardware to be installed in second slot from bottom

ITEM NO.	DESCRIPTION	QTY
1	Z-CLIP	10
2	3/8" x 2 1/2" BOLT	10
3	3/8" WASHER	20
4	3/8" FENDER WASHER	10
5	3/8" NUT	10

SOLAR PANELS

Assembly View

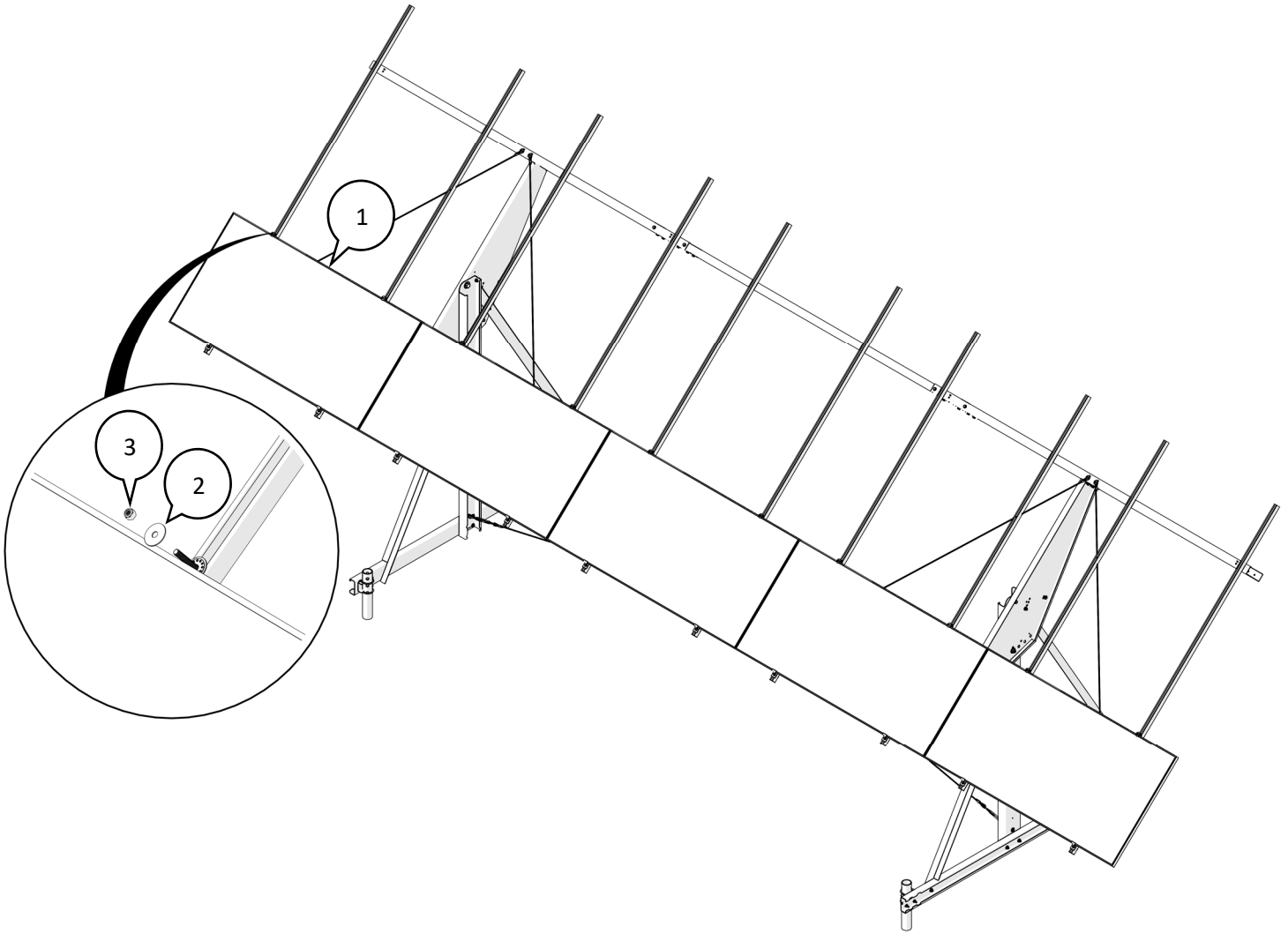


Note: fender washer & bonding washer installed on odd numbered purlins only

ITEM NO.	DESCRIPTION	QTY
1	3/8" SPRING STUD	10
2	3/8" FENDER WASHER	5
3	3/8" BONDING WASHER	5

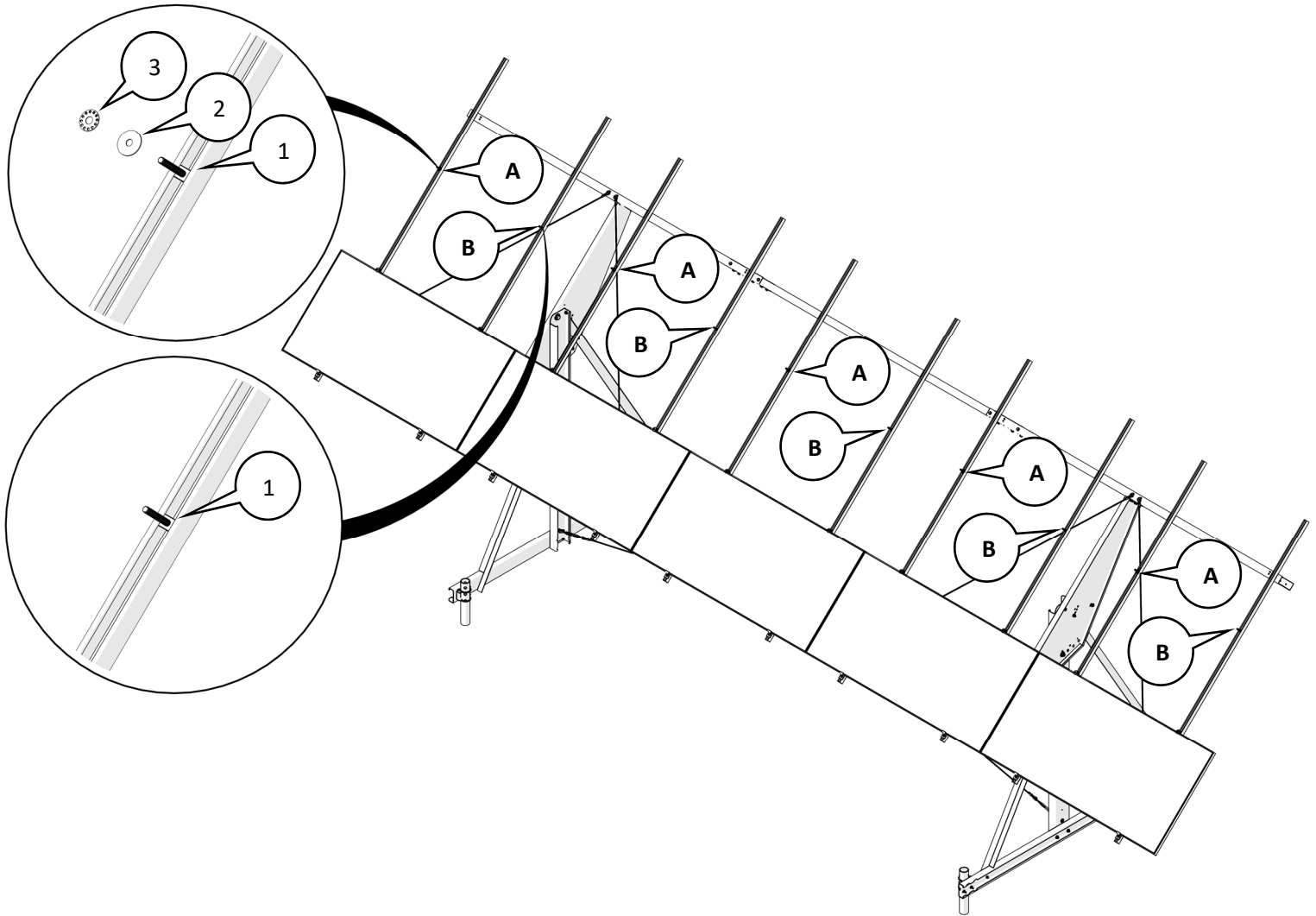
SOLAR PANELS

Assembly View



ITEM NO.	DESCRIPTION	QTY
1	SOLAR PANEL	5
2	3/8" FENDER WASHER	10
3	3/8" NYLOCK NUT	10

SOLAR PANELS Assembly View

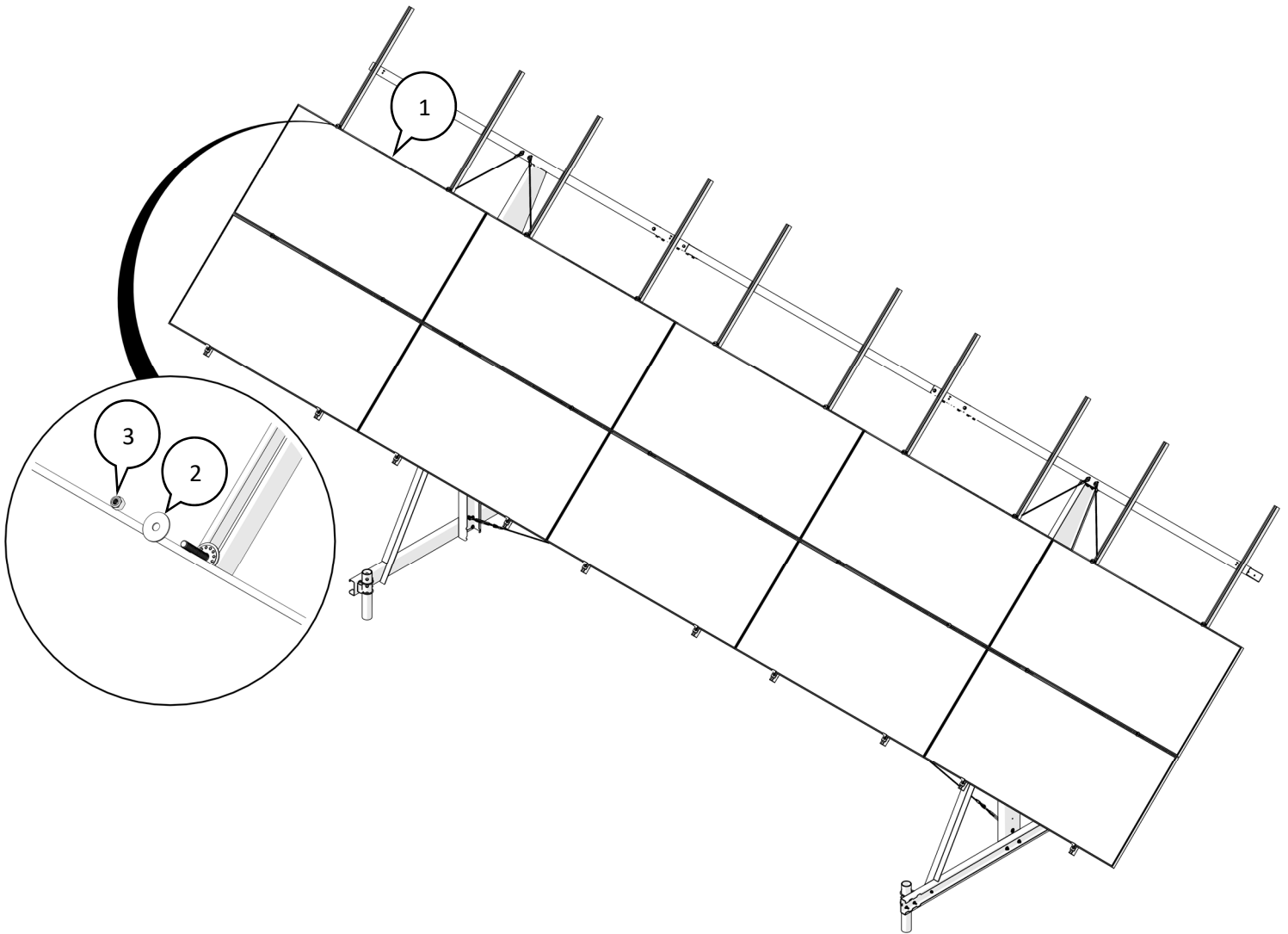


Note: fender washer & bonding washer installed on odd numbered purlins only

ITEM NO.	DESCRIPTION	QTY
1	3/8" SPRING STUD	10
2	3/8" FENDER WASHER	5
3	3/8" BONDING WASHER	5

SOLAR PANELS

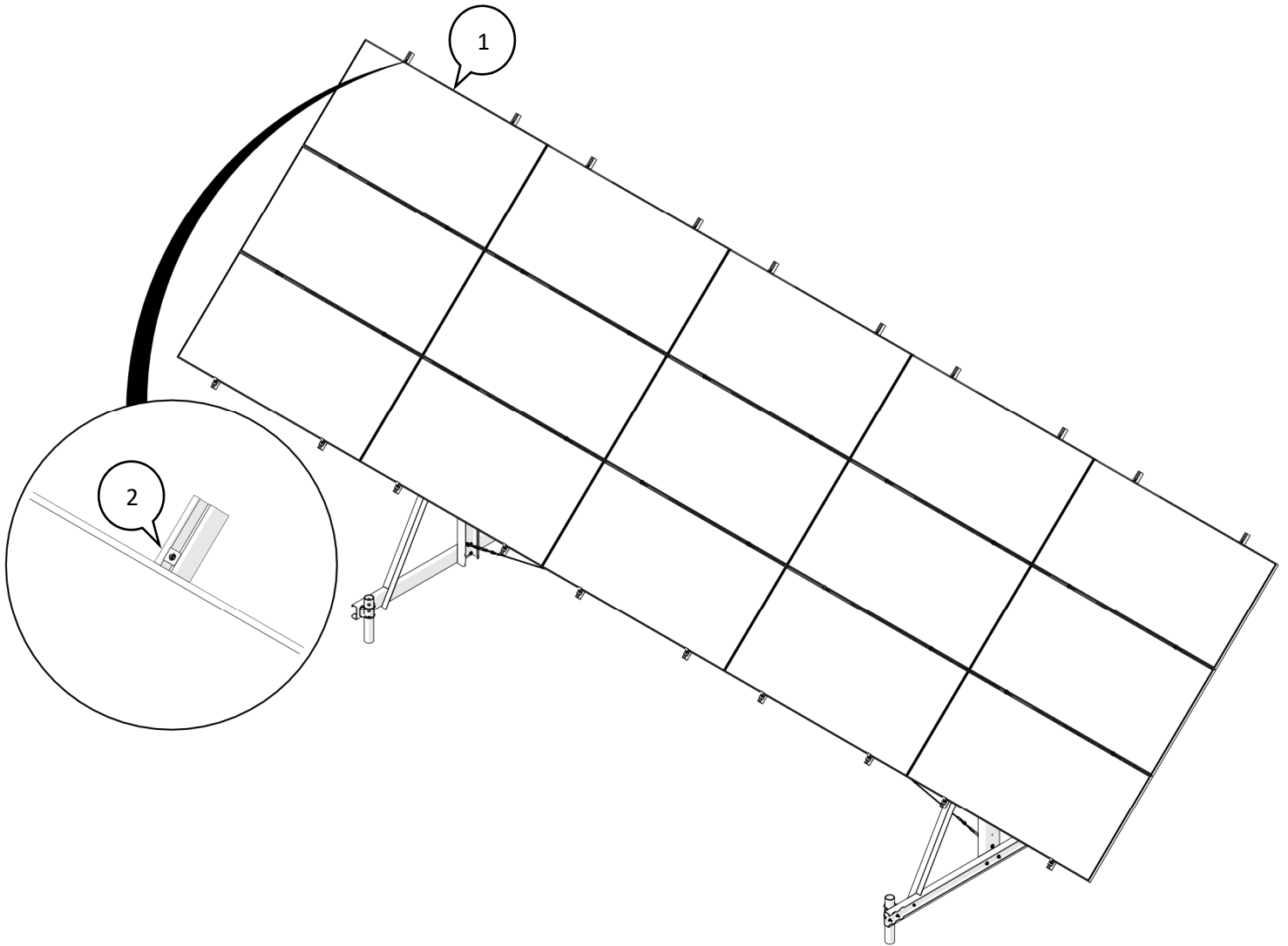
Assembly View



ITEM NO.	DESCRIPTION	QTY
1	SOLAR PANEL	5
2	3/8" FENDER WASHER	10
3	3/8" NYLOCK NUT	10

SOLAR PANELS

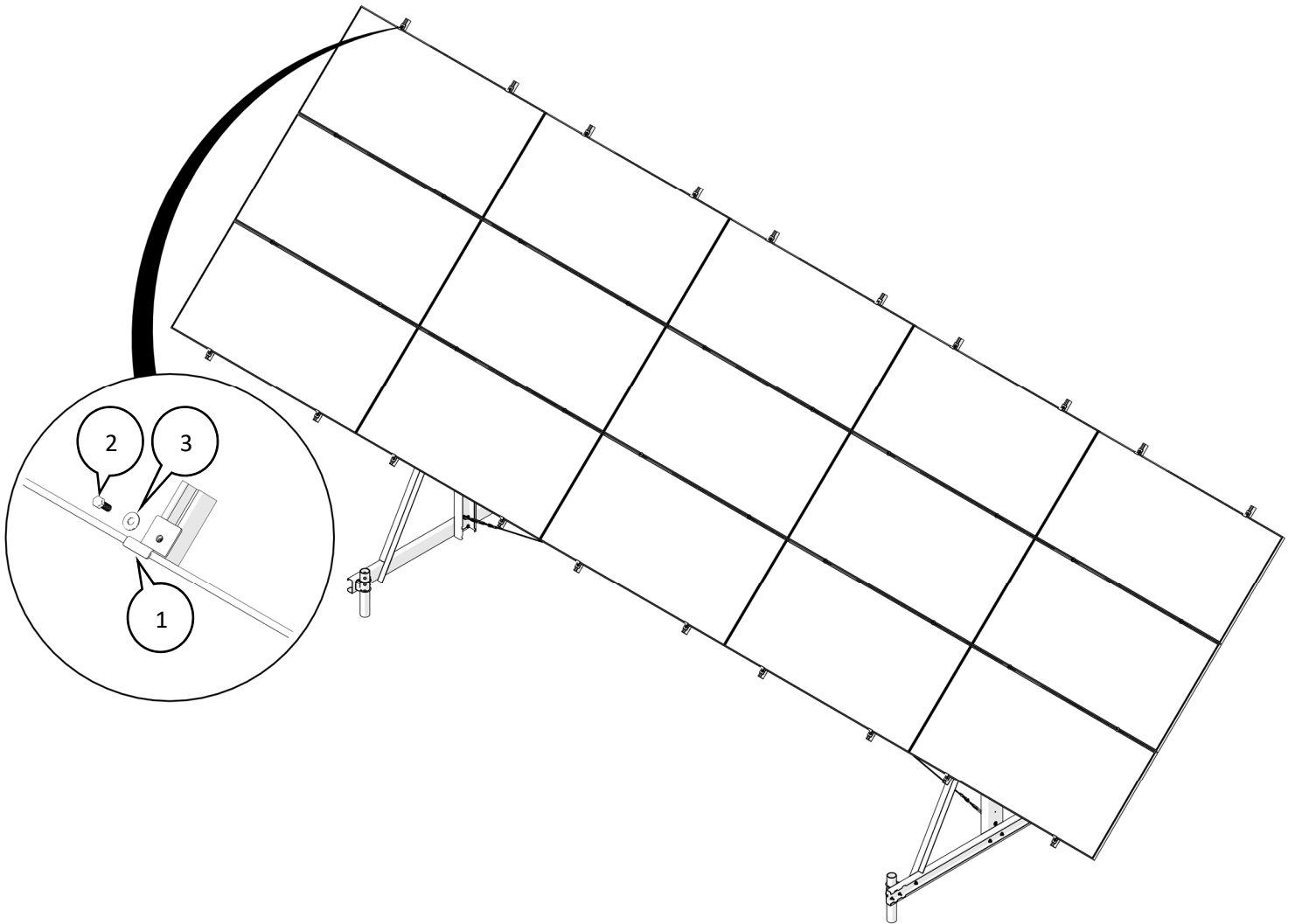
Assembly View



ITEM NO.	DESCRIPTION	QTY
1	SOLAR PANEL	5
2	3/8" SPRING NUT	10

SOLAR PANELS

Assembly View



ITEM NO.	DESCRIPTION	QTY
1	Z-CLIP	10
2	3/8" x 1" BOLT	10
3	3/8" WASHER	10

FINAL ASSEMBLY

SunRanger® ST-15L

