

United States Department of the Interior
National Park Service

National Register of Historic Places

Date Listed 7-10-17

NRIS No. NP100001303

Oregon SHPO

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 Pilot Butte Canal: Downtown Redmond Segment Historic District

other names/site number N/A

Name of Multiple Property Listing Carey and Reclamation Acts Irrigation Projects in Oregon, 1901-1978
(Enter "N/A" if property is not part of a multiple property listing)

2. Location

street & number NW Canal Blvd from approximately NW Quince Ave. on the north to NW Dogwood Ave. on the south not for publication

city or town Redmond vicinity

state Oregon code OR county Deschutes code 017 zip code 97756

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 at the following level(s) of significance: ___ national ___ statewide local

Applicable National Register Criteria: A ___ B ___ C ___ D

Signature of certifying official/Title: Deputy State Historic Preservation Officer

Date 5/22/2017

Oregon State Historic Preservation Office
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:

- 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:)

Signature of the Keeper

Date of Action

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5. Classification

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

Category of Property
 (Check only one box.)

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

- private
- public - Local
- public - State
- public - Federal

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

Contributing	Noncontributing	
		buildings
		site
3	17	structure
		object
3	17	Total

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
 (Enter categories from instructions.)

AGRICULTURE/SUBSISTENCE:
Irrigation Facility

Current Functions
 (Enter categories from instructions.)

AGRICULTURE/SUBSISTENCE
Irrigation Facility

7. Description

Architectural Classification
 (Enter categories from instructions.)

NO STYLE

Materials
 (Enter categories from instructions.)

foundation: N/A
 walls: N/A
 roof: N/A
 other: EARTH; STONE; BASALT

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Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity).

Summary Paragraph

The Pilot Butte Canal: Downtown Redmond Segment Historic District is located on land owned by the Central Oregon Irrigation District in downtown Redmond, Deschutes County, Oregon. It consists of an approximately 6,780-foot long segment of the Pilot Butte Canal located entirely within several Deschutes County parcels. These narrow parcels correspond with the footprint of the canal segment, oriented north-south, extending between NW Canal Boulevard on the west and U.S. Route 97 (The Dalles-California Highway) on the east, and from about NW Quince Avenue on the north and NW Dogwood on the south, in the northeastern portion of downtown Redmond. The nominated area encompasses property owned or managed by the Central Oregon Irrigation District that functionally exists as an open irrigation canal in this vicinity. In addition to the canal segment, it includes two contributing features and seventeen non-contributing features. The two contributing features are a weir that spans the width of the canal and a lateral that parallels the canal for a short distance. The boundary of the nominated property includes the full extent of the last intact, uninterrupted segment of the Pilot Butte Canal that passes through downtown Redmond. The connecting sections of canal to the north and south, outside the boundary, have been replaced with underground pipe and have lost integrity, physically and visually separating the intact open canal segment from the rest of the Pilot Butte Canal.

Narrative Description

Pilot Butte Canal

The Pilot Butte Canal is a 22-mile long irrigation canal that originates from a diversion on the Deschutes River in the City of Bend, Oregon, and flows in a north/northeasterly direction to the Crooked River in northern Deschutes County. Along its course, the canal passes through the communities of Bend, Redmond, and Terrebonne, Oregon. It is one of two main canals that supply irrigation water to the Central Oregon Irrigation District for agricultural and other purposes. The Central Oregon Irrigation District, originally known as the Central Oregon Project, provides water to approximately 45,000 acres within an 180,000-acre area in the Upper Deschutes River basin of Central Oregon. Much of this water is used for agricultural production, although some water is also used by parks and schools in Bend and Redmond, and for industrial and domestic purposes. The overall system consists of over 700 miles of canals and laterals, servicing the communities of Terrebonne, Redmond, Bend, Alfalfa, and Powell Butte, Oregon.

The Pilot Butte Canal consists of earthen construction. Much of its length was excavated through the fields of basalt bedrock that characterize the geology of the Upper Deschutes River basin. Within this area, soils generally composed of sandy pumice volcanic ash overlay the volcanic rock. It is through these materials that the Pilot Butte Canal was constructed, utilizing horse-drawn scrapers, steam-powered scrapers and drills, and sometimes blasting. As a result, the canal's shape in most locations is wide and rectangular with a mostly flat bottom and side walls set at steep grade. The latter are often reinforced with installations of stone riprap and sometimes by carefully placed coursed-stone walls. The canal's width and depth vary, depending on its elevation and the characteristics of the geography through which it passes.

The primary elements of the Pilot Butte Canal include its excavated channel and flanking embankments or berms created by the canal's construction. The excavated channel consists of the channel bed, typically formed from bedrock or a mixture of impervious soils or stone, and the aforementioned

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sidewalls. The sidewalls were formed by excavating the canal through existing soils or by building a levee or berm to establish the canal at a specific grade at a given elevation. Both actions were often involved. The Pilot Butte Canal's flanking embankments consist of compacted soils, most excavated from the canal during its construction. These embankments typically carry ditch roads that flank the canal through most of its length, providing access required for conducting routine maintenance or inspecting the canal's structural integrity.

At its diversion from the Deschutes River, the Pilot Butte Canal's elevation is 3,651 feet. It ends at the Crooked River with an elevation of 2,930 feet, representing an overall drop of 631 feet. As originally designed, this elevation change facilitates the natural, gravity-based flow of water through the canal and the entire irrigation system. The Pilot Butte Canal generally has a consistent size and shape through its length to accommodate high levels of water flow. However, its width and depth are generally greater through its upstream sections, becoming gradually shallower and narrower toward its termination.

The Pilot Butte Canal: Downtown Redmond Segment Historic District contains a representative, intact segment of the Pilot Butte Canal. It is located on land owned or managed by the Central Oregon Irrigation District in Redmond, Deschutes County, Oregon, within Township 15 south, Range 13 East, Section 10 (Figure 1). The canal segment is situated in the northeastern portion of downtown Redmond and measures approximately 6,780' long, 8' to 12' deep, and has a consistent width ranging from approximately 30' to 43' through its entire length (Figures 2, 16 and 17). It has a relatively straight north-south orientation with a slight curve at its northern end. It passes through Deschutes County tax assessor's parcel numbers 151310B000303, 151303CC00200, 151303CC00201, 151303CC00700, 151303CC00800, 151303CC00900, 151303CC01000, 151304DD00100, 151310B000302, 151310B000399, 151310B000304, 151310B000300, and 151304DA00300. The width of the nomination area through these parcels is approximately 50-feet wide, consisting of the canal footprint inclusive of the area of its sidewall embankments. In addition, the nominated property includes the full areas of Deschutes County tax assessor's parcel numbers 151304DACANAL, 151309DACANAL, 151309A0CANAL, 151310CBCANAL, and 151310B0CANAL, plus an approximately 25-feet of the northern portion of parcel number 151309DDCANAL (Figures 4, 5, 6, 7, 8, 9, 10, and 11). These areas correspond with the footprint of the canal segment plus its embankment, extending between NW Canal Boulevard on the west and U.S. Route 97 (The Dalles-California Highway) on the east, and from NW Quince Street on the north and NW Dogwood on the south.

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The Pilot Butte Canal: Downtown Redmond Segment Historic District contains the last intact, open-channel sections of the Pilot Butte Canal to remain within the City of Redmond's downtown area. The sections of the Pilot Butte Canal located north and south of the Downtown Redmond Segment were reconstructed as underground pipes for a length of approximately 0.15 miles and 1.1 miles, respectively, in 2005. This activity was carried out in conjunction with the rerouting of U.S. Route 97 through Redmond in 2005-2009. The bypass route of U.S. Route 97 runs parallel to the Pilot Butte Canal: Downtown Redmond Segment Historic District on the east and crosses over it on the north, characterizing the setting of the resource in these directions. Prior to the bypass' construction, this area was primarily low-density industrial in use, but retained some of its past agricultural use.

A residential neighborhood, the St. Charles Medical Center Redmond, several commercial office and light industrial properties, and a Walmart Superstore and Home Depot occupy the areas west of the canal segment, moving from south to north. The neighborhood of primarily single-family residential homes is characterized by a regular east-west and north-south grid pattern of streets, including NW Canal Boulevard, which parallels the Pilot Butte Canal: Downtown Redmond Segment Historic District on the west. The medical center and other commercial and retail establishments, located farther outside the

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development of Redmond's downtown historic core, primarily consist of larger, irregular parcels with sizable buildings and expansive paved parking lots on large, irregular parcels.

Included within the boundaries of the nominated property are three contributing and seventeen non-contributing features. Each of these features is associated with the Pilot Butte Canal, which is considered a principal resource. Of the non-contributing features, each falls outside the period of significance of the Pilot Butte Canal: Downtown Redmond Segment Historic District, is not related to the area of significance (farm access bridge, #18) or has lost integrity:

1. Pilot Butte Canal (1903-1905), contributing

The segment of the Pilot Butte Canal within the nomination area is the historic property's principal resource. It consists of an approximately 6,780' length of canal. Similar to other parts of the canal, the Downtown Redmond Segment was constructed by excavating down into existing soils to create the canal channel. Some of the excavated soils were used to reinforce the embankments flanking the canal. Evidence of this activity is seen in the slight, lateral crowns that characterize the open areas of land flanking the canal segment on either side. The segment's channel has a slightly concave shape, gradually rising to steeper angles at the sidewalls. This shape results from basalt riprap that lines the canal at the sidewalls to support the earthen embankments in these locations. The riprap and lining of the channel floor are characterized by stone and gravel of various sizes.

2. Outlet Structure (March 2005), non-contributing

When the section of the Pilot Butte Canal south of the Downtown Redmond Segment was reconstructed as an underground pipe, an outlet structure was built at the same time to transition the new pipe back to the open canal. This outlet structure is located at the south end of the canal segment (Photos 6 and 7). It consists of a large culvert-type structure, which is constructed of reinforced poured concrete and partially buried. The structure features wide, poured-concrete wing walls and its top is rimmed by a steel railing. The structure is considered non-contributing due to its age, which is outside the period of significance.

3. Bridge over the Pilot Butte Canal at NW Fir Avenue (c. 1990), non-contributing

Ten bridges cross the Pilot Butte Canal in the historic district. The southernmost bridge that crosses the Pilot Butte Canal in the historic district is located at the intersection of the canal with NW Fir Avenue (Photos 10 and 11). This bridge is a simple beam-type bridge with squared poured-concrete abutments with perpendicular wing wall returns at the canal's east and west banks. The bridge deck is constructed of reinforced poured concrete with an asphalt road surface placed on top. Galvanized metal guard rails are bolted to the sides of the bridge deck. The bridge is considered non-contributing due to its age, which is outside the period of significance.

4. Lateral D-2 headgate (c. 1970), non-contributing

A former headgate is located on the west bank of the canal segment, immediately north of the NW Fir Avenue bridge (Photo 12). No longer functional, two poured concrete bulkheads are the only elements remaining of the feature. One bulkhead is mounted against the canal's west bank, presumably to provide erosion control from water passing beneath the adjacent bridge. The second bulkhead angles from the downstream edge of this wall into the canal channel, to shelter the turnout. A steel bracket holds the two bulkheads together. The structure of the former headgate has been removed and the headgate's opening is no longer visible. The headgate is considered non-contributing due to its age, which is outside the period of significance.

5. Bridge over the Pilot Butte Canal at NW Greenwood Avenue (c. 1950/2010), non-contributing

A second bridge crosses the Pilot Butte Canal near the intersection of NW Greenwood Avenue and NW Canal Boulevard (Photos 14 and 15). There has been a bridge in this location since at

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least the 1950s. However, all of the existing bridge's features are of recent construction, except for possibly its concrete abutments. The existing bridge is a simple beam-type bridge with poured-concrete abutments at the canal's east and west banks and a central steel I-beam support in the canal channel. The abutments each have wing walls that angle back into the canal's earthen embankments. They support a series of steel I-beams, upon which a bridge deck of wood planks is placed. The road surface is formed by a second layer of wood planks, installed on top of and perpendicular to the first, with a paved asphalt approach on the west side. Wood railings with angled support brackets are installed at the bridge's sides. The bridge is currently a pedestrian-only bridge and additional wood railings have been installed across the bridge deck to block vehicular access. It is considered non-contributing, due to loss of integrity.

6. Weir (c. 1940), contributing

This feature consists of a board-formed poured-concrete weir that spans the width of the canal segment a short distance north of the NW Greenwood Avenue bridge (Photos 16 and 17). The weir appears to also serve as a check structure for an adjacent headgate. It has a low-profile concrete notch that is supported by straight, concrete bulkheads at the canal's east and west embankments. A wide steel notch plate (or blade) is mounted within the notch. The blade has a trapezoidal-shaped opening, such as those typical of Cipolletti-type weirs. It is mounted on the notch's leading (south) edge and is supported by steel support brackets. A catwalk mounted on top of the weir provides access across the structure to both sides of the canal. It spans the weir's full width. The catwalk features steel construction with a walkway of wood planks and a steel railing. It is mounted to the concrete bulkhead by steel brackets. A vertical measuring gauge has been installed in the weir's upstream water pool, just in front of the weir, near the canal segment's west bank.

7. Headgate (c. 2000), non-contributing

This headgate is located on the east bank of the canal segment, immediately south and adjacent to the aforementioned weir/check structure. It consists of a flat, reinforced, poured-concrete headwall, on which is mounted a rectangular slide gate with a T-shaped handle (Photo 18). Based on the type and materials of construction, the headgate is estimated to have been custom-made and installed by the Central Oregon Irrigation District c. 2000. It serves as the turnout for an unnamed lateral that parallels the east side of the segment. The headgate is considered non-contributing due to its age, which is outside the period of significance.

8. Lateral (c. 1920), contributing

An unnamed lateral parallels the east side of the canal segment, running north from the aforementioned headgate toward NW Hemlock Avenue (Photo 19). It is representative of some of the smaller laterals that extend from turnouts along the Pilot Butte Canal. The lateral consists of a small earthen ditch that measures approximately 2' to 4' wide, 2' to 3' deep, and 530' long. It once supplied water to an adjacent property.

9. Bridge over the Pilot Butte Canal at NW Hemlock Avenue (ID#17C19, 1967), non-contributing

A third bridge over the Pilot Butte Canal corresponds with the alignment of NW Hemlock Avenue. Prior to the reroute construction of U.S. Route 97, this bridge was a primary transportation route across the Pilot Butte Canal from downtown Redmond to areas on its east side. The existing bridge is a simple beam type bridge with poured concrete abutments at the canal's east and west banks and a central concrete-support pier and footing, located in the canal channel (Photos 24 and 25). Records indicate the bridge was constructed in 1967. The abutments and support pier appear to be older than the superstructure, and were likely installed at this time. These elements support pairs of timber beams, which in turn support the bridge deck. The bridge deck consists of wood planks, on which an asphalt road surface has been laid. The beams, bridge deck, and road surface all appear to be of more recent age. In addition, contemporary galvanized-metal guard

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rails have been bolted to both sides of the bridge deck. The bridge is considered non-contributing, due to its age, which is outside the period of significance.

10. Bridge over the Pilot Butte Canal at NW Kingwood Avenue (c. 1990), non-contributing

This bridge crosses the Pilot Butte Canal at the intersection of the canal with NW Kingwood Avenue. The bridge serves as a private driveway access from NW Kingwood Avenue and NW Canal Boulevard to a residential property on the canal's east side (Photos 29 and 31). There has been a bridge in this location since at least the 1950s. However, all of the existing bridge's features are of more recent construction. The bridge is a simple beam-type bridge with a poured-concrete deck supported by poured-concrete abutments with angled wing wall returns at the canal's east and west banks. Heavy wood guard railings are bolted to the sides of the bridge deck. The bridge is considered non-contributing due to its age, which is outside the period of significance.

11. Headgate at NW Kingwood Avenue Bridge (c. 1990), non-contributing

The headgate consists of a tall, poured-concrete headwall with a flat face that is an extension of the NW Kingwood Avenue bridge's eastern bridge abutment (Photo 30). It was installed when the existing bridge was constructed over the Pilot Butte Canal. An anodized steel, screw-type lift gate is mounted to the headwall's flat-wall face. The headgate is considered non-contributing due to its age, which is outside the period of significance.

12. Bridge over the Pilot Butte Canal at Medical Center (c. 1990/2016), non-contributing

Similar in design to the bridge at NW Kingwood Avenue, this bridge crosses the Pilot Butte Canal just south of NW Larch Avenue across NW Canal Boulevard from the St. Charles Medical Center-Redmond. It was first constructed sometime between 1980 and 1994 to provide access to land on the east side of the Pilot Butte Canal belonging to the residence accessed by the NW Kingwood Avenue bridge (Photos 32, 33 and 34). The bridge has the same design as the NW Kingwood Avenue bridge and the two bridges were likely installed at the same time. The one difference is the presence of metal W-beam guard rails bolted to the sides of the bridge deck, instead of wood railings. In 2016, the bridge was renovated to provide access to a new, asphalt parking lot on the canal's east side, and a new gable-roof canopy was erected across its length. The bridge is considered non-contributing due to its age, which is outside the period of significance.

13. Bridge over the Pilot Butte Canal at NW Larch Avenue (2006), non-contributing

Built in 2006 as part of the U.S. Route 97 bypass project, this bridge is a single-span, beam-type bridge with direct approaches and poured concrete abutments (Photos 35, 36, and 39). The headwalls of each abutment also extend northward to incorporate the Lateral D Headgate (#13) and Check Structure (#14) described below. The roadway deck is finished with asphalt, featuring poured-concrete, paneled parapet walls across the entire span. Metal railings and safety fencing are mounted on the parapets, which feature decorative, inset, arched panels on their outer sides. Metal W-beam guard rails mark the roadway approaches. The bridge is considered non-contributing due to its age, which is outside the period of significance.

14. Lateral D Headgate (2006), non-contributing

The headgate consists of a tall, poured-concrete headwall with a flat face that is an extension of the adjacent bridge abutment (Photos 36 and 37). An original location, the existing headgate was installed in 2006 when the new bridge was constructed over the Pilot Butte Canal at NW Larch Avenue. An anodized steel, screw-type lift gate is mounted to the headwall's flat-wall face. The Lateral D Headgate is considered non-contributing due to its age, which is outside the period of significance.

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15. Check Structure (2006), non-contributing

This feature consists of a board-formed poured-concrete check structure that spans the width of the canal segment immediately north of the NW Larch Avenue bridge (Photos 36 and 39). The check structure was installed in 2006, when the new bridge was constructed. It replaced an older check structure in this location, which served water to the Lateral D Headgate. The feature has a low-profile concrete notch that is affixed directly to the flat-wall concrete bulkheads at the canal's east and west embankments. The latter are extensions of the adjacent bridge abutments. Wood slats are mounted in the notch. A metal catwalk mounted on top of the check structure, spanning its full width, provides access across the structure to both sides of the canal. The catwalk features steel construction with steel structural supports, grated deck, and a steel railing. The check structure is considered non-contributing due to its age, which is outside the period of significance.

16. Bridge over the Pilot Butte Canal at NE Negus Way (2006), non-contributing

This bridge is a modern highway overpass that functions as a viaduct conveying traffic over NW Canal Boulevard, the Pilot Butte Canal, U.S. Route 97, and the BNSF railroad line (Photos 38 and 40). It was constructed in 2006 as part of the U.S. Route 97 bypass project and is a primary transportation corridor from downtown Redmond to the city's east side. It consists of a multiple-span, poured-concrete, beam-type bridge with elevated approach embankments reinforced by boxed cultured-stone abutments, and columned support piles separating each span. The roadway deck is finished with asphalt, flanked by poured concrete sidewalks and paneled parapet walls across the entire span. Metal railings and safety fencing are mounted on the parapets, which feature decorative, inset, arched panels on their outer sides. The bridge is considered non-contributing due to its age, which is outside the period of significance.

17. Bridge over the Pilot Butte Canal at NE 2nd Street (2006), non-contributing

This bridge was built in 2006 as part of the U.S. Route 97 bypass project, although there has been a bridge in this location since at least the 1950s. It is a poured-concrete, single-span, beam type bridge with poured-concrete abutments that have angled wing wall returns at the canal's east and west banks (Photos 41 and 43). The road surface of the bridge deck is paved with asphalt, flanked by poured-concrete sidewalks and paneled parapet walls across the entire span. Metal railings are mounted on the parapets, which feature decorative, inset, arched panels on their outer sides. The bridge is considered non-contributing due to its age, which is outside the period of significance.

18. Bridge over the Pilot Butte Canal at 2036 NW Canal Blvd (c. 1920), non-contributing

This bridge was constructed c. 1920 to provide access to the farm on the east side of the Pilot Butte Canal. It consists of a simple beam-type bridge constructed with a combination of wood and poured concrete (Photos 45 and 46). The bridge has poured-concrete abutments with angle wing walls on the canal's east and west sides. These structures, along with a central line of squared timber support piers located in the canal channel, support the bridge deck. The deck features wood beam construction with a roadway surface of wood planks, over which are perpendicular runners. A simply designed wood balustrade flanks the deck on the north and south. The replacement of deteriorated wood elements has likely occurred. Because the bridge is not functionally a part of the nominated structure and related appurtenances comprising the historic district, it is not considered to be contributing.

19. Bridge over the Pilot Butte Canal at 2190 NW Canal Blvd (c. 1929/1960), non-contributing

The northernmost bridge in the historic district, this bridge was constructed c. 1929 to provide access to the adjacent farm on the east side of the Pilot Butte Canal, similar to the previous bridge. All of the existing bridge's features appear to be of more recent construction, except for possibly its abutments and central support pier (Photos 47 and 48). These elements are constructed of poured concrete, supporting a bridge span formed by steel I-beams. A roadway

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deck of wood planks with perpendicular wood runs was installed over the I-beams. The bridge has no railings or parapet. The bridge is considered non-contributing because of its apparent alterations, which have caused a loss of integrity.

20. Intake Structure (March 2005), non-contributing

Similar to the aforementioned outlet structure, an intake structure was built when the section of the Pilot Butte Canal north of the Downtown Redmond Segment was reconstructed as an underground pipe, to transition the open canal to the new pipe. The intake structure is located at the north end of the canal segment (Photo 49). It consists of a large culvert-type structure, which is constructed of reinforced poured concrete and partially buried. The structure features wide, poured-concrete wing walls and its top is rimmed by a steel railing. The structure is considered non-contributing due to its age, which is outside the period of significance.

The Pilot Butte Canal: Downtown Redmond Segment Historic District has good integrity and retains the majority of its original features and characteristics. Apparent alterations are limited to those non-contributing features described above. The non-contributing properties are located within the historic district and are physically attached to contributing features; therefore, they cannot be excluded from the nominated area.

The canal segment retains its original unaltered alignment, and the design, materials, and workmanship of its character-defining elements remain intact. These elements include the canal's channel and sidewalls, its basalt stone lining, and its earthen embankments. The contributing weir and lateral compliment this integrity through their association with the canal as a principal resource and by helping represent the canal's engineering and function. In addition, the canal's location, setting, and association within an operating irrigation system remain unchanged.

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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.)

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.)

EXPLORATION AND SETTLEMENT

AGRICULTURE

Period of Significance

1903–1950

Significant Dates

1903 – Construction Begins

1905 – Construction Complete

1910 – City of Redmond Incorporated

1950 – State of Oregon Ends Carey Act

Significant Person

(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation (if applicable)

N/A

Architect/Builder

Wiest, Levi D., Irrigation Engineer

Period of Significance (justification)

The period of significance for the Pilot Butte Canal: Downtown Redmond Segment Historic District extends from the Pilot Butte Canal's initial construction in 1903 and ends in 1950, when the State of Oregon decreed an end to the Carey Act's provisions. This timeframe represents the Pilot Butte Canal's initial construction, as well as subsequent ongoing improvements to the property, until the termination of the Carey Act's authorization. It further encompasses the initial settlement and incorporation of the City of Redmond. The Pilot Butte Canal remained an important influence on the development and growth of the surrounding communities and region throughout this period.

Criteria Considerations (explanation, if necessary) N/A

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Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations).

The Pilot Butte Canal: Downtown Redmond Segment Historic District is historically significant under Criteria A of the National Register of Historic Places, at the local level of significance, in the areas of exploration/settlement and agriculture. It is considered historically significant for its association with the founding and settling of Redmond, Oregon, the development of agricultural irrigation in central Oregon, and as a principal resource of the Central Oregon Project, an early Carey Act project in Oregon. The segment meets the general and property-specific registration requirements for historic properties associated with the development of irrigation projects in Oregon described in the Multiple Property Document: "Carey and Reclamation Acts Irrigation Projects in Oregon, 1901-1978," specifically under the historic context of "Carey Desert Land Act Projects in Oregon, 1901-1950."

As a principal resource of the Central Oregon Project, the Pilot Butte Canal is closely associated with early homesteading and settlement efforts in the Upper Deschutes River basin in the vicinity of Bend and Redmond, Oregon, and the use of irrigation as a means to improve agricultural production, overcome harsh environmental conditions, and provide a sustainable livelihood with limited resources in the region. Its construction was authorized under the Carey Act, which was adopted by the State of Oregon in 1901 to promote development of irrigated agriculture in the State's arid regions, and led to the organization and actions of local irrigation companies to carry out these efforts. As part of the Central Oregon Project, the Pilot Butte Canal provided water for agricultural use in Deschutes County, and specifically the towns of Bend and Redmond, throughout its period of significance. These events led to the founding, initial development, and continued growth of these and other communities. The Pilot Butte Canal: Downtown Redmond Segment Historic District represents this historical significance.

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

The Pilot Butte Canal is the backbone of one of the two irrigation systems that form what is known as the Central Oregon Project in the Upper Deschutes River basin. The Central Oregon Project stands out as a prominent example of an irrigation project resulting from the provisions of the Carey Desert Land Act (Carey Act), and one that had a tremendous impact on the formation and development of central Oregon. It has the distinction of being Oregon's largest Carey Act project and was one of the most successful Carey Act projects in the nation. It also was the primary impetus for agricultural development in the Upper Deschutes River basin during the early twentieth century and the growth and development of many of its population centers.

Calculated at 140,714 acres in 1909, the Central Oregon Project was one of several large-scale irrigation developments in central Oregon, beginning in the late 1890s and early 1900s. These developments centered on Oregon's adoption of the provisions of the Carey Act, which occurred in 1901. During this period, a large number of speculative corporations and cooperative ventures were organized for the express purpose of claiming and developing lands under the Carey Act. These projects differed somewhat from prior irrigation developments because they were primarily speculative commercial enterprises, rather than cooperative developments organized solely for the purposes of improved agricultural production.

Between 1901 and 1906, seven projects in the Upper Deschutes River Basin were approved under the Carey Act. Work was carried out by development companies on at least five of these irrigation projects prior to the Act's adoption by the Oregon State Legislature. These projects included the Deschutes Reclamation and Irrigation Company (Swalley) and Three Sisters Irrigation Company projects, and irrigation projects promoted by the Oregon Irrigation Company, the Pilot Butte Development Company, and the Deschutes Irrigation and Power Company. Companies with previously established irrigation projects, such as the Swalley and Three Sisters Irrigation Company projects, transitioned their existing infrastructure to form Carey Act projects.

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Meanwhile, the newly established companies generally conducted preliminary work to claim and hold their water rights, until approval for an irrigation project under the Carey Act could be secured.

Carey Desert Land Act

Introduced by Wyoming Senator Joseph M. Carey, Congress passed the Carey Desert Land Act on August 18, 1894, and subsequently amended the law with revisions on June 11, 1896, and March 3, 1901. The Carey Act authorized the United States government to grant up to one million acres of public lands to each western state that agreed to its provisions, and enabled these states to issue irrigation contracts to private developers. These developers were then expected to design and build irrigation works to serve lands "segregated" by the state from their federal allocation of one million acres. A state then issued a water right to the private developer for their particular project.

The State of Oregon adopted the provisions of the Carey Act on February 28, 1901.¹ The legislation established a State Land Board to administer the act in Oregon and declared a state policy that Oregon's arid lands were to be reclaimed and settled. Under the act, the State of Oregon relied on private companies to bring about reclamation and settlement, but without becoming liable for any costs. The state was not directly responsible for the financing or construction of any Carey Act projects. If an irrigation project failed, the State simply reassigned the contract to another development firm.²

By 1904, the State Land Board had established contracts for twenty-three segregations under the Carey Act. Four of these were approved by the U.S. Secretary of the Interior, including three in the Upper Deschutes River basin and one in the Harney Valley.³ The segregations in the Upper Deschutes River basin, in what was then Crook County, were the most prominent of Oregon's Carey Act projects. They were often the primary focus of discussions and publications on western irrigation and the Carey Act's implementation in Oregon at that time.

Central Oregon Project

The Central Oregon Project was actually the combination of two segregations initiated by two separate development companies: the Pilot Butte Development Company and the Oregon Irrigation Company. The Pilot Butte Development Company's planned reclamation of Segregation List No. 6, consisting of 84,707.74 acres and executed on May 31, 1902, was the State of Oregon's second Carey Act contract. At 56,006.89 acres, Segregation List No. 19 by the Oregon Irrigation Company was the fourth.⁴

Both companies were subsumed by the Deschutes Irrigation and Power Company in 1907 and subsequently by the Central Oregon Irrigation Company in 1910.⁵ The Central Oregon Irrigation District assumed full control of both segregations in 1921.⁶ The Deschutes Irrigation and Power Company also long held a contract for another large development, Segregation List No. 20, known as the Benham Falls project. This project contemplated the irrigation of 74,198.02 acres from a diversion at Benham Falls. The project was never realized, however, and the state released the segregation from contract on October 17, 1915.⁷

¹ George B. Archibald, "Central Oregon Project" (The Dalles, OR: U.S. General Land Office, 22 December 1916), 138; Kelsey Doncaster, Chris Horting-Jones, and Renewal Technologies, Inc., "Sagebrush to Clover: The U. S. Bureau of Reclamation's North Unit of the Deschutes Project, Volume 1: History" (U.S. Department of the Interior, Bureau of Reclamation, Pacific Northwest Region, November 2013), 8; Michael S. Hall, "Irrigation Development in Oregon's Upper Deschutes River Basin, 1871-1957: A Historic Context Statement" (Bend, OR: Deschutes County Community Development Department, 31 August 1994), 12.

² Hall, 12.

³ Phil F. Brogan, "The Watering of the Wilderness," *The Bend Bulletin* (4 February 1931), 1; Hall, 12.

⁴ Archibald, 59-60; Hall, 12-13 and 25; John H. Lewis and Percy A. Cupper. *Irrigation in Oregon*, U.S. Department of Agriculture, Office of Experiment Stations, Bulletin 209 (Washington, DC: Government Printing Office, 1909), 34.

⁵ Archibald, 177-179; Oregon Department of Transportation, "Deschutes Irrigation and Power Company," 8.

⁶ Oregon Department of Transportation, "Pilot Butte Canal," Historic American Engineering Record (HAER OR-62/HAER ORE 9-Bend, 3-)(Seattle, WA: National Park Service, Columbia Cascades Support Office, 26 May 1998), 8-9.

⁷ Archibald, 349-350; Hall, 13.

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The activities of the Oregon Irrigation Company, the Pilot Butte Development Company, and the Deschutes Irrigation and Power Company are good examples of the progression of speculative irrigation companies in central Oregon in the late 1890s and 1910s. They illustrate the development history of the Upper Deschutes River basin and what would become the Central Oregon Project. The histories of these three companies were closely intertwined. The Oregon Irrigation Company and the Pilot Butte Development Company eventually merged to become the Deschutes Irrigation and Power Company, and the irrigation developments pursued by all three entities, including the construction of the Pilot Butte Canal, eventually became a single system.

Charles C. Hutchinson was a pivotal figure in the formation of all three companies. An early promoter of irrigation development, Hutchinson was probably one of the first individuals to recognize the Upper Deschutes River basin's potential for extensive irrigation development. He was the founder of the Oregon Irrigation Company, initiated events that led to the creation of the Pilot Butte Development Company, and was at one time a president or stockholder of both companies.

Hutchinson initially had little or no financial backing for irrigation developments, but was prolific in realizing their potential and filing numerous water rights for proposed projects at propitious diversion points along the Deschutes River. He would then commission surveys of these areas, promote their irrigation, and attempt to attract capital investment for the corporate business ventures.⁸ In the late 1890s, Hutchinson contemplated the following irrigation projects: an irrigation system on the Deschutes River in the vicinity of Benham Falls in what would eventually become Segregation List No. 20 of the Central Oregon Project, under the Carey Act; the irrigation of lands in Segregation List No. 6, similar to those serviced by the present Central Oregon Canal, but involving a diversion on the Deschutes River at Lava Island; the reclamation of land that would eventually be developed under the Carey Act's Segregation List No. 19 and presently serviced by the North Canal as part of the Central Oregon Project; and in Segregation List No. 6 presently serviced by the Pilot Butte Canal.

To achieve these goals, Hutchinson organized the Oregon Development Company in the spring of 1898 and filed his first water rights the same year. The company was capitalized for \$10,000 with a total of 10,000 shares of stock, valued at \$1.00 per share. There were two partners in the company: D. D. Warner and H. Ross, both of Portland.⁹ In May and June of 1899, Hutchinson hired an engineer to survey potentially irrigable lands along the Deschutes River and filed even more claims. Totalling nearly 35,000 acres, these filings were the largest single quantity of water rights filed in Oregon up to that time. On November 14, 1899, he then organized the Oregon Irrigation Company, his second speculative development company, and transferred all the rights and surveys of the Oregon Development Company to this new company.¹⁰

Hutchinson needed capital to carry out his schemes, so he wrote to Alexander McClurg Drake, a wealthy Minneapolis capitalist, in 1899. Hutchinson appealed to Drake by enticing him with the potential profits that could be made by developing irrigation in the Upper Deschutes River basin. In 1900, Drake agreed to a partnership and provided the needed capital in return for half of the Oregon Irrigation Company's stock and a role as president and manager. Soon after, however, Drake and Hutchinson became embroiled in a dispute, which resulted in both parties pursuing determined yet separate efforts to initiate development projects. Drake informed Hutchinson he saw no reason to continue their partnership and formed the Pilot Butte Development Company to compete for irrigation interests in the Upper Deschutes River basin.¹¹

Drake incorporated the Pilot Butte Development Company on October 29, 1900, while Hutchinson continued to operate the Oregon Irrigation Company. The Pilot Butte Development Company was incorporated with a total capitalization of \$50,000. Its principal investors were Alexander M. Drake, Florence W. Drake, and Charles J. Cotter. Drake hired engineer Levi D. Wiest as the company's chief engineer and to survey its

⁸ Archibald, 381-382.

⁹ Archibald, 26.

¹⁰ Hall, 19-20.

¹¹ Archibald, 381-382; Hall, 20.

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holdings. Wiest reportedly conducted all the surveys and land examinations for the irrigation systems and designed the company's buildings and structures, including the Pilot Butte Canal.¹²

Conflicting water rights were filed by both companies at nearly all the same diversion points along the Deschutes River, and the two companies generally made every effort to discredit the other.¹³ On November 5, 1900, for example, Drake made four water filings on the Deschutes, two of which were posted next to Hutchinson's notices. Hutchinson submitted complaints to the Oregon State Land Board, the U.S. General Land Office, and Oregon's Congressman, Malcolm Moody. He argued that his prior filings took preference over Drake's filings, and his actions were an attempt to effectively prevent Drake from complying with his Carey Act obligations. In 1903, the U.S. Secretary of the Interior affirmed a General Land Office dismissal of Hutchinson's protest and recognized the legitimacy of the Pilot Butte Development Company.¹⁴

Drake first arrived in central Oregon in 1900. Upon his arrival, he purchased land in the vicinity of Bend, built a summer lodge on the Deschutes River's east bank and initiated the development of what would become the City of Bend. The Pilot Butte Development Company filed the initial plat for the City of Bend on June 7, 1904. Drake was named the chief petitioner for the incorporation and was one of 49 residents who signed the documents supporting the action. After completing his summer lodge, Drake also constructed three pumping plants to supply water to the new town, and for irrigation purposes. One was located at the Staat's property, one was placed just below the present Tumalo Avenue Bridge, and one was located a little farther downstream. The third plant supplied water directly to Drake's residence. Water pumped from the Deschutes River provided irrigation for what would become "Garden Row," the residential section of Bend that was home to many of its most influential citizens. These properties, with their fine gardens and lawns, were located between the present Tumalo Avenue and Drake Park bridges on the river's east side.¹⁵

Whether through agreement or another mechanism, the two companies eventually confined their activities to separate territories. The Pilot Butte Development Company developed a system to irrigate lands in what would become Segregation List No. 6 under the Carey Act, and the Oregon Irrigation Company attempted to finance a project that would reclaim land in Segregation List No. 19. The irrigation of land in Segregation List No. 20 was pursued by both companies, with perhaps the Oregon Irrigation Company being the most actively interested.¹⁶

The Oregon Irrigation Company initiated the construction of irrigation works at Benham Falls in 1901-1902. Relatively minor in scope, this work consisted of excavations for a flume to divert water on the river's east bank at the head of the falls, and to validate the company's claims in the area. The company reportedly had two workers employed "in the timber," some distance back from the falls, from the spring of 1901 to the spring of 1903. As was typical, these men performed a minimum of work on the proposed diversion and along the river or in the lava beds just east thereof, or just enough to validate the company's claim to the water rights. Contemporary reports indicated the effort to be merely "pick and shovel work," which did not amount to much improvement.¹⁷

The Oregon Irrigation Company's plan for the reclamation of the land in Segregation List No. 19 involved the construction of a diversion dam on the Deschutes River's west bank at a point commonly referred to as "The Narrows," from which point a canal was to follow along the river's west bank downstream to about where the North Canal Dam is now located. Here a crossing was to be made to the river's east bank and the canal

¹² Oregon Department of Transportation, "Pilot Butte Canal."

¹³ Archibald lists the Pilot Butte Development Company's incorporation under the laws of Oregon as occurring on May 18, 1900. The Oregon Secretary of State recorded the filing of the incorporation on October 29, 1900. Crook County, Oregon, "The Pilot Butte Company, Articles of Incorporation," *Articles of Incorporation*, Vol. 1 (Prineville, OR: Crook County Clerk, 29 October 1900), 78; Archibald, 25 and 381-382.

¹⁴ Archibald, 56; Hall, 20.

¹⁵ *The Bend Bulletin* (18 October 1933); Hall, 49.

¹⁶ Archibald, 381-382.

¹⁷ Archibald, 349-350.

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extended easterly to the Powell Butte district. Some work was done by the company at the location of this original diversion in 1901, presumably to validate the water right. However, no further work was done at The Narrows.¹⁸ Similarly, the Oregon Irrigation Company's plans for the lands of Segregation List No. 6 involved the construction of the Lava Island Canal, which was to divert from the upper Lava Island on the Deschutes River. To support rights filed at this location, the company likewise employed a few laborers who, from the Spring of 1901 to Spring 1903, excavated or partially excavated a canal about ten feet wide, a half mile long, and about three feet deep.¹⁹

The Pilot Butte Development Company, meanwhile, contemplated the reclamation of approximately the same area by the means of two possible canals. The first (referred to as the Central Oregon Canal but different from today's canal of that name) was to divert from the Deschutes River's west bank at the so-called Midway Diversion, cross to the river's east bank at Lava Island, and then run easterly to the Powell Butte district. From a point near what is now the Brasada Ranch, it would have then had almost the same alignment as the present Central Oregon Canal. The second canal (referred to as the Pilot Butte Canal) was to divert from the location of the existing Central Oregon Canal diversion (then known as the Pilot Butte Diversion or Deschutes Canal Diversion) and run northerly to the Crooked River on approximately the same alignment as the present Pilot Butte Canal. Feeder canals were also considered, to allow water to be interchanged from one canal system to the other. A feeder canal proposed from the Pilot Butte Diversion was to have practically the same alignment as the upper (southern) part of the present Central Oregon Canal, but was not intended to serve as a permanent water supply. Instead, it was to irrigate those areas west/southwest of Alfalfa, Oregon, and supply water to the Powell Butte district, located farther north, until construction the construction of the new canal from the Midway Diversion could be completed. The only aspect of these plans achieved by the Pilot Butte Development Company at this time was the construction of the Pilot Butte Canal.²⁰

The Pilot Butte Development Company subsequently initiated construction of a diversion dam, originally known as the Pilot Butte Diversion, in the spring of 1901. This diversion was at the location of what is now the Central Oregon Canal diversion, and was intended to supply water to both the Central Oregon Canal and the Pilot Butte Canal. The work included erection of the diversion structure, the construction of what was then known as the Pilot Butte flume, and excavation of the Pilot Butte Canal as far as the town of Bend (today this canal is known as the Old Pilot Butte Canal). Construction of headworks, the flume, and about ten miles of earthen canal below the flume were completed by 1903. The flume was reported as originally measuring approximately 3' x 5' in section, was about 1 ½ miles long, and had a carrying capacity of 169 second feet of flow.²¹ This capacity would be increased with later improvements to the structure.

Deschutes Irrigation and Power Company

The Deschutes Irrigation and Power Company succeeded both the Pilot Butte Development Company and the Oregon Irrigation Company, and acquired control of all the property, contracts, rights, franchises, and other assets owned by each of the two companies. The Deschutes Irrigation and Power Company was incorporated on February 10, 1904, with a total capitalization of \$2,500,000 and 25,000 shares of stock, valued at \$1.00 per share. The company was incorporated by William Mundy, George Hill, and E. B. Holmes. Supplemental articles of incorporation were filed on June 30, 1904.²²

The Deschutes Irrigation and Power Company's creation resulted from the conflicting claims of the Oregon Irrigation Company and the Pilot Butte Development Company. Both companies had submitted applications for the segregation of the same lands in the Upper Deschutes River basin and alleged the same prior water rights and privileges. The establishment of the new company was a compromise evidently reached by the various parties involved. Drake sold his interests in the Pilot Butte Development Company to the Deschutes Irrigation

¹⁸ Archibald, 353.

¹⁹ Archibald, 383.

²⁰ Archibald, 57, 236-237, and 383-384.

²¹ Archibald, 238, 350, and 383.

²² Archibald, 27, 59 and 142; Hall, 20; Oregon Department of Transportation, "Deschutes Irrigation and Power Company," 6.

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and Power Company for \$70,000 in 1904. He subsequently sold all his holdings in Bend and moved with his family to Pasadena, California, in 1911, where he retired. Hutchinson likewise sold his contracts and rights to the Deschutes Irrigation and Power Company, receiving about \$35,000 for 56,006.89 acres identified as the lands of Segregation List No. 19. With its incorporation, the Deschutes Irrigation and Power Company took over the irrigation developments of both older companies and was thereafter jointly managed and operated.²³

As part of this process, the deed of transfer included a provision that some 25 second feet of water from the system be reserved for use by the City of Bend, and not diverted from the Deschutes River. This water was to be used for municipal purposes, such as power development, and would play a role in later improvements affecting the Pilot Butte Canal and Central Oregon Canal. A contract between the State of Oregon and the Deschutes Irrigation and Power Company executed on June 17, 1907 recognized and reaffirmed this reservation of water.²⁴ The Pilot Butte Development Company later constructed the Bend Power Plant in 1909, which provided electricity to the City of Bend, relying on hydro-electric power generated by the power plant and a small rock-filled dam across the Deschutes River.²⁵

The Deschutes Irrigation and Power Company continued the work begun by its predecessors and completed the construction of the Central Oregon Canal and the Pilot Butte Canal systems between 1904 and 1912. Upon completion, the size of the irrigation project extended across sections of three counties: Deschutes, Crook, and Jefferson; and provided irrigation water throughout this area. The company also worked to improve the area's communication and transportation infrastructure. The area's first telephone line was installed between the company offices and Prineville to improve communications between Bend and the outside world, including the company's offices in Portland and Columbus, Ohio. The company also organized the Central Oregon Transportation Company as a subsidiary to provide transportation for passengers and express mail between Bend and Shaniko, Oregon, which was the end of the railroad at that time.²⁶

Work was started on the enlargement of the Pilot Butte flume on September 12, 1904, and its size increased to about 5' x 16' in section by August 19, 1905. This enlargement was called for by the system's original plans and necessary to supply sufficient water to both the Pilot Butte Canal and Central Oregon Canal. At the same time, work was commenced on an extension of the Pilot Butte Canal from its prior terminus near Bend.²⁷ The canal systems were initially designed to divert water from the east bank of the Deschutes River approximately four miles upstream from what would become Bend at the Pilot Butte Diversion. The water then travelled approximately a mile through the Pilot Butte flume to a structure referred to as the "bifurcation." This structure was the original starting point of the Pilot Butte Canal, which essentially functioned as a lateral of the Central Oregon Canal, until the construction of the North Canal Dam in 1909-1912.²⁸

Enlargement of the Pilot Butte flume was responsible for initiating Bend's first water fight and resulted in the construction of the North Canal Dam, and the current configuration of the Pilot Butte Canal. Due to the flume's greater capacity, Deschutes Irrigation and Power Company engineers devised plans to divert more water from the Deschutes River above Bend for the purposes of supplying water to the two irrigation systems, neither of which had yet reclaimed their full segregations. These plans had the potential to leave the river dry at Bend during the irrigation season and to adversely affect the construction and operation of the Bend Power Plant; and were in lieu of a prior agreement with the State of Oregon to divert additional water from new headworks at the Bend townsite.²⁹

²³ Archibald, 58-59; Hall, 20.

²⁴ Archibald, 38.

²⁵ Archibald, 39-40.

²⁶ Hall, 20.

²⁷ Archibald, 239; "To Enlarge Flume," *The Bend Bulletin* (12 August 1904), 1; "Digs Ditch Bigger," *The Bend Bulletin* (21 October 1904), 1.

²⁸ Archibald, 258.

²⁹ Hall, 25.

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On December 5, 1905, the City of Bend adopted a resolution addressed to the State Land Board protesting the Deschutes Irrigation and Power Company's plans. The company responded that the change in plans was necessary to provide irrigation water at a minimal expense to settlers and that diversion of water below Bend was possible, but would require the construction of a new dam. The solution was the construction of what is now the North Canal Dam, an action the Deschutes Irrigation and Power Company agreed to on January 19, 1906.³⁰ Preliminary work was begun on construction of the North Canal Dam on May 31, 1909, by the Deschutes Irrigation and Power Company.³¹ Preliminary work consisted of preparing the dam site and canal right of way, and was continued by the company until it went into receivership in 1910.³² Thereafter, the preliminary and preparatory work was again taken up by the Central Oregon Irrigation Company and continued until 1912, when actual construction started.³³

Built at a cost of \$220,000, the project initially included the construction of the dam, headgates, and the first 1.41 miles of what was called the North Canal from the diversion to its junction with the Pilot Butte Canal. The diversion dam consisted of a single concrete arch, gravity sectioned, overflow-type structure with a radius of 180 feet. Much of this structure still exists today. In 1910-1911 the North Canal was enlarged for a distance of 5.5 miles below the flume to a width of 21 feet and a depth of about four feet, and from 1912-1915 the lower end of the ditch was enlarged. In 1931, the canal was about 13 miles long, with a 3.5-mile lateral extension.³⁴

The North Canal Dam was completed in 1913, and the canal was partially completed from the headgate to its intersection with the Pilot Butte Canal, a total distance of 7,460 feet. The canal did not irrigate lands beyond the intersection with the Pilot Butte Canal at this time.³⁵ Following its completion, the old portion of the Pilot Butte Canal that extended from the bifurcation and traversed through Bend was terminated about 1.5 miles north of the city and renamed the Old Pilot Butte Canal. This reconfiguration of the Pilot Butte Canal reduced the amount of water taken from the river above Bend and provided a greater flow of river water for municipal and industrial use in the town, while still supplying water for agricultural irrigation in the surrounding area. After flowing through Bend, water from the Deschutes River was diverted at the North Canal dam, passed through a short segment of the North Canal, and led into the Pilot Butte Canal.³⁶

Pilot Butte Canal

Construction of the Pilot Butte Canal was completed as far as the Crooked River, a total distance of 39.37 miles, on February 9, 1905. Construction camps were set up along the course of the canal and moved as work progressed. An estimated 300 men and around 200 horse teams, organized in over 40 work crews, were employed in the canal's construction, with labor levels varying by the season and schedule. This work included the construction of the Pilot Butte Canal: Downtown Redmond Segment Historic District.

Water was first run in the canal in 1904, primarily for construction purposes, and in 1905 and 1906 for the first regular irrigation seasons.³⁷ At the time, much of the Pilot Butte Canal was characterized as consisting of a series of improved coulees, excavated by hand using horse-drawn scrapers or steam-powered drills, with no structures of consequence beyond the lateral headgates. Construction through the region's fields of lava rock was particularly challenging. Natural drops were utilized throughout the system and all the laterals featured wooden headgates. Both the Pilot Butte canal and various laterals were protected by stacked-stone riprap at points where erosion was liable to occur. Wooden weirs were also said to have been placed at the heads of most laterals and at the head of nearly all the farmers' ditches. However, reports indicate there were no

³⁰ Hall, 25.

³¹ Archibald, 242, 263, 364, 385 and 391; Doncaster, 9; Hall, 26.

³² Archibald, 364.

³³ Archibald, 34, 42, 364, 385 and 391.

³⁴ Hall, 15.

³⁵ Archibald, 265, 276 and 385.

³⁶ Hall, 26.

³⁷ Archibald, 239.

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structures of importance on any of the laterals beyond an occasional small flume or inverted siphon. All of these were built of wood prior to 1916.³⁸

City of Redmond

In conjunction with the Pilot Butte Canal's completion, the Deschutes Irrigation and Power Company conceived plans to establish a new speculative town in the desert north of Bend. Organized as the Redmond Townsite Company, engineers platted a total of 320 acres and began staking out the townsite of Redmond in May 1905 on a vacant section of school land. The townsite was located just west of the Pilot Butte Canal: Downtown Redmond Segment Historic District.

The City of Redmond was named for Frank T. and Josephine Redmond, a husband and wife, who had left school-teaching jobs in North Dakota, and homesteaded on land to be served by the irrigation project. The Redmonds arrived in central Oregon in 1905, attracted to the area by promotional literature that huckstered the advantages of cheap, irrigated land in a desirable region.³⁹ The family was said to have exemplified the vision held by settlers of the Progressive Era, who maintained traditional American values and sought a place to realize these ideals.⁴⁰ They chose to settle land suggested by the Deschutes Irrigation and Power Company next to the Pilot Butte Canal's right of way, and equally close to a projected rail line.⁴¹ A historical marker commemorating the original location of the Redmond homestead, which was adjacent to the Pilot Butte Canal, is located immediately east of the Pilot Butte Canal: Downtown Redmond Segment Historic District within what is now an unnamed, informal public park.

Other early settlers soon followed. Arriving in 1905, many migrated from the same region of North Dakota as had the Redmond family. By 1910, there were 216 people living in the community and the City of Redmond was incorporated. In January 1911, the *Redmond Spokesman* reflected on the previous year and enumerated on Redmond's growth and development. At the time, the newspaper reported Redmond as containing: one garage, two banks, two doctors, one bakery, a brickyard, four lawyers, three saloons, two dentists, a tailor shop, a skating rink, a novelty works, two feed stores, a public library, a reading circle, two newspapers, two drug stores, a harness shop, two barber shops, three restaurants, two transfer lines, a hand laundry, a city water plant, two lumber yards, a jewelry store, a fire department, a basketball team, two photographers, a millinery store, two meat markets, two bowling alleys, a furniture store, three blacksmith shops, an electric light system, two large general stores, five real estate agencies, four confectionary stores, a central telephone office, five church organizations, two billiard-pool halls, a brass band and orchestra, a passenger and express line, two large sale and feed stables, four fraternal organizations, a cleaning-pressing establishment, a ladies auxiliary, a public school to tenth grade, the largest department store in central Oregon, a commercial club, and two hotels.⁴² The point of listing all these elements – the entire enterprise began with establishment of the Pilot Butte Canal and the townsite's proximity to what is now the Pilot Butte Canal: Downtown Redmond Segment Historic District.

Despite its apparent successes, the Deschutes Irrigation and Power Company struggled financially. By May 1907, it presented to the State Land Board that it had completed 184 miles of canal and entered into contracts with landowners for about 27,000 acres of irrigable land.⁴³ However, the company also reported that all funds from its original lien had been expended and that an increase of lien would be necessary. The amount the company had received for constructing the irrigation system and colonizing the lands at \$10 per acre had been insufficient to pay its construction costs, plus expenses such as advertising and colonization campaigns. Because of these circumstances the company incurred a large amount of bonded indebtedness.⁴⁴ As a result,

³⁸ Archibald, 258 and 260.

³⁹ Keith Clark, *Redmond: Where the Desert Blooms* (Portland, OR: The Oregon Historical Society, 1985), 4.

⁴⁰ "Townsite of Redmond," *The Bend Bulletin* (5 May 1905), 1; Hall, 51.

⁴¹ Clark, 4.

⁴² Clark, 12.

⁴³ Oregon Department of Transportation, "Deschutes Irrigation and Power Company," 8.

⁴⁴ Archibald, 63

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the company renegotiated with the state and entered into a new contract under the Carey Act for about 56,000 acres of unclaimed land in Segregation List No. 6 and additional acreage in Segregation List No. 19.⁴⁵ The contract also called for increasing the capacity of the Central Oregon Project's existing canals and laterals to meet higher allocations to water users.⁴⁶ In addition, the company applied for contracts and reclamation rights for about 74,198 acres in Segregation List No. 20, known as the Benham Falls segregation.⁴⁷

Central Oregon Irrigation Company

The Deschutes Irrigation and Power Company's financial circumstances and slow progress caused its bond holders to take legal action against the company in 1907. Lawsuits were filed, which resulted in foreclosure proceedings, and the U.S. Circuit Court for the District of Oregon reviewed the case and ordered the company's reorganization. Under the approved reorganization plan, the company's liabilities were reduced and its rights and assets were transferred to a new corporation named the Central Oregon Irrigation Company. The Central Oregon Irrigation Company was incorporated on October 25, 1910, with offices in both Portland and Deschutes, Oregon. It was capitalized at \$1,500,000 with a total of 15,000 shares, valued at \$100.00 per share. Stock in the new company was issued to the former bondholders of the Deschutes Irrigation and Power Company in satisfaction of their claims against the former company. Officers of the company included: Frederick S. Stanley of Portland as president, Robert Smith of Portland as vice president, Jesse Stearns of Portland as secretary and treasurer, Roscoe Howard of Deschutes as general manager, and C. M. Redfield of Deschutes as chief engineer.⁴⁸

The Central Oregon Irrigation Company moved the company office first from Bend to Redmond and then to the new town of Deschutes, located nine miles north of Bend. The Deschutes Townsite Company, a subsidiary of the Central Oregon Irrigation Company, filed a formal plat of the town of Deschutes on July 18, 1911. Located along the right-of-way of the branch railway, which arrived the same year, the townsite consisted of five avenues oriented parallel to the tracks. Deschutes was intended to link the railroad to the company's irrigation development. In addition to having their headquarters and maintenance facilities in Deschutes, the Central Oregon Irrigation Company also operated the town's hotel and grocery store. By 1917, the growing company town provided numerous other businesses as well.⁴⁹ The Central Oregon Irrigation Company, meanwhile, continued expansion of the Pilot Butte Canal and Central Oregon Canal irrigation systems.

Under the Central Oregon Irrigation Company, improvement of the Central Oregon Project progressed rapidly and effectively reached completion in the mid-1910s. By 1913, the company had irrigated over 25,006 acres of land with 16,804 acres actually under cultivation. The following year it reported that the Central Oregon Canal system had 44.15 miles of main canal and 187.5 miles of laterals, and the North Canal/Pilot Butte Canal had 30.1 miles of main canal and 175.08 miles of laterals. By 1921, the two systems combined had reached approximately 600 miles of canals and laterals built.⁵⁰

⁴⁵ ODOT, "Deschutes Irrigation and Power Company Canal," 8.

⁴⁶ Archibald, 243.

⁴⁷ Hall, 25.

⁴⁸ During the reorganization, the stock of the Central Oregon Irrigation Company was held in trust and voted on by a committee consisting of Jesse Stearns, L. G. Addison of Columbus, Ohio, and L. L. Seldon of New York, per the court-approved plan. Under the plan, Jesse Stearns and Louis G. Addison purchased the personal property of the Deschutes Irrigation and Power Company on October 4, 1910, and conveyed it to the Central Oregon Irrigation Company on October 27, 1910. The deed covered all contracts with the State of Oregon, water appropriations, right of way agreements, equipment, settlers' notes, land liens, etc., but was never recorded. Stearns and Addison also facilitated the transfer of the Deschutes Irrigation and Power Company's real property, which primarily consisted of town lots and real estate in Bend, Deschutes, and the surrounding area. This property was considered of little consequence in the affairs of the project, except as financial assets. Stearns and Addison purchased the property on October 7, 1910, and reassigned the certificate of sale to the Central Oregon Irrigation Company on August 28, 1911. A Special Commissioner then deeded the real property directly to the company on November 3, 1911. Archibald, 30-31, 69, and 350; Oregon Department of Transportation, "Deschutes Irrigation and Power Company," 8-9.

⁴⁹ Hall, 52-53.

⁵⁰ Paul G. Claeysens and Jan Tomlinson, "Determination of National Register of Historic Places Eligibility for Historic Agricultural Resources in Central Oregon: Central Oregon Irrigation District" (Bend, OR: Heritage NW c/o Deschutes and Ochoco NFs, 1 June 2006), E-15.

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One of the requirements of the Central Oregon Project under the Carey Act was to convey the developed irrigation system to a water users' association within five years of its completion, as provided for in the company's contract with the State Land Board, dated June 17, 1907. For the Central Oregon Project, this transition occurred in the early 1920s, due to legal delays caused by competition between two separate water user organizations expecting to fulfill this role: the Central Oregon Water Users Association and the Central Oregon Irrigation District.

The Central Oregon Water Users' Association was established following the Central Oregon Irrigation Company's reorganization in 1907. The association consisted of a group of settlers opposed to the company's efforts and who attempted to secure more advantageous conditions for their operations. In October 1915, for example, the association attempted to have the affairs of the Central Oregon Project brought under the supervision of the State Public Utilities Commission. They also filed complaints with the Public Service Commission of Oregon concerning its practices.⁵¹ The Central Oregon Water Users' Association, however, did not represent all of the settlers that subscribed to the irrigation project.

Central Oregon Irrigation District

A separate group established the Central Oregon Irrigation District in December 1918. This organization was formed for the express purpose of assuming the Central Oregon Irrigation Company's operations of the Central Oregon Project, in lieu of a water users' association. As a result, because there were now two water user organizations competing for control of the Central Oregon Project, the matter of succession landed before the U.S. Circuit Court of the State of Oregon in Deschutes County. A contract executed on December 13, 1918, had stipulated that the Central Oregon Irrigation District would take over the company's irrigation system. However, the district's financial weakness and several other issues plagued the transaction. A final decree, known as the Dietrich Decree, was issued by the court on July 9, 1921. The decree ordered that ownership and operation of the Central Oregon Project was to be conveyed to the settlers organized as the Central Oregon Irrigation District. The decree also fixed water appropriations for any additional lands still to be reclaimed by the Central Oregon Irrigation Company or its successors. The company subsequently transferred all water rights, property, and assets to the district, roughly valued at \$3,000,000.⁵²

The Central Oregon Irrigation District continues to operate the facilities of the Central Oregon Project, providing irrigation water to over 4,000 users and covering about 45,000 acres within an 180,000-acre area in Central Oregon. The history of this project is indicative of the private development of agricultural irrigation in central Oregon in the late nineteenth and twentieth centuries under the provisions of the Carey Act, and the effect such projects have had on the growth and development of the region. Developments such as the Central Oregon Project likewise set the stage for the state's next phase of irrigation-dependent growth, which stemmed from the United States government's creation of its federal reclamation program.

Developmental history/additional historic context information (include a chronological or thematic context.)

A broad and comprehensive context for the Pilot Butte Canal is provided in the Multiple Property Documentation "Carey and Reclamation Acts Irrigation Projects in Oregon, 1901-1978," specifically under the historic context of "Carey Desert Land Act Projects in Oregon, 1901-1950." The Pilot Butte Canal, including the Downtown Redmond Segment, was one of Oregon's earliest and most successful Carey Act irrigation projects and it strongly influenced the creation and development of agriculture and communities in the surrounding area.

⁵¹ Archibald, 83; Public Service Commission of Oregon, *Ninth Annual Report of the Public Service Commission of Oregon to the Governor, December 15, 1916* (Salem, OR: State Printing Department, 1917).

⁵² Hall, 27-28; Oregon Department of Transportation, "Deschutes Irrigation and Power Company," 9.

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The Pilot Butte Canal: Downtown Redmond Segment Historic District meets the registration requirements of the Multiple Property Documentation. It consists of a concentration of property types (and subtypes) that existed as part of the Pilot Butte Canal irrigation system and is a significant, distinguishable entity that possesses the ability to convey the historical significance of the Pilot Butte Canal under National Register Criterion A. The historic district includes a segment of the Pilot Butte Canal as a principal resource, in addition to two other contributing features, from two of the Multiple Property Documentation's identified property types. By property type, the historic district's features include: the canal as representative of the water conduit/conveyance structures property type, specifically the canal subtype; the lateral as representative of the water conduit/conveyance structures property type, specifically the lateral/ditch subtype; and the weir as representative of the flow control and measuring devices property type, specifically the weir subtype.

All of the contributing resources were constructed together within the Pilot Butte Canal: Downtown Redmond Segment Historic District's period of significance, which includes the segment's initial construction and ongoing improvements over time. Together, this collection of contributing features satisfies the Multiple Property Documentation's requirements that a historic district contain resources united historically by plan, function, or physical development; that it relate to one or more of the historic contexts associated with the irrigation project; and that it contain a principal resource associated with contributing elements from one or more defined property types or subtypes. As a group of related features, the historic district also possesses a high degree of integrity and represents the irrigation project's influence on the founding, initial development, and continued growth of the City of Redmond and other communities in the Deschutes River basin, following implementation of the Carey Act's provisions; and its impact on the region's physical landscape.

To date, only one other segment of the Pilot Butte Canal has been listed in the National Register—the Pilot Butte Canal Historic District (Cooley Road to Yeoman Road Segment). In addition to this resource, there are several other segments along the canal that possess characteristics similar to the Pilot Butte Canal: Downtown Redmond Segment Historic District, and retain an equally high level of physical integrity. However, most lack a suitable concentration of contributing elements necessary to convey historical significance, and few equal the Pilot Butte Canal: Downtown Redmond Segment Historic District's public accessibility, its close association with the founding and development of the City of Redmond, and its potential for historical interpretation. The historic district is located in the heart of downtown Redmond, and the canal segment it contains is among the last intact sections of open canal in this vicinity. Because of its proximity to downtown Redmond, it is easily accessed by the general public and provides unique opportunities for public education. The historic district adjoins a public park (i.e., Homestead Park), which is the site of the former Frank T. and Josephine Redmond Homestead, and the founding of Redmond. Current interpretation at the park relates to the Redmond Homestead, but could be expanded to include the history of the Pilot Butte Canal and its influence on Redmond's growth and development, as represented by the adjacent canal segment. No other segment of the Pilot Butte Canal possesses this direct association with Redmond's early history.

In comparison to the Cooley Road to Yeoman Road Segment, the Pilot Butte Canal: Downtown Redmond Segment Historic District further represents a different canal design and offers contributing elements not present in the other segment. As it passes through downtown Redmond, the Pilot Butte Canal's physical form does not possess the wide, shallow channel and irregular embankments that characterize the Cooley Road to Yeoman Road Segment. Instead, the Downtown Redmond Segment possesses a more traditional canal design because it does not necessarily pass through extensive formations of volcanic rock. Construction of the Pilot Butte Canal in the vicinity of downtown Redmond resulted in a more consistent width and depth, and excavated soils were used to create and reinforce the embankments flanking the canal. The Downtown Redmond Segment's channel generally retains the same width and depth through its entire length; has a slightly concave shape, gradually rising to steeper angles at the sidewalls; and has less presence of solid volcanic rock formations at its base.

The Pilot Butte Canal: Downtown Redmond Segment Historic District also contains two contributing elements in addition to the canal, whereas the Cooley Road to Yeoman Road Segment includes the canal only. One of these contributing elements is a 530' lateral and the other is a board-formed poured-concrete weir. Both

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features date to the historic district's period of significance, and help convey the historical significance of the larger irrigation system, including its plan, function, and physical development, as required for historic districts by the Multiple Property Documentation. Such features are lacking in the previously National Register-listed Cooley Road to Yeoman Road Segment.

As defined in the Multiple Property Documentation, the Pilot Butte Canal: Downtown Redmond Segment Historic District is eligible under Criterion A for its association with the Central Oregon Project, whose creation was significant in the growth and development of the Upper Deschutes River basin, influenced the founding and development of the City of Redmond and, as an early Carey Act project, was important in the history of irrigation development in the State of Oregon. The nominated grouping of contributing features represents the Central Oregon Project's historic significance and specifically that of the Pilot Butte Canal and its associated irrigation system.

Pilot Butte Canal: Downtown Redmond Segment Historic District
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9. Major Bibliographical References

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

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Clark, Keith. *Redmond: Where the Desert Blooms*. Portland, OR: The Oregon Historical Society, 1985.

Crook County, Oregon. "The Pilot Butte Development Company, Articles of Incorporation." *Articles of Incorporation*. Volume 1. Prineville, Oregon: Crook County Clerk, 29 October 1900: 78.

Doncaster, Kelsey, Chris Horting-Jones, and Renewal Technologies, Inc. "Sagebrush to Clover: The U. S. Bureau of Reclamation's North Unit of the Deschutes Project, Volume 1: History." U.S. Department of the Interior, Bureau of Reclamation, Pacific Northwest Region, November 2013.

Hall, Michael S. "Irrigation Development in Oregon's Upper Deschutes River Basin, 1871-1957: A Historic Context Statement." Bend, OR: Deschutes County Community Development Department, 31 August 1994.

Lewis, John H., and Percy A. Cupper. *Irrigation in Oregon*, U.S. Department of Agriculture, Office of Experiment Stations, Bulletin 209. Washington, DC: Government Printing Office, 1909.

Oregon Department of Transportation. "Deschutes Irrigation and Power Company Canal (Central Oregon Irrigation Canal)," Historic American Engineering Record (HAER OR-63/HAER ORE 9-Bend, 1). Seattle, WA: National Park Service, Columbia Cascades Support Office, 26 May 1998.

_____. "Pilot Butte Canal," Historic American Engineering Record (HAER OR-62/HAER ORE 9-Bend, 3-). Seattle, WA: National Park Service, Columbia Cascades Support Office, 26 May 1998.

Public Service Commission of Oregon. *Ninth Annual Report of the Public Service Commission of Oregon to the Governor, December 15, 1916*. Salem, OR: State Printing Department, 1917.

The Bend Bulletin (12 August 1904; 21 October 1904; 5 May 1905; 18 October 1933).

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 #ORE, 9-BEND, 3 and X 2D
- recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other Central Oregon Irrigation District, Redmond, OR

Name of repository: _____

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10. Geographical Data

Acreage of Property 9.2 acres

(Do not include previously listed resource acreage; enter "Less than one" if the acreage is .99 or less)

Latitude/Longitude Coordinates

Datum if other than WGS84: N/A

(enter coordinates to 6 decimal places)

1	<u>44.286619</u>	<u>-121.168887</u>	5	<u>44.287631</u>	<u>-121.168700</u>
	Latitude	Longitude		Latitude	Longitude
2	<u>44.279537</u>	<u>-121.169193</u>	6	<u>44.290270</u>	<u>-121.167641</u>
	Latitude	Longitude		Latitude	Longitude
3	<u>44.286628</u>	<u>-121.168601</u>	7	<u>44.295531</u>	<u>-121.169535</u>
	Latitude	Longitude		Latitude	Longitude
4	<u>44.279537</u>	<u>-121.168925</u>	8	<u>44.297786</u>	<u>-121.169428</u>
	Latitude	Longitude		Latitude	Longitude

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

The Pilot Butte Canal: Downtown Redmond Segment Historic District is located on land owned by multiple property owners in downtown Redmond, Deschutes County, Oregon, within Township 15 south, Range 13 East, Section 10. The nominated property consists of an approximately 6,780-foot long segment of the Pilot Butte Canal, passing through Deschutes County tax assessor's parcel numbers 151310B000303, 151303CC00200, 151303CC00201, 151303CC00700, 151303CC00800, 151303CC00900, 151303CC01000, 151304DD00100, 151310B000302, 151310B000399, 151310B000304, 151310B000300, and 151304DA00300. The width of the nomination area through these parcels is approximately 50-foot wide, consisting of the canal footprint inclusive of the area of its sidewall embankments. In addition, the nominated property includes the full areas of Deschutes County tax assessor's parcel numbers 151304DACANAL, 151309DACANAL, 151309A0CANAL, 151310CBCANAL, and 151310B0CANAL, plus approximately 25-feet of the northern portion of parcel number 151309DDCANAL. The boundaries of these parcels are considered the boundaries of the nominated property in their respective locations, likewise encompassing the canal footprint and its sidewall embankments.

Boundary Justification (Explain why the boundaries were selected.)

The boundary of the nominated property includes the full extent of the last intact, uninterrupted segment of the Pilot Butte Canal that passes through downtown Redmond. It also encompasses those contributing elements most closely associated with the canal in this location. The connecting sections of canal to the north and south, outside the boundary, have been replaced with underground pipe and have lost integrity, physically and visually separating the intact open canal segment from the rest of the Pilot Butte Canal. Parcels at the southern end of the nominated property, owned by the Central Oregon Irrigation District, are in a publicly-accessible location situated in proximity to other properties associated with Redmond history (i.e., Homestead Park). The Central Oregon Irrigation District's ownership of the property affords future preservation of the historic district on these parcels, which would not otherwise be guaranteed.

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11. Form Prepared By

name/title Christopher Hetzel/Sr. Architectural Historian date 12/1/2016
organization ICF International telephone (213) 840-3143
street & number 710 2nd Avenue, Suite 550 email christopher.hetzel@icfi.com
city or town Seattle state WA zip code 98104

Additional Documentation

Submit the following items with the completed form:

- **Regional Location Map**
- **Local Location Map**
- **Tax Lot Map**
- **Site Plan**
- **Floor Plans (As Applicable)**
- **Photo Location Map** (Include for historic districts and properties having large acreage or numerous resources. Key all photographs to this map and insert immediately after the photo log and before the list of figures).

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Photographs:

Submit clear and descriptive photographs. The size of each image must be 3000x2000 pixels, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Pilot Butte Canal: Downtown Redmond Segment Historic District
City or Vicinity: Redmond
County: Deschutes **State:** Oregon
Photographer: Christopher Hetzel and Jenny Hartzel-Hill
Date Photographed: February 27, 2014, November 19, 2015, and November 23, 2016

Description of Photograph(s) and number, include description of view indicating direction of camera:

- Photo 1 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_001
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from NW Greenwood Avenue bridge
- Photo 2 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_002
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast from NW Greenwood Avenue bridge
- Photo 3 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_003
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north from NW Fir Avenue bridge
- Photo 4 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_004
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from NW Fir Avenue bridge
- Photo 5 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_005
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast from NW Fir Avenue bridge
- Photo 6 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_006
Pilot Butte Canal: Downtown Redmond Segment Historic District, outlet structure, looking southeast
- Photo 7 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_007
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north from top of outlet structure
- Photo 8 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_008
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from east side of outlet structure
- Photo 9 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_009
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southwest from NW Fir Avenue bridge

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- Photo 10 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_010
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Fir Avenue bridge, looking southwest
- Photo 11 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_011
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Fir Avenue bridge, looking east
- Photo 12 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_012
Pilot Butte Canal: Downtown Redmond Segment Historic District, Lateral D-2 headgate, looking southwest
- Photo 13 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_013
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from NW Fir Avenue bridge
- Photo 14 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_014
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Greenwood Avenue bridge, looking northwest
- Photo 15 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_015
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Greenwood Avenue bridge, looking east
- Photo 16 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_016
Pilot Butte Canal: Downtown Redmond Segment Historic District, weir, looking north from NW Greenwood Avenue bridge
- Photo 17 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_017
Pilot Butte Canal: Downtown Redmond Segment Historic District, weir, looking southeast
- Photo 18 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_018
Pilot Butte Canal: Downtown Redmond Segment Historic District, headgate, looking east
- Photo 19 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_019
Pilot Butte Canal: Downtown Redmond Segment Historic District, lateral, looking southeast
- Photo 20 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_020
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north across east embankment towards NW Hemlock Avenue
- Photo 21 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_021
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from NW Hemlock Avenue bridge
- Photo 22 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_022
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north from NW Hemlock Avenue bridge

Pilot Butte Canal: Downtown Redmond Segment Historic District
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- Photo 23 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_023
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from NW Hemlock Avenue bridge
- Photo 24 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_024
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Hemlock Avenue bridge, looking northwest
- Photo 25 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_025
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Hemlock Avenue bridge, looking west
- Photo 26 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_026
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast from NW Hemlock Avenue bridge
- Photo 27 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_027
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast to NW Hemlock Avenue bridge
- Photo 28 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_028
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north to NW Kingwood Avenue bridge
- Photo 29 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_029
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Kingwood Avenue bridge, looking north
- Photo 30 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_030
Pilot Butte Canal: Downtown Redmond Segment Historic District, headgate next to NW Kingwood Avenue bridge, looking east
- Photo 31 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_031
Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Kingwood Avenue bridge, looking south
- Photo 32 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_032
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northeast from NW Kingwood Avenue bridge
- Photo 33 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_033
Pilot Butte Canal: Downtown Redmond Segment Historic District, Medical Center bridge, looking northeast
- Photo 34 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_034
Pilot Butte Canal: Downtown Redmond Segment Historic District, Medical Center bridge, looking south
- Photo 35 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_035
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north to NW Larch Avenue bridge

Pilot Butte Canal: Downtown Redmond Segment Historic District
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- Photo 36 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_036
Pilot Butte Canal: Downtown Redmond Segment Historic District, Check Structure, Lateral D Headgate, and NW Larch Avenue bridge, looking southeast
- Photo 37 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_037
Pilot Butte Canal: Downtown Redmond Segment Historic District, Lateral D Headgate, looking west
- Photo 38 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_038
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northeast from NW Larch Avenue bridge
- Photo 39 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_039
Pilot Butte Canal: Downtown Redmond Segment Historic District, Check Structure and NW Larch Avenue bridge, looking southwest
- Photo 40 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_040
Pilot Butte Canal: Downtown Redmond Segment Historic District, NE Negus Way bridge, looking northwest
- Photo 41 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_041
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest to NE 2nd Street bridge
- Photo 42 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_042
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from NE 2nd Street bridge
- Photo 43 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_043
Pilot Butte Canal: Downtown Redmond Segment Historic District, NE 2nd Street bridge, looking southeast
- Photo 44 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_044
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from 2036 NW Canal Boulevard bridge
- Photo 45 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_045
Pilot Butte Canal: Downtown Redmond Segment Historic District, 2036 NW Canal Boulevard bridge, looking north
- Photo 46 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_046
Pilot Butte Canal: Downtown Redmond Segment Historic District, 2036 NW Canal Boulevard bridge, looking southeast
- Photo 47 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_047
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north to 2190 NW Canal Boulevard bridge
- Photo 48 of 49:** OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_048
Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south to 2190 NW Canal Boulevard bridge

Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 49 of 49: OR_DeschutesCounty_PilotButteCanalRedmondSegment_IrrigationMPD_049
Pilot Butte Canal: Downtown Redmond Segment Historic District, intake structure,
looking north

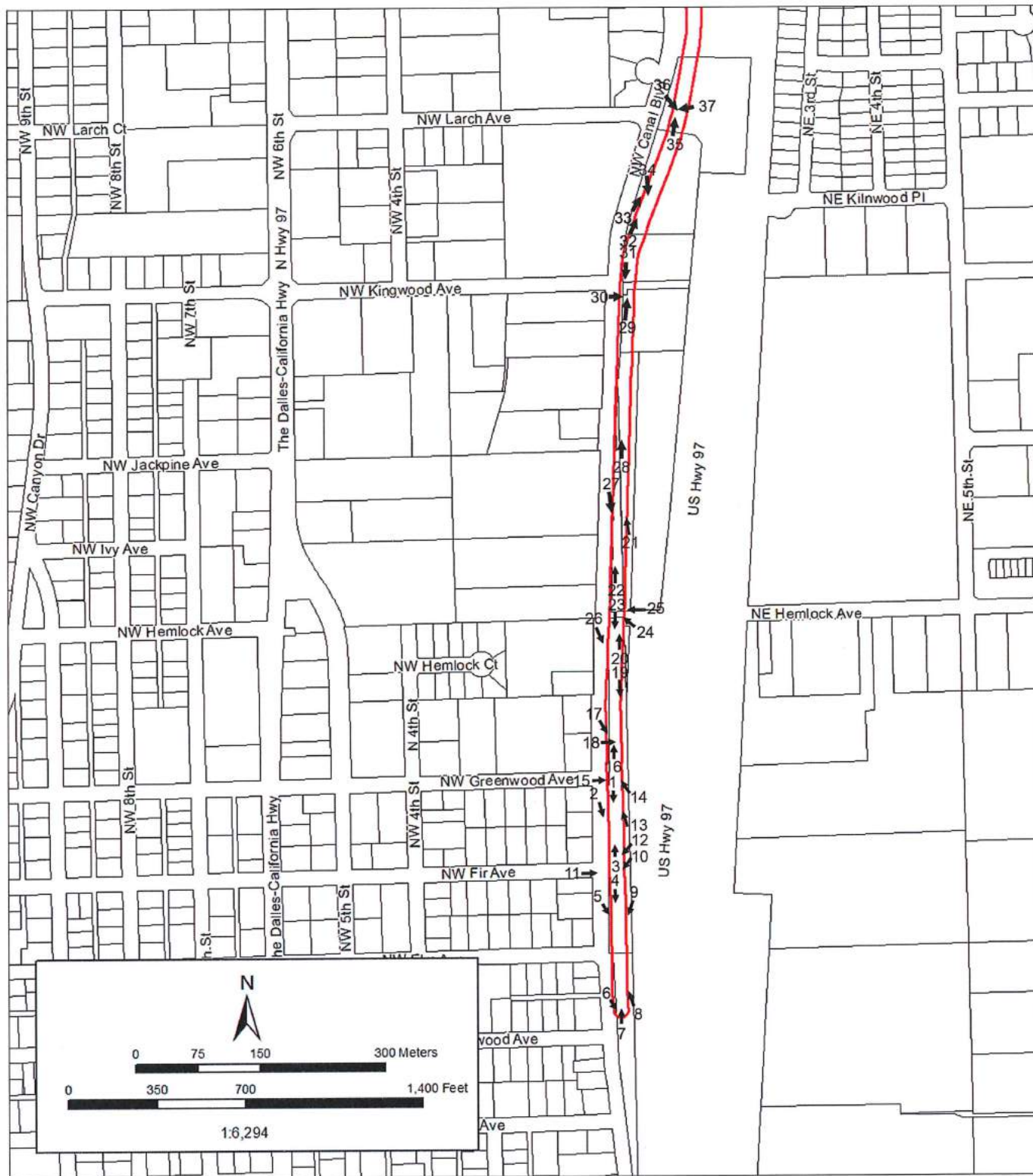
Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain 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 100 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.

Pilot Butte Canal: Downtown Redmond Segment Historic District
Name of Property

Deschutes, Oregon
County and State

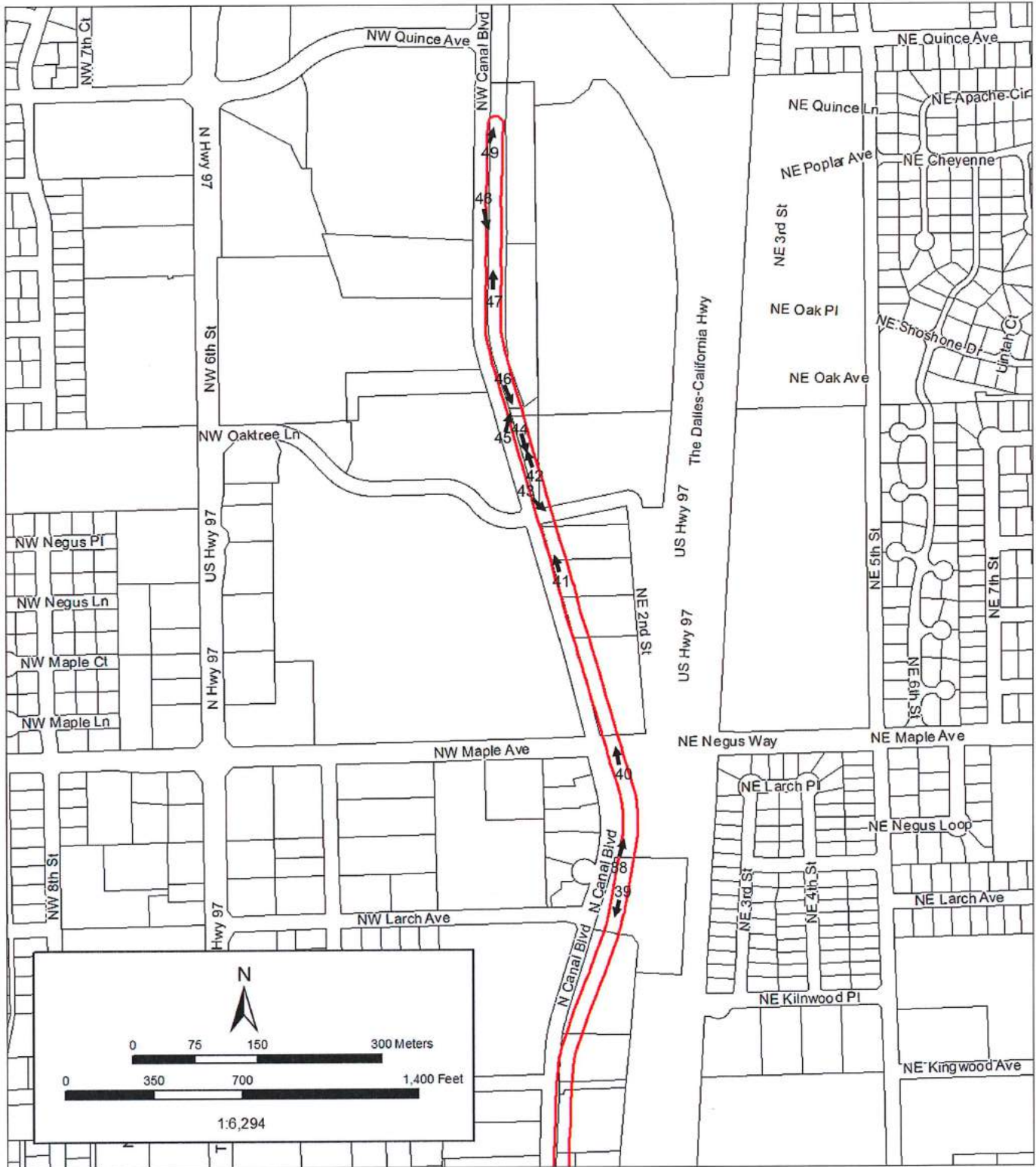
Photo Location Map 1 of 2



Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo Location Map 2 of 2



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Pilot Butte Canal: Downtown Redmond Segment Historic District
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List of Figures

(Resize, compact, and paste images of maps and historic documents in this section. Place captions, with figure numbers above each image. Orient maps so that north is at the top of the page, all document should be inserted with the top toward the top of the page.

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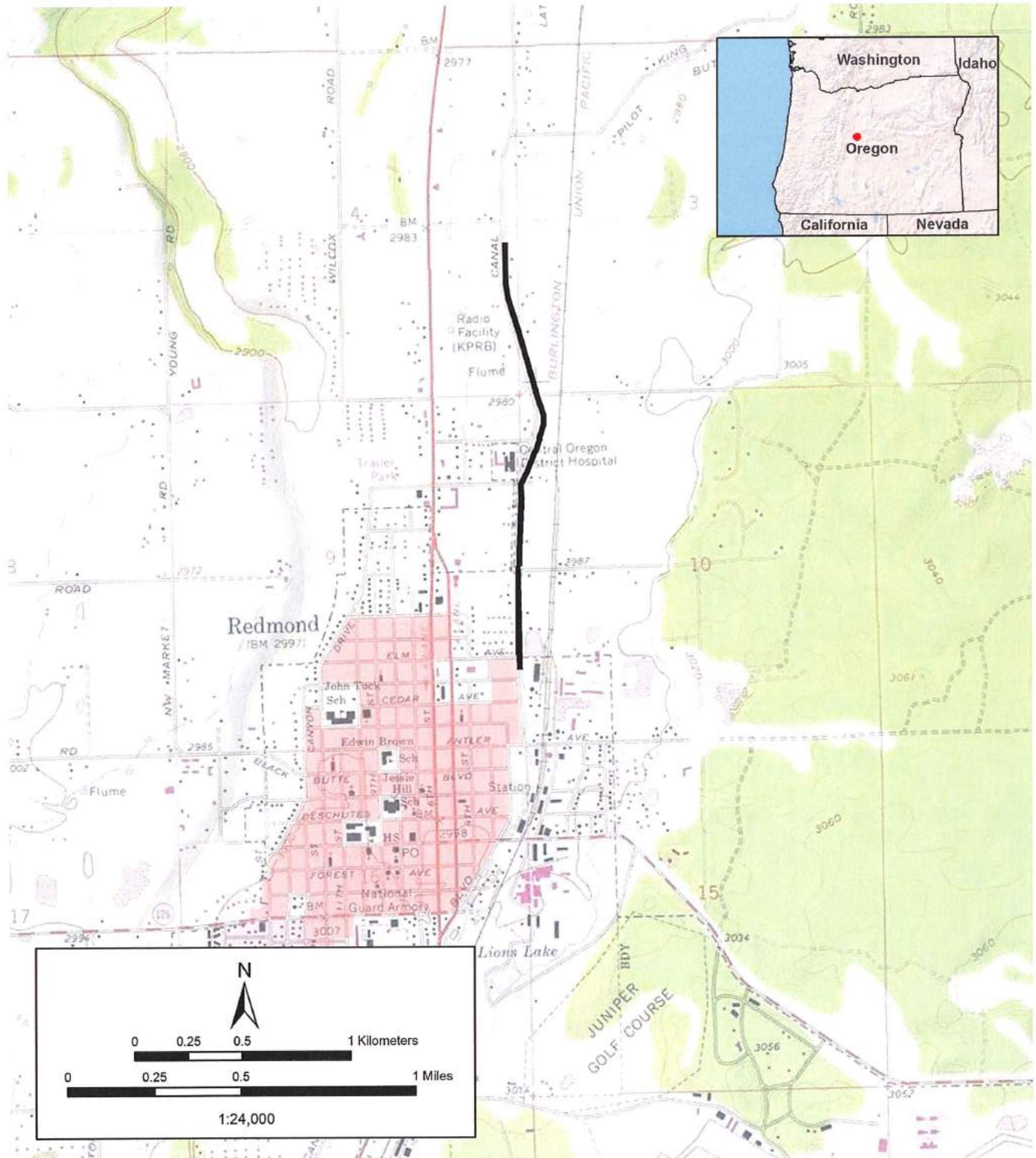
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Pilot Butte Canal: Downtown Redmond Segment Historic District
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Figure 1: Regional Location Map



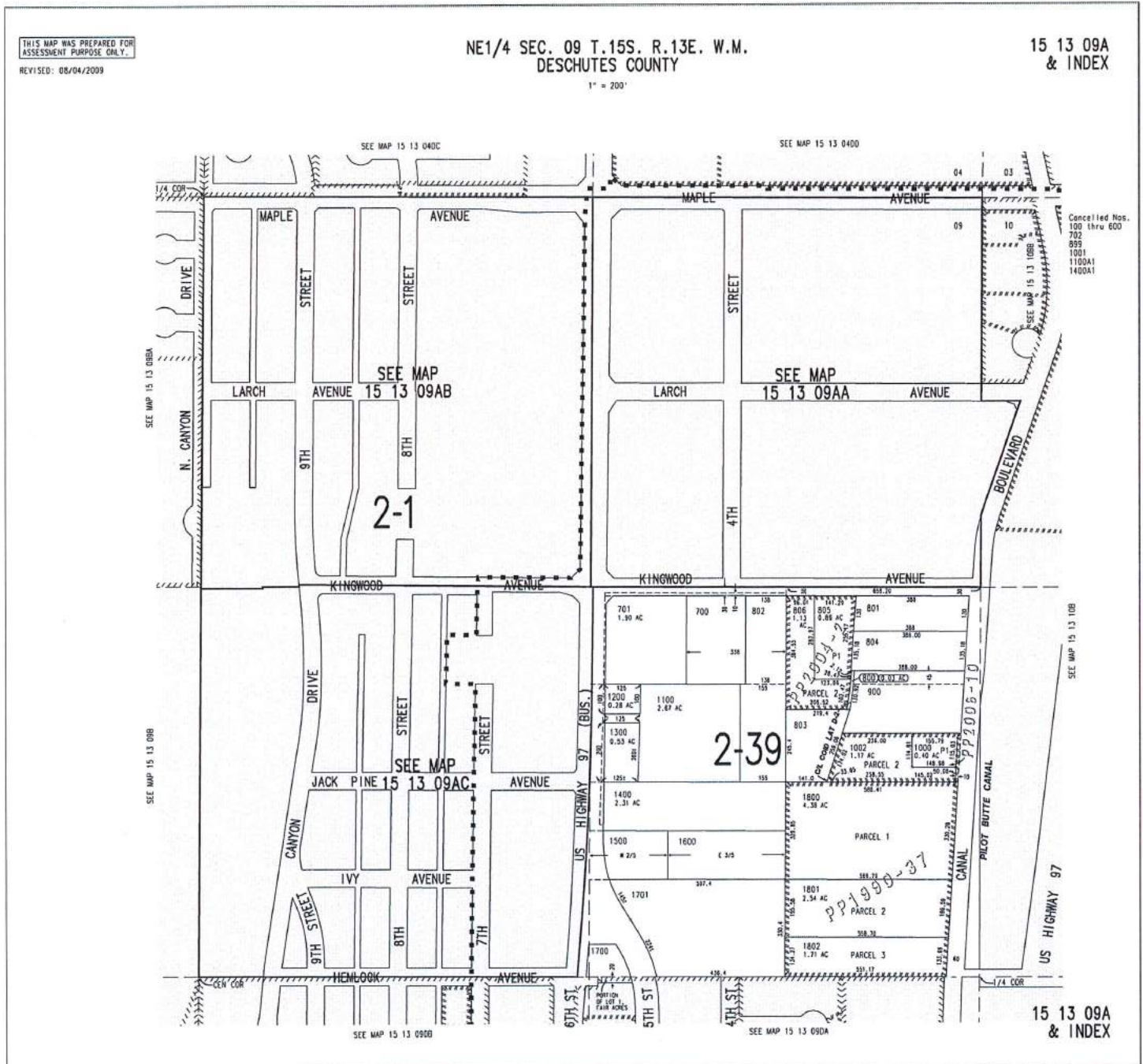
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Pilot Butte Canal: Downtown Redmond Segment Historic District
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Figure 3: Tax Lot Map, Deschutes County, 15 13 09A



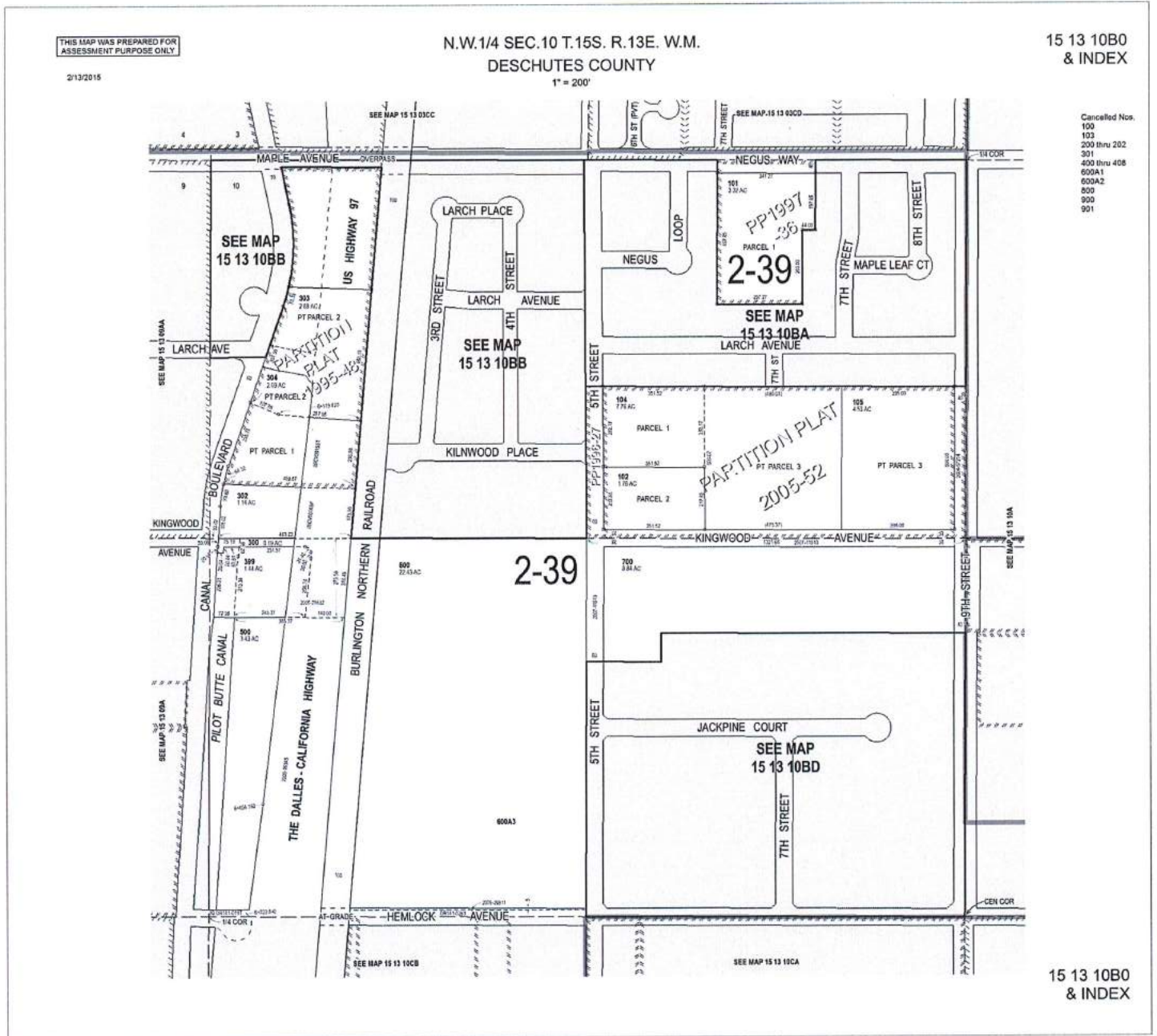
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Figure 4: Tax Lot Map, Deschutes County, 15 13 10B



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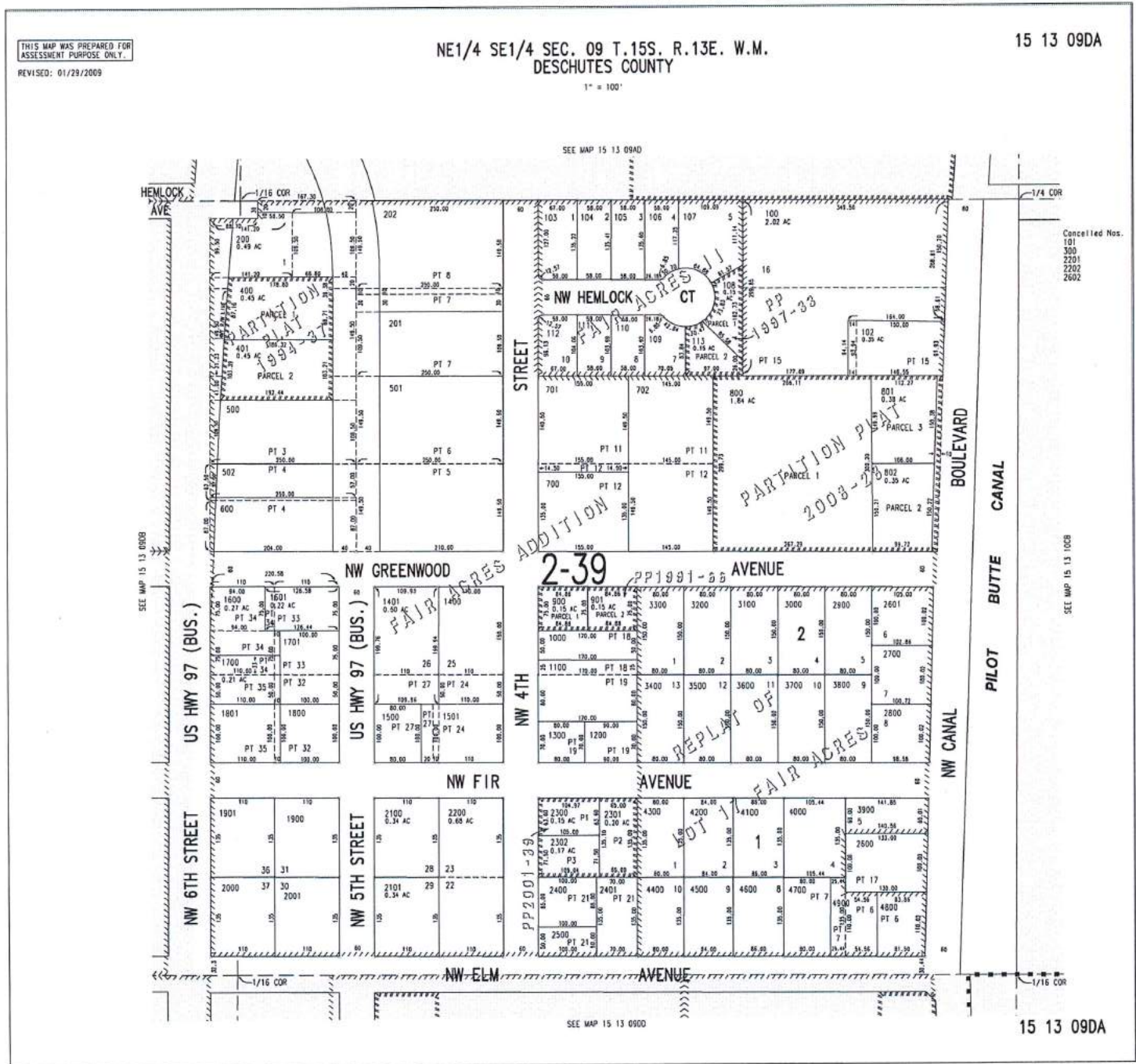
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Figure 5: Tax Lot Map, Deschutes County, 15 13 09DA



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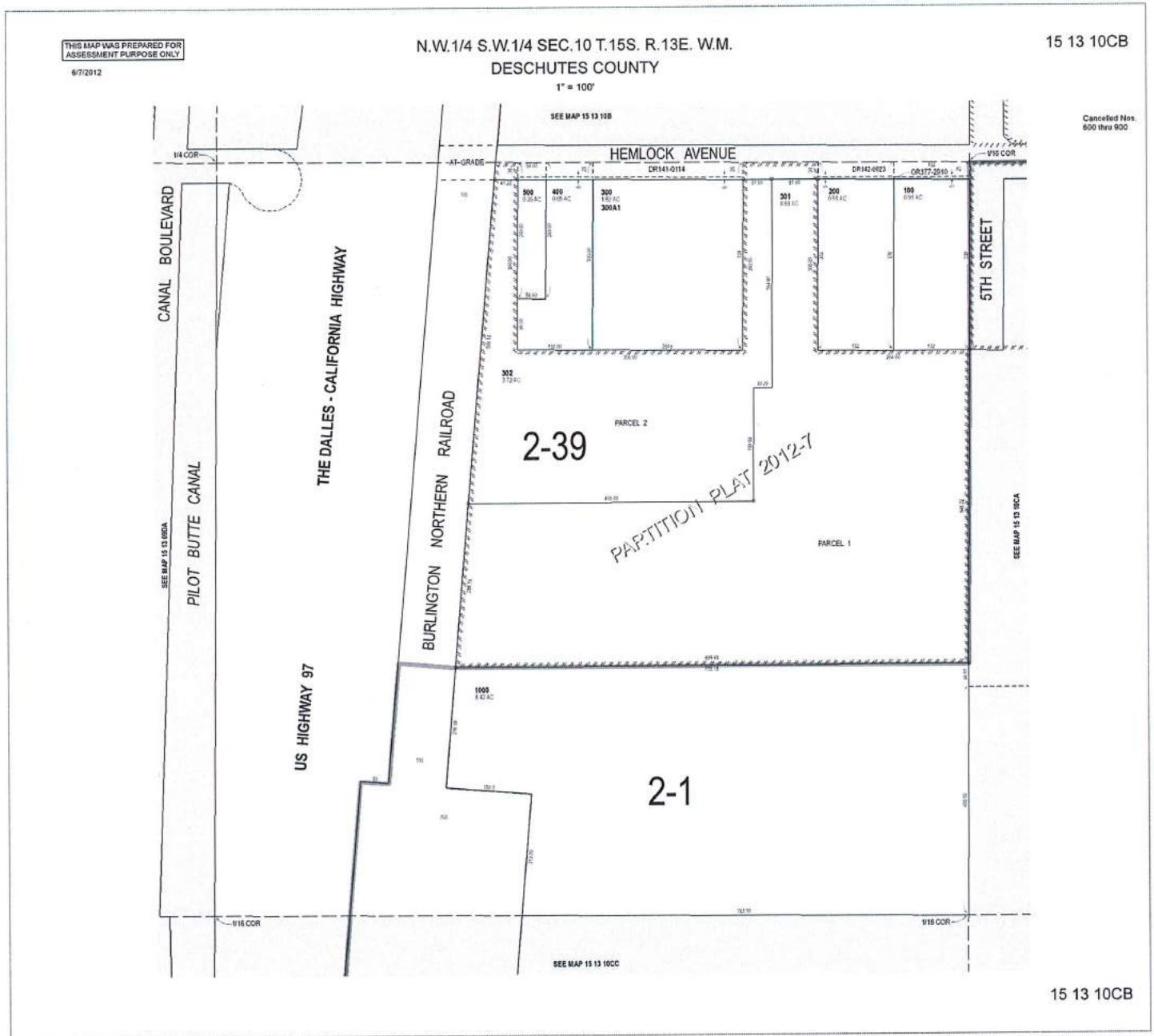
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Figure 6: Tax Lot Map, Deschutes County, 15 13 10CB



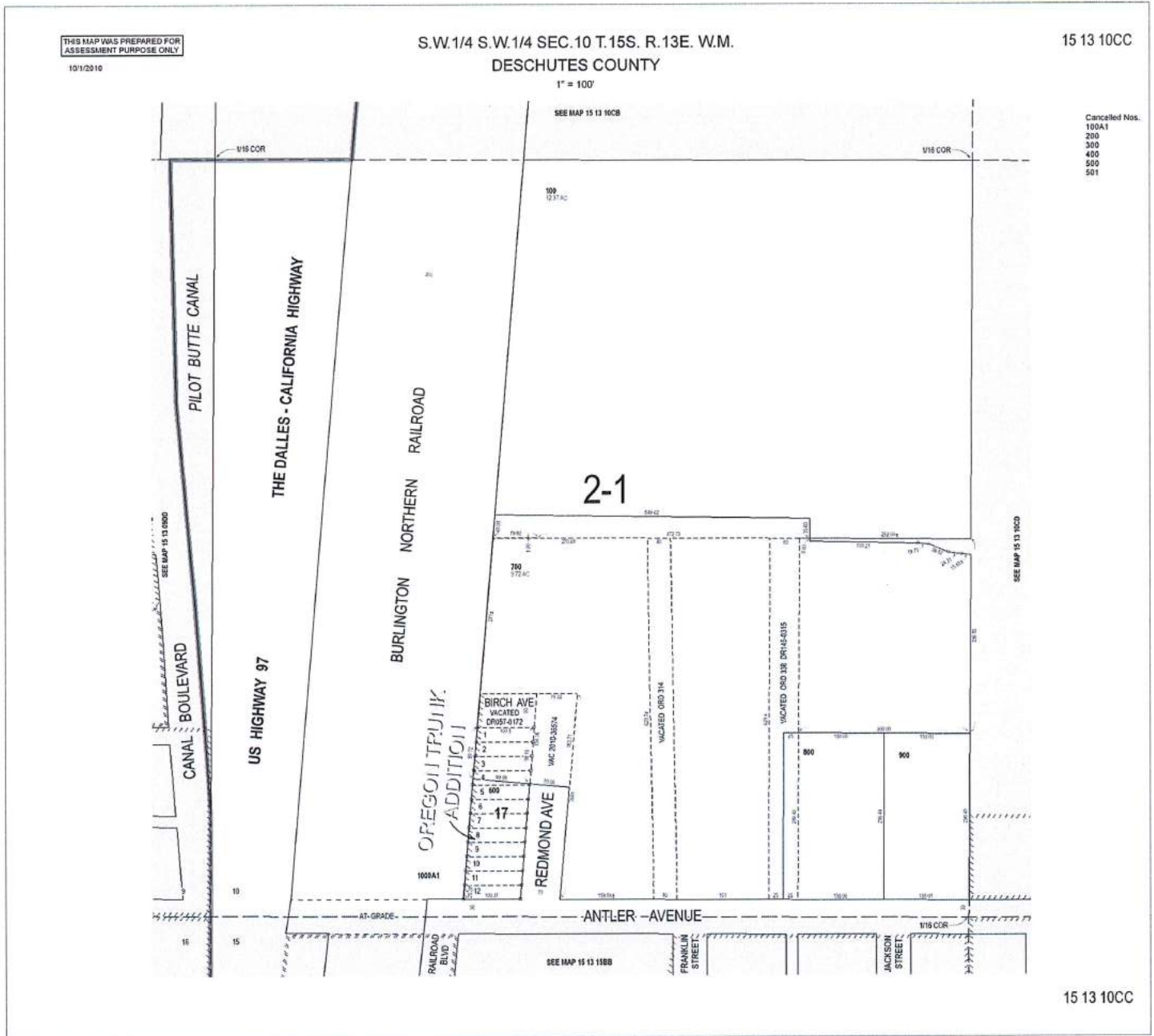
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Figure 8: Tax Lot Map, Deschutes County, 15 13 10CC



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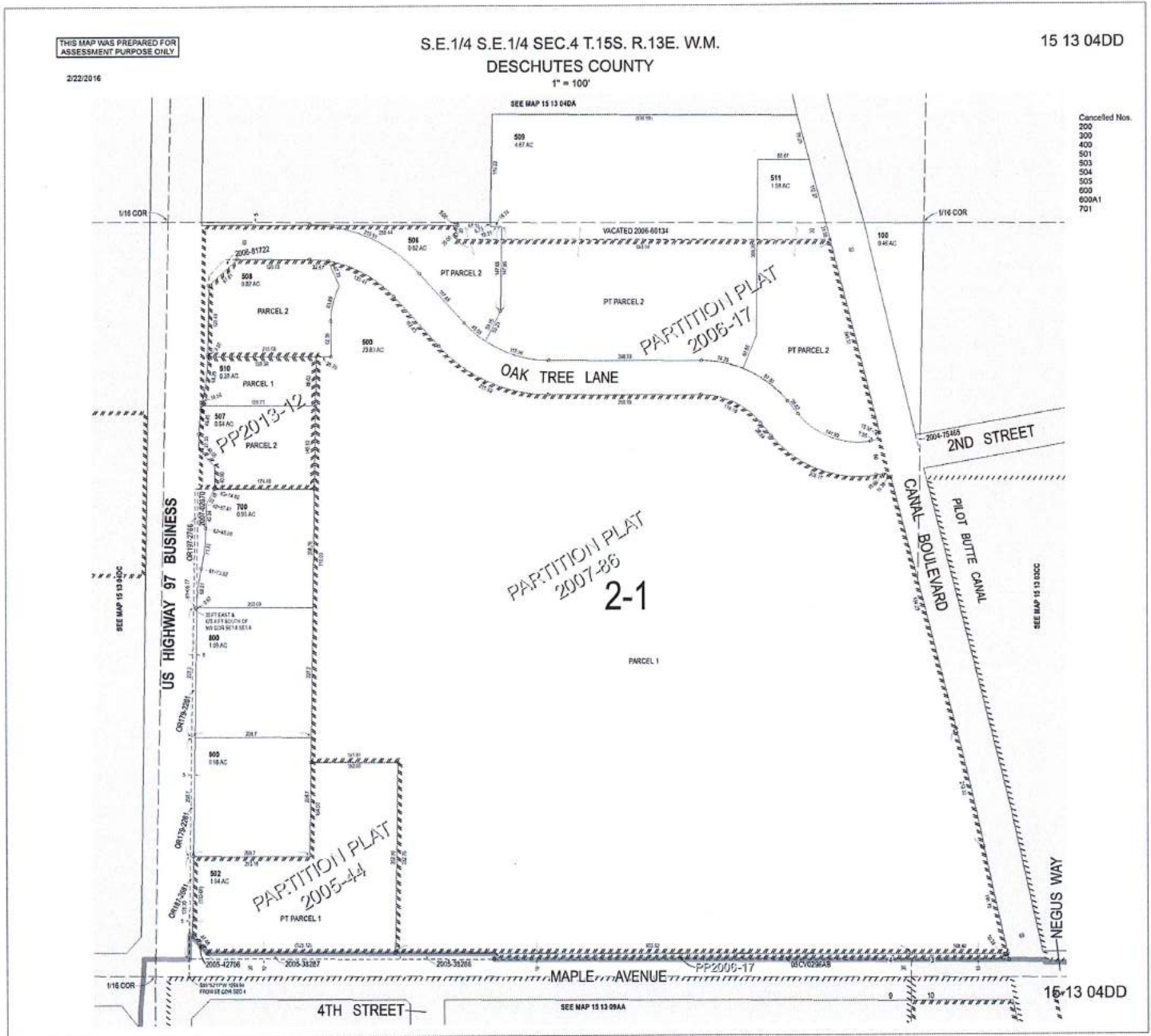
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Figure 9: Tax Lot Map, Deschutes County, 15 13 04DD



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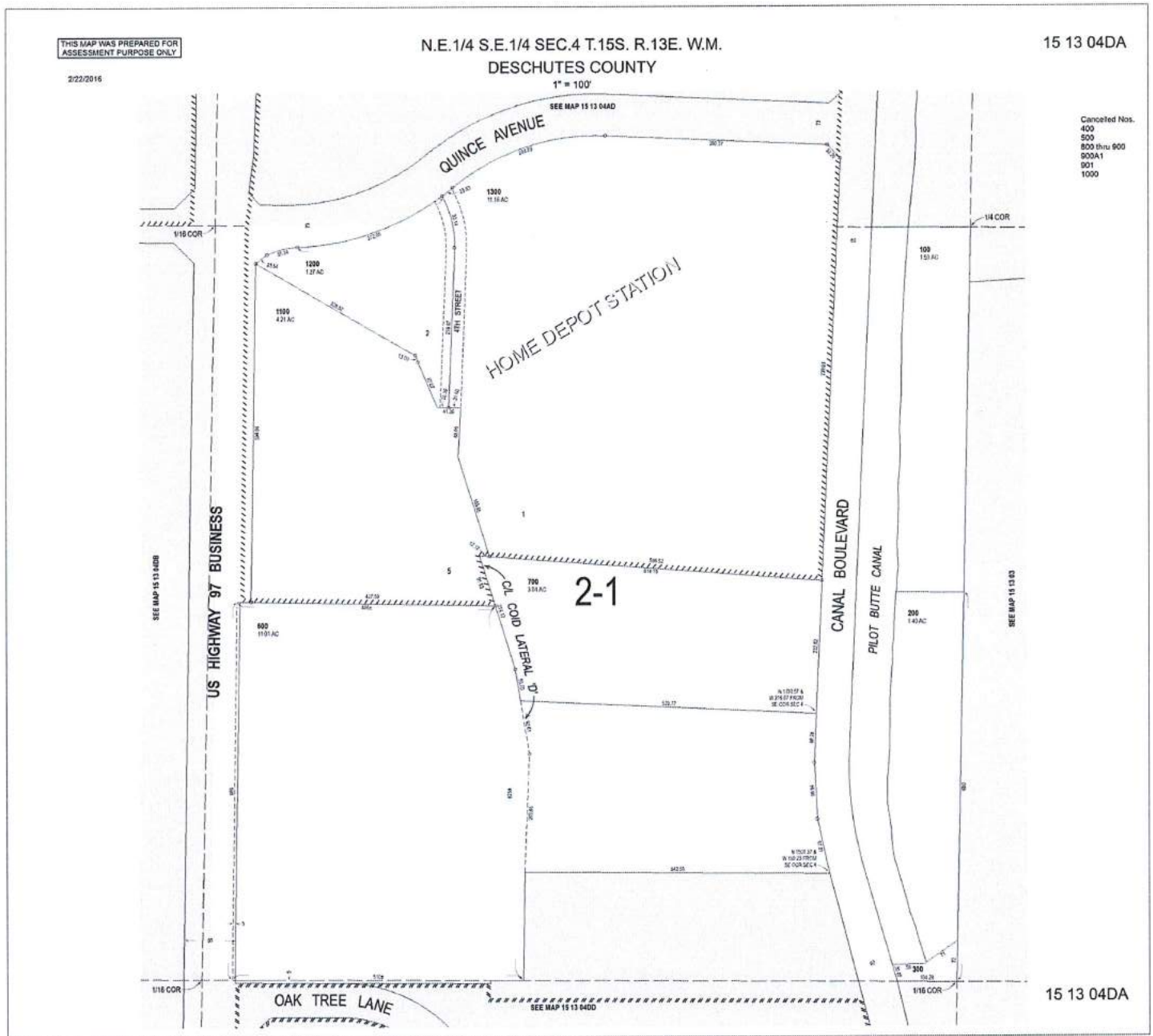
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Figure 10: Tax Lot Map, Deschutes County, 15 13 04DA



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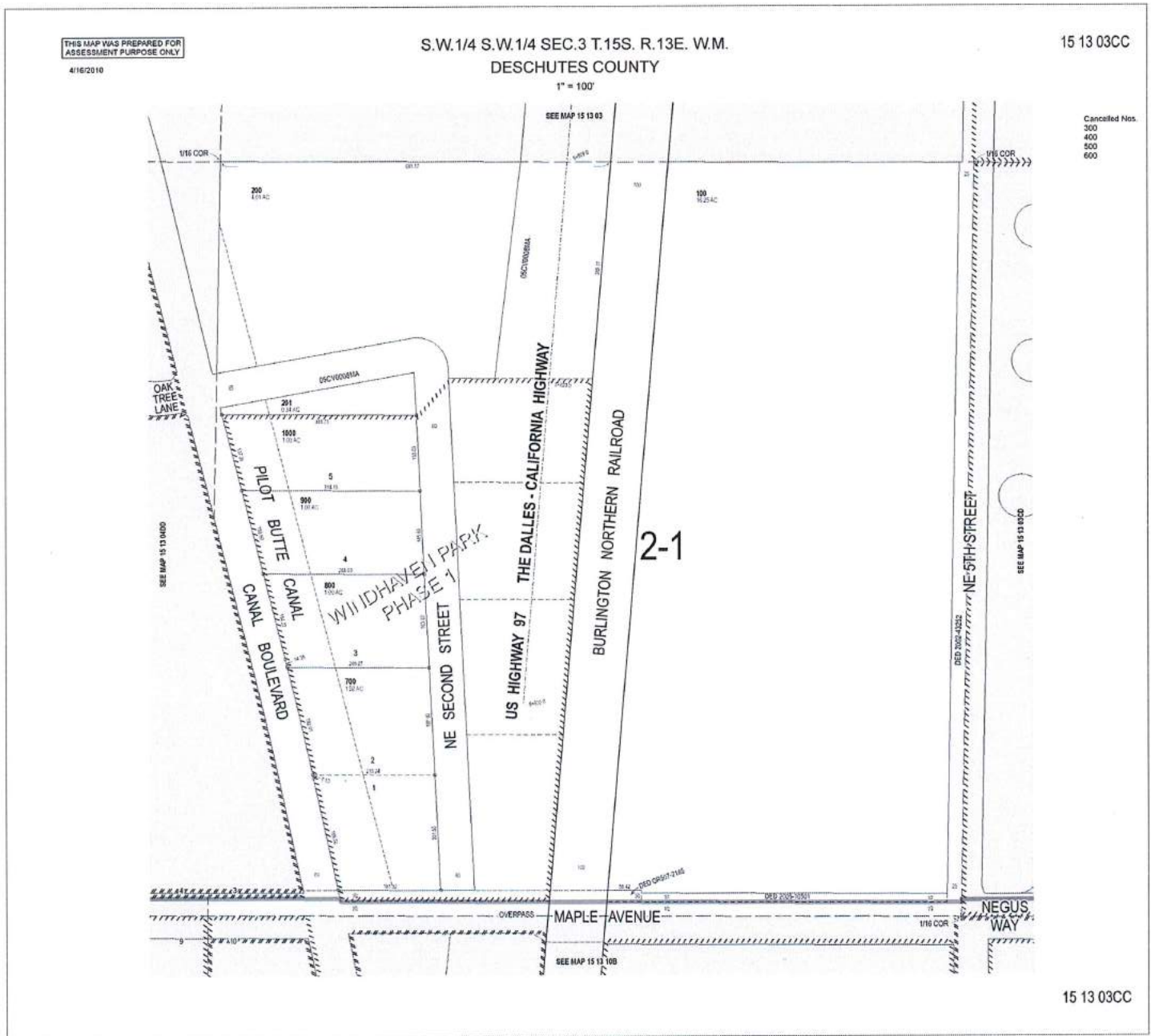
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Figure 11: Tax Lot Map, Deschutes County, 15 13 03CC



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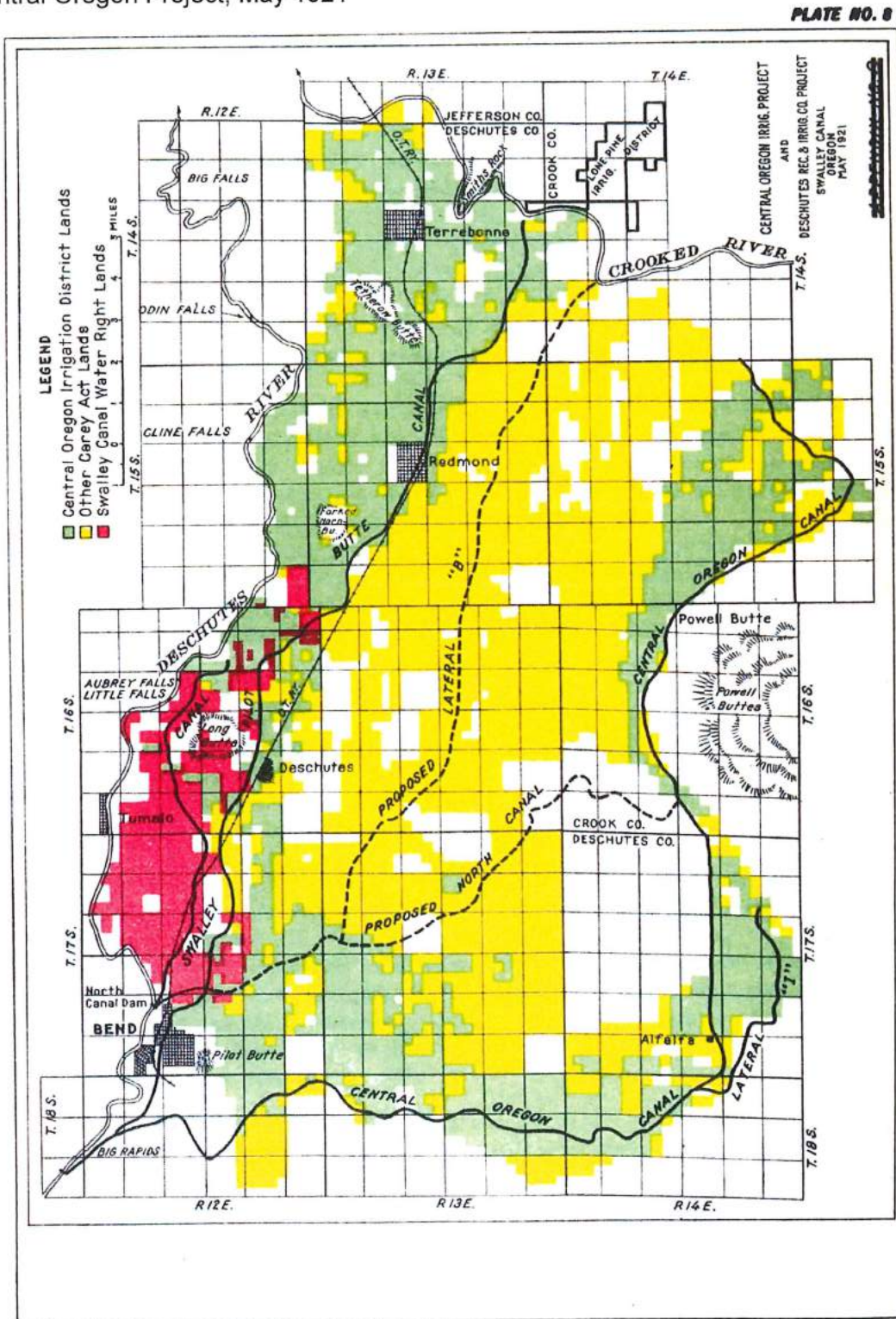
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Figure 12: Central Oregon Project, May 1921



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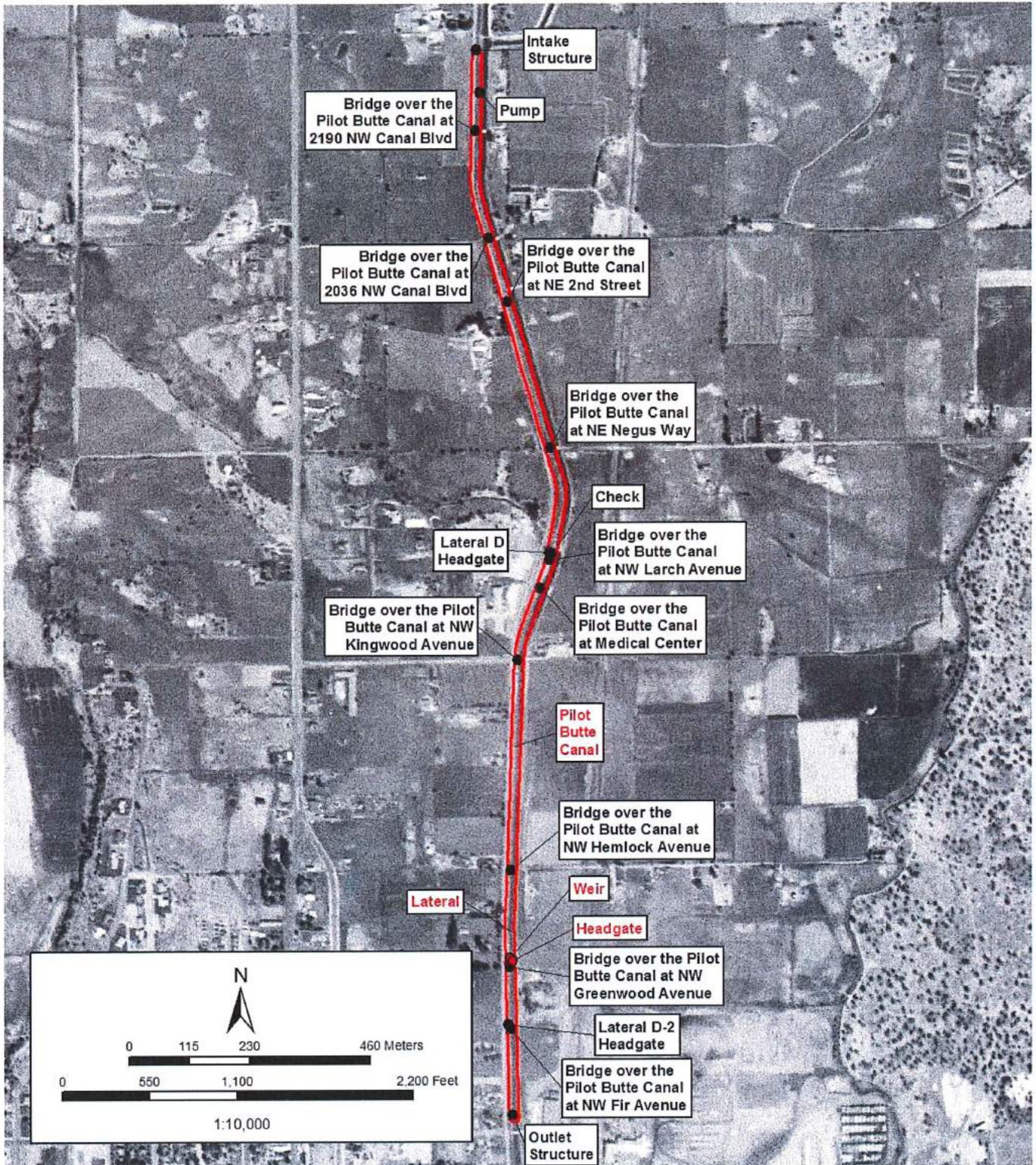
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Figure 13: 1953 USGS Aerial Photo



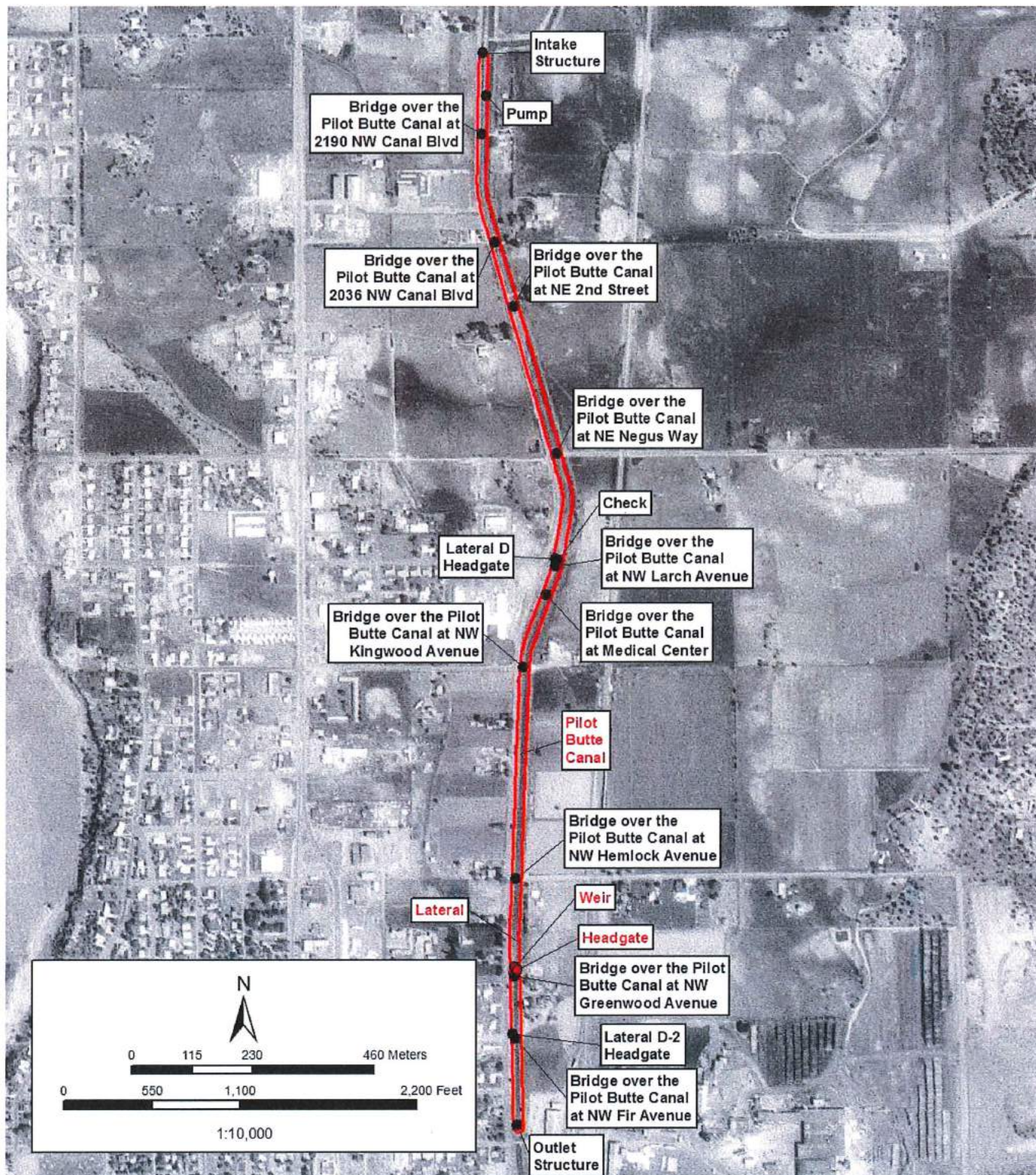
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Figure 14: 1980 USGS Aerial Photo



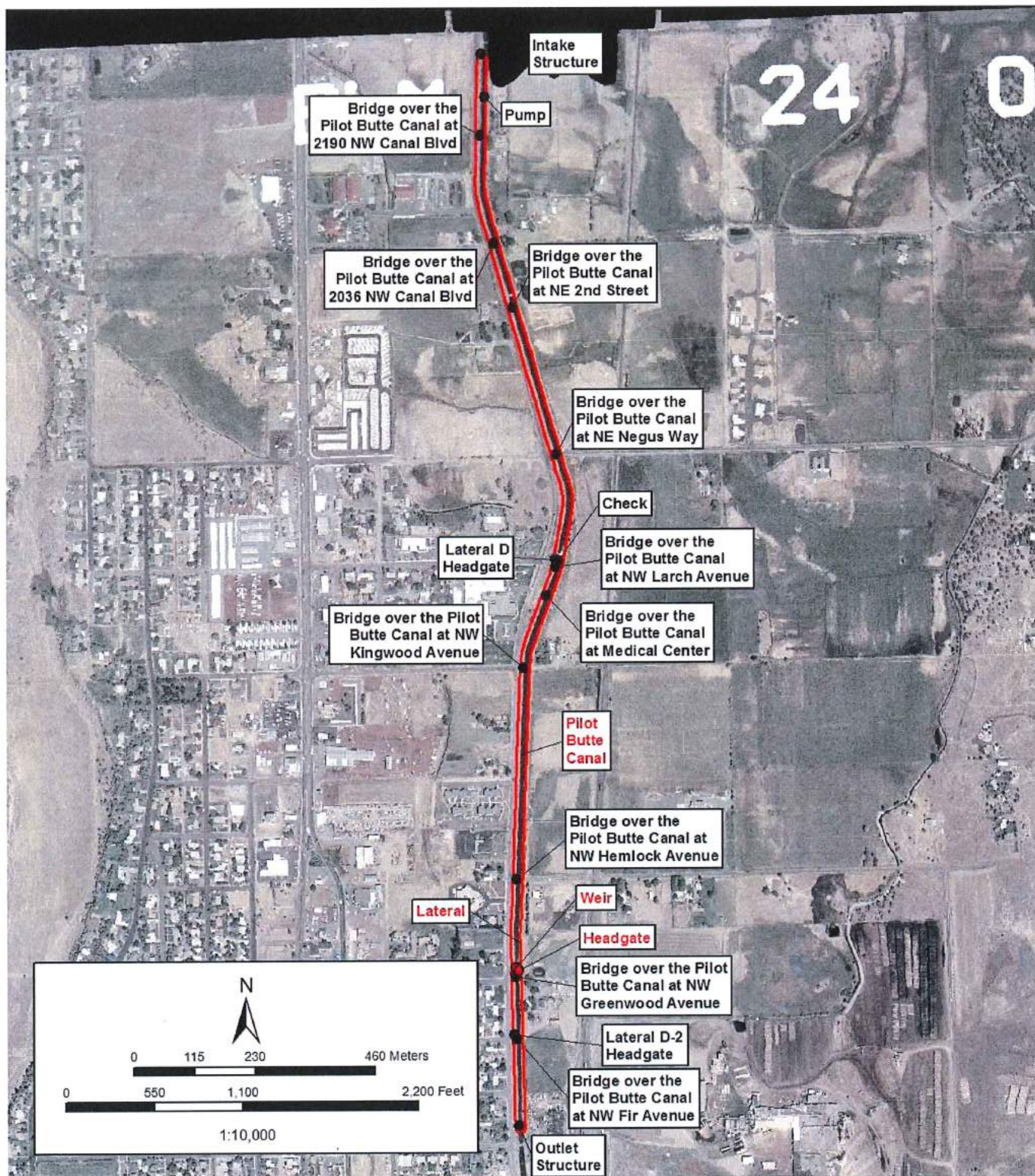
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Figure 15: 1994 USGS Aerial Photo



**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 1 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from NW Greenwood Avenue bridge



Photo 2 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast from NW Greenwood Avenue bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 3 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north from NW Fir Avenue bridge



Photo 4 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from NW Fir Avenue bridge

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Photo 5 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast from NW Fir Avenue bridge



Photo 6 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, outlet structure, looking southeast

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 7 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north from top of outlet structure



Photo 8 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from east side of outlet structure

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Photo 9 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southwest from NW Fir Avenue bridge



Photo 10 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Fir Avenue bridge, looking southwest

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 11 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Fir Avenue bridge, looking east



Photo 12 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, Lateral D-2 headgate, looking southwest

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 13 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from NW Fir Avenue bridge



Photo 14 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Greenwood Avenue bridge, looking northwest

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 15 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Greenwood Avenue bridge, looking east



Photo 16 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, weir, looking north from NW Greenwood Avenue bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 17 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, weir, looking southeast



Photo 18 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, headgate, looking east

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 19 of 49: Butte Canal: Downtown Redmond Segment, lateral, looking southeast



Photo 20 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north across east embankment towards NW Hemlock Avenue

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 21 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from NW Hemlock Avenue bridge



Photo 22 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north from NW Hemlock Avenue bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 23 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from NW Hemlock Avenue bridge



Photo 24 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Hemlock Avenue bridge, looking northwest

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Photo 25 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Hemlock Avenue bridge, looking west



Photo 26 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast from NW Hemlock Avenue bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 27 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking southeast to NW Hemlock Avenue bridge



Photo 28 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north to NW Kingwood Avenue bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 29 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Kingwood Avenue bridge, looking north



Photo 30 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, headgate next to NW Kingwood Avenue bridge, looking east

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Photo 31 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NW Kingwood Avenue bridge, looking south



Photo 32 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northeast from NW Kingwood Avenue bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 33 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, Medical Center bridge, looking northeast



Photo 34 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, Medical Center bridge, looking south

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 35 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north to NW Larch Avenue bridge



Photo 36 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, Check Structure, Lateral D Headgate, and NW Larch Avenue bridge, looking southeast

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 37 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, Lateral D Headgate, looking west



Photo 38 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northeast from NW Larch Avenue bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 39 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, Check Structure and NW Larch Avenue bridge, looking southwest



Photo 40 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NE Negus Way bridge, looking northwest

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 41 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest to NE 2nd Street bridge



Photo 42 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking northwest from NE 2nd Street bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 43 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, NE 2nd Street bridge, looking southeast



Photo 44 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south from 2036 NW Canal Boulevard bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 45 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, 2036 NW Canal Boulevard bridge, looking north



Photo 46 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, 2036 NW Canal Boulevard bridge, looking southeast

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 47 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking north to 2190 NW Canal Boulevard bridge



Photo 48 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, looking south to 2190 NW Canal Boulevard bridge

**Pilot Butte Canal: Downtown Redmond Segment Historic District
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Photo 49 of 49: Pilot Butte Canal: Downtown Redmond Segment Historic District, intake structure, looking north