

SECTION 2.0 - PROPOSED PROJECT AND ALTERNATIVES

This joint Environmental Assessment/Mitigated Negative Declaration includes analysis of the Proposed Project and the No Action Alternative. As the Proposed Project is the replacement of portions of an existing AT&T Corp. (AT&T) fiber optic cable, no alternative alignments are feasible.

2.1 PROPOSED PROJECT

Under the Proposed Project, the Bureau of Land Management (BLM) would approve and issue a Right-of-Way (ROW) Grant Amendment to the Project applicant and the California State Lands Commission (CSLC) would approve a lease amendment to replace three segments of an existing fiber optic cable extending from Las Vegas, Nevada, to Victorville, California, across predominantly federal land. This activity would be required to maintain the overall function and capacity of AT&T's system.

Constructed in 1988–89 pursuant in part to the BLM ROW Grant CA-21604/NV-48572 and CSLC Lease No. PRC 7264.2, this fiber optic cable route contains a 0.5-inch diameter fiber optic cable that is either directly buried in the ground or otherwise enclosed within a buried conduit. Ancillary facilities along the route consist of eight regeneration stations, several short segments of electrical distribution line, splice boxes, marker poles, marker ribbon, and access vaults. A total of approximately 43.39 non-contiguous miles of the existing fiber optic cable, divided into three segments, would be replaced within its existing ROW. Approximately 10.83 miles of fiber optic cable would be replaced and installed in existing, buried conduit, while approximately 32.56 miles of cable would require the installation of new conduit (New Build). In addition to cable and conduit already described, the Proposed Project would involve the installation of approximately 77 access vaults, 266 marker posts, and 32.56 miles of subsurface warning tape. No new regeneration stations are proposed.

The majority of the land crossed by (approximately 29.4 miles of the approximately 43.4 miles of cable to be replaced) the Proposed Project route is managed by the BLM. The City of Victorville, County of San Bernardino, and private land owners own approximately 13.15 miles along the Proposed Project route. The remaining 0.85 mile is owned by the Los Angeles Department of Water and Power (approximately 0.5 mile) and the CSLC (approximately 0.35 mile). Figure 2-1, Figure 2-2, and Figure 2-3 Route Map depict the location of the three segments of fiber optic cable to be replaced. These maps also indicate the areas of the Proposed Project route that are managed by the BLM and CSLC, access roads, and laydown areas.

Table 2-1: AT&T Fiber Optic Cable Segments summarizes the total length of each segment and provides the portion of cable that would require new conduit to be installed.

Table 2-1: AT&T Fiber Optic Cable Segments

Segment Number	Segment Length (miles)	Existing Conduit (miles)	New Build (miles)
Segment 1	10.79	1.71	9.08
Segment 2	7.0	0.0	7.0
Segment 3	25.6	9.12	16.48
Total	43.39	10.83	32.56

2.1.1 Route Description

2.1.1.1 Segment 1

Segment 1 begins at the Nevada-California State Line near the town of Primm, Nevada. The line heads south for approximately 0.6 mile, parallel to Interstate 15 (I-15) and across Ivanpah Dry Lake, along a dirt

access road. It then heads southwest for approximately 2.3 miles along a dirt access road, parallel to existing electric transmission lines. The route then heads south, exiting Ivanpah Dry Lake, for approximately 1 mile, and continues along dirt access roads until intersecting with Saragossa Drive. At this point, the line heads west within Saragossa Drive for approximately 0.4 mile and then turns south at Silverton Road. The route follows Silverton Road for approximately 1 mile and turns east at Desmore Drive for approximately 0.3 mile. The line then heads south on Yates Wells Road for approximately 0.5 mile and continues generally south and parallel to I-15 along a dirt access road for approximately 4.7 miles. Segment 1 terminates at the existing Nipton Regeneration Station located near the intersection of Nipton Road and I-15.

2.1.1.2 Segment 2

Segment 2 begins near the intersection of Cima Road and County Highway 20909, approximately 0.4 mile north of I-15. The route heads generally west and parallel to County Highway 20909 for its entire length, approximately 7 miles. Segment 2 terminates at the existing Halloran Springs Regeneration Station, near the intersection of County Highway 20909 and Halloran Summit Road.

2.1.1.3 Segment 3

Segment 3 begins near the existing Slash X Regeneration Station and the intersection of State Route (SR) 247/Barstow Road and Boulder Road, approximately 9 miles south of the City of Barstow. The line heads southwest for approximately 4.9 miles, paralleling existing electrical transmission lines. At this point, the line continues in a generally southwest direction along Stoddard Wells Road for approximately 13.8 miles. The line then enters the community of Bell Mountain at the intersection of Stoddard Wells Road and Central Road. The line follows Stoddard Wells Road in a westerly direction for approximately 2.2 miles and then in a southwesterly direction for approximately 3.6 miles. The route then generally follows the I-5 frontage road in a southern direction for approximately 1.1 miles before terminating at the intersection of the frontage road and Quarry Road.

2.1.2 Project Components

2.1.2.1 Fiber Optic Cable

Fiber optic cable resembles a traditional copper conductor telephone cable in outward appearance. Instead of copper conductors, however, it contains multiple glass fiber strands used to transmit pulses of highly concentrated light. The glass fibers are protected by various internal cable components, including buffer tubes, mylar tape, an inner polyethylene sheath, a steel shield, and a waterproof outer polyethylene sheath. The total outside diameter of the cable is approximately 0.7 inch.

2.1.2.2 Fiber Optic Cable Conduit

The New Build portions of the Proposed Project, approximately 32.56 miles in length, would require the installation of three 1.5-inch diameter, high-density polyethylene conduits, bundled together and buried at a depth of approximately 4 feet. After the conduit bundle is installed, the replacement fiber optic cable would be pulled through one of the empty conduits. There are no current plans for use of the other two conduits. AT&T proposes to install these two extra conduits so that the ROW would not have to be disturbed again if the need for additional cable arises in the future. In this way, AT&T would be able to adapt to future changes in technology and demand without disturbing the existing environment.

2.1.2.3 Subsurface Warning Tape

A continuous ribbon of buried cable subsurface warning tape would be placed approximately 6 inches to 8 inches above, and parallel to, the New Build conduit. The subsurface warning tape would be imprinted with a warning message at 2-foot intervals. This tape serves as a final warning to excavators that fiber optic cable is buried below. The high-density metallic tape is 6 inches wide and made of a six-ply copolymer that is impervious to soil acid, alkali, and other natural soil agents. The subsurface warning tape would allow engineers to scan the road for the fiber cable location without having to resort to ground-disturbing activities, such as potholing, to locate the fiber optic line.

Figure 2-1: Route Map – Segment 1

Figure 2-1: Route Map – Segment 1 has been omitted from this document and is included separately as Fig2-1.pdf.

Figure 2-2: Route Map – Segment 2

Figure 2-2: Route Map – Segment 2 has been omitted from this document and is included separately as Fig1-1.pdf.

Figure 2-3: Route Map – Segment 3

Page 1 of 2 of Figure 2-3: Route Map – Segment 3 has been omitted from this document and is included separately as Fig2-3.pdf.

Figure 2-3: Route Map – Segment 3

Page 2 of 2 of Figure 2-3: Route Map – Segment 3 has been omitted from this document and is included separately as Fig2-3.pdf.

2.1.2.4 Access Vaults

Within the New Build portions of the Proposed Project, access vaults would be installed approximately every 2,500 feet to enable access to the underground conduits. The access vaults would be buried approximately 18 inches below grade and would measure 3 feet wide by 5 feet long by 3 feet deep. The access vaults would be pre-cast from polymer concrete, rather than cast in-place, and would be designed to withstand H-20 highway live loading impacts. These vaults would not be visible and would be installed near the center of the existing roads. Approximately 20 vaults are proposed for installation in Segment 1, 15 vaults in Segment 2, and 42 vaults in Segment 3 for a total of 77 vaults to be installed in the New Build segments. No new vaults would be installed in areas of existing conduit.

2.1.2.5 Marker Posts

Aboveground warning marker posts, measuring approximately 6 inches by 6 inches wide and between 8 feet and 16 feet tall, currently exist along the entire cable route at intervals of approximately 700 feet. These wooden posts are installed to provide visible evidence of the presence of buried cable, identify the owner of the cable, and provide a telephone number for emergency notifications. All existing marker posts would be maintained or replaced as necessary. Approximately 77 new marker poles would be installed, and approximately 189 marker poles may be replaced along the New Build portions of the Proposed Project.

2.1.3 General Construction Methods

2.1.3.1 Preconstruction Activities

Prior to construction activities, AT&T field engineers would install markers along the New Build conduit alignment for route location identification purposes to assist the authorized biologists in pre-construction survey work.

Authorized/Qualified Biologists would then flag areas with sensitive species to alert the construction crews to avoid those areas. The biologists would walk ahead of the equipment prior to ground disturbing activities. In addition, clearance surveys for desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Spermophilus mohavensis*) would be conducted by the biologists in areas of high tortoise density and/or in areas having the potential for Mohave ground squirrel (see Appendix A - Biological Evaluation and Appendix B - Mohave Ground Squirrel Habitat Assessment for more information) a maximum of 48 hours prior to construction activities along those segments. Areas of high desert tortoise activity were identified along Segment 1 outside of Ivanpah Dry Lake and in the northern section of Segment 3. However, the entire Project falls within desert tortoise habitat. Areas of extant soils, vegetation types (habitat), and topography generally suitable for Mohave ground squirrel are present along the southern portion of Segment 3.

2.1.3.2 Conduit Bundle Installation

A majority of the conduit required in New Build segments of the Proposed Project would be installed using two construction methods—cable plowing and trenching. Cable plowing would be the predominant method for the construction of the New Build segments of the Project, although where field conditions dictate, trenching may be required in limited areas. AT&T anticipates 60 percent utilization of plowing methods and 40 percent utilization of trenching. A third technique, horizontal directional drilling (HDD), may be used to install short segments of conduit, but is not anticipated to be used. A discussion of HDD techniques is provided herein should it be deemed necessary in limited areas. For this analysis, it has been assumed that HDD techniques would only occur within the existing road prism at a maximum of 10 locations.

Cable Plowing

Cable plowing is a technique that can be used to install new conduit directly into the ground without excavating a trench. The plowing operation would produce a temporary disturbance in the ROW, approximately 16 inches wide and 4 feet deep, using a plow shank attached to a bulldozer. The bulldozer

would either be fitted with a reel on the front end and an innerduct plow on the back end or would pull trailer-mounted innerduct reels. The plow is a straight blade that would open the narrow furrow. The conduit would be continually placed into the furrow.

After the conduit bundle is installed, the furrow would be compacted back into place by the back end of the plow or a trailing compaction vehicle. This method is typically used in open areas with suitable terrain. Because all work in the Proposed Project is planned in existing roads and access roads, conditions are mostly amenable to plow installation.

Trenching

Trenching, a technique that may be necessary in areas where soil and geologic conditions preclude the use of a plow, would be implemented using either backhoes, trenching machines, or excavators. Trenching consists of excavating linear trenches, installing fiber optic cable conduit into the ditch, then backfilling and compacting the trench. This construction technique would involve the excavation of a trench approximately 16 inches wide and at least 4 feet deep. As the backhoe excavates the trench, the conduit bundle would be placed into the trench.

The trench would be backfilled immediately after the conduit bundle is installed and after the biologists have cleared the area for any species that may have entered the trench. Any trenches that cannot be backfilled at the end of the working day would be covered with plates overnight and inspected by the biologist the next day prior to backfilling. Backfilling would be accomplished with a rubber-tired backhoe/loader, motor graders, vibrator compactors, and small dozers.

The excavated material would be collected and used to backfill the trench. In vegetated shoulder areas where sidecasting cannot be avoided, a tarp would be used to cover the vegetation prior to trenching to protect the vegetation from sidecasted material and from being removed during the backfilling of the soil into the trench. Backfill material would be removed from the tarped area with an excavator to a depth of approximately 18 inches. In areas where the sidecast material depth is less than 18 inches, the remaining material would be removed from the tarp manually using shovels or equivalent tools. The tarp would then be removed from the vegetated area by hand.

HDD

The HDD method of construction, if required, would be used to place conduit bundles under road crossings, utilities, dry washes, or other obstacles in the ground.¹ This method of construction consists of subsurface boring using a guided drill head. To start the bore, a surface-operated drilling device would be angled into the ground near the entry pit, creating a 3- to 4-inch pilot hole. A 6-inch back ream would then be attached and pulled back through the pilot hole, connecting the receiving pit to the entry pit. The back ream would increase the pilot hole to the required diameter, approximately 6 inches, to a maximum depth of approximately 60 inches.

HDD uses a bentonite/water mixture that is pumped down the drill stem to run the drill head, lubricate the drill pipe, maintain the bore hole, and remove bore cuttings. Bentonite is a fine clay that, when mixed with water, provides the necessary lubrication and operating fluid for the drilling process. The bentonite/water mix would be prepared onsite and circulated in tanks and/or tanker trucks.

Although the HDD method would not be anticipated, AT&T has included a maximum of 10 bore sites along the New Build portions of the Proposed Project in their impact calculations for this analysis. It is expected that fewer bore sites—or none at all—would be utilized.

Distance From Other Utilities

Placement of the new conduit for the replacement cable would all occur within the existing BLM ROW Grant and CSLC Lease areas, and within 5 to 6 feet of AT&T's existing direct buried cable. The new

¹ Existing conduit would be utilized to cross the existing Union Pacific rail line.

cable would be located near the center of the road, or offset approximately 5 feet to one side in the case of Stoddard Wells Road. The new conduit would not, however, be any closer than 2 feet to the existing direct buried cable or to any other existing underground utility line. This proximity limitation does not apply where the replacement cable would be pulled through segments or portions of segments that already contain existing and available conduit.

2.1.3.3 Access Vault Installation

The access vaults would be buried at a depth that provides approximately 18 inches of ground cover. The ground would be excavated using a backhoe or excavator, and the vaults would be installed entirely within existing roads, in direct line with or directly adjacent to the installed buried conduit. A typical drawing of the access vault installation has been included as Figure 2-4: Access Vault Typical Drawing. After installing each vault, the hole would be backfilled and the road restored to preconstruction contours.

2.1.3.4 Fiber Optic Cable Conduit “Proving”

Prior to installing the fiber optic cable into the conduit, the conduit must be “proved.” The process of proving entails pulling a mandrel (a small dowel-like device constructed from wood or metal) through the conduit on a line to ensure clear passage for the fiber optic cable. If a blockage is identified, the surrounding area would be excavated to expose the conduit. Once the conduit is exposed, the area of blockage would be cut out and replaced with new conduit. After the conduit is proved, a pull and splice crew would install the fiber optic cable.

2.1.3.5 Fiber Optic Cable Installation

Traditionally, the most common method of installing fiber optic cable into a conduit is through “cable pulling.” The length of cable that may be installed using this method is limited by the cable’s tensile strength. To increase the lengths of cable that can be installed by pulling, air-assisted installation or “cable blowing” methods have been developed for the installation of lightweight and lower tensile cable (e.g., fiber optic cable). The following discussion provides a more detailed description of the general procedures, equipment, and personnel involved in a fiber optic cable pulling and air-assisted cable blowing installation process.

Pulling of Fiber Optic Cable

The cable installation process is initiated by accessing the conduit system through the access vaults located at increments of approximately 2,500 feet along the cable route. Generally, a cable pulling crew opens only the access vaults needed to install a predetermined length of cable. Access to selected vaults may be required for approximately 1 to 3 days to pull each cable segment the approximate 2,500 feet between the vaults.

The cable pulling process begins by moving the reel of cable, typically attached to a flatbed truck or trailer hitched to a tractor, and cable placing equipment to an open access point for a section of conduit in which the cable is to be installed. The location of this access point along the segment is selected based upon the crew’s chosen placement technique. In the placement technique called “figure-eighting,” the reel is brought to the first access vault along the section of conduit to be pulled and the pulling equipment is moved to the access vault at the end of the first section. After threading or blowing the pull line through the first section of conduit and attaching it to the cable, the total length of cable segment is then pulled through the first section. The excess cable is laid out neatly in a figure-eight pattern (approximately 20 feet in length) on a tarp that is placed on the ground at the second vault. The pulling equipment is then moved to the access vault of the next section of conduit. The line is threaded or blown back through the conduit and re-attached to the cable. The figure-eight of cable is then pulled through this second section of conduit. This process is continued from access vault to access vault until the complete segment of cable is installed. Another second placement method, called “bi-directional,” involves starting the cable installation process in the middle of the conduit segment to be installed. The cable is then installed in both directions. During this placement method, the cable reel is placed at an access vault in the middle of the conduit segment, while pulling equipment is placed at each end of the segment. This method reduces the length of cable that is pulled and figure-eighted through each access vault.

The placement technique that is selected for a fiber optic cable pulling operation is dependent upon site-specific variables relating to the section of conduit to be installed. Cable installation experts at the time of cable placement would make the decision regarding which technique to use. Cable can typically be pulled at a speed of 75 to 200 feet per minute for a length of 1,500 to 3,500 feet. To aid in the speed and length that a cable can be pulled, lubricants are manually placed into the conduit during the threading of pull rope and applied to the cable itself during cable pulling. A cable pulling operation typically requires 5 to 10 gallons of lubricant for one 16,000-foot reel of cable. Typical modern lubricants are composed of non-toxic water-based polymer materials. Although the lubricants are composed of non-toxic materials, proper spill containment materials to isolate potential spills would be utilized to protect the area from harm. A construction Spill Prevention and Contingency Plan is included as Appendix G - Spill Prevention and Contingency Plan.

Blowing of Fiber Optic Cable

As with cable pulling, the cable blowing process is initiated by accessing the conduit system through access vaults. Also like cable pulling, the installation crew begins the cable blowing process by moving the reel of cable and all cable blowing equipment to an access point at either the beginning or middle of the segment to be installed. Using either the figure-eight or bi-directional placement technique, the cable is then blown through the conduit using a method such as the high air speed blowing (HASB) or the piston, or push/pull, method.

In the HASB method, a large air volume is blown through the conduit during cable installation. The air suspends the cable in the conduit and a mechanical pusher advances the cable through the conduit. Air suspension of the cable in the conduit reduces friction during the installation process, thus reducing the need for lubrication. The piston, or push/pull, method would utilize a piston/missile carrier attached to the front of the cable. The carrier is pushed through the conduit by air pressure and pulls the cable along with it through the conduit, assisted by the mechanical drive unit. Because the conduit is partially blocked by this carrier, this method does not require as much airflow as the HASB method.

The placement technique and blowing method that is selected for a fiber optic cable blowing operation is dependent upon site-specific variables relating to the segment of conduit to be installed. Cable installation experts at the time of cable placement decide which technique and method to use. Cable can typically be blown at a speed of 200 to 350 feet per minute for a length of 3,000 to 8,000 feet. To aid in the speed and length that a cable can be blown, lubricants are applied to the insides of the conduit walls by blowing a lubricant-soaked sponge through the conduit. To coat the cable itself as it is blown, lubricant is also filled into blocks that are clamped around the cable-blowing machine. The typical quantity of lubricant used in a blowing operation is quite small, only about 12 ounces per reel of cable. As with cable pulling lubricants, modern cable-blowing lubricants are comprised of non-toxic water-based polymer materials. Although the lubricants are composed of non-toxic materials, proper spill containment materials to isolate potential spills would be utilized. A construction spill prevention plan is included as Appendix G - Spill Prevention and Contingency Plan.

2.1.3.6 Marker Post Installation

Marker poles would be typically installed using mechanical equipment consisting of a tractor with a power auger extension arm. Marker posts would be installed securely, to a minimum depth of 3 feet, as close as is practicable to the edge of the road without impeding traffic. In situations where old posts would be replaced, they would be replaced in the same location as previously installed, as close to the edge of the road as possible. The holes surrounding the marker posts would then be backfilled and compacted. The installation of marker poles would typically disturb an area of 12 inches by 12 inches, but the maximum zone of potential disturbance is a 5-foot by 5-foot area. Because marker poles would be installed in areas that lack vegetation, the exact location of each marker post would be determined in the field.

Figure 2-4: Access Vault Typical Drawing

Figure 2-4: Access Vault Typical Drawing has been omitted from this document and is included separately as Fig2-4.pdf.

2.1.3.7 Soil Compacting and Surface Restoration

Backfill material would be compacted to prevent erosion and soil settlement. Backfill material consists of native soil or imported aggregate base. In most cases, the native material excavated during installation would be placed back in the trench as backfill and compacted to its pre-construction condition.

Final restoration would be the last phase of the Proposed Project and would include detailed grooming of all disturbed road areas to pre-Project contours, removal of construction debris, and repair of culverts, water bars, and other erosion control devices. Vegetation restoration would include the seeding of a mix of native vegetation and would not include any non-native vegetation or noxious weeds. If succulents or cacti are found to be in harm's way, these species would be carefully removed, if necessary, by a restoration specialist and held in a nearby nursery area until safe to return to the area utilizing BLM-approved transplanting methods as outlined in Appendix E - Succulent Transplanting Plan.

Post-Project restoration monitoring consisting of an evaluation of the success of newly seeded areas and invasive vegetation control would be implemented. This post-Project monitoring would occur within the spring flowering period of the following year.

2.1.4 Temporary Construction Areas

2.1.4.1 Right-of-Way

In New Build areas, construction would take place in the existing ROW, which consists of San Bernardino County roads or previously disturbed access roads that were originally permitted by the BLM ROW Grant and CSLC Lease. This ROW would consist of a 10-foot permanent impact area (i.e., existing roads) and an additional 10-foot temporary impact area (i.e., road shoulder).

2.1.4.2 Access Roads

Segment 1

Segment 1 would be accessed using the Yates Wells Road exit from I-15, which connects to the Proposed Project's ROW. The existing dirt access roads in Segment 1 are approximately 10 to 15 feet wide. Due to the low volume of traffic, vegetation has emerged within the shoulders of the road and across the 20-foot-wide berms that exist from the original construction of the line (see Attachment B - Representative Photographs). The approximately 2.4-mile-long portion of this segment within Ivanpah Dry Lake is not bordered by any vegetation.

Segment 2

Segment 2 would be accessed using the Cima Road and Halloran Summit Road exits from I-15. These roads connect to the dirt access road that is coincidental with the permanent ROW. The access road leading from Cima Road to Halloran Summit Road is approximately 25 feet wide for a distance of approximately 1.1 miles. This dirt access road then narrows to approximately 10 to 15 feet wide for the remainder of the segment. The 20-foot-wide berms from the original construction activities still exist; however, due to the low volume of traffic, vegetation has emerged along the shoulder of the road.

Segment 3

Segment 3 would be accessed using the SR 247/Barstow Road, and the Quarry Road exit from I-15. Leaving the Slash X Regeneration Station and heading southwest, the access road width is approximately 15 feet for a distance of approximately 4.8 miles. Vegetation has recovered in this portion of the segment past the original 20-foot-wide berms. The access roads along the remainder of this segment are approximately 20 to 30 feet wide.

2.1.4.3 Staging Areas

Staging areas would be established off-site to provide the locations to store material and large equipment for long periods of time and to conduct fueling and maintenance work. They would be located outside of BLM/CSLC land in commercial property areas only.

In Segment 1, staging may occur in the Whiskey Pete's or Primm Valley Golf Club facility parking areas. In Segment 2, two staging areas may be located in a commercial area off the ROW, at Cima Road and the I-15, and on the north side of the I-15 at Halloran Summit Road. In Segment 3, all staging areas would be located on commercial property off the ROW. The locations and quantity of staging areas for Segment 3 have not been determined.

2.1.4.4 Laydown Yards

Potential laydown areas within the New Build portions of the proposed fiber cable route would be located adjacent to the ROW. Laydown areas are defined as an identified area for vehicle parking and/or short-term placement of equipment, conduit, and cable. These areas would generally be unvegetated, but a few may contain sparsely scattered, disturbed native, and exotic vegetation. No previously undisturbed vegetation (i.e., vegetation located outside of areas previously affected by the installation of the fiber optic cable in 1988 and outside of the disturbed areas affected by ongoing uses) would be affected by activities in the laydown areas. No refueling or maintenance activities would occur within the laydown areas; however, refueling would occur within the ROW. Temporary parking of vehicles (overnight) would occur within laydown areas adjacent to the ROW. The location and dimensions of the 12 laydown areas that would be used for the construction of the Proposed Project are included in Table 2-2: Laydown Areas. A total of approximately 11.69 acres of temporary construction area would be required for the 12 laydown areas. Laydown areas would be marked after being surveyed by qualified biologists prior to parking equipment. Vehicles and equipment would be thoroughly checked for desert tortoise and other wildlife by the biologist prior to moving. Vehicle operators would inspect under and around their vehicles prior to any movement. Appendix A - Biological Evaluation contains representative photos of laydown areas along the proposed fiber cable route.

2.1.4.5 HDD Sites

The HDD method of construction, if required, would involve the use of three temporary construction areas at each crossing. An entry pit and an area for the boring rig and fluid pump would be required on one side of the crossing, while an exit pit would be required on the other side. The entry pit would measure approximately 4 feet by 4 feet and the exit pit would measure approximately 4 feet by 8 feet. Both pits would be approximately 3 feet deep. The drilling rig and pumps would require an area approximately 6 feet wide by 25 feet long. All temporary construction areas related to HDD activities would be located in the existing roadway.

2.1.5 Temporary Disturbance

All construction equipment would be driven over existing roads to access the Proposed Project. The widest vehicle that would be used during construction is an approximately 9-foot-wide Caterpillar D9 tractor. Due to the recovery of vegetation within the previous, temporary ROW, certain portions of the access roads are less than 20 feet wide. As a result, the passing of vehicles, turn-arounds, and general road travel may potentially crush some previously disturbed vegetation along the shoulders of the access roads. Temporarily crushing the vegetation would minimize impacts as the root system, which would be

Table 2-2: Laydown Areas

Laydown Area	Location (Universal Transverse Mercator)	Area (feet)	Acreage	Description
Segment 1				
Corral Area (Mile Marker No. 317 + 200)	11s 0642185 3932660	50 by 100	0.11	Located approximately 1 mile south of Yates Wells Road
Nipton Regeneration (Nipton Road and I-15)	11s 0640628 3926809	70 by 100	0.16	Located at the gravel area in front of the Nipton Regeneration Station
Segment 2				
Mile Marker No. 466	11s 0618224 3923038	60 by 200	0.28	Located approximately 1.2 miles south of Cima Road
Halloran Springs Regeneration (Halloran Summit Road and I-15)	11s 0609596 3918830	60 by 100	0.14	Located near the intersection of Halloran Summit Road and I-15
Segment 3				
Level 3 Regeneration Station	11s 0498090 3844817	100 by 100	0.23	--
Stoddard Wells Road	11s 0491420 3841033	100 by 75	0.17	Located approximately 5 miles southwest of the Level 3 Regeneration Station
Rock Well Area	11s 0491551 3841268	100 by 75	0.17	Located approximately 0.15 mile south of the Stoddard Wells Road laydown area
Mile Marker No. 1094	11s 0490580 3839549	100 by 75	0.17	--
Mile Marker No. 1098 + 250	11s 0491074 3838790	100 by 75	0.17	--
Mile Marker No. 1119 + 225	11s 0489340 3834580	West – 150 by 300 East – 100 by 300	West – 1.03 East – 0.69	Located on both sides of Stoddard Wells Road
Mile Marker No. 1137 – 200	11s 0485530 3832993	North – 300 by 500 South – 250 by 300	North – 3.44 South – 1.72	Located on both sides of Stoddard Wells Road
Mile Marker No. 1146	11s 0483637 3832066	350 by 400	3.21	Located on the north side of Stoddard Wells Road

left intact to allow for post-construction recovery. No vegetation would be removed and no previously undisturbed vegetation would be crushed. In addition to vegetation, other locations along the ROW would be temporarily disturbed as part of the Proposed Project. These disturbances would result from the grading of existing access roads, installation of conduit bundles, and the use of laydown areas. Table 2-3: Temporary Disturbance provides a summary of the areas that have the potential to be disturbed during construction.

Table 2-3: Temporary Disturbance

Activity	Disturbance Dimensions	Quantity	Area of Disturbance² (acres)
Within Permanent ROW			
Plowing/Trenching	16 inches wide	32.6 miles	5.3
Access Road Grading	10 feet wide	32.6 miles	39.5
Outside Permanent ROW			
Laydown Areas	Various	12	11.7
HDD Sites	198 square feet	10	0.05
Marker Pole Installation	5 feet by 5 feet	266	0.15
Vegetation Crushing			
Segment 1	8 feet wide	6.7 miles	6.5 acres
Segment 2	0 feet wide	5.9 miles	0.0 acres
Segment 3	8 feet wide	4.8 miles	4.7 acres
Access Vault Installation³			
Segment 1	10 feet by 10 feet	20	0.05
Segment 2	5 feet by 10 feet	15	0.02
Segment 3	5 feet by 10 feet	42	0.05

2.1.6 Equipment

Due to both the variety of equipment available and the differences in equipment inventory between contractors, a list of typical construction equipment that may be used during construction of the Proposed Project has been included as Table 2-4: Typical Construction Equipment.

Because most construction equipment is similar, impacts to habitat were assessed based on a width greater than the maximum width of equipment. The maximum width for the typical construction equipment listed is 9 feet; therefore, potential impacts due to vehicle maneuvering outside the road is limited to 10 feet wide. This potential impact may be narrower at some locations due to site-specific conditions. All equipment would stay within the confines of the previously disturbed road ROW or access road ROW in which the fiber optic cable is currently located.

Routine maintenance or repair activities on all construction equipment would occur outside of the ROW. Any disabled equipment would be towed on a flat-bed truck off site to the nearest repair facility and repaired at this location before being returned to service.

² These calculations indicate the maximum potential temporary disturbance.

³ The area of disturbance for access vault installation varies by segment due to the level of previously disturbed vegetation within the temporary ROW.

Table 2-4: Typical Construction Equipment

Construction Equipment	Number	Width (feet)	Crew Size	Reference Noise Level at 50 feet (A-weighted decibels)
Conduit Installation				
D9 Caterpillar	1	9	10–13	85
Backhoe	2	9		80
10-wheeler truck	1	8		82
Semi-trailer truck	1	8		88
Three-quarter-ton pickup truck	5	6		71
Excavator	1	9		85
Trencher	1	8		82
Dozer/Plow	1	9		85
Loader	1	8		85
Water truck	1	8		80
Cable Placing				
One-ton truck (tows cable trailer)	1	8	6–9	78
Cable reel trailer	1	8		Not Applicable (NA)
Cable reel	1	83 by 42 inches		NA
Three-quarter-ton pickup truck (tows air compressor)	1	6		71
Semi-trailer truck	1	8		88
Air blower device	1	NA		78
Mechanical pusher/puller	1	8		NA
Pull line	1	NA		NA
Backhoe	1	9		80

Source: United States Environmental Protection Agency, 1971

2.1.7 Operation and Maintenance

The post-construction operation and maintenance activities for the fiber optic line would not differ from pre-construction conditions. No new access roads would be constructed for operation and maintenance activities. AT&T surveyors may drive along the existing roads to inspect the line after rainstorm events and may stop and open access vaults. Ground-disturbing activities associated with ongoing operation and maintenance procedures are normally minor, if any. These activities would primarily consist of the repair of erosion control devices or cable conduits in the event of storm damage, landslides, or other emergencies. In most emergency situations, review of damaged areas would be accessed via public roads, transmission ROW, and existing access roads. No new habitat would be affected by fiber optic maintenance activities, which would occur only within the ROW. The BLM and CSLC would be notified if maintenance activities needed to occur outside of the areas authorized by those agencies.

2.2 CONSTRUCTION TIMELINE AND SCHEDULE

2.2.1 Construction Timeline

Construction of the Proposed Project is estimated to occur over a 6-month period. Due to the impending need for replacement of the existing cable in the targeted portions, construction activities are scheduled to begin immediately upon receipt of all necessary authorizations. During the construction period, various aspects of construction would be occurring simultaneously, including conduit installation, cable installation, and final restoration.

2.2.2 Schedule

Construction crews would generally work a minimum of 5 days per week and 8 to 10 hours per day. If necessary, work would occur on Saturdays in accordance with local ordinances. Unless restricted by local ordinance, workdays would begin at daylight and end at dusk, typically 7:00 a.m. and 6:00 p.m., respectively.

2.3 COMPLIANCE WITH ALL LAWS

AT&T contractually requires its contractors to comply with all local, state, and federal laws (including all statutes, ordinances, regulations, orders, and codes).

2.4 APPLICANT-PROPOSED MEASURES

In order to minimize adverse impacts to the environment, the Proposed Project applicant would be required to comply with BLM standard operating procedures for the use of public lands as required by law, regulation, and other BLM guidelines. The below-listed applicant-proposed measures (APMs) would also be employed by AT&T and its contractors should the Proposed Project be approved.

2.4.1 Vegetation

- APM-VEG-01: No ground clearing or grading of vegetation shall be conducted to prepare for and during construction activities. Plant root systems shall not be affected by plowing/trenching activities since these activities shall occur within existing roads only. No sensitive vegetation shall be removed. If sensitive plant species, such as cacti and succulents are within an impact area, the restoration specialist shall remove and temporarily relocate the species to a "nursery area" until safe to return to the immediate area where the sensitive vegetation was originally found utilizing BLM-approved transplanting methods as outlined in Appendix E - Succulent Transplanting Plan. Disturbance of vegetation outside of the road, but within the temporary construction ROW, shall be limited to crushing vegetation to minimize root damage to vegetation.

- APM-VEG-02: Surface stabilization and reclamation shall be accomplished by removing all construction debris from the Project area and returning the soil to its original contours. Vegetation restoration shall be accomplished by the use of native seeding only.
- APM-VEG-03: All Project activities shall be confined to the Project ROW and approved access roads and storage areas. If unforeseen circumstances require disturbance beyond the Project ROW, AT&T shall notify the California Department of Fish and Game (CDFG) and BLM immediately. BLM shall notify the United States (U.S.) Fish and Wildlife Service (USFWS).
- APM-VEG-04: Sidecasting into vegetated shoulder areas shall be minimized to the extent feasible. In vegetated shoulder areas where sidecasting cannot be avoided, a tarp shall be placed to cover the vegetation prior to sidecasting to ensure vegetation is not removed during the replacements of soil back into the trench.

2.4.2 Wildlife

- APM-WLD-01: Biological Monitors shall be present with each construction team for all construction activities. Three construction teams (two Biological Monitors per team) in total are anticipated for Project construction. Only personnel authorized by the BLM, CDFG, and USFWS may handle desert tortoises. When a listed species is moved, the Authorized Biologist shall be responsible for taking appropriate measures to ensure that the animal is not exposed to temperature extremes, which could be harmful. The biologist shall be responsible for assisting crews in compliance with protection measures, performing surveys in front of crews as needed to locate and avoid desert tortoise, and monitoring compliance. Biologists (Qualified Monitors) for the desert tortoise shall be present during all construction activities along the Project area to help avoid the take of individual animals and to minimize disturbance to the habitat. The Qualified Monitors shall conduct daily inspections of the fiber optic replacement activities site and shall ensure compliance with the management measures. A field contact representative (FCR) shall be responsible for overseeing compliance with protective measures and stipulations for the desert tortoise and for coordinating on compliance with the BLM. The FCR shall be on site during all Project activities. The FCR shall have the authority to halt all Project activities that are in violation of the stipulations, which the FCR shall have a copy of while work is being conducted. The FCR may be a crew chief, or a field supervisor, a Project manager, any employee of the Project proponent, or a contract biologist.
- APM-WLD-02: Authorized Biologists (USFWS and CDFG approved) shall conduct surveys for the presence of desert tortoise a maximum of 48 hours before ground-disturbing work is initiated in areas of high desert tortoise density (Appendix A - Biological Evaluation). In addition, clearance surveys shall be performed directly ahead of construction Project activities as they occur along the Project route. Survey methodology shall consist of walking the entire length of the Project activity area. The surveys shall concentrate on detecting live tortoise, tracks, and cover sites. At a minimum, the survey shall include all areas that shall be subjected to disturbance or overland travel and a 50-foot buffer around those areas. All desert tortoise burrows/pallets within the Project areas shall be marked in such a manner so as the equipment operators shall be able to identify and avoid such burrows. Flagging these locations shall be performed prior to replacement activities planned each week, and flagging shall be distinctive to distinguish between an occupied burrow and an unoccupied burrow. All trenches and holes shall be inspected daily for entrapped animals. The Biological Monitors shall be supplied with the equipment necessary to facilitate removal for any entrapped wildlife. The equipment shall minimally include catch net, heavy gloves, rubber gloves, and materials (plywood) to effectively block animal access to holes and trenches.
- APM-WLD-03: Operators of heavy equipment (such as plow trucks conducting surface-disturbing activities) shall be accompanied by a Biological Monitor when working in desert tortoise habitat during all construction activities. The monitor shall walk in front of the equipment during its

operation and shall have the responsibility and authority to halt all Project activity should danger to a desert tortoise arise. Work shall proceed only after hazards to the desert tortoise are removed, the desert tortoise is no longer at risk, or the Qualified Monitor has moved the desert tortoise from harm's way. The monitors shall be present throughout to ensure compliance with the protection measures and terms and conditions of the USFWS Biological Opinion and CDFG Incidental Take Permit. Any trenches temporarily created shall be covered with native soil material or shall be plated with steel plates at the end of each workday. All trenches shall be inspected for desert tortoise occupancy before soil is refilled. All reasonable efforts shall be made to allow any entrapped animals to escape.

- APM-WLD-04: Encounters with a listed species shall be reported to the Authorized Biologist. These biologists shall maintain records of all listed species encountered during Project activities. This information shall include the following for each individual: the locations (narrative, vegetation type, and maps), dates of observations; general conditions of health, and apparent injuries and state of healing; if moved, location moved from and location moved to (for desert tortoises, whether animals voided their bladders); and diagnostic markings (i.e., identification numbers or, on desert tortoises, marked lateral scutes).
- APM-WLD-05: If desert tortoise must be moved from harm's way during any Project activities, persons authorized by the BLM, USFWS and CDFG to handle desert tortoise shall implement the following procedures:
 - The Authorized Biologist shall handle a desert tortoise only when necessary. New latex gloves shall be used when handling each desert tortoise to avoid transfers of infectious diseases between animals.
 - Desert tortoises shall be moved the minimum distance possible within appropriate habitat to ensure their safety. Desert tortoises shall not be moved in excess of 1,000 feet for adults or 300 feet for juveniles and hatchlings.
 - The Authorized Biologist(s) shall follow the appropriate protocols outlined in "Guidelines for Handling Desert Tortoises during Construction Projects: (Desert Tortoise Council 1994).
 - Desert tortoises that are found above ground and need to be moved from harm's way shall be placed in the shade of a shrub.
 - The Authorized Biologist shall have the authority to halt all non-emergency Project activity should danger to a desert tortoise or other species arise. Work shall proceed only after hazards to the listed species are removed, the species is no longer at risk, or the species has been moved from harm's way by the Authorized Biologist.
- APM-WLD-06: Upon locating a dead or injured listed species, AT&T shall notify the BLM, USFWS, and CDFG. Written notification shall be made within 15 days of the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death (if known), and other pertinent information. Animals injured through AT&T activities shall be transported to an authorized veterinarian for treatment at the expense of AT&T. If an injured desert tortoise, harmed by other than Project activities, is found, the desert tortoise shall be taken to a USFWS/CDFG authorized veterinarian. If an injured animal recovers from injury, the BLM, CDFG, and USFWS shall be contacted for final disposition of the animal. If AT&T, its employees, contractor or agents kills or injures an individual of a listed species status, or finds any such animal dead, injured or entrapped, AT&T shall immediately notify the BLM. Any animal that may have been killed as a result of Project activities shall be turned over to the BLM and a written report detailing the date, time, location, and general circumstances under which it was found shall be submitted to the BLM no later than 3 business days following the incident.
- APM-WLD-07: Authorized/Qualified biologists shall flag areas with the extant soils, vegetation types (habitat) and topography considered generally suitable for the Mohave ground squirrel along Segment 3 to alert the construction crews to avoid those areas. The Biologists shall walk

ahead of the equipment prior to ground-disturbing activities. In addition, clearance surveys for Mohave ground squirrel shall be conducted by the biologists in areas with potential for Mohave ground squirrel (see Appendix B - Mohave Ground Squirrel Habitat Assessment) no more than 48 hours prior to construction activities occurring along this segment.

- APM-WLD-08: The proposed cable installation Project shall not disturb habitats adjacent to the existing dirt road, thereby minimizing the potential for any take of any Mohave ground squirrel that might be in the Segment 3 area. The presence of a field Biological Monitor during the installation process shall insure that intrusions into the adjacent desert habitats do not occur.
- APM-WLD-09: The specific location for the installation of underground cable marker posts shall be established by the Biological Monitor such that no small mammal burrows shall be disturbed by this activity.
- APM-WLD-10: Although occurrence of the Mohave Ground Squirrel is not anticipated, should one be observed, under no circumstance shall Project personnel, including the Biologists, be allowed to touch or otherwise disturb the animal.
- APM-WLD-11: Biologists monitoring the area of Project activity for desert tortoises and Mohave ground squirrels shall be required to be on the vigilant outlook for any other species, and shall be authorized to temporarily halt or redirect Project activities to the extent necessary to keep any observed wildlife out of harm's way.
- APM-WLD-12: The Project applicant shall retain a qualified Biological Monitor (USFWS, CDFG, and BLM approved) to supervise all construction activities located within or near sensitive communities and/or known special-status plant species. All sensitive resources shall be clearly marked prior to the start of work in each sub-segment. To reduce potential impacts to sensitive biological resources during construction activities, the following measures shall be implemented throughout construction:
 - The Biological Monitor shall conduct brief environmental training sessions for work crews prior to commencement of construction within or directly adjacent to sensitive areas. The training session shall discuss local, state, and federal statutes, advise construction personnel on the biological value and protected status of those areas, and discuss various measures for minimizing potential construction-related impacts; and
 - The Biological Monitor shall visit construction zones located within or near sensitive areas at a frequency and duration determined by the appropriate agency and based on construction timing and sensitivity of resources at issue.
- APM-WLD-13: Desert tortoises shall be handled only by a biologist authorized by the USFWS and approved by the BLM (Authorized Biologist) and only when necessary. The Project applicant shall submit the names of proposed Authorized Biologists and Biological Monitors to the BLM, CSLC, and CDFG at least 30 days prior to the onset of construction activities. No construction activities shall begin until an Authorized Biologist is approved. All construction activities shall be monitored by the Biological Monitors to identify and assure compliance with the Biological Opinion for desert tortoise within the Project area. The Authorized Biologist shall determine avoidance measures as warranted and address any unforeseen issues and potential conflicts that may emerge from the implementation of construction activities. The Biological Monitor shall oversee the construction personnel regarding the protocol for working in desert tortoise habitat and flag any sensitive areas for avoidance, such as boring site set up, installation of manholes and vaults, plowing and trenching segments, and monitor conduit and fiber optic line installation. In addition, the Biological Monitor shall inspect den and burrow excavations for any potentially trapped wildlife and, if necessary, remove the trapped wildlife from harm's way.

- APM-WLD-14: A post-Project report identifying all activities affecting the desert tortoise shall be submitted to the USFWS Ventura Office, BLM Needles Field Office, and the CDFG Bishop Office.
- APM-WLD-15: All contractors, crewmembers, engineering inspectors and Biological Monitors shall inspect for desert tortoises resting in the shade under vehicles and equipment prior to moving any equipment. If a desert tortoise is present, the worker(s), under the direction of the Biological Monitor, shall carefully move the vehicle only when necessary and if the desert tortoise shall not be injured by moving the vehicle. If this is not possible, the worker(s) shall wait for the desert tortoise to move out from under the vehicle before moving the vehicle, or the Authorized Biologist shall carefully move the desert tortoise using the protocol methods (Desert Tortoise Council 1999).
- APM-WLD-16: Firearms and domestic dogs shall be prohibited from work areas.
- APM-WLD-17: Trash and food items shall be disposed of promptly in predator-proof containers with re-sealable lids. Trash containers shall be removed at the end of each workday.

2.4.3 Invasive and Noxious Weeds

- APM-NOX-01: The Biological Monitor shall survey the Project corridor, including access roads, for populations of invasive and noxious weeds prior to the start of construction. Populations of invasive and noxious weeds within 50 feet or less of the ROW in the areas of narrow roads or access zones shall be flagged prior to construction. Construction activities in all other segments shall be restricted to the existing roads.
- APM-NOX-02: The construction contractor shall implement control measures for invasive and noxious weeds as defined in the BLM management guidelines and the Noxious Weed Management Plan (Appendix D - Noxious Weeds Management Plan), including specific measures to control the introduction and spread of noxious weeds in the Project corridor; worker training, specifications and inspection procedures for construction materials and equipment used in the Project corridor; post-construction monitoring for noxious weeds; and eradication and control methods, subject to BLM approval.
- APM-NOX-03: To prevent contamination into new habitat, the construction superintendent shall establish wash stations in staging areas to remove any seeds that may have attached to construction vehicles.
- APM-NOX-04: Construction personnel shall power wash construction vehicles and equipment, including body, bumpers and undercarriages, at the staging area wash stations prior to moving the equipment on site and beginning earthmoving activities.
- APM-NOX-05: When vehicles and equipment are washed, a log shall be kept stating the location, date and time, types of equipment, and methods used. The crewmember who washed the vehicle shall sign the log. Written logs shall be included in the Biological Monitor's monitoring reports.
- APM-NOX-06: The construction superintendent shall use certified weed-free erosion control materials (i.e., straw bales) during grading and construction activities to control surface runoff.
- APM-NOX-07: All gravel and fill material required during Project construction and maintenance shall be certified weed free.
- APM-NOX-08: The Project applicant shall be responsible for implementing an invasive species-monitoring program to identify and remove any invasive species. Post-Project monitoring shall be implemented for invasive vegetation and shall occur within the spring flowering period of the following year.

2.4.4 Noise

- APM-NO-01: The construction superintendent shall ensure compliance with San Bernardino County Municipal Code Section 83.01.080(g)(3) timing requirements within noise-sensitive areas. The Project proponent shall utilize standard construction equipment that complies with established noise standards.

2.4.5 Air Quality

- APM-AIR-01: The construction superintendent shall cease all earth moving or excavation activities during periods of high winds (i.e., winds greater than 20 miles per hour (mph) averaged over one hour).
- APM-AIR-02: The construction superintendent shall sufficiently water or secure all material transported off-site to control the release of dust.
- APM-AIR-03: The construction superintendent shall control fugitive dust emissions by limiting all on-site construction vehicle speeds to 20 mph.
- APM-AIR-04: The construction superintendent shall control Ozone precursor emissions from mobile equipment by keeping all engines in good condition and in proper tune according to manufacturer's specifications.
- APM-AIR-05: The construction superintendent shall monitor on-site mobile equipment, which shall not be left idling for periods longer than 5 minutes.

2.4.6 Surface and Groundwater

- APM-WTR-01: All laydown areas shall be located at least 100 feet from drainages. No refueling, equipment repair, or lubrication activities shall be allowed within a laydown area. A construction Stormwater Pollution Prevention Plan (SWPPP) is included herein as Appendix H – Stormwater Pollution Prevention Plan.
- APM-WTR-02: All stipulations found in the streambed alteration agreement for the Project (Section 1602 of the California Fish and Game Code) shall be strictly followed. The utilization of directional boring, if required, shall adhere to the Horizontal Directional Drilling: Contingency and Resource Protection Plan (Appendix I - Horizontal Directional Drilling: Contingency and Resource Protection Plan).
- APM-WTR-03: Conservation measures proposed for dry wash crossings include the immediate implementation of stabilization measures along the stream bank and floodplain upon completion of construction; no placement of artificial flow obstructions within the stream bank or channel; avoid areas of stream crossing at bends, in areas of undercut berms, or in unstable bank areas. A monitor shall be present during construction activities to ensure compliance with protection measures. AT&T shall inspect the fiber optic cable line after storm events to identify erosion or stability issues. No manholes or access vaults shall be installed within the streambeds or stream bank areas.
- APM-WTR-04: The Project applicant has prepared a SWPPP to address controlling construction related erosion and sedimentation and has obtained a National Pollutant Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board stipulating permissible waste discharge requirements. The SWPPP addresses:
 - identification of potential sources of pollutants and toxic materials;

- identification of Best Management Practices (BMPs) for stormwater contact minimization, construction material distribution and access, equipment storage, vehicle maintenance and cleaning areas;
 - erosion and sediment control measures for wet- and dry-season activities;
 - temporary and permanent erosion control techniques, sediment control on public roads, wind erosion, and non-stormwater management techniques; and
 - waste management/disposal methods.
- APM-WTR-05: The construction superintendent shall be responsible for constructing and installing all BMPs outlined in the SWPPP to limit sediment movement. Flow dissipation and sediment-control structures shall also be constructed in appropriate locations. Small sediment areas, designed for catching runoff and storing sediment from exposed and erodible surfaces, shall be built prior to construction start-up where they are deemed necessary. These structures shall be maintained and cleaned out as often as necessary for as long as erodible surfaces were exposed. Small weed-free hay bale dams shall be placed below slopes as temporary erosion control measures.
 - APM-WTR-06: The Project applicant shall follow the Spill Prevention and Contingency Plan (Appendix G – Spill Prevention and Contingency Plan), which outlines the storage and use of hazardous materials, the prevention of spill incidents, and emergency response procedures. The plan also describes the various chemicals to be stored and used on the Project site (i.e., fertilizers, cable lubricants, etc.). This plan also establishes procedures and methods to transport, store, and clean up a spill involving hazardous materials in compliance with state and county regulations and ordinances. In addition, the plan outlines construction measures and operational procedures to follow in the event of an emergency.
 - APM-WTR-07: All HDD crewmembers shall be familiar with and be prepared to implement all aspects of the Horizontal Directional Drilling: Contingency and Resource Protection Plan (Appendix I - Horizontal Directional Drilling: Contingency and Resource Protection Plan).
 - APM-WTR-08: Directional boring of cable routes shall be monitored for potential day-lighting of drill lubricant, and proper equipment staging, travel or use during construction or cable attachment activities. To reduce potential impacts to sensitive biological resources that could occur during boring activities and impacts associated with sedimentation, noise, lighting, and improper equipment use, the following measures shall be implemented during construction:
 - During boring activities, the bore crew shall strictly monitor drilling fluid pressures and down gradient of water crossing sites to identify seeps, and inspect the bore route periodically. If drill-lubricant material surfaces along the route, the crew shall immediately stop work, implement clean-up operations, and notify the Authorized Biologist, the Biological Monitor, and appropriate regulatory agencies. The Biological Monitor shall closely monitor all clean-up efforts to ensure that disturbance to vegetation is minimized, and closely supervise the use of any equipment during clean-up operations.
 - No boring activities shall be conducted during nighttime hours to reduce the potential for drill-lubricant seeps to go unnoticed in the dark, unless approved by local or permitting agency.
 - Appropriate materials for clean-up of drill-lubricant shall be retained on the site throughout the duration of construction.
 - The limits of all construction areas, access routes, and adjacent sensitive resources shall be clearly marked and all vehicles and equipment shall be restricted to within the defined area.

- The use of heavy equipment directly adjacent to sensitive communities, known special status plant or wildlife locations shall be avoided.
- APM-WTR-9: Upon completion of construction activities at access, staging, and emergency access areas, the contractor shall replace all erosion-resistant materials disturbed by construction activities to pre-Project contours or to the satisfaction of the BLM.

2.4.7 Health and Safety/Hazardous Materials

- APM-HAZ-01: The Project applicant and construction superintendent shall be subject to the Occupational Safety Health Administration, which sets forth mandatory health and safety standards for construction sites. These standards include mandatory incident reporting, weekly tailgate meetings, and monthly safety meetings with the contractor to discuss potential health and safety issues. In addition, the construction superintendent shall be responsible for verifying that all construction personnel working on the Project site are legal citizens of the USA or possess approved employment visas.
- APM-HAZ-02: The contractor shall follow WATCH guidelines.
- APM-HAZ-03: The Project applicant or contractor shall obtain all required permits.
- APM-HAZ-04: All excavations shall be backfilled and/or covered at the end of each workday.

In addition to these measures, the applicant shall implement the Spill Prevention and Contingency Plan (Appendix G – Spill Prevention and Contingency Plan) as discussed in APM-WTR-07.

2.4.8 Cultural Resources

- APM-CUL-01: If buried cultural materials are identified during construction activities, the construction superintendent shall halt all work in that area until a qualified archaeologist can evaluate the nature and significance of the finds. Upon discovery of potential human skeletal remains, all activity in the area of discovery shall cease immediately. The County Coroner shall be notified immediately (within 24 hours) to make a determination as to human or nonhuman skeletal remains, and the circumstances, manner and cause of death. At the same time, the BLM and/or CSLC shall also be notified of the discovery. If the Coroner determines that the remains are Native American, the BLM, and/or the applicant shall contact the Native American Heritage Commission to identify a Most Likely Descendent. The BLM shall also notify the potentially effected Tribe(s).
- APM-CUL-02: In the event of discovered looting or disturbance of resources, all responsible parties shall be reported to the BLM and CSLC and local authorities for legal action pursuant to the approved cultural resources monitoring plan.

2.4.9 Transportation

- APM-TRA-01: Traffic detour signs and/or personnel shall be posted to direct traffic during the staged construction period.
- APM-TRA-02: The contractor shall maintain traffic control in compliance with the encroachment permit.
- APM-TRA-03: Multiple work crews shall be adequately distanced to avoid back-to-back construction zones.

- APM-TRA-04: The contractor shall post adequate signing to notify traffic of construction equipment that may slow down traffic, and notify of approaching construction zone.

2.4.10 Utilities

- APM-UTL-01: The contractor shall notify Underground Service Alert to identify existing utilities and mark them in the field and notify local utilities of planned work activities.

2.5 ALTERNATIVES TO THE PROPOSED PROJECT

As the Proposed Project is the replacement of portions of an existing fiber optic cable system, no alternative alignments are feasible that would eliminate the potential for significant impacts. The following section describes the one feasible alternative to the Proposed Project, the No Action Alternative, which has been identified.

2.5.1 No Action Alternative

Under the No Action Alternative, the BLM would not issue the ROW Grant Amendment approval and the CSLC would not approve the requested Lease amendment to encroach on federal/state land to replace portions of an existing fiber optic cable system. The subject area would continue to be managed within the framework of a program of multiple use and sustained yield and maintenance of environmental quality [43 U.S. Code 1781 (b)] in conformance with applicable statutes, regulations, policy, and land use plans.

The Las Vegas-Victorville cable route segments targeted for replacement by the Proposed Project are rapidly nearing the end of their useful life. Under the No Action Alternative, the compromised segments would not be replaced and would continue to be susceptible to damage and potential failure. Those segments identified in the Proposed Project would continue to be at risk. The overall functionality of the Las Vegas-Victorville cable route would not be maintained.

The Las Vegas-Victorville cable route is an integral part of AT&T's nationwide and global network of cable communication, which links and carries voice, data, and streaming video. Failure of the Las Vegas-Victorville cable route would affect critical uses ranging from household personal computers to businesses, universities, hospitals, emergency responders, and government institutions.

Three other fiber optic cable service providers—Level 3, WilTel, and Sprint—have facilities in the Proposed Project area; however, their ability to serve AT&T's customers is unknown.