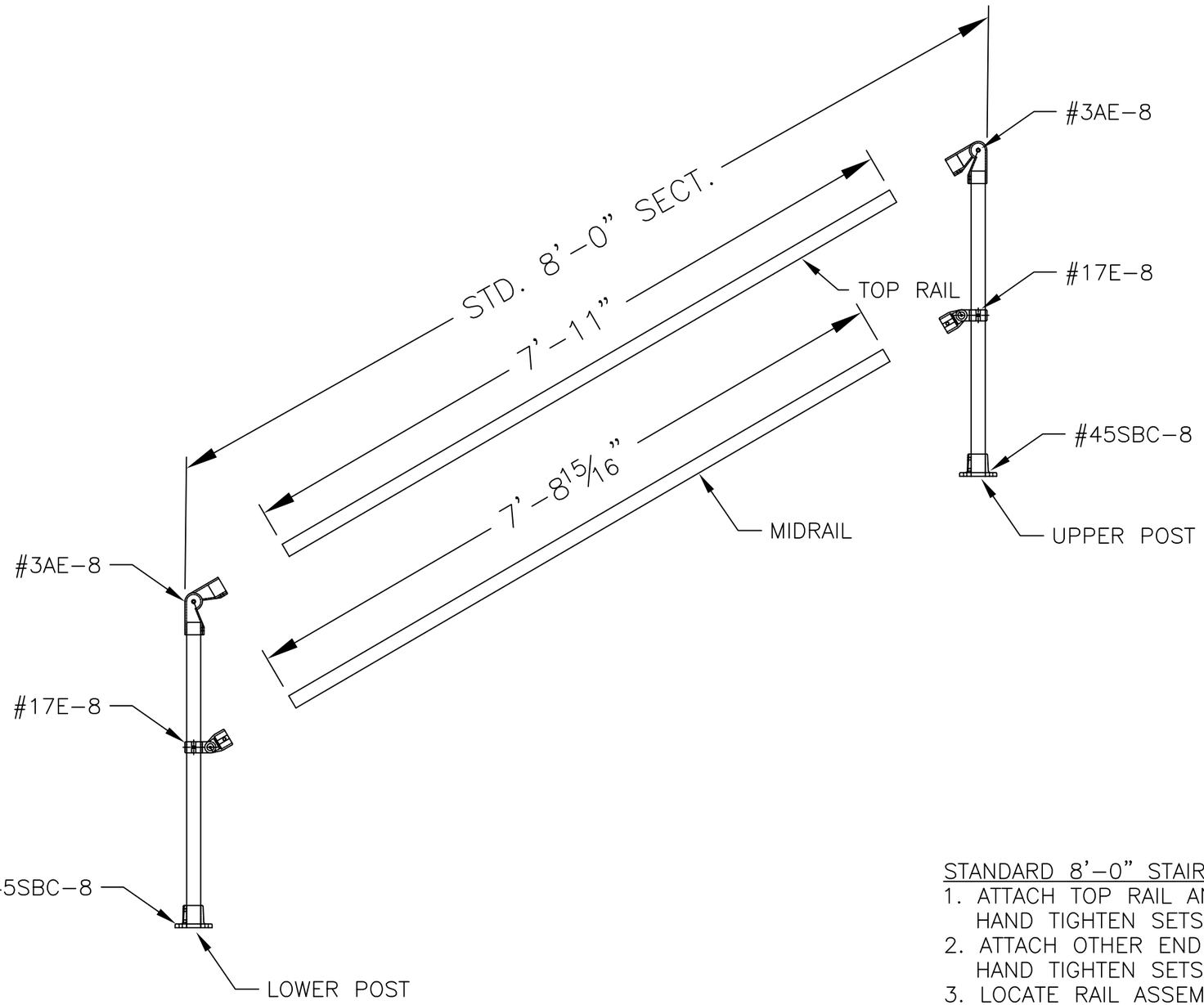

STANDARD 8'-0" STAIR SECTION:

1. ATTACH TOP RAIL AND MID RAIL TO ONE END POST. HAND TIGHTEN SETSCREWS.
2. ATTACH OTHER END POST TO TOP RAIL AND MID RAIL. HAND TIGHTEN SETSCREWS.
3. LOCATE RAIL ASSEMBLY AND ANCHOR INTO POSITION. ANCHORS NOT PROVIDED.
4. USING A LEVEL, CHECK THAT POST ARE VERTICAL AND RAILS ARE LEVEL.
5. TIGHTEN ALL SETSCREWS.

NO.	REVISIONS	DATE	APPROVED
0	RELEASED FOR APPROVAL	1-15-13	BW

Hollaender®
STRUCTURAL ENGINEERING GROUP
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CINCINNATI, OH 45215-6399
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PROJECT	CUSTOMER	DESCRIPTION
STAIR RAIL SECTION 8'-0" c/c POST 42" HIGH RAIL		BUMBLE BEE RAIL SECTION DRAWINGS

DRAWN BY: GG	APPROVED BY: BW	DATE: 1-15-12
PROJECT NO.: 50251		SCALE: NTS
FINISH: POWDER COAT		DRAWING NO.: 7052-S
MATERIAL: STL. PIPE/ALUM FITTING		SHEET 1 OF 1

hollaender.com

The Hollaender Mfg. Co.
Originators and Manufacturers of:
Speed-Rail®
Nu-Rail®
Rackmaster®
Mend-a-Rail®
Interna-Rail®
Speed-Rail II®
Bumble Bee Safety Rail®

Bumble Bee Modular Railing Kit

Specifications & Test Data

Material Specifications

Posts and Rails: ASTM A500 High Yield Steel, 1 ½" IPS, Sch. 10 Wall

Fittings and Flanges: 535 Aluminum Magnesium Sand Cast Alloy, per ASTM B26

Powder Coat is suitable for indoor or outdoor use: *Pipe* - PPG Safety Yellow & *Fittings* PPG Semi-Gloss Black, TGIC Polyester, AAMA 2603

Test Data

Code of Federal Regulations Title 29 Subtitle B-Regulations Relating to Labor Chapter XVII – Occupational Safety and Health Administration, Department Of Labor

Part 1910 Occupational Safety and Health Standards
1910.212 (a) Machine Guarding
(1) Types of Guarding – One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by points of operation, ingoing nip points, rotating parts, flying chips and sparks. I.e. barrier guards, guardrail, etc…..
1910.23 (e) Railings, toe boards and cover specifications.
(iv) The anchoring of the posts and framing of members for railings of all type shall be of such construction that the completed structure shall be capable of withstanding a load of at least **200 pounds applied in any** direction at any point on the top rail.

Product Test Data
Test Sample: Standard Bumble Bee® Safety Rail Post mounted using #45SBC Base Flange.
Load Criteria: All loads were applied 41" *(Center of top rail)* above the mounting surface.

- A pre-load of 100 lbs. was applied to eliminate any residual deflection in the test system.
- A point load of 200 lbs. was applied 41" above the mounting surface and the deflection was recorded.
- The load was reduced to the original 100 lbs. and the permanent deformation was recorded.

Maximum Allowable Deflection and Permanent Deformation per ASTM E985:

All dimensions in inches, to be measured at top of post.
Allowable Deflection: $D_a = 3.4$
Allowable Permanent Deformation: $D_p = .5$

Test Results:	Test No.	D_a	D_p	Pass
	SFTDXXX1	.63	.26	√
	SFTDXXX2	.58	.22	√
	SFTDXXX3	.68	.28	√

Based on the above stated test results and the performance criteria set forth by ASTM, this product meets the structural load requirements specified by the Occupational Health and Safety Administration.