

## HISTORIC AMERICAN ENGINEERING RECORD

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BIG CREEK HYDROELECTRIC SYSTEM, POWERHOUSE NO. 1      HAER CA-167-E  
(Big Creek No. 1)  
North Bank of Big Creek, 100 feet from Big Creek Road  
Big Creek  
Fresno County  
California

Photographs No. CA-167-E-59 through CA-167-E-85 are 8" x 10" contact prints from film copy negatives of paper digital scan printouts (approximately 22" x 36" size). No original drafted line drawings were available for HAER copy work. The scan printouts copied for this project were made from microfilm and other secondary sources. Original materials are held at the Southern California Edison Company archives, 2244, Walnut Grove Avenue, Rosemead, California, 91770.

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David G DeVries, photographer, September 2009

CA-167-E-1	Powerhouse 1 and Dam 4, looking northeast from the railroad grade on the south bank of Big Creek.
CA-167-E-2	South front.
CA-167-E-3	West side, showing freight door and rail spur.
CA-167-E-4	Perspective view of north rear, at left, and west side.
CA-167-E-5	East side.
CA-167-E-6	Detail, south front windows and tailraces.
CA-167-E-7	Generator floor, looking east from the freight door on the west side.
CA-167-E-8	Generator floor, looking west from the northeast corner, Unit 4 generator, L.H. governor control cabinet, and turbine shutoff valve control at left and center.

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- CA-167-E-9 View to the south from the east end of the generator floor. Unit 4 oil tank in foreground and exciter in background.
- CA-167-E-10 Pelton left and right turbine shutoff valve operators at the east end of the generator floor.
- CA-167-E-11 Central part of generator floor, looking south. Unit 3 (left) and Unit 2 (right) exciters in middle distance. Governor oil air cushion tanks in background.
- CA-167-E-12 From left, Unit 2 exciter, L.H. turbine, governor control cabinet, with Unit 2 generator behind. Note rail spur at right, on generator floor. View to southwest.
- CA-167-E-13 Control room bay window, which faces south and overlooks the generator floor.
- CA-167-E-14 Unit 4 generator.
- CA-167-E-15 Generator floor, Unit 4 exciter, L.H. turbine, and oil tank. View to the southwest. See also CA-167-E-9.
- CA-167-E-16 Unit 2 governor. View to southeast.
- CA-167-E-17 Looking southwest at Unit 2 governor, showing relationship to governor control cabinet.
- CA-167-E-18 Unit 3 exciter.
- CA-167-E-19 Water-powered spare exciter, central part of generator floor, beneath control room, looking north. The current from this exciter can be switched to any generator unit in the plant, or used to recharge the battery bank. The ship's wheel is for manual control of the governor.
- CA-167-E-20 Spare exciter, looking east.
- CA-167-E-21 Spare exciter, looking south, with turbine at left.
- CA-167-E-22 Generator floor, looking west at Mountain Lab test equipment, oil pump, and speed reducing gear. The Mountain Lab equipment was used for turbine research.
- CA-167-E-23 Ladder storage and locker area at north rear of the generator floor, near the east stairwell to the second floor. View to the west.

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- CA-167-E-24 Overview of the crane and the west wall of the generator floor.
- CA-167-E-25 East side of the Cleveland 100-ton crane.
- CA-167-E-26 View to the north, looking up at Cleveland crane hook and cables.
- CA-167-E-27 Machine shop located north of the generator, near the east end of the building. View is to the east.
- CA-167-E-28 Machine shop, looking west from the east end.
- CA-167-E-29 Turbine shutoff valve room, at north rear of the generator floor. View to west.
- CA-167-E-30 Tool room, with wrenches on tool board, open shelves, and a wooden cabinet at right. View is to the west.
- CA-167-E-31 Control room overview to the east, showing operator's desk and bay window at far right.
- CA-167-E-32 View of control room access corridor, from the rear of the north control panel, at left, looking west.
- CA-167-E-33 View of control room access corridor, from the rear of the north control panel, at right, looking east from the doorway of the exhibit room.
- CA-167-E-34 Archive room on the second floor, looking east.
- CA-167-E-35 Detail of original light fixture in second floor stairwell up to the third floor from the control room.
- CA-167-E-36 Third floor gallery at the north rear of the building, looking west at bus cabinets.
- CA-167-E-37 Third floor gallery, looking east toward the central stairway visible in the background.
- CA-167-E-38 Third floor battery room, looking east to windows on east side of powerhouse.
- CA-167-E-39 Detail, window on the north wall at the east end of the third floor.
- CA-167-E-40 Lower fourth floor gallery looking east from the west wall of the powerhouse.

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- CA-167-E-41 Lower fourth floor gallery, looking west.
- CA-167-E-42 Lower fourth floor gallery, looking east toward the fire door. A parts storage room is beyond the fire door.
- CA-167-E-43 View of lower fourth floor west end. Looking at wooden parts storage compartments on left.
- CA-167-E-44 Detail, telephone on the south wall of the lower fourth floor gallery.
- CA-167-E-45 Upper fourth floor gallery, looking west. Electrical bus banks are visible on the right.
- CA-167-E-46 Upper fourth floor gallery, looking east.
- CA-167-E-47 Detail, southernmost window on the east wall, upper fourth floor.
- CA-167-E-48 Hoist opening with trap door, near the north wall of the upper fourth floor. Opening above provides access to the fifth floor gallery.
- CA-167-E-49 Station light and power bank, and station power transfer 7KV discs on upper fourth floor. View to northwest.
- CA-167-E-50 Overview of fifth floor south gallery, to the east.
- CA-167-E-51 Overview of fifth floor south gallery, looking west.
- CA-167-E-52 View of fifth floor fire door and hoist opening (at right) in the south gallery. The open door farthest from the camera leads to the north gallery.
- CA-167-E-53 Roof trusses, viewed from the geotechnical bore sample room, fifth floor, at northeast corner of powerhouse.
- CA-167-E-54 Basement work area, southeast corner of powerhouse. View to south.
- CA-167-E-55 Looking west along the basement corridor.
- CA-167-E-56 Basement, showing right header pipe for Unit 4, looking southeast.
- CA-167-E-57 Unit 3 left header turbine shut off valve, looking east.

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- CA-167-E-58 Unit 2 governor oil sump, located in basement beneath Unit 2 governor, against the north wall.
- CA-167-E-59 Big Creek No. 1 Powerhouse Extension for Unit 4, Architectural South (Front) Elevation. Original scale 1/8 inch to the foot. Changed tail race openings. Dated 9/15/1924. Drawing no. 59309.
- CA-167-E-60 Big Creek No. 1 Powerhouse Extension for Unit 4, Architectural North (Rear) Elevation. Original scale 1/8 inch to the foot. Dated 7/25/1924. Drawing no. 59310.
- CA-167-E-61 Big Creek No. 1 Powerhouse Extension for Unit 4, Architectural West and East Elevations. Original scale 1/8 inch to the foot. Dated 7/25/1924. Drawing no. 59311.
- CA-167-E-62 NOTE photographs CA-167-E-62 through CA-167-E-85 (except E-80) show plans, sections, and elevations common to both powerhouses 1 and 2, despite some drawings being titled for Powerhouse 2 only.
- Big Creek Powerhouses 1 and 2, Permanent End Elevation and Temporary End Elevation. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 3/28/1913. Drawing no. 52656, formerly no.'s 1142-221 & 12422-210.
- CA-167-E-63 Big Creek Powerhouse 2, Foundation Plan for Unit 3. Drawing no. 52864, formerly no. 11681-103.
- CA-167-E-64 Big Creek Development, Powerhouse 2, First Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 30 feet. From microfilm. Dated 11/11/1913. Drawing no. 12077, formerly drawing no. 13641-217.
- CA-167-E-65 Big Creek Development, Powerhouse 2, Second Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 30 feet. From microfilm. Dated 12/15/1913. Drawing no. 12075, formerly no. 13641-217.

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- CA-167-E-66 Big Creek Development, Powerhouse 2, Third Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 30 feet. From microfilm. Dated 12/16/1913. Drawing no. 12073, formerly no. 13641-217.
- CA-167-E-67 Big Creek Development, Powerhouse 2, Fourth Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 30 feet. From microfilm. Dated 12/17/1913. Drawing no. 12072, formerly no. 13641-217.
- CA-167-E-68 Big Creek Development, Powerhouse 2, Fifth Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 30 feet. From microfilm. Dated 12/18/1913. Drawing no. 12076, formerly no. 13641-217.
- CA-167-E-69 Big Creek Development, Powerhouse 2, Roof Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 30 feet. From microfilm. Dated 12/15/1913. Drawing no. 12074, formerly no. 13641-217.
- CA-167-E-70 Big Creek Development, Powerhouse 2, Basement Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 30 feet. From microfilm. Dated 12/12/1913. Drawing no. 12071, formerly no. 13641-217.
- CA-167-E-71 Big Creek Development, Powerhouse 2 Cross Section, Section A. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 20 feet. From microfilm. Dated 1/2/1914. Drawing no. 12078, formerly no. 13641-217.

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- CA-167-E-72 Big Creek Development, Powerhouse 2 Cross Section, Section B. Pacific Light & Power Corp. Stone & Webster Construction Co. Fresno, original drawing. Original scale 1 inch equal to 20 feet. From microfilm. Dated 1/9/1914. Drawing no. 12070, formerly no. 13641-217.
- CA-167-E-73 Big Creek Powerhouse 1 and 2, Third and Fourth Floor Plans. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 3/29/1913. Drawing no. 52659, formerly no.'s 1142-294. & 12494-210.
- CA-167-E-74 Big Creek Powerhouse 1 and 2, Fifth Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 4/3/1913. Drawing no. 52660, formerly no.'s 1142-295 & 12495-210.
- CA-167-E-75 Powerhouse 1 and 2, Roof Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 5/6/1913. Drawing no. 52661, formerly no.'s 1142-296 & 12496-210.
- CA-167-E-76 Powerhouses 1 and 2, Oil Room Floor Plan. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 4/3/1913. Drawing no. 51455, formerly no.'s 1142-244 & 12444-210.
- CA-167-E-77 Powerhouses 1 and 2, Longitudinal Section, Section CC. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 4/17/1913. Drawing no. 52662, formerly no.'s 1142-322 & 12522-211.

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- CA-167-E-78 Powerhouses 1 and 2, Longitudinal Section, Section EE. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 4/17/1913. Drawing no. 52663, formerly no.'s 1142-323 & 12523-211.
- CA-167-E-79 Powerhouses 1 and 2, Longitudinal Section, Section FF. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 1/8 inch to the foot. From microfilm. Dated 4/17/1913. Drawing no. 52664, formerly no.'s 1142-324 & 12524-211.
- CA-167-E-80 Big Creek Powerhouse 1, Detailed Structural Plan, First Floor-Installation of Unit 3. Original scale 1/8 inch to the foot. Drawing no. 58207.
- CA-167-E-81 Powerhouses 1 and 2, Mill Details. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 3/8-3 inch to the foot. Dated 3/31/1913. Drawing no. 51450, formerly no.'s 1142-239 & 12439-210.
- CA-167-E-82 Powerhouses 1 and 2, Mill Details. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 3/8-3 inch to the foot. Dated 3/31/1913. Drawing no. 51451, formerly no.'s 1142-240 & 12440-210.
- CA-167-E-83 Powerhouses 1 and 2, Mill Details. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 3/8-3 inch to the foot. Dated 3/31/1913. Drawing no. 51452, formerly no's. 1142-241 & 12441-210.
- CA-167-E-84 Powerhouses 1 and 2, Mill Details. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 3/8-3 inch to the foot. Dated 3/20/1913. Drawing no. 51453, formerly no's. 1142-242 & 12442-210.
- CA-167-E-85 Powerhouses 1 and 2, Mill Details. Pacific Light & Power Corp. Stone & Webster Construction Co. Boston original drawing. Original scale 3/8-3 inch to the foot. Dated 3/31/1913. Drawing no. 51454, formerly no's. 1142-243 & 12443-210.