

Attachment 1: Project Description and Area of Potential Effects Maps

DRAFT PROGRAMMATIC AGREEMENT
AMONG
THE FEDERAL RAILROAD ADMINISTRATION,
THE FEDERAL HIGHWAY ADMINISTRATION,
THE SURFACE TRANSPORTATION BOARD,
THE U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT, THE
U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT, THE CALIFORNIA
STATE HISTORIC PRESERVATION OFFICER,
THE NEVADA STATE HISTORIC PRESERVATION OFFICER,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
AND DESERTXPRESS ENTERPRISES, LLC
REGARDING
THE
BRIGHTLINE WEST – LAS VEGAS TO VICTOR VALLEY PROJECT IN BAKER,
YERMO, AND BARSTOW IN
SAN BERNARDINO COUNTY, CALIFORNIA AND LAS VEGAS AND PRIMM IN CLARK
COUNTY, NEVADA

Description of Proposed Undertaking, December 2022

Brightline West - Las Vegas to Victor Valley

Project Location and Description

Summary

The Brightline West - Las Vegas to Victor Valley project (Project) seeks to construct an approximately 174.36-mile-long, high-speed, passenger train line connecting Victorville, California, to Las Vegas, Nevada. Much of the fully grade-separated, passenger-only railroad would be constructed within the Interstate-15 (I-15) highway corridor. Two passenger stations would be built, one in Victorville, California, and the other in Las Vegas, Nevada; both would be located next to the I-15 corridor. The Project also includes ancillary operations and maintenance facilities, as well as utility corridors to link proposed electrical substations to external sources of power to accommodate the preferred electrically powered technology option.

The California segment of the Project is located between Victorville, California, and the California/Nevada state line. The Project's Area of Potential Effects (APE) in California encompasses 41,790.3 acres and is 139.98 miles long. The APE's Area of Direct Impact (APE-ADI) is a subset of the APE and covers approximately 3,607.2 acres. The APE-ADI is also referred to as the Limits of Disturbance (LOD). The Nevada segment of the Project is located between the California-Nevada state line near Primm, Nevada, and Las Vegas, Nevada. The Project APE in Nevada encompasses 10,344.6 acres and is 34.39 miles long. Geographic information systems parcel/land ownership data were obtained from Clark County and U.S. Bureau of Land Management (BLM) websites. The APE is depicted in Appendix A.

In January 2019, DesertXpress Enterprises, LLC, submitted project modifications, including a refined alignment between Victor Valley and Las Vegas (with a greater proportion within the I-15 median), modified station sites in Apple Valley and the Las Vegas area, and changes to ancillary facilities (FRA 2020).

Reference

FRA (Federal Railroad Administration). 2020. *Final National Environmental Policy Act Reevaluation for the DesertXpress Enterprises, LLC XpressWest High-Speed Passenger Train Victorville, California to Las Vegas, Nevada*. U.S. Department of Transportation, Federal Railroad Administration, Washington, DC. July.

Detailed Discussion

As the Project moves into final design and preparation to begin construction, additional Project modifications have been identified. Those modifications are described in Table 1.

Table 1. Project Modifications

Project Feature	Description of Modification(s)
Alignment	
Segment 1 Alignment (Apple Valley to Lenwood)	<p>The project modifications involve relocating the rail alignment between the Dale Evans Station and Sidewinder Road from the east side of I-15 to the I-15 median. As such, the entirety of the proposed Segment 1 rail alignment would be within the I-15 median, which would result in reduced impacts and would increase the efficiency of train operations. This design change is also favorable with Caltrans and FHWA because it would improve constructability of potential future I-15 improvements in either the northbound or southbound direction.</p> <p>Additionally, the Segment 1 rail alignment would be extended 1 mile south of the Victor Valley Station to access a maintenance-of-way track that would be constructed to move equipment from the median rail mainline to the maintenance-of-way facility. Constructing a median-running rail alignment in that area, south of the Dale Evans Parkway interchange, would require realignment of the existing I-15 northbound travel lanes approximately 50 feet east and reconstruction of the Dale Evans Parkway interchange, including the overpass. (This is described further under the Victor Valley Station description, below.) Additionally, the I-15 northbound travel lanes south of the Dale Evans Parkway interchange would be elevated approximately 25 feet to allow the maintenance-of-way track to pass from the median to the maintenance-of-way facility. All roadway work would occur within existing Caltrans right-of-way.</p>

Table 1. Project Modifications

Project Feature	Description of Modification(s)
Segment 5 Alignment (Primm to Sloan Road)	<p>Project modifications would relocate the rail alignment between Primm, Nevada, and north of Goodsprings Road near Jean, Nevada, from the east side of I-15 to the I-15 median. As such, the entirety of the Segment 5 rail alignment would be within the I-15 median, which would result in reduced impacts, would increase the safety and efficiency of train operations, and would improve project constructability for future I-15 widening in this portion of the alignment.</p> <p>Additionally, the previously considered braid structures near Primm and at the Union Pacific Railroad (UPRR) crossing are no longer needed and have been removed from the Project.</p>

Table 1. Project Modifications

Project Feature	Description of Modification(s)
Stations	
<p>Victor Valley Station (previously referred to as Dale Evans Station)</p>	<p>The prior project design evaluated in September 2020 considered collocating an operations, maintenance, and storage facility (OMSF) with the Victor Valley Station (previously referred to as the Dale Evans Station in the DesertXpress Final EIS and the September 2020 reevaluation), with a permanent footprint of approximately 300 acres. The project modifications include relocation of the vehicle maintenance facility (VMF), previously located as part of the Victor Valley Station, to a site on the west side of I-15 in Sloan, Nevada (described further below).</p> <p>The permanent footprint of the Victor Valley Station would remain unchanged. As noted above under the description of Segment 1, the project modifications include relocating the rail alignment into the I-15 median. To accommodate the median rail alignment, the Victor Valley Station layout has been revised to include the passenger boarding and alighting platforms as well as a maintenance-of-way track structure in the I-15 median. To provide the necessary footprint and access for the passenger platforms, the existing I-15 northbound lanes would be raised and moved east within the Caltrans right-of-way south of the Dale Evans Parkway interchange. Passengers would access station platforms using a walkway underneath the relocated I-15 northbound lanes.</p>
Ancillary Features	
<p>Freeway Ramp Realignments/Modifications</p>	<p>The prior project design included realignment of portions of approximately 17 existing I-15 on- and off- ramps to accommodate the rail line within the I-15 right-of-way. The project modifications include extending those on- and off-ramp realignments and ramp modifications and changing the location where those ramp realignments/reconstructions transition to the existing roadway/pavement. There are six locations where those proposed on- and off-ramp modifications would occur (from south to north):</p> <ul style="list-style-type: none"> • I-15 southbound ramps at Dale Evans Parkway • I-15 northbound ramps at Main Street in Barstow • I-15 northbound ramps and southbound ramps at East Primm Boulevard • I-15 southbound ramps at Goodsprings Road • I-15 southbound ramps at Sloan Road <p>The proposed modifications would be located primarily on previously evaluated project footprint within existing Caltrans, NDOT, and local rights-of-way along I-15. The modifications are the result of coordination with Caltrans and NDOT on final design details to update the modified median-running alignment to adhere to current safety design standards.</p>
<p>California Highway Patrol Emergency Crossovers</p>	<p>The prior project design included eight emergency crossovers along the alignment in California. The project modifications include two new emergency crossovers at Zzyzx Road and Halloran Springs. Additionally, five previously evaluated emergency crossovers in Segment 3 would be relocated; the crossovers near Coyote Lake Road, Basin Road, Baker, and both north and south of Halloran Springs. Emergency crossovers would be located mainly on the previously evaluated project footprint within existing Caltrans right-of-way.</p>

Table 1. Project Modifications

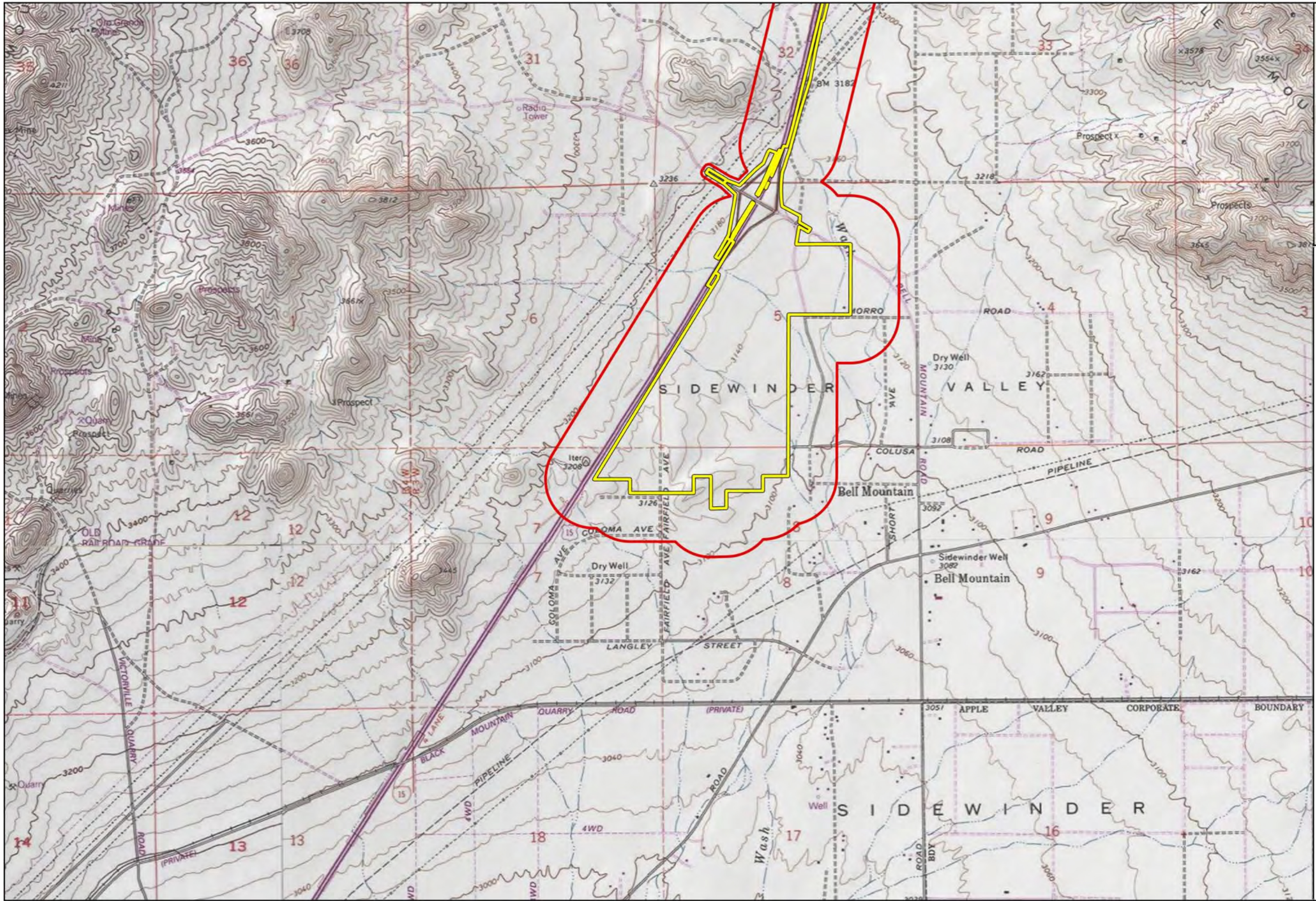
Project Feature	Description of Modification(s)
Roadwork	<p>The prior project design included roadwork at local interchanges and along the I-15 roadway at various locations. The project modifications include:</p> <ul style="list-style-type: none"> • Realigning the I-15 northbound lane approximately 50 feet east and raising the lane approximately 25 feet to accommodate the passenger platforms in the I-15 median, tail track for train storage, a pedestrian underpass for access to/from the platforms, and a maintenance-of-way access track for trains. Those roadwork improvements would occur along an approximately 1-mile portion of the I-15 northbound lane adjacent to the Victor Valley Station. • Additional roadwork at the Dale Evans Parkway interchange accessing the I-15 southbound ramps • I-15 median widening at Segment 5 to accommodate the modified median-running alignment • Raising the I-15 southbound lanes just south of the Sloan Road interchange to allow for tracks to exit the I-15 median under the southbound lanes and into the relocated VMF site. <p>The proposed project modifications also include small, on-road lane realignments along I-15 at Segment 6, near Silverado Ranch Boulevard and Blue Diamond Road.</p>
Culverts	<p>The prior project design included drainage and culvert work throughout the project limits. The project modifications include revised designs for three culverts and the addition of four culverts within Segment 5. The associated drainage and grading activities have also been modified accordingly.</p>
CEMEX Facility and Rail Connection	<p>A new connection to the existing CEMEX industrial rail track is proposed on the north side of Apple Valley, California, near the proposed Victor Valley Station. The connection would consist of a turnout off the existing CEMEX track and approximately 2 miles of new track along the east side of I-15 heading north, all within the Caltrans right-of-way. The current design includes a viaduct over the existing CEMEX bridge. Brightline West is working to reach agreement with CEMEX to reconstruct the existing CEMEX track railroad bridge over I-15 to allow the project rail alignment to run at grade underneath the railroad bridge.</p> <p>The proposed new connection would allow rail transport of construction materials such as track ballast, rail, ties, catenary poles, and other miscellaneous materials to the project site and would reduce the need for trucking construction materials to the project site.</p>
Ivanpah Traction Power Substation (TPSS)	<p>The prior project design included a substation and two options for utility line connections in the Ivanpah area. The current design utilizes only the north utility line option with minor adjustments that have been made in response to coordination with BLM and Southern California Edison.</p>
California Maintenance of Way Facility	<p>The prior project design considered the relocation of the California maintenance-of-way facility from Baker, California, to the I-15 median approximately 6 miles south of the California-Nevada state line, adjacent to the existing California Agricultural Inspection Station. The 25-acre facility was proposed to be utilized for passive equipment storage.</p> <p>The project modifications divide the maintenance-of-way facilities between the proposed new site at Sloan and the Victor Valley Station area.</p>
Las Vegas Vehicle Maintenance Facility (VMF)	<p>The project design evaluated in the DesertXpress Final EIS included an OMSF very near to the original Victorville Station location west of I-15 and included facilities for maintaining and storing trains. Project modifications evaluated in</p>

Table 1. Project Modifications

Project Feature	Description of Modification(s)
	<p>2020 relocated the Victorville Station to the south side of I-15 at Dale Evans Parkway in Apple Valley. At that time, it was proposed the OMSF would be collocated with the Victorville Station, and a separate location for vehicle maintenance and storage had not been identified.</p> <p>As currently proposed, the project modifications would relocate the vehicle maintenance and storage activities to a site located in Segment 6 west of I-15 and south of Sloan Road. An additional freight track corridor would connect the VMF to the adjacent Union Pacific Railroad.</p> <ul style="list-style-type: none"> • Brightline West has filed a connection request and is coordinating with UPRR regarding the connection design and operational concepts. UPRR has granted preliminary approval of the proposed rail connection, which would be subject to additional design development. <p>The relocated VMF and adjacent UPRR connection would require 239 acres of permanent footprint and 127 acres of temporary footprint and include:</p> <ul style="list-style-type: none"> • Storage and staging tracks and overhead catenary system from which trains would be mobilized for daily operations • Appurtenances associated with the VMF, including but not limited to a train car wash station, a train performance monitoring station, an operations control center, a power substation and distribution lines, utility connections, circulation system, site control, fencing, and parking <p>The VMF would be a permanent workplace for approximately 100 employees related to either maintaining the Brightline West train fleet or performing other functions such as driving the trains. The VMF would be located on land under BLM jurisdiction and would, therefore, require a right-of-way grant lease from BLM.</p>
<p>Temporary Construction Areas (TCAs)</p>	
<p>TCAs are areas that would be utilized for construction staging and storage. No permanent project features would be installed in TCAs, and the TCAs would be restored/vacated upon completion of construction. The modified Project includes an additional 202 TCAs located along the alignment. The additional 202 TCAs would add approximately 1,492 acres of temporary footprint, which does not include the 127 acres of total temporary footprint required for constructing the Las Vegas VMF and UPRR connection. The additional TCAs would be located primarily within existing Caltrans or NDOT right-of-way adjoining permanent facilities to be constructed in the I-15 corridor.</p>	

Appendix A

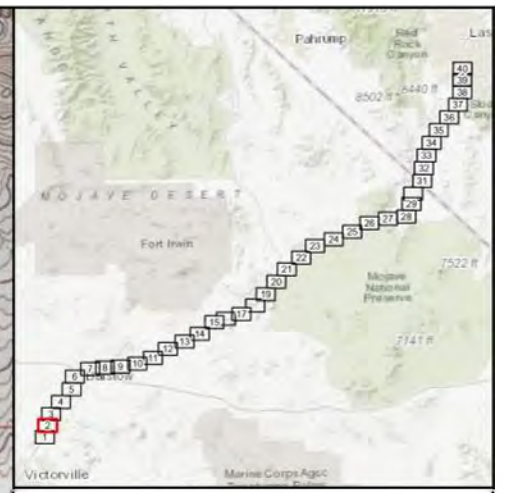
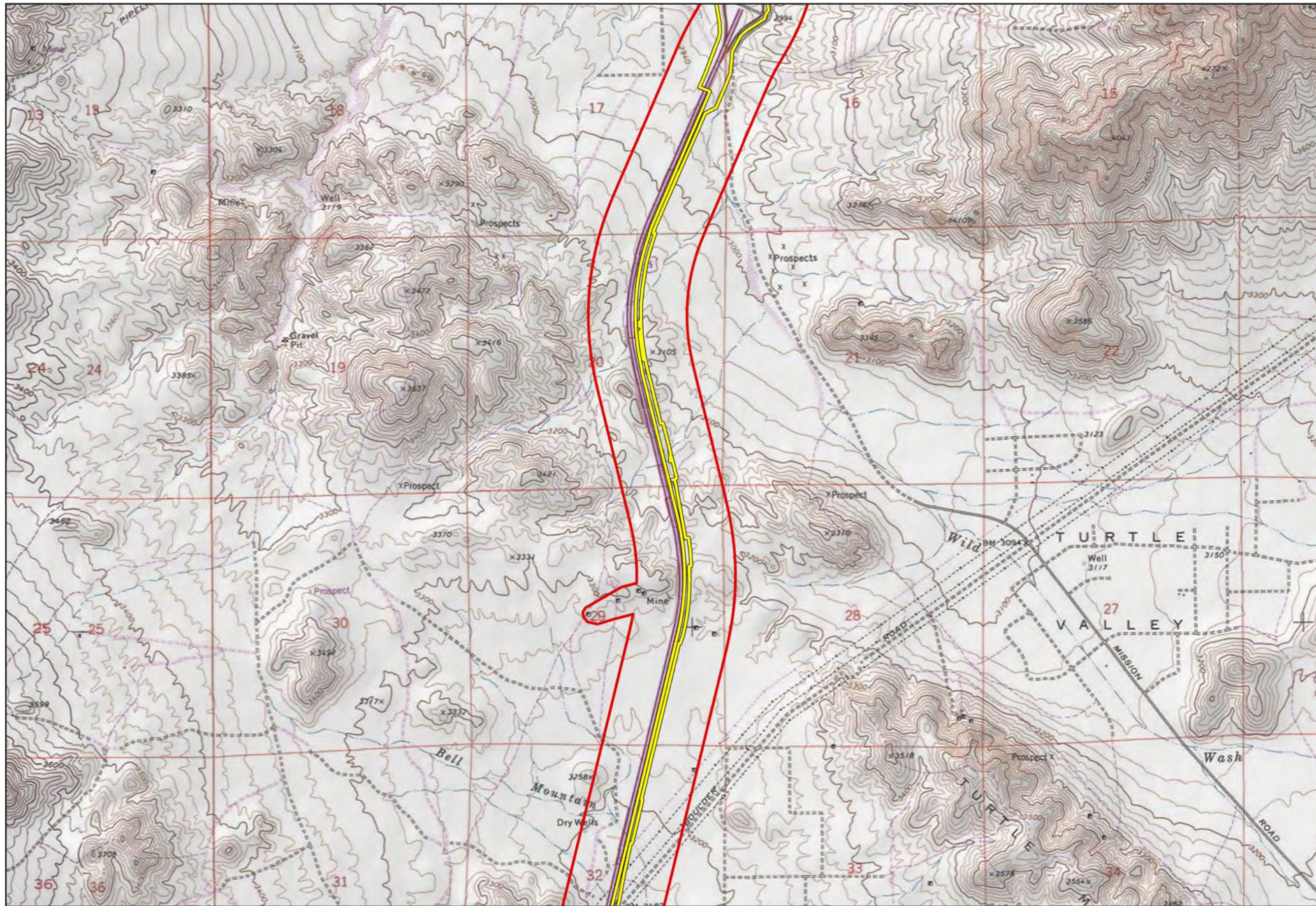
Area of Potential Effects



Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

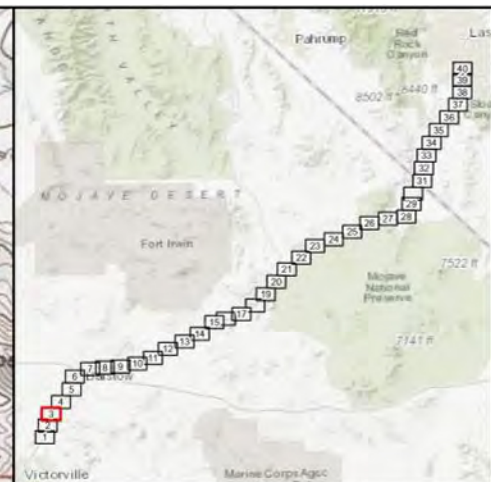
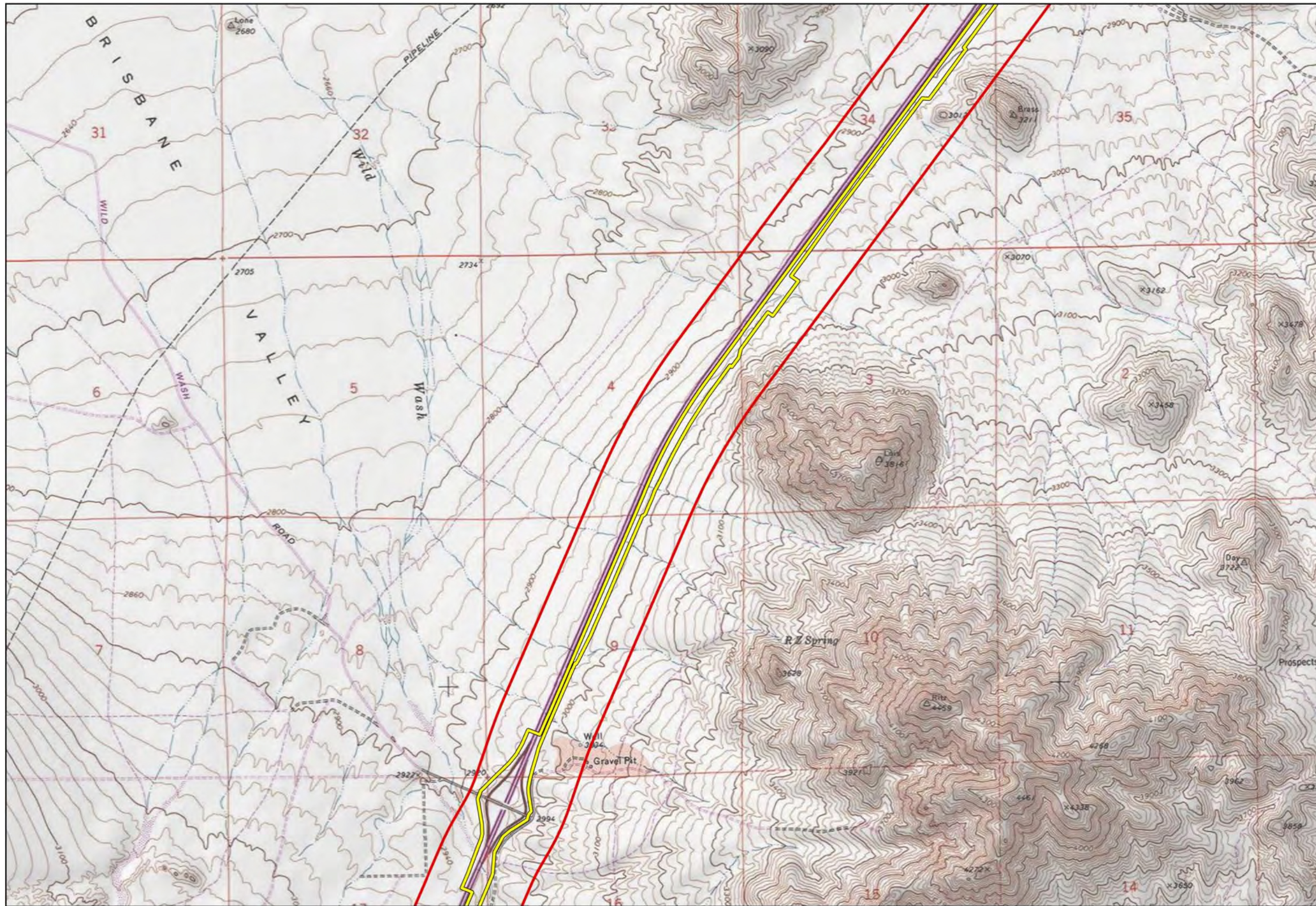


Legend
 Area of Potential Effect
 Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

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 Scale: 1:24,000

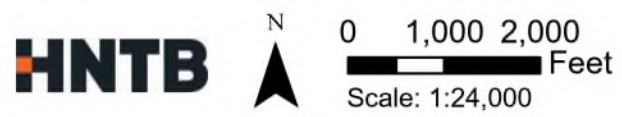
Appendix A - Sheet 2 of 40
Project Vicinity - APE and LOD
XpressWest

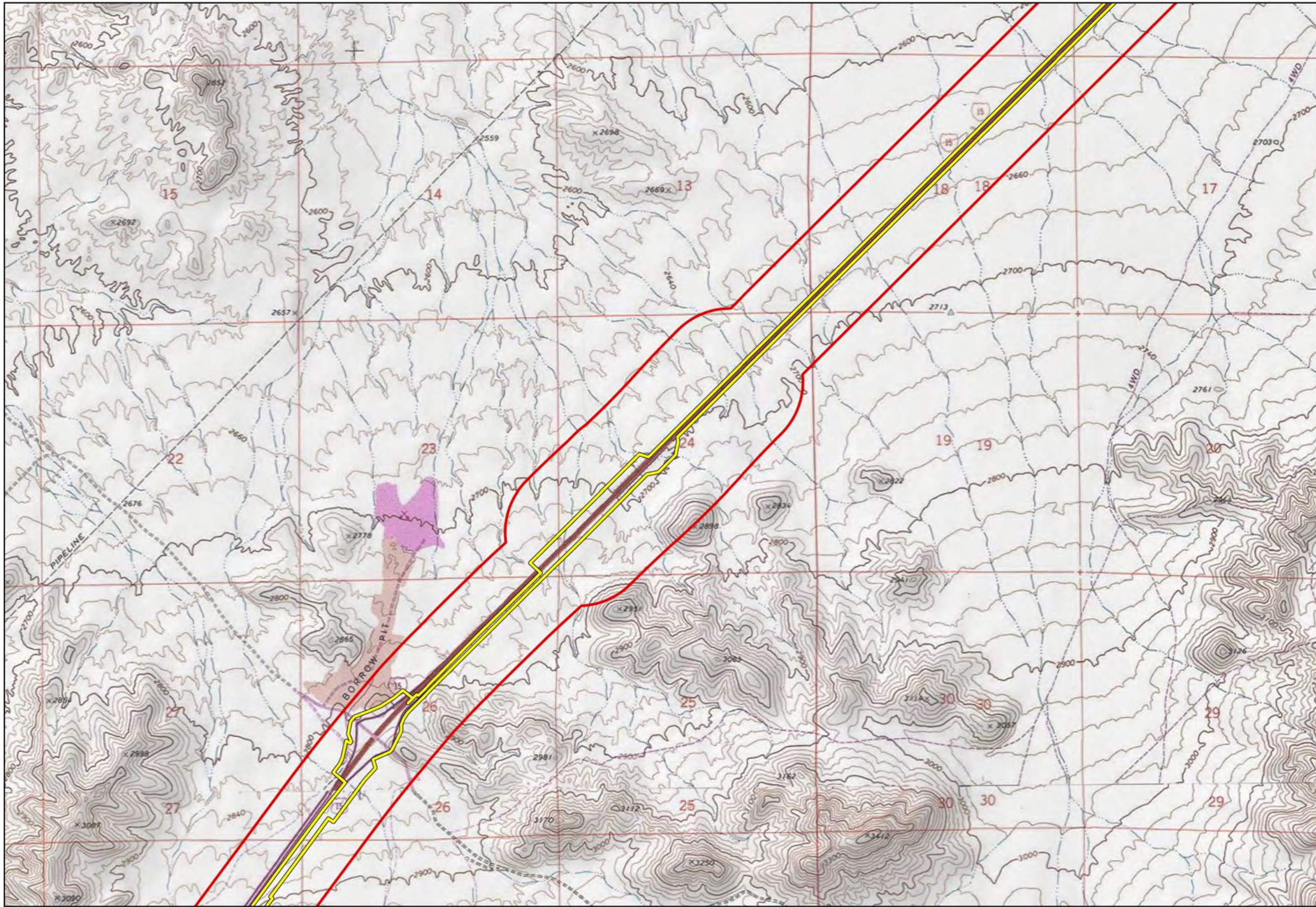


Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

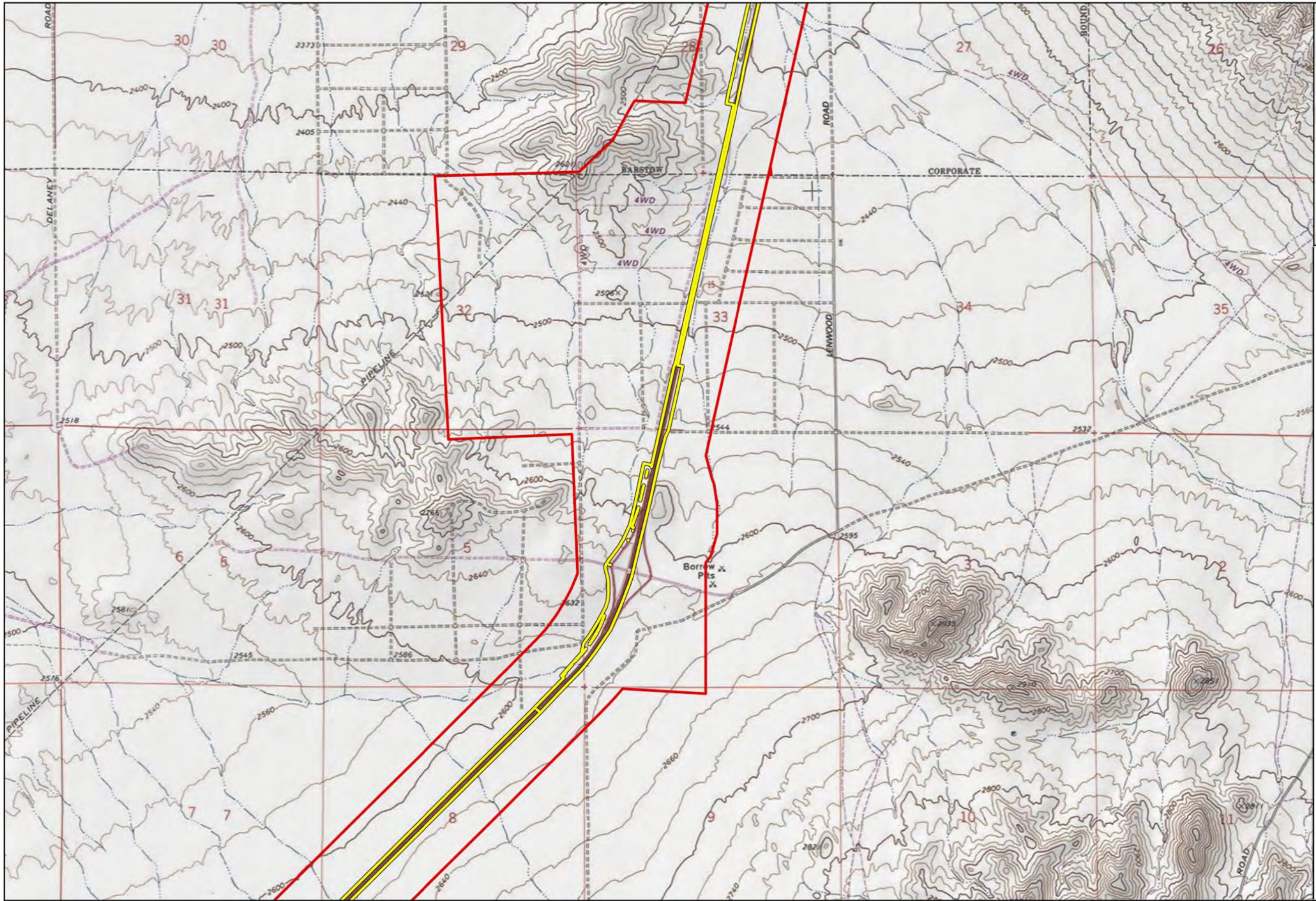




- Legend**
- Area of Potential Effect
 - Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



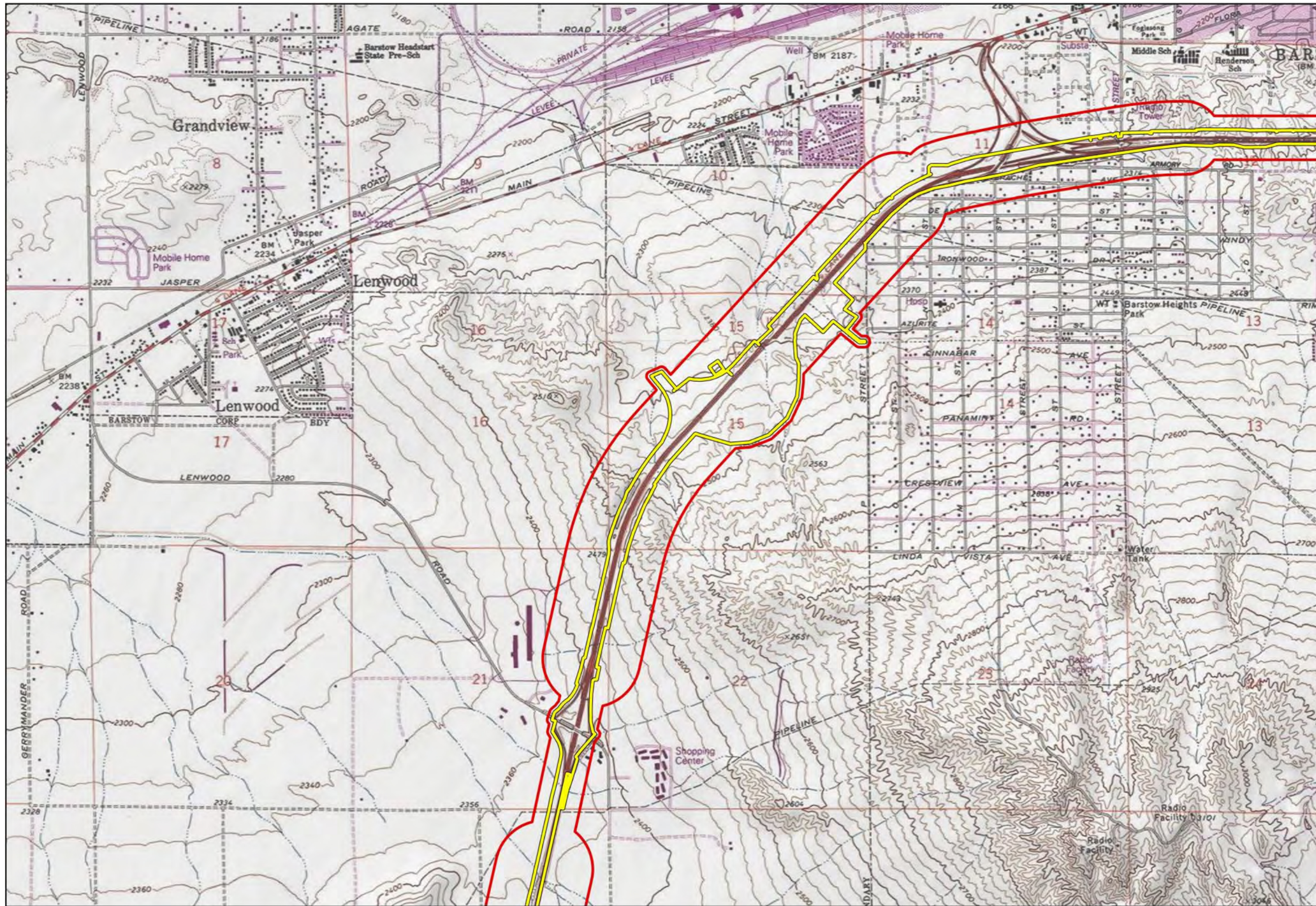


Legend
 [Red Outline] Area of Potential Effect
 [Yellow Outline] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

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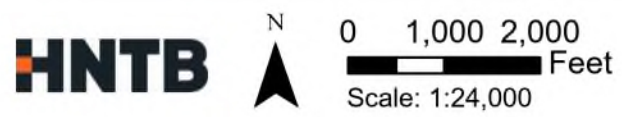
Appendix A - Sheet 5 of 40
Project Vicinity - APE and LOD
XpressWest



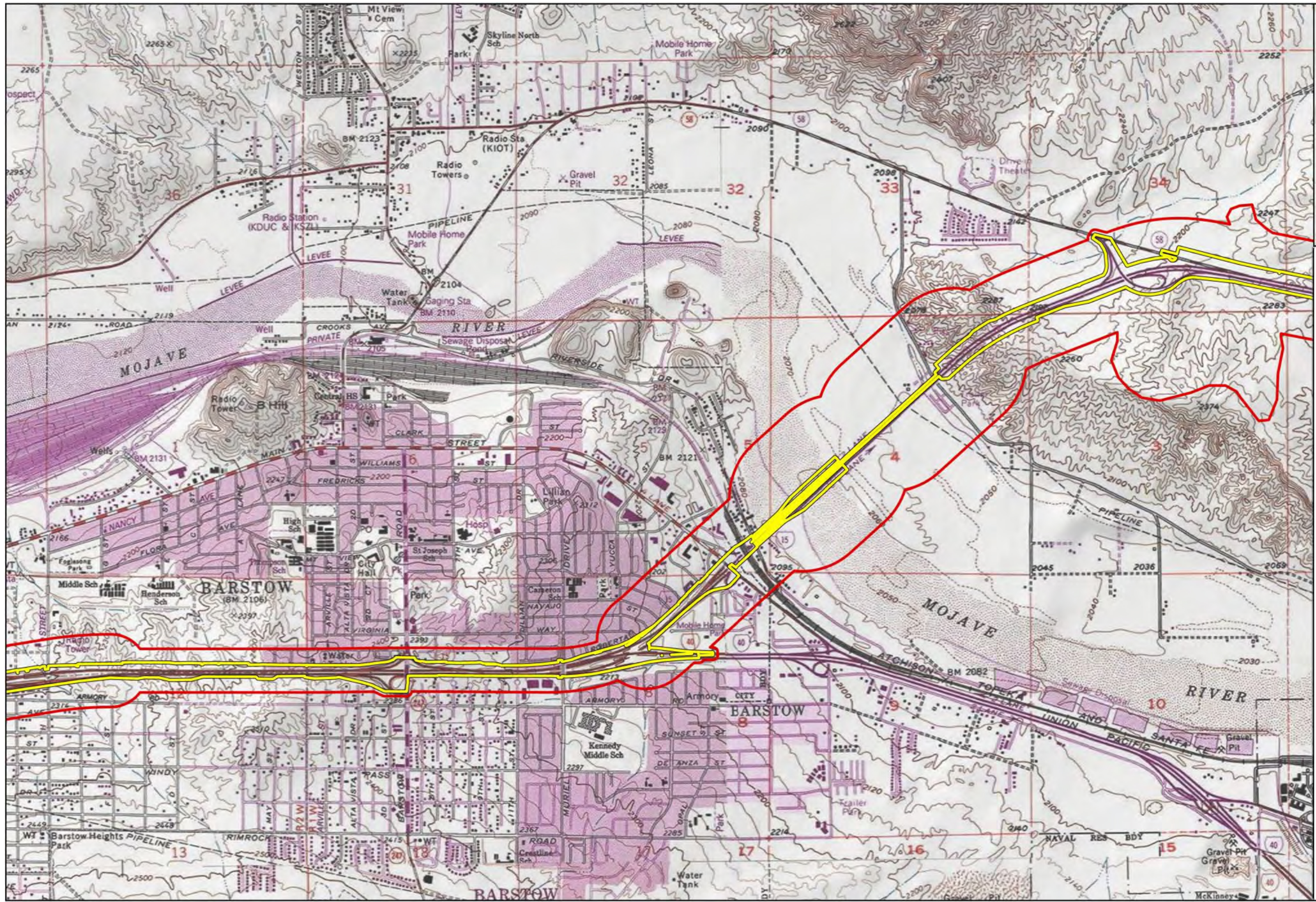
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- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 6 of 40
Project Vicinity - APE and LOD
XpressWest



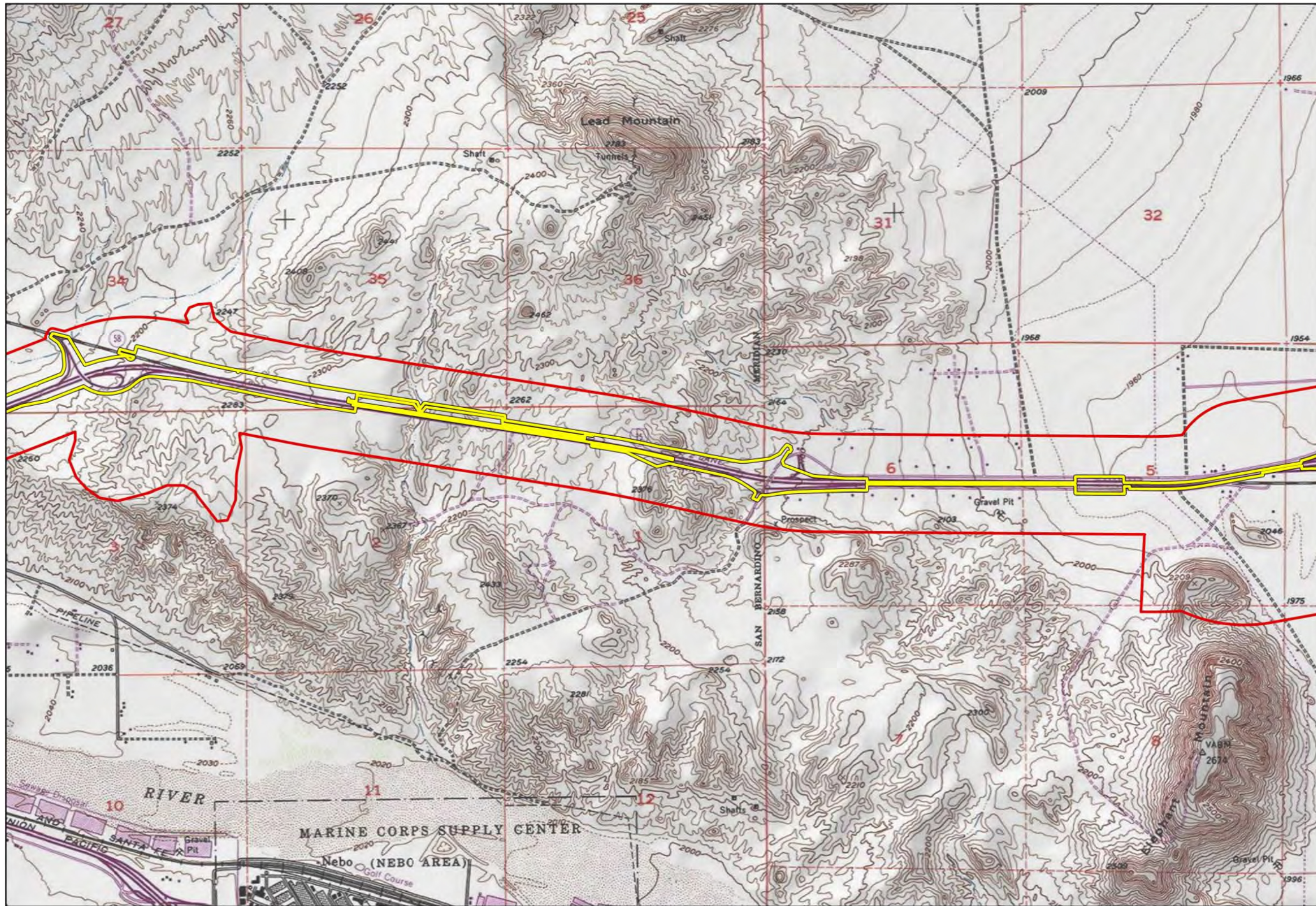
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- ▬ Area of Potential Effect
- ▬ Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

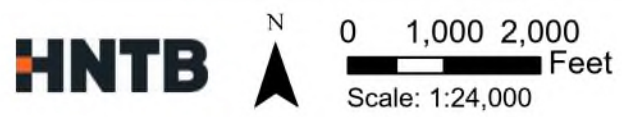


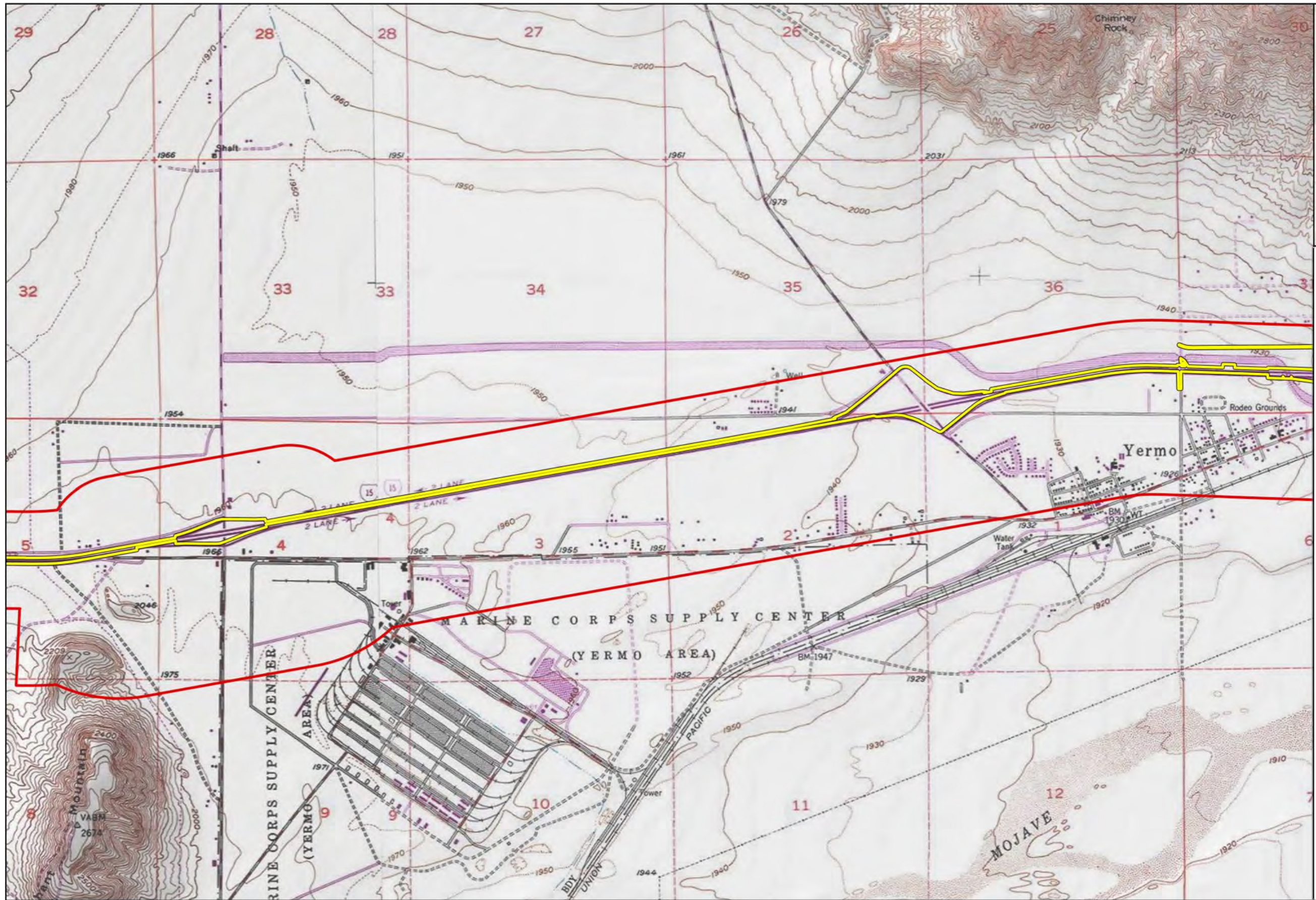
Appendix A - Sheet 7 of 40
Project Vicinity - APE and LOD
XpressWest



Legend
 Area of Potential Effect
 Limits of Disturbance

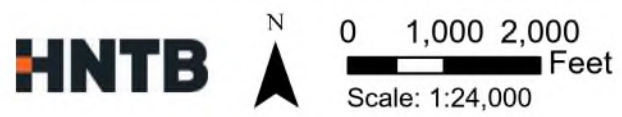
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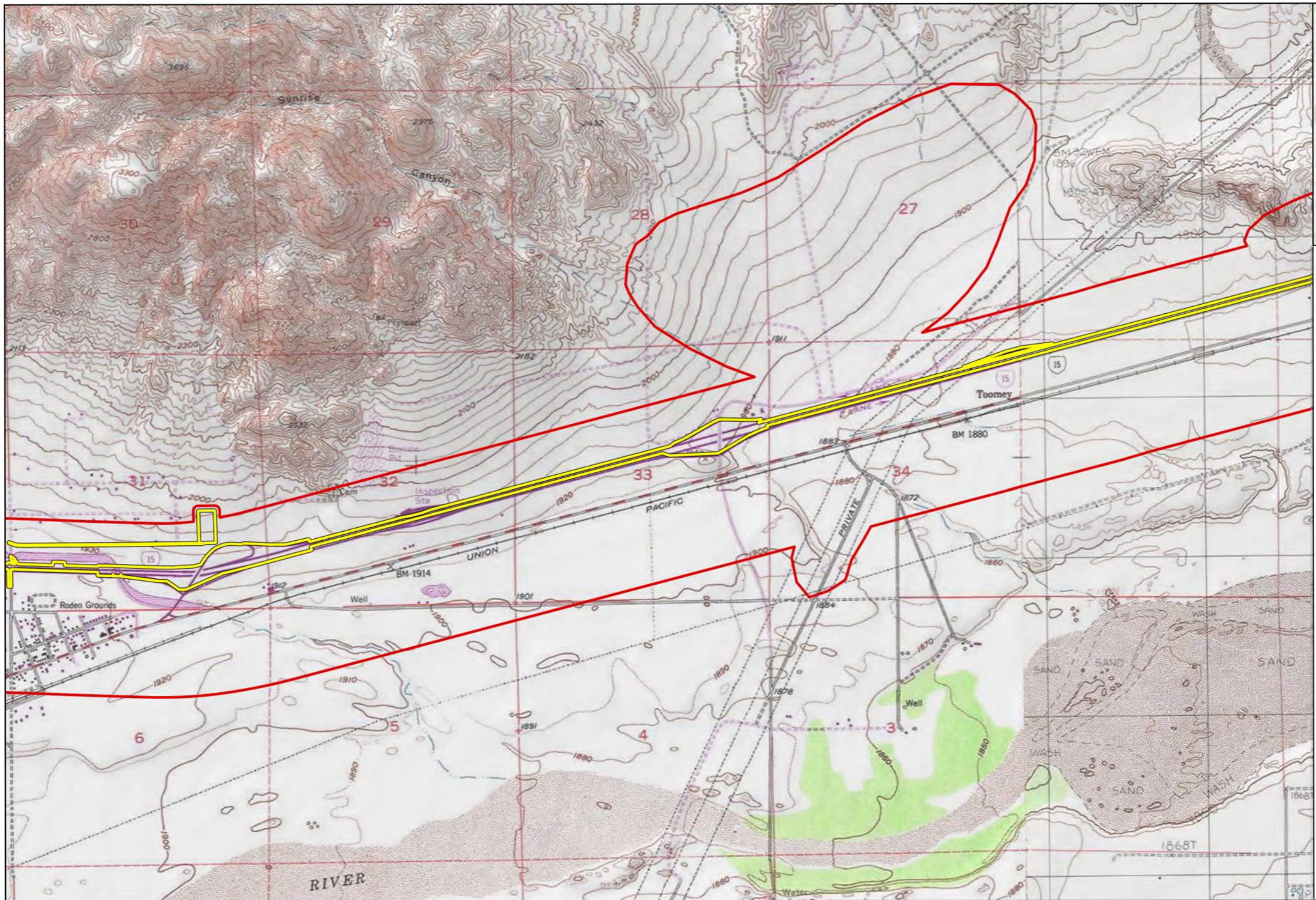




Legend
 Area of Potential Effect
 Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020





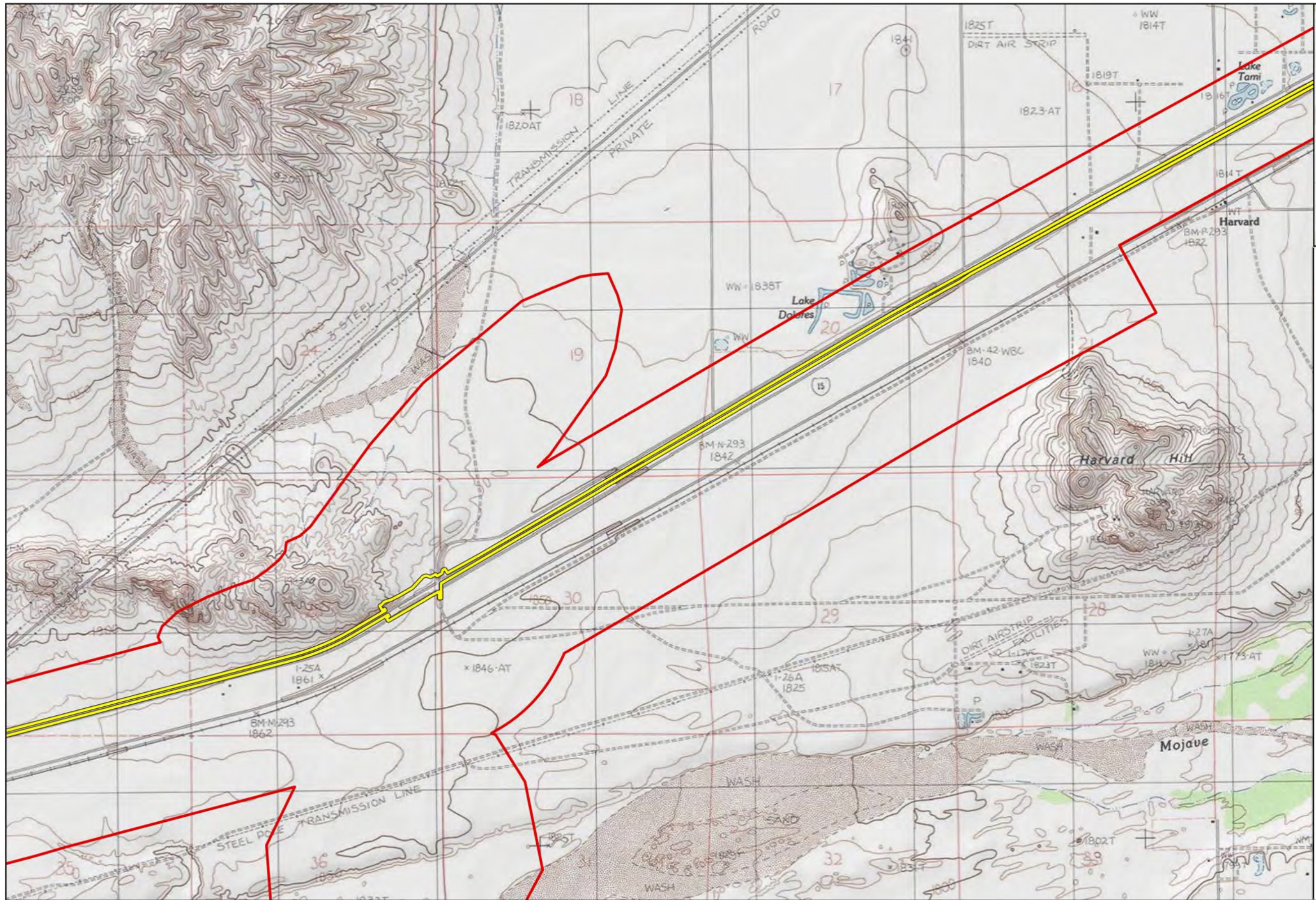
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

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 Scale: 1:24,000

Appendix A - Sheet 10 of 40
Project Vicinity - APE and LOD
XpressWest



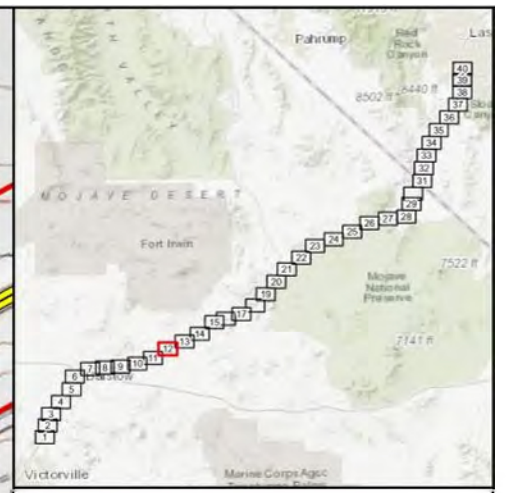
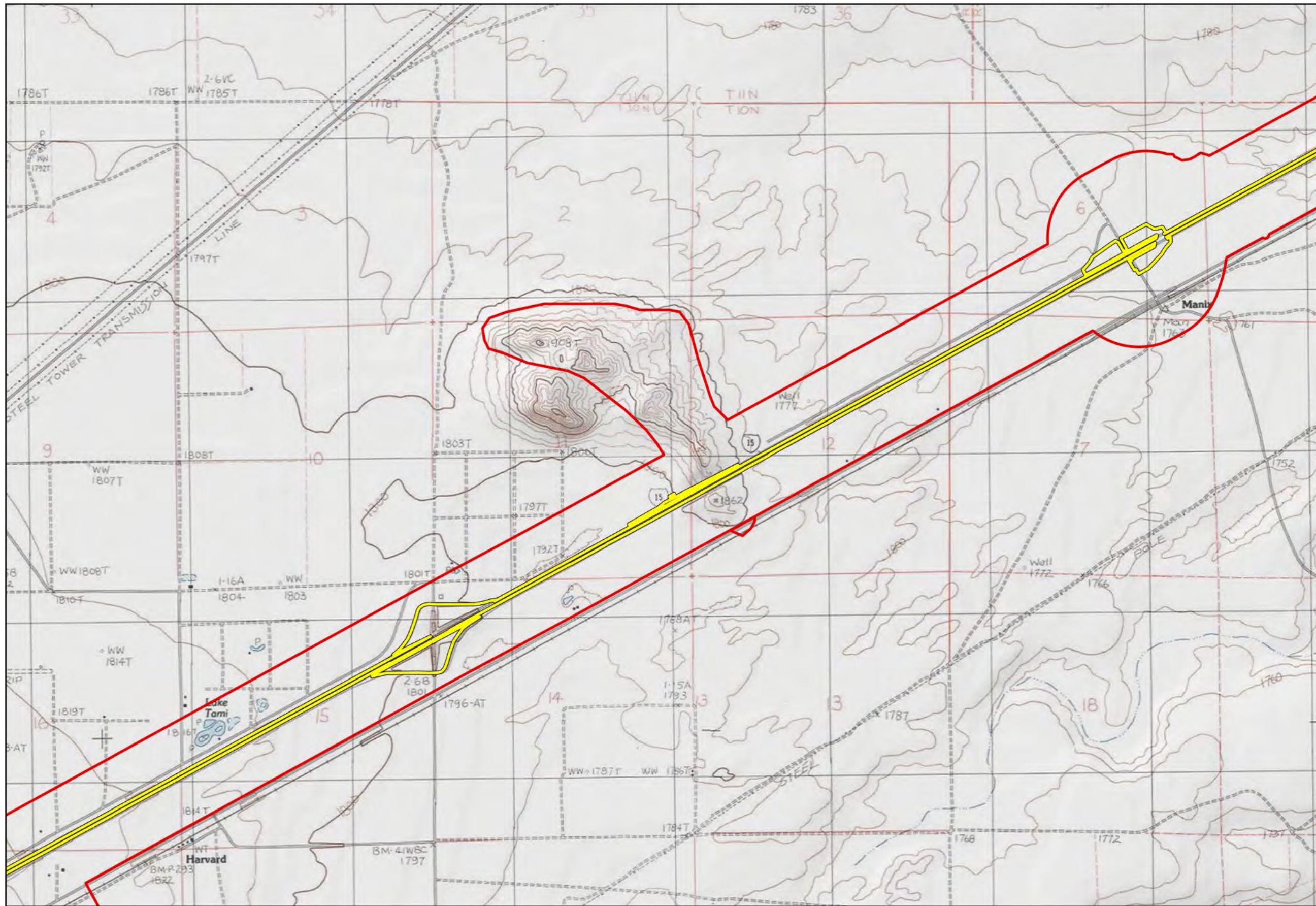
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- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

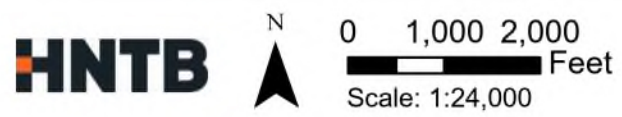


Appendix A - Sheet 11 of 40
Project Vicinity - APE and LOD
XpressWest

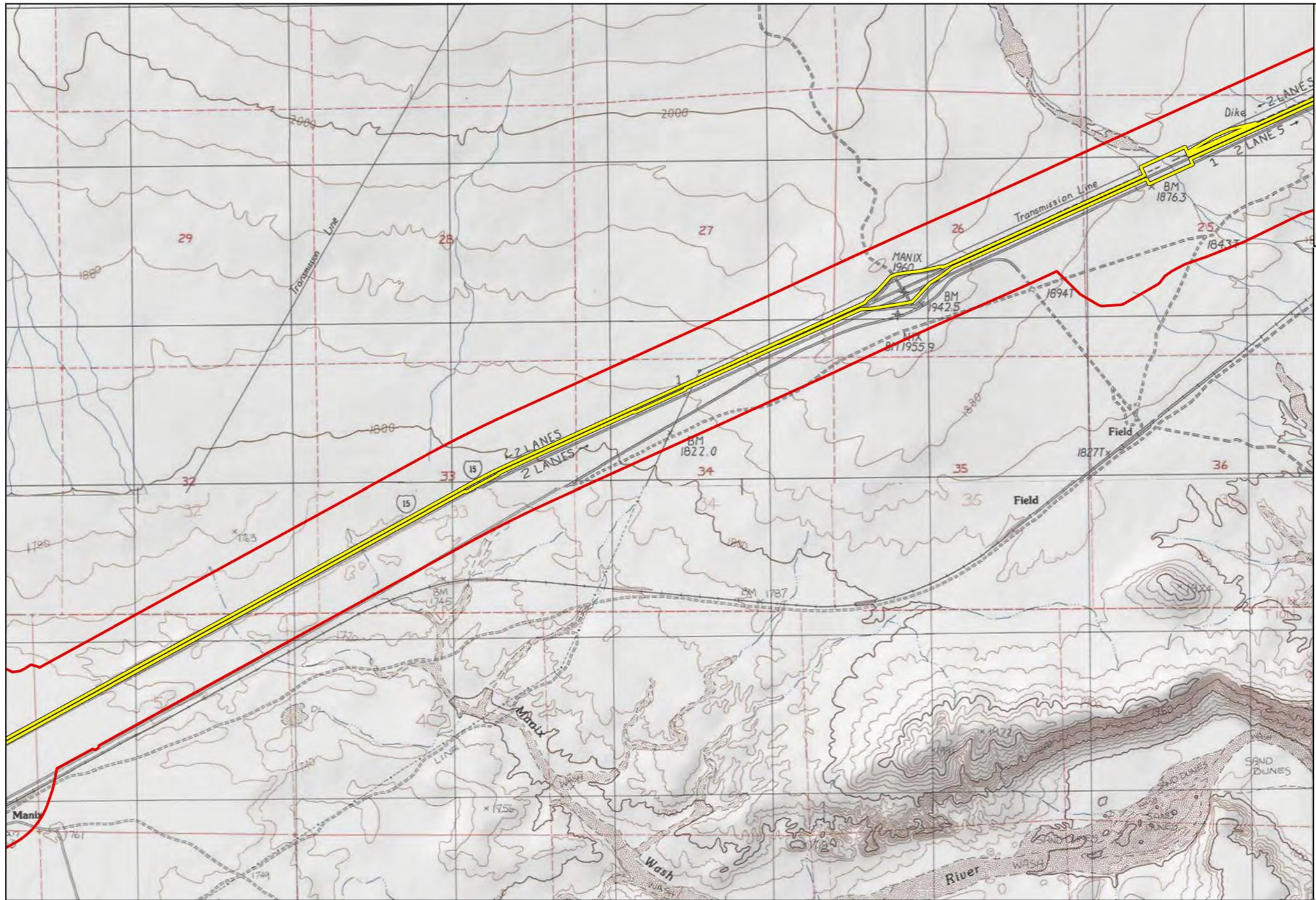


Legend
 [Red Line] Area of Potential Effect
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Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 12 of 40
Project Vicinity - APE and LOD
XpressWest

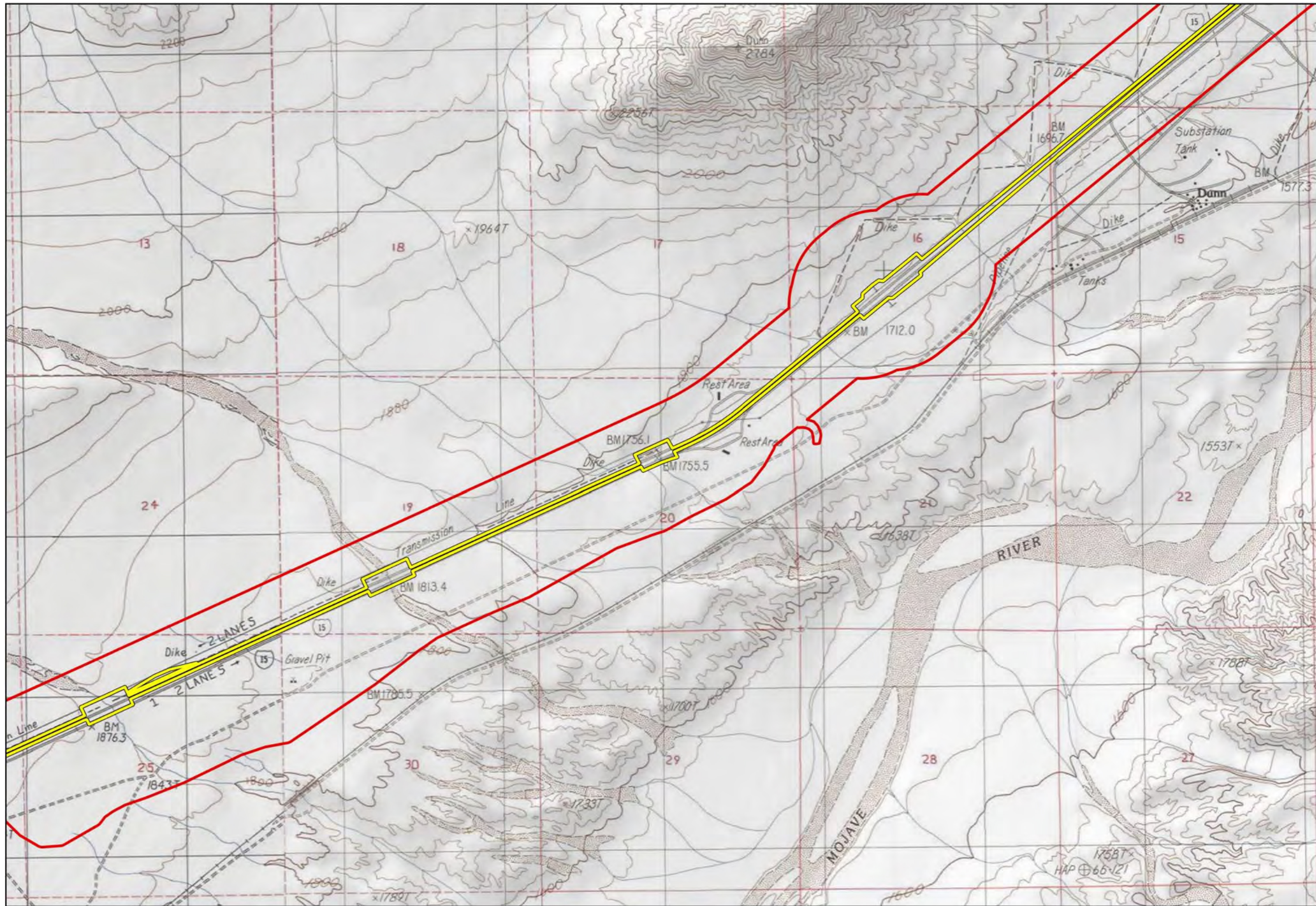


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▭ Area of Potential Effect
▭ Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

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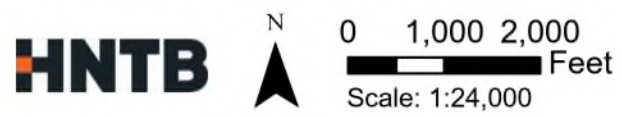
Appendix A - Sheet 13 of 40
Project Vicinity - APE and LOD
XpressWest



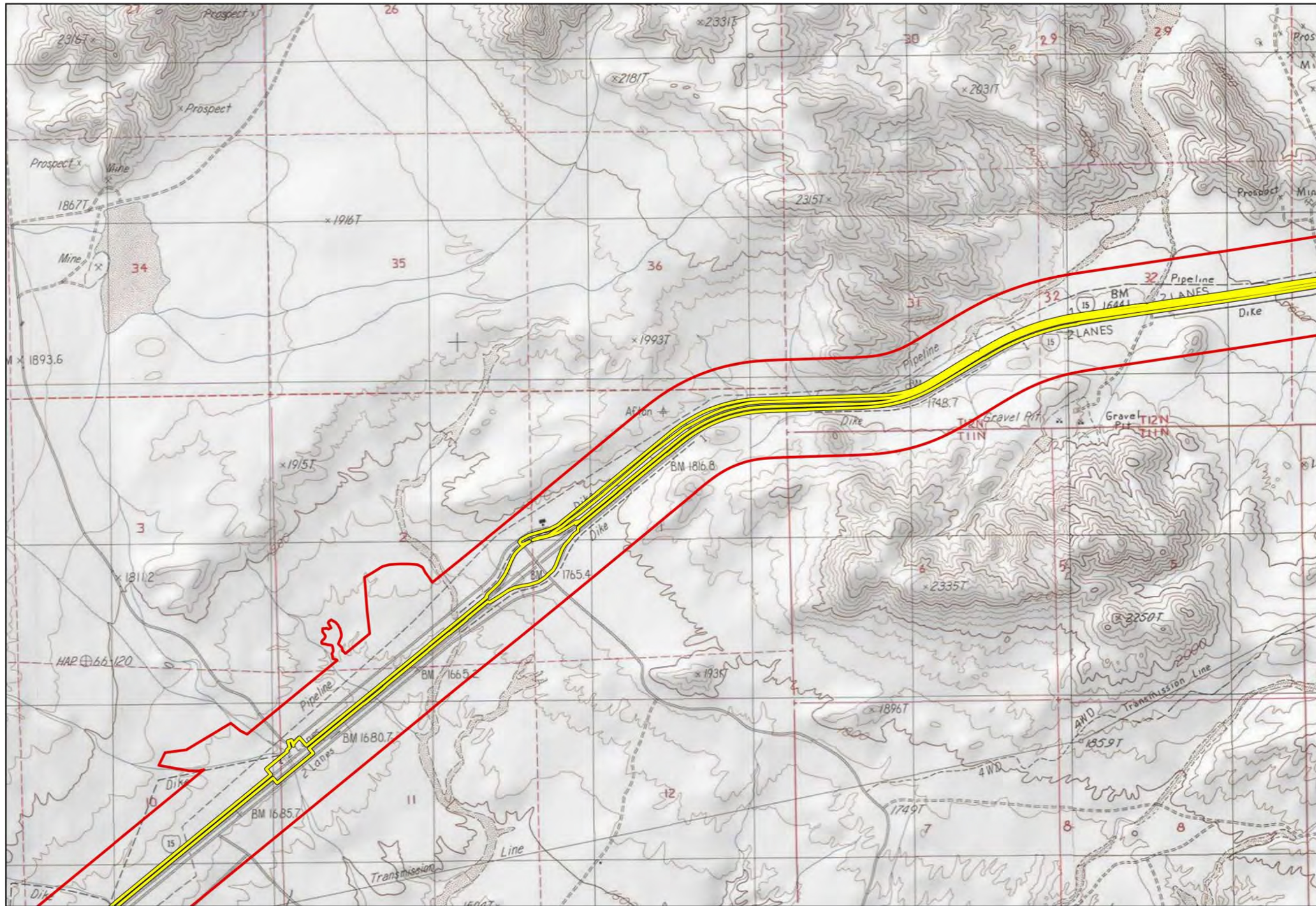
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- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

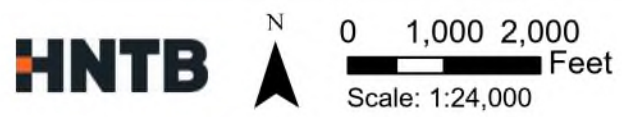


Appendix A - Sheet 14 of 40
Project Vicinity - APE and LOD
XpressWest

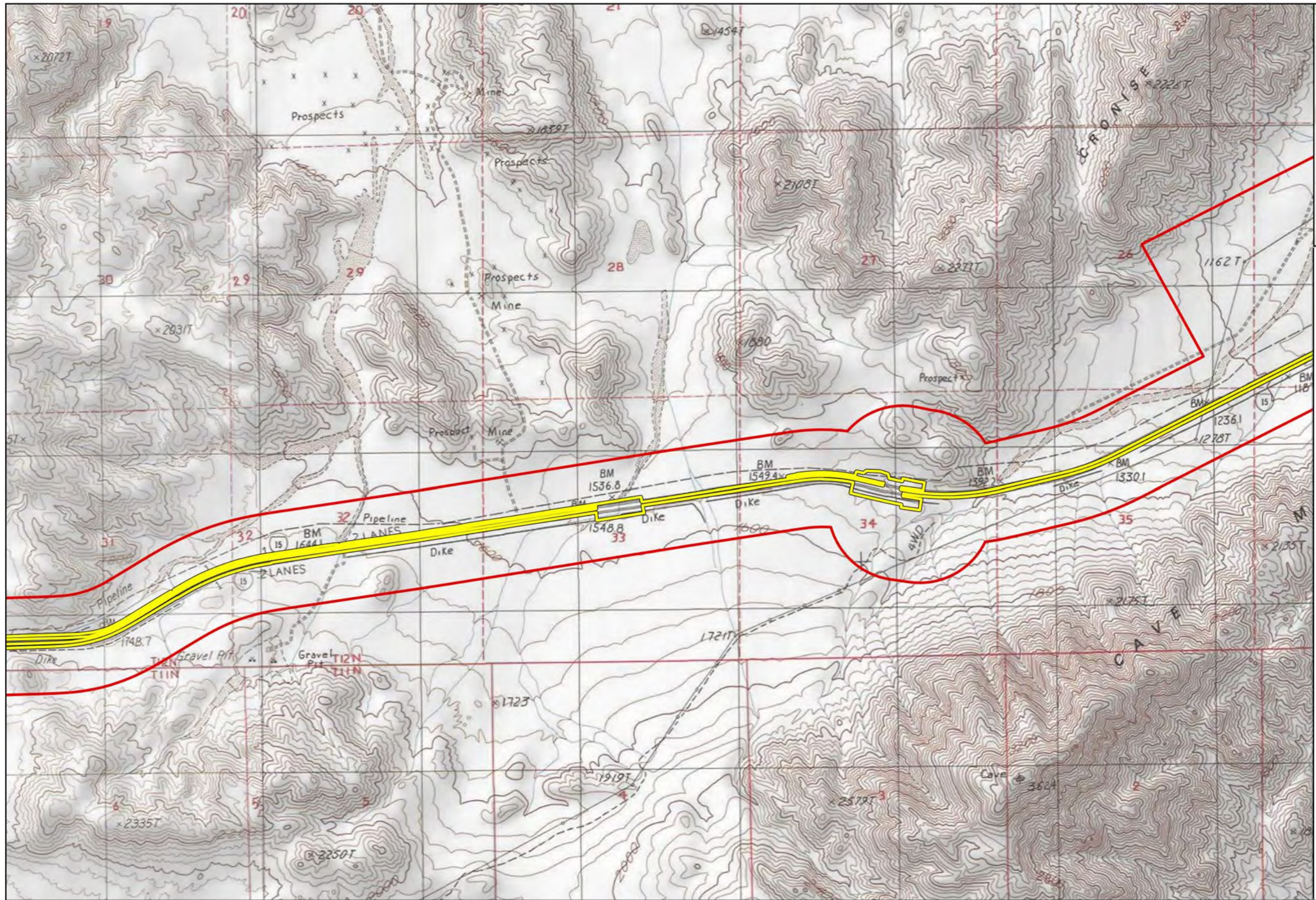


Legend
 [Red Line] Area of Potential Effect
 [Yellow Line] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 15 of 40
Project Vicinity - APE and LOD
XpressWest

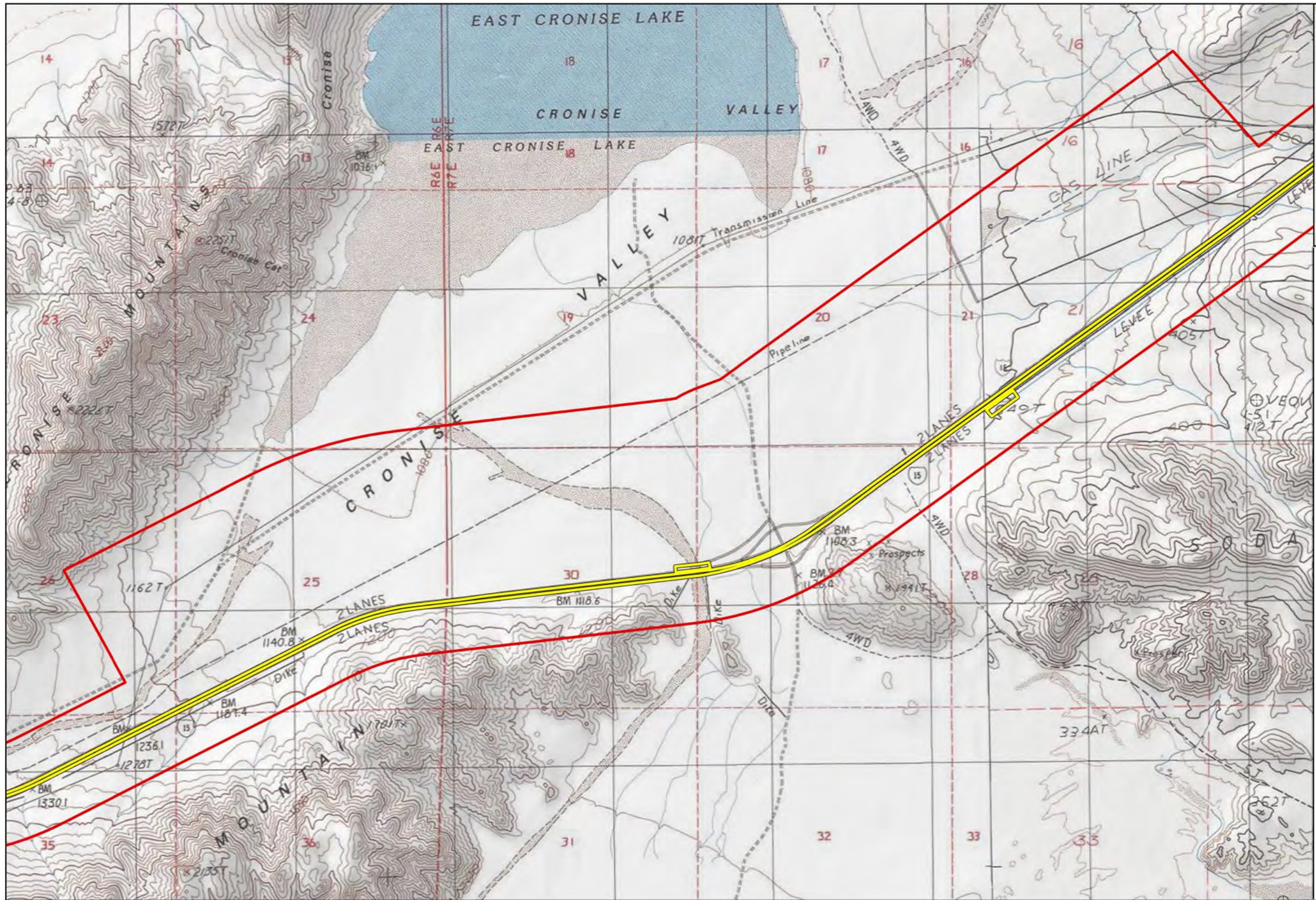


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 [Yellow Line] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



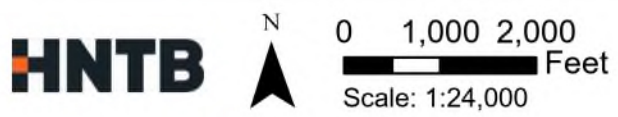
Appendix A - Sheet 16 of 40
Project Vicinity - APE and LOD
XpressWest



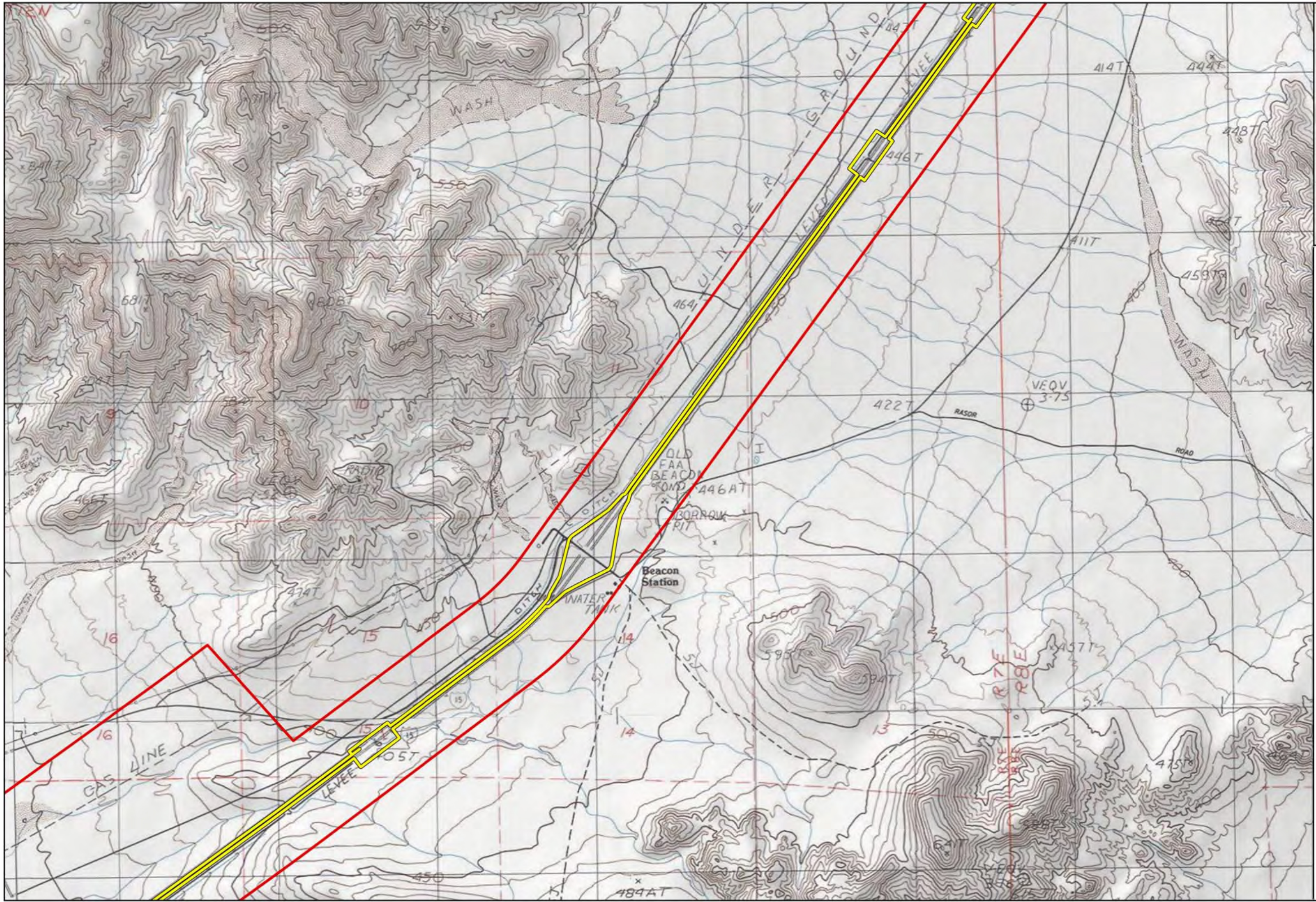
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 17 of 40
Project Vicinity - APE and LOD
XpressWest

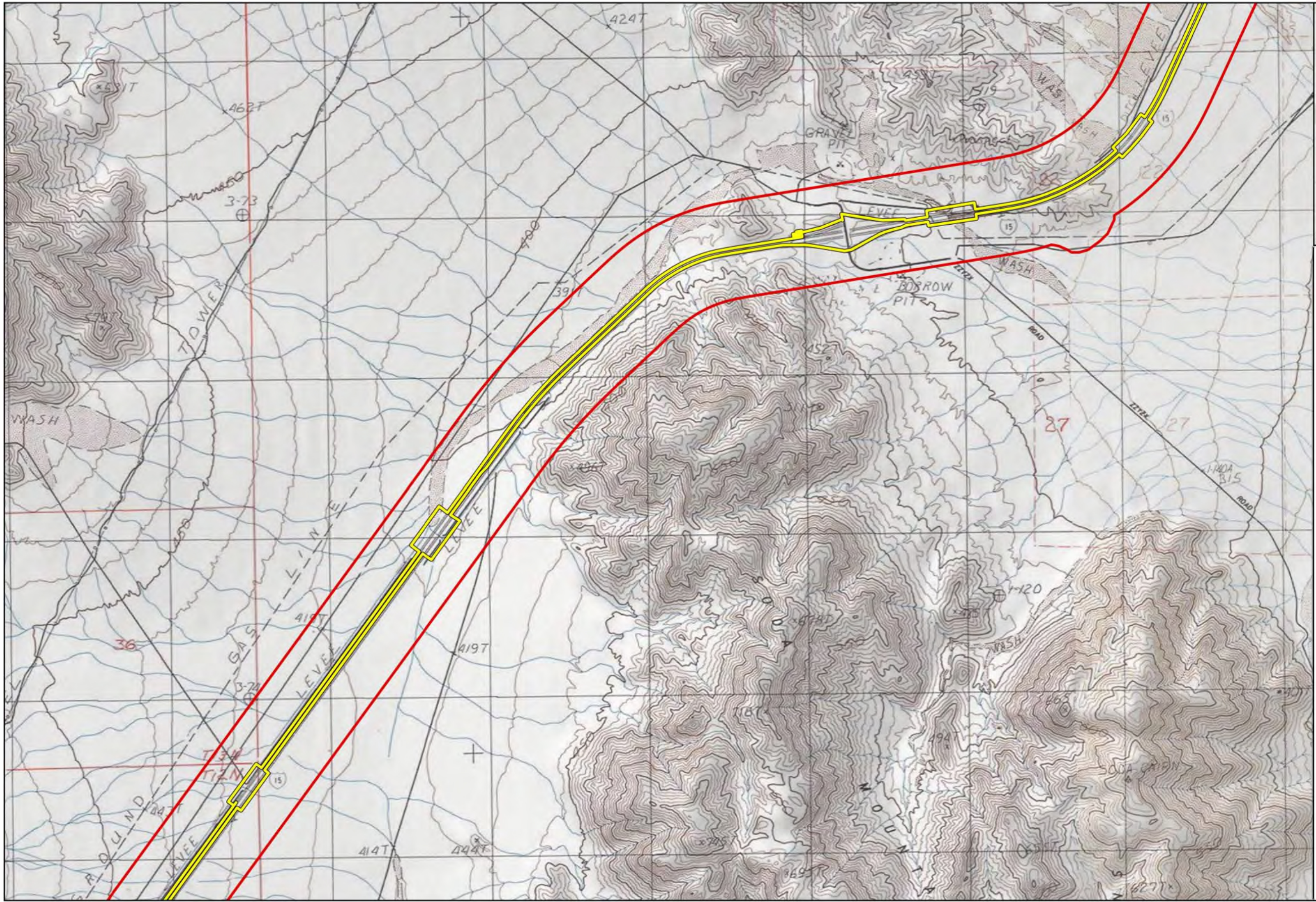


Legend
 [Red outline] Area of Potential Effect
 [Yellow outline] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

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Appendix A - Sheet 18 of 40
Project Vicinity - APE and LOD
XpressWest



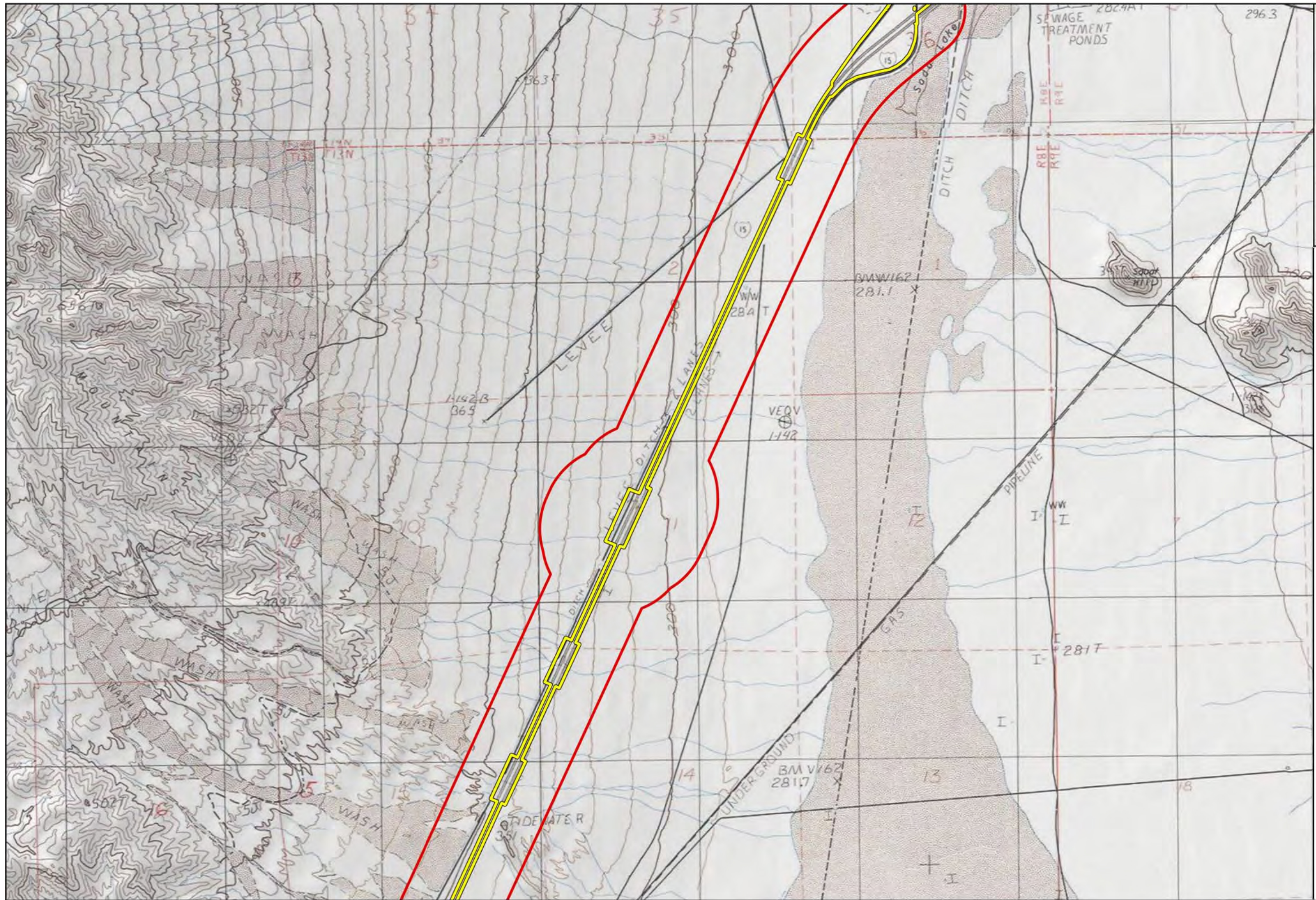
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- Area of Potential Effect
- Limits of Disturbance

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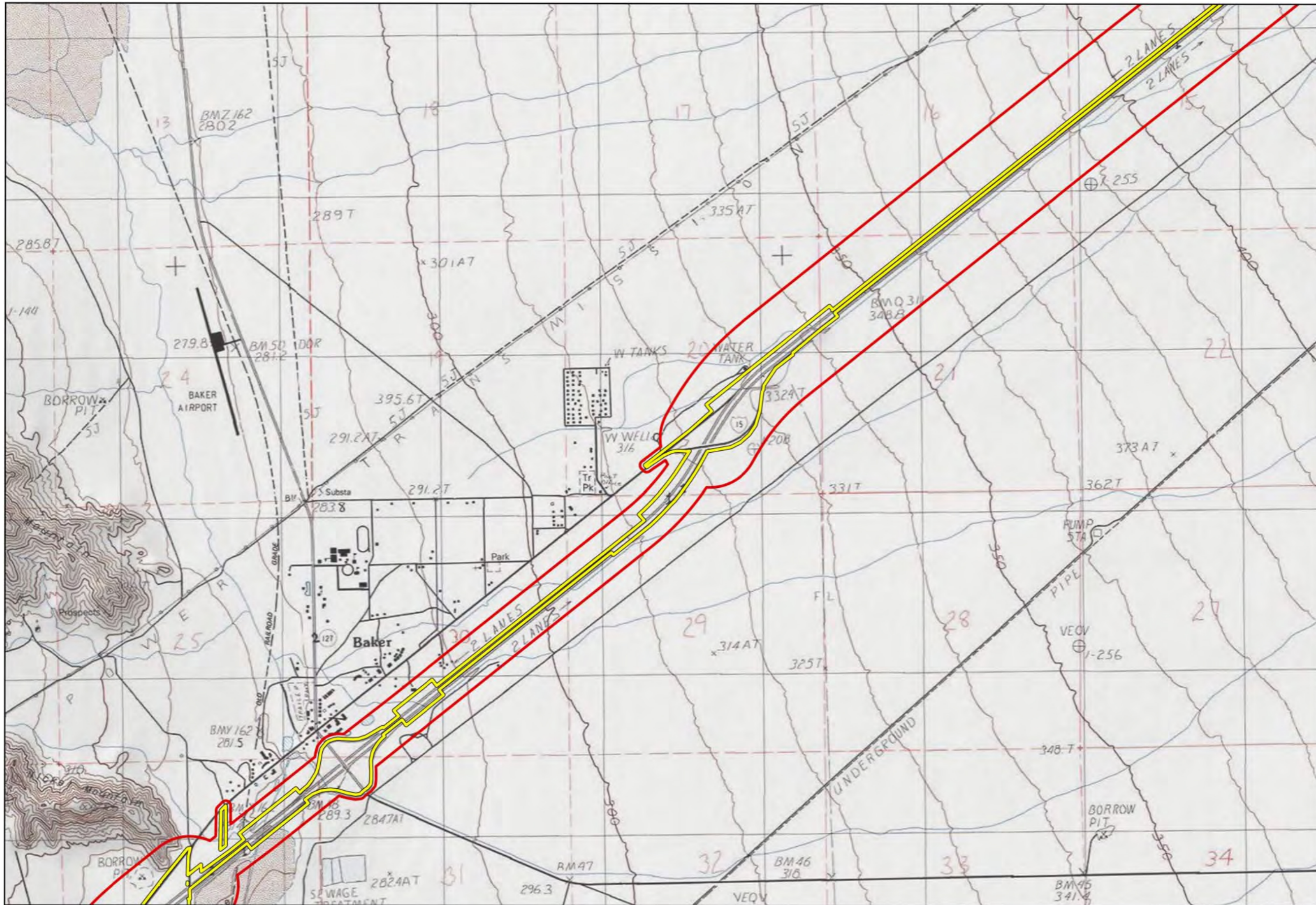
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Appendix A - Sheet 19 of 40
Project Vicinity - APE and LOD
XpressWest



Legend
 [Red outline] Area of Potential Effect
 [Yellow outline] Limits of Disturbance

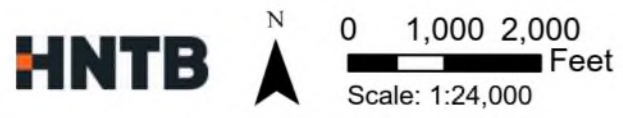
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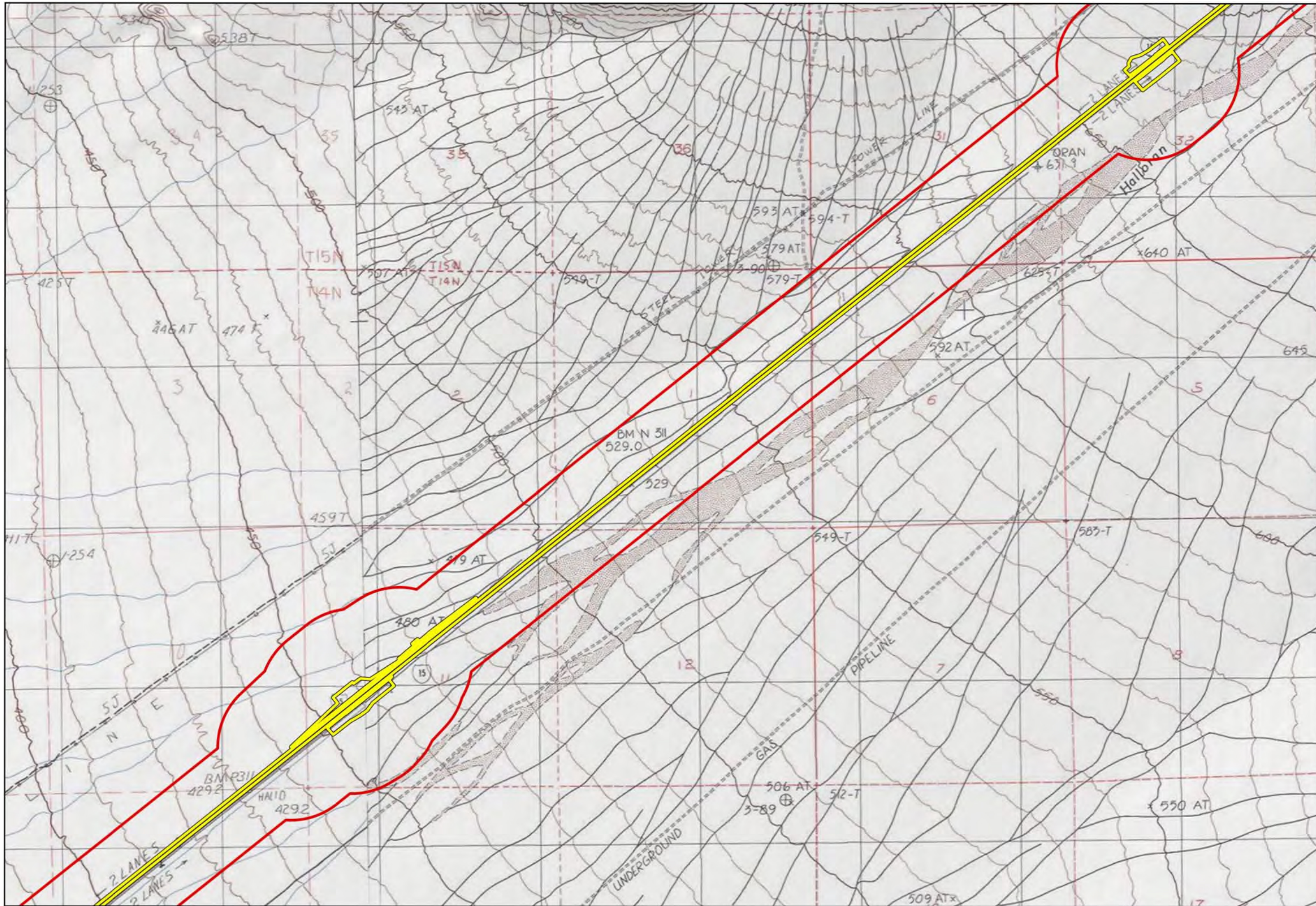
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- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 21 of 40
Project Vicinity - APE and LOD
XpressWest

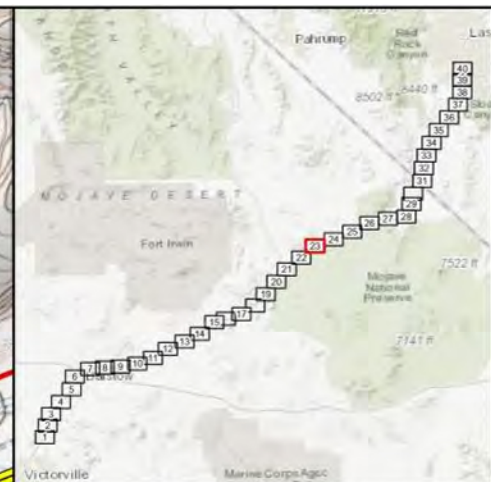
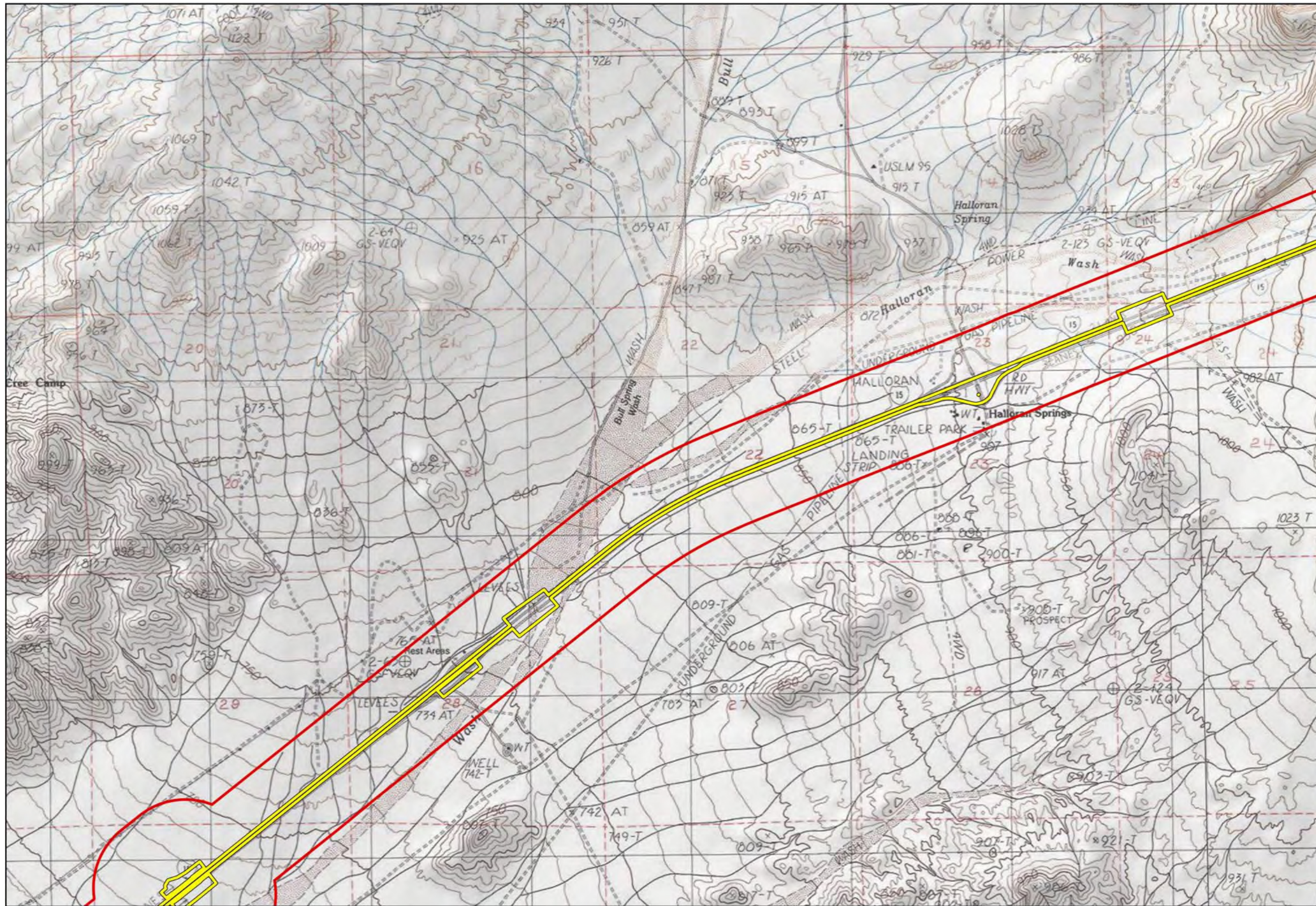


Legend
 Area of Potential Effect
 Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

HNTB N
 0 1,000 2,000 Feet
 Scale: 1:24,000

Appendix A - Sheet 22 of 40
Project Vicinity - APE and LOD
XpressWest



Legend

- Area of Potential Effect
- Limits of Disturbance

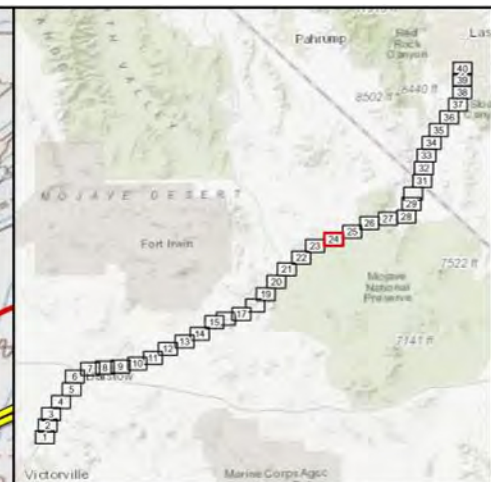
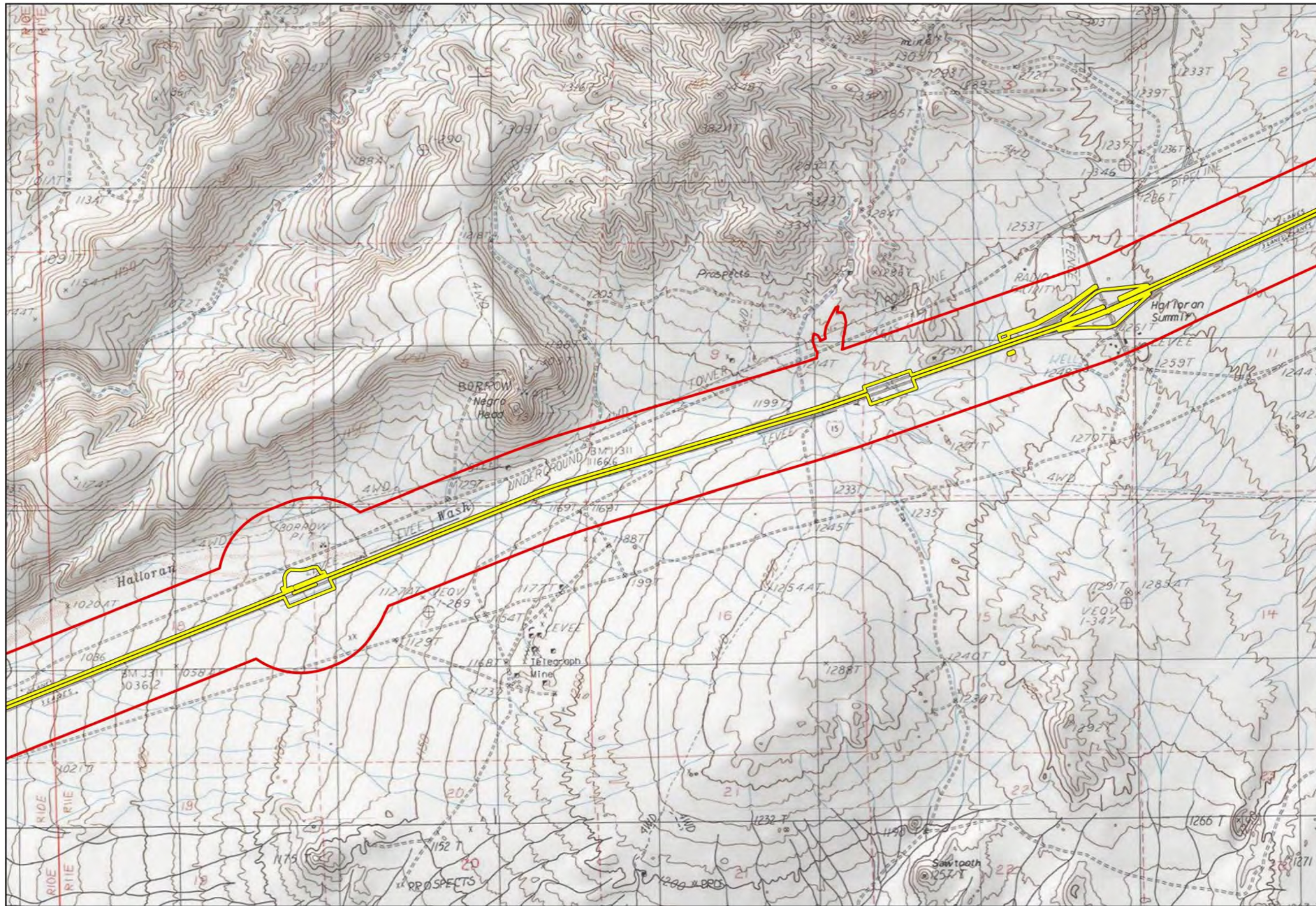
Source: USA Topo Maps, LOD dated to 06/24/2020

HNTB

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0 1,000 2,000 Feet

Scale: 1:24,000

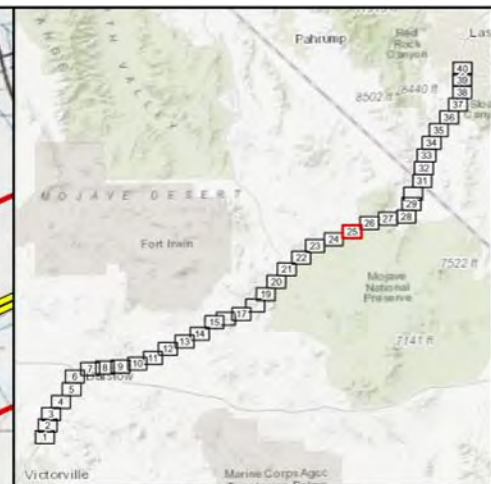
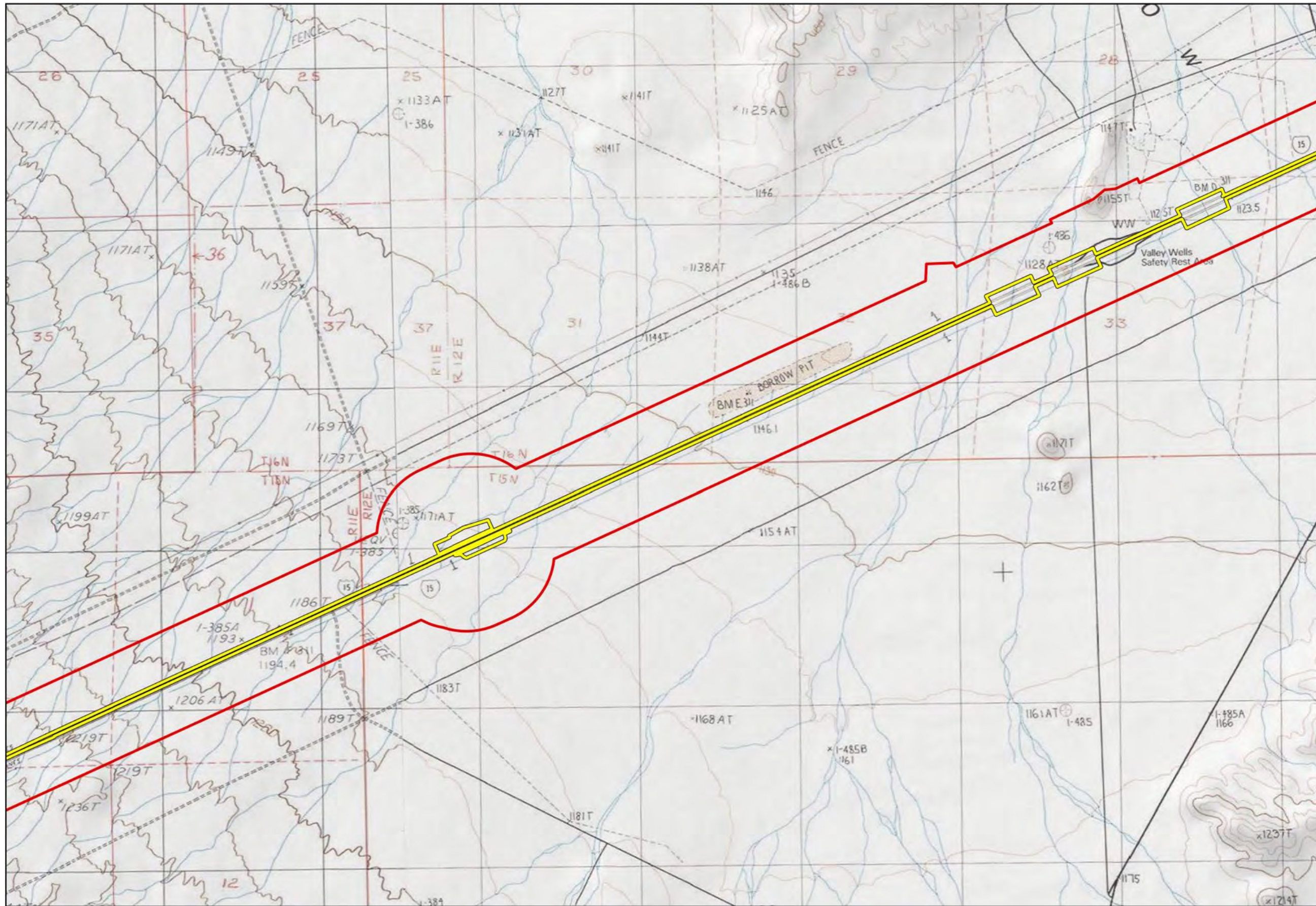


Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

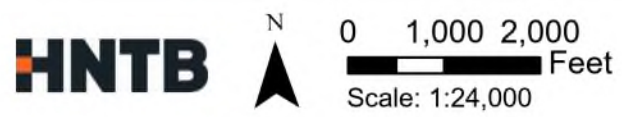
HNTB N
 0 1,000 2,000 Feet
 Scale: 1:24,000



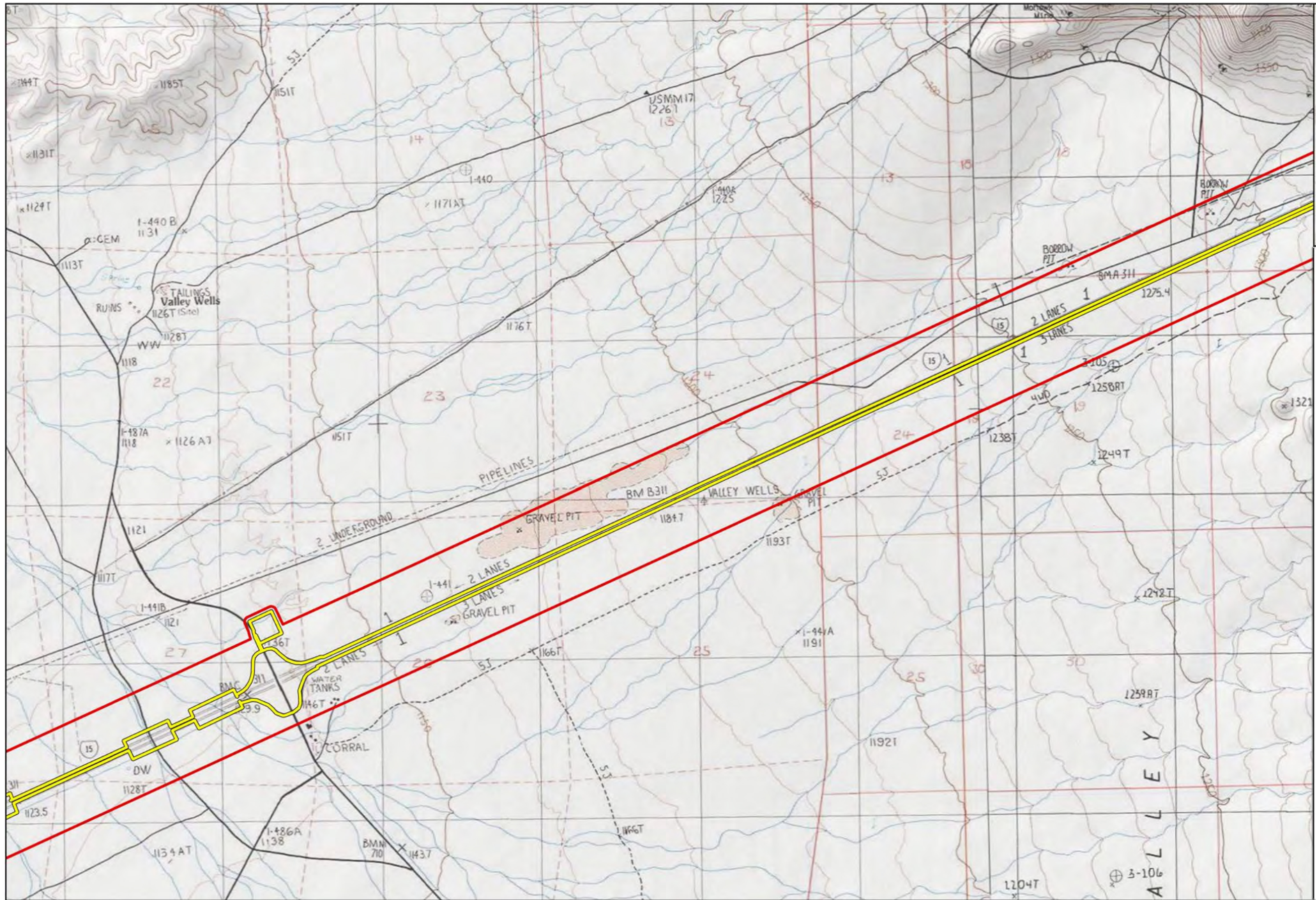
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 25 of 40
Project Vicinity - APE and LOD
XpressWest



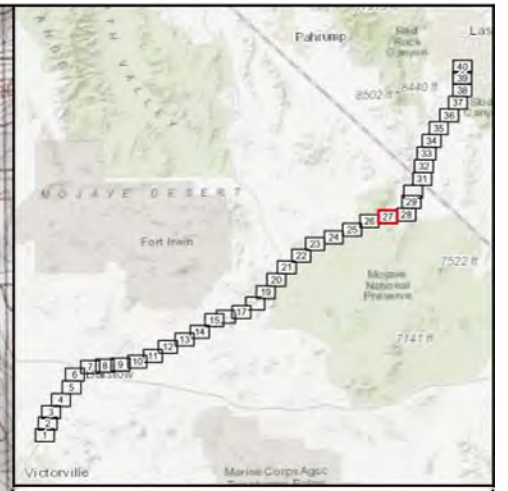
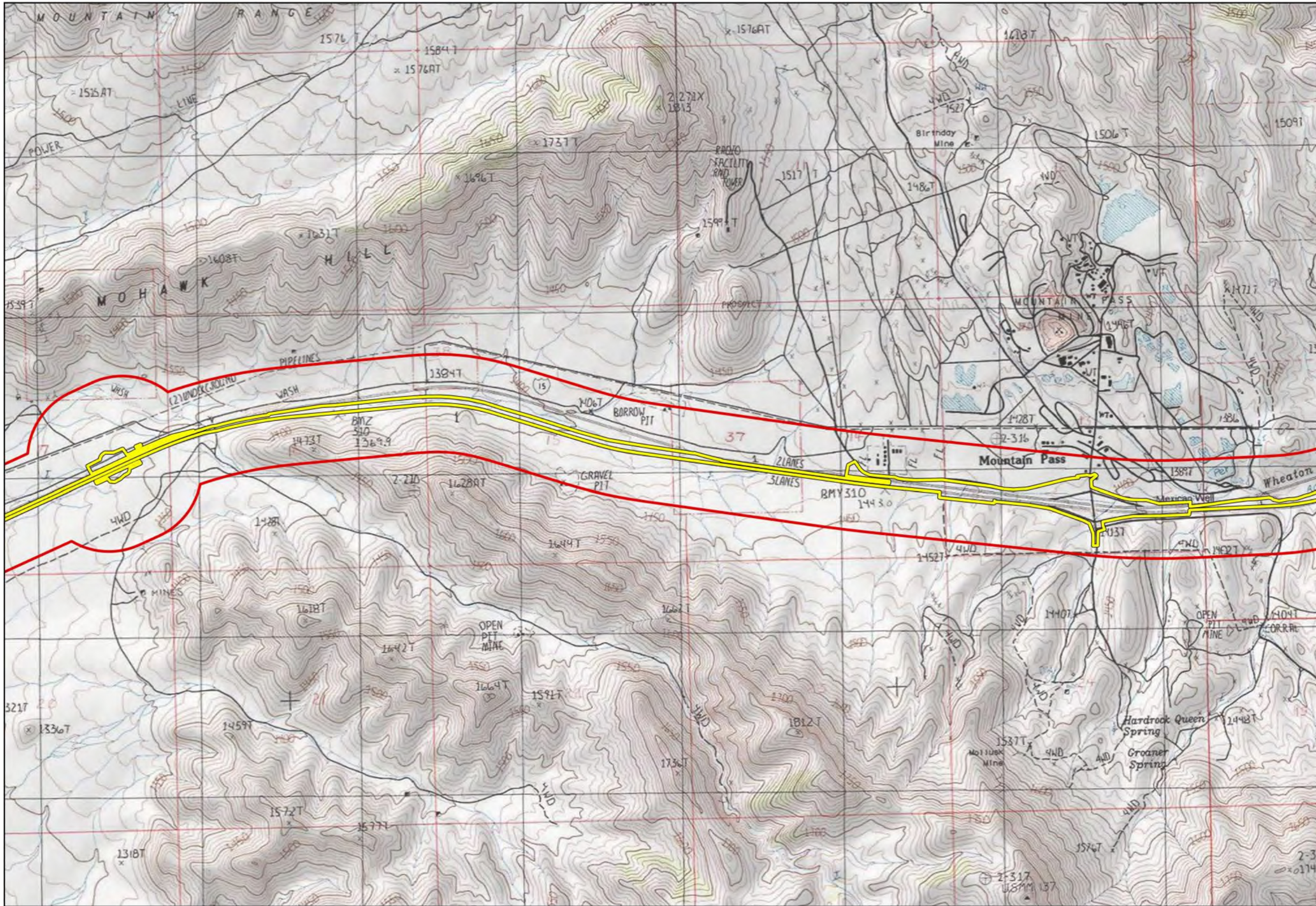
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

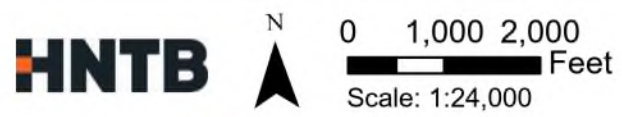


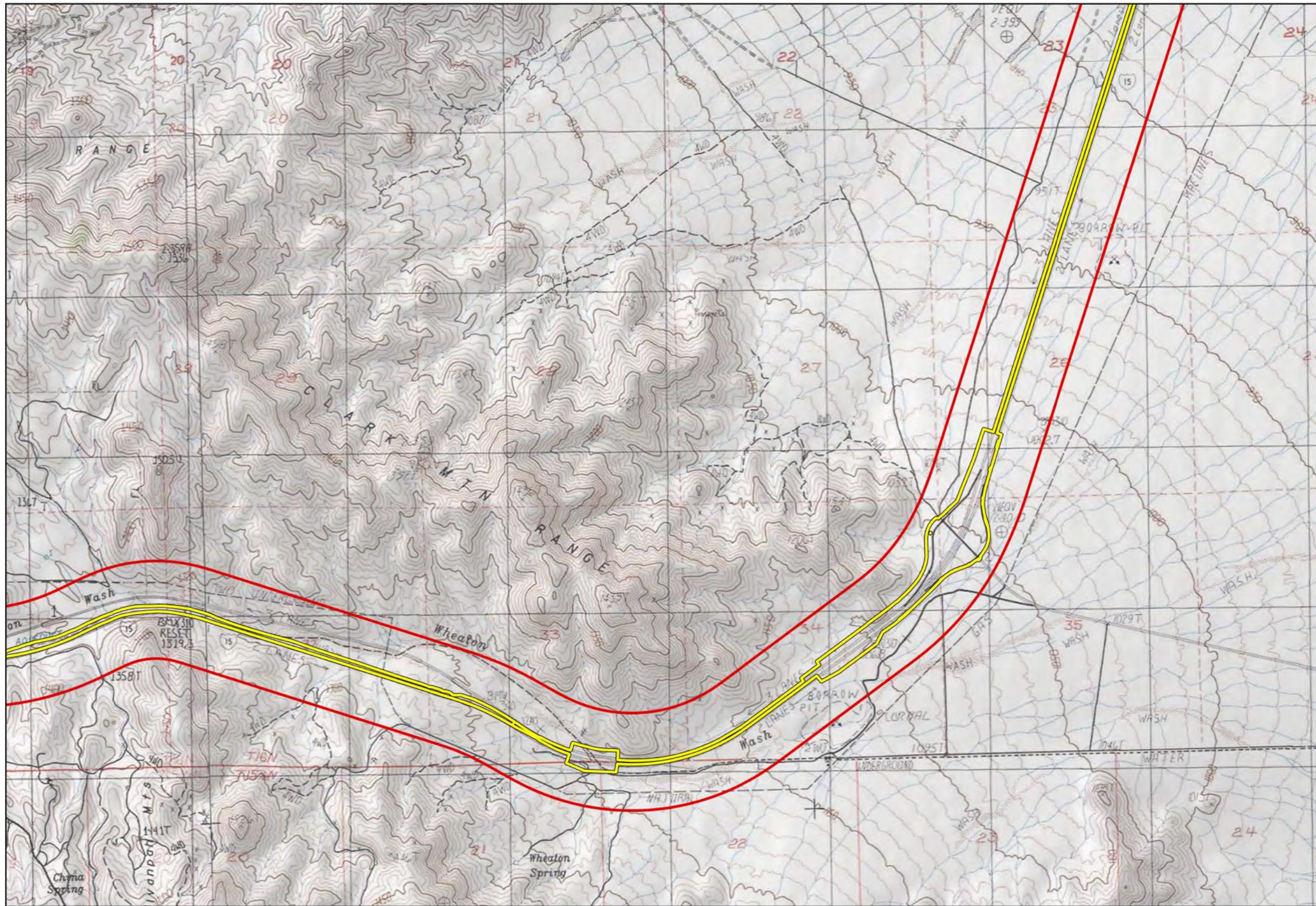
Appendix A - Sheet 26 of 40
Project Vicinity - APE and LOD
XpressWest



Legend
[Red Line] Area of Potential Effect
[Yellow Line] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020





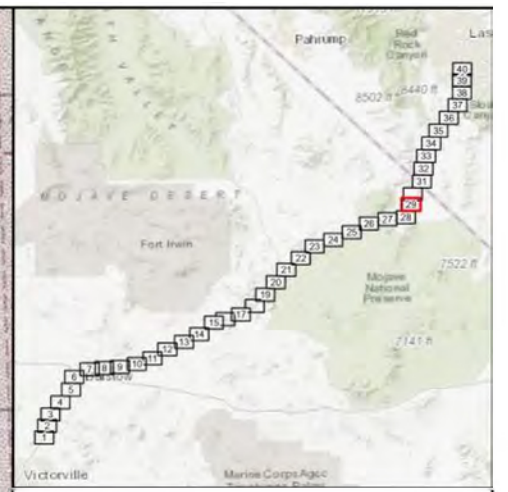
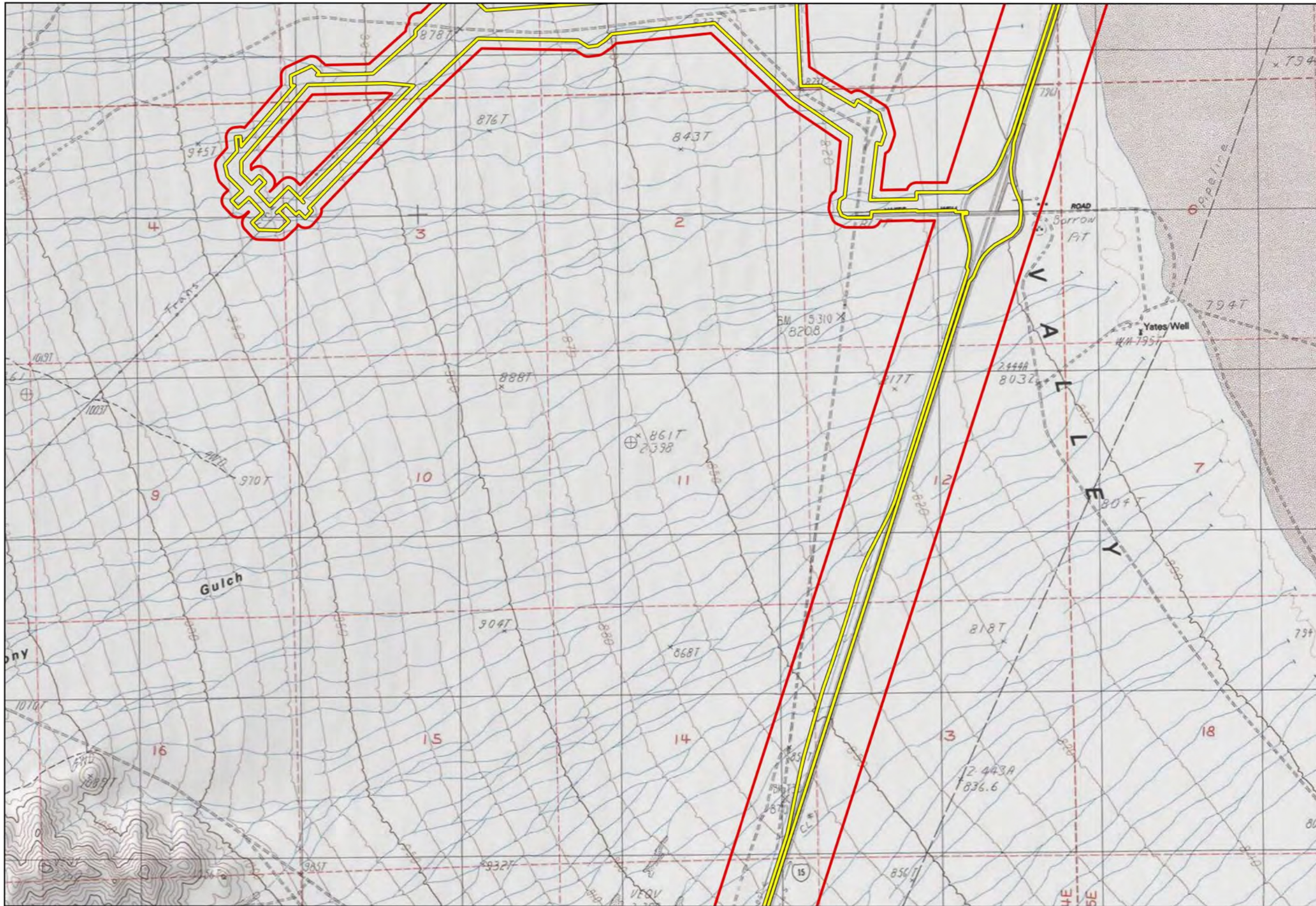
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020




Appendix A - Sheet 28 of 40
Project Vicinity - APE and LOD
XpressWest



Legend
 [Red Outline] Area of Potential Effect
 [Yellow Outline] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

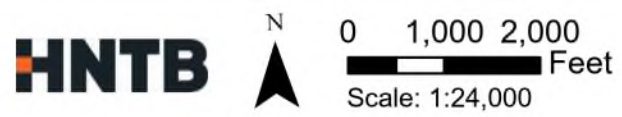
HNTB  0 1,000 2,000 Feet
 Scale: 1:24,000

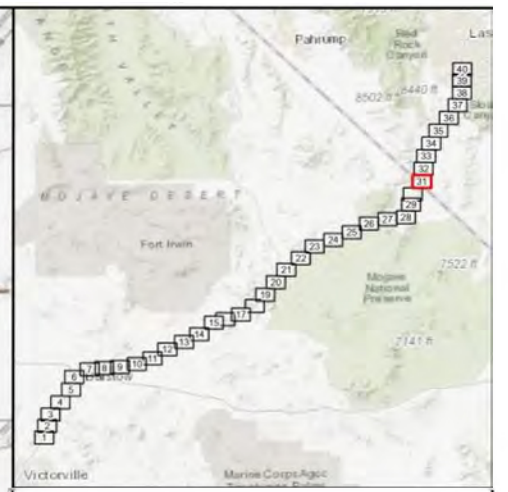
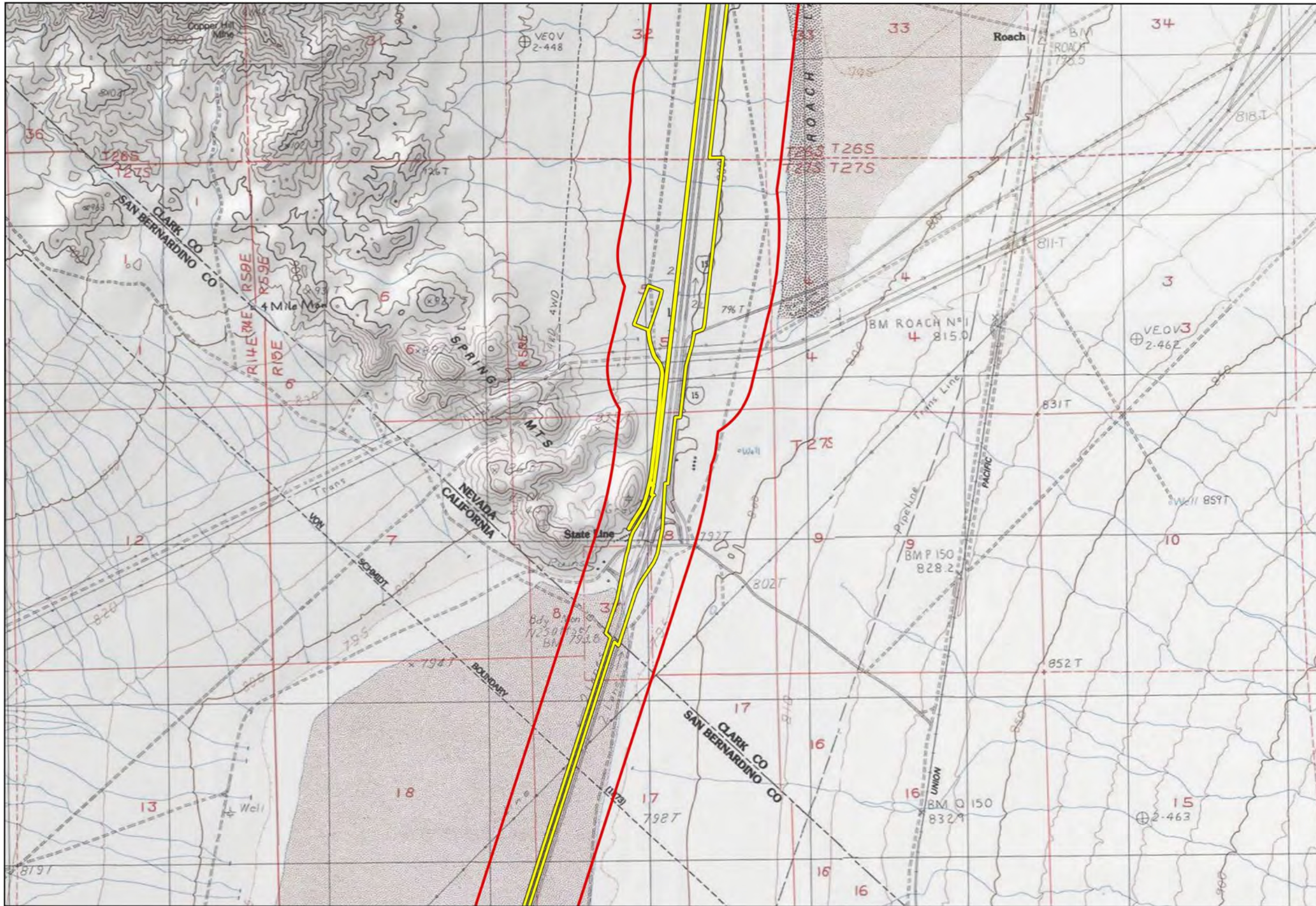
Appendix A - Sheet 29 of 40
Project Vicinity - APE and LOD
XpressWest



Legend
 [Red Line] Area of Potential Effect
 [Yellow Line] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

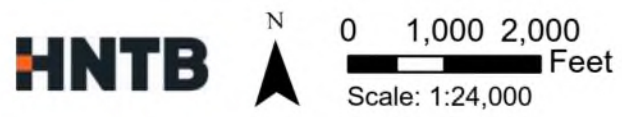




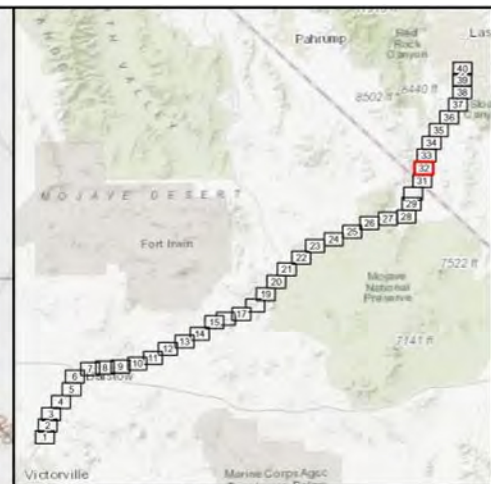
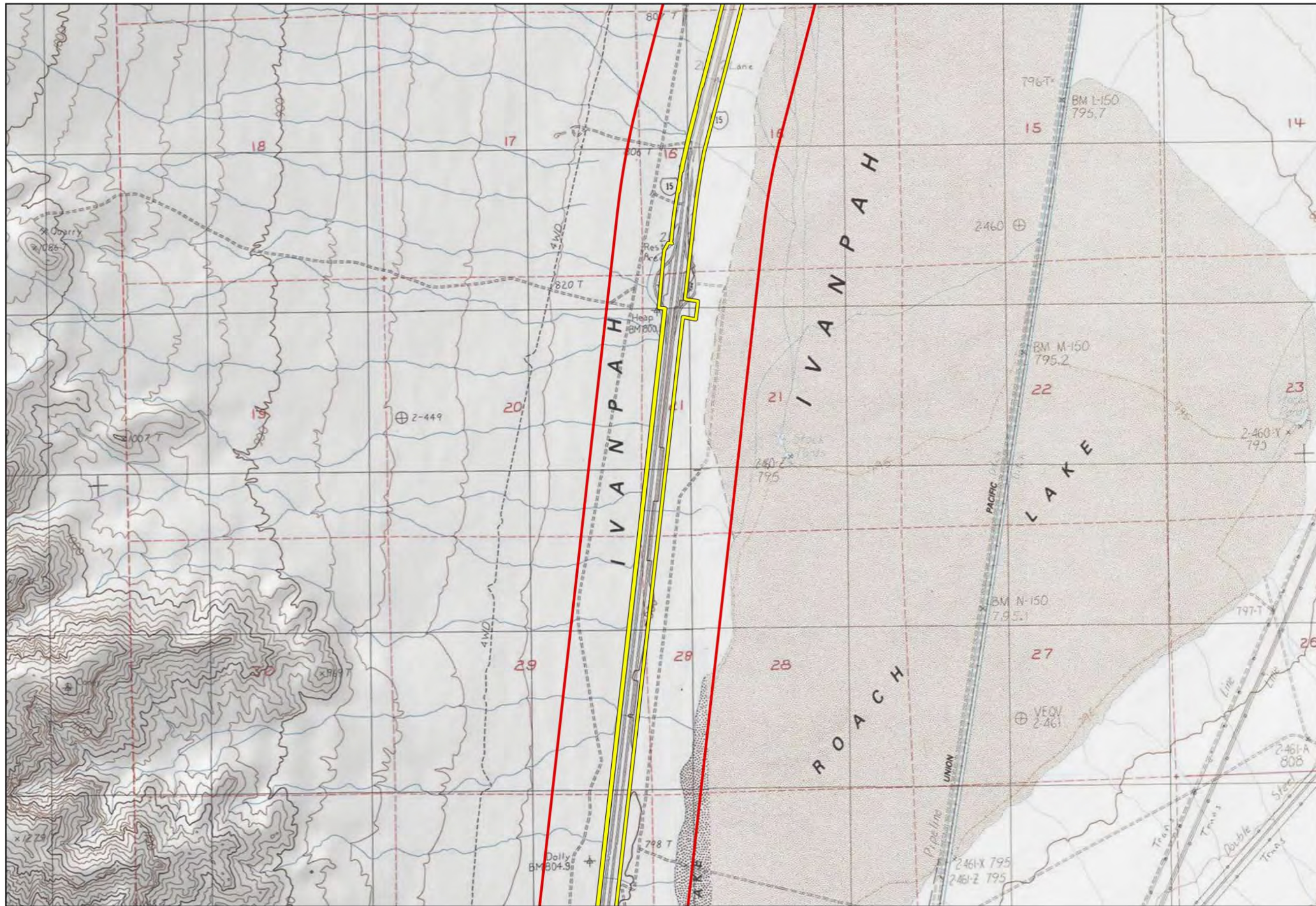
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

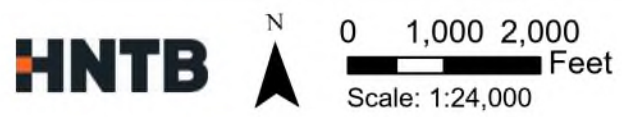


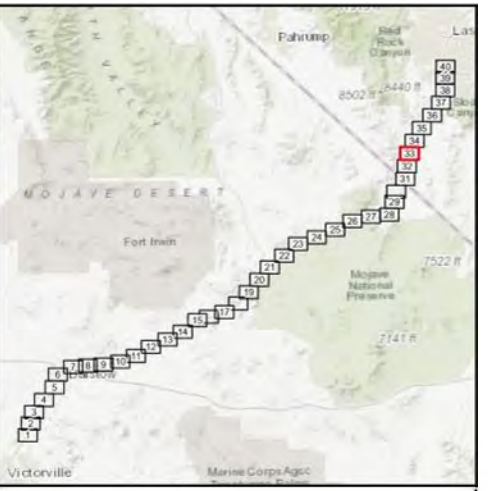
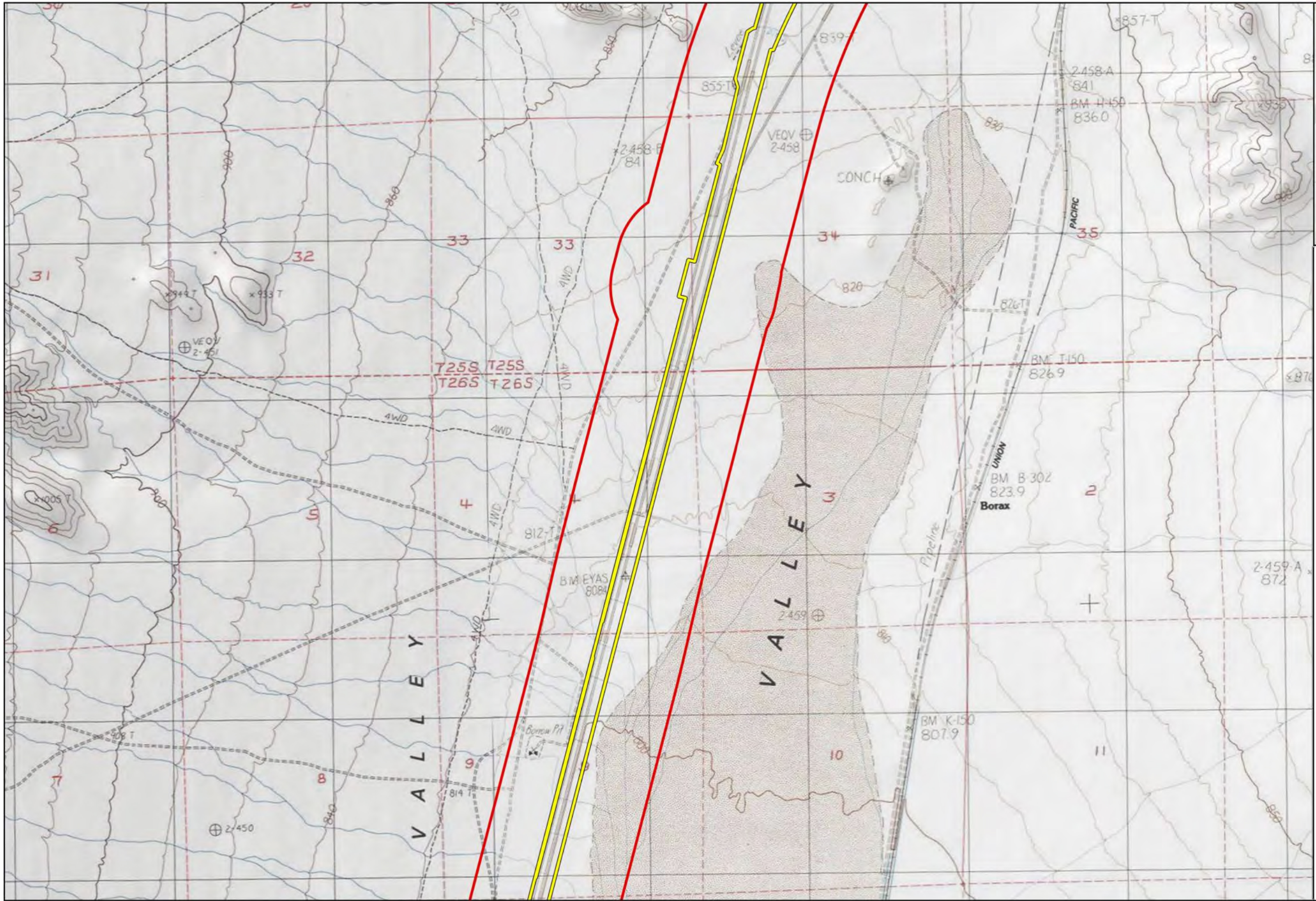
Appendix A - Sheet 31 of 40
Project Vicinity - APE and LOD
XpressWest



- Legend**
- Area of Potential Effect
 - Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



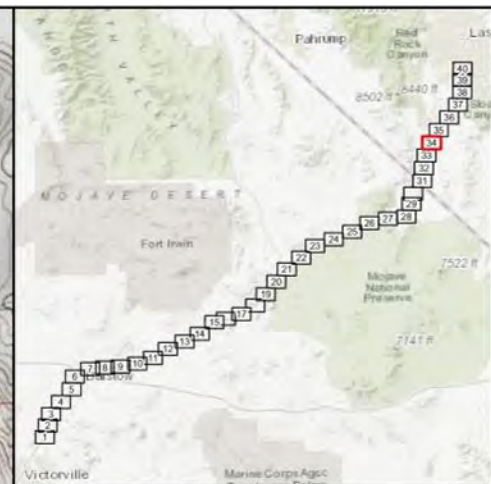


Legend
 Area of Potential Effect
 Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



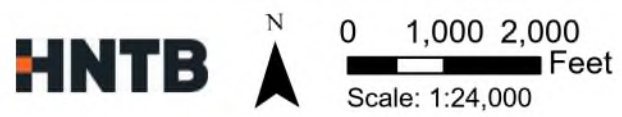
Appendix A - Sheet 33 of 40
Project Vicinity - APE and LOD
XpressWest



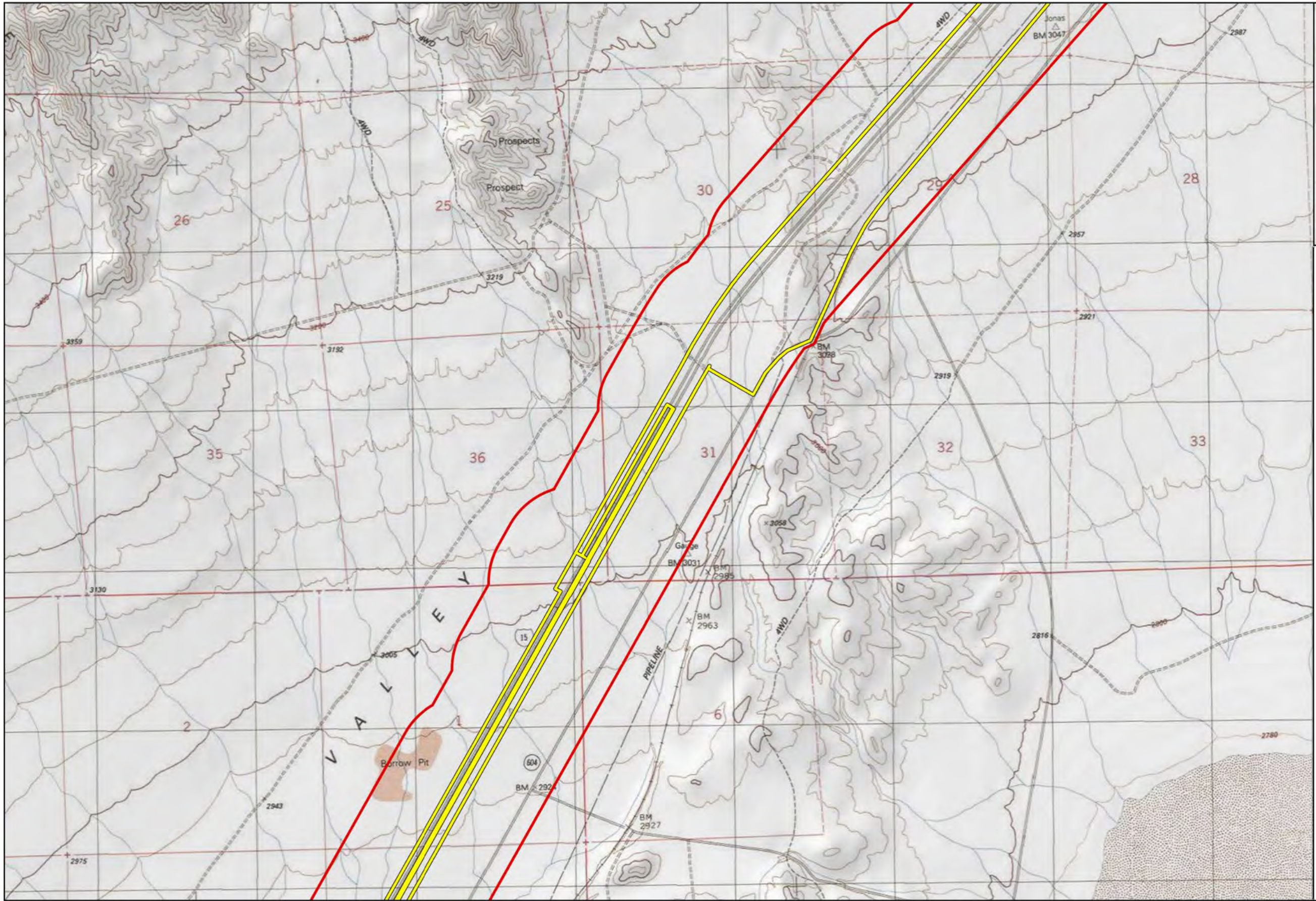
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 34 of 40
Project Vicinity - APE and LOD
XpressWest

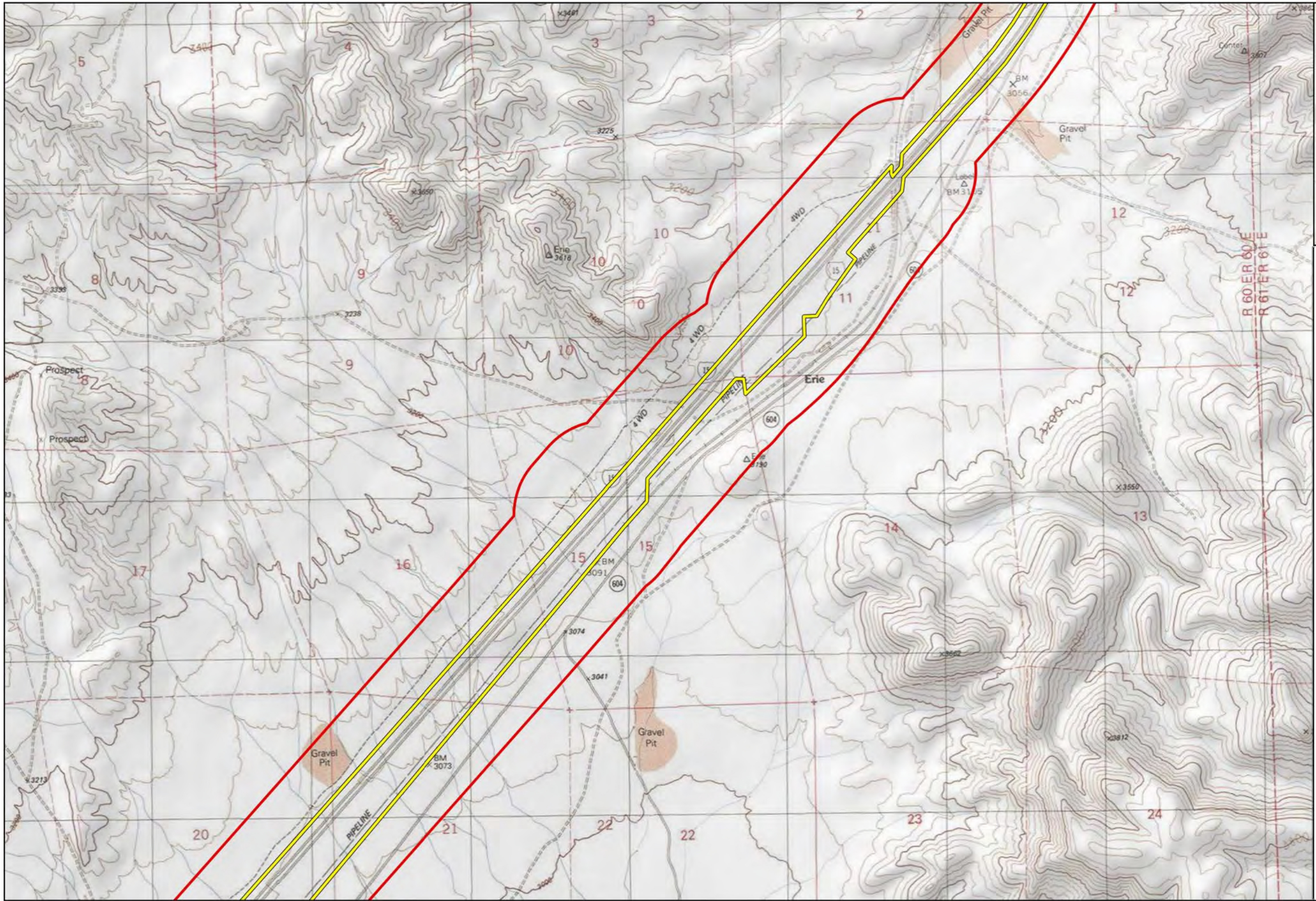


Legend
 [Red Outline] Area of Potential Effect
 [Yellow Outline] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

HNTB  0 1,000 2,000 Feet
 Scale: 1:24,000

Appendix A - Sheet 35 of 40
Project Vicinity - APE and LOD
XpressWest



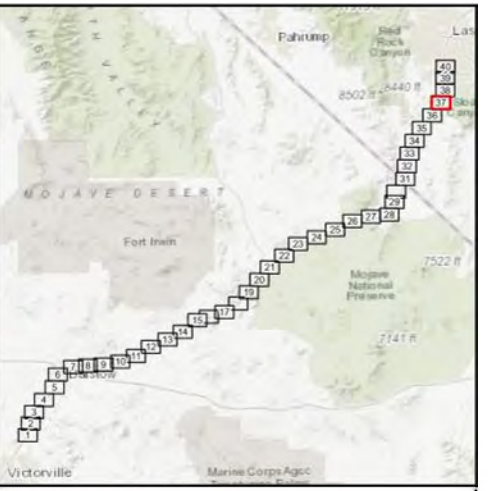
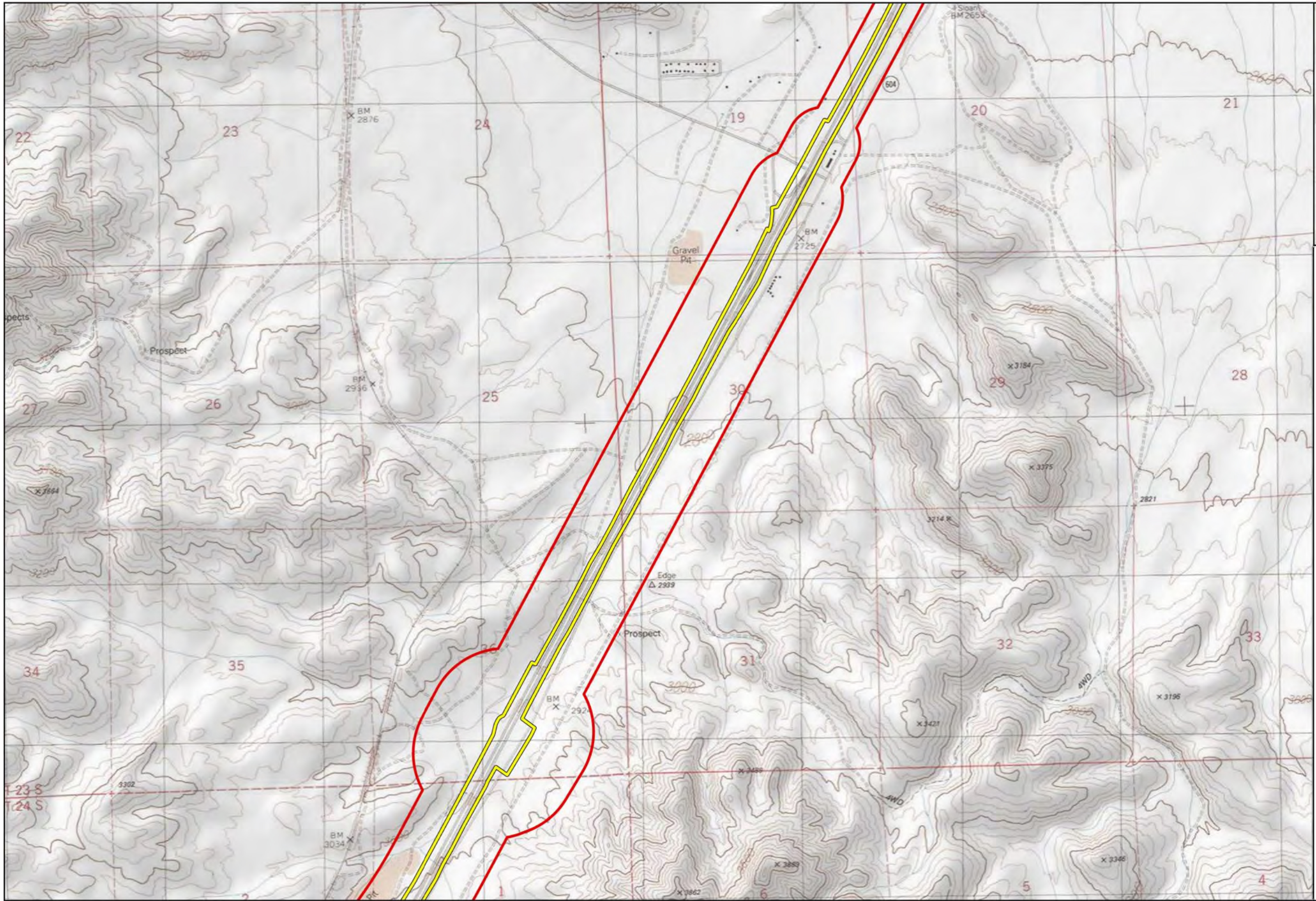
Legend

- Area of Potential Effect
- Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

HNTB N
 0 1,000 2,000 Feet
 Scale: 1:24,000

Appendix A - Sheet 36 of 40
Project Vicinity - APE and LOD
XpressWest

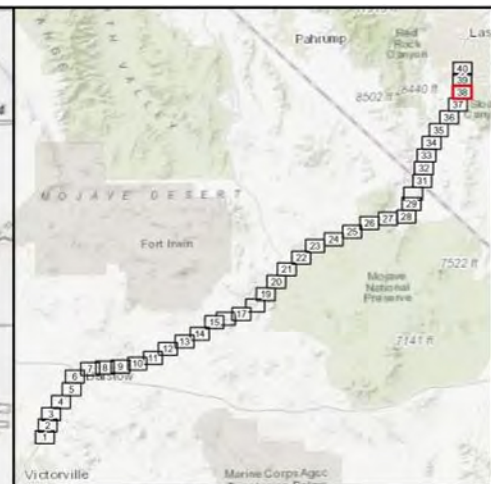


Legend
 Area of Potential Effect
 Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020

HNTB N
 0 1,000 2,000 Feet
 Scale: 1:24,000

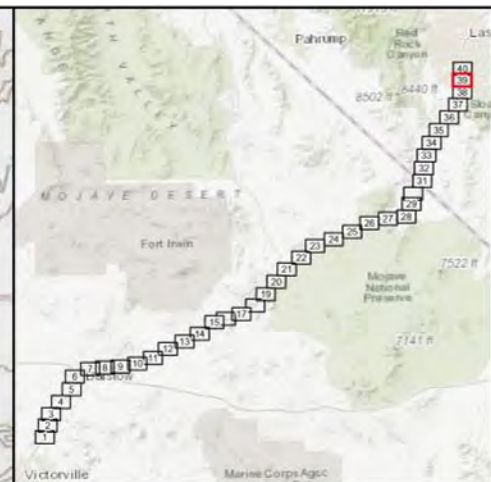
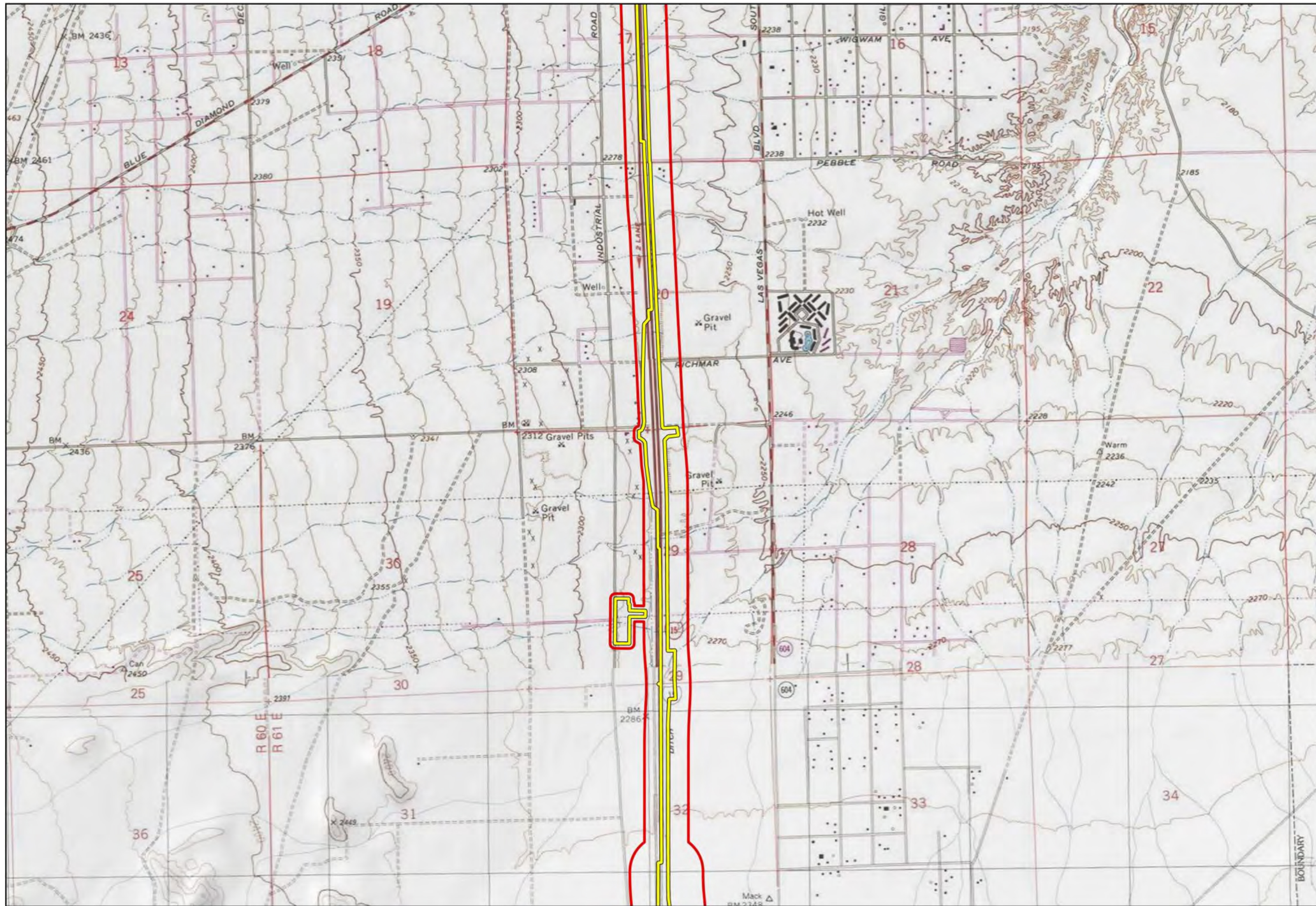
Appendix A - Sheet 37 of 40
Project Vicinity - APE and LOD
XpressWest



Legend
 Area of Potential Effect
 Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020





Legend

- Area of Potential Effect
- Limits of Disturbance

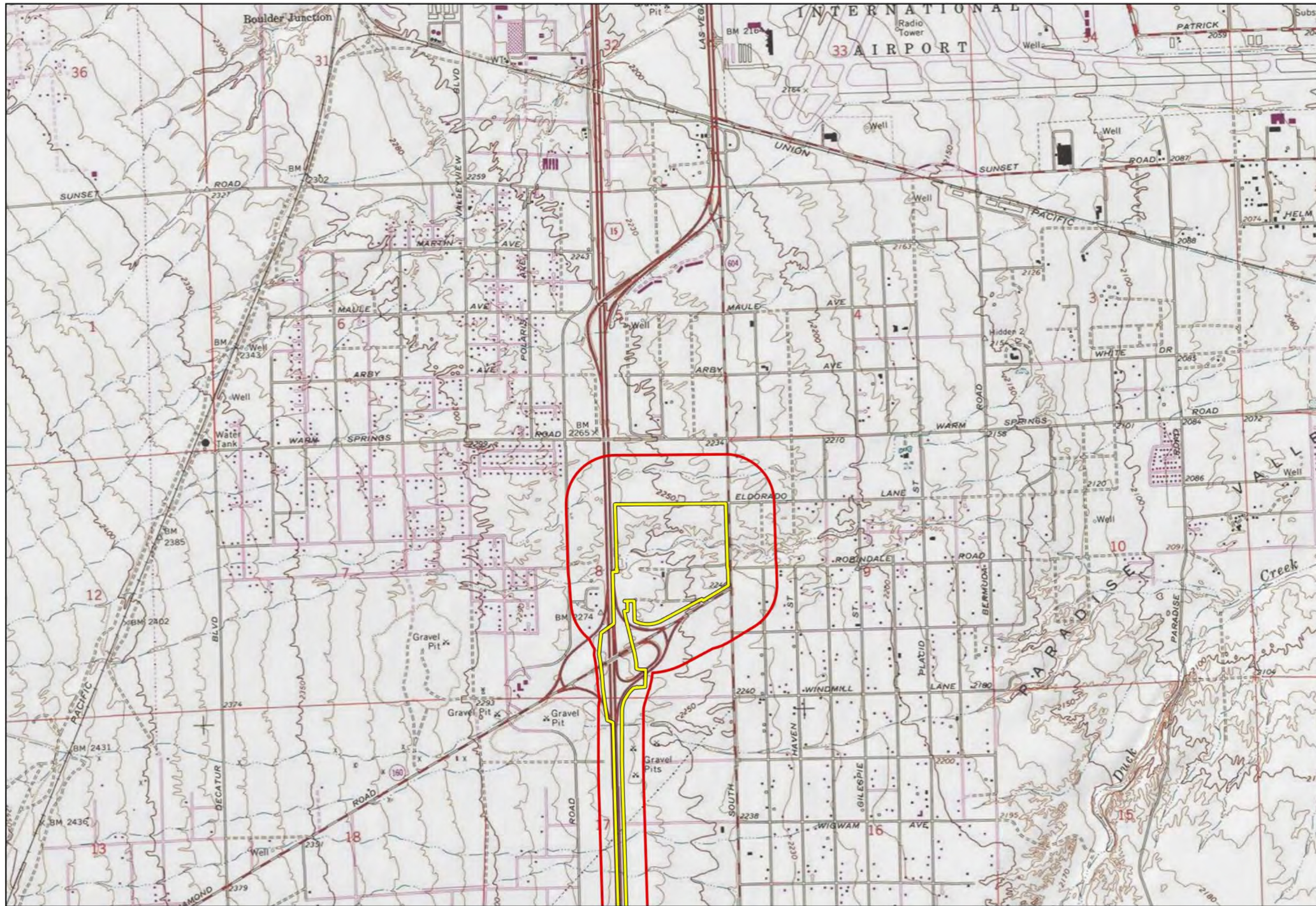
Source: USA Topo Maps, LOD dated to 06/24/2020

HNTB

N

0 1,000 2,000 Feet

Scale: 1:24,000



Legend
 [Red Outline] Area of Potential Effect
 [Yellow Outline] Limits of Disturbance

Source: USA Topo Maps, LOD dated to 06/24/2020



Appendix A - Sheet 40 of 40
Project Vicinity - APE and LOD
XpressWest