

Bolts, Machine, Square Head, with Square Nut



1. Scope

This standard covers the requirements for zinc-coated, square head, steel machine bolts, each provided with one square nut.

This standard applies to the Seattle City Light (SCL) stock numbers cited in Section 4.

2. Application

Machine bolts and nuts are used in overhead line construction and where the applied load is primarily a tensile load.

Refer to IEEE C135.1 for minimum tensile strength values.

3. Industry Standards

Machine bolts and nuts shall meet the applicable requirements of the latest revision of the following industry standards:

IEEE C135.1 - Standard for Zinc-Coated Steel Bolts and Nuts for Overhead Line Construction

ASME B18.12 - Glossary of Terms for Mechanical Fasteners

ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

4. Requirements

4.1 General

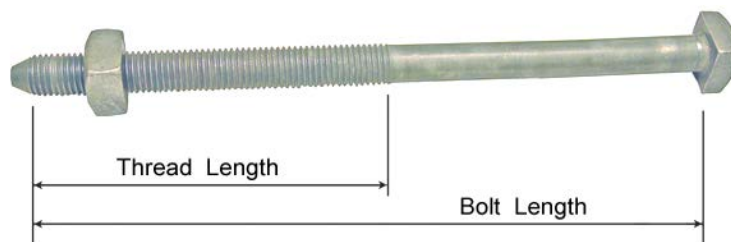
Thread length and bolt length shall be defined as shown in Figure 4.1.

A handwritten signature in black ink, appearing to read 'Quan Wang'.

A handwritten signature in black ink, appearing to read 'John Shipek'.

A handwritten signature in black ink, appearing to read 'Andrew Strong'.

Figure 4.1 Thread Length and Bolt Length



4.1a. Bolts

Bolts shall be as defined below.

	Requirements	Reference
Product Name	square head bolt	ASME B18.12
Material	steel	IEEE C135.1
Dimensions	per reference	IEEE C135.1
Minimum Thread Length	product length 4 in. or greater	IEEE C135.1
	product length 4 in. or less	ASME B18.2.1
Corrosion Protection	zinc-coated	IEEE C135.1

Machine bolt threads shall be machine-rolled; cut threads are not acceptable.
This requirement is a clarification to IEEE C135.1.

Bolt heads shall bear the manufacturer's symbol or identification mark according to IEEE C135.1.

4.1b. Nuts

Nuts shall be as defined below.

	Requirements	Reference
Product Name	square nut	ASME B18.12
Material	steel	IEEE C135.1
Dimensions	per reference	IEEE C135.1
Corrosion Protection	zinc-coated	IEEE C135.1

Nuts shall be provided installed on bolts, one nut per bolt.

4.2 Detailed Requirements

Nominal Size (in)	Threads per in.	Minimum Thread Length (in)	Product Length (in)	Stock No.
1/2	13	1-1/4	1-1/2	780794
			2	780796
			3	780800
		3	4-1/2	780803
			5	780804
			5-1/2	780805
			6	780806
			7	780808
		4	8	780810
			9	780812
			10	780814
		6	12	780815
			14	780816
			16	780817
			18	780818
5/8	11	1-1/2	2	780827
			2-1/2	780828
			3-1/2	780831
		3	5	780834
			6	780836
			7	780838
		4	8	780840
			10	780844
		6	12	780845
			14	780846
			16	780847
			18	780848
			20	780849
			22	780850
			24	781040
			30	781046
3/4	10	1-3/4	2	014535
			6	780875
		6	12	780876
			14	780876
			16	780877
			18	780878
			20	780879
			22	780880
			24	781070
			26	781072
7/8	9	6	12	012636
			14	012637
			16	012638
			18	012639
			20	012640
			22	012643
			24	012641
			26	012642

5. Packaging

Individual packages shall be legibly marked with:

- Manufacturer name
- Product description
- Seattle City Light stock number

Each shipping container shall be legibly marked with:

- Manufacturer name
- Seattle City Light purchase order number

6. Issuance

Stock Unit: EA

7. Approved Manufacturers

A. B. Chance (Hubbell Power Systems)
Hughes Brothers, Inc., Seward NE
Joslyn Manufacturing (MacLean Power Systems)
Kortick, Hayward, CA
Portland Bolt, Portland, OR

8. Sources

SCL Material Standard 7807.1; "Square Head Machine Bolt with Square Nut"
(canceled / renumbered to 7807.15)