

Appendix E.1

Additional Supporting Information for Cultural Resources

Some documents included in this are provided as they were originally produced and may not fully comply with Section 508 of the Rehabilitation Act. These materials include third-party reports, historical documents, maps, and technical drawings that cannot be readily converted into accessible formats.

Upon request, the Natural Resources Conservation Service will provide reasonable accommodations or accessible alternatives for individuals with disabilities. To request assistance, please contact Gary Diridoni, gary.diridoni@usda.gov, (503) 414-3092 within a reasonable time frame.

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Section 106 Forms

OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM
Individual Properties

Property Name: Oregon Trunk Railway-PBC Crossing (NE Butler Market Rd)	Street Address: NE Butler Market Rd/PBC Canal	City, County: Bend, Deschutes County
Project Name: COID-Pilot Butte Canal Piping Project		Agency project #:
Agency: COID/NCRS		SHPO Case#: 22-0850
Location Coordinates (to sixth decimal place): Latitude: 44.080104 Longitude: -121.300505		Is the property listed in the National Register of Historic Places? ☐ YES – Individually ☒ NO ☒ YES – In a district (DOE 2011)



OTR Line, Crossing Pilot Butte Canal near NE Butler Market Road, Looking NW (August 2024)

Surveyor: George Kramer, Kramer & Company, for COID/Parametrix Inc.		Date Recorded: August 2024
National Register Findings: ☒ Eligible: ☐ Individually ☒ As part of District NR Criteria: ☒ A ☐ B ☐ C ☐ D ☐ Not Eligible: ☐ Irretrievable integrity loss ☐ Not 50 Years ☐ Fails to meet NR Criteria		Finding of Effect: ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect
State Historic Preservation Office Comments – Official Use Only: Eligibility: ☐ Concur ☐ Do Not Concur: Effect: ☐ Concur ☐ Do Not Concur:		
RECEIVED STAMP		
Signed _____		Date _____
CONTACT INFORMATION STAMP		
Comments: 		

OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM
Individual Properties

Property Name: Oregon Trunk Railway-PBC Crossing (NE Butler Market Rd)	Street Address: NE Butler Market Rd/PBC Canal	City, County: Bend, Deschutes County
Original Use: Transportation: Rail-Related (Bridge)		Number of Associated Resources:
Architectural Classification / Resource Type: Utilitarian		Owner: ☐ Private ☒ Local Government ☐ State ☐ Federal
Window type and Materials: N/A	Exterior Surface Materials: Primary: Concrete Secondary: Decorative:	
Roof Type and Materials: N/A		
Integrity: ☐ Excellent ☐ Good ☒ Fair ☐ Poor		Construction Date: 1911 (as modified) (☐ Circa)
		Architect/Builder (if known):

Description of Property (including previous alterations & approximate dates):

The Oregon Trunk Railway/Pilot Butte Canal Crossing at NE Butler Market Road carries the line of what is now the Burlington Northern Santa Fe (BNSF) railroad over the Pilot Butte Canal (PBC), a major component in the Central Oregon Irrigation District (COID) system. The crossing is supported by formboard poured-in-place concrete sidewalls that rise above the gunite-lined PBC canal for approximately 20 feet, 700 feet north of NE Butler Market Road in Bend, Deschutes County, Oregon. The rail crossing itself, approximately 14-feet in length (the width of the canal) is a reinforced concrete slab with a single track, as modified (n.d.).¹ A walkway on the upstream face is supported by pressure treated wood (n.d.)

The construction history of the OTR/PBC crossing is unclear but the concrete supports that rise above the canal are assumed to have been built as part of the original construction of the rail line by the Oregon Trunk Railroad, which entered Bend in September 1911. The crossing, the span between these early supports is clearly not original and is of more recent, if undated, construction.

Determination of Eligibility, Justification, and Sources (Use continuation sheets if necessary):

The Oregon Trunk Railway (OTR), completed in 1911 between Wishram, Washington to Bend by James J. Hill's Great Northern Railroad, played a pivotal role in the development history of central Oregon. "The OTR line expanded shipping capabilities for stock ranchers in the region while creating new opportunities for large-scale producers of wood products to operate in Bend during the early twentieth century" (Held, 2011:2). While at one time carrying both passenger and rail traffic, the OTR line, now operated by BSNF, today remains the only freight carrier in Central Oregon.

The race to construct a railroad through Central Oregon during the early 20th century resulted in a "war" between E. H. Harriman's Union Pacific empire and the Great Northern Railway, owned by James J. Hill. Both men were legendary and their powerful companies fought to serve the growing region north of Bend. Harriman's Des Chutes Railroad began construction in 1906 while Hill's Oregon Trunk Railway started three years later. Their battle for the region, known as the Deschutes River Railroad War," was the last of many confrontations between the two rail barons and their surrogates (Speroff, 2007:xiii). "The Hill system obviously had some thought that line would ultimately be extended to California and thus built to relatively high standards" (Due & Rush, 1991:77).

By February 1911 construction of the Oregon Trunk Railway, Hill's line, under the direction of chief engineer John F. Stevens, had pushed 110 miles south from Wishram and was approaching Madras. "Grading between

¹ A second rail crossing, carrying the OTR over the North Unit Irrigation Canal, is located just south of the subject PBC crossing. The NUID crossing, separately built and operated from the COID system, is not documented here or impacted by the proposed project.

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Madras and Bend, a distance of 45 miles, is well along and construction will proceed rapidly to Crooked River” (*Oregonian*, 4-Feb-1911, 3:1-3). By September 1911 track had reached Redmond, which celebrated with on “Railroad Day,” with a parade and an “imposing arch of welcome” on 6th Street, decorated with agricultural products from the section (*Redmond Spokesman*, 21-Sept-1911, 1:1-3).

The line reached Bend less than a month later, which was celebrated with two days of activities, culminating in the driving of a golden spike by James J. Hill himself (*Bend Bulletin*, 27-Sept-1911, 1:3-4). “The celebration of the last spike on October 5, 1911, drew a crowd of 1,500 to 2,000 people, an impressive gathering given that the Bend had only 536 people” (Speroff, 2007:139).\

The arrival of the railroad in Bend and Redmond, connecting these cities to markets to the north, were, transformative, bringing new industry, new residents and, in concert with the development of irrigation, expanded agriculture. “The first ingredient in this transformation was the railroad” (DCHS, 2004:35). Bend’s population grew from 536 people in 1910 to 5,415 in 1920. Growth in Redmond followed a similar, if less dramatic arc, more than doubling from 218 in 1910 to 585 ten years later.

The significance of the OTR and its role in the development of Bend and the Central Oregon region has been previously evaluated as part of several proposed federally funded undertakings. In 2009 an archeological survey found a 7.5 mile long segment of the OTR south of Redmond significant under multiple criterion in association with construction of 19th Street (Griffin and O’Neill, 2009). In 2011, in connection with proposed work on US Highway 97, a segment of the rail line beginning in Section 28 of Township 17S, Range 12E, and continuing “...near the North/Pilot Built Canal in Section 3” of the same township was evaluated for historic significance. That document concluded “The surveyed section of the OTR is recommended eligible for listing in the National Register of Historic Places under Criterion A *as a contributing feature to a potential OTR linear historic district*” (Held, 2011, emphasis added). Held elaborated that the linear district, spanning 157 miles from Wishram (WA) to Bend, was the oldest portion of the OTR, retaining its historic alignment and ballast. “Modern transportation improvements have necessitated new street crossing at various points along the historic alignment” (Held, 2011). Oregon SHPO concurred with the finding on January 27, 2011.

In 2015 a nine-mile long section of the OTR between Romaine Village Way and Lava Butte Lane, south of the OTR Depot in Bend, was evaluated by the Oregon Department of Transportation. That study reconfirmed the historic significance of the segment within a larger linear district under Criterion A for its association with the growth of Central Oregon and its continuing economic role in the regional economy (Rudnicki, August 2015). Oregon SHPO concurred with the finding on October 5, 2015.

OTR/PBC Crossing at NE Butler Market Road

While the subject crossing was not specifically documented in period accounts of construction of the OTR south of Redmond and into Bend in 1911, the Pilot Butte Canal was first developed between 1903-1904 and as the OTR construction moved south would have required a crossing at this location. The current concrete abutments and sidewalls are assumed to be original. Modifications to the depth of the canal (or changes to the elevation of the railroad grade) required added height to the supports, creating the current condition of the resource. The roadbed itself, carrying the single track, is of what appears to be a pre-cast concrete slab, a later, if undated, modification.

The OTR/PBC Crossing, as an original element of the Oregon Trunk Railroad line, although modified, is considered eligible as part of the linear OTR District as defined by the Oregon State Historic Preservation Office in 2011 and re-confirmed in 2015. The crossing, carrying the railroad line over the Pilot Butte Canal, remains on the original right-of-way and continues its original function.

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The OTR/PBC Crossing, a modest structure of limited size and design value, was not noted in any located period accounts of the line's construction, despite that construction being a focus of considerable interest in the Bend-Redmond area in 1911. Available histories of the "Deschutes River Railroad War" fail to mention anything related to the crossing or the intersection of the Pilot Butte Canal and the rail line. Most, like Speroff, focus entirely on the larger and far more significant spans over the Columbia, Crooked and Deschutes rivers.²

Evaluation of Significance

The OTR/PBC Crossing, an original and integral element of the construction of the OTR line between Redmond and Bend, is considered eligible as an element of the 157-mile long Oregon Trunk Railway line between Wishram, Washington and Bend, Oregon, for its Criterion A role in the continued function of the rail line.

Modest in scale, of typical construction and modified over time, the OTR/PBC Crossing retains integrity of association and location, with lesser integrity in design and workmanship. Integrity of materials and feeling have been reduced, due to changes and upgrades over time.

The OTR/PBC Crossing is considered not eligible *individually*, as it lacks any specific association or design meeting NR eligibility criteria. The OTR/PBC Crossing is considered ELIGIBLE under Criterion A as an element of the linear Oregon Trunk Railway district.

Description of project scope, and nature and extent of impacts:

The Pilot Butte Piping Project as proposed by COID, currently in the environmental impact study phase, proposes to pipe all or most of the Pilot Butte Canal for approximately 18-21 miles from NE 17th Street in Redmond, Oregon the diversion point from the Deschutes River, in Bend, Oregon. The project would follow the existing PBC alignment in the segment north of NE Butler Market Road, including the OTR/PBC Crossing, converting the existing open canal to a covered, piped, feature. The existing elevated crossing at the intersection of the OTR and the PBC would be visually and become a single track on an elevated grade.

Finding of Effect and justification:

The proposed piping of the PBC project will have an effect on the Oregon Trunk Railway through the removal of the existing bridge slab that carries the rail line over the canal. The existing concrete footings and abutments will remain, with the new 11'-0" diameter set within the canal channel and covered with fill, to the existing railroad grade. The project will require the reconstruction of the existing feature by infilling the canal and transforming the crossing to, essentially, a continuation of the rail line at grade at its intersection with the piped Pilot Butte Canal below.³

The proposal will have a physical and visual effect on the Oregon Trunk Railway, transforming this short section within the historic right-of-way from a crossing to, visually, a simple continuation of the rail corridor although the historic abutments will remain below fill.

An analysis of effect finds that while the project as proposed will have an effect on a historic resource, the Oregon Trunk Railway, resulting in visual and physical modifications to this 15-foot long portion of the right-of-way, it does not impact any character defining feature of the resource and will not, in any significant manner, impact the

² The index in Speroff's classic study does not include any mention of COID or the Pilot Butte Canal. Irrigation is only mentioned in an early chapter, documenting the resources and development pressures that led to an interest in extending a railroad into the Central Oregon region as a whole.

³ This submittal addresses impacts to the OTR only. Impacts of the project as proposed to the PBC will be documented separately once the final design is determined.

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Criterion A significance of the linear district as defined. As a result, the modification of the OTR/PBC Crossing will have effect on the Oregon Trunk Railway Linear District, a resource determined eligible for listing on the National Register of Historic Places but that effect is **NOT ADVERSE**.

Sources:

Bend Bulletin (Bend, OR). Misc. issues as cited in text by date:page.

Brogan, Phil F. *East of the Cascades*. Portland, OR: Binfords and Mort, Publishers, 1964 (Fourth Edition, 1977).

Deschutes County Historical Society. *Bend, Oregon: 100 Years of Bend History*. Bend, Oregon: Des Chutes Historical Center, 2004.

Due, John F. and Francis Duris Rush. *Roads and Rails South from the Columbia: Transportation and Economic Development in MidColumbia and Central Oregon*. Bend, OR: Maverick Publications, Inc., 191.

Griffin, Ryan and Megan O'Neill. *Oregon Cultural Resource Site Record: Site 05050614357S1 "Oregon Trunk Railway, South of Redmond."* BLM Prineville Deschutes Resource Area, May 6, 2009.

Held, Jonathon, M.A., *Section 106 Documentation Form: Oregon Trunk Railway*. Archaeological Investigations Northwest, Inc., Report No. 2554, September 2010.

Oregonian (Portland, OR). Misc. issues as cited in text by date:page.

Redmond Spokesman (Redmond, OR). Misc. issues as cited in text by date:page.

Robertson, Donald B. *Encyclopedia of Western Railroad History, Vol. III., Oregon Washington*. Caxton, ID: The Caxton Printers, LTD, 1995.

Rudnicki, Larissa. *Section 106 Documentation Form: US97: Romaine Village Way-Lava Butte*. Oregon Department of Transportation, August 2015.

Speroff, Leon. *The Deschutes River Railroad War*. Portland, OR: Arnica Publishing, 2007.

Williams, Elsie Horn. *A Pictorial History of the Bend Country*. Virginia Beach, VA: The Donning Company Publishers, 1983 (Second, Revised Edition, 1998).

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View: OTR/PBC Crossing, Looking Northwest from COID/PBC Maintenance Road (G. Kramer, August 2024)



View: OTR/PBC Crossing, Looking East, from OTR Track (G. Kramer, August 2024)

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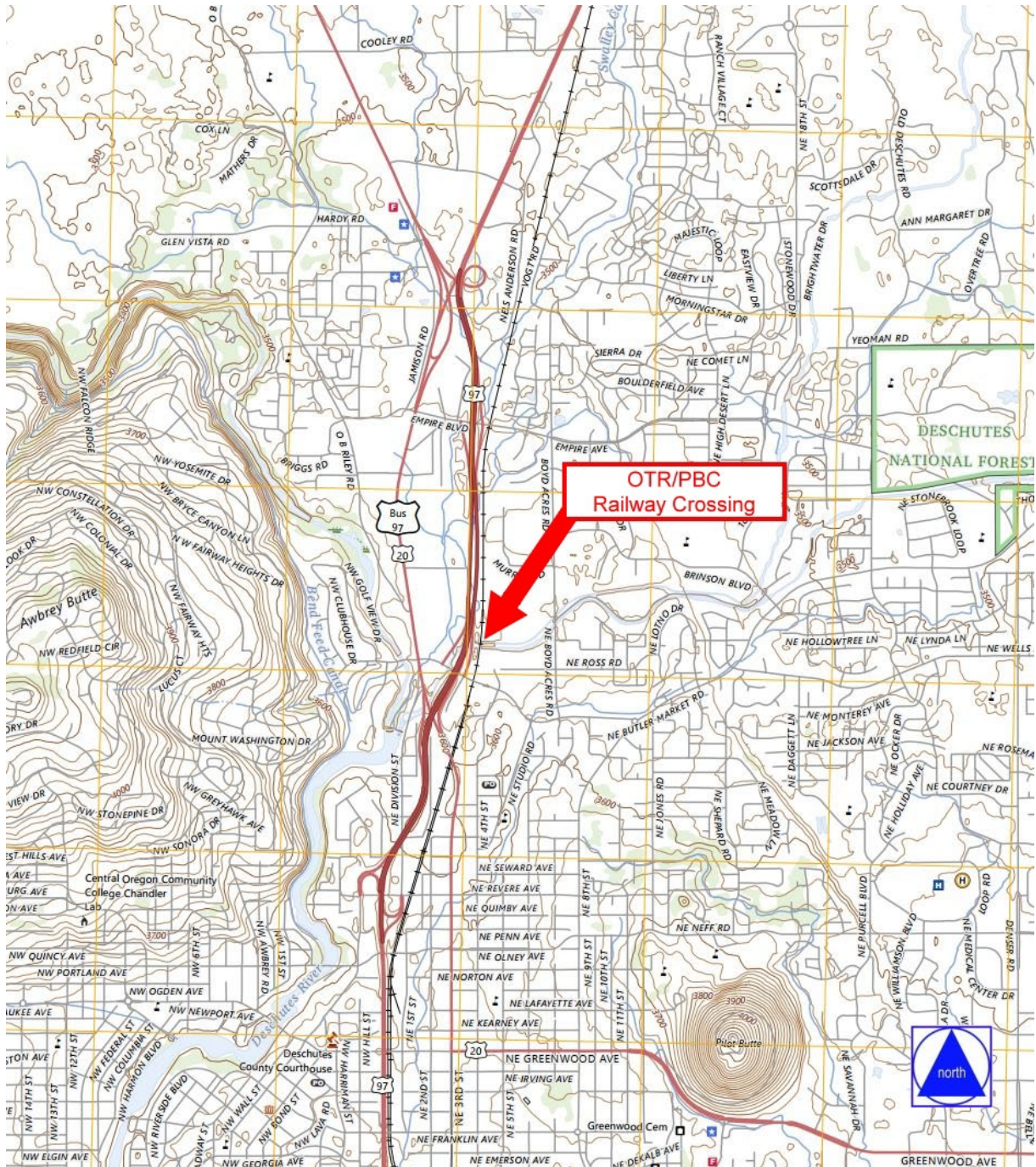
View: OTR/PBC Crossing, Looking East from US 97 Onramp (G. Kramer, August 2024)



View: OTR/PBC Crossing, Looking East, from PBC Canal (Parametrix Image, January 2019)

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VICINITY MAP: OTR/PBC Railroad Crossing
(USGS "Bend" 7.5m Topo Map, 2024, annotated)

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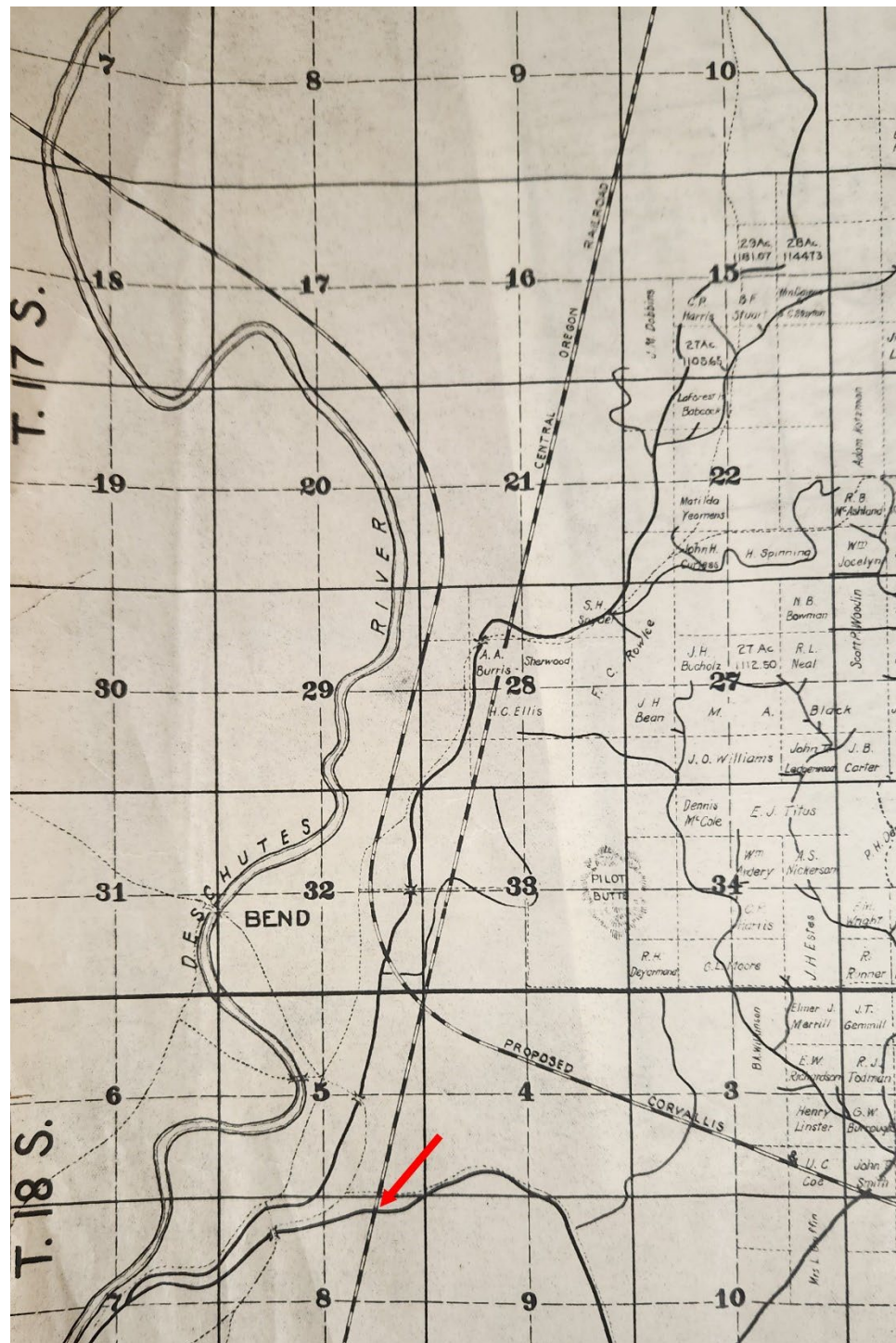
Property Name: Oregon Trunk Railway-PBC Crossing (NE Butler Market Rd)	Street Address: NE Butler Market Rd/PBC Canal	City, County: Bend, Deschutes County
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AERIAL VIEW: OTR/PBC Railroad Crossing
(GoogleEarth View, 2021, annotated)

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HISTORIC MAP: OTR/PBC Railroad Crossing, 1909 (Proposed)
(Deschutes Irrigation & Power Company, Drawing 390, July 1909)

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HISTORIC AERIAL VIEW: OTR/PBC Railroad Crossing, c1945

(US Army Corps of Engineers Image, annotated)

OREGON INVENTORY OF HISTORIC PROPERTIES

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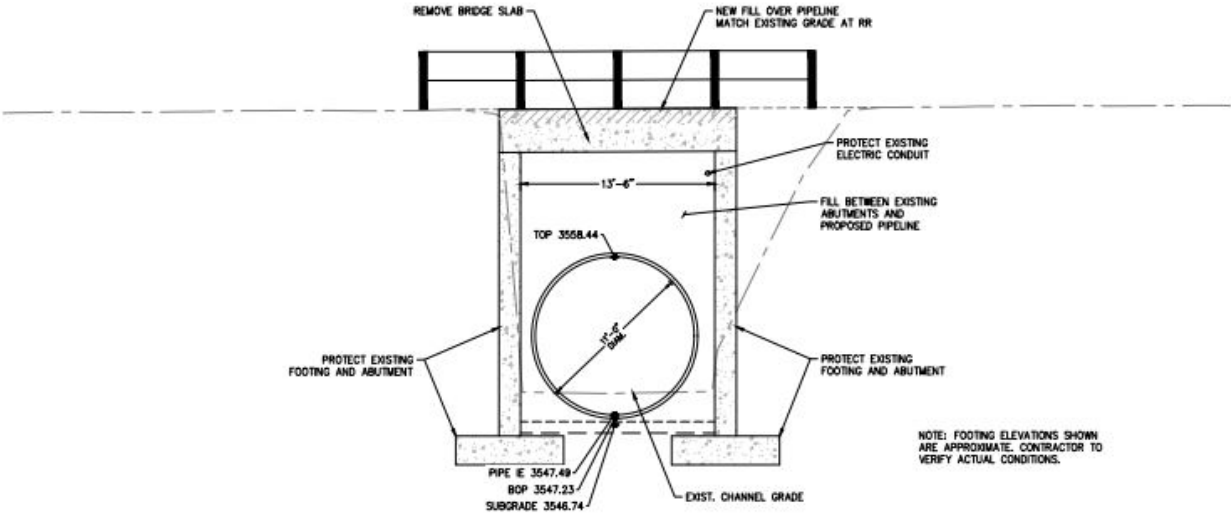
Property Name: Oregon Trunk Railway-PBC Crossing (NE Butler Market Rd)	Street Address: NE Butler Market Rd/PBC Canal	City, County: Bend, Deschutes County, OR
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BNSF RAILROAD
EXISTING CONDITION

SHEET NOTES

1. CONTRACTOR MAY STAGE WITHIN LIMITS OF DEMOLITION.
2. REMOVE ALL SITE COMPONENTS AND RECYCLE COMPONENTS AS REQUIRED IN THE SPECIFICATIONS.
3. GENERAL DEMOLITION PERMIT SHALL BE SECURED BY THE CONTRACTOR.
4. ALL TRADE LICENSES AND PERMITS NECESSARY FOR THE PROCUREMENT AND COMPLETION OF THE WORK SHALL BE SECURED BY THE CONTRACTOR PRIOR TO COMMENCING DEMOLITION.
5. THE CONTRACTOR SHALL PRESERVE AND PROTECT FROM DAMAGE ALL EXISTING RIGHT-OF-WAY SURVEY MONUMENTATION DURING DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REPLACEMENT OF ANY DAMAGED OR REMOVED MONUMENTS BY A LICENSED SURVEYOR.
6. PROTECT ALL ITEMS ON ADJACENT PROPERTIES AND IN THE RIGHT OF WAY INCLUDING BUT NOT LIMITED TO SIGNAL EQUIPMENT, PARKING METERS, SIDEWALKS, STREET TREES, STREET LIGHTS, CURBS, PAVEMENT AND SIGNS. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DAMAGED ITEMS TO ORIGINAL CONDITION.
7. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, AND OTHER FACILITIES IMMEDIATELY ADJACENT TO EXCAVATIONS FROM DAMAGES CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS.
8. SAWCUT STRAIGHT LINES IN SIDEWALK, AS NECESSARY.
9. CONTRACTOR IS RESPONSIBLE TO CONTROL DUST AND MUD DURING THE DEMOLITION PERIOD, AND DURING TRANSPORTATION OF DEMOLITION DEBRIS. ALL STREET SURFACES OUTSIDE THE CONSTRUCTION ZONE MUST BE KEPT CLEAN.



PIPELINE SECTION AT
BNSF RAILROAD BRIDGE

P:\N\100229-000-Plot-Butte-Canal-Piping\CAUT\180229-0170-BNSF-RR.dwg TAB: C-170
2/2/24 Plotted: 11/17/19 at 10:04am By: rmmaster

				 111 SW 80th Ave, Suite 200 Portland, OR 97204 P: 503.227.4000 F: 503.227.4001	 CENTRAL OREGON Irrigation DISTRICT Since 1918	PRELIMINARY NOT FOR CONSTRUCTION	JOB NO: 1800229 DESIGNED BY: EBM/CB DRAWN BY: DNMM CHECKED BY: MBW PLOT DATE: 11/14/19 10:04am PLOTTER BY: rmmaster DWG NAME: C170-BNSF-RR.dwg TAB NAME: C-170		BEND/DESCHUTES, OREGON CENTRAL OREGON IRRIGATION DISTRICT PILOT BUTTE CANAL PIPELINE PROJECT BNSF RR EXIST COND & PROFILE - RIVERS EDGE		SHEET NO. C-170 SHEET OF RECORD NO. 1800229
REVISION	DATE	DESCRIPTION	BY								

Proposed: Pilot Butte Canal Piping Project, BNSF RR Condition and Profile (NE Butler Market Road), KPFF, 2019

**OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM
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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
Project Name: COID: Pilot Butte Canal Piping Project		Agency project #:
Agency: Natural Resources Conservation Service (NRCS, w/ COID)		SHPO Case #: 22-0850 [PA-173]
Location Coordinates (to sixth decimal place): (See Figure #1) Latitude: Longitude:		Is the property listed in the National Register of Historic Places? ☐ YES – Individually ☐ NO ☒ YES – In a district
		
Pilot Butte Canal, Downtown Redmond Segment (Author Photo, June 2023)		
Surveyor: George Kramer, Kramer & Company, for NRCS/COID		Date Recorded: March 2025
National Register Findings: (Carey & Reclamation Acts Irrigation Projects in Oregon MPS) ☒ Eligible: ☐ Individually ☒ As part of District NR Criteria: ☒ A ☐ B ☐ C ☐ D ☐ Not Eligible: ☐ Irretrievable integrity loss ☐ Not 50 Years ☐ Fails to meet NR Criteria		Finding of Effect: ☐ No Effect ☐ No Adverse Effect ☒ Adverse Effect
State Historic Preservation Office Comments – Official Use Only: Eligibility: ☐ Concur ☐ Do Not Concur: Effect: ☐ Concur ☐ Do Not Concur:		
RECEIVED STAMP		
Signed _____		Date _____
CONTACT INFORMATION STAMP		
Comments:		

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
Original Use: Agriculture, Irrigation Facility (Canal)		Number of Associated Resources: See Documentation
Architectural Classification / Resource Type: N/A		Owner: ☐ Private ☒ Local Government ☐ State ☐ Federal
Window type and Materials: N/A	Exterior Surface Materials: Primary: Earth Secondary: Stone, Basalt, Concrete Decorative:	
Roof Type and Materials: N/A		
Integrity: ☐ Excellent ☒ Good ☐ Fair ☐ Poor		Construction Date: See Documentation (☐ Circa)
		Architect/Builder (if known): Wiest, Levi D. (Irrigation Engineer)

Description of Property (including previous alterations & approximate dates):

The Pilot Butte Canal is a 22-mile long irrigation system that originates at a diversion point on the Deschutes River, in the City of Bend, and continues in a generally north/northeasterly direction, through Bend, Redmond and Terrebonne toward the Crooked River. The Pilot Butte Canal (PBC) is one of two main canals operated by the Central Oregon Irrigation District (COID) and provides water for agricultural and other uses. The COID system as a whole consists of multiple individual segments as detailed in previous documentation on the COID canal system. The Downtown Redmond segment of the PBC, the focus of this document, is an approximately 6,780-foot-long segment located entirely within multiple Deschutes County parcels as shown in Figures 2 through 9. The Downtown Redmond Segment of the PBC is oriented generally north-south between NW Canal Boulevard on the west and U.S. Route 97 (The Dalles-California Highway) on the east. The segment runs, approximately, from NW Quince Avenue on the north, to NW Dogwood Avenue on the south (see Figure 1).

The National Register documentation of the Downtown Redmond Segment of the PBC, listed under the Multiple Property documentation of *Carey and Reclamation Acts Irrigation Projects in Oregon 1901-1978*, describes the canal as follows.

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... (Hetzel, 2016:4).

Construction of the Pilot Butte Canal was completed from its point of diversion on the Deschutes River as far north as the Crooked River, in early February 1905. Water for irrigation flowed through the canal that summer. That same year Frank T. and Josephine Redmond, schoolteachers in North Dakota, for whom the city is named, settled on land adjacent to the canal (Hetzel, 2016:18).

As documented in the National Register nomination, the Downtown Redmond Segment contains three (3) contributing and seventeen (17) non-contributing resources. The three contributing resources are as follows.

Pilot Butte Canal (1903-1905): "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" (Hetzel,

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2016:5). The segment has basalt riprap lining its walls and is approximately 30 feet wide for most of its length. Multiple, non-historic public and private crossings/bridges provide access across the canal.

Weir (c. 1940): “This feature consists of a board-formed concrete weir that spans the width of the canal a short distance north of the NW Greenwood Avenue bridge. 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 as is supported by steel 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 plans 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” (Hetzel, 2016:6).

Lateral (c. 1920): An unnamed lateral parallels the east side of the canal segment, running north from the aforementioned (non-contributing) headgate toward NW Hemlock Avenue. 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.” (Hetzel, 2016:6).

A full listing of the twenty (20) resources identified within the Downtown Redmond Segment of the Pilot Butte Canal in the National Register of Historic Places documentation is included in Table 1 (see also Figure 11).

TABLE 1: PBC- Downtown Redmond Segment, NR-Identified Features

NO.	PROPERTY NAME	YrBuilt	EVALUATION
1.	Pilot Butte Canal	1903-05	Contributing
2.	Outlet Structure	March 2005	Non-Contributing
3.	Bridge @ NW Fir Avenue	1990c	Non-Contributing
4.	Lateral D-2 headgate	1970c	Non-Contributing
5.	Bridge @ NW Greenwood Ave	1950/2010c	Non-Contributing
6.	Weir	1940c	Contributing
7.	Headgate	2000c	Non-Contributing
8.	Lateral (unnamed)	1920c	Contributing
9.	Bridge @ NW Hemlock Ave	1967	Non-Contributing
10.	Bridge @ NW Kingwood Ave	1990cc	Non-Contributing
11.	Headgate @ NW Kingwood Ave Bridge	1990c	Non-Contributing
12.	Bridge @ Medical Center	1990c/2016	Non-Contributing
13.	Bridge @ NW Larch Ave	2006	Non-Contributing
14.	Lateral D Headgate	2006	Non-Contributing
15.	Check Structure	2006	Non-Contributing
16.	Bridge @ NE Negus Way	2006	Non-Contributing
17.	Bridge @ NE 2 nd Street	2006	Non-Contributing
18.	Bridge @ 2036 NW Canal	1920c	Non-Contributing

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)		Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
19.	Bridge @ 2190 NW Canal	1929c/1960	Non-Contributing
20.	Intake Structure	March 2005	Non-Contributing

Determination of Eligibility, Justification, and Sources (Use continuation sheets if necessary):

In July 2017, the Pilot Butte Canal – Downtown Redmond Historic District was accepted for listing in the National Register of Historic Places, under the Carey and Reclamation Acts Irrigation Projects in Oregon 1901-1978 Multiple Property Submittal (NRIS MP100001303). “The Pilot Butte Canal: Downtown Redmond Segment Historic District contains a representative, intact, segment of the Pilot Butte Canal” (Hetzl, 2016:73). The district was found significant under Criterion A, for its association with the initial settlement and incorporation of the city of Redmond and the agricultural development of the area. The Period of Significance was established as 1903, the canal’s initial construction, through 1950, when the State of Oregon decreed an end to the provisions of the Carey Act.

Description of project scope, and nature and extent of impact:

As part of its System Improvement Plan to address water conservation and support sustainable agriculture, COID proposes to pipe the existing Pilot Butte Canal in the Downtown Redmond Segment, converting the canal from its current open free-flowing water operation to an underground pipe.

The goal of the proposed project is to pipe District-owned canals to conserve water, improve efficiency and water supply reliability, enhance public safety, enable renewable energy generation, and improve fishery habitat in the Upper Deschutes Watershed while improving the economic sustainability and resilience of agriculture in the Deschutes Basin (COID, 2017).

The proposed piping of the Downtown Redmond Segment is a component in a larger piping project of the COID system that will ultimately result in the conversion of the entire Pilot Butte Canal into a primarily piped system. “When piped, the main canal will conserve 30 cubic feet per second upon completion to the Deschutes River while creating operating efficiencies for 638 district patrons.”¹

The piping of the Pilot Butte Canal (Downtown Redmond Segment) is a covered undertaking, as defined by Section III(A)1a of the Programmatic Agreement signed by COID, Bureau of Reclamation and the Oregon State Historic Preservation Office in July 2019. That document is in the process of amendment, to reflect the addition of the Natural Resource Conservation Service (NRCS) as a signatory and, additionally, to address the impacts of the proposed Pilot Butte Piping Project on the Downtown Redmond Segment.

Alternatives Considered

No Build Alternative: This alternative would leave the Pilot Butte Canal: Downtown Redmond Segment as it currently exists, as an open canal flowing seasonally and dewatered outside the irrigation season. Water would continue to be lost to seepage and evaporation, and fail to meet District goals of efficient water usage. Because this option is inconsistent with COID’s goals, does not address the issues of water evaporation or seepage, fails to improve water conservation or support sustainable agriculture, it was not considered feasible or prudent and dropped from consideration.

¹ KTVZ News Team. “Taylor NW Chosen for COID’s Pilot Butte Canal Project,” 19-Dec-2019 (www.ktvz.com, visited 13-Jan-2020).

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Alternate Alignment Alternative: This alternative would replace the existing Downtown Redmond Segment with a new underground pipe on an entirely new alignment, leaving the existing canal in place, permanently dewatered, on the current alignment. New alignments, as shown in Figure 12, basically parallel to the existing canal, either to the east or west. Because this alternative would require either the acquisition of additional land or the disruption and reconstruction of more than a mile of NW Canal Avenue as well as creating long-term management and liability issues in the dewatered canal, it was not considered feasible or prudent and dropped from consideration.

Modernization (Piping) Alternative: This alternative excavates and installs a new pressurized ten (10) to eleven (11) foot diameter closed conduit system within the existing canal right of way, following the existing alignment. Following construction of the pipe line, the existing canal would be filled creating a flat terrain for its length. Compacted soil and backfill to create minimum 3'-0" cover for all piping will be provided. Most existing crossings, including both public or private bridges and other water control features will be removed, with access provided at grade over the filled canal alignment. Because this alternative meets the program goals in the most cost-effective and minimally disruptive manner, this is the **PREFERRED ALTERNATIVE**.

Finding of Effect and justification:

The proposed project will have an impact on the existing character of the Pilot Butte Canal: Downtown Redmond Segment as the result of infill of the existing open canal. The project will result in the removal of other features identified as historic contributing within the Pilot Butte Canal: Downtown Redmond Segment Historic District, as entered on the National Register of Historic Places in 2017.

The Pilot Butte Canal Piping Project will result in the physical and visual loss of the existing canal system in the Downtown Redmond Segment, altering the historic open character. It will require the removal of all existing above grade control features with new work below grade in order to create a more efficient system, reduce water loss, and allow for continued, sustainable, agriculture in the region.

An evaluation of the project under the Criteria for Effect (36 CFR 800.5) finds that the project will have an effect on three features identified as historically significant within the NR-listed Pilot Butte Canal Downtown Redmond Segment Historic District. The project effect, including the complete loss of all physical and visual qualities that relate historic character and association, results in visual and physical effects that will remove the historic qualities of the Pilot Butte Canal Downtown Redmond Segment as originally constructed. The Pilot Butte Piping Project as proposed will have an effect on the Downtown Redmond Segment of the canal and such effect is **ADVERSE**.

Summary:

The proposed piping of the Downtown Redmond Segment of the Pilot Butte Canal, includes modification to a resource listed on the National Register of Historic Places, the Pilot Butte Canal-Downtown Redmond Segment Historic District, containing three (3) features identified as historic contributing and seventeen (17) features identified as non-historic, non-contributing.

The project as proposed, requiring the removal of the existing, historic contributing elements of the Pilot Butte Canal: Downtown Redmond Segment, will result in the loss of those elements with significant visual and physical impact to existing character. An evaluation of the project under the Assessment of Adverse

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Effects (USC 36 CRF 800.5) finds that the project will have an effect upon resources listing in the National Register of Historic Places and that such effect is adverse, resulting in **FINDING OF ADVERSE EFFECT**.

Sources:

Central Oregon Irrigation District (COID). *Central Oregon Irrigation District Modernization Project, Public and Interagency Meeting, July 10, 2017*. (found at <http://coid.org/wp-content/uploads/2017/07/7.10.17-Public-Meeting-Handout.pdf>, visited 14-January-2020).

20-Year Capital Investment Plan, March 2018.

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Doncaster, Kelsey, and Chris Horting-Jones. *Sagebrush to Clover: The U. S. Bureau of Reclamation's North Unit of the Deschutes Project, Volume 2: Historic Evaluation of the North Unit Irrigation District (DRAFT)*. US/DOI Bureau of Reclamation, PN Region, March 2018.

Hall, Michael. *Irrigation Development in Oregon's Upper Deschutes River Basin, 1871-1957: A Historic Context Statement*. Prepared for Deschutes County, the cities of Bend, Redmond and Sisters, and the State Historic Preservation Office by the Deschutes County Landmarks Commission, August 1994.

Hetzel, Christopher D. *Pilot Butte Canal: Downtown Redmond Segment Historic District*. NPS/National Register of Historic Places Registration Form, December 1, 2016 (NRIS No. MP100001303, entered 7-10-2017).

Kramer, George. *Pilot Butte Watershed Plan -EIS Project, Preliminary Evaluation of Historic Built Resources within the Area of Project Effect*. Prepared for COID/Parametrix, October 2023.

Natural Resources Conservation Service. *Programmatic Agreement Among the US/DOI-Bureau of Reclamation Columbia-Cascades Area Office, The Natural Resources Conservation Services, the Oregon State Historic Preservation Office and the Central Oregon Irrigation District, Agreement No. R19MA13745 (BFO-U19-05.19.001)*, Amended Distribution Draft, February 2025.

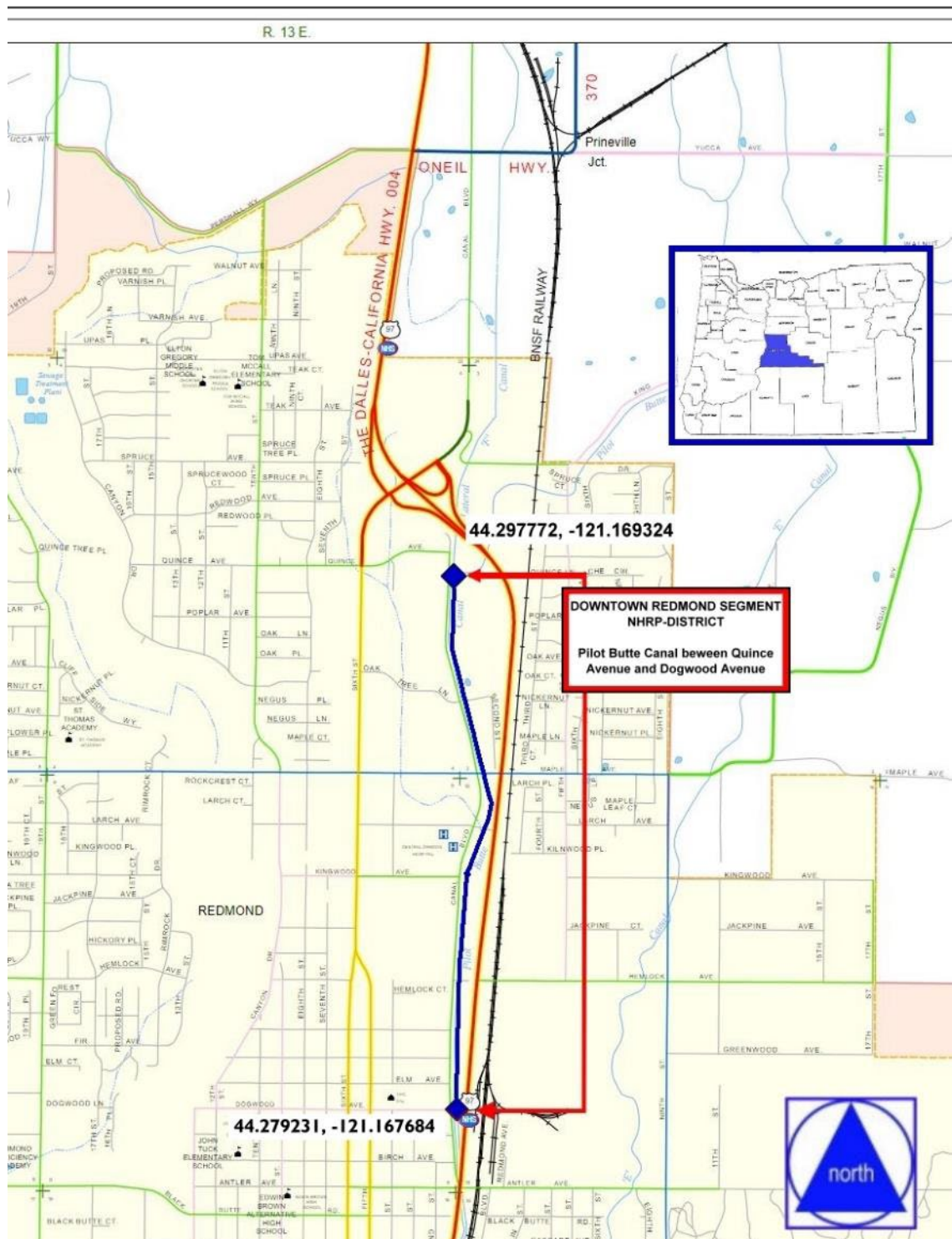
Parametrix. *COID Pilot Butte Canal- Visual Resources Technical Report (DRAFT)*. Prepared for COID, May 2024.

US Reclamation Service, in cooperation with the State of Oregon. *Deschutes Project*. Washington, D.C.: US/DOI Reclamation Services, December 1914.

Programmatic Agreement Among the US/DOI-Bureau of Reclamation Columbia-Cascades Area Office, the Oregon State Historic Preservation Office and the Central Oregon Irrigation District, Agreement No. R19MA13745 (BFO-U19-05.19.001), signed July 16, 2019.

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**FIGURE 1: Pilot Rock Canal: Downtown Redmond Segment
(ODOT Redmond Base Map, Annotated)**

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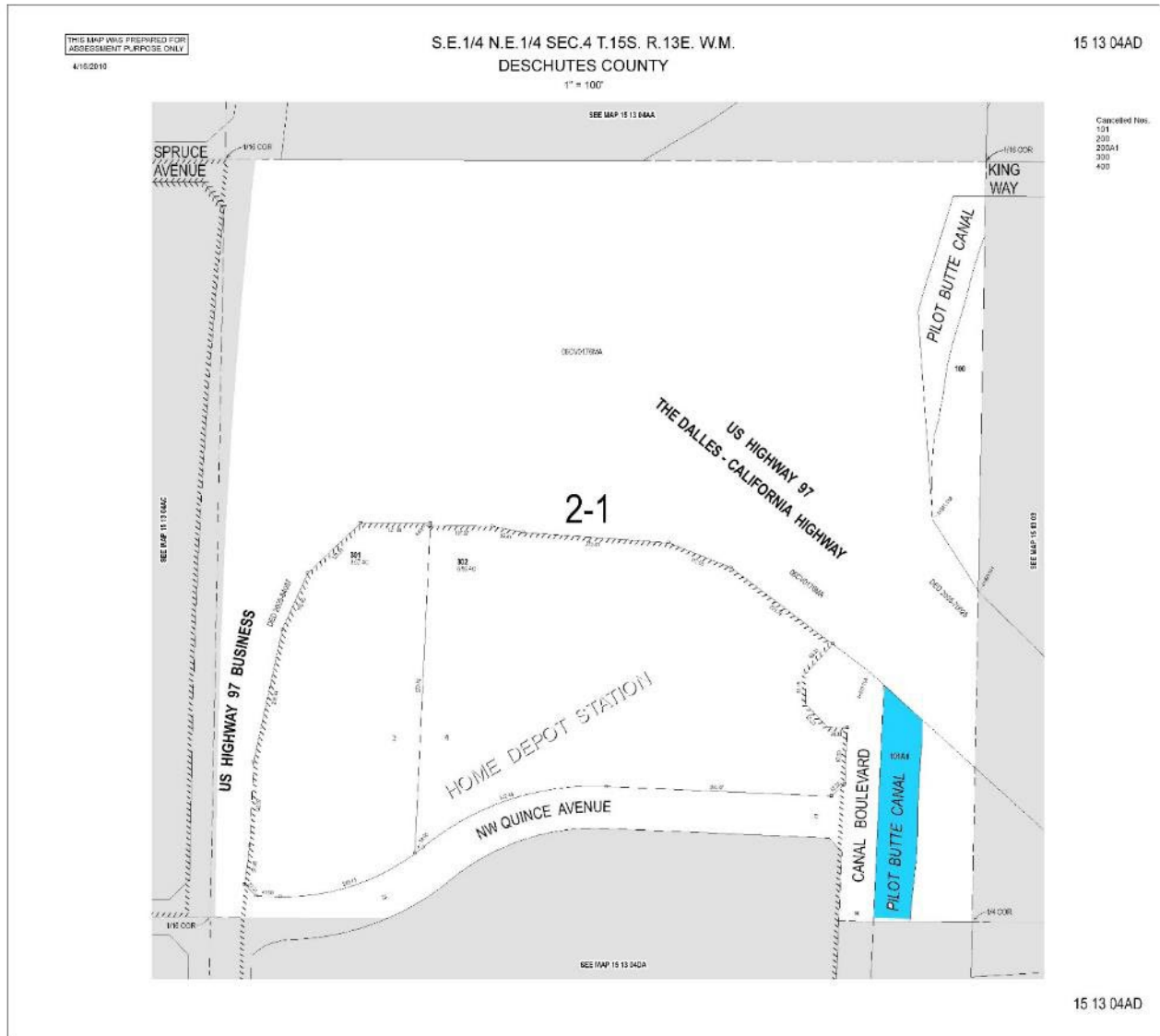


FIGURE 2: Pilot Butte Canal, Deschutes County Assessor Plat 151304-AD (Annotated)

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
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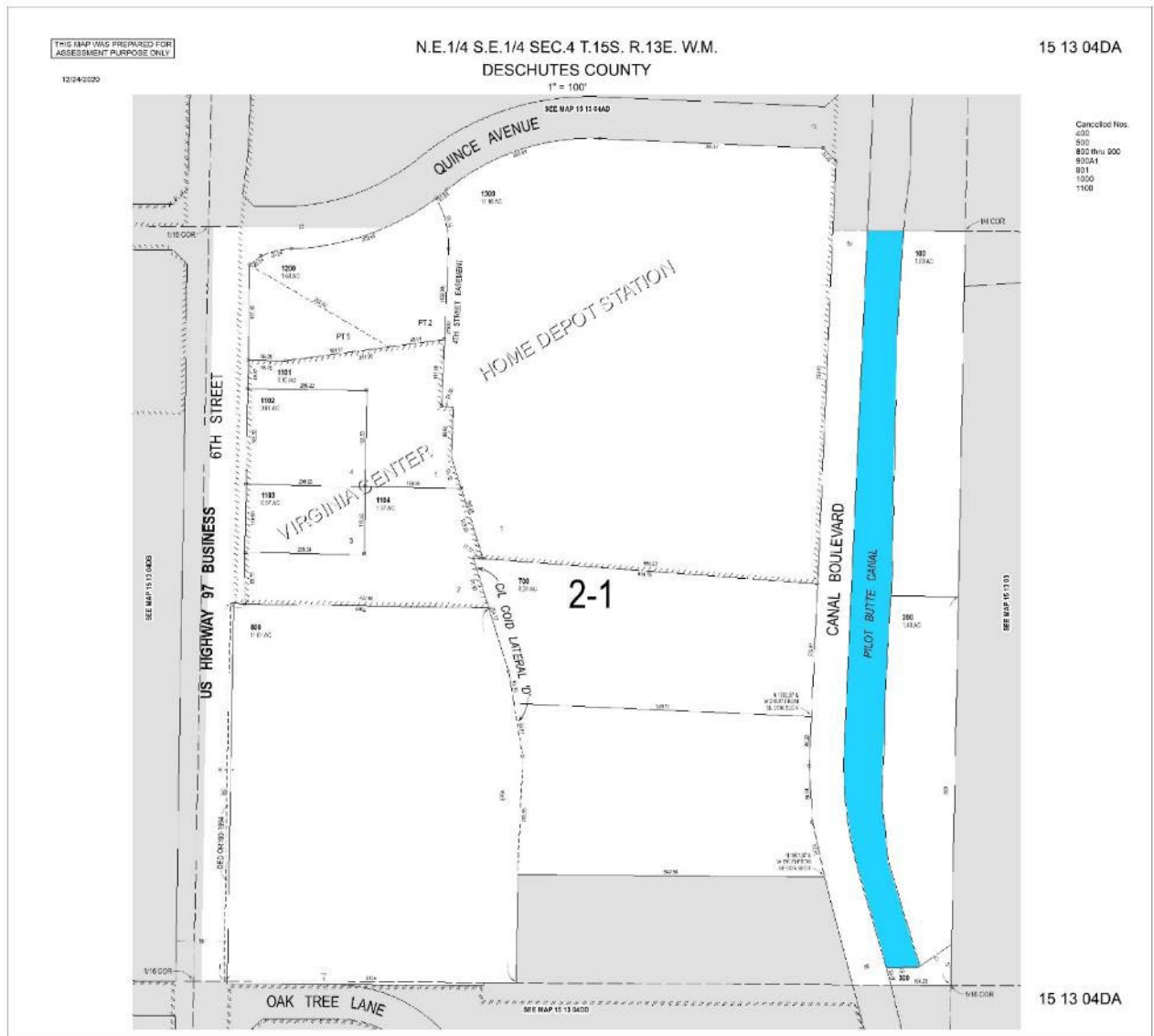


FIGURE 3: Pilot Butte Canal, Deschutes County Assessor Plat 151304-DA (Annotated)

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
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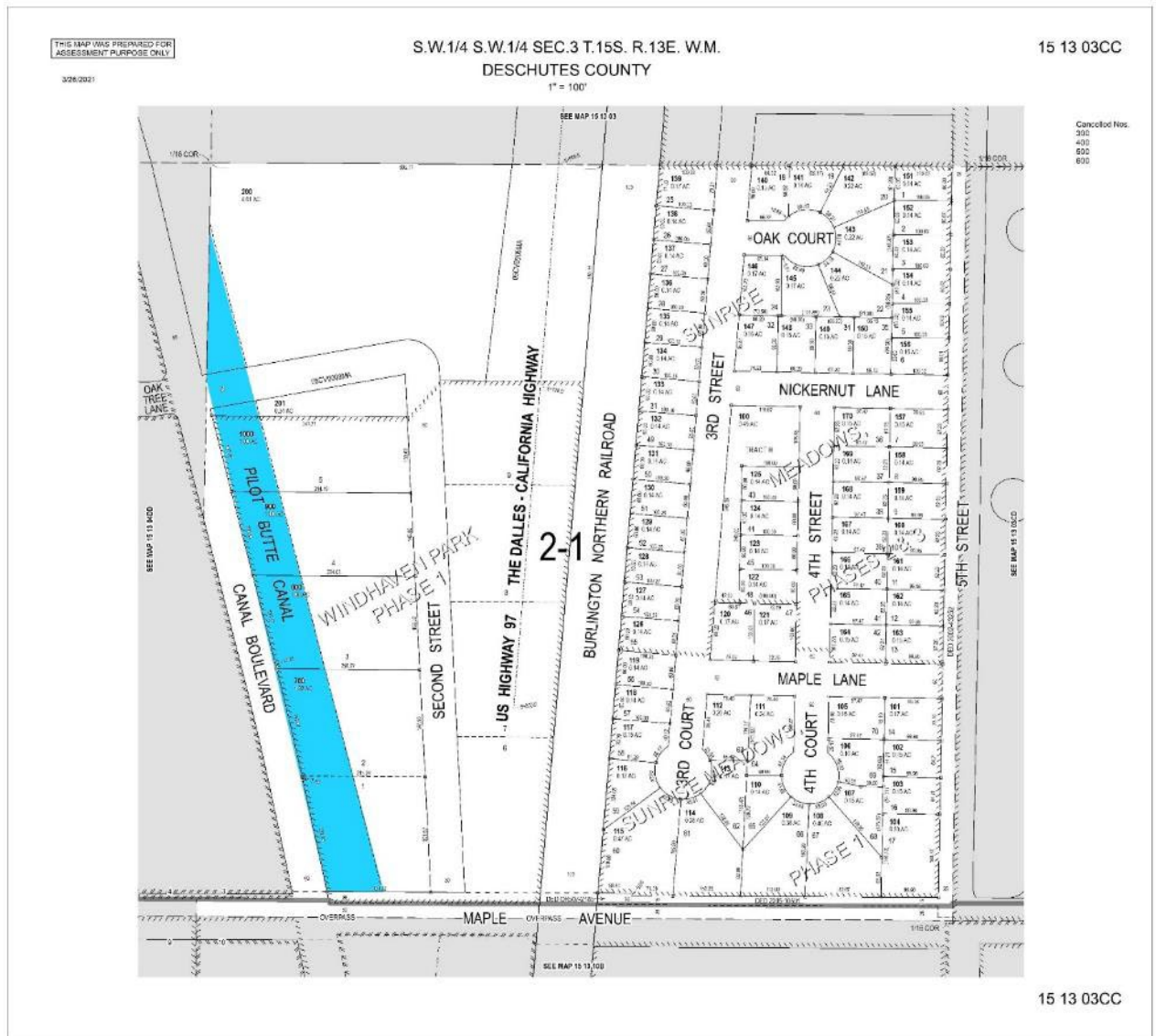


FIGURE 5: Pilot Butte Canal, Deschutes County Assessor Plat 151303-CC (Annotated)

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
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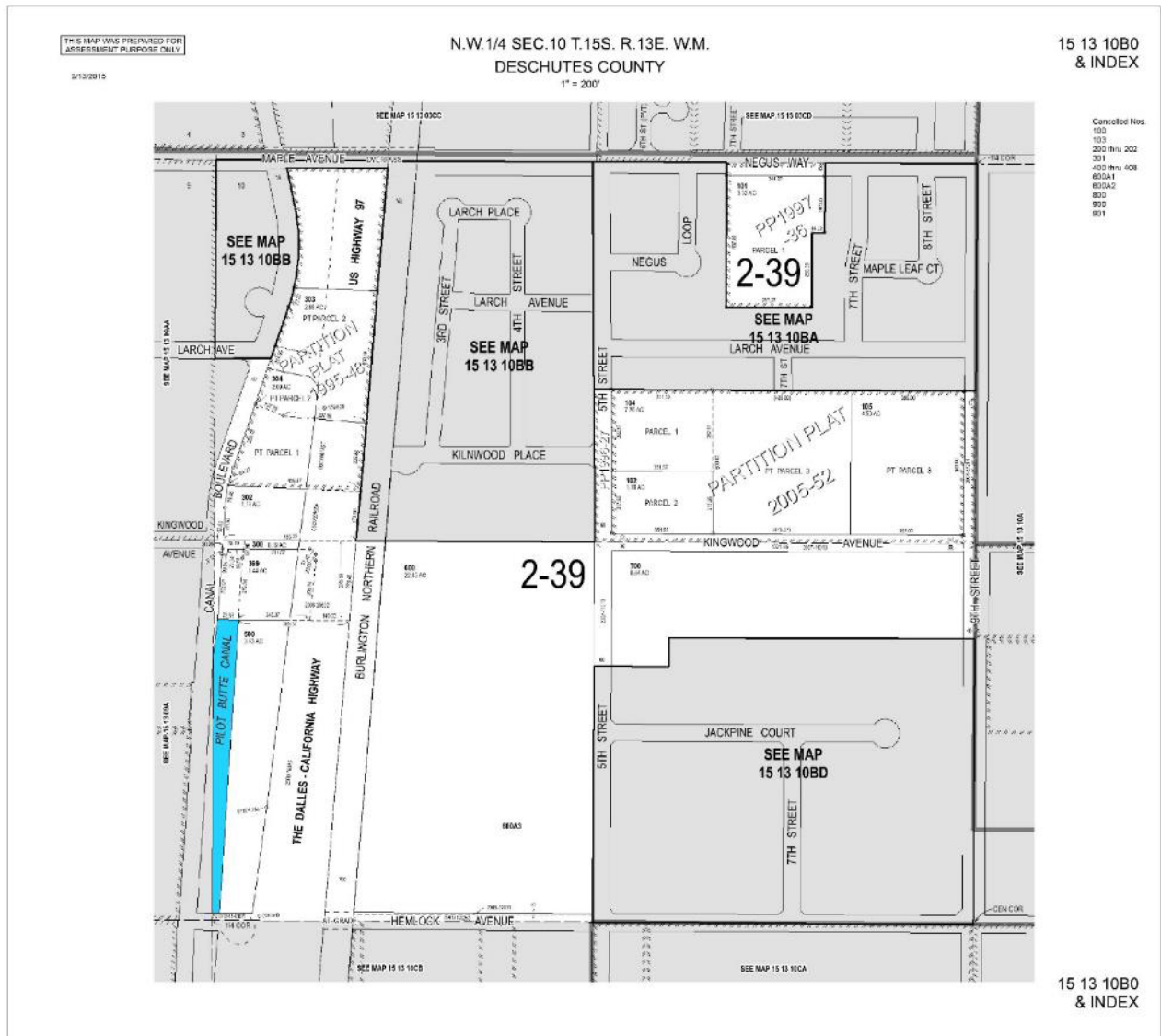


FIGURE 6: Pilot Butte Canal, Deschutes County Assessor Plat 151310B (Annotated)

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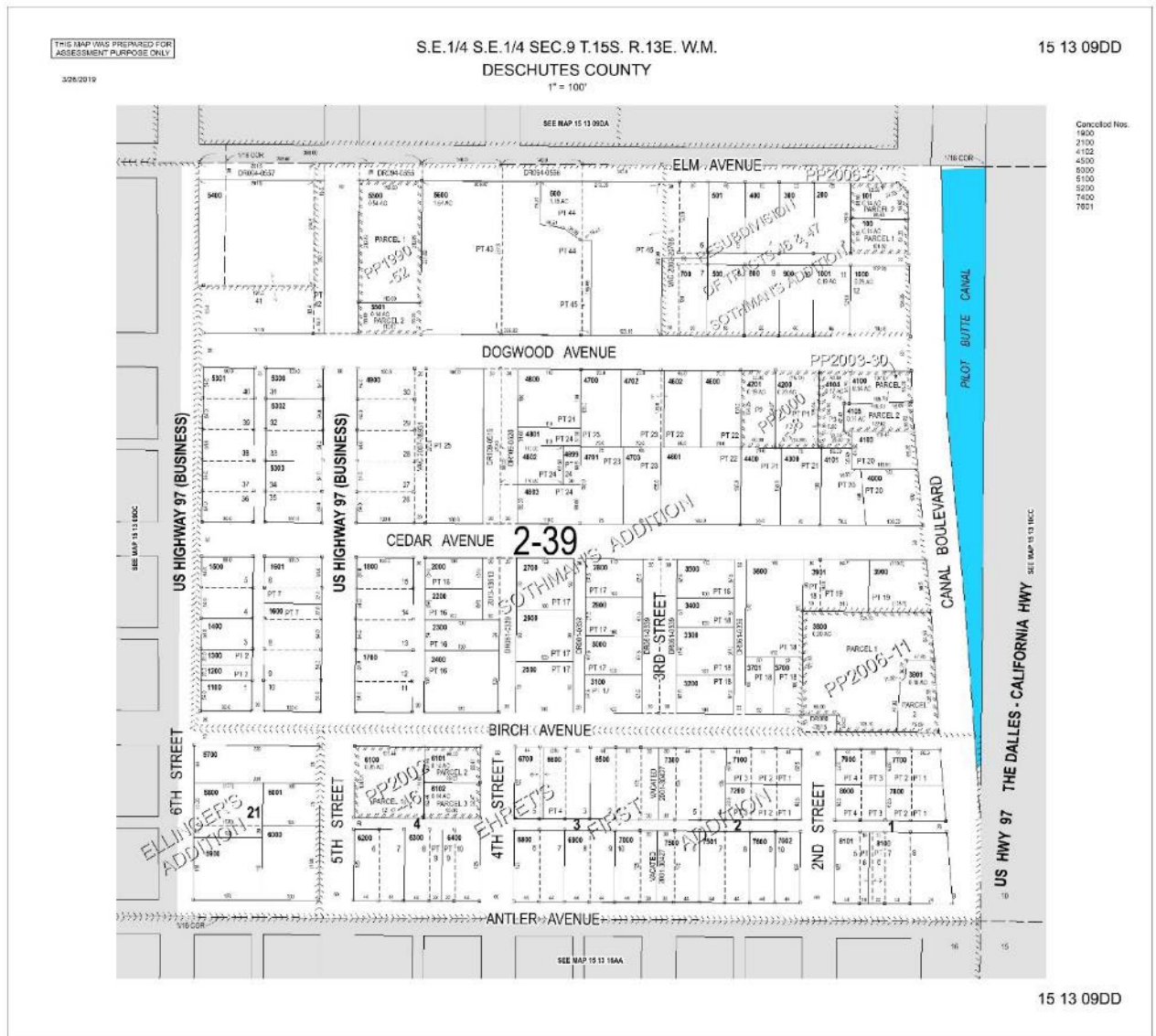


FIGURE 8: Pilot Butte Canal, Deschutes County Assessor Plat 151309-DD (Annotated)

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
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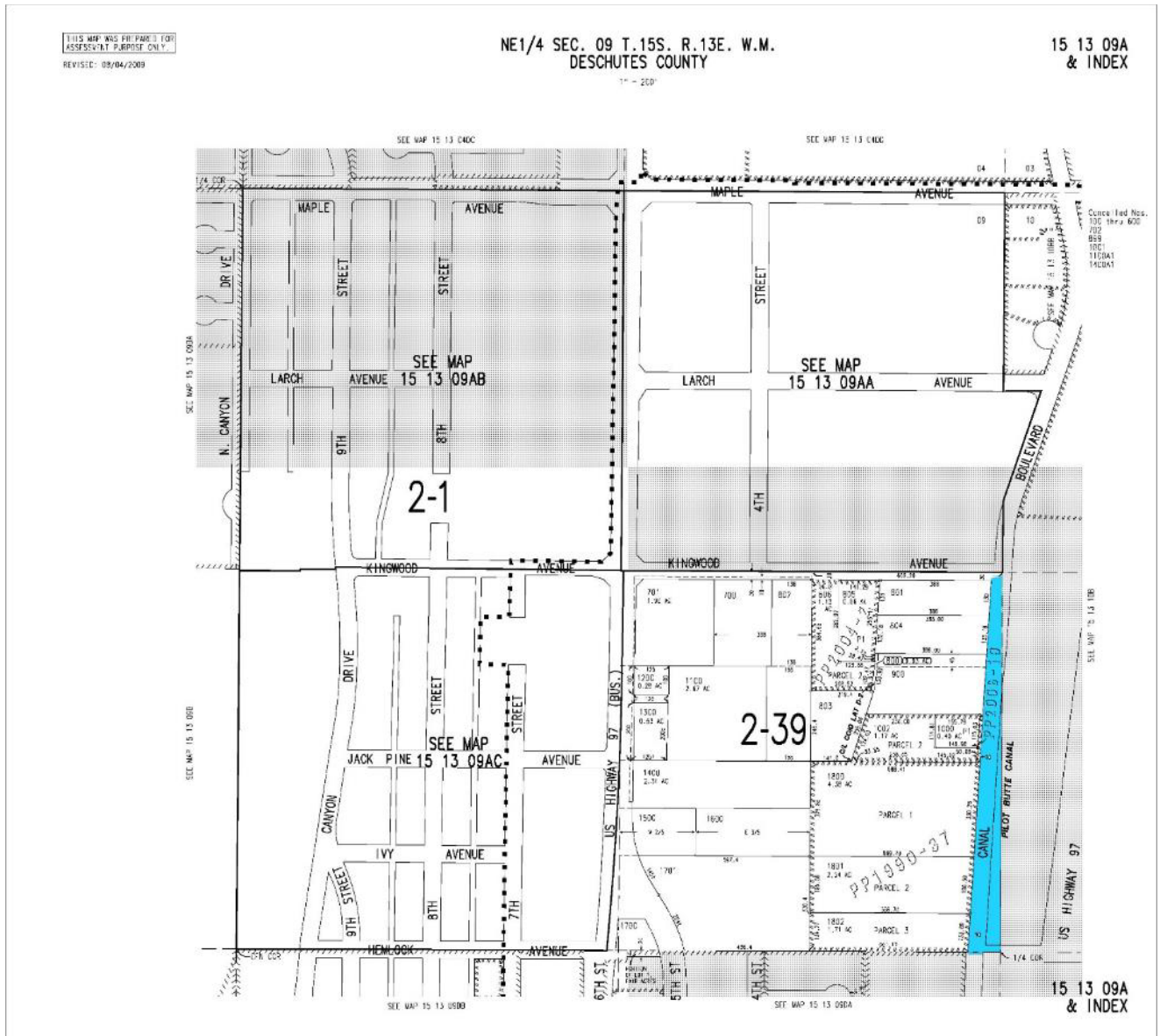


FIGURE 9: Pilot Butte Canal, Deschutes County Assessor Plat 151309-A (Annotated)

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Property Name:
PILOT BUTTE CANAL
(Downtown Redmond Segment)

Street Address:
**NW Canal Blvd, between NW Quince
and NW Dogwood**

City, County:
Redmond, Deschutes Cty, OR



FIGURE 10: "Deschutes Irrigated Lands Fertile,"
The Sunday Oregonian, August 20, 1905
[Note middle image of the Pilot Butte Canal]

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
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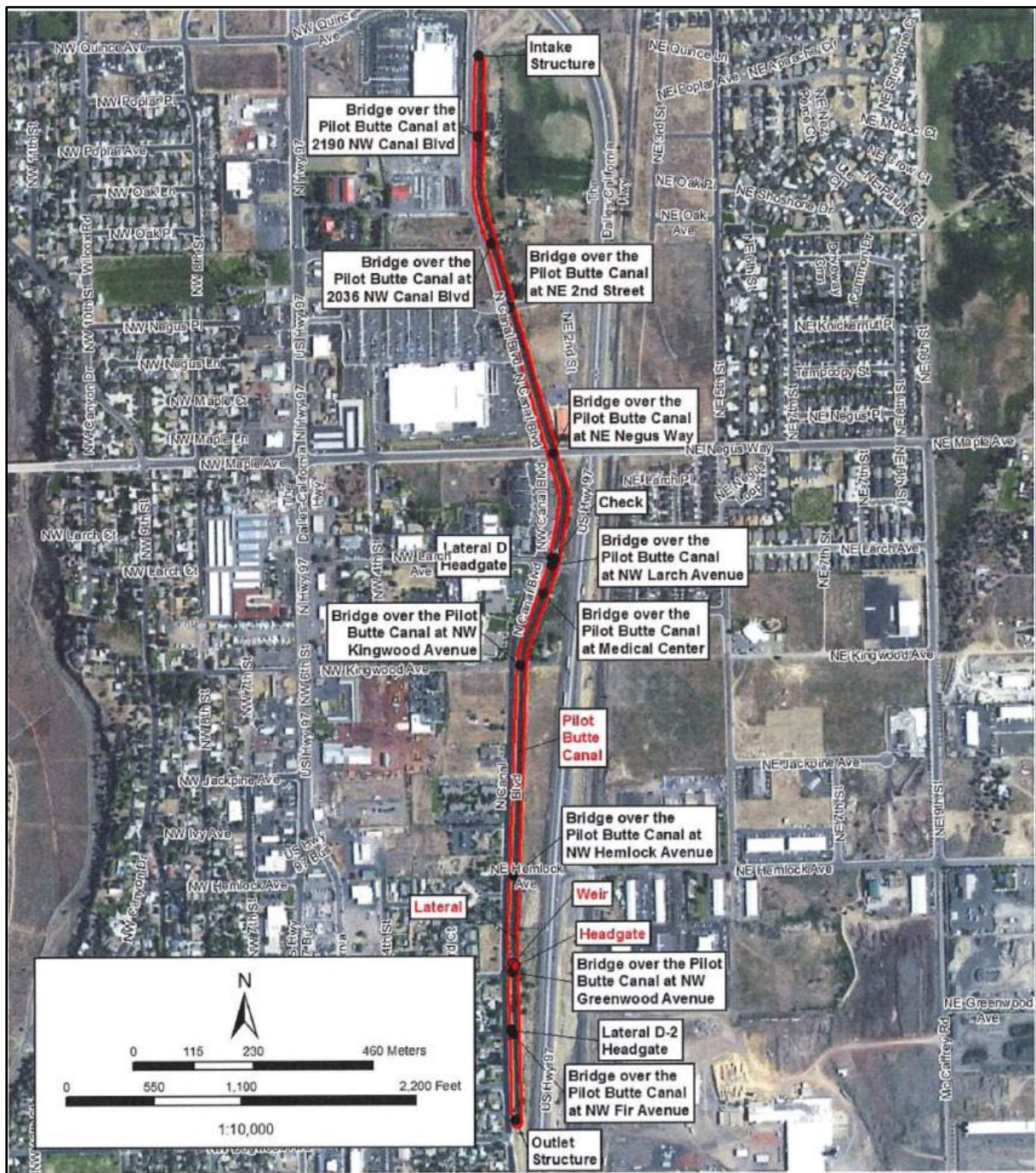


FIGURE 11 Pilot Butte Canal – Downtown Redmond Segment HD with individual features
(C. Hetzel Map, NR Documentation 2017)

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
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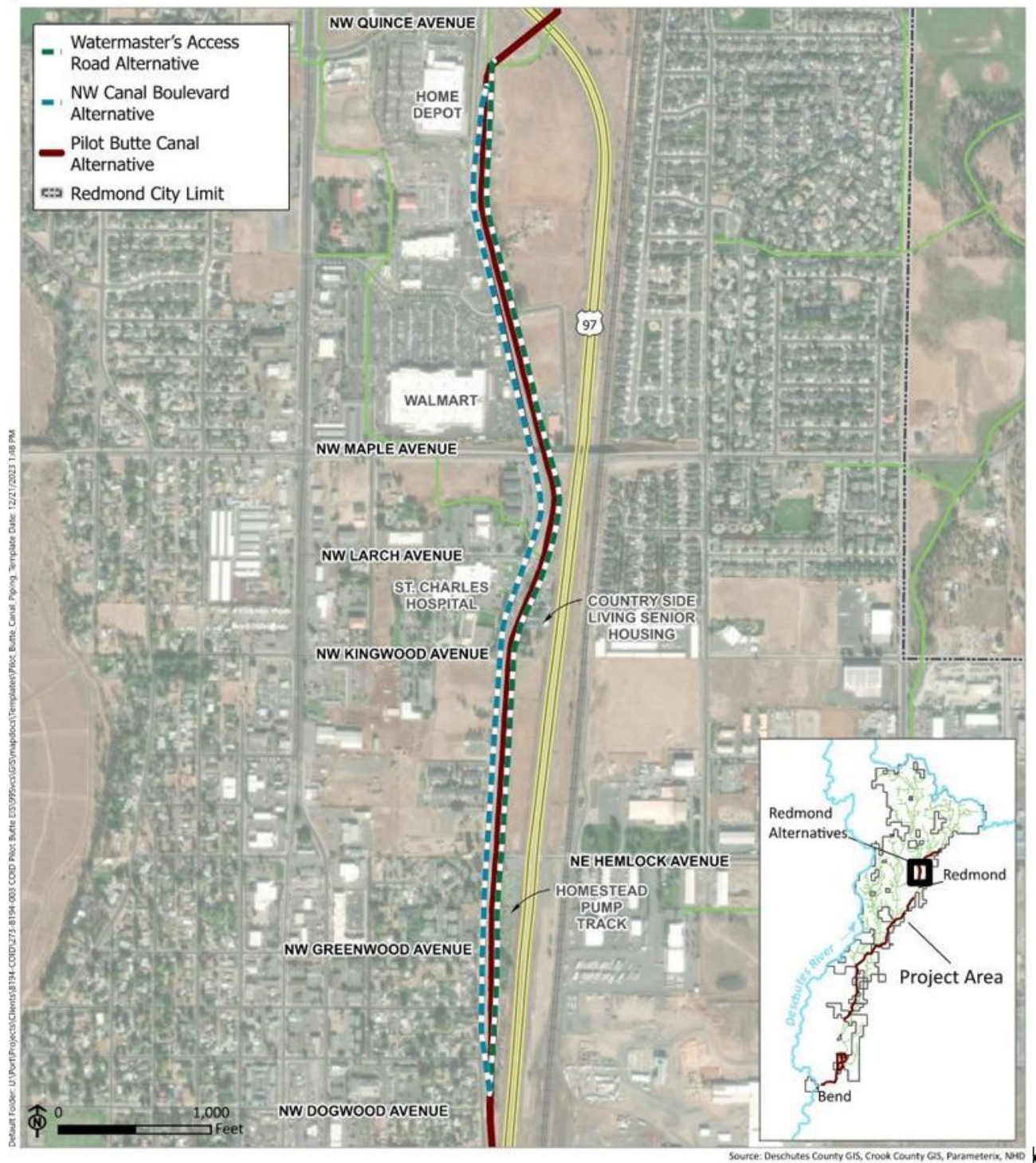


FIGURE 12 Pilot Butte Canal – Downtown Redmond Segment, Alternative Alignment Options
(Parametrix, Visual Resources Technical Report, May 2024)

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FIGURE 13 Pilot Butte Canal – Downtown Redmond Segment
 General View, (Parametrix, 2021)



FIGURE 14 Pilot Butte Canal – Downtown Redmond Segment
 Central Redmond, General View (Parametrix, 2021)

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Property Name: PILOT BUTTE CANAL (Downtown Redmond Segment)	Street Address: NW Canal Blvd, between NW Quince and NW Dogwood	City, County: Redmond, Deschutes Cty, OR
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FIGURE 15 Pilot Butte Canal – Downtown Redmond Segment
Near NW Fir Avenue (Parametrix, 2021)



FIGURE 16 Pilot Butte Canal – Downtown Redmond Segment
North of Yeoman Street (Parametrix, 2021)

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FIGURE 17 Pilot Butte Canal – Downtown Redmond Segment
Greenwood Ave Weir (Google Street View, 2024)



FIGURE 18 Pilot Butte Canal – Downtown Redmond Segment
Lateral, Looking South (Google Street View, 2024)

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FIGURE 19 Pilot Butte Canal – Downtown Redmond Segment
Looking East, from NW Canal Blvd (Author photo, June 2023)



FIGURE 20 Pilot Butte Canal – Downtown Redmond Segment
Looking Southeast, from NW Canal Blvd (Author photo, June 2023)

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Project Name: COID-Pilot Butte Canal Piping Project		Agency project #:
Agency: COID/NRCS		SHPO Case#: 22-0850
Location Coordinates (to sixth decimal place): Latitude: 44.180308 Longitude: -121.095505		Is the property listed in the National Register of Historic Places? ☐ YES – Individually ☒ NO ☒ YES – In a district (DOE 2011)



OTR Line, Crossing Pilot Butte Canal near NE King Way, Looking SW (August 2024)

Surveyor: George Kramer, Kramer & Company, for COID/Parametrix Inc.		Date Recorded: August 2024
National Register Findings: ☒ Eligible: ☐ Individually ☒ As part of District NR Criteria: ☒ A ☐ B ☐ C ☐ D ☐ Not Eligible: ☐ Irretrievable integrity loss ☐ Not 50 Years ☐ Fails to meet NR Criteria		Finding of Effect: ☐ No Effect ☒ No Adverse Effect ☐ Adverse Effect
State Historic Preservation Office Comments – Official Use Only: Eligibility: ☐ Concur ☐ Do Not Concur: Effect: ☐ Concur ☐ Do Not Concur:		
RECEIVED STAMP		
Signed _____		Date _____
CONTACT INFORMATION STAMP		
Comments: 		

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Property Name: Oregon Trunk Railway-PBC Crossing (NE King Way)	Street Address: NE King Way/PBC Canal	City, County: Redmond, Deschutes Cty, OR
Original Use: Transportation: Rail-Related (Bridge)		Number of Associated Resources:
Architectural Classification / Resource Type: Utilitarian		Owner: ☐ Private ☒ Local Government ☐ State ☐ Federal
Window type and Materials: N/A	Exterior Surface Materials: Primary: Concrete Secondary: Decorative:	
Roof Type and Materials: N/A		
Integrity: ☐ Excellent ☐ Good ☒ Fair ☐ Poor		Construction Date: 1911 (as modified) (☐ Circa)
		Architect/Builder (if known):

Description of Property (including previous alterations & approximate dates):

The Oregon Trunk Railway/Pilot Butte Canal Crossing south of NE King Way carries the line of what is now the Burlington Northern Santa Fe (BNSF) railroad over the Pilot Butte Canal (PBC), a major component in the Central Oregon Irrigation District (COID) system. The crossing is a poured-in-place concrete structure consisting of abutments and a center pillar, all with spread footings, that carry the roadbed across the canal at a location approximately 275 feet south of NE King Way, in Redmond, Deschutes County, Oregon. The rail crossing itself, is about 20-feet in length (the width of the canal) and is a reinforced concrete slab with a single track, as modified (n.d.).

The construction history of this specific crossing is unclear and the details of its materials are not precisely determined. The substructure is assumed to have been built as part of the original construction of the rail line by the Oregon Trunk Railroad, which arrived in Bend in September 1911. The crossing itself, the railbed that carries the rail line across the canal, is not original and is of more modern, undated, construction.

Determination of Eligibility, Justification, and Sources (Use continuation sheets if necessary):

The Oregon Trunk Railway (OTR), completed in 1911 between Wishram, Washington to Bend by James J. Hill's Great Northern Railroad, played a pivotal role in the development history of central Oregon. "The OTR line expanded shipping capabilities for stock ranchers in the region while creating new opportunities for large-scale producers of wood products to operate in Bend during the early twentieth century" (Held, 2011:2). While at one time carrying both passenger and rail traffic, the OTR line, owned and operated by BSNF, today remains the primary freight carrier in Central Oregon.

The race to construct a railroad through Central Oregon during the early 20th century resulted in a "war" between E. H. Harriman's Union Pacific empire and the Great Northern Railway, owned by James J. Hill. Both men were legendary and their powerful companies fought to serve the growing region north of Bend. Harriman's Deschutes Railroad began construction in 1906 while Hill's Oregon Trunk Railway started three years later. Their battle for the region, known as the Deschutes River Railroad War," was the last of many confrontations between the two rail barons and their surrogates (Speroff, 2007:xiii). "The Hill system obviously had some thought that line would ultimately be extended to California and thus built to relatively high standards" (Due & Rush, 1991:77).

By February 1911 construction of the Oregon Trunk Railway, Hill's line, under the direction of chief engineer John F. Stevens, had pushed 110 miles south from Wishram and was approaching Madras. "Grading between Madras and Bend, a distance of 45 miles, is well along and construction will proceed rapidly to Crooked River" (*Oregonian*, 4-Feb-1911, 3:1-3). By September 1911 track had reached Redmond, which celebrated on

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“Railroad Day,” with a parade and an “imposing arch of welcome” on 6th, decorated with agricultural products from the section (*Redmond Spokesman*, 21-Sept-1911, 1:1-3). The line reached Bend less than a month later, an event that was celebrated over two days of activity, culminating in the driving of a golden spike by James J. Hill himself (*Bend Bulletin*, 27-Sept-1911, 1:3-4). “The celebration of the last spike on October 5, 1911, drew a crowd of 1,500 to 2,000 people, an impressive gathering given that the Bend had only 536 people” (Speroff, 2007:139).

The arrival of the railroad in Bend and Redmond, connecting these cities to markets to the north, were, transformative, bringing new industry, new residents and, in concert with the development of irrigation, expanded agriculture. “The first ingredient in this transformation was the railroad” (DCHS, 2004:35). Bend’s population grew from 536 people in 1910 to 5,415 in 1920. Growth in Redmond followed a similar, if less dramatic arc, more than doubling from 218 in 1910 to 585 ten years later.

The significance of the OTR and its role in the development of Bend and the Central Oregon region has been previously evaluated as part of several federally funded undertakings. In 2009 an archeological survey found a 7.5 mile long segment of the OTR south of Redmond significant under multiple criterion in association with construction of 19th Street (Griffin and O’Neill, 2009). In 2011, in connection with proposed work on US Highway 97, a segment of the railway beginning in Section 28 of Township 17S, Range 12E, and continuing “...near the North/Pilot Built Canal in Section 3” of the same township was evaluated for historic significance. That document concluded “The surveyed section of the OTR is recommended eligible for listing in the National Register of Historic Places under Criterion A *as a contributing feature to a potential OTR linear historic district*” (Held, 2011, emphasis added). Held elaborated that the linear district, spanning 157 miles from Wishram (WA) to Bend, was the oldest portion of the OTR, retaining its historic alignment and ballast. “Modern transportation improvements have necessitated new street crossing at various points along the historic alignment” (Held, 2011). Oregon SHPO concurred with the finding on January 27, 2011.

In 2015 a nine-mile long section of the OTR between Romaine Village Way and Lava Butte Lane, south of the OTR Depot in Bend, was evaluated by the Oregon Department of Transportation. That study reconfirmed the historic significance of the segment within a larger linear district under Criterion A for its association with the growth of Central Oregon and its continuing economic role in the regional economy (Rudnicki, August 2015). Oregon SHPO concurred with the finding on October 5, 2015.

OTR/PBC Crossing at NE King Way

The Pilot Butte Canal was first developed between 1903-1904 and pre-dates OTR construction. As the rail line worked south from Madras, it would have necessitated a crossing at this location, which was clearly built prior to September 1911, when the OTR reached Bend. The concrete abutments of the OTR/PBC Crossing at NE King Way are assumed original and the center post is likely of similar vintage, however this is unclear. The roadbed itself, carrying the single track, is of what appears to be a pre-cast concrete slab, is clearly a later, if undated, modification.

The OTR/PBC Crossing at NE King Way, as an original element of the Oregon Trunk Railroad line, although modified, is considered eligible as part of the linear OTR District as defined by the Oregon State Historic Preservation Office in 2011 and re-confirmed in 2015. The crossing, carrying the railroad line over the Pilot Butte Canal, remains on the original right-of-way and continues its original function.

The OTR/PBC Crossing, a modest structure of limited size and design value, was not noted in any located period accounts of the line’s construction, despite that construction being a focus of considerable interest in the Bend-Redmond area in 1911. Available histories of the “Deschutes River Railroad War” fail to mention anything

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related to the crossing or the intersection of the Pilot Butte Canal and the rail line. Most, like Speroff, focus entirely on the larger and far more significant spans over the Columbia, Crooked and Deschutes rivers.¹

Evaluation of Significance

The OTR/PBC Crossing at NE King Way, an original and integral element of the construction of the OTR line between Redmond and Bend, is considered eligible as an element of the 157-mile long Oregon Trunk Railway line between Wishram, Washington and Bend, Oregon, for its Criterion A role in the continued function of the rail line.

Modest in scale, of utilitarian construction and modified, the OTR/PBC Crossing retains integrity of association and location, with lesser integrity in design and workmanship. Integrity of materials and feeling have been reduced, due to changes and upgrades over time.

The OTR/PBC Crossing at NE King Way is considered not eligible *individually*, as it lacks any specific association or design necessary to meet NR eligibility criteria. The OTR/PBC Crossing is considered ELIGIBLE under Criterion A as an element of the linear Oregon Trunk Railway district.

Description of project scope, and nature and extent of impacts:

The Pilot Butte Piping Project as proposed by COID, currently in the environmental impact study phase, proposes to pipe all or most of the Pilot Butte Canal for approximately 18-21 miles from NE 17th Street in Redmond, Oregon the diversion point from the Deschutes River, in Bend, Oregon. The project would follow the existing PBC alignment in the segment south of NE King Way, including the OTR/PBC Crossing, and includes converting the existing open canal to a covered, piped, feature. The existing OTC/PBC elevated crossing at the intersection of the OTR and the PBC south of NE King Way would become an elevated single track on grade.

Finding of Effect and justification:

The proposed piping of the PBC project will have an effect on the Oregon Trunk Railway through the removal of the existing bridge slab that carries the rail line over the canal south of NE King Way. The existing concrete footings and abutments of that feature will remain, with the new 11'-0" diameter set within the canal channel and covered with fill, to the existing railroad grade. The existing center support will be removed, to allow installation of the piping. The project will result in the modification of the existing feature by infilling the canal and transforming the crossing to create a continuation of the rail line at grade at its intersection with the piped Pilot Butte Canal.²

The proposal will have a physical and visual effect on the Oregon Trunk Railway, transforming this section of the historic right-of-way from a crossing to, visually, a simple continuation of the rail corridor. The original, historic, abutments are anticipated to remain, below the fill, but that is dependent upon final design.

An analysis of effect finds that while the project as proposed will have an effect on a historic resource, the Oregon Trunk Railway, resulting in visual and physical modifications to this short portion of the right-of-way, it does not impact any character defining feature of the resource and will not, in any significant manner, impact the Criterion A significance of the linear district as defined. As a result, the modification of the OTR/PBC Crossing will have

¹ The index in Speroff's classic study does not include any mention of COID or the Pilot Butte Canal. Irrigation is only mentioned in an early chapter, documenting the resources and development pressures that led to an interest in extending a railroad into the Central Oregon region as a whole.

² This submittal addresses impacts to the OTR only. Impacts of the project as proposed to the PBC will be documented separately once the final design is determined.

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Property Name: Oregon Trunk Railway-PBC Crossing (NE King Way)	Street Address: NE King Way/PBC Canal	City, County: Redmond, Deschutes Cty, OR
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effect on the Oregon Trunk Railway Linear District, a resource determined eligible for listing on the National Register of Historic Places but that effect is **NOT ADVERSE**.

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OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM
Individual Properties

Property Name: Oregon Trunk Railway-PBC Crossing (NE King Way)	Street Address: NE King Way/PBC Canal	City, County: Redmond, Deschutes Cty, OR
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View: OTR/PBC Crossing, Looking SE (G. Kramer, August 2024)



View: OTR/PBC Crossing, Looking West from OTR Line (G. Kramer, August 2024)

OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM
Individual Properties

Property Name: Oregon Trunk Railway-PBC Crossing (NE King Way)	Street Address: NE King Way/PBC Canal	City, County: Redmond, Deschutes Cty, OR
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View: OTR/PBC Crossing, Looking NW (G. Kramer, August 2024)



View: OTR/PBC Crossing, Looking South (G. Kramer, August 2024)

[illegible]

VICINITY MAP: OTR/PBC Railroad Crossing
(USGS “Redmond” 7.5m Topo Map, 2024, annotated)

OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM
Individual Properties

Property Name: Oregon Trunk Railway-PBC Crossing (NE King Way)	Street Address: NE King Way/PBC Canal	City, County: Redmond, Deschutes Cty, OR
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AERIAL VIEW: OTR/PBC Railroad Crossing
(GoogleEarth View, 2021, annotated)

OREGON INVENTORY OF HISTORIC PROPERTIES
SECTION 106 DOCUMENTATION FORM
Individual Properties

Property Name: Oregon Trunk Railway-PBC Crossing (NE King Way)	Street Address: NE King Way/PBC Canal	City, County: Redmond, Deschutes Cty, OR
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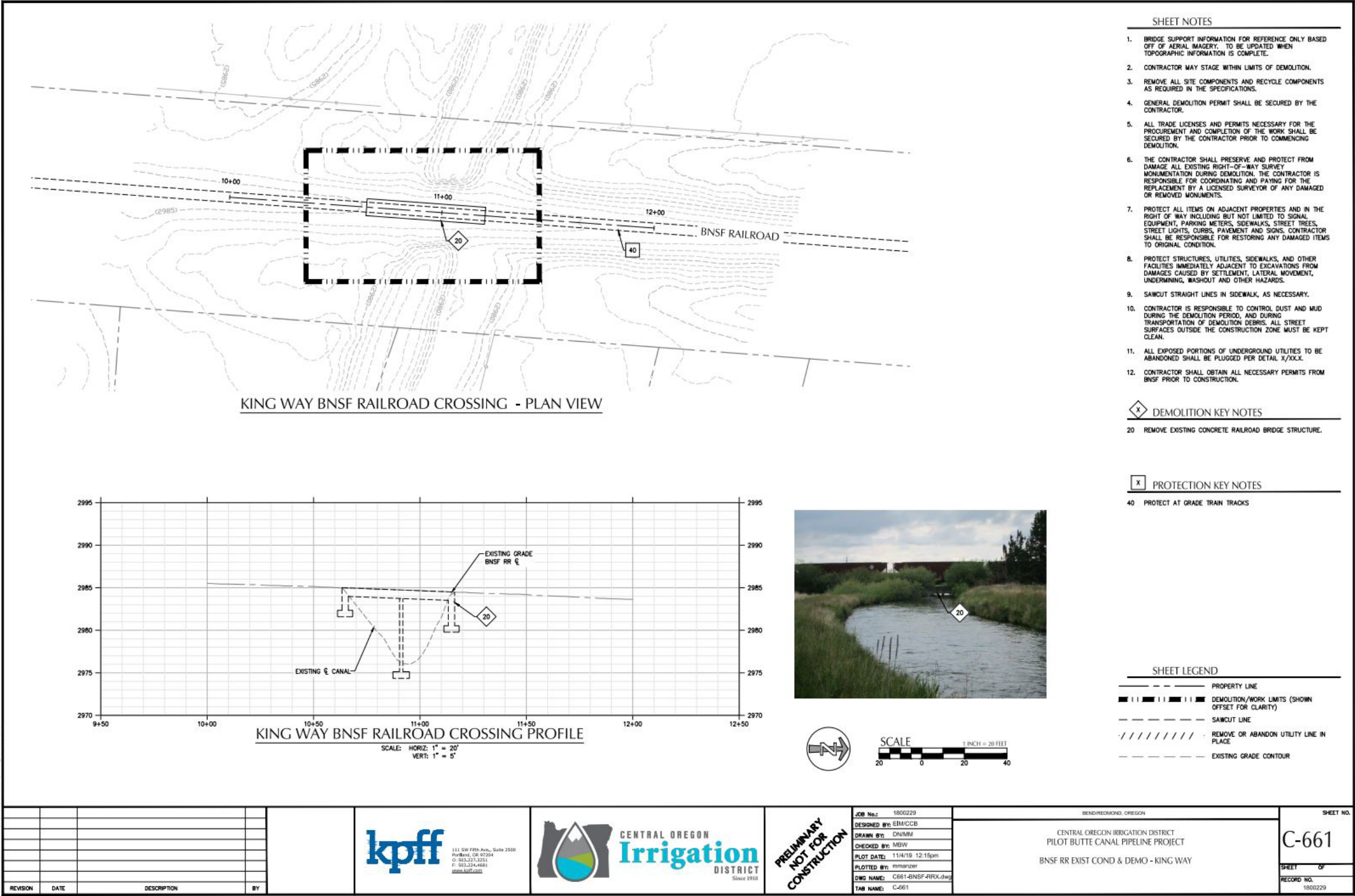
HISTORIC AERIAL VIEW: OTR/PBC Railroad Crossing, c1945
(US Army Corps of Engineers Image, annotated)

OREGON INVENTORY OF HISTORIC PROPERTIES

SECTION 106 DOCUMENTATION FORM

Individual Properties

Property Name: Oregon Trunk Railway-PBC Crossing (NE King Way)	Street Address: NE King Way/PBC Canal	City, County: Redmond, Deschutes Cty, OR
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KING WAY BNSF RAILROAD CROSSING - PLAN VIEW

KING WAY BNSF RAILROAD CROSSING PROFILE

SCALE: HORIZ: 1" = 20'
VERT: 1" = 5'

Scale

1 INCH = 20 FEET

20 0 20 40

File: N:\p\p\2018\1800229-CDD-Pipe-Cond-Piping\CAD\PLT\1800229-C661-BNSF-RRX.dwg TAB: C-661	22x34 Plotted: 11/14/19 at 12:15pm By: mmanizer
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REVISION	DATE	DESCRIPTION	BY

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F: 503.224.4881
www.kpff.com

CENTRAL OREGON Irrigation DISTRICT

Since 1938

PRELIMINARY NOT FOR CONSTRUCTION

JOB No.: 1800229

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CHECKED BY: MBW

PLOT DATE: 11/14/19 12:15pm

PLOTTED BY: mmanizer

DWG NAME: C661-BNSF-RRX.dwg

TAB NAME: C-661

BEND/REDMOND, OREGON

CENTRAL OREGON IRRIGATION DISTRICT
PILOT BUTTE CANAL PIPELINE PROJECT
BNSF RR EXIST COND & DEMO - KING WAY

SHEET NO.

C-661

SHEET OF

RECORD NO.
1800229

Proposed: Pilot Butte Canal Piping Project, BNSF RR Condition and Profile (NE King Way), KPFF, 2019