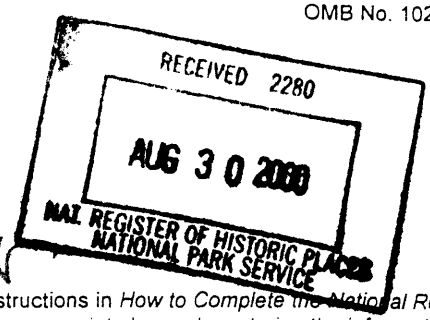
NPS Form 10-900
(Oct. 1990)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

1168
SUB Rec



This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. 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 entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer to complete all items.

1. Name of Property

historic name ANGELS FLIGHT RAILWAY

other names/site number _____

2. Location

street & number Hill Street N/A ☐ not for publication

city or town Los Angeles 037 N/A ☐ vicinity

state California code CA county Los Angeles code 039 zip code 90013

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ 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 ☒ meets ☐ does not meet the National Register Criteria. I recommend that this property be considered significant ☐ nationally ☐ statewide ☒ locally.
(☐ See continuation sheet for additional comments.)

Signature of certifying official/Title Date 8/3/00

State Historic Preservation Officer
State or Federal Agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of commenting or other official Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that this property is:

☒ entered in the National Register
☐ See continuation sheet.
☐ determined eligible for the National Register
☐ See continuation sheet.
☐ determined not eligible for the National Register
☐ removed from the National Register
☐ other (explain): _____

Signature of the Keeper Date of Action

10/13/2000

5. Classification

Ownership of Property
(Check as many boxes as apply)

- ☐ private
- ☒ public-local
- ☐ public-State
- ☐ public-Federal

Category of Property
(Check only one box)

- ☐ building(s)
- ☐ district
- ☐ site
- ☒ structure
- ☐ object

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

Contributing	Noncontributing	
1	0	buildings
0	0	sites
3	1	structures
0	0	objects
4	1	Total

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

Number of contributing resources previously in the National Register
0

6. Function or Use

Historic Functions
(Enter categories from instructions)
Transportation/rail-related

Current Functions
(Enter categories from instructions)
Transportation/rail-related

7. Description

Architectural Classification
(Enter categories from instructions)

Late 19th and 20th Century Revivals:
Beaux Arts
Other: Incline Railway

Materials
(Enter categories from instructions)

foundation concrete

roof *station house:* asphalt composition
cars: painted canvas

walls *cars:* wood
station house: wood, cast stone

other *cars:* metal decorative trim
station house and arch: cast stone columns, ornamental elements; metal trim

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

(See continuation sheets)

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)

- ☒ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☐ **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.)

- ☐ **A** owned by a religious institution or used for religious purposes.
- ☒ **B** removed from its original location.
- ☐ **C** a birthplace or a grave.
- ☐ **D** a cemetery.
- ☐ **E** a reconstructed building, object, or structure.
- ☐ **F** a commemorative property.
- ☐ **G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance
(Enter categories from instructions)
Transportation
Engineering
Architecture

Period of Significance
1905- c.1950

Significant Dates
1905 - current cars constructed
1910 - construction of arch and station house
1913 - tracks and trestle modified

Significant Person
(Complete if Criterion B is marked above)
N/A

Cultural Affiliation
N/A

Architect/Builder
1905 - Mercereau Bridge & Construction Company
1910 - Train & Williams

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

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 for the National Register
- ☐ designated a National Historic Landmark
- ☒ recorded by Historic American Buildings Survey
  # CA-337
- ☐ recorded by Historic American Engineering Record
  #

Primary location of additional data:

- ☐ State Historic Preservation Office
- ☐ Other State agency
- ☐ Federal agency
- ☒ Local government
- ☐ University
- ☐ Other

Name of repository:

Angels Flight Railway
Name of Property

Los Angeles, CA
County and State

10. Geographical Data

Acreage of Property Less than one acre

UTM References
(Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing
1	11	384700	3768360
2			
3			
4			

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Christy Johnson McAvoy

organization Historic Resources Group date February 9, 2000

street & number 1728 Whitley Avenue telephone (323)469-2349

city or town Los Angeles state CA zip code 90028

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

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.

Photographs

Representative **black and white photographs** of the property.

Additional items
(Check with the SHPO or FPO for any additional items)

Property Owner

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

name City of Los Angeles/John Welborne, Angels Flight Operating Company, LLC (Lessee)

street & number 434 South Plymouth Blvd. telephone (323) 935-1914

city or town Los Angeles state CA zip code 90020-4708

Architectural Description

Summary

Angels Flight is an incline railway on the eastern slope of Bunker Hill in downtown Los Angeles. It consists of an inclined track carried on trestles; a Beaux Arts wood and cast stone station house at the top of the hill; a Beaux Arts cast stone archway for boarding at the bottom of the track; and two inclined wooden cars. Angels Flight is located between and runs parallel to Third Street and Fourth Street, ascending from the entrance arch at Hill Street to the station house now on California Plaza at Olive Street. Originally located along the south side of the Third Street tunnel, Angels Flight was dismantled in 1969. The original site has been developed as part of the Angelus Plaza Senior Citizens Housing Project. As part of a major rehabilitation in 1995, the cars, station house, and archway were restored and reinstalled; the tracks and trestle, damaged or destroyed after being dismantled, were replicated in modern materials.

Construction History

Angels Flight was built to bridge the change in elevation between the exclusive residential enclave of Olive Heights, as Bunker Hill was then known, to the burgeoning business district below to the east. Late 19th Century residences, mostly designed in the Queen Anne and Eastlake styles, crowned the hill. The area was nearly inaccessible from its eastern edge and could only be reached by steeply graded streets and public steps. The original installation of Angels Flight involved construction of an inclined cable railway on grade from South Hill Street to Clay Street and, at some point past Clay, on trestle work up to South Olive Street. As a result of this configuration, two vertical slopes were involved: a gradual climb of 40'-0" up to the elevation of Clay Street and a steep ascent of 70'-0" from Clay to Olive Street. The two car railway was built as a three-rail system, with a shared common center rail, and an automatic turnout system. Entrance to the railway on South Hill Street was marked by a simple iron arch with an inset signboard bulkhead. This original arch was an identification device for the railway and not used as a portal to enter or leave the cars.

In 1905, improvements were made to the original configuration and equipment. The original cars were replaced by larger ones. In the same year, the track was rebuilt into a direct line system with timber trestles placed to allow the cars to ascend the entire length of the hill at a uniform 33% grade. The length of the track was slightly over 315 feet with a vertical rise of approximately 100 feet. This construction eliminated the on-grade crossing on Clay Street by elevating the tracks above the street. The new three track system also had a turn-out area in the middle of the incline which allowed the new cars to pass each other, albeit with only four inches to spare. The simple iron Hill Street arch was left in place, but was modified by the removal of its infilled signboard in order to facilitate access to the new cars, which were entered and exited from their east (Hill Street) elevation.

In 1913 the railway was again partially reconstructed. Drawings by Mercereau Bridge & Construction Co. indicate partial reconstruction of the decking, support bents, and extension of the length of the turn-out by one additional bay (20'-0"). These drawings were used to accurately design the dimension, size, scale, and placement of the elements of both the trestle and trackage as part of the 1995 rehabilitation and reinstallation of Angels Flight.

Another early feature of the site was an iron observation tower known as "Angels View," "Angels Rest," or "Angels Roost." It is unclear when this feature was first constructed. While the observation tower was located on the site, it was not associated with the function and use of railway itself and was not architecturally integrated with the 1905-1910 improvements to the site. It is not associated with the engineering, transportation, or architectural significance of Angels Flight.

Site

The historic site of Angels Flight on Bunker Hill was a narrow piece of land adjacent to the southern boundary of West Third Street. The land was in the 400 block of West Third in the public right-of-way between the retaining walls of the Third Street Tunnel and property lines to the south. The length of the property ran in an east to west direction, rising from a lower site on South Hill Street up to its terminus at South Olive Street. After twenty-five years in storage, Angels Flight was reinstalled at a new location to the south of its original location at Third and Hill Streets. The new site is a steeply graded hillside parcel, located within the same city block on the eastern slope of Bunker Hill, approximately 300 feet south of the original site.

Track and Trestle Structure

The two-car railway was built as a three-rail system, with a shared common center rail, with a passing bay consisting of four rails to allow the cars to pass. The original trackage and trestle were destroyed or damaged beyond repair after being dismantled in 1969. The current structure replicates the Mercereau Bridge & Construction Company design, although fabricated in modern materials. The three-rail track and midway passing bay are laid on a thirty-inch gauge, as they were originally. The trackage rests on reinforced concrete rail ties, textured to recall the wooden ties of the original construction. The 335-foot tracks are carried by reinforced concrete trestles that replicate the same 33% grade as the original installation. Iron ties crossbrace the trestle for seismic stability. The track is illuminated at night by lights hung on a series of seven original decorative metal arches or 'hoops' that date from 1910 and are placed at intervals along the track. These metal frames are attached to the trestle support members which extend beyond the width of the actual track. The two hoops over the turnout are wider to accommodate the width of the double track at this location.

Cars

The two Angels Flight cars, named Sinai and Olivet, are of wood frame construction with wood siding and detailing, metal decorative trimwork, and slightly barrel-arched wood frame roofs clad in canvas. The roofs are curved at the corners and extend past the interior space on the upper end of each car to form an open porch for entry and exit. Rectangular in plan, the cars are stepped in lengthwise section which reflects the angle of the track on which they travel. The stepping of the car interior is reflected on the exterior elevations, in which the windows are also stepped to correspond to the division of bays and seating layout.

The length of each car is divided into seven bays with an eighth open air bay located on the west (upper) end of each car. Seven, single-pane windows on the north and south elevations enclose the interior car section; open metal mesh grillework encloses the open air bay. The cars do not contain doors. Sign boards reading "Angels Flight", extant when the cars were removed from storage, are located on the roof and painted with dark lettering on a light background as seen in early photographs.

The longitudinal elevations (north and south) of the cars are composed of a wide base board, an angled three panel bulkhead, a plain frieze panel, an angled upper midsection which contains a framed banding of stepped windows, and two fascia boards which denote the roofline. Flat wood trim frames the window openings and steps with the windows, while the bulkhead paneling on the lower part of the cars is set at an angle parallel to the track and roofline.

The side (north and south) elevations are mirror images of each other. The lower (east) elevation is symmetrical with a centered open doorway flanked by vertical, rectangular windows, metal stairs leading to the doorway, and metal hand rails. The porches at the upper (west) ends of the cars are sheltered by the overhang of the roof and enclosed on the sides by metal screens composed of wire square mesh framed by metal channels. The metal channels and the roof are joined by decorative wrought iron brackets.

The interiors of the cars are symmetrical about a center aisle which is flanked by slatted wood seats facing the aisle. Between the windows and the floor, a vertical tongue and groove wainscot extends to the underside of the wood trim of the windows. Coved signboard tracks run the entire length of the cars at the ceiling line. The floor, constructed in wood planks, is partially covered with a non-slip material. Metal strips protect the edge of each step. The open bays located at the upper (west) end of the cars feature tongue and groove floor decking.

The ceiling of the cars is constructed of a series of curved, transverse beams which define the slight barrel vault of the roof. The ceiling of the cars is wood slats set lengthwise above these beams. Interior passenger stanchions consist of vertical metal tubing which steps the length of the cars and is connected to tubing which runs parallel with the ceiling. Vertical metal grab bars are also located at the exterior doorway of the metal enclosed bay of each car. Illumination is provided by a series of lights which are placed in the center of the roof and are original. The conduit which services the lights is inset into the wood plank ceiling and left exposed. This conduit connects to an exposed exterior conduit which runs vertically down the side of each car from the roof line and continues below the base plate of the car. This originally allowed an electrical power connection with a trolley mechanism located on the track assembly.

As part of a 1995 rehabilitation, the cars were removed from storage, original materials repaired, and the cars restored. A very high level of care was brought to the retention of historic fabric; the amount of replacement was negligible and that which was required was done in kind. Limited areas of the cars' undercarriage that had rotted were replaced in kind using scarf joints and dutchman patches. The inner core stratum of the lower wood paneling was replaced by plywood to stiffen and strengthen the overall structure of the cars; all the outer framing and inner finishes were retained and reinstalled. The finished appearance has not changed and the great majority of those finish elements are original. Tempered safety glass was installed in the original window frames, as extant glass neither met current safety standards nor dated from the period of significance. After completing a chromochronology study that identified thirty paint strata, the orange and black paint scheme of the 1930s to 1960s was restored. The mesh grilles of the open air bays were modified to open for disabled access from the side of the car; however, no historic fabric was lost in the alteration.

Station House

A station house is located at the upper end of the railway at the South Olive Street terminus and is aligned with the center of the rails. Offset to the north of the rail bed is an open pavilion for passengers. The one story structure was designed in a Beaux Arts Classical Revival style, with a composite of Doric and Tuscan detailing. The roof is gabled, with the ridge line running from north to south. Parapet elements on the east and west elevations obscure the gable itself. The present station house reflects its appearance since the 1920s, when the northern four bays of the original building were removed due to site settlement. At that time they were replaced with a simple pavilion-type structure which was essentially square in plan. This flat-roofed pavilion addition was attached to the north elevation of the remaining two bay structure. This is the current configuration of the building, though the pavilion portion was reconstructed in 1995 when the station house was reinstalled at California Plaza.

The east and west elevations of the station house are constructed using a post and beam system with arched infill elements. The framework is composed of solid cast stone columns and beams, infilled with cast stone arch elements, and braced at the roof line by three wood trusses which correspond to the three columns on the east and west elevations. The ends of the heavy timber trusses are set into masonry pockets located on the interior face of the cast stone beam above each column.

The cast stone framework of the east and west facades is composed of a row of Tuscan columns, which support a Roman Doric entablature and parapet features. The monolithic columns have integrated rectangular plinths, with the capitals modified by the bisection of vertically oriented cross members. The bays between the columns contain cast stone arch orders, meaning arches which are framed by the engaged columns and entablature. The arch order contains a projecting, scrolled cast stone keystone flanked on either side by integral cast stone bas-relief ornamentation composed of a laurel branch overlaid by a laurel wreath. The edges of pilasters are also included in the arch order.

The Doric entablature carried on the columns is composed of a simple architrave, ornamented frieze and overhanging cornice. The frieze is divided into a series of triglyphs (vertically scored panels) and metopes (flat panels) which contain a plain round medallion in low relief. Below the taenia (a flat string course below the triglyphs and metopes) and corresponding to each triglyph is a row of five small cone shaped ornament known as guttae. Over the triglyphs, on the soffit of the overhanging cornice, are mutules (projecting flat blocks) decorated with guttae.

The stone parapet assemblies are composed of three piers on the west elevation and two piers on the east elevation with Neo-classical open balustrades located between them. The piers contain a stylized form resembling the shape of an acanthus leaf on their exterior face only, with the exception of the southern most (corner) piers which also contain the leaves on their south face. Piers are capped with a composition of small domes atop stepped horizontal planes. The finial detail of each dome features a mounting hole which according to photographs and postcards held flagstaffs.

The two cast stone arches on the west elevation (originally South Olive Street) are infilled with single wall wood frame construction of double sided, double beaded 1" x 6" vertical tongue and groove wood siding which rests on a stepped wood sill plate. There is a window in the northern bay and a doorway in the southern bay. Both openings are surrounded by wide, flat wood trim and crowned with a pedimented cornice supported by wood consoles.

The east elevation of the station house faces the route of the railway and is the elevation seen from the cars while in transit. It is also the elevation where passengers pay fares and enter exit the cars. Its main feature is an open porch which functions as a 3' 6" deep passenger loading platform. The roof extends over the platform beyond the east elevation with an open soffit of exposed roof decking and block eaves.

It resembles the detail of the west elevation, but there is no central column in order to provide space for entry and exit. The wood infill and windows are recessed within the porch, and the cast stone framework is open to frame the porch. The arch orders seen elsewhere are contained in the side edges of the porch. A flattened arch, as seen in the entrance arch at the bottom of the hill, extends between the two columns at the edges of the porch and is lined with twelve light bulbs.

The fenestration on the east elevation, within the porch, is composed of four connecting window openings with the same window surround and trim detailing of the other elevations. A continuous wood sill unites the window assembly and is supported with concave brackets. The two windows to the south are the original single sash with two panes. Upper panes are divided into a series of margin lights. The second window from the north was altered over the course of time to include a slider type window and transom. The northern most window retains its upper pane margin lights, although the bottom pane now contains a wood insert with cut-outs for operational purposes. An exterior stem lamp with metal hood is located above the window assembly which contains the slider unit. Additional details include the placement of a series of five electrical insulators set on projecting wood supports above the windows. These insulators held the feeder wires from the station house to the railway source which it served.

The south facade is the simplest of the four elevations. The facade is bracketed by the end columns and end parapet piers of the east and west elevations. The material between these cast stone elements is wood, including the end truss of the gable roof which surmounts the wall. The truss is exposed and infilled with double-sided, double-beaded vertical wood siding. The wall itself is clad in vertical tongue and groove siding. The eastern portion (approximately one-third) of the facade below the truss is open, where the porch which forms the loading platform occurs on the east facade. Plans drawn at the time of dismantling indicate that the loading platform stopped short of the southeast column, which was freestanding and supported by a battered concrete pier. One downspout and its metal bracketing which appeared to be original remain on the south elevation. A low wood balustrade of turned wood balusters closes the loading platform to access from the south.

The north elevation of the station house structure is partially obscured by the attachment of the open pavilion structure below the bottom chord of the roof truss. The openings are surrounded by wide wood trim and surmounted by pedimented window and door hoods supported by wood consoles. Located to the east (left) of the window, a two panel door originally contained a lower panel of wood and a glazed upper pane divided into margin lights. The single sash window contained a lower single glazed pane and an upper pane with margin lights.

Attached to the north elevation of the station house is the pavilion structure which added in the 1920s after the removal of the four northern pavillion-style bays of theTrain & Williams design. The current pavillion structure is constructed of two hollow clay tile piers, lintel beams and tall hollow clay tile parapets finished in stucco. The ceiling is clad in tongue and groove wood planking. A metal downspout is located at the interior (south face) corner of the northwest and northeast columns. Although greatly simplified, this addition references the pre-1920 remainder of the station house in the capital of the columns and the stepped pressed metal cornice. The historic turnstiles, railing and signs from this pavilion are still present.

The interior of the station house contained a raised wood tongue and groove floor set on wood floor joists with perimeter rim joists. Plans of the station house prepared at the time of its dismantling confirm the location of the operating equipment for the cable, with the engineer in the partially enclosed southern third section. Owner records indicate that the operating motor was bolted to a floor-plate which was in turn bolted into concrete. At least part of the cable drive machinery extended into a sub-surface concrete pit.

The interior of the station house is utilitarian in design without the architectural detailing found on the exterior. It has exposed wood framing supporting the interior face of the tongue and groove wood wall cladding. A majority of the windows are boxed out with wood framing without finish trim. The open gable truss work features three wood trusses braced by wood purlins. Truss work is constructed of

eight by eight inch members which support the tongue and groove construction of the roof deck. Wood trim details the top edge of the bottom chord of each truss. Metal tie-rods which brace the cast stone facades pierce the slope of the gable ceiling.

Plans indicate that the south end of the building originally contained a small storage closet and a room with a toilet and sink. The storage closet remains in place, enclosed by single wall construction composed of vertical tongue and groove paneling with the framing support exposed on the interior. It is capped by a tongue and groove paneled ceiling at a level below the truss system.

As part of a 1995 rehabilitation, the station house was removed from storage and original material repaired. A very high level of care was brought to the retention of historic fabric; the amount of replacement was negligible and that which was required was done in kind. New operating machinery is housed below the station house; the original motor and works are reinstalled in their original location inside the station house.

Entrance Arch

The signature of Angels Flight on South Hill Street is its decorative entrance arch. The original arch was replaced in approximately 1910 with a more substantial and ornate masonry structure, which remains today. It was designed in Beaux Arts Classical Revival style, with a composite of Doric and Tuscan detailing to complement the station house at the top of the hill designed in the same style. Built as a free-standing element, it is finished on all sides. The framework is composed of two solid cast stone columns carrying a Doric frieze.

The cast stone structure is composed of elliptical Tuscan style columns with partially flat sides supporting a Roman Doric entablature and stylized parapet features. The monolithic columns contain integrated stepped plinths and rectangular bases, and capitals modified by the bisection of vertically oriented cross members. The bay between the columns is spanned by a suspended wood and metal canopy, the depth of which is greater than that of the arch itself in order to provide shelter within the arch. The arch of the canopy has a slightly flattened top. The ribbed, galvanized sheet metal cladding of the canopy is typical of the metal used for this type of construction in the early 1900s. The edges of the hood are framed with a three piece wood fascia trim, cut and assembled in sections to create the curvature of the flattened arch. At its springing, flat portions extend to either side to surround the columns. The canopy is lined with rows of twelve light bulbs at the edges following the arch profile. The canopy is supported from the entablature by iron chains which are attached to the fore edges of the flat side portions. The cast stone infill around the canopy contains bas-relief ornamentation composed of a laurel branch overlaid by a laurel wreath.

The Doric entablature carried on the columns is composed of a simple architrave, ornamented frieze and overhanging cornice. The frieze is divided into a series of triglyphs (vertically scored panels) and metopes (flat panels) which contain a plain round medallion in low relief. Below the taenia (a flat string course below the triglyphs and metopes) and corresponding to each triglyph is a row of five small cone shaped ornament known as guttae. Over the triglyphs, on the soffit of the overhanging cornice, are mutules (projecting flat blocks) decorated with guttae.

The cast stone parapet assembly above the cornice, similar to that of the station house, is composed of two piers with a neoclassical open balustrade spanning the space between them. The center of the balustrade is occupied by a rectangular panel bearing the initials "B.P.O.E." for the Benevolent Protective Order of Elks, whose local lodge was formerly located at the top of the flight on Olive Street. The piers have stylized decoration resembling the shape of a single acanthus leaf on each face. Each pier is capped with a small dome. The finial detail of each dome features a mounting hole which, according to photographs and postcards, once held flagstaffs. A cast stone panel mounted on top of the balustrade, also set between the piers, bears the words "ANGELS FLIGHT" flanked by stylized scrolls and tassels. This panel is surmounted in the center by a small, oval tablet surrounded by rosette work.

As part of a 1995 rehabilitation, the structure was removed from storage, original materials repaired and the entrance arch restored. A very high level of care was brought to the retention of historic fabric. The columns had deteriorated and were not seismically stable. The shaft of both columns were recast with new steel reinforcing.

Statement of Significance

Summary

Angels Flight, located on Bunker Hill in downtown Los Angeles, is a rare surviving example of an incline railway and is eligible for listing in the National Register of Historic Places under Criteria A and C, Consideration B, for significance in transportation and the unique representation of a rare property type. The property was first constructed in 1901 to provide efficient transportation between the city's commercial core and the top of Bunker Hill. New cars were constructed in 1905. A new station house, designed by noted Los Angeles architects Train & Williams, and an entrance arch were added in 1910. The period of significance begins in 1905 and ends circa 1945. The Flight operated continuously until 1969 when it was dismantled and stored as part of an urban renewal program. Twenty-five years later, the original elements of Angels Flight was removed from storage, rehabilitated, and reinstalled within the same city block slightly south of and parallel to its original location on the hill. Angels Flight operates in its historic function, carrying passengers up and down Bunker Hill's steep eastern slope in downtown Los Angeles. Angels Flight retains its integrity of design, setting, materials, workmanship, feeling and association, and therefore meets the registration requirements of Criterion C, Consideration B, for significance in engineering and architecture as an example of a distinct property type, an incline railway, and for its use of Beaux Arts architecture in its design, which is unique among the extant examples of its type. Angels Flight also meets the requirements of Criterion A, Consideration B, as the only surviving property associated with the development and use of incline railways as a mode of transportation in Southern California.

Engineering Context

One of only six incline railways still extant and operating in the United States, Angels Flight represents a now extremely rare property type. The incline railway was originally developed to serve two different needs: industrial and passenger. According to incline railway historian Donald Duke, "The first known incline railway in the United States was constructed in 1762, at Lewiston, New York. It was used to haul merchandise up and down the Niagara escarpment, near what is now the border between the United States and Canada." The application of cable rail technology to incline rails spurred their greatest period of construction in the late nineteenth and early twentieth century, with most constructed between 1880 and 1910.

The technology required for both incline railways and streetcars developed from the early work of Andrew Smith Halladie. Adapting a mining technique of hauling coal cars by large cables, Halladie employed a steam engine to power passenger vehicles run along tracks similar to horsecar tracks. The perfection of high-carbon or crucible steel cable by Halladie and John Roebling made possible new cable-run rail systems. The cable technology lent itself particularly well to climbing steep grades, as nearly 95 percent of the power generated was used to move the cable alone, regardless of the load. Historian Donald Duke describes the basic operation of an incline railway:

> In the simplest of [inclines] two counterbalanced cars move up and down parallel tracks, somewhat in the manner of a glorified dumbwaiter. Much of the load of each car is balanced by the load of the second car, the engine merely supplying power to move the unbalanced payload and to overcome the friction of the system. [Inclines were] usually used for comparatively short runs...[and] became quite popular as a means of lifting passengers up very steep grades.

The original installation of Angels Flight involved construction of an inclined cable railway on grade from South Hill Street to Clay Street and at some point past Clay, on trestle work up to South Olive Street. As a result of this configuration, two vertical slopes were involved: a gradual climb of 40'-0" up to the elevation of Clay Street and a steep ascent of 70'-0" from Clay to Olive Street. The two car railway was built as a three-rail system, with a shared common center rail and an automatic turnout system.

In 1905, the track was rebuilt into a direct line system with timber trestles placed to allow the cars to ascend the entire length of the hill at a uniform 33% grade, elevated above the street. New cars, those which are extant, were also constructed in 1905. The new three-track system had a turn-out area in the middle of the incline which allowed the new cars to pass each other, albeit with only four inches to spare. A new (extant) station house and entrance arch did not require any additional mechanical changes for the operation of the railway when it was constructed in 1910. In 1913 the decking, support bents and turn-out bay were again partially reconstructed by Mercereau Bridge & Construction Co.

Angels Flight ran on a 30-inch gauge line, forged of 40 pound iron. The Flight operated on three-rail system with a four-rail passing bay. The "Olivet" car ran along the north rail; the "Sinai" car ran along the south rail. The cars came within about four inches of one another as they crossed the passing bay. A 50 horsepower Westinghouse slipring motor powered the Flight's operation; speed was regulated by a Westinghouse streetcar controller. The motor turned a system of drums around which a 7/8-inch steel pulling cable was reeled. One end of the cable was attached to each car. An operator was located at the station house; the lower station was remotely controlled.

Architecture Context

The architecture of Angels Flight, particularly the station house and entrance arch, is unique among all surviving incline railways. The buildings and structures associated with the other six incline railways are all vernacular or utilitarian buildings which generally blend in with the surrounding buildings, which used for other purposes. Angels Flight, however, used architecture to create a distinctive marker in the city for the railway. The 1910 station house and arch were constructed in a Beaux Arts style. The Beaux Arts style was used widely throughout the United States, particularly from the time of the World's Columbian Exposition in Chicago in 1893 through the 1920s. The style was most commonly applied to public and civic buildings such as courthouses, libraries, museums, governmental buildings, and major railway stations (including Los Angeles's Southern Pacific Rail depot). Los Angeles has few civic examples of Beaux Arts architecture (the most significant being the 1925 Hall of Justice), due in part to the fact that most of the city's public buildings were constructed or replaced after the popularity of Beaux Arts architecture had passed. The many Beaux Arts style commercial buildings in downtown Los Angeles were mainly examples of the style adapted to the design of tall commercial buildings, as opposed to the traditional building types noted above. Angels Flight was redesigned in 1910 in this grand civic and public style, creating the appearance of a miniature Beaux Arts railway station.

The original station house was a simple, wood-frame building with a hipped roof and clapboard siding. The entrance arch was a simple metal frame which held a signboard over the landing area. The new structures built in 1910, however, departed from this utilitarian style which was common to the extant incline railways in the United States. The new station house was designed in a Beaux Arts Classical Revival style, with a composite of Doric and Tuscan detailing. The original entrance arch was also replaced in the same year with a more substantial and ornate masonry structure, designed in Beaux Arts Classical Revival style to complement the station house at the top of the hill.

The new station house was designed by the noted Los Angeles architectural firm Train & Williams, the principals of which were Robert Edmund Williams (1869-1951) and Robert Farquhar Train (1874-1960) . Because of the similarities in their design and the fact that they were constructed in the same year, it is believed that the entrance arch was also a Train & Williams design.

The 1910 station house and the entrance arch represent unique utilitarian examples of Beaux Arts architecture. The ornamented cast stone details in elements such as the columns, pilasters, balustrades, finials, and floral relief ornamentation give the station house and arch a sense of monumentality despite their diminutive size. The infill of this classical system on the station house is simple wood tongue and groove panels and wood-frame windows and doors, visible on each elevation. In its use of modest, wood materials and details, the station house reflected the expected architecture of an incline railway station house seen in other examples nationwide. Angels Flight is very much like other extant incline railways in terms of its component parts and their configuration. However, its architecture, particularly its classical detailing, distinguishes it from other extant examples.

In the 1920s, the four northern pavillion-style bays of the station house were demolished and replaced with a simple pavilion-type structure which was essentially square in plan. The current appearance of the station house maintains this configuration, which dates from within the period of significance. The station house operated in this configuration for over forty years. While the new pavillion altered the size of the building, the alteration did not significantly effect the architectural identity of Angels Flight as a Beaux Arts style design.

Transportation Context

In several cities, such as Pittsburgh, Cincinnati and Los Angeles, individual incline railways served as unique streetcar lines in a

mountainous or riverside topography, connecting hillside residential neighborhoods to the city center below. An 1880 article in *Scientific American* explained "The topography of many western cities is such that, as the corporate limits enlarge, their most populous portions include districts embodying very rugged features. [H]ills,or rather mountains... have long since been absorbed by the cities..., and these are covered with a dense and growing population. This has been of late years rendered the more possible by the introduction of the inclined railway, which makes hill climbing a luxury." National Register documentation of the Fenelon Place Elevator, an incline plane railway in Dubuque, Iowa, further describe their development:

> These simple, practical mechanisms appear to have arisen under very particular circumstances. A city would be established on the flat, slowly growing out--and upward into surrounding higher elevations. People living on the hills (generally the well-to-do) would seek an alternative to lengthy community (often by horse and buggy) from hillside home [sic] to downtown offices. The shortest distance was straight down the hill or bluff, an inclined plane railway the most practical method of moving quickly and safely between the upper and lower elevations.

The popularity of incline railways as a means of urban transit passed only with the overall decline in popularity of the streetcar, the rise of automotive technology for transit and transportation, and the subsequent decentralization of cities in the twentieth century.

The mountainous topography of Southern California popularized the use of incline railways throughout the region. Other cities where incline railways flourished, such as Pittsburgh and Cincinnati, required their use as a result of river bank topographies. Unlike Angels Flight, other inclines railways constructed in mountainous regions of California and the United States were used for tourism or for industrial purposes. In Los Angeles, Angels Flight, Court Flight and the Mt. Washington railways carried passengers up hillsides rather than river bluffs, during the city's pre-automotive history. Both Angels Flight and Court Flight operated for passenger transport up Bunker Hill. Other historic incline railways in Southern California included the Mount Lowe Railway, located in the San Gabriel Mountains north of Pasadena, and the Island Mountain Railway on Catalina Island. Angels Flight is the only surviving historic incline railway in California and one of only six in the nation, all of which are listed on the National Register.

Angels Flight, in operation longer than any other cable railway system in the City of Los Angeles, was a favorite of residents and tourists alike. From 1901 until 1969, the railway traveled the steep face of Bunker Hill as the city grew and changed around it. Entrepreneur Colonel J. W. Eddy saw the need to connect the exclusive residential enclave of Olive Heights, as Bunker Hill was then known, to the burgeoning business district below. Elegant Victorian residences, designed in fashionable Queen Anne and Eastlake styles, crowned the hill. The area was not accessible from its eastern edge and could only be reached by steeply graded streets and steps. The city's commercial district lay to the east, just below the hill. Extravagant Queen Anne and Eastlake mansions, built for prominent Angelenos such as the Crockers and Bradburys, crowned the hill. The mansions were followed by elaborate hotels and apartment buildings as the popularity of the hill grew. The only problem was access, since the hill was steep and the walk formidable.

Third Street was Bunker Hill's only link to downtown, yet the street extended only a short block west of Hill before terminating and becoming a pedestrian stairway into the residential area. Third Street resumed at the top of the Hill, at Olive Street, though no through traffic could proceed over the hill. This situation remained until the Third Street tunnel was constructed under Bunker Hill in 1901 to provide an uninterrupted route for vehicular traffic. The tunnel, however, left unsolved the problem of transporting pedestrians to the top of the hill.

The exact location of Angels Flight at West Third Street is attributable to several geographic and economic factors. Access to the eastern side of Bunker Hill at Third Street was both the longest and steepest of the various access points. The Third Street alignment was also relatively central to Bunker Hill in the north to south direction. The development of the commercial core to the east and south of the site and the increasing density of housing on Bunker Hill ensured a strong patronage of riders for the Angels Flight railway.

On May 10, 1901, Colonel Eddy petitioned Los Angeles City Council for a franchise to operate an electric cable railway to travel over the Third Street right-of-way from Hill to Olive Street. The City Council granted the request to construct the railway in the public right-of-way with two conditions. The open area above the Third Street Tunnel was required to be turned into a landscaped park, and a stairway was to be constructed to avoid a monopoly on the access up to South Olive Street.

Construction commenced in August of 1901 and was completed by December of the same year. The Angels Flight cars were christened on December 31, 1901. The railway immediately became an important connection between the affluent hillside and the commercial core of the downtown area. The fare was one cent thereafter, and never more than five cents during its entire run. The mayor commended Eddy for "furnishing transportation facilities for the hill residents and in beautifying the formerly rough and unsightly face of the hill."

The bulk of the traffic was from passengers entering on Hill Street. Passengers entered a car and waited for a buzzer to announce the beginning of the ride. The entire trip was made in just under one minute. The attendant, fare box, and mechanical systems were all located at the top of the hill.

Although not the only incline cable railway in Los Angeles, Angels Flight was the most popular and the longest lived. Billed as "the shortest railway in the world", the Flight operated from 7:00 a.m. to 10:30 p.m. daily. The Flight's popularity peaked in the 1920s with as many as 12,000 passengers daily. By World War II, however, with the rise of the automobile, ridership plummeted to an average of 3,000 passengers daily. In its first fifty years, Angels Flight claimed to have transported more than one hundred million passengers.

Recent History

Like other cities throughout the nation, Los Angeles experienced the effects of urban renewal programs of the mid-twentieth century. Historian Paul Gleye described the effects on Bunker Hill: "In 1948 the City Council adopted a resolution declaring the need for a redevelopment agency, and by 1955 a plan had been prepared and adopted that called for the demolition and redevelopment of the entire hill. The derelict old mansions-turned boarding houses would be replaced by modern apartment towers and landscaped plazas. The proposals were controversial, but ten years later the land had been cleared, its population removed, and [in 1969] Angels Flight was dismantled amidst promises that it would be rebuilt as part of the redevelopment plan." It was to be restored at the same location in two years, when the Bunker Hill regrading project was completed.

In the 1960s, Angels Flight still transported thousands of people per day, although substantial changes had occurred in the neighborhood. Its last weekend of operation was May 17-18, 1969. An estimated 40,000 people took the 315 foot journey one more time before the railway was dismantled and stored. As with its opening, all rides were free.

Long considered an icon of downtown Los Angeles, Angels Flight was recorded in many photographs, the subject of dozens of postcards, and the location scene of movies. The Daughters of the Golden West were the first to designate its importance with the installation of a marker in 1952. It was recorded for the Historic American Buildings Survey by the Southern California Chapter of the American Institute of Architects in 1964, and designated by the Cultural Heritage Board as one of the first Historic-Cultural Monuments in 1962.

Beginning in the late 1960s and through the 1980s, and without the building height limit that had been lifted in 1957, Bunker Hill was redeveloped with large high rise commercial towers and landscaped plazas. However, the area remained separated by its geography from the remainder of the downtown below the hill. In 1995, the station house, entrance arch and cars were removed from storage and rehabilitated. Seismically stable trackage and trestle were constructed to emulate the appearance and function of the original, to the extent technically and economically feasible. The rehabilitation and reinstallation of Angels Flight, conducted according to the Secretary of the Interior's Standards, restored the historic link between Bunker Hill and the city's historic commercial core below.

Integrity and Eligibility

In keeping with the National Register's basic purposes, "to encourage the preservation of historic properties as living parts of the communities," Angels Flight was rehabilitated and reinstalled slightly south of its original location on the hill; it operates in its original function, carrying passengers up the eastern slope of Bunker Hill's steep hillside in downtown Los Angeles. The property was reinstalled on the same hill approximately 3200 feet to the south of its original location. The new site is located within the same city block and as close to the original site as possible, allowing the property to retain its basic orientation and setting on Bunker Hill. Angels Flight's new location is compatible with the property's significance and was not reinstalled as part of an artificially created group of historic properties; it continues to operate in its historic function as a cable incline railway, transporting passengers up and down Bunker Hill, in downtown Los Angeles.

As a result of this move, Angels Flight has been nominated under Criteria Consideration B. Angels Flight retains, in whole or in part, its integrity of design, setting, material, workmanship, feeling , and association and embodies the distinctive characteristics of its type. The current design, a result of a precise and exacting rehabilitation and reinstallation completed in January 1996, reflects the design and appearance of Angels Flight from the 1920s until its dismantling in 1969. This design was the result of its physical evolution, through a series of professional plans and subsequent alterations, from the time of its construction in 1901 through its first twenty years of service. The design of the tracks and trestle replicates the Mercereau Bridge & Construction designs, using modern materials in order to differentiate the modern construction from the historic; the historic configuration and spatial relationships among the structural elements of the property -- the tracks, trestle, cars, station house, and entrance arch -- have been replicated in the reinstallation. Although inoperable, the original motor and mechanical workings were retained and reinstalled. The property is situated on the eastern slope of Bunker Hill within the same city block that the resource was historically located and retains its hillside setting. While the urban environment at the top of Bunker Hill has changed dramatically since the period of significance, the historic character of the area at its eastern base remains essentially intact. The original materials (primarily wood and cast stone) and workmanship (Beaux Arts style ornamentation, cast stone techniques) of Angels Flight are intact and visible in the cars, station house, and entrance arch--modern materials are clearly differentiated from the historic. Angels Flight retains the feeling of and association with early twentieth century, downtown Los Angeles and with this mode of pre-automotive transportation and transit.

Angels Flight is eligible for listing in the National Register of Historic Places under Criterion A, Consideration B, for significance in transportation as the single remaining property associated with the development and use of incline railways in Southern California. No other property with the same associative value survives. In addition, as one of only six extant incline railways still in operation in the United States, Angels Flight is eligible for listing under Criterion C, Consideration B, as a rare example of the property type, significant in both engineering and architecture. The construction of incline railways solved efficiently and effectively the laborious transportation problems created by a mountainous topography and, in the case of Angels Flight, addressing those needs within the urban environment. As an example of an incline railway, Angels Flight clearly illustrates the pattern of features common to the property type: inclined cars, boarding and landing structures, and inclined trackage and trestlework. It is the only surviving property of its type in the western United States. Its Beaux Arts style architecture distinguishes among other extant examples of incline railways. The property's period of significance begins in 1905 with the construction of the extant cars and extends to 1950 at which point planning had begun for urban renewal programs on Bunker Hill that would ultimately close the Flight in 1969.

Bibliography

Beasley, Ellen. "National Register Nomination Form: Lookout Mountain Incline Railway." Tennessee Historical Commission, 1972.

Campbell, Joseph. California Funicular Railways: From Angels Flight to Shasta Springs. Los Angeles: Borden Publishers, 1993.

Comer, Virginia L. Angels Flight: A History of Bunker Hill's Incline Railway. Los Angeles: Historical Society of Southern California, 1996.

Duke, Donald. Incline Railways of Los Angeles and Southern California. San Marino, CA: Golden West Books, 1998.

Fogelson, Robert M. The Fragmented Metropolis: Los Angeles, 1850-1930. Berkeley and Los Angeles: University of California Press, 1967. Revised, 1993.

Gleye, Paul. The Architecture of Los Angeles. Los Angeles: Rosebud Books, 1981.

Historic Resources Group. "Angels Flight Historic Structures Reports." Volumes 1,3. 1993.

Historic American Engineering Record. "Johnstown Inclined Plane." American Memory Collection. <www.loc.gov>

Historic American Buildings Survey. "Angels Flight" American Memory Collection. <www.loc.gov>.

Jackson, Kenneth T. Crabgrass Frontier: The Suburbanization of the United States. New York: Oxford University Press, 1985.

Mercer, Helen and Mrs. Steve Shadle. "National Register Nomination Form: Fenelon Place Elevator." Dubuque County Historical Society, 1978.

Pennsylvania Historic Sites and Landmarks. "National Register Nomination Form: Johnstown Inclined Railway." Pennsylvania Historical and Museum Commission, 1972.

Van Trump, James D. "National Register Nomination Form: Monongahela Incline." Pittsburgh History and Landmarks Foundation, 1973.

Van Trump, James D. and David M. Berman. "National Register Nomination Form: Duquesne Incline." Pittsburgh History and Landmarks Foundation/Pennsylvania Historical and Museum Commission, 1974.

Warner, Sam Bass Warner, Jr. Streetcar Suburbs. Cambridge: Massachusetts: Harvard University Press, 1962. Revised, 1978.

Wheelock, Walt. Angels Flight. Los Angeles: Borden Publishing Company, 1993.

Work Projects Administration. Los Angeles: A Guide to the City and its Environs. New York: Hastings House, 1941.

Verbal Boundary Description

The current site is known as Parcel Y-1-B which is that portion of Lot 5 of Tract No. 30781, in the City of Los Angeles, as per map recorded in Book 897, Pages 8 to 12 inclusive of Maps, in the office of the County Recorder of said County, described as follows:

Beginning at the northeast corner of said Lot 5, proceeding south 18 feet along the eastern property line of said Lot 5, then proceeding west along a line north 52°16'38" west 287 feet, then proceeding south along a line north 37°45'35" east 45 feet, then proceeding west along a line north 52°16'38" west to the western property line of said Lot 5, then proceeding north along said western property line to the northwest corner of said Lot 5, then proceeding east along the northern property line of said Lot 5 to the true point of beginning.

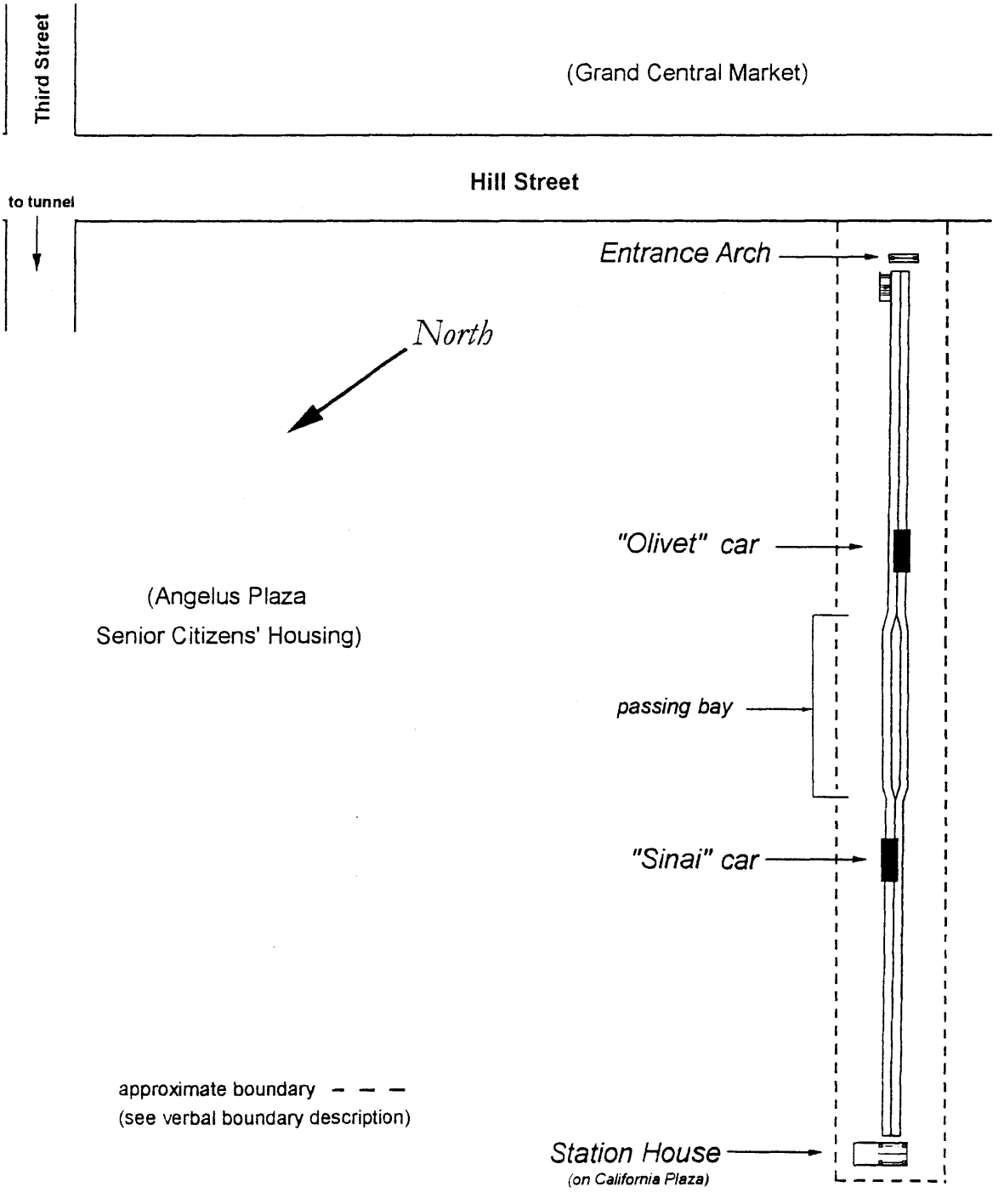
Boundary Justification

The boundary is contiguous with the property's current legal parcel. The new site is located within the same city block as the property's historic location. The current site has an orientation, setting and general environment that are comparable to those of the historic location and that are compatible with the property's significance.

PHOTOGRAPHS

Name:	Angels Flight Railway
Location:	Hill Street Los Angeles Los Angeles County, California
Photographer:	Jennifer Minasian, Historic Resources Group
Date of Photographs:	February 3, 2000
Location of Negatives:	Historic Resources Group 1728 Whitley Avenue Los Angeles CA 90028

1. General view of site, view west
2. General view of site, view northeast
3. Entrance arch, Hill Street, view west
4. Metal hoops, trackage, and station house, view west from car
5. Station house and pavilion, view southeast
6. Station house, west elevation, view east
7. Station house, south elevation, view north
8. Station house, passenger loading platform, view north
9. Station house, pavilion and north elevations, view south
10. Station house, north elevation, view southwest
11. Station house, north and east elevations, view southwest
12. Trackage from car, view east
13. Car and trackage, view west
14. Trackage and trestle, view southeast
15. Trestle, view northwest
16. "Sinai" car docked at station house, view south
17. Car, view northwest
18. "Sinai" car, general interior view, view east
19. "Sinai" car, interior, ceiling and seats, view east
20. "Sinai" car, interior, steps and seats, view east
21. "Sinai" car, ceiling, view east


Third Street
(Grand Central Market)
Hill Street
to tunnel
Entrance Arch
North
"Olivet" car
(Angelus Plaza
Senior Citizens' Housing)
passing bay
"Sinai" car
approximate boundary
(see verbal boundary description)
Station House
(on California Plaza)
Olive Street (beneath California Plaza)