Water Quality Technical Memorandum Addendum

New Pueblo Freeway Phase 1

CDOT Project No. IM 0251-156

Project Control No. 12831

Colorado Department of Transportation

March 2012

In some cases, information in this Environmental Technical Report may have been refined or updated as preparation of the FEIS advanced. In such cases, the information and conclusions presented in the FEIS supersede all previous background material included in this Technical Report.

Exhibits

1 Phase I Northern Avenue

2 Phase I Ilex Street

Purpose of Addendum

The purpose of this addendum is to update the conceptual drainage design to address interim and ultimate designs for Phase 1 of the New Pueblo Freeway project. Phase 1 consists of constructing bridges at Northern Avenue and Ilex Street, as illustrated in Exhibits 1 and 2, respectively. This addendum updates the information presented in the *Water Quality Technical Memorandum*, New Pueblo Freeway, dated September 2005.

Proposed Conditions

Both the Northern Avenue and Ilex Street project areas would require storm drain to convey runoff to water quality treatment facilities. Drainage would not be piped across the bridges. Instead, a water quality feature would be needed near each bridge end.

The Northern Avenue Bridge project is within the Pond 4A and 4B onsite basin areas. The conceptual design consists of the pond locations and approximately 4,000 feet of storm drain system discharging north into the Arkansas River. Neither of the ultimate ponds 4A and 4B would be constructed in Phase I because Interstate 25 (I-25) will not be relocated until the ultimate project is constructed. In the Phase I interim condition, storm drains would be constructed within Northern Avenue on each side of the proposed bridge over I-25.

The west-side storm drain would convey runoff to an existing storm drain running north under Routt Avenue. Water quality would be provided by proposed proprietary facilities located immediately upstream of the existing Routt Avenue drain. The proprietary system could also treat runoff from the section of Northern Avenue located just west of the project limits between Routt and Evans Avenues. Credit for this treatment of non-project runoff could be applied to compensate for other project areas that may prove impractical to treat.

The proposed storm drain on Northern Avenue east of I-25 would discharge to an existing swale to the east of the Union Pacific Railroad (UPRR) near I-25. This swale along the east side of the UPRR would need to be deepened to accept runoff originating from Northern Avenue east of Taylor Avenue. Discharge to the swale would require an agreement with the railroad. Because a wider Northern Avenue would create more runoff into the swale, an agreement with the railroad may require construction of a detention pond. Should detention be required, a pond would be constructed within the existing Northern Avenue alignment between Rio Grande and Taylor Avenues.

A proprietary or vault system would still be needed to treat runoff from the proposed frontage road connecting Rio Grande Avenue to Taylor Avenue. The frontage road storm drain would release into the ditch along the UPRR. Again, use of the ditch would require an agreement with the railroad. The interim elements could be incorporated into the ultimate outfall system.

The Ilex Avenue Bridge project is within the Pond 7 and 8 onsite basin areas. The original location for Pond 7 is not feasible with the modified alignment. Existing I-25 will remain in place on the original Pond 7 site through the Phase I construction period. Pond 7 is proposed to be relocated to the infield area of the Ilex Ramp.

Pond 8A would be constructed north of the Burlington Northern Santa Fe (BNSF) railroad spur between I-25 and Santa Fe Avenue. If the site should prove too steep to place a pond, a proprietary or vault system could be used. This system would discharge into the Arkansas

River tributary (the river's historic alignment), which flows parallel to the railroad spur and into Runyon Lake.

Pond 8, which was to be located east of I-25 between the BNSF railroad spur and the Arkansas River tributary, is not likely to be feasible because the required pipe below the railroad spur would be too low to outlet into the Arkansas River tributary. The relocated Pond 7 would discharge to the tributary north of the BNSF railroad spur via approximately 1,000 feet of storm drain. Alternatively, the relocated Pond 7 could discharge into a new storm drain that would be constructed within Stanton Avenue. This storm drain would convey flow south and connect to an existing storm sewer in Locust Street.

Drainage from D Street and Clark Street west of Santa Fe Avenue would be treated using a proprietary system prior to discharging into the existing Santa Fe Avenue storm drain.

Summary

Coordination with the UPRR at Northern Avenue would be required. Construction of an optional detention pond east of I-25 within the existing Northern Avenue that is to be abandoned could minimize UPRR requirements. Coordination with the BNSF railroad may be required at Ilex Street. Right of way (ROW) may be required northwest of I-25 and the BNSF railroad spur unless a proprietary system is selected to treat runoff from I-25 north of the spur. Both Phase I areas are summarized below.

West of I-25, the Phase 1 Northern Avenue Bridge project can effectively be designed with interim elements within the public ROW. East of I-25, the project will need to coordinate with the UPRR for a drainage easement. The interim elements can discharge to existing storm systems and drainage swales. Drainage from the east side of the bridge can be treated and released to an existing swale flowing north along the I-25 corridor. Water quality features would be needed upstream of the existing storm system at the intersection of Routt Avenue and Northern Avenue. These water quality features could provide additional treatment of offsite flows to offset flow from other areas that may prove impractical to treat.

The Phase 1 Ilex Avenue Bridge project requires construction of two ponds. The construction of Pond 8A would require the purchase of property. Use of a proprietary system in place of constructing Pond 8A would not require the purchase of property. Coordination with the BNSF railroad would be needed if water from Pond 7 is released north into the Arkansas River tributary via a proposed storm drain under the existing railroad spur. (It should be noted that, at the time of this addendum, it is unconfirmed whether the railroad spur is abandoned.) An alternate outlet for Pond 7 that would convey drainage south under Stanton Avenue could be constructed.

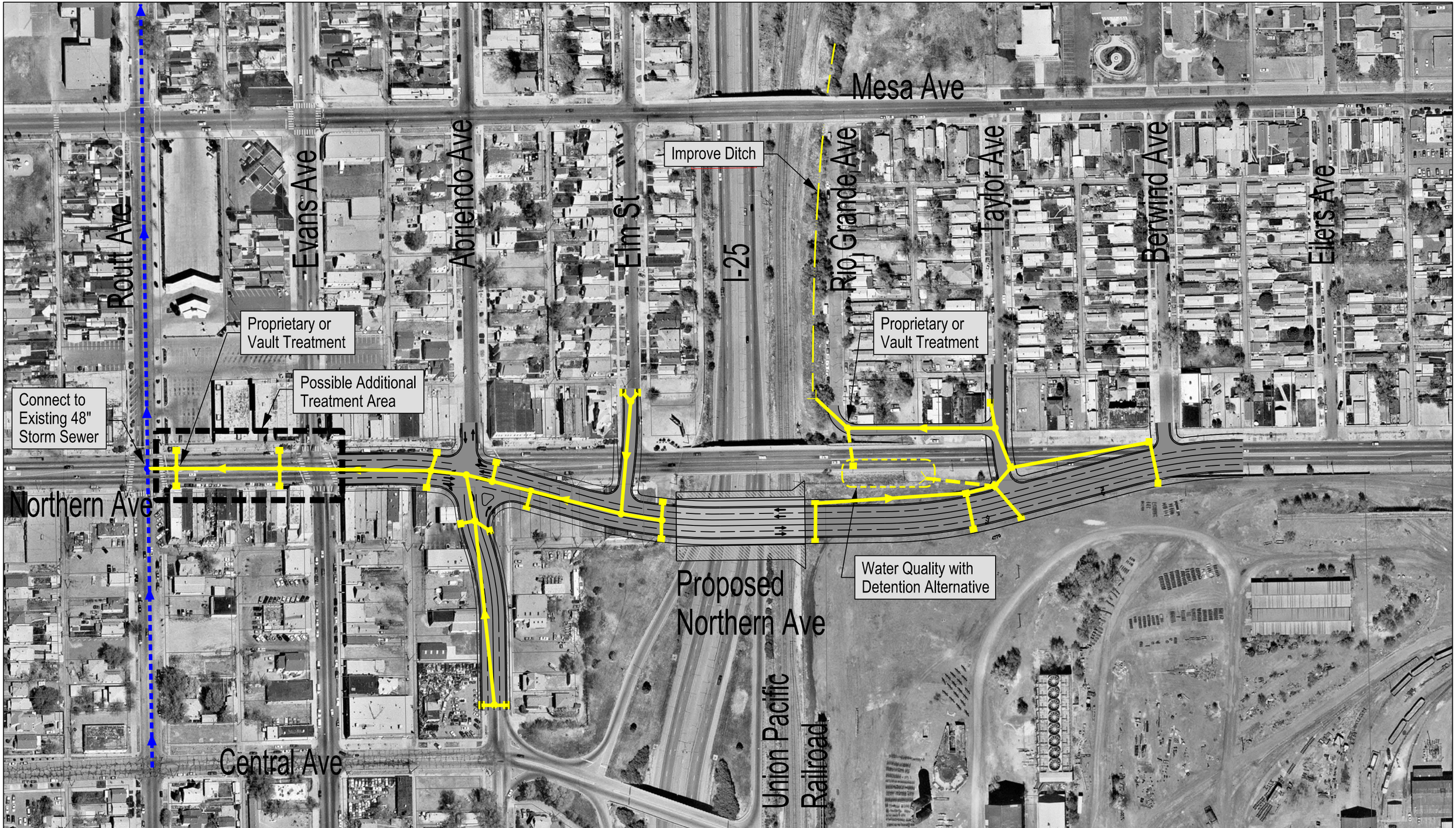

Exhibit 1 - Phase I
Northern Avenue

Draft

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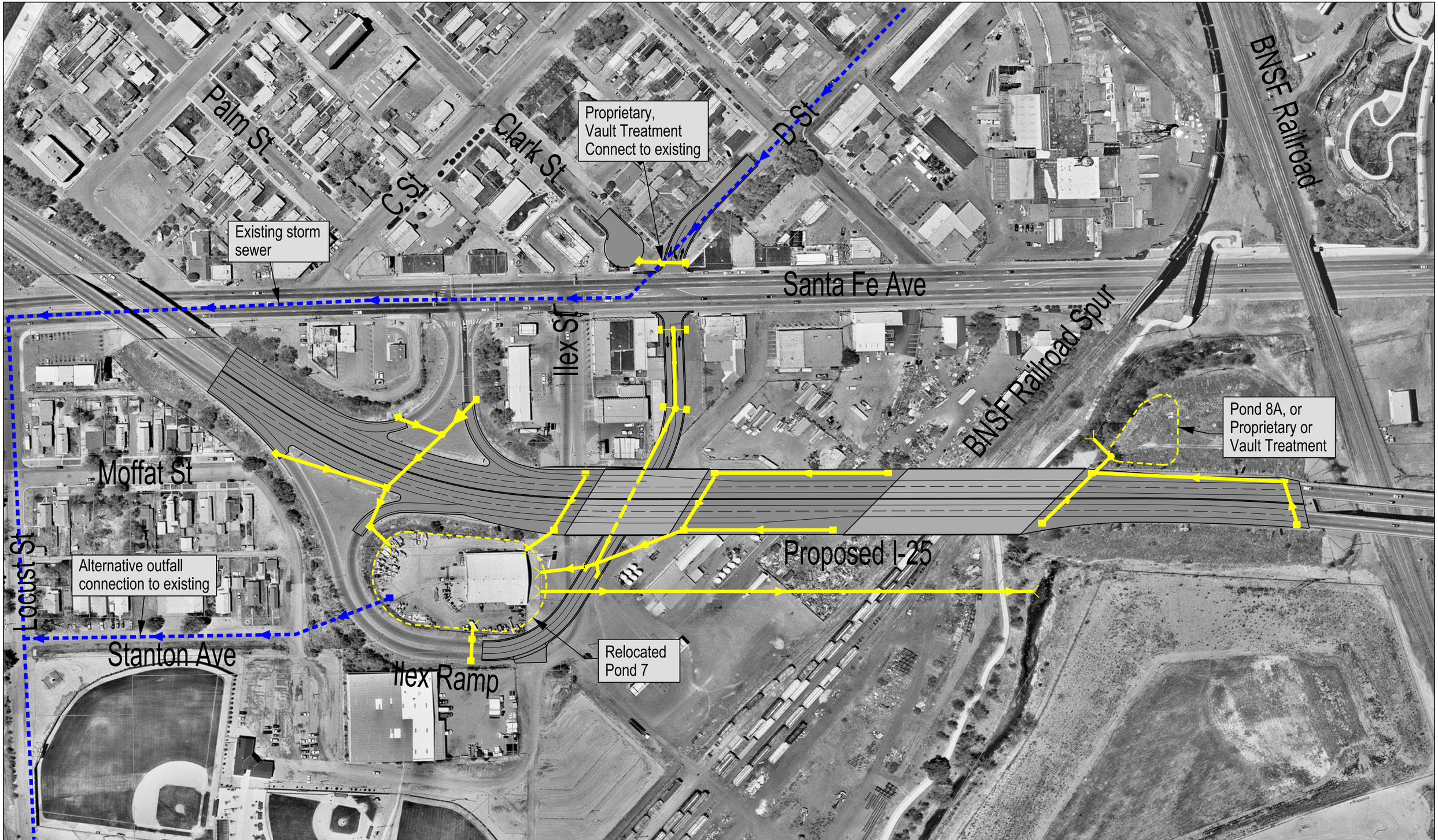

Exhibit 2 - Phase I
Ilex Avenue

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