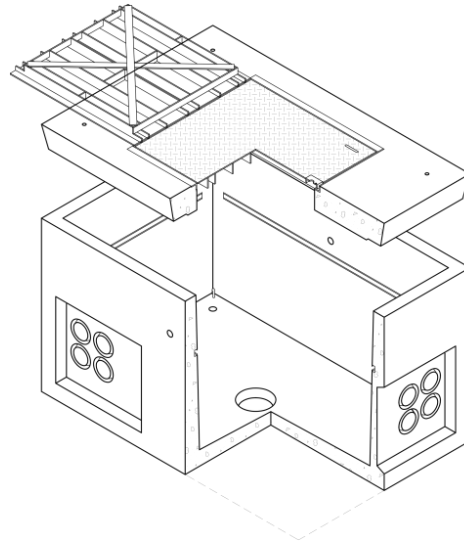


644 Electric Vault, Primary Service



1. Scope

This standard covers the detailed requirements for 644 electrical vault components (vault base and cover with hatch) and 644 vault assemblies. Components may be ordered separately or ordered as an assembly.

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No	Description
013731	Base , standard 644
013732	Cover , with hatch
013733	Assembly ; base and cover with hatch

2. Application

644 vaults are used in the construction of underground electric systems. The precast concrete structure may also house loadbreak junction boxes, and be used to make service connections and splices for the SCL system.

H20-rated 644 vault assemblies are not to be used in high traffic locations.

Standards Coordinator
Quan Wang

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Unit Director
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3. General Requirements

This standard is to be used in conjunction with the latest revision of SCL 7203.21.

4. Component Requirements

4.1 Grounding and Bonding

Vault grounding shall comply with SCL 7203.21.

4.2 Base

Table 4.2a. Vault Base Components

	Size, Nominal (in)	Location	Per Location	Total #
Knockouts				
Round	4-3/4 dia	All 4 walls, on bottom	8 ea side	32
Ground rod	1 dia	2 corners of floor	1 ea corner	2
Channels				
Galvanized "C" channel, horizontal, embedded in walls	36 long	End walls, above all knockouts	1 ea side	2
	60 long	Side walls, above all knockouts	1 ea side	2
Sump	8 dia	Floor, center	1, to one side	1
Pulling irons	1/2 dia	As request per project; 2 corners of floor (typical)	1 ea corner	4
Lift holes	1-1/2 dia	2 opposite walls, center wall, horizontal	1 ea side	2
Ground inserts, bronze	1/2 dia	2 opposite walls, internal and external	2 ea side	4
Ladder	–	Not required	–	

Base shall have dimensions as shown in Tables 4.2b and 4.2c, and Figure 4.2.

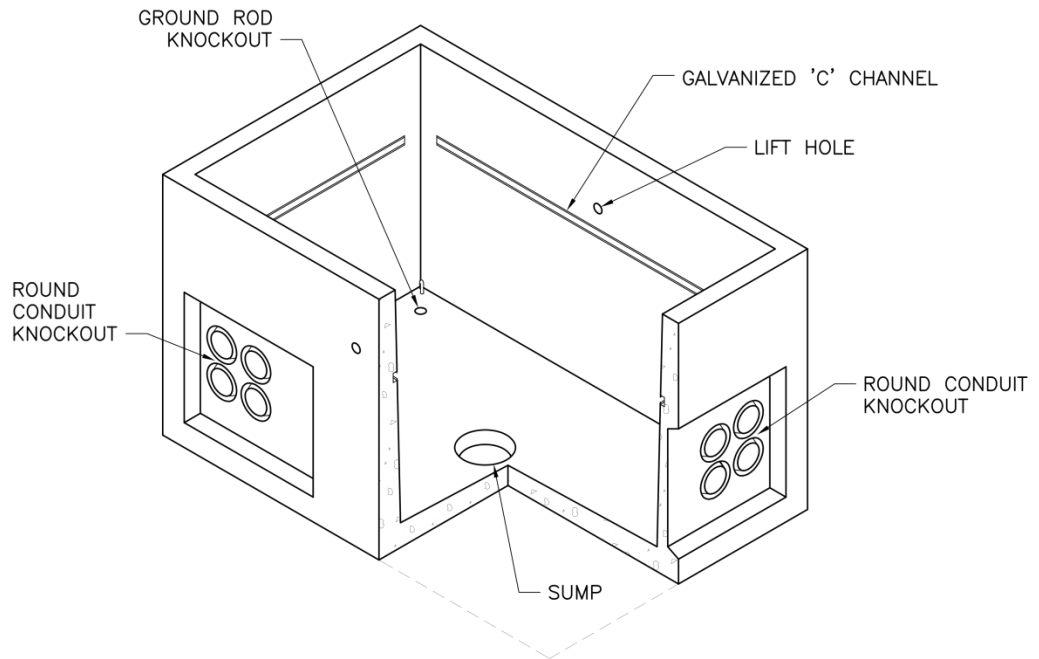
Table 4.2b. Base Dimensions, Inside, Nominal (ft-in)

Length	Width	Height
5-6	3-6	3-2

Table 4.2c. Base Dimensions, Outside, Nominal (ft-in)

Length	Width	Height
6-0	4-0	3-6

Figure 4.2. Base



4.3 Cover

Cover shall consist of a concrete collar with a slip-resistant solid hatch.

Cover shall have overall dimensions as shown in Table 4.3.

Cover shall have a 3/4-in diameter (nominal) lift insert at each corner on the top, as shown in Figure 4.3.

Caps shall be provided to cover the lift inserts.

Cover shall have a keyway to ensure a tight fit.

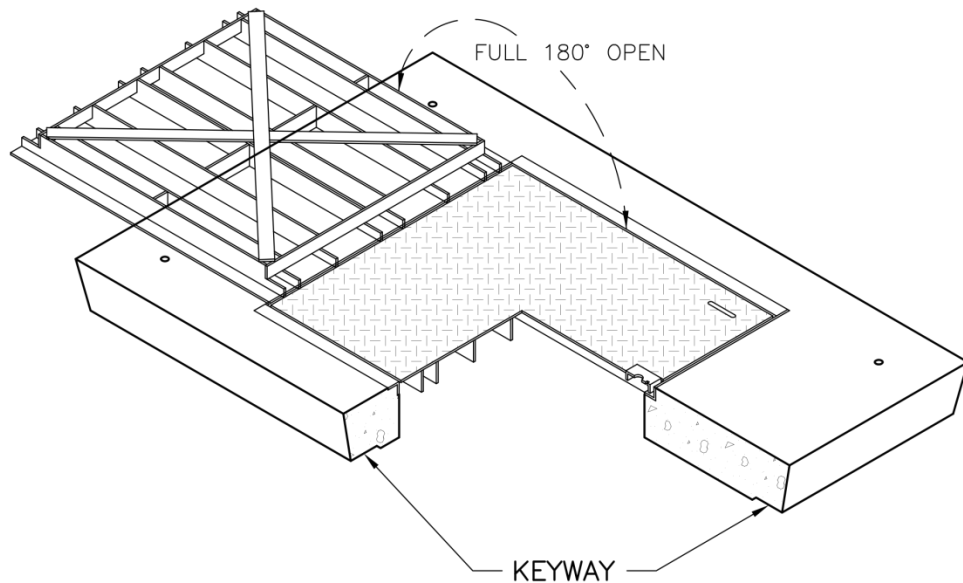
Table 4.3. Cover Dimensions, Nominal

Concrete Collar			
Length (ft-in)	Width (ft-in)	Thickness (in)	Opening (ft)
6-0	4-0	6	3 x 3

The solid hatch shall have the following:

- 3 ft x 3 ft dimension
- H20 rating
- Recessed lift handles
- Non-slip surfaces
- One handle located on each of the short ends of the hatch
- 5/8-in bonding point hole on support bar for grounding hatch
- Hatch-locking mechanism with Penta head bolt

Figure 4.3. Cover with Hatch



5. Issuance

Unit: EA

6. Approved Manufacturer

Stock No.	Description	Oldcastle/Utility Vault Catalog Number
013731	Base, standard 644	644-BL
013732	Cover, with hatch	64-332P
013733	Assembly, base and cover with hatch	644-LA

7. References

SCL Material Standard 7203.21; "Precast Reinforced Concrete Structure, General"

8. Sources

Wang, Quan; SCL Standards Engineer, originator, and subject matter expert for 7203.61 (quan.wang@seattle.gov)