

**SECTION 2.0**  
**DESCRIPTION OF THE PROJECT**





## 2.0 DESCRIPTION OF THE PROJECT

The Project consists of constructing, operating, and maintaining approximately 36 miles of TI, which consists of vehicle fence, two access roads, 14 passing zones, and associated construction roads. In order to facilitate construction four staging areas will be used. The vehicle fence will be placed approximately 3 to 6 feet north of the U.S./Mexico border, within the Roosevelt Reservation. The TI will extend 1.5 miles west of Border Monument 69 eastward to 1.5 miles east of Border Monument 66 (HV-1 and HV-2) and from 1.5 miles west of Border Monument 64 eastward to Border Monument 62 (HV-3) in southern Hidalgo County, New Mexico (see Figure 1-2).

As the name implies, vehicle fences are structures designed to prevent illegal vehicle traffic; however, they are not designed to preclude pedestrian or wildlife movement. The vehicle fence (Normandy-style) to be constructed and installed as part of the Project (Photograph 2-1) will be placed along the border and result in negligible permanent ground disturbance. The Normandy-style vehicle fence is typically constructed of welded metal similar to railroad rail. This type of vehicle fence cannot be rolled or moved manually, and must be lifted using a forklift or front-end loader. The barriers will be constructed within the staging areas or Roosevelt Reservation, transported throughout the Project corridor, placed on the ground, anchored to the ground every 24-feet using a concrete or steel anchor only on slopes greater than 20 percent and near washes, and then welded together. A typical section of Normandy-style vehicle fence is 24 feet long and stands 4 to 6 feet high. Additionally, the vehicle fence will be outfitted with pipe, tubing, or a similar material that will parallel the horizontal rail no lower than 16 inches from the ground and no higher than 48 inches for the purposes of preventing livestock from crossing. Big game panels will also be installed every 1,300 feet to allow large ungulates (i.e., mule deer [*Odocoileus hemionus*]) to easily cross the fence. The panels will consist of steel tubing approximately 12 to 16 feet long placed at the same height as the rail on the vehicle fence. The panels will be similar in appearance to a gate.



Photograph 2-1. Vehicle Fence (Normandy-style).

Construction roads are needed to construct the TI and provide a safe driving surface along the border. These are located adjacent to the vehicle fence and will be 28 feet wide including adequate drainage ditches. Aggregate will be added to the surface of the road as part of the construction activities to reduce erosion and future maintenance activities. Water bars will be installed at various locations along the road to direct storm water into parallel ditches or down slope to reduce erosion of the road surface. Upon

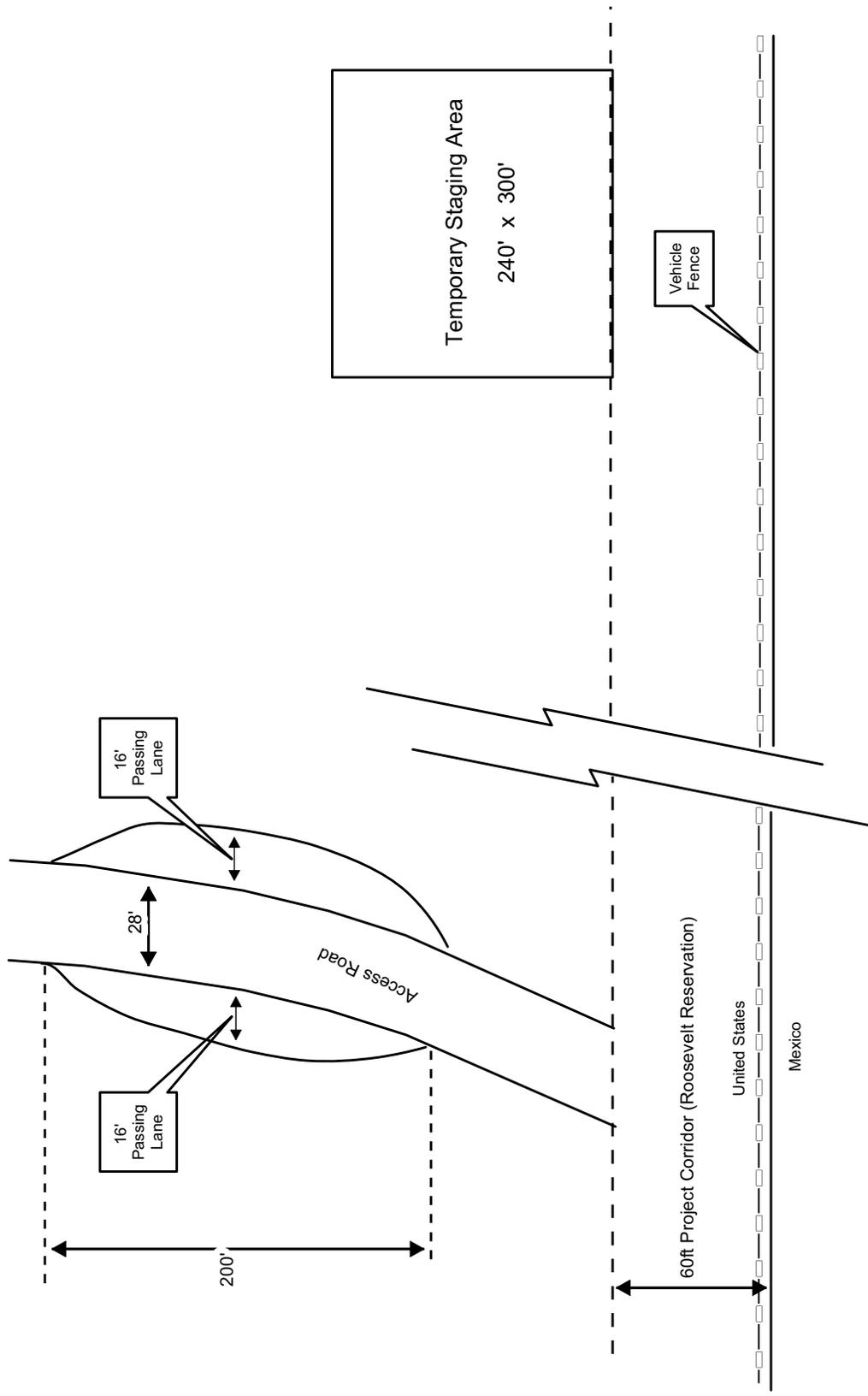
completion of the construction activities the construction roads will be used for patrolling, dragging, and maintenance of the vehicle fence.

The new construction roads will also include the construction of low water crossings (LWC). LWCs will consist of concrete slabs designed with suitable approach angles. Culverts may also be incorporated into the design of LWCs, as appropriate. The size and number of culverts required will depend upon the width of the drainage and the expected flood flow volumes and velocities at each of the drainage crossings. Each drainage structure will be designed to ensure that flows are not impeded, thus avoiding creation of backwater areas. The designs will also ensure that water velocity is not significantly changed at the outfall. Stilling basins, rip rap, gabion baskets, and other designs will be used on both ends of the drainage structure to dissipate the water flow energy. Head, tail, and cut-off walls will be constructed, as appropriate, to reduce scouring and ensure the stability of the drainage structure.

Access roads provide access to the border fence itself, as well as the border fence construction road. Within the Project corridor, approximately 19.8 miles of existing access roads will be used. Two north-south oriented roads provide direct access to the border from State Routes 1 and 81 in Hidalgo County. These access roads will not exceed 28-feet in width but will have aggregate placed on them. The aggregate and any other improvements made to these access roads will be removed to the greatest extent practicable within a year of completion of the construction activities. As part of the Project, 14 passing zones will be developed to allow for safe passage of transport vehicles and equipment. These passing zones will be approximately 60 feet wide by 200 feet long and will encompass the access road (Figure 2-1). Aggregate will be placed in these passing zones; however, the aggregate will be removed to the extent practicable within a year of completing construction activities and brought back to preconstruction condition.

In order to facilitate operation of equipment, staging of materials, and construction access to the Project corridor, four temporary staging areas, totaling approximately 7 acres will be used. Vegetation will be cleared and grading may occur where needed in the staging areas. Upon completion of construction activities, the temporary staging areas will be rehabilitated.

To account for heat restrictions for adequate concrete drying and curing processes, most concrete pours for low water crossings, other drainage structures, and fencing will need to take place during the pre-dawn hours. However, the possibility exists that work will have to occur on a 24-hour basis. A 24-hour schedule will be implemented only when additional efforts are needed in order to maintain the work task schedule as Federally mandated. In order to facilitate construction activities during these work



NOT TO SCALE

Figure 2-1 Schematics of Project Corridor

hours, portable lights will be used (Photograph 2-2). It is estimated that no more than 12 lights will be in operation at any one time at each Project site.

A 6-kilowatt self-contained diesel generator powers these lights. Each unit typically has four 400- to 1000-watt lamps. The portable light systems can be towed to the desired construction location as needed and removed upon completion of construction activities. If construction or maintenance activities continue at night, all lights will be shielded to direct light only onto the area required for worker safety and productivity. The minimum wattage needed will be used and the number of lights will be minimized.



Photograph 2-2. Portable lights

The construction footprint of the Project will be contained primarily within the 60-foot wide Roosevelt Reservation (except for the staging areas), which was set aside in 1907 by President Roosevelt as a border enforcement zone. Additionally, all materials and equipment that will be stored onsite will be done so within the designated staging areas. The Project will be constructed by private contractors, though some military units could be used to assist in road construction. The anticipated completion date for the construction is December 2008.