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NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name San Diego Fire Department Shops at Station 6

other names/site number San Diego Firehouse Museum

2. Location

street & number 1572 Columbia Street — n/a not for publication

city or town San Diego — n/a vicinity

state CA code ____ county San Diego code ____ zip code 92101

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this _x_ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property _x_ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

_x_ national **__ statewide** **__local**

Deputy State Historic Preservation Officer 12/5/14
Signature of certifying official/Title Date

California Office of Historic Preservation
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

X entered in the National Register ___ determined eligible for the National Register

___ determined not eligible for the National Register ___ removed from the National Register

___ other (explain:) ____

1/27/2015
Signature of the Keeper Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [ ] private
- [x] public - Local
- [ ] public - State
- [ ] public - Federal

Category of Property
(Check only **one** box.)

- [x] building(s)
- [ ] district
- [ ] site
- [ ] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1		buildings
		sites
		structures
		objects
1		**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

n/a

Number of contributing resources previously listed in the National Register

n/a

6. Function or Use

Historic Functions
(Enter categories from instructions.)

Government – Fire Station & Machine Shop

Current Functions
(Enter categories from instructions.)

Recreation & Culture – Museum

7. Description

Architectural Classification
(Enter categories from instructions.)

Modern Movement- California Style
Late 19th & 20th Century Revivals – Mission/Spanish Colonial

Materials
(Enter categories from instructions.)

foundation: Concrete
walls: Stucco
roof: Wood
other:

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

Built in 1915 to serve the growing Little Italy/waterfront population and provide a centralized maintenance facility/machine shop for the five other fire stations, *San Diego Fire Department Shops at Station 6* is located on the southwest corner of Columbia and Cedar Streets in the historic Little Italy district of the City of San Diego. It is a two-story stucco, California-Style firehouse with a flat roof concealed by an ornamental, Mission-style parapet similar to those found on Spanish colonial missions throughout California. The southern portion of the building, which served as the fire department machine shop, is one-story, with three garage bays and high ceilings. The northern portion of the building housed the firefighters of SDFD Engine Company #6, and is two stories. In that portion, there is an additional garage entrance with two double hung sash windows above on the second floor. The windows are enclosed by a rectangle, which previously bordered five larger windows which have since been replaced. The eleven windows on the north facing side of the building are also double-hung sash. In the northwest corner of building there is a hose tower, which resembles a Mission style bell tower. The interior has been preserved in its original condition with apparatus bays which are now occupied by antique fire engines. There are two firemen's poles and an iron circular staircase that provides access to the bunk room on the second story. Overall, the building is well-maintained and effectively maintains its historic integrity as a working firehouse and machine shop from its period of significance from 1915 to 1963.

Narrative Description

(See Continuation Sheet)

Narrative Description

San Diego Fire Department Shops at Station 6 was built in 1915. While the architects and builder are unknown in public records, they adopted a Mission/Utilitarian-style appearance which blends in with construction common in other areas of San Diego at that time such as the nearby Balboa Park and San Diego Mission. As a government building, aesthetics were secondary to its function as San Diego's sixth fire station and original machine shop.

In 2013, the building stands much as it did when it was first constructed in 1915. Aside from a moderate alteration estimated around 1934, the design and architecture has changed very little.

Initial Building in 1915

(The only known photographs taken of the original building range from approximately 1916 to 1931. The following description is based on that evidence and of the existing building.)

Primary (East) Facade

The original building is rectangular (approximately 100' x 80') with predominantly masonry construction, and consists of two distinct but connected sections; a two-story firehouse and a single story machine/maintenance shop. The stucco exterior is a light and natural color on all sides except for the rear (west facing) wall.

The southern portion of the primary facade contains what is known as the Machine Shop while the northern portion contains the fire station for *Engine Company No. 6 (Image 01)*. The facade of the machine shop has two large window openings, each with three double-hung sash windows. There are also decorative concrete sills beneath both openings. Between those windows is a single garage opening with two large, inward swinging doors. Mounted above the garage is a concrete circular ornamental design, which matches the design over the garage door for the fire station. A double-layered ornamental border surrounds the door, which joins at the bottom with an ornamental base that stands approximately one and a half feet and runs along the base of the entire front of the building.

A parapet above the machine shop is designed as a double-layered point, with two adjacent double-layered rectangles, reminiscent of the Mission-style design found throughout San Diego and Southern California, with ornamental lines and boxes that occupy the space between the windows/door and the parapet. Adjoining and to the immediate left of the machine shop is the firehouse. In order to accommodate the five firefighters who work 24 hours a day, a second story living quarters was included above the apparatus bay where the fire engine was parked.

The ornamental design used for the firehouse garage door is identical to the machine shop door's ornamental design. The large, outward swinging, hinged wood double doors are recessed approximately five feet into a bare alcove. The large window encasement on the second floor has a concrete border with six, stepped ornamental projections that resemble shelf brackets. The encasement contains five double-hung sash windows, each with small rectangular windows above them; the parapet above the window also mirrors the design of the machine shop, with the exception of a large mounted antenna in the middle of the peak of the parapet. Embossed in the stucco between the window and garage door is "Engine Company No 6."

Cedar Street (North) Facade

Moving counter-clockwise, the north-facing wall of the structure continues with the California-style parapet bordering design along the top. The first floor has four double-hung sash windows which illuminate the apparatus bay. The second floor has six double-hung sash windows, five for the bunk room and one for the locker room. All windows have decorative concrete sills, consistent with the window openings in the front and throughout the entire structure. A standard-sized wood door on the far western corner provides access to the hose tower, as well as an approximately two foot by three foot opening approximately seven feet above that door that provides light and ventilation to the hose tower. It is also noteworthy that Cedar Street slopes downwards towards the waterfront, making the west end of the north side of the building longer than the east end *(Image 14)*.

The fire hose tower, the tallest point of the building, is located on the northwest corner of the structure. This is a typical design for firehouses throughout the country as the firefighters needed to dry the 50-foot sections of cotton and rubber fire hoses after being used so they wouldn't mildew or rot in storage *(Image 15)*.

The design for the hose tower is highly ornamental, and contains in a condensed version of the Mission-style features used elsewhere in the building, with the peaked top adorned with double-grooved border lines and masonry simulated brackets. A standard-sized wood door provides access to the top of the tower, with large vents on the remaining three sides providing air circulation.

Rear (West) Facade

The rear of the building is unadorned and its utilitarian design is based on the functional needs of the corresponding interior. The second story of the firehouse has three double-hung sash windows of different sizes, all with the same decorative concrete sills. On the ground level, there is a covered subterranean staircase that accesses a bare 10' x 10' basement *(Image 09)*. The rear of the machine shop lies to the south, which has three large light windows, as well as an oversized wood hinged door which provides access to a back yard area that spans the length of the rear of the station and wraps around the south side. A feature of the rear facade is that it is constructed of heavy timber and wood paneling, whereas all other walls are masonry. A possible reason for this design is that the wood siding would provide for a more comfortable interior temperature (in an otherwise concrete block building) using the afternoon sun from the west facing aspect.

South Facade

The south facade is unadorned, other than a series of elevated double-hung sash windows that provide light to the machine shop. A standard-sized door in the rear of the facade provides access from the machine shop to the side yard.

Interior

The interior of the machine shop is an open, rectangular area with a concrete floor. The front three walls share the same masonry as the exterior, with the rear wall being wood. The floor plan allows for an open area where vehicles and trucks can be repaired. Much of this area was built without overhead beams by utilizing wood blocks and a heavy-duty cable tensioning system *(Image 19)*. The southwestern portion, designated as the machine shop, has an approximately six-inch elevated concrete pad that prevents spills from the adjoining garage area to affect the machinery on the raised pad.

A a large steel fire door separates the machine shop from the firehouse as well as two bi-directional swinging wood doors *(Image 64)* and the shared wall that connects the two is thick masonry. The first floor of the firehouse *(Image 20)* is concrete with decorative lines to give the appearance of tiles. Immediately to the left upon entering through the large front double doors into the apparatus bay is an alarm panel, an iron circular iron staircase, and a brass fire pole. On the opposite side there is an exterior door and another brass fire pole. The apparatus bay is rectangular and open to allow for the fire engine, with an exterior door in the rear providing access to the back yard, as well as a door that opens into the hose tower.

The firefighters living quarters are upstairs, utilizing an open floor plan that allows for cots to be placed throughout. The front allows access for the two brass firefighter's poles and the staircase and the rear of the second floor has a restroom (left) and a locker room (right), with a standard-sized wood door providing mid-shaft access to the hose tower from the locker room.

Alterations (Approx 1919-1944)

During the period of 1919 to 1944, there was one minor and one moderate alteration. At some time between the removal of the fireboat from the side yard in 1919 and 1928, a small wood and stucco addition was added in its place on to the south façade *(Image 10)*. In addition, a kitchen was added on to the rear of the first floor of the fire apparatus bay in Station 6. The kitchen has a large paned light window as well as a standard-sized wood door that provides access the outside common area *(Image 41)*.

Possibly in 1934, but at a point between 1931 and 1944, the building experienced a moderate renovation. The architect and builder were most likely skilled fire department personnel, though that is unconfirmed. The wood structure that was added in the side yard where the fireboat was built was brought forward flush with the rest of the *Primary (East) Facade (Image 13)*. The ornamental parapet was extended to the new south wall as well, adding a single point design on the parapet but without the double layer ornament or the ornamental one and a half inch bottom design.

A barrack from the former Marine Corps Base in Balboa Park (decommissioned in 1921) was relocated and rebuilt as a carpenter shop behind the machine and paint shops in what was the backyard of the property[2]. The stand-alone rectangular structure is of wood construction with wood slat siding and a flat roof, and extends the building to within two feet of the west property line. The west facing portion of that structure has six medium wood-framed double-hung sash windows and one small window in a storage room *(Image 44)*.

In between the barrack and the machine/paint shop a small two story wood structure was built and connects the two larger structures *(Image 45)*, with the upper floor of this structure is a storage room with a one-sided pitched roof, with the low side braced against the top of the east barrack wall *(Image 62)*. The east-facing side is a bank of wood, six-paned horizontal sliding windows that connect to the existing machine shop exterior wall *(Image 61)*. The first floor consists of a welding shop and storage room. The door to the welding room opens to the exterior into an alcove containing the large sliding door to the machine shop, the staircase to the upper storage room, and a door to the woodshop *(Image 17)*.

In addition to the creation of the paint, carpenters, and welding shops, the machine shop was renovated with two functional alterations: An additional garage door with a single overhead opening wood door was installed in place of the large southern pane window and a matching overhead door was installed in the existing garage entrance. The northern pane window was reduced in size to accommodate an office and second-story storage room inside the garage and two recessed double-hung sash windows were installed *(Image 13)*. With the window reduction, three skylights were installed over the paint shop and another large one was installed over the machine shop to provide additional light.

The firehouse portion also experienced a functional alteration with the creation of a captain's quarters and a "bullpen", or dayroom, in the front of the structure, which necessitated the reduction of the front window opening. The original concrete framing was kept and two smaller sets of double-hung sash windows were installed; one for the southern "bullpen", and one for the captain's quarters located in the northeast corner of the second floor. In addition, the large antenna was relocated from the front of the firehouse peak to the middle of the roof *(Image 14)*.

This alteration prompted a complete re-stucco of the entire building inclusive of subtle design changes to the entire *Primary (East) Facade*. To maintain consistency with the two new garage openings, the two initial circular ornamental designs over the original and firehouse garage doors were removed. In addition, the decorative lines and designs that bordered the parapet were filled in on the Primary Façade only. The decorative lines on other facades, (including the hose tower), remain. Finally, the original embossed "Engine Company No.6" was also filled in and made flush. In its place is a wood engraved sign stating "Engine Co 6", which is consistent with those for the machine and paint shops and those on many other fire stations throughout San Diego *(Image 14)*.

The interior changes during this alteration were: the addition of an office and upstairs store room, as well as an extra garage bay in the machine shop; the addition of a captain's quarters and "bullpen" in the firehouse; and the addition of the paint, carpenter, and welding shops, as well as the storage areas next to and above the welding shop. The carpenter shop has a natural, cedar wood floor. *(Image 22)*

The only other interior change of note was the removal of the brass fire poles in 1942. In order to support the war effort the brass poles were donated and replaced with galvanized poles. *(Image 68)*

Minor Security Alterations

Since those alterations and additions approximately 80 years ago, *San Diego Fire Department Shops at Station 6* has undergone only minor changes. These occurred sometime after 1966, when the machine shop and Engine Co. 6 was relocated, and the structure made its transition to a museum and meeting hall, making security a priority due to a lack of a constant presence.

The windows on the South Facade were modified and raised over ten feet into a row of five, wood-framed single pane rectangular windows *(Image 49)*. The east-facing windows in the second story addition storage room were covered *(Image 62)* as were all of the skylights on the machine shop roof *(Images 50 & 51)*. All the ground-level windows for the carpenter shop were covered in tin outside, and the wall was enclosed on the inside *(Images 46 & 47)*. Four of the exterior tin coverings have various firehouse scenes illustrated on them, presumably hand-painted by members of the neighboring Mexican Consulate to improve the aesthetics of their adjacent deck only feet away. Brick like designs are also painted on the wood slat siding as well. Large metal roll-up doors were installed on all four garage openings *(Image 30)*, and an additional standard-sized door was placed in the paint shop section to the south of the garage door. To support the needs of the meeting hall, a kitchen was built in the welding room *(Image 59)*, and the alcove where the garage, welding room and carpenter shop opened into was enclosed and made into a hallway *(Image 60)*. Large double doors were placed to give access to a side courtyard, and a storage closet and small restroom were added adjacent to them.

The San Diego Firehouse Museum – 2013

The *San Diego Firehouse Department Shops at Station 6* currently functions full-time as a public museum and meeting hall. The *Primary (East) Facade* is two-toned and has been repainted with earth-toned colors, close to how it was originally. To provide modern contrast to the utilitarian design, all garage, access doors, and window frames have been painted red, which is commonly associated with the fire service. On the front of the museum are two red signs that read, "The Firehouse Museum" in antique lettering with hours of operation underneath *(Image 33)* and a small glass "Notices" case next to the main door. Over the old firehouse door is a wood, red-painted sign that reads "Pioneer Hook and Ladder Co.", which signifies the group that was responsible for transitioning the building from a working firehouse/machine shop into a museum *(Image 35)*. There are also three flags hanging over the door: a fire department flag, an American flag, and the flag of the State of California. Inside thousands of historical artifacts and approximately 10 antique fire trucks and engines occupy the garage and firehouse area *(Images 52-54)*. The machine shop office is now a gift shop, and the storage area is now the museum Executive Director's office *(Image 55)*. The carpenter shop now holds the meeting hall *(Image 58)*, and the former kitchen for the firehouse is a fire safety room for children *(Image 70)*. The kitchen built in the old welding room remains intact and is fully functional *(Image 59)*. The upstairs bunk room in the firehouse provides additional meeting space *(Image 71)* and a side lot located next to where the fireboat was built is used for parking and temporary storage.

Historic Integrity

San Diego Fire Department Shops at Station 6 is characterized by its distinct Mission style front facade, adjoining machine shop/firehouse design, and hose tower. Despite the functional alterations to the building in its 98 year history, it has maintained its appearance with very few alterations to its design. While some the original ornamental designs were lost in the 1930's alteration, the building retains its integrity of design and workmanship in that both the exterior and interior of the building are essentially original with the exception of the façade alteration. The structure stands in its original location, and is an integral landmark in the Little Italy and downtown San Diego area. The Mission style architecture is prevalent throughout San Diego, so it retains its integrity of location and setting as well. Finally, the building's interior and exterior has been preserved in the condition as it was during its period of significance, so it also retains its integrity and association related to its original and ongoing function. The *San Diego Fire Department Shops at Station 6* therefore, retains its historic integrity.

During the time of service this building was considered more of the "Central Shops" of the SFFD. The firefighters who worked there were hand selected as craftsmen in their trade, as well as firefighters. New and existing fire stations had a need for chairs, tables, and desks, all of which were constructed in the carpenter shop. In fact, the carpenters became so well known in the city they build the San Diego mayor's desk, which is still the mayors desk today. Also, since the fire service was still in its infancy many new tools and equipment were being created to improve firefighting abilities. This included repairing and replacing parts on their many fire engines. Many of those parts were hand made in the machine shop.

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[1] San Diego City Property Record – Parcel #: 760-213-10; Prepared February 13, 1989

[2] "Bill Kettner 34 Today", San Diego Union, November 19, 1952

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [x] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [x] B Property is associated with the lives of persons significant in our past.
- [ ] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance

(Enter categories from instructions.)

A: Engineering, Maritime History, Invention

B: Invention, Engineering

Period of Significance

1915 – 1963

Significant Dates

1915 – Station #6 Built

1919 – Construction of 1st gas powered fire boat

1963 – National Fire Service Hose Thread Standardized

Significant Person

(Complete only if Criterion B is marked above.)

Ely, Robert – Assistant Fire Chief San Diego FD

Cultural Affiliation

Architect/Builder

Period of Significance (justification)

The period of significance for the *San Diego Fire Department Shops at Station 6* ranges from its original construction in 1915 to 1963, the year the National Fire Protection Agency declared the National Standard Thread the official fire hose thread of the United States. Developed in the machine shop of the building, it would become the common thread for all fire departments across the country, allowing them all to work as one.

Criteria Considerations (explanation, if necessary)

None

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance and applicable criteria.)

San Diego Fire Department Shops at Station 6 is eligible for the National Register of Historic Places under Criterion A under Engineering, Maritime History and Invention, and under Criterion B for its association with inventor Robert Ely, at the national level of significance, with a period of significance of 1915-1963, from the year the building was constructed until national adoption of the National Standard Thread for firehouses, based on an invention developed by Ely at Station 6.

Criterion A Significance

The *San Diego Fire Department Shops at Station No. 6* is significant at the national level for the National Register under Criterion A under Engineering, Maritime History, and Invention. The building of the world's first internal combustion, gas-powered fireboat, the *Bill Kettner*, at that site was the model for all modern fireboats, which is a significant contribution to the broad pattern of our nation's history. Fireboats have a presence around the world in all major ports and harbors, and have been instrumental in saving billions of dollars in damage and an untold number of lives. The Kettner now serves as a houseboat in Los Angeles, CA. The boat's original bell, however, has been restored and is on display at the San Diego Firehouse Museum.

Criterion B Significance

The *San Diego Fire Department Shops at Station No. 6* are eligible at the national level due to the Shops' association with the productive life of Robert Ely, a person who made significant contributions to our nation's history in the areas of invention and engineering.

Chief Ely's contributions to the American fire service started with the creation of the *Ely Fog Nozzle Adapter*, as well as the eductor to suction flooding holds of ships. The latter invention saved a million-dollar naval vessel from sinking and was subsequently adopted by the *US Navy* on its ships.

Ely's primary contribution was the invention and engineering in the machine shop of the 90-second *Ely Fire Hose Thread Standardizer*, which created the *National Standard Thread*. It reduced the hundreds of different types of fire hose thread used around the United States to one, providing all fire departments across the country with the ability to attach to each other's fire hydrants and engines. This commonality has prevented billions of dollars in property damage, not to mention countless lives saved. Interestingly, this was a personal project for him in which he received no additional compensation for, and service he did not charge for.

The original *Ely Fire Hose Thread Standardizer* remains in the same building where it was invented. See *Figures 29-35* in the *Additional Documentation* section and Photo 47.

(Continued in Section 8 narrative)

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1 "The Spirit of a Champion Magazine", Volume XXXIV, Number 5, Sept-Oct 1952

2 "Bill Kettner 34 Today", San Diego Union, Nov 19, 1952

3 San Diego Fire, 1889-2000; Turner Publishing Company, 2000, Page 52

4 "Fireboat May End 40-Year Service", San Diego Union, Unknown.

5 "Special Report- Fireboats Then and Now", US Fire Administration USFA-TR-146, May 2003

6 "Evolution of Fire Stations", San Diego Fire Department 1976, Page 121

7 "Before Combination Fire Nozzles", by Robert Ely; San Diego Fire, 1889-2000; Turner Publishing Company, 2000, Page 297

8 "Robert Ely," Obituary, San Diego Union-Tribune, November 18, 2003

9 "Coast Guard Takes Lease on City Fireboat", San Diego Union, January 3, 1943

10 "Bill Kettner 34 Today", San Diego Union, November 19, 1952

11 Letter from Robert Ely to President Nixon, June 26, 1972; San Diego Firehouse Museum Archives

12 "San Diego Chief Discussed Problem of Hose Threads", Pacific Coast Fire Magazine, May 1957, Page 10

13 "History of Fire Hose", by Darrell Gilbert, http://www.crownshoptalk.com/History%20of%20Fire%20Hose.pdf

14 "Robert Ely," Obituary, San Diego Union-Tribune, November 18, 2003

15 SDFD Fire Stations Locations/Apparatus, http://www.sandiego.gov/fireandems/about/apparatus.shtml

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

(See Continuation Sheet)

Developmental history/additional historic context information (if appropriate)

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

"The Spirit of a Champion Magazine", Volume XXXIV Number 5, Sept-Oct 1952

"Bill Kettner 34 Today", San Diego Union, Nov 19, 1952

San Diego Fire, 1889-2000; Turner Publishing Company, 2000, Page 52

"Fireboat May End 40-Year Service" San Diego Union, Unknown

"Special Report – Fireboats Then and Now", US Fire Administration, USFA-TR-146/May 2003

"Evolution of Fire Stations", San Diego Fire Department 1976; Page 121

"Before Combination Fire Nozzles", Robert Ely, San Diego Fire, 1889-2000; Turner Publishing Company, 2000, Page 297

"Robert Ely", Obituary – San Diego Union-Tribune, November 18, 2003

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"History of Fire Hose", Darrell Gilbert, http://www.crownshoptalk.com/History%20of%20Fire%20Hose.pdf

SDFD Fire Stations Locations/Apparatus- http://www.sandiego.gov/fireandems/about/apparatus.shtml

San Diego Fire Department Shops at Station 6
Name of Property

San Diego, CA
County and State

Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested)
____previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey #_____
____recorded by Historic American Engineering Record #_____
____recorded by Historic American Landscape Survey #_____

Primary location of additional data:

____State Historic Preservation Office
____Other State agency
____Federal agency
____Local government
____University
____Other
Name of repository: _____

Historic Resources Survey Number (if assigned):

10. Geographical Data

Acreage of Property .23 acres
(Do not include previously listed resource acreage.)

Latitude/Longitude Coordinates
Datum if other than WGS84:_____
(enter coordinates to 6 decimal places)
Latitude: 32.721630 Longitude: -117.167119

Verbal Boundary Description (Describe the boundaries of the property.)

The *San Diego Fire Department Shops at Station 6* stands at 1572 Columbia Street (Parcel # 760-213010), and is a rectangular parcel on the southwest corner of Columbia and Cedar Streets in San Diego, CA. The north border is Cedar Street and the east border is Columbia Street. The parcel to the west is the Mexican Consulate, which is only 3-4 feet from the western end of the structure. The south border is a parking/storage lot which is bordered by a mid-rise condominium.

Boundary Justification (Explain why the boundaries were selected.)

The boundary is defined by the parcel on which the *San Diego Fire Department Shops at Station 6* stands, which, along with a back and side yard, coincide with the parcel boundaries.

(See Continuation Sheet for Google Earth Map, Map 3.)

11. Form Prepared By

name/title Stu Sprung/Executive Board Member

organization San Diego Firehouse Museum/Pioneer Hook & Ladder Co. date February 22, 2012

street & number 1572 Columbia St telephone (619) 232-3473

city or town San Diego, CA state CA zip code 92101

e-mail sdfirehouse@yahoo.com

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.

  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Continuation Sheets**

- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

(See Continuation Sheet, Additional Documentation: Photograph Log)

Property Owner:

(Complete this item at the request of the SHPO or FPO.)

name City of San Diego- Attn: Patti D. Phillips, Supervising Property Agent

street & number 1200 Third Ave, Suite 1700 telephone (619) 236-6766

city or town San Diego state CA zip code 92101

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).
Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Significance Statement--Continued

With the development of San Diego's waterfront and the prominence of tuna fishing, the early 1900's created a neighborhood known as the Little Italy district, primarily due to the Italian fishermen and their families who settled there. While most of the neighborhoods shops and restaurants lined India Street, the surrounding residential area was built with a mix of Victorian, Craftsman, and Spanish-style homes. In 1895 a San Diego resident named Joseph Cook was registered as the owner of the property at 1572 Columbia Street, one block east of India Street and bordering Cedar Street. Mr. Cook leased the property to the City of San Diego in 1913 so a fire station could be built to accommodate the growing Little Italy/waterfront population. The fire department was also in need of a centralized maintenance facility/machine shop. The large lot would suit both of those needs.

Coincidentally, it would also suit a revolutionary idea that then-Fire Chief Louis Almgren had been conceptualizing. The fledging waterfront had also created a need for maritime fire protection. Foremost in Chief Almgren's mind was the infamous *Great Standard Oil Fire of 1913*. He witnessed firsthand the burning oil from the tank farm spread into neighboring lumberyards, creating a three-day inferno that would exhaust all his resources and become the city's first major industrial fire. Standing on the docks he looked at the vast, untapped resource of water in the bay and imagined a gas-powered, internal combustion fireboat pumping vast quantities of seawater.

Almost immediately Chief Almgren and a crew of draftsmen went to work making the blueprints for the fireboat[1]. Since there were no gas-powered fireboats in existence in the world, they would have to create it from scratch. Fireboats of that era were all steam, but the purchase and operational costs of a new steam-powered fireboat were cost prohibitive for the San Diego Fire Department in 1913. Since the shops at station 6 had the room, equipment, skilled tradesmen, and innovation they knew it would be cheaper to build their own boat. They chose a gas engine over steam boilers because it is simpler to build. Gas hadn't been utilized as there was a common fear against using it in a firefighting boat.

In 1914, while attending the International Association of Fire Chiefs convention in New Orleans, Chief Almgren presented his concept for building a wood-hulled gasoline powered fireboat to his colleagues from around the world. His international peers literally laughed at his concept[2]. In the age of steamers, no one could fathom a wood-hulled fireboat powered by gas whose purpose was to fight fire.

In 1915, after leasing the property for two years, *San Diego Fire Department Shops at Station 6* was built at 1572 Columbia Street. The fire station occupied the northeast portion of the lot and shared a common wall with the machine shop which was just south of it. The footprint of the building left a backyard to the west and a side yard to the south. One of the characteristics that set Station 6 apart from other San Diego fire stations is that all assigned personnel were required to be skilled in a trade such as mechanic, carpenter or welder (and later painter) to support Station 6 as well as the other five local fire stations. *Station 6* members were proud of their assignment and were seen and treated as unique, inclusive of wearing distinct uniforms.

Undeterred by the criticism directed at his concept by his peers at the convention, Chief Almgren and the trade-skilled crew began building the fireboat in 1915, utilizing the newly built fire station/machine shop to prove his concept was a worthy consideration. During construction of the vessel, the boat's keel was laid in the backyard and then moved to the side yard in December 1915[3] *(Figure 03)*, where it would remain until it was completed.

A six-cylinder Atlas 220 HP Marine Gasoline Engine was selected to provide propulsion with a customized manifold that was made in the machine shop *(Figure 05)*. The machine shop crew also designed and built a custom ignition system.

In June of 1919 the 55-ton, 50-foot fireboat was completed and the laborious task of moving the boat was undertaken *(Figures 4, 6 & 7)*. Due to power lines in front of the fire station and along the route, the elevated

nozzle bridge had to be removed and re-installed at the waterfront. On November 19, 1919 the boat was christened the *Bill Kettner*[4], in honor of the local congressman who had been instrumental in bringing the military to San Diego. The world's first internal combustion gasoline-powered fireboat was then launched at the Santa Fe Wharf *(Figure 08)*.

Sometime in the 1920's the fire chief from the New York City Fire Department visited Chief Almgren in San Diego and joked, "Chief, how is your little toy coming along?"[5]. In 1931, however, the New York Fire Department launched an internal combustion, gas-powered fireboat, the *John J. Harvey*, which was modeled after the *Bill Kettner*. Other cities across the country followed suit as well.

The fireboat *Bill Kettner* would serve on the San Diego bay for 41 years. *(Interestingly, FDNY's John J. Harvey would also serve a long career and was brought out of retirement to pump water to the firefighters at the site of the 9/11 World Trade Center attack.)*

In the time since 1915 when *Station 6* and the machine shop were built, the San Diego Fire Department had experienced significant growth. In that period 15 fire stations were either opened or relocated[6], doubling the department in size. This created a heavy need for the purchase and maintenance of fire engines and trucks, firefighting equipment, and furniture. The existing layout of the machine shop and *Station 6* was inadequate and needed to be expanded and modernized to meet this demand.

A Marine barrack from the former Balboa Park Marine Base was made available, and was dismantled and rebuilt in the back yard behind the machine shop. In addition a welding room and paint shop was also needed. The welding room connected the main building and the carpenter shop, and the paint shop was added in the location on the side of the station where the *Bill Kettner* was built. The carpenter shop would become legendary for creating custom woodwork throughout the city, including the mayor's desk, which has been used by all sitting mayors of San Diego for the past half-century up through today (*Figures 23 & 24)*.

In 1934, a large, thick pad of concrete was laid at the *Fire Department Shops at Station 6*. Eight station personnel etched their names in the drying concrete and dated it January 4, 1934 *(Figure 12)*. This preserved chunk of concrete is the only known proof of what is estimated as the primary significant alteration of the building. This estimate is supported by two other items: a photograph taken in 1931 *(Figure 11)*, which is the last known photograph of *Station 6* before the facade (and hence the other alterations) was changed, and the Robert Ely collection of photographs and records.

Thirty-year-old Robert Ely (*pronounced E-lee*), was a native San Diegan and service manager for the El Cortez Pontiac dealership when he decided to take the civil service examination for the fire department. The already skilled mechanic and self-made engineer scored high and was hired on January 17, 1941. On his seventeenth day as a firefighter Ely responded to a house fire:

> *"The captain called for 150 feet of 1 1/2 inch hose, and connected to the 2 1/2 inch hose and the pumper went two blocks (away) to the hydrant to pump more pressure. The straight stream nozzle was carried, connected to the 2 1/2 inch hose.*
>
> *The captain (then) called for the fog nozzle tip (which is an important part in firefighting tactics as it breaks up the stream into a fog, which increases the surface area of the flowing water in order to more efficiently absorb heat from fire) and it was still on the pumper two blocks back at the hydrant.*

Somebody was supposed to get the fog nozzle tip and put it in their turnout coat pocket before the pumper went back the hydrant, and that was probably me. Most of that night I thought about the fog nozzle back at the hydrant.

The next morning I told the captain that I believed I could solve the problem of forgetting to get the fog nozzle. He said, "How?" I said, "If you can get me a fog tip, and old straight stream nozzle and an old fire hose coupling, I will bring them back tomorrow and we can see if it will work."

I took the nozzles and hose coupling to the Pontiac Agency where I had worked, borrowed their welding torch and brazed and external threaded hose coupling over the straight stream nozzle. I then placed the fog nozzle over the end of the straight stream nozzle and screwed it onto the braze on the threaded hose coupling. The next shift I took the nozzles back to the fire station. We connected the nozzles and turned on the water. It (actually) made a lot better fog. (The Chief) was called to view the demonstration, and he said he wanted one on each pumper of the department."[7]

That would only be Ely's first fire service invention *(Figure 27)*. His next invention would forever link his name to the history of fireboat *Bill Kettner*. When the United States entered World War II, Ely enlisted with the Coast Guard where he was able to stay in San Diego and serve as a Chief Specialist providing port security and firefighting[8]. At the time the Coast Guard had leased the *Bill Kettner* from the city at $1/year[9], which by default allowed Ely to serve upon her (*Figure* 28). During this time he had noticed a shortfall in the design of the 25-year-old fireboat. Its three 110 horsepower, six-cylinder Seagrave engines could pump plenty of water, but there was nothing on the boat that had the capability of pumping water out of a sinking vessel.

Using the siphon forces of flowing water through hoses, he successfully designed an "eductor" that could suction water out of flooded compartments in ships. This process, known as the Venturi effect, occurs when a fluid or gas that is flowing through a pipe is forced through a narrow section, decreasing pressure and increasing velocity, resulting in a suction effect in that area. This is the same principle sandblasters use to draw in sand through the use of flowing air.

On November 21, 1944, two months after the *Kettner* was outfitted with Ely's new suction equipment, the new US Navy tug *Santana* was struck by a propeller blade of a big ship it was attempting to berth at the B Street Pier. As it took on water and began to sink Ely and his Coast Guard crew arrived in the *Bill Kettner*[10]. The *Kettner* crew pumped out enough water to prevent the Santana from sinking and accompanied it, still siphoning, back to the Naval Station where the crew continued to pump water out until it was put on a floating dry dock. Ely's innovation was credited by the Navy for saving the million-dollar tug, which earned him a Naval commendation.

Saving the Santana also earned Ely the confidence of Fire Chief John E. Parrish. After completing his Coast Guard duty, Ely was offered the coveted assignment of *Fire Station 6* in 1944, where he was quickly promoted to master mechanic and battalion chief. In addition to being a brilliant engineer and mechanic, Chief Ely was also a meticulous keeper of written and photographic records, which were offered to the Firehouse Museum upon his death in 2003. His contributions to innovation and invention, and his attention to recordkeeping, significantly contribute to the *San Diego Fire Department Shops at Station 6* being place of national significance.

Chief Ely was constantly looking for ways of improving and enhancing the tools firefighters used. None would have such a far-reaching effect on a national level, however, as his creation of what would become known as the *National Standard Thread (NST)*.

In the American fire service in the mid-1950's it was estimated that there were ten different sizes of fire hose that used 462 different sizes of couplings and seventeen different types of threads *(Figure 29-30)*. If a fire took place

that required the help of surrounding fire departments, there was a good chance that the hose from the other jurisdiction would not be compatible and therefore useless.

Ely knew the history of the issues with the couplings and threads. In the World Wars, both Britain and Germany paid a heavy price due to incompatible fire equipment. In Norway, the palace of the Crown Prince was almost a total loss due to a fire that raged while the fire brigade from a neighboring town stood by, unable to use their hose in 1930. In all cases, it was only after significant loss of life and property that fire hose threads were standardized in Norway, Britain and Germany.[11 & 12]

Acknowledging the same potential for disaster and unnecessary loss in the United States, Chief Ely began conceptualizing solutions. He knew that San Diego had already felt the effect of it with the Great Standard Oil Fire of 1913, in which a tank holding 1,500,000 gallons of black oil ignited erupting into a towering ball of flame, causing extensive damage. Burning oil flowed like molasses, igniting adjoining lumber yards. Neighboring departments from cities like La Mesa were unable to use their hose to help due to the incompatible equipment.

Ely also knew about the 1,231 firefighters that were required to extinguish the Great Baltimore fire of 1904. It destroyed over 1,500 buildings covering approximately 140 acres; and in 1872, almost half of Boston was laid to ruin because surrounding fire departments that had been called in to help couldn't attach their hose to the hydrants. Other American disasters included the complete loss of the USS Normandie in the New York Harbor on February 9, 1942, as well the tragic fire aboard the aircraft carrier USS Constellation at the Brooklyn Naval Yard on December 19, 1960 where 49 lives were lost. Both conflagrations were blamed on the lack of "interchangeability of hose." [13]

A key consideration to resolving the issue of incompatible equipment was that hundreds of thousands of dollars had already been spent by fire departments around the country on fire hose. Most would be unable to absorb the financial cost of a complete transition to a common thread and most fire hose was actively being used on fire apparatus. To take the hose off to change couplings would take too much time. The solution would have to be quick and economical.

In early 1957, in the *San Diego Fire Department Machine Shop at Station 6,* Ely conceptualized, engineered and built a machine that met the standardization needs. It would take him approximately 100 hours[14]. The *Ely Fire Hose Thread Standardizer,* as it was called, could take the brass couplings and re-thread them to what would become the *National Standard Thread.* The machine was portable, and could convert a coupling without removing it from the hose in 90 seconds (*Image 29-30*). It took advantage of the malleable nature of brass and the fact that existing brass couplings were built robustly. After evaluating the various commonly used couplings, Ely calculated that a design utilizing 9 threads-per-inch would allow for the various existing fire hose couplings to be converted to a standard size without destroying or rendering them useless.

Once the machine was built, Ely's mission to standardize fire hose thread throughout the United States had to be shared with fire stations nationwide, a task that would dominate his time for most of the remainder of his career. He chaired the *International Association of Fire Chief's (IAFF) Committee on Standardization of Fire Hose Threads* and traveled across the country with his machine, demonstrating its ability and preaching its benefit. Ely, concerned about the dangers of fighting fighters with incompatible threads offered the use of the machine to fire stations at no charge. He appealed on behalf of the IAFF to President John F. Kennedy Jr. for legislation and support for the cause. Though no response to the appeal was found, the letter was published in the congressional record. [15]

In October 1957, the State of California was the first to adopt legislation to make Ely's hose standardization mandatory for 1 1/2" hose, the primary fire attack hose line for firefighters. The California State Fire Marshal himself traveled to San Diego to take possession of three of Ely's machines with the purpose of spreading them

through the state to expedite the transition. Following California adoption, Ely's NST quickly became the standard throughout the United States in the US Government and Military (*Figure 31*), as well as in states such as Alaska (*Figure 32*), Colorado (*Figure33*), Utah (*Figure 34*), and Washington DC (*Figure 35*).

In 1963, because of Ely's fire hose thread standardizer, the National Fire Protection Association (NFPA), the federal governing body for fire codes and regulations in the United States, adopted national hose standards based on his *National Standard Thread (NST)*[16]. California extended the NST requirement for 2 1/2" hose, the main "supply" hose size (the size most commonly used to connect the hydrant to the fire engine and to provide large water streams) the same year.

The NFPA's adoption of the NST was the crowning achievement of both Chief Robert Ely and the *San Diego Fire Department Shops at Station 6*, and effectively concludes the period of significance of this historical site on a national level. It is difficult to measure the amount of lives, property and the environment saved by the national standardization of fire hose over the last half-century. Each day in the United States hundreds of fire departments respond into neighboring jurisdictions to help extinguish their fires, and they are able to do it seamlessly with standardized equipment such as fire hose.

In his 1961-62 annual report to the fire chief, Chief Ely wrote, *"It has been requested that a new Fire Department Shop be built at a fire station that would house a truck company and/or two engine companies. In this way the personnel assigned to the two companies could be instructed in proper operation and maintenance of equipment and at the same time could assist in the considerable amount of repair work without additional cost to the city."* In 1962, there were 32 fire stations in the City of San Diego, almost six times the department size when the original station was first opened in 1915. On May 3, 1966, 51 years after *San Diego Fire Department Shops at Station No. 6* were built, a new 17,500 square foot shop was completed at Station 28 in the Kearny Mesa community of San Diego, and the original shop was closed permanently. While Engine Company No. 6 remained in their quarters in the north side of the building, the vacating of the sizable shop created an opportunity for what is today the San Diego Firehouse Museum.

The Pioneer Hook and Ladder Company, whose purpose is the preservation of fire service history and the promotion of fire safety, was founded in 1962 with 22 charter members. Many of the members were former firefighters and some were prominent San Diego citizens who shared the common interest. The name was derived from the first San Diego fire company formed in the 1870's in what is now downtown San Diego. The volunteer company's equipment consisted of a total of 12 leather buckets.

The final alteration to *San Diego Fire Department Shops at Station No. 6* took place after the shop was closed in 1966. The shop temporarily became a storage area, which included a collection of firefighting memorabilia. The Pioneer Hook and Ladder Company adopted the facility as their headquarters for gatherings and meetings, and converted the old welding shop into a kitchen (Image 59). In order to provide a level of security for the growing collection of memorabilia steps were taken to protect them, which included the covering of many of the floor-level windows.

The San Diego Firehouse Museum was opened in 1972 and continues to be managed and staffed by members and volunteers of the Pioneer Hook and Ladder Company (PHL). In addition, they provide canteen service to active duty firefighters at large scale fires. Interestingly, Chief Ely was a long-standing active member of the PHL after his retirement in 1973, and was instrumental in the restoration of one of the museums most prized relics, a Seagrave pumper that had been used during the 1915-17 Panama-California Exposition in Balboa Park, where the Marine barrack for the carpenter shop originated. Long after he made the old machine shop legendary, Ely, described by some at that time as a "living national treasure"[17], continued to be a presence there. In March of 1978, Engine 6 was relocated to a new station in Otay Mesa, and the city closed the fire station permanently, this effectively ended the storied history of the property.

Today, the San Diego Firehouse Museum continues to host over 1,000 visitors per year, and holds many events annually, all with the same mandate established by the original PHL members in1962: the preservation of fire service history and the promotion of fire safety.

Ownership 1915-2012

In 1895 San Diego resident Joseph Cook was registered as the owner of the property at 1572 Columbia Street. Mr. Cook leased the property to the City of San Diego in 1913, and the property was purchased from him outright in 1945. The City of San Diego continues to own the property and building.

Criterion A Significance

The *San Diego Fire Department Shops at Station No. 6* is significant at the national level for the National Register under Criterion A under Engineering, Maritime History, and Invention. The building of the world's first internal combustion, gas-powered fireboat, the *Bill Kettner*, at that site was the model for all modern fireboats, which is a significant contribution to the broad pattern of our nation's history. Fireboats have a presence around the world in all major ports and harbors, and have been instrumental in saving billions of dollars in damage and an untold number of lives. The Kettner now serves as a houseboat in Los Angeles, CA. The boat's original bell, however, has been restored and is on display at the San Diego Firehouse Museum.

Criterion B Significance

The *San Diego Fire Department Shops at Station No. 6* is significant at the national level for the National Register under Criterion B under Invention and Engineering for the work of SDFD Assistant Chief Robert Ely and the creation of the National Standard Thread.

Chief Ely's contributions to the American fire service started with the creation of the Ely Fog Nozzle Adapter, as well as the eductor to suction flooding holds of ships. The latter invention saved a million-dollar naval vessel from sinking and was subsequently adopted by the *US Navy* on its ships.

Ely's primary contribution was the invention and engineering in the machine shop of the 90-second *Ely Fire Hose Thread Standardizer*, which created the *National Standard Thread.* It reduced the hundreds of different types of fire hose thread used around the United States to one, providing all fire departments across the country with the ability to attach to each other's fire hydrants and engines. This commonality has prevented billions of dollars in property damage, not to mention countless lives saved. Interestingly, this was a personal project for him in which he received no additional compensation for, and service he did not charge for.

The original *Ely Fire Hose Thread Standardizer* remains in the same building where it was invented. *(Photo 47)*

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1 "The Spirit of a Champion Magazine" Volume XXXIV Number 5 Sept-Oct 1952,

2 "Bill Kettner 34 Today" San Diego Union, Nov 19, 1952.

3 San Diego Fire, 1889-2000. Turner Publishing Company, 2000. Pg. 52

4 "Fireboat May End 40-Year Service" San Diego Union, Unknown.

5 "Special Report- Fireboats Then and Now" US Fire Administration USFA-TR-146/May 2003

6 "Evolution of Fire Stations" San Diego Fire Department 1976. Pg. 121.

7 "Before Combination Fire Nozzles" by Robert Ely. San Diego Fire, 1889-2000. Turner Publishing Company, 2000. Pg. 297

8 "Roberty Ely" Obituary- San Diego Union-Tribune, November 18, 2003.

9 "Coast Guard Takes Lease on City Fireboat" San Diego Union, January 3, 1943

10 "Bill Kettner 34 Today", San Diego Union, November 19, 1952

11 Letter from Robert Ely to President Nixon, June 26, 1972. San Diego Firehouse Museum Archives

12 Congressional Record, "National Standards for Firehoses", Hon. Bob Wilson of CA, January 24, 1973

13 Congressional Record, "Legislation Authorizing the Establishment of National Standards for Threads and Couplings of Firehoses", Hon. Bob Wilson of CA, October 14, 1971, pg. E10845

14 "San Diego Chief Discussed Problem of Hose Threads" Pacific Coast Fire Magazine. May, 1957. Pg. 10.

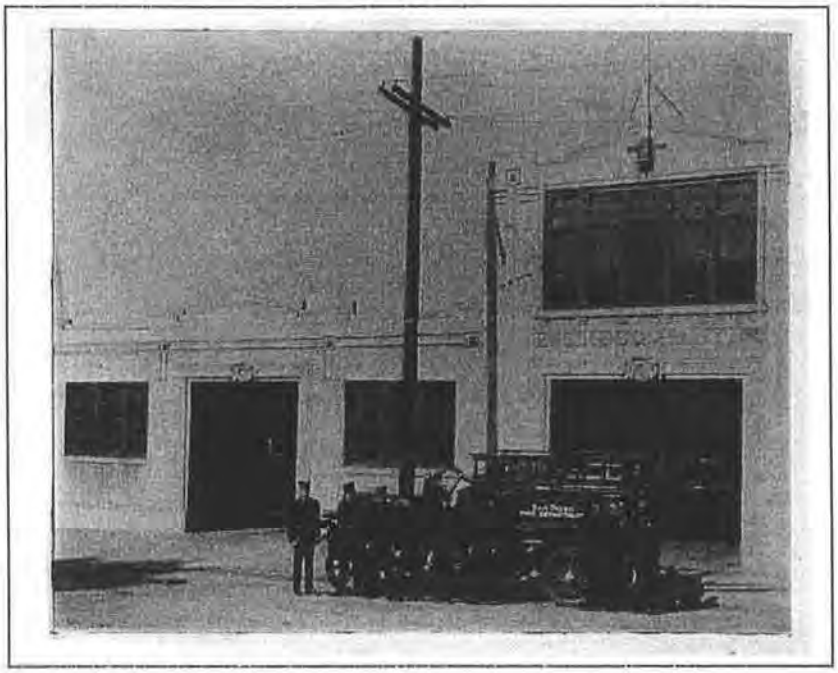
15 Congressional Record, "Plea for Standardization of Firehose Threads, Extension of Remarks", Hon. Bob Wilson of CA, September 27, 1961, Pg. A8028

16 "History of Fire Hose" by Darrell Gilbert, http://www.crownshoptalk.com/History%20of%20Fire%20Hose.pdf

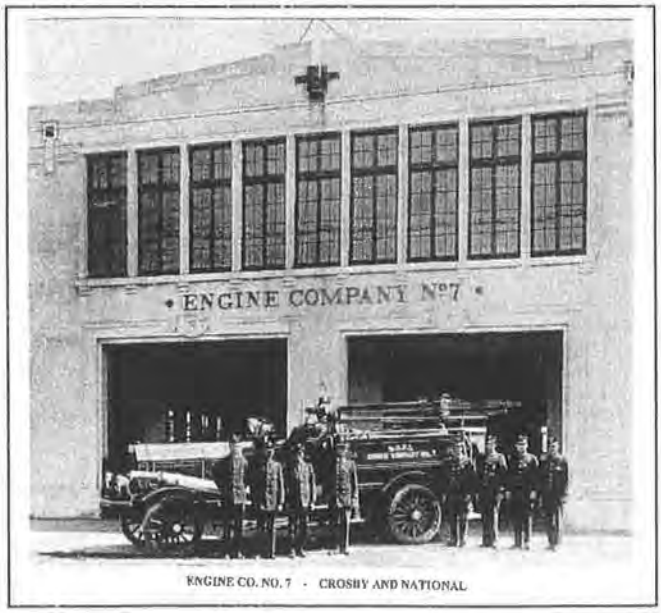
17 "Roberty Ely" Obituary- San Diego Union-Tribune, November 18, 2003.

18 SDFD Fire Stations Locations/Apparatus- http://www.sandiego.gov/fireandems/about/apparatus.shtml

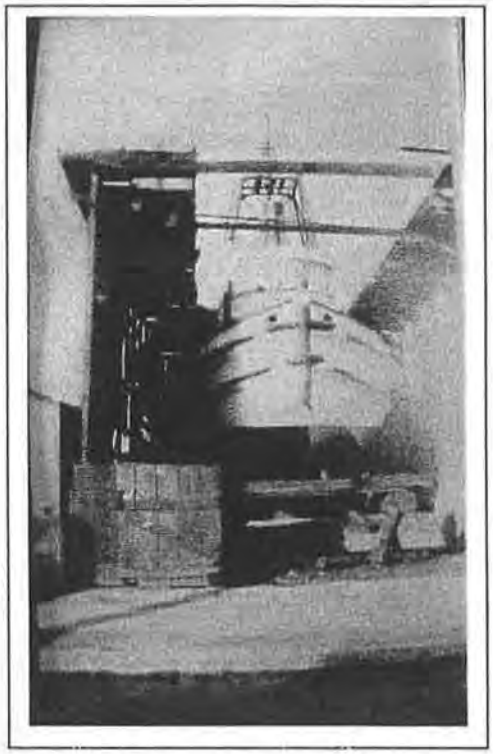
DESCRIPTION: All these photos are property of the San Diego Firehouse Museum Archives.



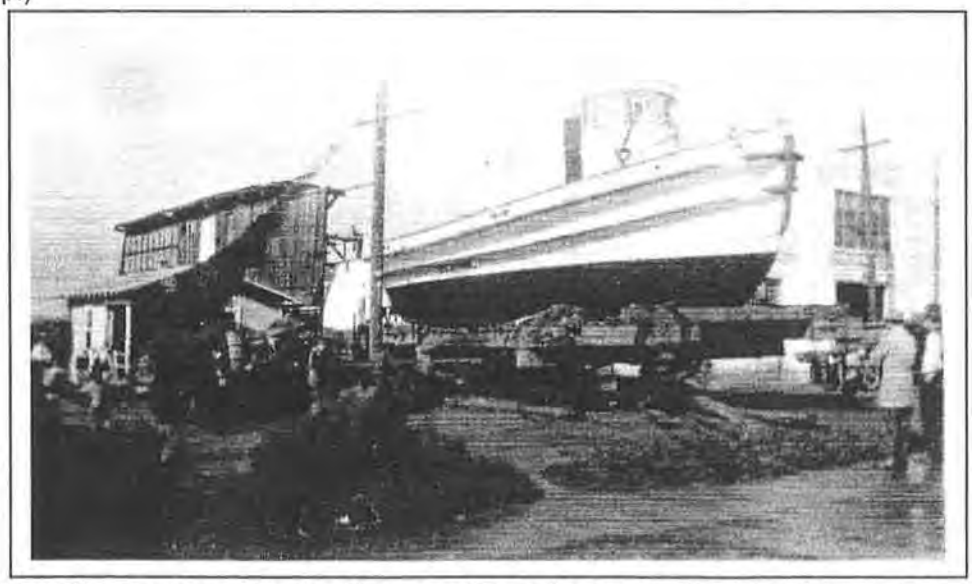
(**Figure 01:** This is the oldest known image with a clear view of the original structure as constructed in 1915. Judging from the dirt street and wood-spoke tires on the apparatus it was taken sometime between 1915 and 1927. The power pole was removed sometime after 1919 and before 1927.)



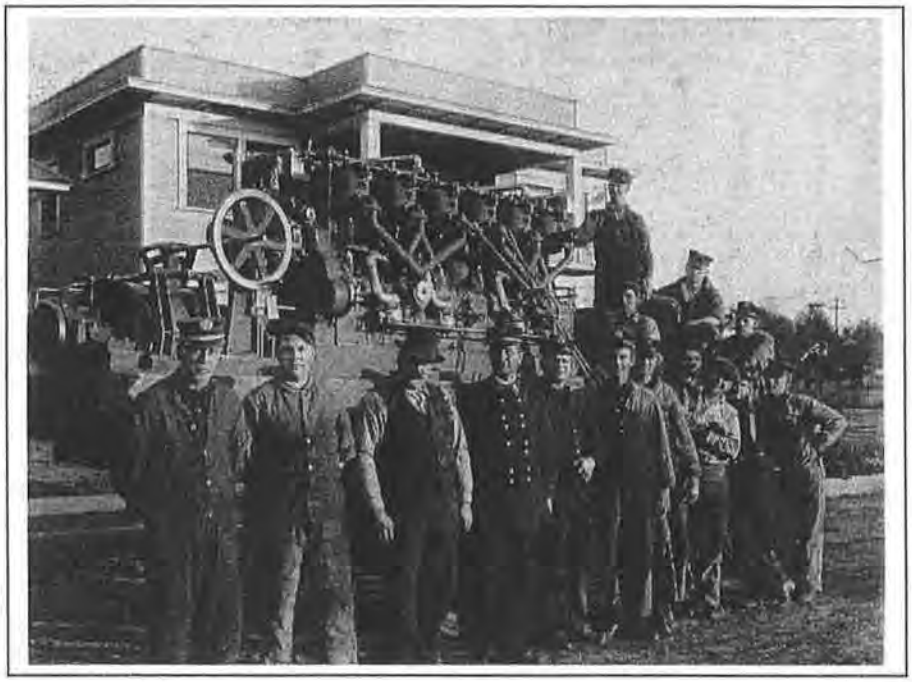
(**Figure 02:** While the architect and builder of Station 6 are unknown, it's interesting to note that the first SDFD Fire Station 7, built in 1913, had the same design and construction. Station No. 7 was demolished and replaced with a new building in 1957.)



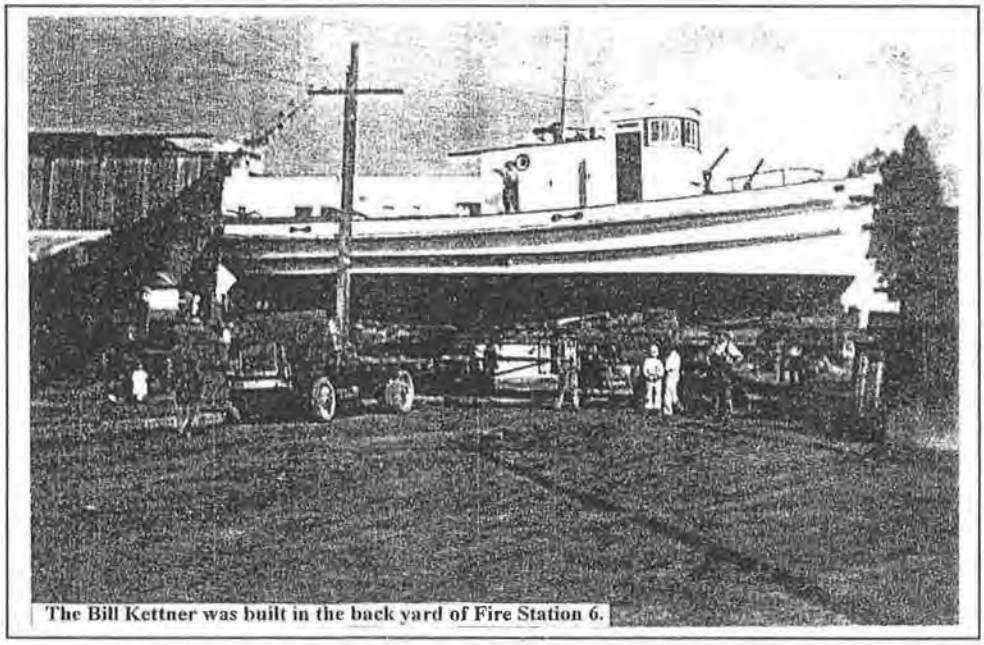
(**Figure 03:** Shown is the *Bill Kettner* in the side yard of the *San Diego Fire Department Shops at Station 6.* It would become the world's first gas-powered fireboat. Scaffolding was built around the fireboat off of the south wall of the machine shop.)



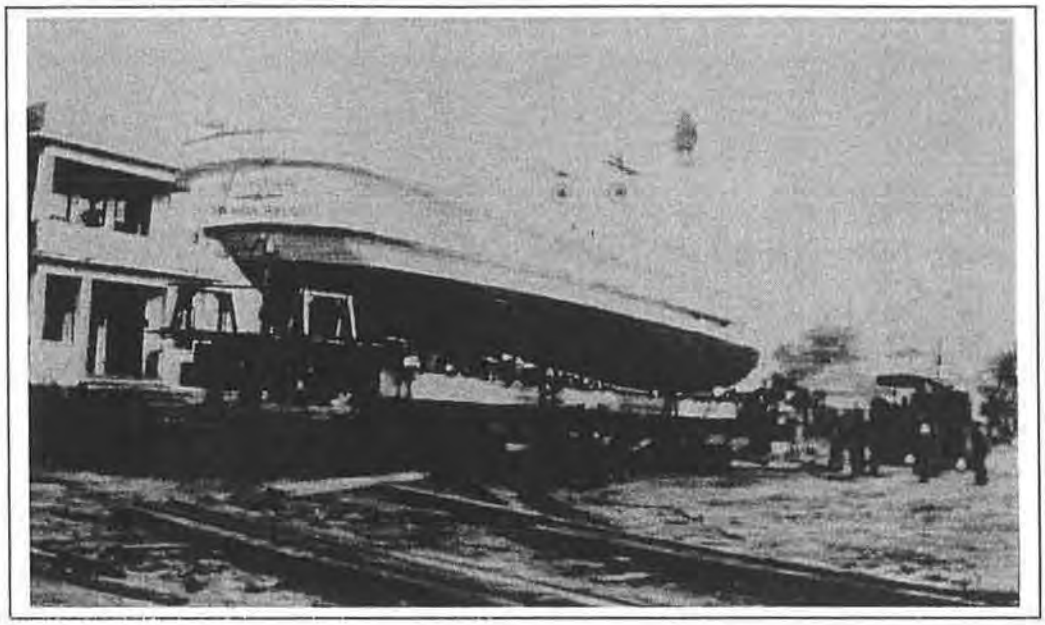
(**Figure 04:** In this photo the quarters of *Engine Company #6* can be seen to the right of the fireboat, with other details of the machine shop under the bow and behind the stern. Note that the hose tower has been removed to clear under the power lines.)



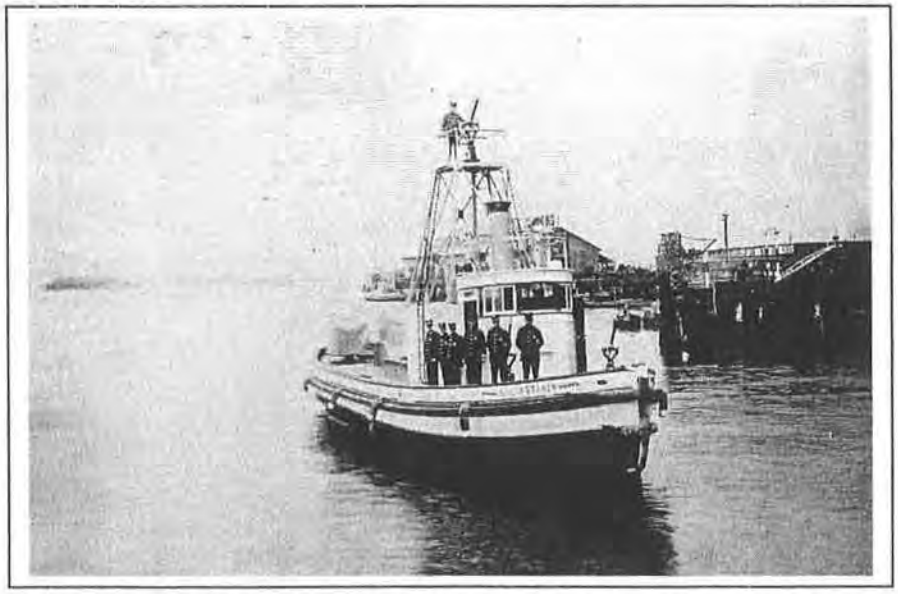
(**Figure 05**: The firefighters of *Engine Co. 6* pose with fellow shipbuilders and mechanics next to the 6-cylinder Atlas 220 HP Marine Gasoline Engine on Columbia St. in front of the station. It will be the first internal combustion engine in the world to power a fireboat.)



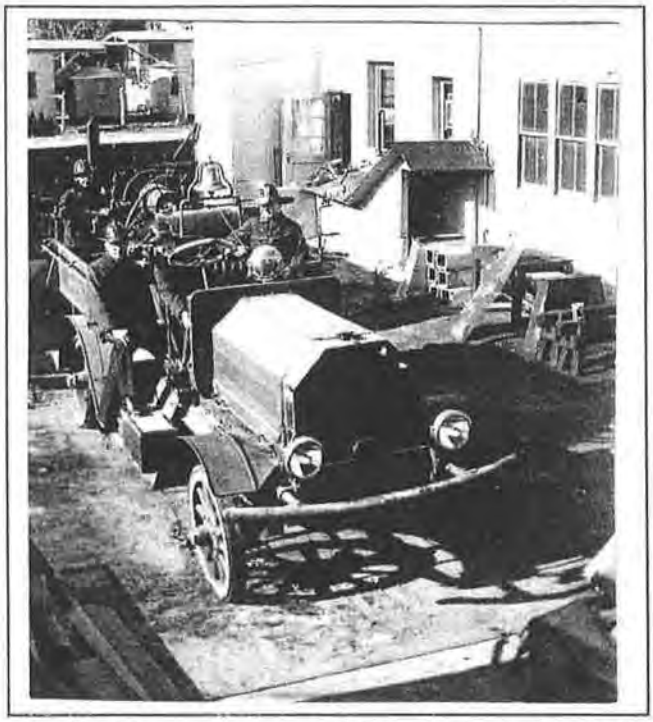
(**Figure 06:** The *Bill Kettner* being pulled out of the side yard onto Columbia St.)



(**Figure 07:** The *Bill Kettner* pulled out from the side yard, facing southbound on Columbia St. A steamroller is providing the power.)



(**Figure 08:** The SDFD fireboat *Bill Kettner* afloat in the San Diego bay where it would serve for 41 years. Note the US Navy battleships moored in Coronado Island across the bay.)



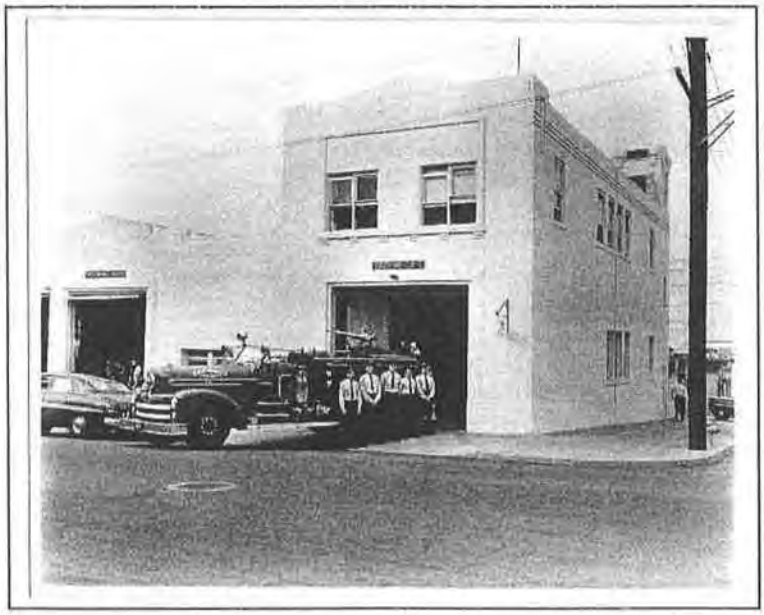
(**Figure 09:** This is the second or third known image of Station 6. This is the back yard with the crew of Engine 6 on their 1915 Seagrave fire engine. This was taken before the kitchen was added on to the rear of the firehouse and was snapped from the spot where the keel of the *Bill Kettner* was first laid.)

(**Figure 10:** This image has a 1928 Model T Ford parked in front, and reveals an added, recessed structure in the side yard (far left) where the fireboat *Bill Kettner* had been built. Also, Columbia and Cedar Streets have been paved and the power pole in front of the station has been removed.)

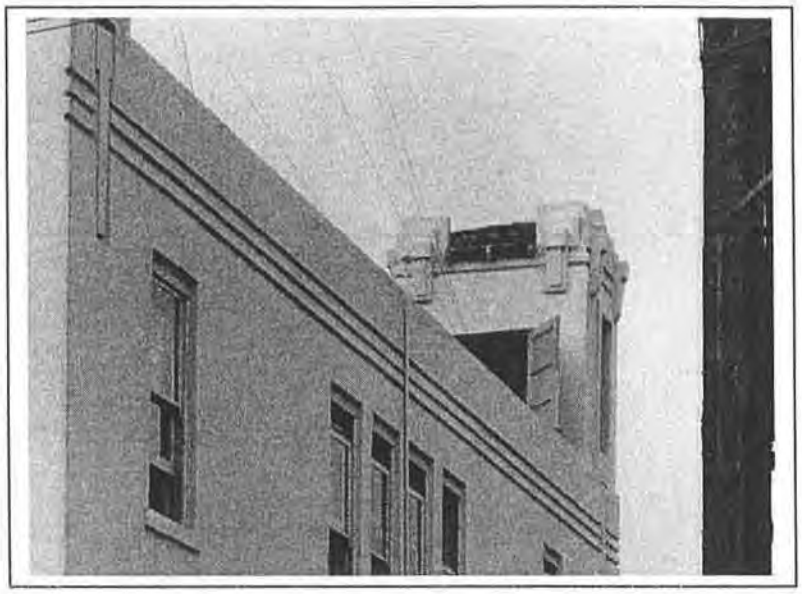
(**Figure 11:** This is the last known photograph of Station 6 before the moderate alteration, (estimated in 1934) was undertaken. The photo is dated 1931.)

(**Figure 12:** This preserved block of concrete, saved from demolition, has the names of Station 6's crew inscribed before it dried: Captain Hawkins, Lieutenant Ellis, Drivers Tyler & Sweeny (?), Firemen Neiswinger(?), Baum, Wentworth, and Cohn. It was dated January 4, 1934, as is estimated as the only evidence of the moderate alteration that occurred between 1931 and 1944.)

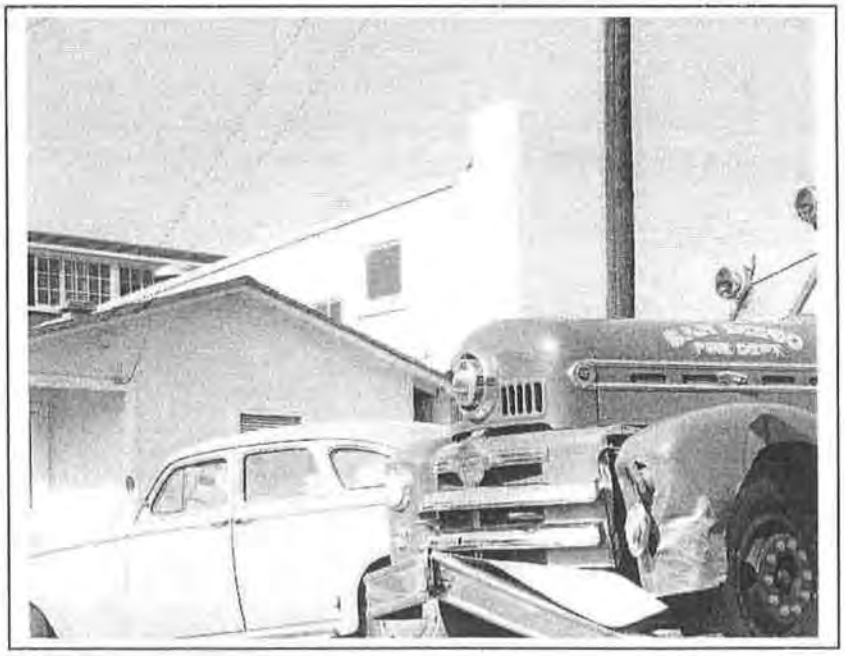
(**Figure 13:** This photo, estimated in 1951, (the Mercury is a '49 or '50) shows the southern addition moved forward flush with the rest of the building and labeled "Paint Shop", with two garage doors instead of one as well as a smaller northern window to accommodate an office.)



(**Figure 14:** Taken circa 1951, this photo shows the reduction of the upper firehouse window, as well as the relocation of the radio antenna. There is also an unobstructed view of the north facade.)

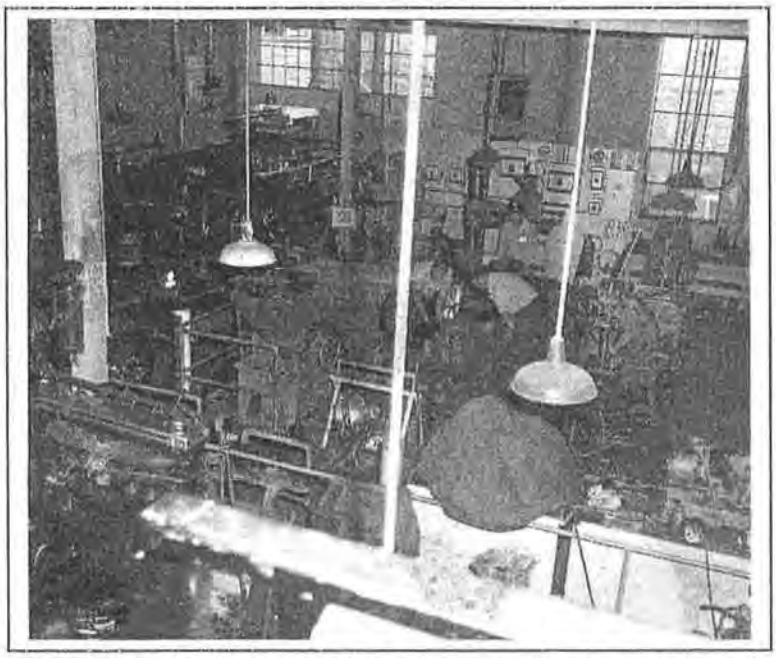


(**Figure 15:** This cropped photo shows the hose tower, which remains as it was today.)

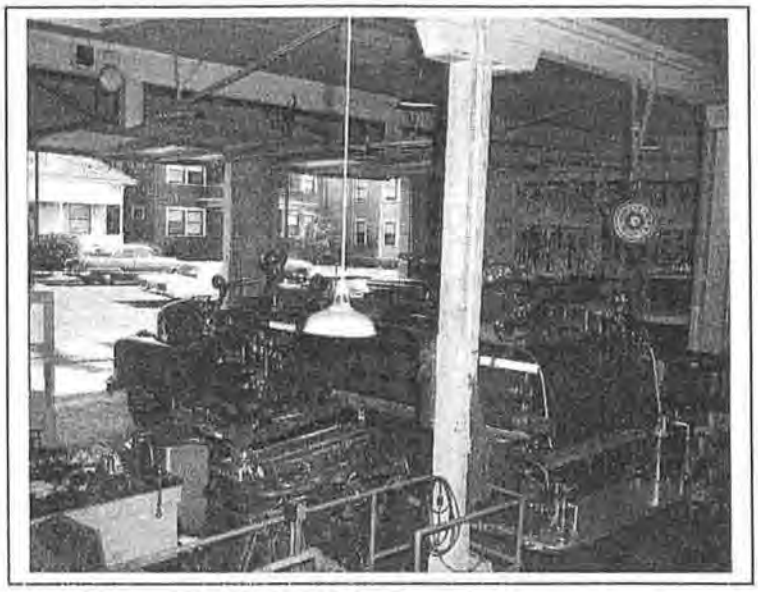


(**Figure 16:** This vehicle damage photo was taken by Chief Ely in approx 1957. It also shows the south facade of the structure, as well as the second story storage room above the welding shop.
Since this photo was taken the windows have been changed in the south facade, and the windows have been covered with plywood on the second story storage room.)

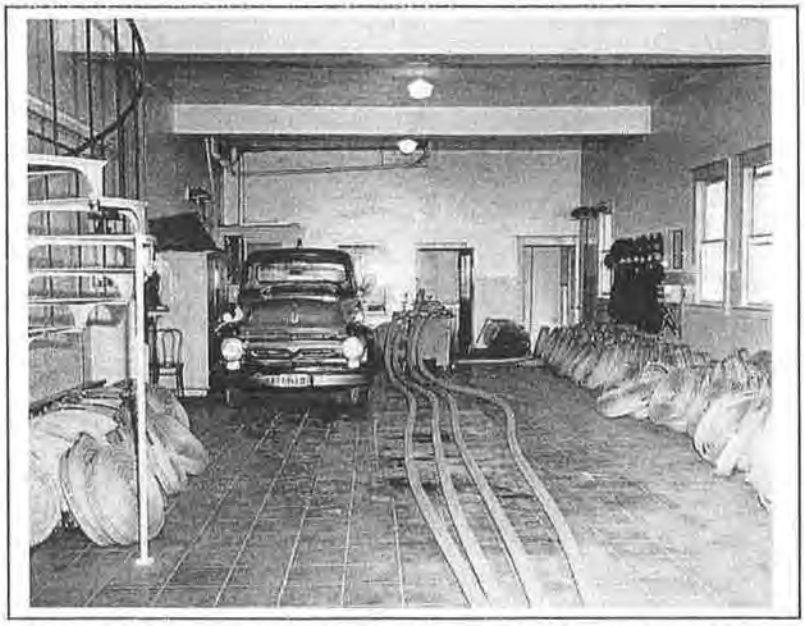
(**Figure 17:** This cropped photo, taken circa 1957, provides a view through the back door and into the alcove that joins the machine, welding and carpenter shops. The staircase providing access to the second story storage room can also be seen. Sometime after 1966 that alcove was covered and made into a hallway, and the stair were moved back against the machine shop.)



(**Figure 18:** This image, taken circa 1957, provides a view from the second-story storage room above Chief Ely's office in the machine shop. The elevated machine shop is on the right, and the repair facility is to the left where a fire engine can be seen.)



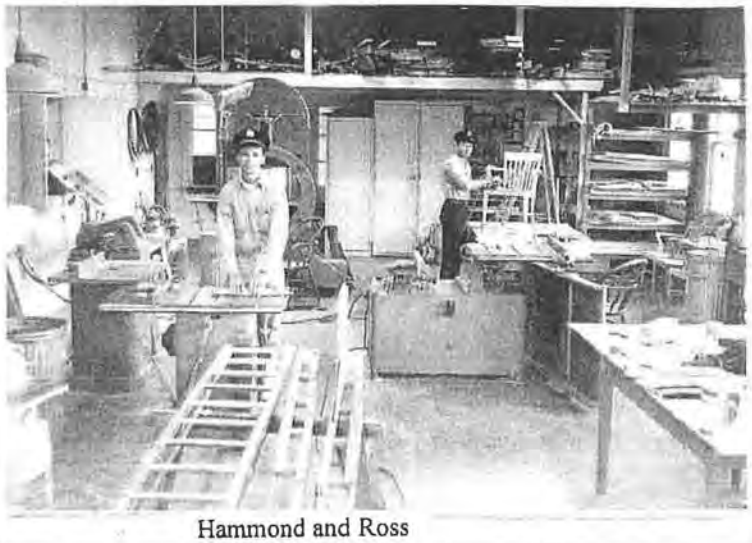
(**Figure 19:** This image, taken the same day as the previous one (circa 1957), shows a view of the front part of the repair portion of the machine shop. Also, this image provides a clear view of the cable-tensioning system used in the ceiling to reduce beams, providing a more open floor space.)



(**Figure 20:** Taken circa 1957, this image of hose testing is one of the few that provide a clear view inside Fire Station 6. In the foreground is the circular iron staircase which provides access to the bunk room. In the rear the left door opens into the kitchen, while the right one provides access to the hose tower. The door to the machine shop is obscured by the staircase.)

Pool and Hammond

(**Figure 21:** This image, circa 1957, is a north-facing view of the carpenter shop. The main door is closed in the rear, and the west-facing windows (now covered) can be seen.)



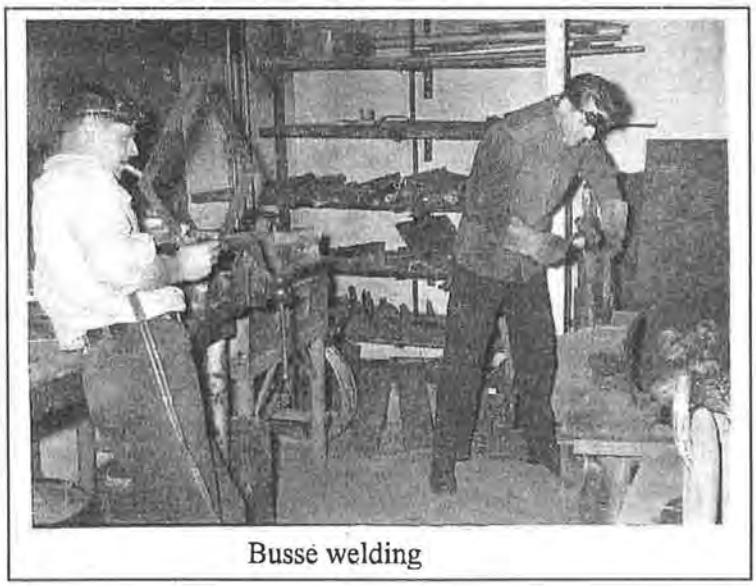
Hammond and Ross

(**Figure 22:** This image, also circa 1957, is a south facing view of the carpenters shop. Windows can be seen in back that are also now covered up. Note the cedar hardwood floor, which is the same that exists today.)

(**Figure 23:** Circa 1957. Here, Captain William Pollock crafts the city seal for the desk of mayor of the City of San Diego. The fire department carpenter shop was well-known throughout the city and provided fine woodwork to many agencies outside of the fire department.)

(**Figure 24:** This image, taken circa 1957, shows the finished product of the mayor's desk for the City of San Diego. This has been the desk for every sitting mayor since then.
This includes Pete Wilson, who would become the governor of California.)

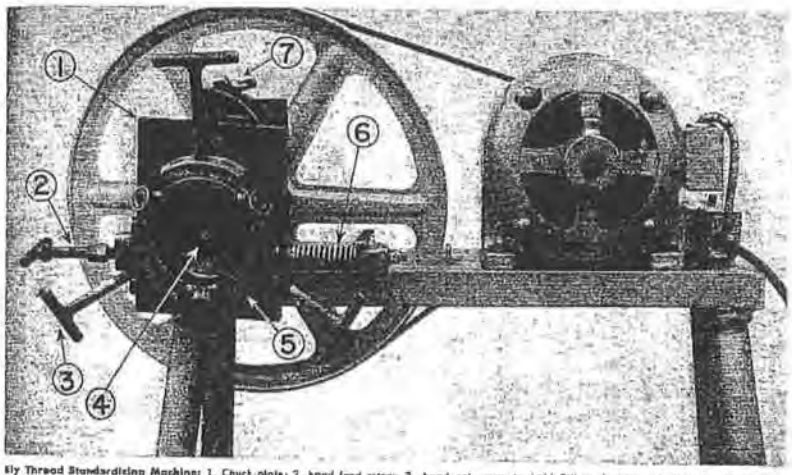
(**Figure 25:** Taken circa 1957, this image shows the interior of the paint shop. The door accessing the machine shop can be seen inside on the right. Also notice the single pane overhead opening garage door, now substituted with a metal rolling door.)



(**Figure 26:** This image, taken in the 1950's, shows the interior of the cramped welding shop. This is a south facing photo, taken near the entrance.)

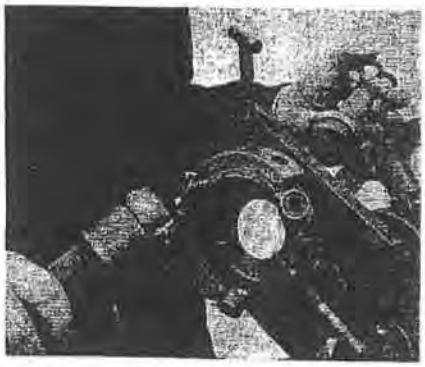
(**Figure 27:** When Chief Ely was only a 17-day-old firefighter he invented the Ely Adapter, designed to function as a removable fog and a straight stream nozzle. It would only be the first of many creations Ely would provide the fire service.)

(**Figure 28:** This undated image shows Coast Guard Chief Specialist Robert Ely training with firefighting foam aboard the Bill Kettner during World War II. Using the theory of eduction, similar to that used in spraying foam, Ely invented a suction unit that could draft water from a flooded ship hold, which saved the US Navy tug Santana in November of 1944, earning Ely a Navy commendation.)



Ely Thread Standardizing Machine: 1. Chuck plate; 2. hand feed screw; 3. hand set screw to hold fittings in place; 4. thread milling cutter; 5. coupling chuck; 6. spring loaded stop; 7. wing nut to lock chuck in position—*Photos by Ted Lau*

STANDARDIZATION IN



90 SECONDS

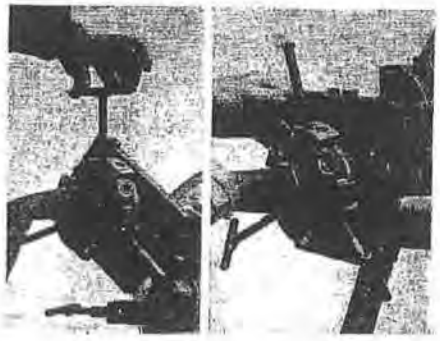
IT HAS BEEN estimated the 10 different sizes of fire hose and fittings commonly used in America require couplings totaling 402 different combinations of major diameter and 17 different threads per inch to meet the needs of the fire service. It may appear to the casual observer that hose thread standardization, like the weather, is a subject of conversation but no one actually does much about it.

SEE NEXT PAGE

1 Above: Chuck in raised position. Coupling is centered by placing against inside stop and screwing centering plug (held in the left hand) into place. Back end of the plug is tapered to fit hole

2 Right: Hand setscrews are tightened to hold coupling centered snug against chuck stop. When secure the centering plug is removed

3 Far right: Chuck lowered with coupling locked in place. Coupling in the chuck is then pushed over thread milling cutter until the plate hits its stop



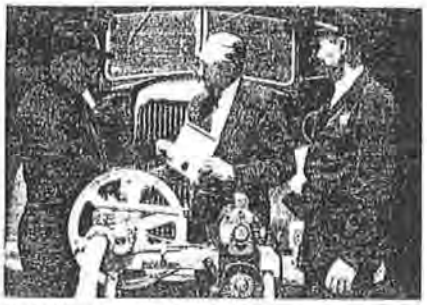
(**Figure 29:** The Ely Fire Hose Thread Standardizer)

There is one outstanding exception. This is Robert Ely, battalion chief and master mechanic of the San Diego, Calif., Fire Department. Recognizing the evil years ago, and having a natural mechanical bent, Chief Ely set out to find a way to accomplish standardization of existing threaded equipment, and to do it quickly and economically. There was, and is plenty of mechanical equipment for cutting threads, but not for rethreading "on the hoof" as quickly and accurately as the fire service has wanted. So, Bob Ely went out and designed his own equipment.

For want of a shorter name, we'll call the device the "Ely Fire Hose Thread Standardizer." And by that name it has become known throughout the Pacific Coast, where it has proved the *open sesame* to the problem of re-threading fire hose to the standard pattern.

Chief Ely's "brain child" will quickly chuck-up fire hose couplings and fittings. Non-standard threads within certain limits can be cut off and standard threads cut on the fire hose couplings, including the Higbee cut or blunt start, all in one operation, in about 90 seconds per fittings. This is accomplished without removing the fire hose couplings from the hose. Also, the cutter will quickly standardize the threads on nozzles and other fittings.

The State of California, prodded by fire chiefs' organizations which had witnessed Chief Ely's device, adopted legislation making 1½-inch standardization mandatory (FIRE ENGINEERING Oct. 1957, page 1074); 2½-inch hose was standardized in 1932. Since then, progress toward uniformity on the Pacific Coast has been steady. The state's fire marshal, Joe R. Yackers, traveled to San Diego in April, 1958, to inspect and take delivery of three of Chief Ely's standardizer machines. They will serve as part of the mechanical equipment to put California into the "uniform fire hose thread" category. No, Bob Ely isn't building the machines, nor is he in the business of selling them. The chief and his public-spirited boss, Chief George Courser—another pioneer in the field of standardization—are making their services, and those of a local machine company available as their contribution toward this thread standardization.



Marshal Yackers (center) presents certificate of standardization completion to Chief Walter Johnson (left), Oceanside Fire Department as Chief Ely looks on

7 Wye originally had non-standard 1½-inch threads (11 per inch). Threads on left have been recut to NST (9 per inch) on Ely machine

6 Above right: Attachment that holds male half while the external threads are removed and coupling rethreaded

5 Above left: Chuck with the coupling in place is rotated clockwise one complete turn. Simultaneously cutter removes non-standard thread and cuts the standard thread. The cycle is then repeated with another coupling

4 Left: Coupling in place and ready for rethread. Chief Ely is turning on the switch. In operation feed screw forces coupling against cutter to the proper depth

(**Figure 30:** The Ely Fire Hose Thread Standardizer, continued.)

NITED STATES GOVERNMENT
Memorandum

Department of Agriculture
Forest Service
Washington 25, D. C.

4 pages Encl 61

o: Regional Foresters

File No. 6330 (5100)

rom: Merle S. Lowden, Director, Division of Fire Control

Date: January 13, 1961

ubject: Specifications, Standards, and Qualified Products

The more than 400 different fire hose coupling thread forms in use by fire services in the United States make the need for standardization demanding. Lack of ability to interchange hose has cost lives and great resource losses on fires in the past and it will continue to be a serious problem until threads are standardized.

There are two national standards for fire hose coupling threads--one for 2-1/2 inch and larger and one for 2-inch and smaller.

The thread standard for 2-1/2 inch and larger couplings was developed by the National Fire Protection Association (NFPA) in 1905. This standard was adopted by various associations through the years and finally was adopted as an "American Standard" in May 1925. Use of this standard is practically universal throughout the United States. The Forest Service adopted it several years ago. We use it on 2-1/2 inch suction hose.

Because of the increase in use of fire hose smaller than 2-1/2 inches an NFPA Comittee was appointed in 1916 to develop a standard for these sizes. This standard was adopted by the NFPA and other groups in 1922 and as an "American Standard" in July 1935. Use of this standard is not yet universal.

Adoption and use of the new standard for small hose was slow at first but it has increased rapidly in recent years. The Air Force, Army, Navy (shore installations), and some other Federal agencies are using this standard. Many fire departments and at least one State (California) have adopted it. The trend is to more general adoption of this standard.

Increasing emphasis on mutual aid in fire fighting between Federal, State and local agencies makes interchangeability of equipment that hooks together, like hose, highly desirable. Adapters are being used now to provide some degree of interchangeability at the water source but they do not solve the basic problem regarding hose. Too many adapters would be needed to assure full interchangeability of hose. Hose coupling problems have been serious on major forest fires in the United States. There have been cases where lack of standard threads resulted in fires escaping and at least one case in loss of life. These are indications of what will happen more frequently as mutual aid in fire fighting increases. From a civil defense standpoint standardization is highly important.

4870

(**Figure #31:** US Forest Service Memorandum from Merle S. Lowden, Director, Division of Fire Control, January 13, 1961. Subject: Specifications Standards, and Qualifying Products, which references Air Force, Army, Navy and other Federal agencies adopting NST.)

Encl. 92

STATE OF ALASKA

KEITH H. MILLER, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY

DIVISION OF FIRE PREVENTION

POUCH H, CAPITOL BUILDING
JUNEAU 99801

May 11, 1970

Robert Ely
International Association of Fire Chiefs
4433 - 42nd Street
San Diego, California

Dear Chief Ely:

Received your letter dated May 6, 1970. I appreciate the interest you are taking in the hose couplings you are preparing for this office. Please bill all charges to the Department of Public Safety, Division of Fire Prevention, if possible before the 15th of June so I may include the billing in our current budget.

Attached are copies of two bills that Governor Miller has signed into law. We are proud to count Alaska as one of the states requiring standardization of fire hose threads. I am sure the ground work you did at the Petersburg meeting helped get us over the top.

I will continue to urge the few remaining cities to take advantage of your help as per your information on the loan of the 2-1/2 inch rethreading tools.

Thanks again, Chief, for your assistance.

Respectfully,

Wallace W. Dawson

WALLACE W. DAWSON
State Fire Marshal

WWD:hn
Enclosures: 2

(**Figure #32:** Letter from State of Alaska Department of Public Safety Alaska State Fire Marshal Wallace W. Dawson dated May 11, 1970 regarding Adopting NST.)

Encl. 113

Water News

Published for customers since 1922
by the Denver Water Department
144 W. Colfax Ave., Denver 80202
Billing Information 893-2444
All Departments (also 24-hour emergency) 222-5511
September-October 1972

Denver Changes Fire Hose Couplings to New Standard

Denver Water Department crews are re-threading two hose connections on each of approximately 8,000 fire hydrants in changing to a national standard thread. George Somma (left) and Mitch Barber on hydrant crew are shown making change on two fire hose connections.

As hydrant connections go national standard, mechanics in the Denver Fire Department will be converting one connection on each of 3,000 sections of 2½-inch fire hose. Dave Helmes holds hose section while Fred McDonald (front) starts re-threading coupling.

Water Department crews are re-threading 16,000 fire hydrant-hose connections in Denver this fall to conform with an adopted national standard size.

Each of the approximate 8,000 fire hydrants has two 2½-inch hose connections; all are being re-threaded as fast as crews can cover sections of the city.

The operation, like many of Denver's fire protection measures, meshes with similar activities of the Denver Fire Department. The two city departments are switching over to the national standard of couplings at the same time. Fire Department mechanics are re-threading connections on nearly 3,000 sections of 2½-inch hose.

In cases where firefighting crews with different hose connections are called to the same alarm, coupling adapters will facilitate hook-ups until the change is complete all over the city.

Other Denver area fire departments are in the process of changing to the standard connection or probably will make the change in the future. The move is being encouraged throughout the country by the federal government. All federal facilities such as Lowry Field and Rocky Mountain Arsenal already have national standard couplings.

STATES ADOPTING STANDARD

Eleven states now have laws requiring the national standard of couplings on hoses and hydrants. California, plagued with forest fires near populated areas, recently adopted the national standard. Fire crews from several communities often converge on a fire in an area such as the San Bernardino mountains, and identical hose couplings speed up the fire fighting. Fire departments from several communities often cooperate in major disasters, such as the 1971 earthquake near Los Angeles.

The change to national standard thread is not a major one in Denver. The city has used the "Denver thread" of 8 per coupling, whereas the national standard is 7½.

Adopting the national standard improves Denver's fire insurance rating. It also will effect savings in ordering standard sizes of hydrants, hoses and parts. Deliveries will be speedier, since these items will be more readily available as standard stock.

(**Figure #33:** Water News, Denver Water Department, Sept-Oct 1972, "Denver Changes Fire Hose Couplings to New Standard".)

See Encl. 134 Encl. 133

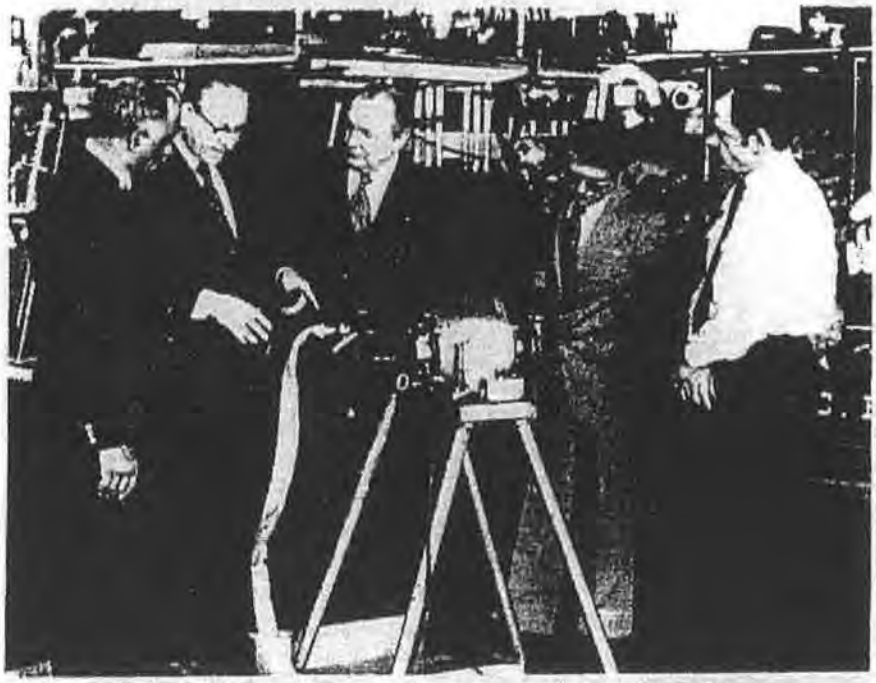
Salt Lake City personel are using an ELY PORTABLE FIRE HYDRANT SCREW THREAD STANDARDIZER that can rethread two 2-1/2 inch fire hydrant outlets from 3-1/4 inch OD with 6 threads per inch to the ANSI/NFPA American National Standard Fire Hose Screw dimensions of 3-1/16 inch OD with 7-1/2 threads per inch with the required Higbee Cut/Blunt Start in just seven minutes

Phone 619-281-8222 Chief Robert Ely 5000 Westminster Terrace

(**Figure #34:** Photo from Robert Ely's Personal Files, regarding Salt Lake City Adopting NST.)

Encl 123

Copy enlarged from page 22 of the 1976 INTERNATIONAL FIRE CHIEF Vol. 42 No. 7

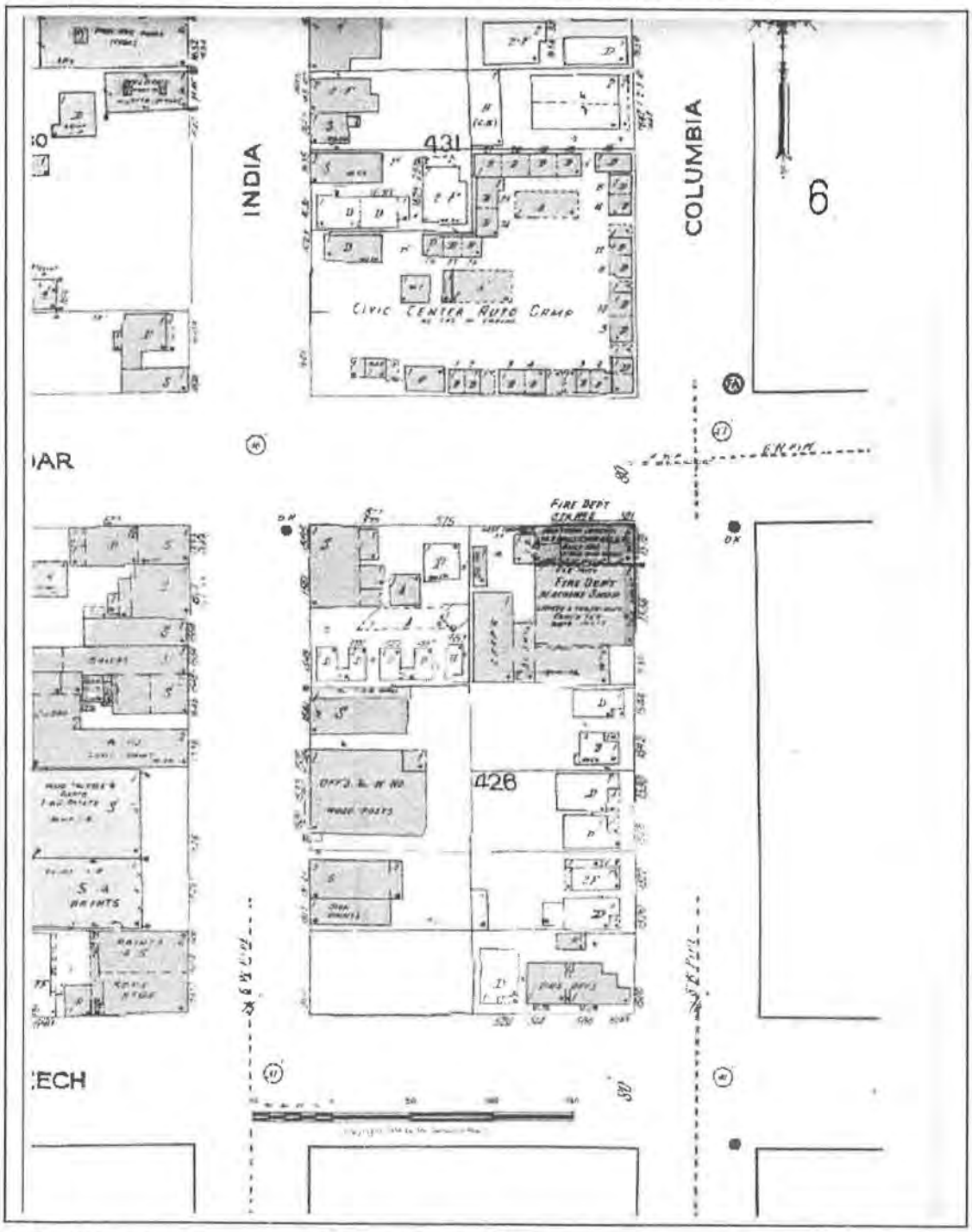


Washington, D.C. Converts to NST

Assistant Chief Robert Ely (retired), Chairman, IAFC Standardization of Fire Hose Screw Threads Committee, is shown explaining to Congressman Bob Wilson (R-California) the operation of the thread cuting machine he designed. The Washington, D.C. Fire Department 2½" hose has been NST and now has converted all 1½" to NST. Pictured at the fire department shops are (l. to r.) Washington, D.C. Fire Chief Burton Johnson, Chief Ely, Congressman Wilson, IAFC General Manager Donald D. Flinn and Deputy Chief for Apparatus Edward H. Birch. A total of 64 pumpers were converted to NST.

(**Figure #35:** 1976 International Fire Chief Magazine: Vol. 42, No. 7; Washington DC Converts to NST.)

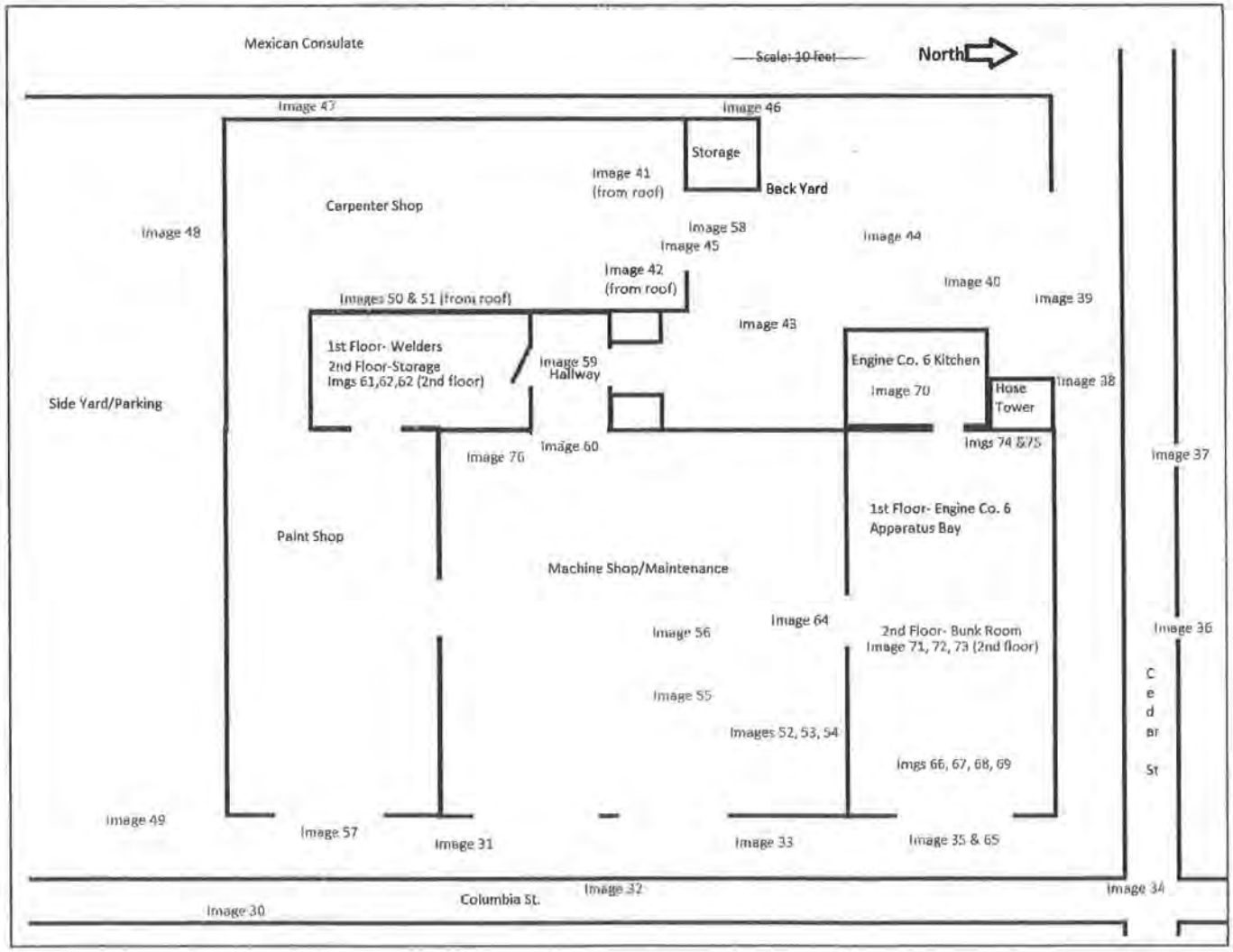
Section 10, Contiued: Geographical Documentation: Boundary Justification Map



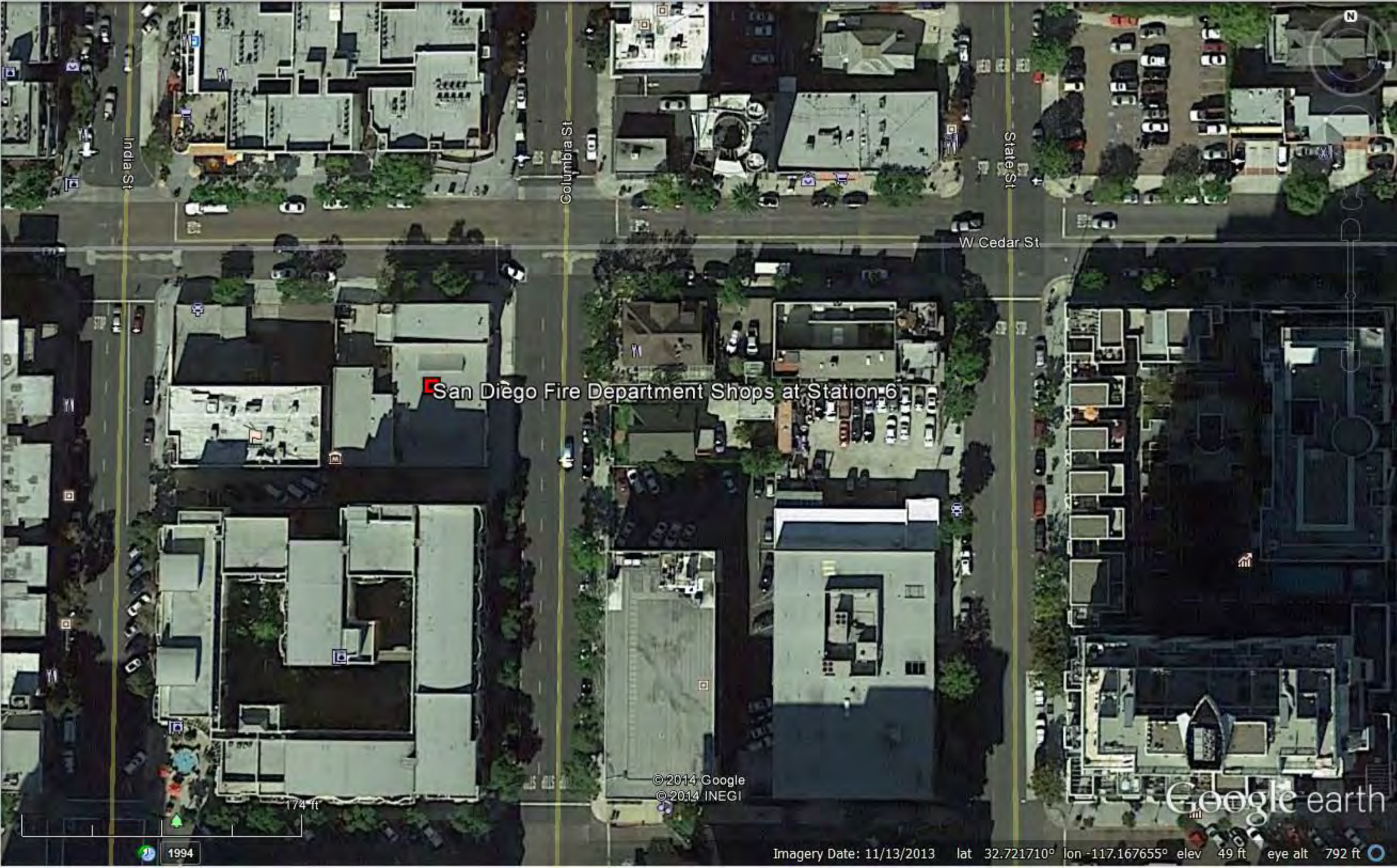
Map 1: The *San Diego Fire Department Shops at Station 6* is indicated by its street address, 1572 Columbia St, above. (Map courtesy of Sanborn Fire Insurance Company, 1955)

Map 2: Diagram/Floor Plan

Description- San Diego Fire Department Shops at Station 6 Diagram/Floor Plan showing boundaries, footprints of photographic submissions, features, a scale, and a north arrow.



Map 3: Decimal Degree Location Map via Google Earth


India St
Columbia St
State St
W Cedar St
San Diego Fire Department Shops at Station 6
© 2014 Google
© 2014 INEGI
174 ft
1994
Google earth
Imagery Date: 11/13/2013 lat 32.721710° lon -117.167655° elev 49 ft eye alt 792 ft

Photograph Log

Name of Property: San Diego Fire Department Shops at Station 6

City or Vicinity: San Diego

County: San Diego State: CA

Photographer: Stu Sprung

Date Photographed: January 29, 2012

Description of Photograph(s) and number:

Photo #1. East (Primary) Façade of San Diego Fire Department Shops at Station 6, now the San Diego Firehouse Museum.

Photo #2. Southern portion of East (Primary) Façade. Located in the location where the fireboat *Bill Kettner* was built and a paint shop was built later.

Photo #3: A closer view of the center of the East (Primary) Façade

Photo #4: East (Primary) Façade. Border of original 1915 window frame can be seen

Photo #5: The northeast corner of the building, showing a two-sided view of Engine Co. 6 quarters.

Photo #6: A close-up of the second floor East (Primary) Façade of the fire station. The second floor was the firefighter bunk room.

Photo #7: North Façade and Hose Tower.

Photo #8: North facing view of the hose tower. Camera facing southwest.

Photo #9: North aspect of hose tower. Photo taken from sidewalk. Image shows covered ventilation/light opening on the side of the tower.

Photo #10: West-facing aspect of hose tower and Station 6 bunk room. Camera is facing east.

Photo #11: Another view of west-facing aspect of hose tower and second floor of Station 6.

Photo #12: View of Station 6 kitchen add-on. Taken from same vantage as historical Image 09, near where keel of the fireboat *Bill Kettner* was first laid in 1915.

Photo #13: South and west facing aspect of Fire Station 6 bunkroom. Taken from roof of carpenter shop facing northeast.

Photo #14: View of wood-siding on West Façade of Machine Shop.

Photo #15: North facing aspect of original welders (left) and carpenter (r) shops. (Former Marine barrack). Camera is facing south.

Photo #16: View of upstairs storage room above original welders shop. This structure connects the original building and the former Marine barrack that became the carpenter shop.

Photo #17: West facing aspect of carpenter shop with windows covered in tin for security. Camera is facing south.

Photo #18: View of south side of west aspect of carpenter shop showing firehouse scene paintings on tin coverings. Photo taken from ledge of Mexican Consulate balcony. Camera facing north.

Photo #19: South-facing aspect of carpenter shop. Original window walled-in for security.

Photo #20: South Façade of property. Also shows welder and carpenter shop add-on. Camera facing northwest.

Photo #21: Roof photograph from top of second story storage room. Shows covered up skylights (Foreground.)

Photo #22: Roof shot #2. Southern portion of machine shop/paint shop roof. Skylights covered up for security.

Photo #23: Maintenance area of machine shop, now antique apparatus parking. Camera on second story balcony facing southwest.

Photo #24. Machine Shop area. Camera facing west from storage balcony. This image is taken from the same locations as historical Image #18.

Photo #25: Front row of maintenance section of machine shop. Camera facing south from storage balcony

Photo #26: Added office and storage room inside machine shop, circa 1934. Downstairs office was that of Asst. Chief Robert Ely. Camera facing northeast.

Photo #27: Elevated machine shop area and fire station access door. Camera facing north.

Photo #28: Interior of former paint shop built over former building place of the fireboat *Bill Kettner*.

Photo #29: Interior of former carpenter shop. Original hardwood floor remains. Camera facing south.

Photo #30: Former welders shop, now kitchen built by Pioneer Hook & Ladder Company. Camera facing south through original welders shop entrance.

Photo #31: Hallway was originally an alcove joining the machine, welders and carpenters shop doors. Camera is facing west through original machine shop rear door. It also serves as a 9/11 memorial hall.

Photo #32: Storage room above welders shop/kitchen. Note windows covered by plywood for security.

Photo #33: Interior shot of upstairs storage room shows original external wall of Marine barrack used as support for ceiling joists.

Photo #34: Original 1915 wood siding of south facade found through breach in upstairs storage room wall joins original concrete wall. Beam to the right is a paint shop add-on support structure.

Photo #35: View of fire door and access between machine shop and fire station. Original swinging doors removed.

Photo #36: Original outward swinging doors for SDFD Engine Co. 6. Note additional steel rolling door.

Photo #37: Original iron spiral staircase providing access to upstairs fire station bunk room. Sliding pole can be seen to the left.

Photo #38: Opposite side of staircase shows another firefighters pole, as well as the original front door to the station.

Photo #39: In 1942 the original brass poles were donated to the war effort, and were replaced by galvanized poles that exist to this day.

Photo #40: The original station alarm system remains, as well as the alarm box index cards in the drawer below.

Photo #41: The added-on firehouse kitchen on the first floor remains and is used as a fire safety demonstration room for children.

Photo #42: The upstairs bunk room of the fire station. Now as a meeting room, currently being used to organize museum archives. Left door is restroom, right door is the former locker room. Camera facing west

Photo #43: Opposite view of firefighters bunk room. Access door is to "bullpen". Camera is facing east.

Photo #44: North facing windows from second story of fire station. (Seen from exterior in Image #36.)

Photo #45: Upper section of hose tower. Racks were for draping hose; rope was for hoisting it; ledge was for firefighter to stand and place hose on racks. Vents can also be seen.

Photo #46: Bottom level of hose tower. Access ladder, rope, and exterior door to Cedar St. can be seen

Photo #47: The original "Ely Fire Hose Thread Standardizer", which created the National Standard Thread, remains at the SDFD Shops at Station 6, now San Diego Firehouse Museum where it was invented in 1956.

THE
FIREHOUSE
MUSEUM
OPEN: THURS & FRI 10a.m. 2p.m.
SAT & SUN 10a.m. 4p.m.

THE
FIREHOUSE
MUSEUM

THE
FIREHOUSE
MUSEUM
OPEN: THURS & FRI 10a.m. 2p.m.
SAT & SUN 10a.m. 4p.m.

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NOTICE

SLIDING POLES
USED BY FIREMEN FOR RAPID DESCENT TO THE APPARATUS FLOOR FROM THE UPSTAIRS DORMITORY.
THESE GALVANIZED POLES REPLACED BRASS POLES REMOVED IN 1942 FOR THE WAR EFFORT.

K. CAPACITY
PERSONS
FIRE
6

NOT
EXI

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: San Diego Fire Department Shops at Station 6

MULTIPLE NAME:

STATE & COUNTY: CALIFORNIA, San Diego

DATE RECEIVED: 12/12/14 DATE OF PENDING LIST: 1/21/15
DATE OF 16TH DAY: 2/05/15 DATE OF 45TH DAY: 1/27/15
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 14001204

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N

COMMENT WAIVER: N

___ACCEPT ___RETURN ___REJECT _____DATE

ABSTRACT/SUMMARY COMMENTS:

The San Diego Fire Department Shops at Station 6 are nationally significant under National Register Criteria A and B in the areas of Engineering, Maritime History, and Invention. Constructed in 1915 to serve as San Diego's Little Italy neighborhood fire station, and as a central service/machine shop for the city's growing fire department, the Station 6 facilities played a leading role in national firefighting technology through the invention and fabrication of important firefighting tools and equipment. The nation's first internal combustion, gas-powered fireboat, the *Bill Kettner*, was designed and built at the Station 6 machine shop (1915-19) and would become a model for modern fireboat technology, replacing expensive steam-powered fireboats. The Station is most closely related to inventor and fire equipment engineer Robert Ely, who while stationed at the department shops developed prototypes for several important firefighting tools, including the Ely Fog Nozzle Adapter, a suction eductor for ships, and the nationally significant Ely Fire Hose Thread Standardizer. The Standardizer, which could convert any one of the multiple types of then common hose threads into a single standard size, would eventually be adopted nationwide through creation of the National Standard Thread, an important breakthrough in firefighting technology that allowed differing departments to share equipment and assist one another in effectively fighting fires. The Station 6 complex is the property best associated with Ely and his significant recognized contributions. Although altered from its original c. 1915 appearance the Station and machine shop complex retains its basic plan and form, with later alterations in the 1930--1940 period achieving significance in the own right.

RECOM./CRITERIA Accept Criteria A+B

REVIEWER Paul Lusignan DISCIPLINE Historian

TELEPHONE _____ DATE 1/27/15

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

THE CITY OF SAN DIEGO

Historical Resources Board

October 28, 2014

Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer
Department of Parks and Recreation
1725 23rd Street, Suite 100
Sacramento, CA 95816

RE: National Register of Historic Places Nomination of the San Diego Fire Department Shops at Station 6 at 1572 Columbia Street, San Diego

Dear Ms. Roland-Nawi:

Pursuant to the Certified Local Government Agreement between the Office of Historic Preservation and the City of San Diego, the Historical Resources Board reviewed the National Register of Historic Places (NRHP) nomination for 1572 Columbia Street, San Diego on October 23, 2014.

As part of the recommendation process, the Mayor and the Historical Resources Board recommended that the property be designated under NRHP Criteria A and B at the national level. Under Criterion A the property is significant for the construction of the world's first internal combustion, gas-fired fireboat, the *Bill Kettner* and under Criterion B it is significant for its association with Robert Ely, the inventor of the Ely Fire House Thread Standardizer (see attached staff report).

If you have any questions about the recommendation, please feel free to contact me at 619.235.5217 or cwinterrowd@sandiego.gov.

Sincerely,

Cathy Winterrowd
Deputy Director

Attachment

Planning Department
1222 First Avenue, MS 413 • San Diego, CA 92101-4155
Tel (619) 235-5200 Fax (619) 446-5499

San Diego Fire Department Shops at Station 6
San Diego, San Diego County, California
National Register of Historic Places

The San Diego Fire Department Shops at Station 6 is located in San Diego's Little Italy neighborhood, constructed in 1915. The building comprises a one-story machine shop and a two-story facility housing firefighters and fire engines, with stucco walls and wooden sash windows, and multiple large wooden garage doors allowing access to the machine shop and fire engines. The building has elements of Mission Revival style including a detailed parapet on the hose tower, but the building is otherwise architecturally utilitarian. The station retains a high degree of historic integrity within its historic context as a working machine shop and fire station.

The property is eligible for the National Register under Criterion A in the areas of engineering, maritime history and invention. The *Bill Kettner*, the first gasoline-powered, wooden-hulled firefighting boat in the United States, was constructed at the shops in 1919, under the supervision of Chief Louis Almgren. Less expensive than steam-powered fireboats, the concept of a gasoline-powered fireboat was mocked by the firefighting community until the *Bill Kettner* was launched. Other fire departments started building their own gasoline-powered fireboats, including the New York Fire Department's *John J. Harvey*, whose 1931 construction was initiated by a New York City fire chief who had visited Chief Almgren in the 1920s, asking "Chief, how is your little toy coming along?"

The property is also eligible under Criterion B for its association with fire chief and inventor Robert Ely (pronounced "Ele") who joined the San Diego Fire Department in 1941. His early inventions included the Ely Fog Nozzle Adapter, an improved "fog nozzle" intended to increase the surface area of water to combat fires, and an "eductor" to suction flooding holds of ships using the siphon force of flowing water through hoses, known as the Venturi effect. The eductor, installed on the *Bill Kettner* in September 1944, was successfully used to prevent the sinking of the US Navy tug *Santana* in November of that year. Ely's most important invention was the Ely Fire Hose Thread Standardizer in 1957. This device became the National Standard Thread used by fire departments throughout the United States, reducing the hundreds of different types of fire hose thread to a single national standard, saving billions of dollars in property damage and countless lives. The original Ely Fire Hose Thread Standardizer was invented and built at the Shops building and is still located there today, as part of the building's current use as a fire department museum. The period of significance for the property is 1915 through 1963, from the building's construction through the year the National Fire Service Hose Thread was standardized. The *Bill Kettner* and Robert Ely's inventions resulted in national changes in firefighting practice via the technological innovations associated directly with the Shops at Fire Station 6 and the firefighters who worked there.

The nomination is submitted on behalf of the Pioneer Hook & Ladder Company, owners of the property. The nomination received a letter of support from the City of San Diego's Historical Resources Board.

Staff supports the nomination as written and recommends that the State Historical Resources Commission determine that the San Diego Fire Department Shops at Station 6 meet National Register Criteria A and B at the national level of significance, with a period of significance of 1915-1963. Staff recommends the State Historic Preservation Officer approve the nomination for forwarding to the National Park Service for listing in the National Register of Historic Places.

William Burg
State Historian II
December 2, 2014

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
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RECEIVED 2280
DEC 12 2014
NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

December 5, 2014

Ms. Carol Shull, Keeper
National Register of Historic Places
National Park Service 2280
1201 I (Eye) Street, NW
Washington, DC 20005

Subject: **San Diego Fire Department Shops at Station 6**
San Diego, San Diego County, California
National Register of Historic Places

Dear Ms. Shull:

Enclosed please find the **San Diego Fire Department Shops at Station 6** nomination to the National Register of Historic Places. This property is located in San Diego, San Diego County, California. On November 7, 2014, the State Historical Resources Commission unanimously found the property eligible for the National Register under Criteria A and B at the national level of significance.

The property is nominated on behalf of the property owner, the City of San Diego, who provided a letter of support.

If you have any questions regarding this nomination, please contact William Burg of my staff at 916-445-7004.

Sincerely,

for Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

Enclosures