

Recovery Unit TCA	Surveyed area (km <sup>2</sup> )	2014 Density (SE)	2004 Abundance (SE)	2014 Abundance (SE)	Δ Abundance (SE)
Western Mojave	6294	2.8 (1.0)	35777 (9703)	17644 (4785)	-18133 (4918)
FK	2347	2.6 (0.3)	12251 (4004)	6196 (2025)	-6055 (1979)
OR	852	3.6 (0.4)	7036 (2299)	3064 (1001)	-3972 (1298)
SC	3094	2.4 (0.3)	19216 (6280)	7398 (2418)	-11818 (3862)
Colorado Desert	11663	3.7 (1.3)	67087 (23312)	42770 (14862)	-24317 (8450)
AG	713	7.2 (0.8)	7327 (2395)	5146 (1682)	-2181 (713)
CK	2818	3.3 (0.4)	14869 (4859)	9304 (3041)	-5565 (1819)
CM	3763	2.8 (0.3)	29660 (9693)	10469 (3421)	-19191 (6272)
FE	1782	4.8 (0.5)	18067 (5905)	8517 (2784)	-9550 (3121)
JT	1152	3.7 (0.4)	2418 (790)	4319 (1412)	1901 (621)
PT	508	2.4 (0.3)	3126 (1022)	1241 (406)	-1885 (616)
Eastern Mojave	3446	1.5 (0.6)	16165 (4515)	5292 (1478)	-10873 (2949)
IV	2447	2.3 (0.2)	12693 (4148)	5578 (1823)	-7115 (2325)
TCA	Desert tortoise conservation area	AG	Chocolate Mountains		
km	Kilometer	CK	Chuckwalla		
Δ	Change	CM	Chemehuevi		
SE	Standard error	FE	Fenner		
FK	Fremont-Kramer	JT	Joshua Tree		
OR	Ord-Rodman	PT	Pinto Mountains		
SC	Superior-Cronese	IV	Ivanpah		

#### *Western Mojave Recovery Unit*

Based on information from range-wide sampling, we estimate that desert tortoises in the conservation areas in the Western Mojave Recovery Unit decreased in abundance by 51 percent from 2004 to 2014. We expect the trend throughout the rest of recovery unit was similar. Because of other surveys conducted outside of conservation areas, we are aware of areas of very low abundance (west of State Route 14, Keith *et al.* 2005) and of relatively higher abundance (southern slope of Cady Mountains, URS 2010).

#### *Colorado Desert Recovery Unit*

From 2004 to 2014, we estimate that the number of desert tortoises in conservation areas in the Colorado Desert Recovery Unit decreased by 36 percent. We expect the trend throughout the rest of recovery unit was similar. Not as many surveys have been conducted here as in the Western Mojave Recovery Unit. However, as a result of surveys conducted in association with renewable energy projects, we are aware that the area surrounding the eastern portion of Interstate 10 supports low abundance of desert tortoises. See Appendix D for more information on desert tortoises found at these solar projects.

#### *Eastern Mojave Recovery Unit*

From 2004 to 2014, we estimate that the number of desert tortoises in conservation areas in the Eastern Mojave Recovery Unit decreased by 67 percent. We expect the trend throughout the rest of recovery unit was similar. Not as many surveys have been conducted here as in the Western Mojave

Recovery Unit. However, as a result of surveys conducted in association with renewable energy projects, we are aware that the Ivanpah Valley west of Interstate 15 supports a substantial number of desert tortoises. See Appendix D for more information on desert tortoises found in this area. Desert tortoises occur in lower abundance in California to the north of the Ivanpah Valley.

### **Status of Critical Habitat in the Action Area**

The conditions of the physical and biological features of critical habitat within the action area are generally similar to those we described in the Status of Critical Habitat section of this biological opinion. Therefore, we will not repeat that discussion here. The critical habitat units on the Western Mojave Recovery Unit generally are more disturbed by human activities than those farther to the east.

The Service's previous biological opinions on the California Desert Conservation Area provide a general description of human activities within critical habitat of the desert tortoise on public lands in California. We hereby incorporate them by reference. Please refer to Appendix A for a list of these biological opinions.

Since the time of the previous land use plan amendments addressed in those biological opinions, the Bureau (2016) has adopted the Desert Renewable Energy Conservation Plan. This land use plan amendment increased the protection afforded to critical habitat of the desert tortoise by including most critical habitat on public lands within either areas of critical environmental concern or National Conservation Lands. The Bureau also adopted numerous conservation and management actions that it will implement or require project proponents to implement during the course of activities in these areas. Overall, the Bureau's management direction is protective of critical habitat while allowing for various types of multiple use.

## **EFFECTS OF THE ACTION ON THE DESERT TORTOISE AND ITS CRITICAL HABITAT**

### **Effects of the Action on the Desert Tortoise**

The activities covered by this consultation may affect desert tortoises in several ways. Desert tortoises would be captured, handled, and moved from harm's way or translocated; they may also be killed by heavy equipment and vehicles. Common ravens may obtain subsidies from activities, increase in abundance, and prey more heavily on desert tortoises. Activities may result in the loss, degradation, and fragmentation of habitat.

First, we will analyze how these various aspects of the proposed action may affect desert tortoises in a qualitative manner. In the Conclusions section, we will integrate this general analysis and the re-initiation thresholds we developed with the Bureau with the best available information with regard to the reproduction, number, and distribution of desert tortoises in the action area to determine whether the proposed action is likely to jeopardize the continued existence of the species.

### *Capture and Translocation of Desert Tortoises*

Desert tortoises are likely to be found within the boundaries of some proposed projects; however, the Bureau will not authorize projects that would require translocation of 35 or more large desert tortoises

(CONS-BIO-IFS-1). These conservation and management actions do not apply to transmission activities. For projects with less than 35 large desert tortoises, the Bureau will require that the project proponent move these desert tortoises to safe habitat, using the Service's translocation protocol; alternatively, the proponent may redesign the proposed action to avoid areas that have more desert tortoises.

The alternatives to translocating desert tortoises from project sites are to leave them in place to be killed or to remove them from the wild. Because of their long generation times and reproduction ecology, protecting individual desert tortoises (particularly reproductive adults) is important for the recovery of the species; removing them from the wild does not serve conservation purposes. Translocating desert tortoises using appropriate techniques, such as described in the Service's protocol, can be done successfully; we will discuss translocation in more detail later in this section. Consequently, the Service views translocation as a reasonable protective measure when the activity is sited appropriately.

The first step in the translocation of desert tortoises involves their capture. In some cases, the authorized biologists may find the animals above ground or near the mouth of their burrow. The Bureau will require that authorized biologists conduct activity-specific biological monitoring during pre-construction, construction, and decommissioning to ensure that avoidance and minimization measures are appropriately implemented and are effective (LUPA-BIO-2). In such cases, authorized biologists can easily pick up the desert tortoise and transfer it to a container for transport. If desert tortoises are deeper in their burrows, the authorized biologists would excavate the burrow; we expect that excavating desert tortoises from deep in their burrows is likely more stressful for them than being captured on the surface of the ground.

The capture and holding of desert tortoises can subject them to stress; stressed desert tortoises occasionally void their bladders. Desert tortoises store water in their bladders; this water is important to desert tortoises, particularly during times of low rainfall, in maintaining their life functions. Consequently, desert tortoises that void their bladders are at an increased risk of dying after their release. Averill-Murray (2002) found that desert tortoises that urinated during handling had lower survival rates than those that did not. Because the Bureau will require project proponents to follow the Service's translocation protocol, the authorized biologist will hydrate desert tortoises prior to their release and otherwise employ the methods described in the protocol to reduce the likelihood that they are killed or injured during translocation.

We acknowledge that, in every phase of implementation of a proposed activity, including during translocation, desert tortoises are at risk of being killed or injured when workers (including authorized biologists and biological monitors) drive outside of areas that have been fenced and cleared of desert tortoises. Small desert tortoises are at greater risk than larger animals because they are more difficult to see. This will generally be the case for every activity, and we will not repeat this throughout the biological opinion. We are aware of desert tortoises that have been crushed by the vehicles of biologists working on translocations; both resident and translocated animals are vulnerable.

Boarman (2002), in a review of literature on threats to the desert tortoise, stated that the adverse effects of translocation include increased risk of mortality, spread of disease, and reduced reproductive success. The tendency for translocated desert tortoises to spend more time above ground, moving through their environment, than animals within their home ranges exacerbates at least some of these threats. Recent research, using comparisons among resident desert tortoises (animals within their home

ranges with translocated individuals nearby) and control desert tortoises (animals within their home ranges with no translocated individuals nearby), has provided substantial information on this issue. We will evaluate the potential effects of translocation on desert tortoises in the following paragraphs.

Field *et al.* (2007), Nussear (2004), and Nussear *et al.* (2012) have found that translocated animals seem to reduce movement distances following their first post-translocation hibernation to a level that is not significantly different from resident populations. As time increases from the date of translocation, most desert tortoises change their movement patterns from dispersed, random patterns to more constrained patterns, which indicate an adoption of a new home range (Nussear 2004).

In general, desert tortoises moved shorter distances (especially within their home ranges) exhibit more limited movement patterns after translocation. Desert tortoises that spend less time above ground are less vulnerable to predation and environmental extremes. Regardless of the distance desert tortoises would be moved, we expect that translocated animals would spend more time moving, at least during the first year, which means they would be more vulnerable to predators, adverse interactions with other desert tortoises, and weather conditions than resident animals. For example, in spring 2013, biologists translocated 108 large and 49 small desert tortoises from approximately 2,000 acres of the KRoad Moapa Solar Project on the Moapa River Indian Reservation northeast of Las Vegas; they also monitored 18 large desert tortoises as controls or residents. Extremely high temperatures during the summer may have killed two or more large translocated desert tortoises. Predators likely killed eight small translocated desert tortoises. No resident or control desert tortoises died during monitoring (Burroughs 2013). During the first year of increased movement, desert tortoises would also be more likely to engage in fence-pacing behavior, which can lead to hyperthermia and death.

Depending on the specific goal of translocating desert tortoises, translocating animals either short or long distances is likely to have differing effects. Hinderle *et al.* (2015) found that desert tortoises translocated less than 2 kilometers are likely to attempt to return to the point of capture. If those returning animals cannot regain access to the habitat from which they were removed, they are likely to wander more extensively or pace fence lines; both of these activities increase the likelihood that the desert tortoises may be attacked by predators or die from exposure to extreme temperatures. Therefore, when desert tortoises will not be able to regain access to their point of capture, translocating them to suitable habitat more than 2 kilometers away is likely to prevent them from returning. Conversely, the short-distance movement of desert tortoises would be an appropriate strategy to employ if disturbance at the project area is temporary and animals are able to return to suitable habitat at the point of capture after work is completed.

As we previously discussed, we expect that translocated desert tortoises would spend more time moving around. Because translocated desert tortoises spend more time moving, individuals that are moved during the summer months outside of their active season (i.e., from June to August) could be overexposed to heat and die from hyperthermia. Cook *et al.* 1978 (in Nussear *et al.* 2012) stated summer releases have previously been reported to be potentially lethal to translocated desert tortoises, often with high mortality within days of release. The Bureau will require project proponents to follow the Service's most recent translocation protocol (DFA-BIO-IFS-3). The Service recommends in its current guidance that translocation not occur in the summer; therefore, desert tortoises will not be exposed to this threat. Absent new information that indicates translocation in the summer does not pose a threat to desert tortoises, the Service is unlikely to alter this protocol.

As with other translocations (Nussear 2004; Field *et al.* 2007), we anticipate that predation is likely to be the primary source of post-translocation mortality. The level of winter rainfall may dictate the amount of predation observed in desert tortoises (Drake *et al.* 2010; Esque *et al.* 2010). Drake *et al.* (2010) documented a statistically significant relationship between decreased precipitation and increased predation of translocated desert tortoises at Fort Irwin. We are aware of two instances where monitoring of large numbers of control and resident desert tortoises accompanied the translocation of desert tortoises (Fort Irwin and Ivanpah Solar Electric Generating System). At Fort Irwin, Esque *et al.* (2010) found that “translocation did not affect the probability of predation: translocated, resident, and control tortoises all had similar levels of predation.” At the Ivanpah Solar Electric Generating System, Scherer *et al.* (2016) “found no statistical difference in estimates of four-year (cumulative) survival probability” among translocated, resident, and control desert tortoises in each size class. Predation by canids is the greatest source of mortality among translocated, resident, and control animals at several projects.

Drought conditions seem to affect translocated and resident desert tortoises similarly. Field *et al.* (2007) noted that studies from various sites “suggest that all (desert) tortoises at the (Large-scale Translocation Site) site, regardless of translocated or resident status, likely were negatively impacted by drought conditions at the site in 1997.” Field *et al.* (2007) noted that most of the translocated desert tortoises “quickly became adept at life in the wild,” despite the harsh conditions. Consequently, we have concluded that the amount of rainfall preceding translocation is not likely to decrease the survival rate of desert tortoises that would be moved from within the area of a proposed renewable energy facility.

Nussear *et al.* (2012) investigated the effects of translocation on reproduction in 120 desert tortoises. They found that, in the first year since translocation, the mean reproductive effort for translocated desert tortoises was slightly less than that of residents. Nussear *et al.* (2012) noted that the translocated animals may have benefited from being fed while in the pre-translocation holding facility; the food provided in the facility may have increased their production of eggs in the first year after translocation. In the second and third years after translocation, the mean number of eggs was not different between resident and translocated desert tortoises. (That is, absent the food the desert tortoises received in the holding facility, the first year’s reproduction may have been lower; the lack of difference in egg production between resident and translocated animals in subsequent years indicates that translocation did not have a long-term effect on reproductive output.)

Walde and Boarman (2013) reported on a microsatellite analysis of 72 hatchlings found in the area to which desert tortoises had been translocated from Fort Irwin. They found that, 4 years after translocation, most (if not all) of the hatchlings had been fathered by resident male desert tortoises, even though translocated males were well represented in the population. We do not know the reason for this difference; additional research into this situation is warranted. We do not view this lack of representation of the translocated males as being appreciably negative, at least in the short term, because minimal differentiation among subpopulations of desert tortoises occurs even at low levels of gene flow such as less than one migrant per year or even one migrant every few decades (see Latch *et al.* 2011). We expect that translocated males will ultimately begin siring offspring within the population during their lifespan.

Translocating desert tortoises may also adversely affect resident desert tortoises within the action area due to local increases in density. Increased densities may result in increased incidence of aggressive interactions between individuals, increased competition for available resources, increased

incidence of predation that may not have occurred in the absence of translocation, and increased spread of upper respiratory tract disease or other diseases.

We anticipate that density-dependent effects on resident populations are likely to be minor because the Bureau will require translocations to occur according to the Service's protocol, which establishes the maximum recipient and translocated density for each recovery unit. Additionally, during the translocation work at Fort Irwin, researchers tested over 200 desert tortoises for differences in the levels of corticosterone, which is a hormone commonly associated with stress responses in reptiles; Drake *et al.* (2012) "did not observe a measurable physiological stress response [as measured by (corticosterone)] within the first two years after translocation." The researchers found no difference in stress hormone levels among resident, control, and translocated desert tortoises. For these reasons, we conclude that the addition of translocated desert tortoises to the recipient areas would not result in detrimental effects to translocated or resident animals.

The Service based its guidance for the upper limit of the number of desert tortoises translocated into an area on the density of large animals. The Service generally recommends that the number of small desert tortoises released into a translocation area not exceed the number of released large individuals. Healthy populations have a large number of desert tortoises smaller than 180 millimeters (Turner *et al.* 1987). Additionally, natural mortality rates of smaller desert tortoises are greater than those of larger tortoises and we expect that small desert tortoises use resources differently than do large ones (Wilson *et al.* 1999). Finally, we expect that juveniles (small animals) and adults (large animals) interact much less frequently than do adults. Due to differences in habitat use, caused by both physical and physiological differences in large and small desert tortoises, we expect overlapping of ranges while the small desert tortoises are growing and dispersing. For these reasons, we do not expect translocating small desert tortoises according to our guidance is likely to result in density-dependent adverse effects.

Upper respiratory tract disease and other pathogens are spread by direct contact between desert tortoises. Consequently, increasing the density of desert tortoises in the recipient areas has the potential to exacerbate the spread of diseases because, presumably, animals that occur in higher densities would have more opportunity to contact one another. Several circumstances are likely to reduce the magnitude of the threat of disease prevalence being exacerbated by translocation. First, the Bureau will require project proponents to use experienced biologists and approved handling techniques that are unlikely to result in substantially elevated stress levels in translocated animals; animals are less likely to succumb to disease when they are not stressed. Second, desert tortoises on project sites are currently part of a continuous population with the resident populations of the adjacent recipient sites and are likely to share similar pathogens and immunities. Third, Drake *et al.* (2012) indicated that translocation does not seem to increase stress in desert tortoises. Fourth, density-dependent stress is unlikely to occur for the reasons discussed previously in this section. Finally, biologists who have been trained by the Service (or other specialist) will perform health assessments using Service-approved protocols and will not translocate any desert tortoise showing severe clinical signs of disease.

During translocations to date, we have detected few desert tortoises that were unsuitable for translocation. For projects authorized under the land use plan amendment, the Service and Bureau will determine their final disposition depending on the site-specific conditions. They may be placed in an agency-approved quarantine facility or used for research; extremely ill individuals may be euthanized.

Based on this information, we anticipate that post-translocation survival rates will not significantly differ from that of animals that have not been translocated. We expect that translocated desert tortoises would be at greatest risk during the time they are spending more time above ground than resident animals. We cannot precisely predict the level of post-translocation mortality because regional factors that we cannot control or predict (e.g., drought, predation related to a decreased prey base during drought, etc.) would likely exert the strongest influence on the rate of mortality and affect translocated and resident desert tortoises similarly. Translocation is an effective means of minimizing adverse effects on desert tortoises during project implementation when occupied habitat cannot be avoided.

#### *Construction of Non-Linear Facilities*

With few exceptions, including differences in the amount of ground disturbance associated with different types of activities, the construction of non-linear facilities would affect desert tortoises in a similar manner. Therefore, we will address the general effects of construction in this section.

Some activities may result in the exclusion of desert tortoises from work areas temporarily (e.g., repair of underground pipelines). Other activities, such as mines and communication sites, would result in the long term exclusion of desert tortoises from such areas. In the past, areas for most activities resulted in the disturbance of less than 20 acres.

The Bureau will require project proponents to install fencing to preclude desert tortoises from entering work areas prior to removing all individuals that they can locate on the project site. During construction of the perimeter fencing and during other ground-disturbing activities that are outside of the fenced facility (i.e., access roads), the authorized biologists will perform pre-activity clearance surveys and move desert tortoises out of harm's way if they re-enter work areas.

Some potential always exists that surveyors may miss desert tortoises during clearance surveys and construction monitoring. We cannot predict how many desert tortoises that clearance surveys and construction monitoring would miss. However, we anticipate the number is likely to be small because the Bureau would authorize projects only when the anticipated number of desert tortoises is 35 or fewer and the proponents will use qualified biologists authorized by the Service for the clearance surveys. Weather conditions can also affect the number of animals detected during surveys; warm weather after average or above-average rainfall would lead to more activity in desert tortoises, which would facilitate their detection.

In some cases, desert tortoises that have been fenced out of their home ranges make repeated efforts to return and follow fence lines for long periods. Desert tortoises would die when exposed to harsh conditions (i.e., cold or hot temperatures) while pacing fences. We expect that desert tortoises whose home ranges have been affected by projects would be most likely to pace fences.

The installation of fencing may also reduce the home range size of some individuals that inhabit areas immediately adjacent to the fence alignments or that overlap the project footprint. This reduction could result in future injury or mortality of these individuals as they expand their home range into adjacent areas where unknown threats may occur or where adverse social or competitive interactions may occur with neighboring desert tortoises. Larger projects are likely to destroy the territories of more desert tortoises; however, given the Bureau's management direction to site

activities in habitat that does not support large numbers of desert tortoises (DFA-BIO-IFS-3), we do not expect that individual activities are likely to destroy numerous territories.

Desert tortoises often construct their nests at the entrance to their burrows (Ennen *et al.* 2012). The Bureau will require applicants to follow the Service's guidelines for clearance surveys; these guidelines call for the excavation of all desert tortoise burrows within construction footprints prior to the onset of ground disturbance. Consequently, the biologists may detect at least some of the nests and eggs. Overall, we anticipate that detection of eggs is unlikely because the buried nests are difficult to find. Because hatchlings can take shelter in burrows of all sizes and are difficult to see due to their cryptic nature and their small size, surveyors are less likely to detect them than they are larger desert tortoises. Consequently, we expect that most of the hatchlings and eggs are likely to remain in the work areas during construction. Construction is likely to kill these desert tortoises. Because construction activities are likely to occur year round, they are likely to affect both hatchlings and eggs. (Eggs and small desert tortoises, even those that are larger than hatchlings, are always more difficult to detect than larger animals and therefore more likely to be killed during every type of activity; we will not repeat this fact for every activity.)

Numerous variables complicate our estimations of the number of desert tortoises on a project site. For example, we usually do not know the precise number of desert tortoises onsite, the size of those individuals, whether eggs will be present at the time of construction, the time of year that construction occurs, and the weather before or during construction. Regardless of these factors, we expect that few large desert tortoises are likely to be killed or injured during construction because the Bureau will require the proponents to site activities in areas with lower densities and to implement measures that have proven effective in the past in reducing mortality and injury. Small desert tortoises are likely to be killed or injured in greater numbers because they are more difficult to find. However, because activities would occur in areas of lower density, we do not expect large numbers of small desert tortoises to be killed or injured. The loss of small desert tortoises is also not as deleterious to the population as the loss of reproductive animals, because they require up to 20 years to reach sexual maturity, have low reproductive rates during a long period of reproductive potential, and individuals experience relatively high mortality early in life (Service 2011).

#### *Construction of Linear Facilities*

Linear facilities have different effects on desert tortoises relative to construction on large blocks of habitat. Construction of linear facilities (e.g., access roads, water pipelines, transmission lines, and installation of fences along access roads) often takes place outside of the permanent perimeter fencing. Consequently, the primary adverse effect associated with the construction of linear features is not the loss of habitat; it is the greater potential to kill desert tortoises with vehicles and other equipment. Additionally, if trenches or holes are left uncovered, desert tortoises could become entrapped and die of exposure or be killed by predators.

During construction of linear components, the proponent would move desert tortoises out of harm's way into adjacent habitat. These animals would remain within their territories because they would be moved short distances and the minor habitat disturbance would not remove their territories. Generally, the construction of linear facilities would not affect numerous desert tortoises because the Bureau will require the proponents to site activities in areas with lower densities and linear facilities

comprise small portions of the projects. However, depending on the local density of desert tortoises and the length of the linear component, the use of access roads during construction may result in the death or injury of numerous individuals because vehicles frequently use these roads, which are usually not fenced.

The Bureau may require the proponent to fence a linear feature during construction. For example, if desert tortoises are particularly active at the time of construction (e.g., if work occurred during a spring with abundant wild flowers), temporary fencing could prevent numerous deaths and injuries.

The Bureau will require project proponents to monitor activities, check under vehicles before moving them, and not exceed a speed limit of 15 miles per hour when working outside of desert tortoise exclusion fencing (LUPA-BIO-IFS-5, -6, -7, -8, and -9). These conservation and management actions should reduce the number of desert tortoises that are killed or injured outside of fences.

Overall, we expect that the construction of linear facilities is likely to injure or kill relatively few desert tortoises. We cannot quantify the number of desert tortoises that these activities may affect because we do not know how many animals will enter linear work areas during construction. Also, we expect that monitors would be able to detect and protect most desert tortoises.

#### *Operations and Maintenance of Non-Linear Facilities*

We are aware of occasions where desert tortoises have been able to enter fenced facilities, such as a pump station for a gas pipeline; they entered through gaps under the fencing or open gates. Floods can damage fences to the point where desert tortoises may be able to enter the facilities. Once inside the fencing, desert tortoises would be at risk of being killed or injured by operations or maintenance. The Bureau would ensure that project proponents maintain fences to prevent entry by desert tortoises (LUPA-BIO-IFS-4).

Over the life of the project, proponents are likely to conduct ground-disturbing maintenance activities outside of fenced areas. These activities have the potential to injure or kill desert tortoises primarily by vehicle strikes, as workers travel to and from work sites outside of fenced areas; a limited possibility exists that desert tortoises could be injured or killed by equipment or workers moving around a work site.

Maintenance activities associated with repair of desert tortoise exclusion fencing would likely kill or injure few, if any, desert tortoises for the following reasons. First, fence repairs are likely to result in minimal ground disturbance in localized areas. Second, at least a portion of the work area would be on disturbed areas within the fenced project site. Third, the permanent perimeter roads, located outside the perimeter fencing, would allow access to most repair locations with minimal off-road travel. Finally, the proponent would implement protective measures to reduce the potential for injury or mortality of desert tortoises.

We expect that the operations and maintenance of non-linear facilities is likely to injure or kill relatively few desert tortoises because the majority of these activities will occur within areas that have been cleared of desert tortoises and have been fenced to prevent their entry. We cannot quantify the number of desert tortoises that these activities may affect because we do not know how many

animals workers will encounter during operations and maintenance. Also, we expect that authorized biologists would be able to detect and protect most desert tortoises.

#### *Operations and Maintenance of Linear Facilities*

The primary adverse effect associated with the operations and maintenance of linear facilities is likely to be the greater potential to kill or injure desert tortoises with vehicles and other equipment while traveling along the access route. The level of risk depends on the local density of desert tortoises, length of the linear facility, time of the year, and amount of use of the facility.

If a desert tortoise is encountered on a linear facility, depending on the nature of the activity, an authorized biologist, biological monitor, or worker may move the desert tortoise out of harm's way into adjacent habitat. These animals would remain within their territories because they would be moved short distances out of harm's way and would not be removed from their territories. Alternatively, the Bureau may direct that desert tortoises be allowed to move out of harm's way on their own accord.

The Bureau will require project proponents to monitor activities, check under vehicles before moving them, and not exceed a speed limit of 15 miles per hour when working outside of desert tortoise exclusion fencing (LUPA-BIO-IFS-5, -6, -7, and -8). These conservation and management actions should reduce the number of desert tortoises that are killed or injured outside of project fences.

Overall, we expect that the operations and maintenance of linear facilities are likely to injure or kill relatively few desert tortoises. However, activities along linear facilities pose a greater risk to desert tortoises than those associated with non-linear facilities; the risk would be greatest in high density areas and during the active seasons. We cannot quantify the number of desert tortoises that these activities may affect because we do not know how many animals will enter linear facilities during operations and maintenance activities.

#### *Decommissioning*

Work associated with decommissioning of facilities within perimeter fences is unlikely to injure or kill desert tortoises because desert tortoises would not be present. The effects of work outside of the exclusion fence would be similar to those associated with construction and described previously in this biological opinion; the effect of work along linear facilities has greater potential to kill or injure desert tortoises and disturb habitat for the reasons discussed during the previous discussion of linear facilities.

The Bureau will require project proponents to restore areas disturbed by project activities to the pre-disturbance plant community (LUPA-BIO-8). Restoration activities that occur outside of fenced areas have the potential to kill or injure desert tortoises, particularly after the plant community has begun to recover and individuals begin to return to the area.

#### *Common Ravens, Coyotes, and Other Predators*

Construction and operation of linear and non-linear facilities have the potential to attract common ravens, coyotes, and other mammalian predators, provide subsidies in the form of food, water, and

shelter, and allow for an increase in their abundance. These species prey on desert tortoises; increases in their numbers would increase the threat of predation on desert tortoises.

The Bureau will require project proponents to implement measures to reduce subsidies that activities may provide to predators (LUPA-BIO-6). These measures would vary on a project-specific basis but would include control of attractants (food, water, and shelter), monitoring and reporting programs, and implementing adaptive management techniques such as devices to discourage the predators from using project-related structures.

The Bureau will require project proponents to participate in the regional management and monitoring program for common ravens (LUPA-BIO-6). The Service developed this program in coordination with the Desert Managers Group, which is a consortium of land management agencies and other stakeholders in California, and the Renewable Energy Action Team, which is composed of the Service, Bureau, California Energy Commission, and the California Department of Fish and Wildlife. To date, management actions undertaken as part of this program include surveys to determine where common ravens are most abundant and removal of birds that are known to be preying on desert tortoises. Because common ravens are intelligent and learn behaviors from one another, the removal of individuals that are killing desert tortoises has both direct and indirect benefits.

We cannot reasonably predict the amount of predation on desert tortoises that construction, operations, and maintenance are likely to add to baseline levels within the action area. Generally, best management practices are effective in eliminating some, but not all, use of the project sites by predators. Contributions to the management program for common ravens would assist in recovery actions for the desert tortoise throughout the desert and, in that manner, further assist in reducing the effects of these predators.

### *Recreation*

The Bureau issues activity-specific authorizations for various types of recreational activities, such as organized tour events, special recreation permits, dual sport events, foot races, marathons, enduros, long-distance tours, and races. It also engages in other activities related to recreation including but not limited to the closure and restoration of routes; shooting ranges; installation of interpretive kiosks; directional signage; and the management of staging areas, and bicycle and hiking trails. The effects on the desert tortoise of building and maintaining recreational facilities and restoring disturbed areas are similar to those associated with other construction and restoration activities; therefore, we will not discuss those effects again here. The Service analyzed the effects of recreational activities that occur within the Bureau's Johnson Valley, Stoddard Valley, El Mirage, and Spangler Hills off-highway vehicle management areas in previous biological opinions. Because those biological opinions will remain in effect after issuance of this biological opinion, we will not discuss those activities here. Additionally, because the Service and Bureau have previously consulted on casual use within the California Desert Conservation Area, we will not address casual use in this biological opinion. Consequently, we have limited the analysis in this section of the biological opinion to the potential effects of the specific recreation activities that the Bureau will undertake or authorize.

The activities usually involve the Bureau's authorization of groups of people using open routes for organized vehicular tour events, dual sport events, foot races, marathons, enduros, and races. Because

these events occur on open routes, the primary risk to desert tortoises is crushing by vehicles, either while the vehicles are in motion or if a desert tortoise has taken shelter under parked vehicle; as in most situations, smaller desert tortoises will be at greater risk because they are more difficult to see and avoid. Events that occur in spring and fall would pose the greatest threat, although some desert tortoises may be active on some days throughout the year.

Desert tortoises would also be vulnerable when tours stage or stop for breaks or camp for the evening. Animals make take shelter under vehicles and be crushed when the vehicle is later moved. Smaller animals may be trampled by foot traffic.

The Bureau may also authorize bicycle tours and group hikers. These activities may also crush desert tortoises with smaller animals being the most vulnerable.

The Bureau has adopted several conservation and management actions that will likely reduce the potential that authorized events will kill desert tortoises. For example, NLCS-REC-1 states that issuance of commercial and competitive special recreation permits is a discretionary action and that the Bureau can issue them “on a case by case basis, for activities that do not diminish the values of the National Conservation Lands unit and would be prohibited if the proposed activities would adversely impact the nationally significant ecological, cultural or scientific values for which the area was designated.” SRMA-REC-2 states that, where special recreation management areas overlap with National Conservation Lands and areas of critical environmental concern, the Bureau will “manage in accordance with the Special Unit Management Plans for the (special recreation management areas/extensive recreation management areas) and the applicable ecological and cultural conservation unit....” If a conflict exists between management of the National Conservation Lands or areas of critical environmental concern and the management of the special recreation management area or extensive recreation management area, the Bureau “will apply the most restrictive management (i.e., management that best supports resource conservation and limits impacts to the values for which the conservation unit was designated).”

With this management direction and the ability of the Bureau and Service to adopt additional activity-specific protective measures during the review of events, we expect that such recreation is likely to kill few desert tortoises.

#### *Loss and Degradation of Habitat*

The loss and degradation of habitat affect desert tortoises on both regional and local scales. We consider the loss of habitat to be the complete removal of all habitat value from a parcel of land. For example, construction of a building in creosote bush scrub removes all potential for desert tortoises to reside within the area occupied by the building. We consider degradation of habitat to occur when activities alter the structure of the substrate or annual and perennial plant communities but do not completely remove it. For example, degradation of habitat would occur if a project proponent excavates a pit to conduct geotechnical testing and then refills it. Desert tortoises may still cross the refilled pit and forage there; in the long term, perennial plants may re-establish themselves and the substrate may become suitable for burrowing.

We expect that most disturbances with conservation areas will be relatively small because of the conservation and management action that will limit the number of desert tortoises that may be disturbed (CONS-BIO-IFS-1). Additionally, the Bureau will require the proponents of activities to implement additional restoration of habitat if they exceed the disturbance cap in areas of critical environmental concern and National Conservation Lands (CONS-BIO-IFS-3). These components of the land use plan amendment are likely to ensure that the loss and degradation of habitat within conservation areas is limited to the extent that regional impacts are minimal.

The construction, operation, maintenance, and decommissioning of transmission lines within conservation areas would disturb more habitat because of the length of the lines. Over time, desert tortoises would continue to use areas within the transmission line corridors to forage, burrow, nest, and traverse. In general, the loss of habitat would be small (e.g., the footprints of pylons for electrical transmission lines, pumping stations for oil and gas lines).

Activities outside of conservation areas may be relatively larger than those inside of such areas because the conservation and management actions discussed previously in this section would not apply. Larger activities would likely impede the ability of desert tortoises to move freely throughout the landscape. However, because the Bureau has included almost all of the areas that the Service considers important for the recovery of the desert tortoise within areas of critical environmental concern and National Conservation Lands, the potential loss and degradation of habitat outside of conservation areas would not compromise the survival and recovery of the species.

#### **Effects of the Action on Critical Habitat**

Most of the critical habitat in the action area lies in National Conservation Lands, areas of critical environmental concern, and wilderness. Only 0.44 percent of the Chuckwalla Critical Habitat Unit and 0.05 percent of the Fremont-Kramer Critical Habitat Unit lie outside of these conservation areas. The disturbance caps will apply within National Conservation Lands and areas of critical environmental concern; disturbance caps will not apply in wilderness, but we expect little, if any, ground disturbance will occur in areas with this land use allocation.

#### *Sufficient Space to Support Viable Populations within Each of the Six Recovery Units and to Provide for Movement, Dispersal, and Gene Flow*

The various activities that the Bureau would authorize or implement could lead to long- or short- term disturbance of habitat. These activities have the potential to reduce the amount of space available to support viable populations; they may also impede, to some degree, the movement, dispersal and gene flow of desert tortoises.

The primary biological resources goals of the land use plan amendment are landscape and habitat connectivity, ecosystem and ecological function, and species conservation. The Bureau will require project proponents to implement conservation and management actions to the maximum extent practicable. For activities covered by this programmatic consultation, the Bureau will require implementation of conservation and management actions within “tortoise conservation areas”; critical habitat of the desert tortoise is included within these tortoise conservation areas. Our analysis focuses only on critical habitat.

Specifically, LUPA-BIO-13 requires, to the maximum extent practicable, that activities avoid occupied habitat of species such as the desert tortoise; it also restricts construction activity to existing roads, routes, and utility corridors to minimize the number and length and size of new roads, routes, disturbance, laydown, and borrow areas. LUPA-BIO-IFS-2 requires, to the maximum extent practicable, avoidance of construction of new roads in critical habitat, that new roads within critical habitat be unpaved with a maximum speed limit of 25 miles per hour, and the incorporation of wildlife underpasses for roads requiring installation of long-term exclusion fencing. LUPA-BIO-IFS-3 requires all culverts for access roads or other barriers be designed to allow unrestricted access by desert tortoises and be large enough so that they do not use culverts as shelter sites.

Finally, the Bureau has established disturbance caps, as described in CONS-BIO-IFS-3 and previously discussed in this biological opinion, of 0.5 percent within all critical habitat of the desert tortoise in the action area. The Bureau's use of these caps will ensure that the amount of ground disturbance resulting from various actions in any given area will not have a larger, cumulative effect on this physical and biological feature. For these reasons, the Bureau's authorization and implementation of activities under this biological opinion will not have a measurable effect on the amount of space available to support viable populations within each of the recovery units and to provide for movement, dispersal, and gene flow.

The following table correlates the types of activities we discussed in the effects of the action on the desert tortoise section of this biological opinion with the potential impacts to this physical and biological feature.

<b>Type of activity</b>	<b>Potential Impact on Sufficient Space to Support Viable Populations within Each of the Six Recovery Units and to Provide for Movement, Dispersal, and Gene Flow</b>
Translocation	This activity involves vehicular use on previously disturbed areas and walking in desert tortoise habitat. None of these activities will reduce the amount of space or disrupt movement, dispersal or gene flow.
Construction of linear facilities	This activity involves short-term disturbance of long but narrow strips of habitat. Linear facilities may involve the loss of the small amount of habitat over long distances, but will not impede movement, dispersal, or gene flow.
Construction of non-linear facilities	This activity involves long-term disturbance of habitat. The conservation and management actions described in this section would ensure that the loss of habitat does not appreciably reduce the space needed to support viable populations or connectivity with regard to movement, dispersal, or gene flow.
Operations and maintenance of linear facilities	This activity involves short-term disturbance of generally small areas of habitat and will not reduce the space needed to support viable populations or disrupt movement, dispersal or gene flow.
Operations and maintenance of non-linear facilities	This activity involves short-term disturbance of generally small areas of habitat and will not reduce the space needed to support viable populations or disrupt movement, dispersal or gene flow.

Decommissioning	This activity involves restoration of vegetation and is likely to increase the amount of space available to support viable populations and decrease impediments to movement, dispersal, and gene flow.
Common ravens, coyotes, and other predators	The attraction of predators to activities and measures implemented to mitigate this effect will not reduce the space needed to support viable populations or disrupt movement, dispersal or gene flow.
Recreation	This activity would result in disturbance or loss of small amounts of habitat to install kiosks, signs, and other recreation features. Most activities would occur on open routes of travel. For these reasons and implementation of the conservation and management actions, recreation will not reduce the space needed to support viable populations or disrupt movement, dispersal or gene flow.

*Sufficient Quality and Quantity of Forage Species and the Proper Soil Conditions to Provide for the Growth of these Species; Suitable Substrates for Burrowing, Nesting, and Overwintering; Burrows, Caliche Caves, and Other Shelter Sites; Sufficient Vegetation for Shelter from Temperature Extremes and Predators*

The second through fifth physical and biological features represent the plant species desert tortoises require for food and shelter, the substrates that are necessary for these plants to grow and for desert tortoises to construct burrows, and the burrows and other shelter sites they use. These features are the components of the environment necessary to meet desert tortoise's need for food and shelter. Because the condition of substrates, annual forage species, and perennial shrubs are so interrelated, we have combined our analysis of the effects of the proposed action on these physical and biological features.

The various activities that the Bureau would authorize or implement could lead to disturbance of the second through fifth physical and biological features. These activities have the potential to reduce the quality and quantity of forage species and proper soil conditions; suitable substrates for burrowing, nesting, and overwintering; burrows, caliche caves, and other shelter sites; and sufficient vegetation for shelter from temperature extremes and predators.

For example, the use of heavy equipment can disrupt soil conditions that lead to an increased abundance of non-native and invasive plant species. These species can outcompete native species and thereby reduce the abundance and diversity of the native species upon which desert tortoises depend. Oftedal's work (2002 in Service 2010) demonstrates that invasive species may adversely affect the physiological health of desert tortoises because they do not contain the same types and levels of nutrients of native plants; desert tortoises that are undergoing nutritional stress may be more susceptible to diseases, drought, and predation. Therefore, a proliferation of nonnative invasive species would impair the conservation function of the second physical and biological feature (i.e., sufficient quality and quantity of forage species). The use of heavy equipment can also crush burrows, caliche caves, other shelter sites, and perennial vegetation under which desert tortoises shelter.

Type of activity	<b>Potential Impacts on Sufficient Quality and Quantity of Forage Species and the Proper Soil Conditions to Provide for the Growth of these Species; Suitable Substrates for Burrowing, Nesting, and Overwintering; Burrows, Caliche Caves, and Other Shelter Sites; Sufficient Vegetation for Shelter from Temperature Extremes and Predators</b>
Translocation	This activity involves vehicular use on previously disturbed areas and walking in desert tortoise habitat. Because these physical and biological features are generally not present in disturbed areas, vehicle use will not affect them. Walking through habitat is likely to affect these physical and biological features (e.g., crushing of some annual plants, minor compaction of a small amount of substrate) but not to an appreciable degree.
Construction of linear facilities	This activity involves short-term disturbance of long but narrow strips of habitat. Linear facilities may involve the loss of small amounts of these physical and biological features over long distances (e.g., removal of burrows, loss of soil structure, etc.); this loss will not have an appreciable effect on the ability of these physical and biological features to support the conservation of the desert tortoise.
Construction of non-linear facilities	This activity involves long-term disturbance of habitat and the loss of these physical and biological features (e.g., removal of burrows, loss of soil structure, etc.). CONS-BIO-IFS-3, which established a disturbance cap of 0.5 percent within all critical habitat of the desert tortoise in the action area, would ensure that the loss of habitat does not appreciably reduce the ability of these physical and biological features to support the conservation of the desert tortoise.
Operations and maintenance of linear facilities	This activity involves short-term disturbance of generally small areas of habitat and will have a negligible effect on the ability of these physical and biological features to support the conservation of the desert tortoise.
Operations and maintenance of non-linear facilities	This activity involves short-term disturbance of generally small areas of habitat and will have a negligible effect on the ability of these physical and biological features to support the conservation of the desert tortoise.
Decommissioning	This activity involves restoration of vegetation and is likely to increase the ability of these physical and biological features to support the conservation of the desert tortoise.
Common ravens, coyotes, and other predators	The attraction of predators to activities will have no effect on these physical and biological features. Measures implemented to manage predators may involve a small amount of off-road driving, which could have a negligible effect on these physical and biological features.
Recreation	Because most activities would occur on open routes and in previously disturbed areas, recreation would have a negligible effect on these physical and biological features.

*Habitat Protected from Disturbance and Human-caused Mortality*

The various activities that the Bureau would authorize or implement have the potential to increase the amount of disturbance or human-caused mortality.

The proposed action would affect the sixth physical and biological feature as a result of increased human activity in project areas. Although this biological opinion analyzes the effects of numerous activities, we expect that increased levels of activity would not have an appreciable effect on the overall function of critical habitat because the activities would be dispersed over a large area and the disturbance cap would limit the area of disturbance and, consequently, the amount of disturbance and human-caused mortality.

Noise from activities could cause disturbance beyond the boundaries of the activity sites. Given that desert tortoises have been found adjacent to other noisy areas, we expect that they would acclimate to noise; in that regard, the conservation function of the critical habitat surrounding activity sites would not be impaired. Workers could leave the activity sites and engage in activities that could compromise this physical and biological feature; however, we expect that worker education programs would eliminate this potential threat.

<b>Type of activity</b>	<b>Potential Impact on Habitat Protected from Disturbance and Human-caused Mortality</b>
Translocation	This activity involves vehicular use on previously disturbed areas and walking in desert tortoise habitat and would have a negligible effect on the ability of this physical and biological feature to support the conservation of the desert tortoise.
Construction of linear facilities	This activity involves short-term disturbance of long but narrow strips of habitat. The construction of linear facilities would temporarily increase the level of disturbance and human-caused mortality. We expect that the disturbance cap would limit this temporary increase so that it does not appreciably affect the function of this physical and biological feature.
Construction of non-linear facilities	This activity involves long-term disturbance of habitat. The construction of non-linear facilities would temporarily increase the level of disturbance and human-caused mortality. We expect that the disturbance cap would limit this temporary increase so that it does not appreciably affect the function of this physical and biological feature.
Operations and maintenance of linear facilities	Operation of linear facilities generally involves driving along authorized routes within rights-of-way, which introduces the potential for human-caused mortality. Conservation and management actions, such as speed limits and worker education programs, should ensure that operations do not have an appreciable adverse effect on this physical and biological feature. Maintenance generally involves short-term disturbance of small areas of habitat. The intermittent and dispersed nature of maintenance activities would have a negligible effect on this physical and biological feature.

Operations and maintenance of non-linear facilities	Operation and maintenance of non-linear facilities generally occur within fenced areas and therefore, do not cause disturbance or human-caused mortality. The repair of perimeter fences may cause negligible disturbance at the edge of the facility. Noise emanating from the facility would likely have a negligible effect on desert tortoises in the immediate area.
Decommissioning	Restoration would have a low potential of disturbance and human-caused mortality during the process of decommissioning because most activities would occur within fenced areas. We expect that all disturbance and human-caused mortality would be absent after completion of decommissioning.
Common ravens, coyotes, and other predators	Predators attracted to activities have the potential to kill desert tortoises (i.e., indirectly human-caused mortality). The Bureau will implement numerous conservation and management actions, which we expect will reduce the provision of subsidies to predators to the extent that it does not appreciably diminish the value of the physical and biological feature. For example, the conservation and management actions include the payment of the raven management fee, which allows the Service and Bureau to implement range-wide management of common ravens.
Recreation	Recreation would introduce disturbance to critical habitat and could result in human-caused mortality. The conservation and management actions provide management direction to protect critical habitat of the desert tortoise; this consultation's provisions that allow for the addition of activity-specific protective measures will allow the Bureau and Service to minimize the effects of recreation with regard to this physical and biological feature.

### Effects of the Action Not Specific to Desert Tortoise and Its Critical Habitat

#### *Compensation*

The Bureau will require project proponents to compensate for the loss of desert tortoise habitat (LUPA-BIO-COMP-1). The Bureau will apply various ratios to the activity, depending on the resource that is affected; for example, the ratio is 5:1 for activities in desert tortoise critical habitat.

The Bureau will require that project proponents compensate by acquiring the calculated amount of habitat or paying a corresponding fee that the Bureau would use to either acquire lands or implement other actions that would benefit desert tortoises. The project proponent may also use a combination of these measures.

Because land acquisition and other recovery actions would occur in conservation areas, the proposed compensation would benefit the recovery of the desert tortoise. The funding of management actions is likely to result in restoration and rehabilitation of degraded habitat, protection of existing habitat from future sources of degradation, and a reduction in the direct mortality of desert tortoises. In

general, the original and revised recovery plans (Service 1994, 2011) identify the actions proposed for compensation as being necessary for the recovery of the desert tortoise. We cannot quantify the level of effects that these actions will have because we do not know the specific actions that will be implemented at this time. However, in light of the continued decline of desert tortoises within conservation areas, the Service (2015a) has emphasized the need “for more aggressive and better prioritized recovery implementation.” The use of compensation to address this need is more important than ever.

## CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The Bureau manages most of the land in the action area; any future action on public lands will require consultation, pursuant to Section 7(a)(2) of the Endangered Species Act. Some activities, such as transmission lines, are likely to occur in areas where land ownership occurs in a checkerboard pattern; that is, non-federal lands are intermingled with lands managed by the Bureau. In such checkerboard areas, most actions on non-federal lands would likely require access across public lands, which would, in turn, require the Bureau to consider issuance of a right-of-way grant. Consequently, we are unaware of any activities in the action area that we would consider to be cumulative effects at this time.

## CONCLUSIONS

### **Desert Tortoise**

As we stated previously in this biological opinion, “jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). This regulatory definition focuses on how the proposed action would affect the reproduction, numbers, or distribution of the species under consideration in the biological opinion. For that reason, we have used those aspects of the desert tortoise’s status as the basis to assess the overall effect of the activities considered in this biological opinion on the species.

Additionally, we determine whether a proposed action is likely “to jeopardize the continued existence of the species” through an analysis of how a proposed action affects the listed taxon within the action area in relation to the range of the entire listed taxon. For the desert tortoise, this process involves considering the effects at the level of the action area, then at the level of the recovery unit (in this case, the Western Mojave, Eastern Mojave, and Colorado Desert recovery units), and then finally for the range of the listed taxon. Logically, if a proposed action is unlikely to cause a measurable effect on the listed taxon within the action area, it is unlikely to affect the species throughout the recovery unit or the remainder of its range. Conversely, an action with measurable effects on the listed entity in the action area may degrade the status of the species to the extent that it is affected at the level of the recovery unit or range-wide.

In the following sections, we will synthesize the analyses of the activities, considered together, discussed in the Effects of the Action section of this biological opinion to determine their effect on the reproduction, number, and distribution of the desert tortoise. We will then assess the effects of the proposed activities on the recovery of the species and whether they are likely to appreciably reduce the likelihood of both the survival and recovery of the desert tortoise.

### *Reproduction*

Activities considered in the biological opinion have the potential to introduce new species of invasive, non-native plants into habitat of the desert tortoise; they may also increase the distribution and abundance of non-native species that are already present. In a study using captive individuals, Drake *et al* (2016) found that invasive grasses negatively affect health and survival, and this can ultimately lead to negative effects on population recruitment for desert tortoises. The Bureau will require project proponents to manage invasive and non-native plants during all activities; this direction should decrease the likelihood that invasive and non-native plants will increase in abundance or distribution.

The Bureau will require that all project proponents implement these measures. The Bureau's adoption of a revised disturbance cap system will prompt the restoration of disturbed habitat in desert tortoise conservation areas throughout the desert. We expect that those measures will also function to control non-native species.

As we discussed in more detail previously, Nussear *et al.* (2012) found that, in the first year after translocation, the mean reproductive effort for translocated desert tortoises was slightly less than that of residents. In the second and third years after translocation, the mean number of eggs was not different between resident and translocated desert tortoises. Relatively few desert tortoises are likely to be translocated because the Bureau will require project developers to avoid higher density areas. For these reasons, we expect that the translocation of desert tortoises as a result of activities considered in this biological opinion is likely to result in the short-term reduction of the reproductive of relatively few desert tortoises.

For these reasons, we conclude that the activities considered in this biological opinion are likely to have a minimal negative effect on the reproductive capacity of desert tortoises in the action area.

### *Numbers*

For activities that would disturb habitat, the Bureau (CONS-BIO-IFS-1; DFA-BIO-IFS-3) will require that proponents conduct protocol surveys of sites where activities are proposed. If the results of these surveys indicate that more than 35 individuals larger than 160 millimeters occur on site or the density of desert tortoises exceeds 5 per square mile (160 millimeters or larger), the Bureau will require the proponent to redesign or relocate the project. The Bureau will use the number calculated through the Service's protocol survey, not the actual number of desert tortoises found during surveys, to implement these thresholds.

Desert tortoises seem to survive translocation from project sites when the translocation is conducted appropriately. We acknowledge that we have not monitored translocated animals for longer than

5 years; however, as we discussed previously in this section, translocated desert tortoises had similar rates of survival as resident and control animals within a year or two of translocation.

Various activities that the Bureau implements and authorizes may kill or injure desert tortoises, particularly small ones that are difficult to see. With a few exceptions, most activities that the Bureau authorizes or implements do not result in the death of desert tortoises. We expect that a few desert tortoises, probably mostly smaller individuals, are killed during activities but not detected. Because we do not know the number of desert tortoises the Bureau will encounter during each activity and cannot predict how many of those animals are likely to be killed, the Bureau and Service agree to reinitiate formal consultation if 15 large desert tortoises are killed in any calendar year as a result of activities undertaken through this biological opinion.

We estimated the number of desert tortoises within desert tortoise conservation areas in California, based on the results of the most recent report on range-wide sampling (Service 2015b). Most of the Eastern Mojave Recovery Unit is located in Nevada, as is a small portion of the Colorado Desert Recovery Unit. To account for this, we used half of the number of desert tortoises in the Eastern Mojave Recovery Unit in our exercise; because so little of the Colorado Desert Recovery Unit is outside of California, we included the entire number of desert tortoises for this area.

<b>Recovery Unit</b>	<b>Estimated Number of Desert Tortoises</b>
Western Mojave	17,644
Eastern Mojave	2,646
Colorado Desert	42,770
<b>Total</b>	<b>63,060</b>

The loss of 15 large desert tortoises represents 0.024 percent of the estimated total number of large desert tortoises within desert tortoise conservation areas in California ( $10 / 63,060 \times 100 = 0.0237868696479543$ ). This value overestimates the percentage of large desert tortoises that are likely to be killed as a result of activities considered in this biological opinion because our calculation does not include an estimate of the number of large desert tortoises that reside outside of the sampled conservation areas. If we included all large individuals within the action area in the calculation, the percentage of large desert tortoises that would be killed would decrease.

When we extend our calculation to all large desert tortoises within conservation areas range-wide (i.e., 85,686; Service 2015a), the percentage drops from 0.024 to 0.018 ( $15 / 85,686 \times 100 = 0.0175057769063791$ ). Therefore, we conclude that the activities considered in this biological opinion would have a negligible effect on the number of desert tortoises range-wide.

Turner *et al.* (1987) predicted that desert tortoises smaller than 180 millimeters comprised approximately 86.8 percent of the total population at their study site. Occasionally, the Service will use the work of Turner *et al.* to estimate the number of desert tortoises on a project site that are smaller than 180 millimeters. These estimates involve several assumptions and the number of assumptions changes with the size of the activity site. Consequently, we have declined to specifically

estimate the number of smaller desert tortoises that may be affected by the activities considered in this biological opinion.

Because smaller desert tortoises are more difficult to find, they are more likely to be missed during surveys; if they are not detected prior to the start of construction, they will likely be killed. The loss of these individuals is not likely to appreciably diminish the numbers of desert tortoises overall because relatively few desert tortoises will be affected by activities considered in this biological opinion in comparison to the number of individuals in the conservation areas. Additionally, smaller desert tortoises have naturally higher rates of mortality than large animals; therefore, the key to protecting desert tortoises in the long term is to focus conservation efforts on the large animals that have higher rates of survival and are currently reproducing.

#### *Distribution*

All desert tortoise habitat in the action area occurs within the Bureau's various land use allocations. The Bureau's National Conservation Lands and areas of critical environmental concern encompass most of conservation areas and linkages for the desert tortoise. The Bureau's conservation and management actions prohibit all activities (except transmission) within National Conservation Lands and areas of critical environmental concern that would result in the long-term removal of habitat supporting more than 5 adults per square mile or more than 35 adults total (CONS-BIO-IFS-1 through -3). The conservation and management actions also impose disturbance caps with these areas that are designed to limit or reverse the amount of habitat degradation that may occur as a result of various activities. These provisions ensure that the distribution of desert tortoises within these areas will not be measurably reduced.

The Bureau has not established caps within wilderness areas because all development is prohibited within these areas. The Bureau has also not established caps within variance process lands, general public lands, or development focus areas. However, the areas within these land use allocations comprise a small portion of the modeled desert tortoise habitat within the action area.

For these reasons, we have concluded that the activities within this biological opinion are not likely to appreciably alter the distribution of the desert tortoise.

#### *Effects on Recovery*

The Bureau (2015b, page IV.7-186) has included 92, 93, and 89 percent of the desert tortoise conservation areas and linkage habitat within the Colorado Desert, Eastern Mojave, and Western Mojave recovery units, respectively, within areas of critical environmental concern and National Conservation Lands through its land use plan amendment for the Desert Renewable Energy Conservation Plan. The Bureau designates National Conservation Lands to conserve, protect and restore nationally significant ecological, cultural and scientific values. It designates areas of critical environmental concern to highlight areas where special management attention is needed to protect and prevent irreparable damage to important historic, cultural, and scenic values, fish, or wildlife resources, or other natural systems or processes. The Bureau's designation of these land use allocations acknowledges the needs of the desert tortoise and its habitat as nationally significant.

The Bureau has also proposed numerous conservation and management actions to guide its activities throughout the action area. The conservation and management actions contained in the land use plan amendment will guide the Bureau's management of all activities.

For example, the Bureau's use of caps on the amount of land that can be disturbed within areas of critical environmental concern and National Conservation Lands directly addresses the issue of habitat loss and degradation within these areas that are important for the recovery of the desert tortoise. The Bureau is congressionally mandated to manage public lands for multiple uses; consequently, the Service acknowledges that the Bureau cannot eliminate every use that is likely to adversely affect desert tortoises. The conservation and management actions, including the caps on disturbance, will provide the Bureau with a set of tools by which it can manage desert tortoises.

The Bureau's requirement that proponents of all activities that are likely to adversely affect desert tortoises and their habitat compensate for these impacts will provide a mechanism by which the Bureau will be able to acquire additional lands and implement other actions that will benefit the recovery of the desert tortoise. The recovery plans for the desert tortoise (Service 1994, 2011) recommend the acquisition of lands within conservation areas and the implementation of other actions that remove or reduce sources of mortality or restore habitat. Consequently, this aspect of the consultation will provide a substantial benefit to the recovery of the desert tortoise. The land use plan amendment does not specifically address how the Bureau would implement the compensation requirements; generally, compensation to date has been implemented on a project-by-project basis. This method can provide important benefits to the conservation of desert tortoises. It is constrained to some degree in that it does not approach the recovery of the desert tortoise in a planned, systematic manner; additionally, the extent to which recovery actions are implemented is a function of the degree of impact of a single project.

### *Conclusion*

After reviewing the current status of the desert tortoise, the environmental baseline for the action area, the effects of the proposed activities, and the cumulative effects, the activities considered within this biological opinion are not likely to jeopardize the continued existence of the desert tortoise. We have reached this conclusion for the following reasons:

The proposed activities will not affect the reproductive capacity of desert tortoises.

The activities considered within this biological opinion will not appreciably reduce the number of desert tortoises within the action area and, by extension, throughout the range of the desert tortoise.

The proposed activities will not appreciably affect the distribution of the desert tortoise.

The activities considered within this biological opinion will not appreciably diminish our ability to recover the desert tortoise. The Bureau's requirement that the proponents of all activities compensate for the loss of habitat will allow for the implementation of numerous actions (acquisition of land, habitat restoration, fencing of roads, etc.) that will promote the recovery of the desert tortoise.

### **Critical Habitat**

As we stated previously in this biological opinion, “destruction or adverse modification of critical habitat” means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features (50 CFR 402.02).

Additionally, we determine whether a proposed action is likely to result in the “destruction or adverse modification” through an analysis of how a proposed action affects the physical and biological features of critical habitat within the action area in relation to the entirety of designated critical habitat. For critical habitat of the desert tortoise, this process involves considering the effects at the level of the action area, then at the level of the critical habitat unit, and then finally for the entirety of designated critical habitat. Logically, if a proposed action is unlikely to cause a measurable effect on critical habitat within the action area, it is unlikely to affect the species throughout the critical habitat unit or the remainder of critical habitat. Conversely, an action with measurable effects on critical habitat in the action area may degrade the status of critical habitat to the extent that it is affected at the level of the critical habitat unit or the entire designated area of critical habitat.

After reviewing the current status of the critical habitat, the environmental baseline for the action area, the effects of the proposed activities, and the cumulative effects, the activities considered within this biological opinion are not likely to result in the destruction or adverse modification of critical habitat of the desert tortoise. We have reached this conclusion because most of the critical habitat in the action area is located within National Conservation Lands, areas of critical environmental concern, and wilderness. The disturbance caps in the conservation and management actions will ensure that disturbance within the National Conservation Lands and areas of critical environmental concern will be minimal; we do not expect any disturbance within wilderness. Therefore, the activities considered in this biological opinion are not likely to appreciably diminish the value of critical habitat for the conservation of the desert tortoise.

### **INCIDENTAL TAKE STATEMENT**

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not the purpose of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement and occurs as a result of the action as proposed by the Bureau.

The measures described below are non-discretionary and must be undertaken by the Bureau or the Bureau must make them binding conditions of any authorization provided to permittees. The Bureau has a continuing duty to regulate the activities covered by this incidental take statement. If the Bureau fails to assume and implement the terms and conditions of the incidental take statement or to make them enforceable terms of permit or grant documents, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the Bureau must report the progress of its action and the impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(i)(3)].

We anticipate that most desert tortoises within the action areas for activities are likely to be taken; in some cases, desert tortoises will be allowed to leave under their own volition. We anticipate that most of the large individuals (i.e., those greater than 180 millimeters in length) within the area will be captured and moved from harm's way to adjacent habitat or translocated. Desert tortoises that are not detected during clearance surveys prior to implementation of activities may be killed or injured; because of the difficulty in finding small desert tortoises, we expect that many of these individuals, as well as eggs, are likely to be killed, injured, or destroyed during activities.

The Bureau and Service have agreed that the Bureau will re-initiate formal consultation if 15 large desert tortoises are killed in a calendar year by Bureau authorized or implemented activities. We have chosen 15 large desert tortoises as the threshold for re-initiation of consultation for the following reasons. Our experience with past projects indicates that authorized biologists will successfully move from harm's way or translocate the vast majority of large desert tortoises from the project site and that project activities are likely to kill or injure few of these individuals. We also acknowledge that it is reasonable to believe that some large desert tortoises are killed or injured that are not detected. Therefore, because of our experience that most large individuals are likely to be translocated, moved from harm's way, or avoided, we consider the detection of 15 dead large desert tortoises to be a reasonable point to re-initiate consultation.

We used large desert tortoises to establish this amount or extent of take because small desert tortoises are difficult to find and the method by which we calculate their abundance contains more assumptions and therefore more potential for variation than does our method for predicting the number of large desert tortoises. If the amount or extent of take for large desert tortoises is exceeded, the re-initiation of formal consultation would also require re-evaluation of the effects of the action on small desert tortoises.

We are not establishing an independent re-initiation criterion for the number of small desert tortoises or eggs that would be moved out of harm's way during activities considered in this biological opinion. We refrain from establishing re-initiation criteria for small desert tortoises or eggs because they are difficult to find, their numbers change more rapidly over time, and we encourage proponents to aggressively search for these individuals without the fear of project delays.

#### REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

The Bureau's conservation and management actions contain all of the common procedures that it may include in its authorizations and activities to minimize the take of desert tortoises. Additionally, when proponents or the Bureau propose specific activities, the Bureau will coordinate with the Service, as described in the Description of the Proposed Action section of this biological opinion, to determine the applicable conservation and management actions for that activity. If the Bureau and the Service

agree that additional measures are necessary to protect desert tortoises for a specific activity, they will include such measures with the applicable conservation and management actions. Consequently, we have not identified any reasonable and prudent measures or terms and conditions that we consider necessary or appropriate to minimize take of the desert tortoise at this time.

#### REPORTING REQUIREMENTS

The Bureau must provide an annual report to the Service by February 28 of each year which will include on-going and completed activities from the prior calendar year. Specifically, the reports must include information on any instances when any desert tortoise are killed or injured, the circumstances of such incidents, and any actions undertaken to prevent similar mortalities or injuries from re-occurring.

If desert tortoises are moved from harm's way or translocated, the Bureau must include that information in the report and any other information required by the activity-specific plan.

The Bureau must condition its authorizations to require project proponents to provide as much detail as possible as to the cause of mortality or injury of desert tortoises. This information will assist the Bureau and Service in developing more efficient means of reducing future impacts.

The reports must also include a description of the monitoring efforts that the Bureau implements.

#### DISPOSITION OF DEAD OR INJURED SPECIMENS

Within 24 hours of locating any dead desert tortoises, you must notify the Palm Springs Fish and Wildlife Office by telephone (760 322-2070) and electronic mail. The report must include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information.

Please notify us immediately of any desert tortoise is found injured. If the injured animal has the potential to survive, the Bureau must ensure that it is taken to a qualified veterinarian for treatment. If any injured individual of a listed species survives, the Bureau must contact the Service regarding its final disposition.

The Bureau must ensure that the applicant takes care in handling dead specimens to preserve biological material in the best possible state for later analysis, if such analysis is needed. The Service will make this determination when the Bureau provides notice that a desert tortoise has been killed by project activities.

#### CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Endangered Species Act directs Federal agencies to use their authorities to further its purposes by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

We offer the following conservation recommendations for your consideration:

In the past, project proponents have worked, at least to some degree, independently of the Federal agencies to develop the types of compensation for their projects. We recommend that the Bureau work with us to develop a mechanism whereby the Bureau, in coordination with the Service and other agencies as appropriate, directs compensation towards the highest-priority tasks identified by the Recovery Implementation Teams. Where compensation from a single project is insufficient to complete such a task, we also recommend that the Bureau pool compensation from additional projects. In light of the continued decline of desert tortoises, this approach to compensation would begin to meet the “need for more aggressive and better prioritized recovery implementation,” as recommended by the Service (2015a) in its annual report on range-wide monitoring.

We also recommend that the Bureau work with the Service, and other agencies as appropriate, to develop a strategy to translocate desert tortoises from project sites to appropriate augmentation areas whenever appropriate. Although desert tortoises generally adapt more quickly to translocation when moved short distances, we consider longer-distance translocations to be appropriate when the translocated animals are from areas where their current densities are below those that can support a viable population in the long term. The coordinated augmentation of populations in conservation areas would do more to further the recovery of the desert tortoise than moving a few individuals from a project site into adjacent habitat where the agencies are not managing the landscape for the long-term conservation of the species.

We recommend that the Bureau include, in its annual report for this biological opinion, information on conservation activities that the Bureau undertook in the previous year. Such activities may include, but are not limited to, acquisition of land, restoration of habitat, and results of research on desert tortoises conducted, permitted, or funded by the Bureau. As an alternative to including this information in the annual report, the Bureau may elect to develop another means whereby it can assist the Service in tracking the implementation of recovery actions.

We recommend that the Bureau engage the Service to discuss the need to re-initiate consultation if the rate that incidental take is occurring in any given year indicates that it may exceed the re-initiate trigger of 15 large desert tortoises.

#### RE-INITIATION NOTICE

This concludes formal consultation on the Bureau’s activities in the California Desert Conservation Area. As provided in 50 CFR 402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take specified in the incidental take statement is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

In instances where the amount or extent of incidental take is exceeded, the exemption issued pursuant to section 7(o)(2) may lapse and any further take may be a violation of section 4(d) or 9 of the Endangered Species Act. Consequently, we recommend that any activities causing such take cease pending re-initiation.

We appreciate the cooperation of your staff during the development of this biological opinion. If you have any questions, please contact Tara Callaway (760 322-2070, extension 417, or [tara\\_callaway@fws.gov](mailto:tara_callaway@fws.gov)) or Ray Bransfield (805 677-3398 or [ray\\_bransfield@fws.gov](mailto:ray_bransfield@fws.gov)) of my staff.

#### Appendices

- A. List of programmatic biological opinions for the desert tortoise
- B. Activity form
- C. Paper or electronic copies of the “Mojave population of the desert tortoise (*Gopherus agassizii*) 5-year review: summary and evaluation” are available upon request and can be found at: [https://www.fws.gov/carlsbad/SpeciesStatusList/5YR/20100930\\_RP\\_DETO.pdf](https://www.fws.gov/carlsbad/SpeciesStatusList/5YR/20100930_RP_DETO.pdf)
- D. Solar projects for which the U.S. Fish and Wildlife Service has issued biological opinions or incidental take permits

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## APPENDIX A

### List of Programmatic Biological Opinions for the Desert Tortoise

This biological opinion will replace most of the existing programmatic biological opinions between the Bureau and Service in the California Desert Conservation Area. This appendix notes how this biological opinion relates to existing biological opinions. Given the number of consultations in which the Bureau and Service have participated, this list may not be complete. If questions regarding a previously issued a biological opinion arise during the evaluation of a future activity, the Bureau and Service may rely on this biological opinion, provided that the analysis herein adequately describes the likely adverse effects to desert tortoises and critical habitat. Additionally, the Bureau and Service may modify this list if they become aware of existing biological opinions that we have failed to include.

#### PROGRAMMATIC BIOLOGICAL OPINIONS THAT WILL REMAIN IN PLACE

El Mirage Cooperative Off-Highway Vehicle Management Area	1-6-90-F-36
Johnson Valley Off-Highway Vehicle Management Area	1-6-90-F-39
Spangler Hills Off-Highway Vehicle Management Area	1-6-92-F-4
Route Designation in Northern and Eastern Mojave Desert	1-8-04-F-11
Stoddard Valley Off-Highway Vehicle Management Area	1-8-93-F-1
Imperial Sand Dunes Recreation Area Management Plan	FWS-IMP-09BO172-11F0310
Rainbow Basin Natural Area Management Plan	1-6-91-F-17
Rand Mountain-Fremont Valley Management Plan	1-6-90-F-54

#### BIOLOGICAL OPINIONS THAT WILL REMAIN PARTIALLY IN PLACE

Biological opinions on livestock management plans will remain in place. However, the Bureau can use the programmatic biological opinion for range improvements conducted under livestock management plans that have previously undergone section 7(a)(2) consultation.

California Desert Conservation Area	
Northern and Eastern Mojave and Northern and Eastern Colorado Plans	1-8-04-F-43R
West Mojave Plan	1-8-03-F-58

The incidental take statements from these biological opinions for the planning efforts for the California Desert Conservation Area will remain in place with regard to causal use (including on authorized routes and mining), livestock grazing (but not range improvements or revised grazing plans).

#### BIOLOGICAL OPINIONS THAT WILL BE REPLACED

Small Mining	1-6-92-F-28, 1-8-94-F-28R
Southern California Edison	1-8-94-F-53
Southern California Gas Pipeline Maintenance	1-8-95-F-28
Pacific Gas and Electric Company Gas Pipeline System	1-8-99-F-71
Small Projects	1-8-97-F-17
Dual Sport Programmatic	1-6-92-F-2
Road Maintenance and Rehabilitation of Disturbed Areas in the Ridgecrest Resource Area	1-8-95-F-32

## **APPENDIX B**

### **Activity Request Form**

## Activity Request Form

This consultation consists of the programmatic biological opinion, the Bureau of Land Management's (Bureau) request to use the programmatic biological opinion for the proposed action with project-specific information (Part A), the Fish and Wildlife Service's (Service) response (Part B), and the Bureau's post-project reporting (Part C). This form will be filled out and sent electronically. If your response to any question does not fit in the fillable box, please add extra pages and note the additional pages in the box.

For projects that affect 10 acres of habitat or less or that do not involve ongoing impacts to desert tortoises that are associated with transportation, the Service's Division Chief will have 30 days to respond via electronic mail if she or he has any concerns with use of the programmatic biological opinion. The Bureau may assume that the Service has no concerns if it does not respond by the close of the 30-day period; as a courtesy, the Service's Division Chief will attempt to notify the Bureau of her or his decision as soon as possible.

For projects that affect more than 10 acres or that will involve ongoing impacts to desert tortoises that are associated with transportation, the Service's Division Chief will respond within 30 days by signing and returning the activity form via electronic mail. The Bureau will not authorize or implement such projects until it receives notification from the Service.

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### Part A: Request to Implement an Activity by the Bureau

Date of request from Bureau:

Bureau point of contact:

Phone number/e-mail:

Project/activity title:

Proponent/applicant:

Number of desert tortoises potentially impacted:

> 180 mm:

< 180 mm:

Number of acres anticipated to be affected:

Non-critical habitat:

Critical habitat:

Description of Proposed Action:

Attach a map of the action area to form ☐

What is the Federal action (*e.g.*, right-of-way, permit, lease, etc.)?

When would the action begin?

When would the action end?

What are the specific activities that would be implemented?

How will access to work areas be accomplished? List equipment and routes of travel.

List proposed Conservation and Management Actions:

Survey Summary and Results:

Attach survey report to form ☐

Signature (Responsible Bureau Official):

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**Part B: Service Response**

Service File No. for Proposed Activity:

Date of FWS response to Bureau:

Conclusion

Is this project appropriate for use under the programmatic biological opinion? -

Additional protective measures or Conservation and Management Actions agreed to by the Bureau and Service during consultation:

**Signature:**

Division Chief  
Palm Springs Fish and Wildlife Office  
Palm Springs, California

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**Part C: Post-project Reporting**

Number of desert tortoises:

Killed:

Injured:

Moved:

Number of acres actually disturbed:

Non-critical habitat:

Critical habitat:

Other effects not described above:

Recommendations to improve protection of desert tortoises during future project activities:

## APPENDIX D

**Solar projects for which the U.S. Fish and Wildlife Service has issued biological opinions or incidental take permits.**

The following table summarizes information regarding the solar projects that have undergone formal consultation with regard to the desert tortoise. In the Citations column, a single reference indicates that the acres of desert tortoise habitat and number of desert tortoises are estimates from the biological opinion; when the column includes two citations, the first is for the acreage of habitat and the estimated number of desert tortoises from the biological opinion and the second is for number of desert tortoises that were found onsite prior to or during construction.

<b>Project and Recovery Unit</b>	<b>Acres of Desert Tortoise Habitat</b>	<b>Desert Tortoises Estimated<sup>1</sup></b>	<b>Desert Tortoises Observed<sup>2</sup></b>	<b>Citations<sup>3</sup></b>
<b>Eastern Mojave</b>				
Ivanpah Solar Electric Generating System	3,582	1,136	175 <sup>7</sup>	Service 2011a, Davis 2014
Stateline	1,685	947	55	Service 2013a, Ironwood 2014
Silver State North – NV	685	14 <sup>6</sup>	4	Service 2010a, Cota 2013
Silver State South – NV	2,427 <sup>4</sup>	1,020 <sup>4</sup>	152	Service 2013a, Cota 2014
Amargosa Farm Road – NV	4,350	4 <sup>6</sup>	-	Service 2010e
Nevada Solar One - NV	400	5	5	Burroughs 2012, 2014
Copper Mountain North - NV	1,400	30 <sup>5</sup>	30 <sup>5</sup>	Burroughs 2012, 2014
Copper Mountain - NV	380	5	5	Burroughs 2012, 2014
Townsite - NV	936	2 <sup>8</sup>	-	Burroughs 2015
Techren Boulder City - NV	2,304	10	-	Burroughs 2015
<b>Western Mojave</b>				
Abengoa Harper Lake	Primarily in abandoned agricultural fields	4 <sup>6</sup>	-	Service 2011b
Chevron Lucerne Valley	516	10	-	Service 2010b
Cinco	500	53	2	Service 2015a, Daitch 2015
Soda Mountain	1,726	78	-	Service 2015b
<b>Northeastern Mojave</b>				
Res Americas Moapa Solar Energy Center - NV	951	95	-	Burroughs 2015
Moapa K Road Solar - NV	2,141	186	157	Service 2012, Burroughs 2013
<b>Colorado</b>				
Genesis	1,774	8	0	Service 2010c, Fraser 2014a
Blythe	6,958	30	0	Service 2010d, Fraser 2014b

Desert Sunlight	4,004	56	7	Service 2011c, Fraser 2014a
McCoy	4,533	15	0	Service 2013b, Fraser 2014b
Desert Harvest	1,300	5	-	Service 2013c
Rice	1,368	18	1	Service 2011d, Fraser 2014a
<b>Total</b>	<b>43,920</b>	<b>3,721</b>	<b>583</b>	

<sup>1</sup>The numbers in this column are not necessarily comparable because the methodologies for estimating the numbers of desert tortoises occasionally vary between projects. When available, we included an estimate of the numbers of small desert tortoises.

<sup>2</sup>This column reflects the numbers of desert tortoises observed within project areas. It includes translocated animals and those that were killed by project activities. Project activities may result in the deaths of more desert tortoises than are found. Dashes represent projects for which we have no information at this point; some projects had not broken ground at the time of this biological opinion.

<sup>3</sup>The first citation in this column is for both the acreage and the estimate of the number of desert tortoises. The second is for the number of desert tortoises observed during construction of the project; where only one citation is present, construction has not begun or data are unavailable at this time.

<sup>4</sup>These numbers include Southern California Edison's Primm Substation and its ancillary facilities.

<sup>5</sup>These projects occurred under the Clark County Multi-species Habitat Conservation Plan; the provisions of the habitat conservation plan do not require the removal of desert tortoises. We estimate that all three projects combined will affect fewer than 30 desert tortoises.

<sup>6</sup>These estimates do not include smaller desert tortoises.

<sup>7</sup>In the table attached to the electronic mail, the number of desert tortoises translocated from the project site is represented by the total number of translocated animals minus the number of animals born in the holding pens.

<sup>8</sup>The estimate of the number of desert tortoises is from the portion of the project on Bureau land (52 acres). The remaining lands are covered by the Clark County Multi-species Habitat Conservation Plan; see footnote 5.

<sup>9</sup>The estimate of the number of desert tortoises is from both Bureau (104 acres) and private (2,200 acres) land. The remaining lands are covered by the Clark County Multi-species Habitat Conservation Plan; see footnote 5.

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## **Appendix B**

### **401 Water Quality Certification**



## Lahontan Regional Water Quality Control Board

August 25, 2021

WDID No. 6B362106003

Curtis Scott, Chief of Engineering  
Federal Highway Administration  
Central Federal Lands Highway Division  
12300 West Dakota Avenue  
Lakewood, CO 80228  
[Curtis.Scott@dot.gov](mailto:Curtis.Scott@dot.gov)

### **Board Order No. R6V-2021-0034, Granting Clean Water Act Section 401 Water Quality Certification, Dumont Dunes Road Project, San Bernardino County**

Lahontan Regional Water Quality Control Board (Water Board) staff has received a complete Clean Water Act (CWA) section 401 Water Quality Certification (WQC) application and application filing fee from the Federal Highway Administration-Central Federal Lands Highway Division (Applicant) for the Dumont Dunes Road Project (Project) in San Bernardino County. The application was received on July 2, 2021 and deemed complete on July 16, 2021. This WQC hereby assigns this Project Waste Discharge Identification (WDID) No. 6B362106003. Please use this reference number in all future correspondence regarding this Project.

Any person aggrieved by this action of the Water Board may petition the State Water Resources Control Board (State Water Board) to reconsider this WQC in accordance with Water Code section 13320 and California Code of Regulations (CCR), title 23, sections 2050 and 3867. The State Water Board must receive the petition within thirty (30) days after the date of this WQC, by 5:00 p.m. on the thirtieth day except if the thirtieth day following the date of this WQC falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at the [Water Quality Petitions](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/) page: ([http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/)) or will be provided upon request.

### **PROJECT INFORMATION**

Project details are listed in the following tables.

PETER C. PUMPHREY, CHAIR | MICHAEL R. PLAZIAK, PG, EXECUTIVE OFFICER

**General Project Information**

<b>Category</b>	<b>Data</b>
Applicant	Federal Highway Administration, Central Federal Lands Highway Division
Agent	Michael Daigler, Project Manager
Project Name	Dumont Dunes Road Project
Project Purpose and Description	The purpose of this Project is to pave the existing at-grade crossing to reduce maintenance of Dumont Dunes Road and assist with dust control. Temporary impacts to waters will result from ground disturbance associated with construction equipment access and grading. Permanent impacts to waters will result from the paving of the road, grading, and placement of rock slope protection (Enclosure 1).
Project Type	Transportation, Roads, Highways, and Bridges
Project Address or other Locating Information	The Project is located 3 miles east of the intersection of State Route 127 and Dumont Dunes Road, where Dumont Dunes Road crosses the Amargosa River, approximately 30 miles north of Baker in San Bernardino County.
Project Location Latitude/Longitude	Latitude: 35.695667 Longitude: -116.251214 (center)
Hydrologic Unit(s)	Amargosa Hydrologic Unit 609.00, Stove Pipe Wells Hydrologic Area (609.11)
Total Project Size	34 acres
Receiving Water(s) Name	Amargosa River
Water Body Type(s)	Intermittent Stream
Beneficial Uses	AGR, GWR, REC-1, REC-2, WARM, SAL, WILD, BIOL, RARE, SPWN
Potential Water Quality Impacts	Hydrogeomorphic changes in the flow regime on the Project site may result in downstream erosion, sedimentation, and/or siltation.
Federal Permit(s)	The United States Army Corps of Engineers (USACE) will regulate the Project as a non-notifying activity under Nationwide Permit 14, Linear Transportation Projects, pursuant to CWA section 404.
Non-Compensatory Mitigation	During construction, the Applicant will follow Best Management Practices (BMPs) including construction storm water controls designed to minimize the short-term degradation of water quality. All temporary impacts will be restored to pre-Project conditions.
Compensatory Mitigation	None.
Application Fee and Fee Code	Not Applicable (Fee Code 18, Federal Entity – No Fee)
Fees Received	Not Applicable
Estimated Annual Fee <sup>1</sup>	Not Applicable

Category	Data
<sup>1</sup> The actual Annual Fee will be calculated using the fee schedule in effect at the time the annual fee is assessed per California Code of Regulations, Title 23, section 2200(a)(3).	

### Impacts of Fill and Excavation to Waters of the United States

Water-body Type	Temporary Impacts			Permanent Physical Loss of Area			Permanent Degradation of Ecological conditions		
Units	Acres	Cubic Yards	Linear Feet	Acres	Cubic Yards	Linear Feet	Acres	Cubic Yards	Linear Feet
Stream Channel	0.36	0	40	0	0	0	0.41	653	87

### Mitigation for Temporary Impacts

Aquatic Resource Type	Units	Establishment	Re-establishment	Rehabilitation	Enhancement	Preservation
Stream Channel	Acres		0.36			
	Linear Feet		40			

### CEQA COMPLIANCE

The Water Board finds that the Project is categorically exempt from the California Environmental Quality Act (CEQA), pursuant to CCR, title 14, section 15031, Existing Facilities, for the maintenance of and minor alteration to an existing facility with negligible to no expansion of use. The Water Board will file a Notice of Exemption with the State Clearinghouse concurrently with this Order.

### CALIFORNIA ECOATLAS

It has been determined through regional, state, and national studies that tracking of mitigation/restoration projects must be improved to better assess the performance of these projects, following monitoring periods that last several years. In addition, to effectively carry out the State's Wetlands Conservation Policy of no net loss to wetlands, the State needs to closely track both aquatic habitat losses and mitigation/restoration project success. Therefore, the Applicant is required to provide Project information related to impacts and mitigation/restoration measures (see Additional Conditions of this WQC) to EcoAtlas using the [Project Tracker website](http://ptrack.ecoatlas.org) (<http://ptrack.ecoatlas.org>). Instructions and how to request a username and password can also be found at the Project Tracker website.

More information about the Water Board's [Clean Water Act \(CWA\) Section 401](http://www.waterboards.ca.gov/lahtontan/water_issues/programs/clean_water_act_401/index.shtml) requirements can be found at: ([http://www.waterboards.ca.gov/lahtontan/water\\_issues/programs/clean\\_water\\_act\\_401/index.shtml](http://www.waterboards.ca.gov/lahtontan/water_issues/programs/clean_water_act_401/index.shtml)). More information about EcoAtlas can be found at: [www.ecoatlas.org](http://www.ecoatlas.org).

## SECTION 401 WATER QUALITY CERTIFICATION

### Authority

CWA section 401 (33 U.S.C §1341) requires that any applicant for a federal license or permit, who plans to conduct any activity that may result in discharge of dredged or fill materials to waters of the U.S., must provide the permitting agency a certification from the state that the discharge will be in compliance with applicable water quality standards of the state in which the discharge will originate. The Applicant submitted a complete application and the fees required for WQC under CWA section 401 for the Project. The Applicant has applied for USACE authorization to proceed under Nationwide Permit 14, Linear Transportation Projects, pursuant to CWA section 404. CCR, title 23, section 3831(e) grants the Water Board Executive Officer the authority to grant or deny WQC for projects in accordance with CWA section 401. The Project qualifies for such WQC.

### Standard Conditions

The following standard conditions are requirements of this WQC:

1. This WQC action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and CCR, title 23, section 3867 through section 3869.
2. This WQC action is not intended and must not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license unless the pertinent WQC application was filed pursuant to CCR title 23, section 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
3. The WQC is conditioned upon total payment of the full fee required under CCR title 23, section 3833, unless otherwise stated in writing by the certifying agency.
4. Neither Project construction activities nor operation of the Project may cause a violation of the *Water Quality Control Plan for the Lahontan Region* (Basin Plan), may cause a condition or threatened condition of pollution or nuisance, or cause any other violation of the California Water Code (CWC) .
5. The Project must be constructed and operated in accordance with that described in the WQC application and supporting documentation that was submitted to the Water Board. Deviation from the Project constitutes a violation of the conditions upon which this WQC was granted. Any significant changes to this Project that would have a significant or material effect on the findings, conclusions, or conditions of this WQC, including Project operation, must be submitted to the Executive Officer for prior review and written approval.
6. This WQC is subject to the acquisition of all local, regional, state, and federal permits and approvals as required by law. Failure to meet any conditions contained herein or any conditions contained in any other permit or approval

issued by the state of California or any subdivision thereof may result in the revocation of this WQC and civil or criminal liability.

7. The Water Board may add to or modify the conditions of this WQC as appropriate to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the CWC or section 303 of the CWA, or as appropriate to coordinate the operations of this Project with other projects where coordination of operations is reasonably necessary to achieve water quality standards or protect the beneficial uses of water. Notwithstanding any more specific conditions in this WQC, the Project must be constructed and operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the CWC or section 303 of the CWA.
8. This WQC does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under the California Endangered Species Act (Fish and Game Code sections 2050, et seq.) or the federal Endangered Species Act (16 USC sections 1531, et seq.). If a "take" will result from any act authorized under this WQC, the Applicant must obtain authorization for the take prior to construction or operation of the Project. The Applicant is responsible for meeting all applicable requirements of the Endangered Species Act for the Project authorized under this WQC.

### **Additional Conditions**

Pursuant to CCR title 23, the following additional conditions are requirements of this WQC:

1. Thirty (30) days from the date of issuance of this Order for WQC, the Applicant is required to upload Project information (all information fields required by EcoAtlas), including a Project map (either using upload or draw polygon features) to the following website: <http://ptrack.ecoatlas.org/>. Amendments to and monitoring reports associated with the Project must be updated on EcoAtlas (using the "Files and Links" tab under "Projects" in EcoAtlas) in addition to any other reporting required as part of this WQC.
2. All excess sediment excavated from the site that is not used on-site will be removed from the site and stockpiled in an upland location so as to not be transported by wind or water into surface water. An adequate combination of sediment and erosion control BMPs must be implemented and maintained, as needed, to temporarily stabilize stockpiled soils until such time that they are reused and/or permanently stabilized.
3. To document the completion of the Project, the Applicant must submit a Project Completion Report to the Water Board within 60 days following completion of the Project, including successful completion of all required mitigation and associated monitoring and reporting, if applicable. The Project Completion Report should

include the following, at minimum: a summary of the Project activities, including the date(s) those activities were performed; identification of work locations (tabulated with latitude/longitude and corresponding map with photo documentation), types of techniques used (hand tools, mechanized equipment, etc.), and the area of temporary and permanent disturbance to waters of the State; a summary of the activities related to construction storm water controls and the BMPs used; and a summary of any activities that deviated from those described in the original application and supporting documents.

4. This WQC does not authorize emergency repair activities. The Applicant is required to apply for separate authorization to perform emergency repairs should that be necessary.
5. Construction equipment vehicles and equipment must be monitored for leaks, and proper BMPs must be implemented should leaks be detected, or the vehicles/equipment must be removed from service, if necessary, to protect water quality.
6. Debris, cement, concrete (or wash water therefrom), oil or other petroleum products must not be allowed to enter or be placed where they may be washed from the Project site by rainfall or runoff into waters of the state. When operations are completed, any excess material must be removed from the Project work area and any areas adjacent to the work area where such material may be transported into waters of the state.
7. The Applicant must immediately notify Water Board staff by telephone whenever an adverse condition occurs as a result of this discharge. Such a condition includes, but is not limited to, a violation of the conditions of this WQC, a significant spill of petroleum products or toxic chemicals, or damage to control facilities that would cause noncompliance. A written notification of the adverse condition must be provided to the Water Board within two weeks of occurrence. The written notification must identify the adverse condition, describe the actions completed or necessary to remedy the condition, and specify a timetable, subject to any modifications by Water Board staff, for the remedial actions, if not already accomplished.
8. An emergency spill kit must always be at the Project site during the Project.
9. The Applicant must permit Water Board staff or its authorized representative upon presentation of credentials:
  - a. Entry onto Project premises, including all areas on which wetland fill or wetland mitigation is located or in which records are kept.
  - b. Access to copy any record required to be kept under the terms and conditions of this WQC.
  - c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this WQC.

- d. Sampling of any discharge or surface water covered by this WQC.
10. The Applicant must prevent the introduction or spread of noxious/invasive organisms within the Project and staging areas. The control measures may include the treatment of onsite infestations, the cleaning of all equipment and gear that has been in an infested site, the use of weed-free erosion control materials (including straw), and the use of weed-free seeds and plant material for revegetation of disturbed areas.
11. The Applicant must maintain at the Project site a copy of this WQC and a copy of the complete WQC application provided to the Water Board so as to be available at all times to site operating personnel and agencies.
12. The Applicant is responsible for informing any contractors of the specific conditions contained in this WQC.

### **Enforcement**

In the event of any violation or threatened violation of the conditions of this WQC, the violation or threatened violation must be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of CWA section 401(d), the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this WQC.

In response to a suspected violation of any condition of this WQC, the State Water Board or the Water Board may require the holder of any permit or license subject to this WQC to furnish, under penalty of perjury, any technical or monitoring report the State Water Board or Water Board deems appropriate, provided that the burden, including costs, of the reports must be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

In response to any violation of the conditions of this WQC, the Water Board may add to or modify the conditions of this WQC as appropriate to ensure compliance.

### **Section 401 Water Quality Certification Requirements Granted**

I hereby issue this WQC certifying that any discharge from the referenced Project will comply with the applicable provisions of CWA sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards), and with other applicable requirements of state law.

This discharge is regulated under State Water Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification" which requires compliance with all conditions of this WQC. A copy of State Water Board Order No. 2003-0017-DWQ is

enclosed for your reference (Enclosure 2). Dischargers will comply with the entirety of this WQC, regardless of any determinations, including waiving of WQC conditions by the Army Corps of Engineers or other federal agencies made pursuant to 40 C.F.R. section 121.9.

Except insofar as may be modified by any preceding conditions, all WQC actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the Applicant's Project description and the terms specified in this WQC, and (b) compliance with all applicable requirements of the Basin Plan.

Electronic document submittal is required. Please send all future correspondence regarding this Project to the Water Board's email address at [lahontan@waterboards.ca.gov](mailto:lahontan@waterboards.ca.gov) and include your WDID No. and Project/Facility Name in the subject line.

We look forward to working with you in your efforts to protect water quality. If you have any questions regarding this matter, please contact Tiffany Steinert, Engineering Geologist, at (760) 241-7305 ([Tiffany.Steinert@waterboards.ca.gov](mailto:Tiffany.Steinert@waterboards.ca.gov)) or Jan Zimmerman Senior Engineering Geologist, at (760) 241-7376 ([jan.zimmerman@waterboards.ca.gov](mailto:jan.zimmerman@waterboards.ca.gov)).



MICHAEL R. PLAZIAK, PG  
EXECUTIVE OFFICER

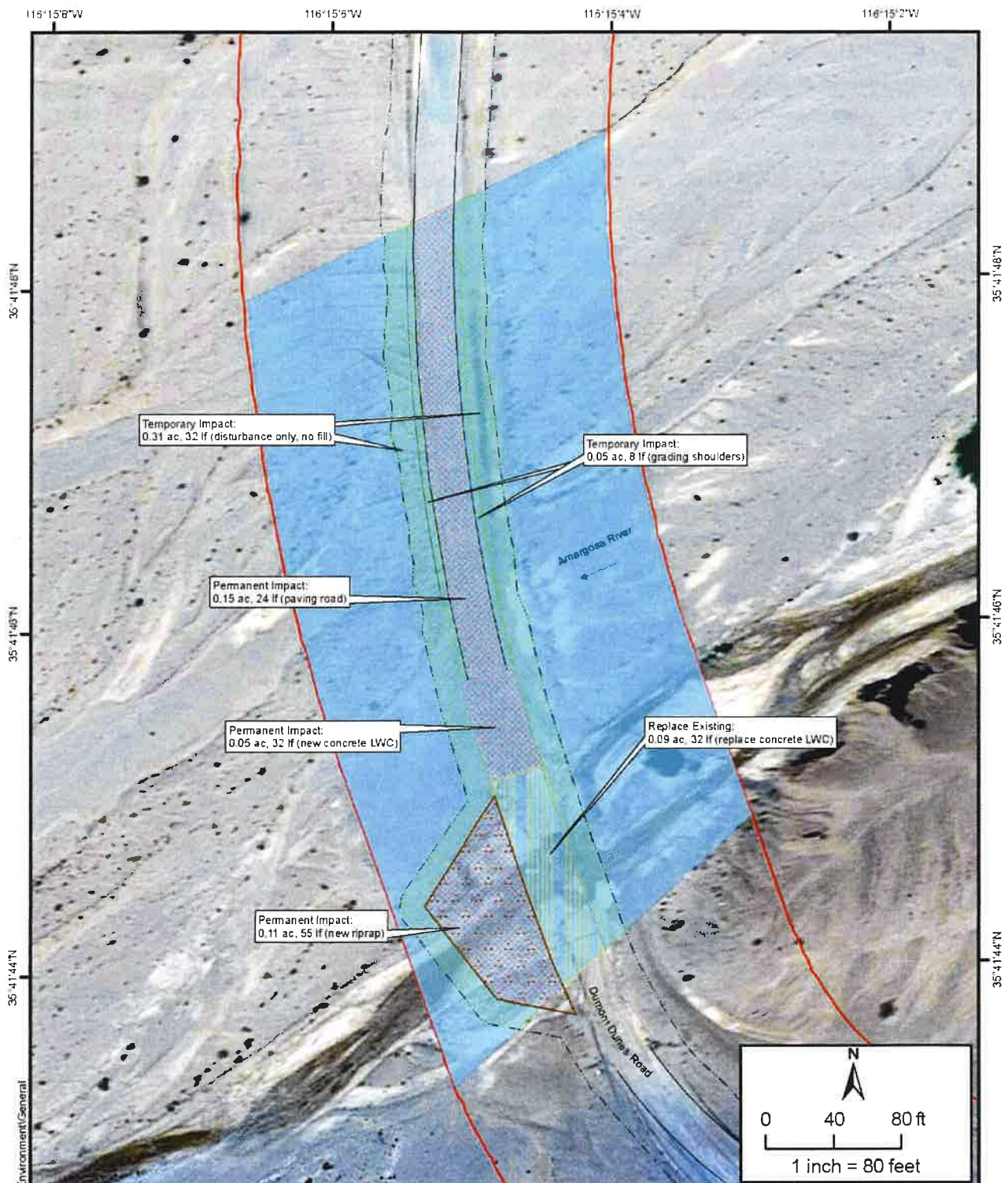
Enclosures: (1) Site Plan  
(2) SWRCB Order No. 2003-0017-DWQ

cc:

Michael Daigler, Federal Highway Administration-Central Federal Lands Highway Division ([Michael.Daigler@dot.gov](mailto:Michael.Daigler@dot.gov))  
Deanna Cummings, USACE ([Deanna.L.Cummings@usace.army.mil](mailto:Deanna.L.Cummings@usace.army.mil))  
USEPA Region 9 ([R9cwa401@epa.gov](mailto:R9cwa401@epa.gov))  
Tiffany Steinert, Lahontan Water Board ([tiffany.steinert@waterboards.ca.gov](mailto:tiffany.steinert@waterboards.ca.gov))

ENCLOSURE 1

Site Plan



Document Path: N:\CA\blndunes(1)\Environment\General



### Legend

- |  |                  |  |                          |
|--|------------------|--|--------------------------|
|  | Temporary Impact |  | Proposed Gravel Shoulder |
|  | Replace Existing |  | Proposed Road            |
|  | Permanent        |  | Proposed Concrete LWC    |
|  | Stream           |  | Proposed Riprap          |
|  | Project Area     |  | Construction Limit       |

**Figure 3.  
Amargosa River  
Impacts  
Dumont Dunes Road  
(CA FTBL Dumont Dunes(1))**

Map prepared by: L. Perry  
Date: 5/26/21  
Data source: Project data, GE Image 05/14

ENCLOSURE 2

SWRCB Order No. 2003-0017-DWQ

**STATE WATER RESOURCES CONTROL BOARD**

**WATER QUALITY ORDER NO. 2003 - 0017 - DWQ**

**STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR  
DREDGED OR FILL DISCHARGES THAT HAVE RECEIVED  
STATE WATER QUALITY CERTIFICATION (GENERAL WDRs)**

The State Water Resources Control Board (SWRCB) finds that:

1. Discharges eligible for coverage under these General WDRs are discharges of dredged or fill material that have received State Water Quality Certification (Certification) pursuant to federal Clean Water Act (CWA) section 401.
2. Discharges of dredged or fill material are commonly associated with port development, stream channelization, utility crossing land development, transportation water resource, and flood control projects. Other activities, such as land clearing, may also involve discharges of dredged or fill materials (e.g., soil) into waters of the United States.
3. CWA section 404 establishes a permit program under which the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States.
4. CWA section 401 requires every applicant for a federal permit or license for an activity that may result in a discharge of pollutants to a water of the United States (including permits under section 404) to obtain Certification that the proposed activity will comply with State water quality standards. In California, Certifications are issued by the Regional Water Quality Control Boards (RWQCB) or for multi-Region discharges, the SWRCB, in accordance with the requirements of California Code of Regulations (CCR) section 3830 et seq. The SWRCB's water quality regulations do not authorize the SWRCB or RWQCBs to waive certification, and therefore, these General WDRs do not apply to any discharge authorized by federal license or permit that was issued based on a determination by the issuing agency that certification has been waived. Certifications are issued by the RWQCB or SWRCB before the ACOE may issue CWA section 404 permits. Any conditions set forth in a Certification become conditions of the federal permit or license if and when it is ultimately issued.
5. Article 4, of Chapter 4 of Division 7 of the California Water Code (CWC), commencing with section 13260(a), requires that any person discharging or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State,<sup>1</sup> file a report of waste discharge (ROWD). Pursuant to Article 4, the RWQCBs are required to prescribe waste discharge requirements (WDRs) for any proposed or existing discharge unless WDRs are waived pursuant to CWC section 13269. These General WDRs fulfill the requirements of Article 4 for proposed dredge or fill discharges to waters of the United States that are regulated under the State's CWA section 401 authority.

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<sup>1</sup> "Waters of the State" as defined in CWC Section 13050(e)

6. These General WDRs require compliance with all conditions of Certification orders to ensure that water quality standards are met.
7. The U.S. Supreme Court decision of *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (the *SWANCC* decision) called into question the extent to which certain “isolated” waters are subject to federal jurisdiction. The SWRCB believes that a Certification is a valid and enforceable order of the SWRCB or RWQCBs irrespective of whether the water body in question is subsequently determined not to be federally jurisdictional. Nonetheless, it is the intent of the SWRCB that all Certification conditions be incorporated into these General WDRs and enforceable hereunder even if the federal permit is subsequently deemed invalid because the water is not deemed subject to federal jurisdiction.
8. The beneficial uses for the waters of the State include, but are not limited to, domestic and municipal supply, agricultural and industrial supply, power generation, recreation, aesthetic enjoyment, navigation, and preservation and enhancement of fish, wildlife, and other aquatic resources.
9. Projects covered by these General WDRs shall be assessed a fee pursuant to Title 23, CCR section 3833.
10. These General WDRs are exempt from the California Environmental Quality Act (CEQA) because (a) they are not a “project” within the meaning of CEQA, since a “project” results in a direct or indirect physical change in the environment (Title 14, CCR section 15378); and (b) the term “project” does not mean each separate governmental approval (Title 14, CCR section 15378(c)). These WDRs do not authorize any specific project. They recognize that dredge and fill discharges that need a federal license or permit must be regulated under CWA section 401 Certification, pursuant to CWA section 401 and Title 23, CCR section 3855, et seq. Certification and issuance of waste discharge requirements are overlapping regulatory processes, which are both administered by the SWRCB and RWQCBs. Each project subject to Certification requires independent compliance with CEQA and is regulated through the Certification process in the context of its specific characteristics. Any effects on the environment will therefore be as a result of the certification process, not from these General WDRs. (Title 14, CCR section 15061(b)(3)).
11. Potential dischargers and other known interested parties have been notified of the intent to adopt these General WDRs by public hearing notice.
12. All comments pertaining to the proposed discharges have been heard and considered at the November 4, 2003 SWRCB Workshop Session.
13. The RWQCBs retain discretion to impose individual or General WDRs or waivers of WDRs in lieu of these General WDRs whenever they deem it appropriate. Furthermore, these General WDRs are not intended to supersede any existing WDRs or waivers of WDRs issued by a RWQCB.

IT IS HEREBY ORDERED that WDRs are issued to all persons proposing to discharge dredged or fill material to waters of the United States where such discharge is also subject to the water quality certification requirements of CWA section 401 of the federal Clean Water Act (Title 33 United States Code section 1341), and such certification has been issued by the applicable RWQCB or the SWRCB, unless the applicable RWQCB notifies the applicant that its discharge will be regulated through WDRs or waivers of WDRs issued by the RWQCB. In order to meet the provisions contained in Division 7 of CWC and regulations adopted thereunder, dischargers shall comply with the following:

1. Dischargers shall implement all the terms and conditions of the applicable CWA section 401 Certification issued for the discharge. This provision shall apply irrespective of whether the federal license or permit for which the Certification was obtained is subsequently deemed invalid because the water body subject to the discharge has been deemed outside of federal jurisdiction.
2. Dischargers are prohibited from discharging dredged or fill material to waters of the United States without first obtaining Certification from the applicable RWQCB or SWRCB.

#### CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 19, 2003.

AYE:        Arthur G. Baggett, Jr.  
              Peter S. Silva  
              Richard Katz  
              Gary M. Carlton  
              Nancy H. Sutley

NO:         None.

ABSENT:   None.

ABSTAIN:   None.

  
Debbie Irvin  
Clerk to the Board

## **Appendix C**

State of California, DOT, Encroachment Permit

**ENCROACHMENT PERMIT**

TR-0120 (REV. 6/2012)

Permit No.  
0921-NRP-0225

In compliance with (Check one):

- ☒ Your application of August 30, 2021
- ☐ Utility Notice No. \_\_\_\_\_ of \_\_\_\_\_
- ☐ Agreement No. \_\_\_\_\_ of \_\_\_\_\_
- ☐ R/W Contract No. \_\_\_\_\_ of \_\_\_\_\_

Dist/Co/Rto/PM  
09 / SBD / 127 / 30.81 & 33.83DATE  
November 18, 2021

Fee Paid \$ <b>Exempt</b>	Deposit \$ <b>Exempt</b>
Performance Bond Amount (1) \$	Performance Bond Amount (2) \$
Bond Company	
Bond Number (1)	Bond Number (2)

**TO:** Federal Highway Administration  
Central Federal Lands Highway Division  
12300 W. Dakota Ave., Ste. 380  
Lakewood, CO. 80228  
ATTN: Michael Daigler, P.E.  
PHONE: (720) 963-3620

, PERMITTEE

and subject to the following, PERMISSION IS HEREBY GRANTED to:

Construct improvements in conformance with the attached plans (37 sheets) signed and stamped by Registered Professional Engineer James Mills, C68832 dated 09/20/2021.

Notwithstanding General Provision #4, your contractor is required to apply for and obtain an encroachment permit prior to starting work.

A pre-construction teleconference with the District 9 Encroachment Permits Office is required prior to starting work. Contact the District 9 Encroachment Permits Office at (760)784-4154 or (760)937-1154 to schedule the teleconference.

Approval for traffic control activities shall be requested the Monday prior to the week of work. Requests shall be submitted using the included "Permit Traffic Control Request" form. Shoulder or lane closures shall be accomplished in accordance with the current Caltrans Standard Plans. A lane closure shall be required when personnel are working, or equipment is operated within 6 feet of the traveled way. A shoulder closure shall be used when personnel or equipment for the work are located outside of 6 feet from the traveled way.

**CONTINUED ON PAGE 2**

THIS PERMIT IS NOT A PROPERTY RIGHT AND DOES NOT TRANSFER WITH THE PROPERTY TO A NEW OWNER.

The following attachments are also included as part of this permit (Check applicable):

- ☒ Yes ☐ No General Provisions
- ☐ Yes ☒ No Utility Maintenance Provisions
- ☒ Yes ☐ No Special Provisions
- ☐ Yes ☒ No A Cal-OSHA permit, if required: Permit No. \_\_\_\_\_
- ☐ Yes ☒ No As-Built Plans Submittal Route Slip for Locally Advertised Projects
- ☐ Yes ☒ No Stormwater Special Provisions for Minimal or No Impact

In addition to fee, the Permittee will be billed actual costs for:

- ☐ Yes ☒ No Review
- ☐ Yes ☒ No Inspection
- ☒ Yes \_\_\_\_\_ Field Work

(If any Caltrans Effort Expended)

- ☒ Yes ☐ No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before September 30, 2022

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.

No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

S. Winzenread, K. Weiermann, R. De La Rosa, J. Tetrick  
J. Smith, D. Batchelder

APPROVED:

Ryan A. Dermody, District Director

BY: **Mark V. Reistetter** Digitally signed by Mark V. Reistetter  
Date: 2021.11.18 08:04:18 -08'00'  
for **Stephen Winzenread**, District Permit Engineer

**ADA Notice**

For individuals with sensory disabilities, this document is available in alternative formats. For information call (916) 653-3657 or TDD (916) 645-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

Notify Caltrans Dispatch at (760)872-0718 and Caltrans Encroachment Permits at (760)784-4154 or (760)937-1154 for emergency operations that affect the State Highway Right-of-Way.

Any obliterated or damaged highway delineation, including but not limited to signs, striping, pavement markings, and roadside delineators, shall be replaced at no expense to the State. The Caltrans District 9 Permits Office shall be notified 7 days prior to replacing any delineation for layout approval.

Forms, special provisions, details, and plans attached to this permit include the following:

1. Permit Traffic Control Request (D9-T-0107)
2. Encroachment Permit General Provisions (TR-0045)
3. Notice of Completion (TR-0128)
4. Caltrans 2018 Standard Plan T9 – Traffic Control System Tables for Lane and Ramp Closures
5. Caltrans 2018 Standard Plan T10 – Traffic Control System for Lane Closure on Freeways and Expressways
6. Caltrans 2018 Revised Standard Plan T13 – Traffic Control System with Reversible Control on Two Lane Conventional Highways
7. Caltrans 2018 Revised Standard Plan T13A – Traffic Control System Two Lane Conventional Highways
8. Caltrans 2018 Revised Standard Plan T13B – Traffic Control System Two Lane Conventional Highways
9. Caltrans 2018 Standard Plans RS1, RS2 & RS4 – Roadside Signs

STATE OF CALIFORNIA – DEPARTMENT OF TRANSPORTATION  
**PERMIT TRAFFIC CONTROL REQUEST – DISTRICT 9**  
 09-T-0107 (Rev. 01/2021)

EMAIL TO: [Caltrans.D9.Permits@dot.ca.gov](mailto:Caltrans.D9.Permits@dot.ca.gov)

Caltrans District 9 Office of Encroachment Permits Representatives:  
 Rick DeLaRosa (760) 784-4154 / Jereme Tetrick (760) 937-1154 / Tom Scott (760) 874-8344 / Kurt Weiermann (760) 937-0791 / Mark Reistetter (760) 937-0113

Permittee	Name	Phone No.	Cell No.	Email Address
Field Contact Information				

Permit No.: \_\_\_\_\_ Double Permit No.: \_\_\_\_\_ Work Order/Job No.: \_\_\_\_\_

Preconstruction Meeting: ☐ YES, Date: \_\_\_\_\_ ☐ PENDING (Contact Encroachment Permits Office Representative to Schedule)

Working Days: ☐ MON ☐ TUE ☐ WED ☐ THUR ☐ FRI ☐ SAT ☐ SUN

Limits			Date/Time		Total Number of Lanes	Lane to be Closed #1,#2	T Plan to be Used	Description of Work
County	Route	Dir.	Post Mile	Nearest Cross Streets				
			From:					
			To:					
			From:					
			To:					
			From:					
			To:					
			From:					
			To:					
			From:					
			To:					
			From:					
			To:					
			From:					
			To:					

Caltrans Standard Plans: T10, T11, T12, T13, T14, T30, T31, T32

This request is due the Monday prior to the week of the planned traffic control.

## ENCROACHMENT PERMIT GENERAL PROVISIONS

TR – 0045 (REV. 04/2021)

1. **AUTHORITY:** The California Department of Transportation ("Department") has authority to issue encroachment permits under Division 1, Chapter 3, Article 1, Sections 660 through 734 of the Streets and Highways Code.
2. **REVOCATION:** Encroachment permits are revocable on five (5) business days' notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. Notwithstanding the foregoing, in an emergency situation as determined by the Department, an encroachment permit may be revoked immediately. These General Provisions and any applicable Special Provisions are subject to modification or abrogation by the Department at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State of California ("State") highway right-of-way may be exceptions to this revocation.
3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay encroachment permit fees when due may result in rejection of future applications and denial of encroachment permits.
4. **ASSIGNMENT:** This encroachment permit allows only the Permittee or Permittee's authorized agent to work within or encroach upon the State highway right-of-way, and the Permittee may not assign or transfer this encroachment permit. Any attempt to assign or transfer this encroachment permit shall be null and void.
5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept and comply with these General Provisions, the Special Provisions, any and all terms and/or conditions contained in or incorporated into the encroachment permit, and all attachments to the encroachment permit (collectively "the Permit Conditions"), for any encroachment, work, and/or activity to be performed under this encroachment permit and/or under color of authority of this encroachment permit. Permittee understands and agrees the Permit Conditions are applicable to and enforceable against Permittee as long as the encroachment remains in, under, or over any part of the State highway right-of-way.
6. **BEGINNING OF WORK:** When traffic is not impacted (see General Provision Number 35), the Permittee must notify the Department's representative two (2) business days before starting permitted work. Permittee must notify the Department's representative if the work is to be interrupted for a period of five (5) business days or more, unless otherwise agreed upon. All work must be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this encroachment permit.
7. **STANDARDS OF CONSTRUCTION:** All work performed within State highway right-of-way must conform to all applicable Departmental construction standards including but not limited to: Standard Specifications, Standard Plans, Project Development Procedures Manual, Highway Design Manual and Special Provisions.

Other than as expressly provided by these General Provisions, the Special Provisions, the Standard Specifications, Standard Plans, and other applicable Departmental standards, nothing in these General Provisions is intended to give any third party any legal or equitable right, remedy, or claim with respect to the encroachment permit and/or to these General Provisions or any provision herein. These General Provisions are for the sole and exclusive benefit of the Permittee and the Department.

Where reference is made in such standards to "Contractor" and "Engineer," these are amended to be read as "Permittee" and "Department's representative," respectively, for purposes of this encroachment permit.
8. **PLAN CHANGES:** Deviations from plans, specifications, and/or the Permit Conditions as defined in General Provision Number 5 are not allowed without prior approval from the Department's representative and the Federal Highway Administration ("FHWA") representative if applicable.
9. **RIGHT OF ENTRY, INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. The United States, the State, the Department, and the Directors, officers, employees, agents, and/or contractors of the State and/or of the Department, and other state, and federal agencies, and the FHWA, through their agents or representatives, must have full access to highway facilities/encroachment area, at any and all times for the purpose of inspection, maintenance, activities needed for construction/reconstruction, and operation of the State highway right-of-way.

Upon completion of work, Permittee must request a final inspection for acceptance and approval by the Department. The local public agency Permittee must not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.
10. **PERMIT AT WORKSITE:** Permittee must keep the permit package or a copy thereof at the work site at all times and must show it upon request to any Department representative or law enforcement officer. If the permit package, or a copy thereof, is not kept and made available at the work site at all times, the work must be suspended.
11. **CONFLICTING ENCROACHMENTS:** Permittee must yield start of work to ongoing, prior authorized work adjacent to or within the limits of the Permittee's project site. When existing encroachments conflict with Permittee's work, the Permittee must bear all cost for rearrangements (e.g., relocation, alteration, removal, etc.).

**ENCROACHMENT PERMIT GENERAL PROVISIONS**

**12. PERMITS AND APPROVALS FROM OTHER PUBLIC AGENCIES AND/OR ENTITIES:** This encroachment permit is invalidated if the Permittee has not obtained all permits and approvals necessary and required by law, including but not limited to permits from the California Public Utilities Commission ("CPUC"), California Occupational Safety and Health Administration ("Cal-OSHA"), and any other public agency and/or entity having jurisdiction. Permittee warrants all such permits and approvals have been obtained before beginning work under this encroachment permit. The Department may, at the Department's discretion, require the Permittee to demonstrate that Permittee has obtained all such permits/approvals, and Permittee shall demonstrate this at the time and in the manner specified by the Department.

**13. PEDESTRIAN AND BICYCLIST SAFETY:** A safe continuous passageway must be maintained through the work area at existing pedestrian or bicycle facilities. At no time must pedestrians be diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades must be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street. Attention is directed to Section 7-1.04 "Public Safety," and to Section 12-4.04 "Temporary Pedestrian Access Routes," and to Section 16-2.02 "Temporary Pedestrian Facility," of the Department's Standard Specifications, and to California Vehicle Code section 21760, subdivision (c).

**14. PUBLIC TRAFFIC CONTROL:** The Permittee must provide traffic control protection, warning signs, lights, safety devices, etc., and take all other measures necessary for the traveling public's safety as required by law and/or the Department. While providing traffic control, the needs of all road users, including but not limited to motorists, bicyclists and pedestrians, including persons with disabilities in accordance with the Americans with Disabilities Act, must be an essential part of the work activity.

Lane, Bike Lane, Sidewalk, Crosswalk, and/or shoulder closures must comply with the Department's Standard Specifications and Standard Plans for Temporary Traffic Control Systems & Temporary Pedestrian Access Routes, and with the applicable Special Provisions. Where issues are not addressed in the Standard Specifications, Standard Plans, and/or Special Provisions, the California Manual on Uniform Traffic Control Devices (Part 6, Temporary Traffic Control) must be followed.

**15. MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee must plan and conduct work so as to create the least possible inconvenience to the traveling public (motorized vehicles, unmotorized vehicles such as bicycles, pedestrians, person(s) with disabilities, etc.), such that traffic is not unreasonably delayed.

**16. STORAGE OF EQUIPMENT AND MATERIALS:** The storage of equipment or materials is not allowed within

State highway right-of-way, unless specified within the Special Provisions of this encroachment permit. If encroachment permit Special Provisions allow for the storage of equipment or materials within the State highway right-of-way, the equipment and material storage must also comply with Section 7-1.04, Public Safety, of the Department's Standard Specifications.

**17. CARE OF DRAINAGE:** Permittee must provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Department's Standard Specifications, Standard Plans, and/or as directed by the Department's representative.

**18. RESTORATION AND REPAIRS IN STATE HIGHWAY RIGHT-OF-WAY:** Permittee is responsible for restoration and repair of State highway right-of-way resulting from permitted work (Streets and Highways Code, section 670 et seq.).

**19. STATE HIGHWAY RIGHT-OF-WAY CLEAN UP:** Upon completion of work, Permittee must remove and dispose of all scraps, refuse, brush, timber, materials, etc. off the State highway right-of-way. The aesthetics of the highway must be as it was before work started or better.

**20. COST OF WORK:** Unless stated otherwise in the encroachment permit or a separate written agreement with the Department, the Permittee must bear all costs incurred for work within the State highway right-of-way and waives all claims for indemnification or contribution from the United States, the State, the Department, and from the Directors, officers, and employees of the State and/or the Department. Removal of Permittee's personal property and improvements shall be at no cost to the United States, the State, and the Department.

**21. ACTUAL COST BILLING:** When specified in the permit, the Department will bill the Permittee actual costs at the currently set Standard Hourly Rate for encroachment permits.

**22. AS-BUILT PLANS:** When required, Permittee must submit one (1) set of folded as-built plans within thirty (30) calendar days after completion and acceptance of work in compliance with requirements listed as follows:

- a) Upon completion of the work provided herein, the Permittee must submit a paper set of As-Built plans to the Department's representative.
- b) All changes in the work will be shown on the plans, as issued with the permit, including changes approved by Encroachment Permit Rider.
- c) The plans are to be prominently stamped or otherwise noted "AS-BUILT" by the Permittee's representative who was responsible for overseeing the work. Any original plan that was approved with a Department stamp, or by signature of the Department's representative, must be used for producing the As-Built plans.
- d) If construction plans include signing or striping, the dates of signing or striping removal, relocation, or installation must be shown on the As-Built plans when required as a condition of the encroachment permit. When the construction plans show signing and striping for staged construction on separate sheets,

**ENCROACHMENT PERMIT GENERAL PROVISIONS**

the sheet for each stage must show the removal, relocation, and installation dates of the appropriate staged striping and signing.

- e) As-Built plans must contain the Encroachment Permit Number, County, Route, and Post Mile on each sheet.
  - f) The As-Built Plans must not include a disclaimer statement of any kind that differs from the obligations and protections provided by sections 6735 through 6735.6 of the California Business and Professions Code. Such statements constitute non-compliance with Encroachment Permit requirements and may result in the Department retaining Performance Bonds or deposits until proper plans are submitted. Failure to comply may also result in denial of future encroachment permits or a provision requiring a public agency to supply additional bonding.
23. **PERMITS FOR RECORD PURPOSES ONLY:** When work in the State highway right-of-way is within an area under a Joint Use Agreement (JUA) or a Consent to Common Use Agreement (CCUA), a fee exempt encroachment permit is issued to the Permittee for the purpose of providing a notice and record of work. The Permittee's prior rights must be preserved without the intention of creating new or different rights or obligations. "Notice and Record Purposes Only" must be stamped across the face of the encroachment permit.
24. **BONDING:** The Permittee must file bond(s), in advance, in the amount(s) set by the Department and using forms acceptable to the Department. The bonds must name the Department as obligee. Failure to maintain bond(s) in full force and effect will result in the Department stopping all work under this encroachment permit and possibly revoking other encroachment permit(s). Bonds are not required of public corporations or privately-owned utilities unless Permittee failed to comply with the provisions and/or conditions of a prior encroachment permit. The surety company is responsible for any latent defects as provided in California Code of Civil Procedure section 337.15. A local public agency Permittee also must comply with the following requirements:
- a) In recognition that project construction work done on State property will not be directly funded and paid by State, for the purpose of protecting stop notice claimants and the interests of State relative to successful project completion, the local public agency Permittee agrees to require the construction contractor to furnish both a payment and performance bond in the local public agency's name with both bonds complying with the requirements set forth in Section 3-1.05 Contract Bonds of the Department's Standard Specifications before performing any project construction work.
  - b) The local public agency Permittee must defend, indemnify, and hold harmless the United States, the State and the Department, and the Directors, officers, and employees of the State and/or Department, from all project construction related claims by contractors, subcontractors, and suppliers, and from all stop notice and/or mechanic's lien claimants. The local public agency also agrees to remedy, in a timely manner and to the Department's satisfaction, any latent defects occurring as a result of the project construction work.
25. **FUTURE MOVING OF INSTALLATIONS:** Permittee understands and agrees to relocate a permitted installation upon notice by the Department. Unless under prior property right or agreement, the Permittee must comply with said notice at the Permittee's sole expense.
26. **ENVIRONMENTAL:**
- a) **ARCHAEOLOGICAL/HISTORICAL:** If any archaeological or historical resources are identified or encountered in the work vicinity, the Permittee must immediately stop work, notify the Department's representative, retain a qualified archaeologist who must evaluate the site at Permittee's sole expense, and make recommendations to the Department's representative regarding the continuance of work.
  - b) **HAZARDOUS MATERIALS:** If any hazardous waste or materials (such as underground storage tanks, asbestos pipes, contaminated soil, etc.) are identified or encountered in the work vicinity, the Permittee must immediately stop work, notify the Department's representative, retain a qualified hazardous waste/material specialist who must evaluate the site at the Permittee's sole expense, and make recommendations to the Department's representative regarding the continuance of work. Attention is directed to potential aerially deposited lead (ADL) presence in unpaved areas along highways. It is the Permittee's responsibility to take all appropriate measures to protect workers in conformance with California Code of Regulations Title 8, Section 1532.1, "Lead," and with Cal-OSHA Construction Safety Orders, and to ensure roadway soil management is in compliance with Department of Toxic Substances Control (DTSC) requirements.
  - c) **Biological:** If any regional, state, or federally listed biological resource is identified or encountered in the work vicinity, the Permittee must immediately stop work, notify the Department's representative, retain a qualified biologist who must evaluate the site at Permittee's sole expense, and make recommendations to the Department's representative regarding the continuance of work.
27. **PREVAILING WAGES:** Work performed by or under an encroachment permit may require Permittee's contractors and subcontractors to pay appropriate prevailing wages as set by the California Department of Industrial Relations. Inquiries or requests for interpretations relative to enforcement of prevailing wage requirements must be directed to the California Department of Industrial Relations.
28. **LIABILITY, DEFENSE, AND INDEMNITY:** The Permittee agrees to indemnify and save harmless the United States, the State, the Department, and the Directors, officers, employees, agents and/or contractors of the State and/or of the Department, including but not limited to the Director

**ENCROACHMENT PERMIT GENERAL PROVISIONS**

of Transportation and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind, and description, including but not limited to those brought for or on account of property damage, invasion of privacy, violation or deprivation of a right under a state or federal law, environmental damage or penalty, or injury to or death of any person including but not limited to members of the public, the Permittee, persons employed by the Permittee, and/or persons acting on behalf of the Permittee, arising out of or in connection with: (a) the issuance and/or use of this encroachment permit; and/or (b) the encroachment, work, and/or activity conducted pursuant to this encroachment permit, or under color of authority of this encroachment permit but not in full compliance with the Permit Conditions as defined in General Provision Number 5 ("Unauthorized Work or Activity"); and/or (c) the installation, placement, design, existence, operation, and/or maintenance of the encroachment, work, and/or activity; and/or (d) the failure by the Permittee or anyone acting on behalf of the Permittee to perform the Permittee's obligations under any part of the Permit Conditions as defined in General Provision Number 5, in respect to maintenance or any other obligation; and/or (e) any change to the Department's property or adjacent property, including but not limited to the features or conditions of either of them, made by the Permittee or anyone acting on behalf of the Permittee; and/or (f) a defect or obstruction related to or caused by the encroachment, work, and/or activity whether conducted in compliance with the Permit Conditions as defined in General Provision Number 5 or constituting Unauthorized Work or Activity, or from any cause whatsoever. The duty of the Permittee to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code.

It is the intent of the parties that except as prohibited by law, the Permittee will defend, indemnify, and hold harmless as set forth in this General Provision Number 28 regardless of the existence or degree of fault or negligence, whether active or passive, primary or secondary, on the part of: the United States, the State; the Department; the Directors, officers, employees, agents and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors; the Permittee; persons employed by the Permittee; and/or persons acting on behalf of the Permittee.

The Permittee waives any and all rights to any type of expressed or implied indemnity from or against the United States, the State, the Department, and the Directors, officers, employees, agents, and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors.

The Permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act in the conduct of the encroachment, work, and/or activity whether conducted pursuant to this encroachment permit or constituting Unauthorized Work

or Activity, and further agrees to defend, indemnify, and save harmless the United States, the State, the Department, and the Directors, officers, employees, agents, and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, from any and all claims, demands, damages, costs, penalties, liability, suits, or actions of every name, kind, and description arising out of or by virtue of the Americans with Disabilities Act.

The Permittee understands and agrees the Directors, officers, employees, agents, and/or contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, are not personally responsible for any liability arising from or by virtue of this encroachment permit.

For the purpose of this General Provision Number 28 and all paragraphs herein, "contractors of the State and/or of the Department" includes contractors, and their subcontractors, under contract to the State and/or the Department.

This General Provision Number 28 and all paragraphs herein take effect immediately upon issuance of this encroachment permit, and apply before, during, and after the encroachment, work, and/or activity contemplated under this encroachment permit, whether such work is in compliance with the Permit Conditions as defined in General Provision Number 5 or constitutes Unauthorized Work or Activity, except as otherwise provided by California law. The Permittee's obligations to defend, indemnify, and save harmless under this General Provision Number 28 take effect immediately upon issuance of this encroachment permit and have no expiration date, including but not limited to situations in which this encroachment permit expires or is revoked, the work or activity performed under this encroachment permit is accepted or not accepted by the Department, the encroachment, work, and/or activity is conducted in compliance with the Permit Conditions as defined in General Provision Number 5 or constitutes Unauthorized Work or Activity, and/or no work or activity is undertaken by the Permittee or by others on the Permittee's behalf.

If the United States or an agency, department, or board of the United States is the Permittee, the first two paragraphs of this General Provision Number 28 (beginning "The Permittee agrees to indemnify..." and "It is the intent of the parties...") are replaced by the following paragraph:

Claims for personal injury, death, or property damage allegedly caused by the negligent or wrongful act or omission of any employee of the United States acting within the scope of their official duties are subject to the Federal Tort Claims Act, as amended, 28 U.S.C. § 1346 and § 2671 et seq. (Chapter 171).

29. **NO PRECEDENT ESTABLISHED:** This encroachment permit is issued with the understanding that it does not establish a precedent.
30. **FEDERAL CIVIL RIGHTS REQUIREMENTS FOR PUBLIC ACCOMMODATION:**

**ENCROACHMENT PERMIT GENERAL PROVISIONS**

- a) As part of the consideration for being issued this encroachment permit, the Permittee, on behalf of Permittee and on behalf of Permittee's personal representatives, successors in interest, and assigns, does hereby covenant and agree that:
    - i) No person on the grounds of race, color, or national origin may be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
    - ii) That in connection with the construction of any improvements on said lands and the furnishings of services thereon, no discrimination must be practiced in the selection and retention of first-tier subcontractors in the selection of second-tier subcontractors.
    - iii) That such discrimination must not be practiced against the public in their access to and use of the facilities and services provided for public accommodations (such as eating, sleeping, rest, recreation), and operation on, over, or under the space of the State highway right-of-way.
    - iv) That the Permittee must use the premises in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A, Office of the Secretary of Commerce, Part 8 (15 C.F.R. Part 8) and as said Regulations may be amended.
  - b) That in the event of breach of any of the above nondiscrimination covenants, the State and the Department have the right to terminate this encroachment permit and to re-enter and repossess said land and the facilities thereon and hold the same as if said permit had never been made or issued.
31. **MAINTENANCE:** The Permittee is responsible for Permittee's sole expense for the encroachment, and the inspection, maintenance, repair, and condition thereof, so that it does not negatively impact State highway safety, maintenance, operations, construction, activities needed for construction/reconstruction, State facilities, or other encroachments. Additional permits or approval documents may be required authorizing additional work related to inspection, repair, and/or maintenance activities.
  32. **SPECIAL EVENTS:** In accordance with subdivision (a) of Streets and Highways Code section 682.5 and 682.7, the Department is not responsible for the conduct or operation of the permitted activity, and the applicant agrees to defend, indemnify, and hold harmless the United States, the State, the Department, and the Directors, officers, employees, agents, and contractors of the State and/or of the Department, including but not limited to the Director of Transportation and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind and description arising out of any activity for which this encroachment permit is issued.
- The Permittee is required, as a condition of this encroachment permit, for any event that awards prize compensation to competitors in gendered categories, for any participant level that receives prize compensation, to ensure the prize compensation for each gendered category is identical at each participant level. (Streets and Highways Code, section 682.7.)
- The Permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act in the conduct of the event, and further agrees to defend, indemnify, and save harmless the United States, the State and the Department, and the Directors, officers, and employees of the State and/or Department, including but not limited to the Director of the Department and the Deputy Directors, from any and all claims, demands, damages, costs, liability, suits, or actions of every name, kind and description arising out of or by virtue of the Americans with Disabilities Act.
33. **PRIVATE USE OF STATE HIGHWAY RIGHT-OF-WAY:** State highway right-of-way must not be used for private purposes without compensation to the State. The gifting of public property uses and therefore public funds is prohibited under the California Constitution, Article XVI, Section 6.
  34. **FIELD WORK REIMBURSEMENT:** Permittee must reimburse the Department for field work performed on Permittee's behalf to correct or remedy hazards or damaged facilities, or to clear refuse, debris, etc. not attended to by the Permittee.
  35. **LANE CLOSURE REQUEST SUBMITTALS AND NOTIFICATION OF CLOSURES TO THE DEPARTMENT:** Lane closure request submittals and notifications must be in accordance with Section 12-4.02, and Section 12.4-04, of the Department's Standard Specifications or as directed by the Department's representative. The Permittee must notify the Department's representative and the Traffic Management Center ("TMC") before initiating a lane closure or conducting an activity that may cause a traffic impact. In emergency situations when the corrective work or the emergency itself may affect traffic, the Department's representative and the TMC must be notified as soon as possible.
  36. **SUSPENSION OF TRAFFIC CONTROL OPERATION:** The Permittee, upon notification by the Department's representative, must immediately suspend all traffic lane, bike lane, sidewalk, crosswalk, and/or shoulder closure operations and any operation that impedes the flow of traffic. All costs associated with this suspension must be borne by the Permittee.
  37. **UNDERGROUND SERVICE ALERT (USA) NOTIFICATION:** Any excavation requires compliance with the provisions of Government Code section 4216 et seq., including but not limited to notice to a regional notification center, such as Underground Service Alert (USA). The Permittee must provide notification to the Department representative at least five (5) business days before, and the regional notification center at least forty-

**ENCROACHMENT PERMIT GENERAL PROVISIONS**

eight (48) hours before, performing any excavation work within the State highway right-of-way.

38. **COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA):** All work within the State highway right-of-way to construct and/or maintain any public facility must be designed, maintained, and constructed strictly in accordance with all applicable Federal Access laws and regulations (including but not limited to Section 504 of the Rehabilitation Act of 1973, codified at 29 U.S.C. § 794), California Access laws and regulations relating to ADA, along with its implementing regulations, Title 28 of the Code of Federal Regulations Parts 35 and 36 (28 C.F.R., Ch. I, Part 35, § 35.101 et seq., and Part 36, § 36.101 et seq.), Title 36 of the Code of Federal Regulations Part 1191 (36 C.F.R., Ch. XI, Part 1191, § 1119.1 et seq.), Title 49 of the Code of Federal Regulations Part 37 (49 C.F.R., Ch. A, Part 37, § 37.1 et seq.), the United States Department of Justice Title II and Title III for the ADA, and California Government Code section 4450 et seq., which require public facilities be made accessible to persons with disabilities.

Notwithstanding the requirements of the previous paragraph, all construction, design, and maintenance of public facilities must also comply with the Department's

Design Information Bulletin 82, "Pedestrian Accessibility Guidelines for Highway Projects" and Standard Plans & Specifications on "Temporary Pedestrian Access Routes."

39. **STORMWATER:** The Permittee is responsible for full compliance with the following:
- a) For all projects, the Department's Storm Water Program and the Department's National Pollutant Discharge Elimination System (NPDES) Permit requirements under Order No. 2012-0011-DWQ, NPDES No CAS0000003; and
  - b) In addition, for projects disturbing one acre or more of soil, with the California Construction General Permit Order No. 2009-0009-DWQ, NPDES No CAS0000002; and
  - c) In addition, for projects disturbing one acre or more of soil in the Lahontan Region with Order No. R6T-2016-0010, NPDES No CAG616002.
  - d) For all projects, it is the Permittee's responsibility to install, inspect, repair, and maintain all facilities and devices used for water pollution control practices (Best Management Practices/BMPs) before performing daily work activities.

## STORMWATER SPECIAL PROVISIONS FOR MINIMAL OR NO IMPACT (SWSP)

TR-0400 (Rev 05/2018)

1. **GENERAL:** The purpose of these Special Provisions is to provide the Permittee with specifications for water pollution control to minimize, prevent, or control the discharge of material into the air, surface waters, groundwater, and storm sewers owned by the State or local agencies. These provisions are not intended to take the place of the Caltrans Water Pollution Control Program (WPCP) for projects where soil disturbance from work activities less than one acre, or work activities of one acre or more subject to the preparation of the Caltrans Storm Water Pollution Prevention Plan (SWPPP). The Permittee must comply with the following Special Provisions and the direction of the State Representative. All Stormwater Best Management Practices (BMPs) must conform to Section 13 Water Pollution Control of Caltrans' Standard Specifications.
2. **NPDES REQUIREMENTS:** The Permittee must be responsible for full compliance with the Caltrans Storm Water Program and the Caltrans National Pollutant Discharge Elimination System (NPDES) Permit requirements (*Order No. 2012-0011-DWQ, NPDES No CA5000003*) and for and projects disturbing one acre or more of soil, full compliance with the California Construction General Permit (*Order No. 2009-0009-DWQ, NPDES No CA5000002*) or for projects for projects that have one acre or more of soil disturbance in the Lahontan Region (*Order No. R6T-2016-0010, NPDES No CAG616002*). It is the Permittee's responsibility to install, inspect, and repair or maintain facilities and devices used for water pollution control practices (BMPs) before performing daily work activities. Installation, inspection and maintenance responsibilities on the job site include: 1) soil stabilization materials in work areas that are inactive or prior to storm events, 2) water pollution control devices to control sediment and erosion, 3) implementation of spill and leak prevention procedures for chemical and hazardous substances stored on the job site, 4) material storage, 5) stockpile management, 6) waste management, 7) non-stormwater management, 8) water conservation, 9) tracking controls and 10) illicit connection, illegal discharge detection and reporting. The Permittee must report to the State representative when discharges enter into receiving waters, adjacent property, drainage systems or when discharges could be a cause or a threat for water pollution. The Permittee must also control illicit discharges or illegal dumping prior to start of daily work schedule. Copies of written notices or orders from the Regional Water Quality Control Board or other regulatory agency must be provided to the State representative within 48 hours of reported activity. For additional information on stormwater compliance, visit the State Water Resources Control Boards storm water Website at:  
  
[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater](http://www.waterboards.ca.gov/water_issues/programs/stormwater)
3. **RESPONSIBILITY FOR DEBRIS REMOVAL:** The Permittee must be responsible for preventing sediment, trash, debris, and other construction waste from entering the street, the storm drains, local creeks, or any other bodies of water.
4. **SPOILS AND RESIDUE:** The Permittee must vacuum any saw-cut concrete waste material, debris, residue, etc. No spoils, debris, residue, etc. must be washed into a drainage system.
5. **SWEEPING:** Sweep paved roads at construction entrance and exit locations and surrounding paved areas daily within the job site during: 1) clearing and grubbing, 2) earthwork, 3) trenching, 4) soil disturbance, 5) pavement grinding and/or cutting, and 6) after observing tracking of material onto or off the State property. Keep dust to a minimum during sweeping activities. Use vacuum whenever dust generation is excessive or sediment pickup is ineffective. Roadways or work areas must not be washed down with water. Street sweeping operations must conform to Section 13 Water Pollution Control of Caltrans' Standard Specifications.
6. **VEHICLES AND EQUIPMENT:** Permittee must prevent all vehicles, equipment, etc. from leakage or mud tracking onto roadways. If leaks cannot be repaired immediately, remove the vehicle or equipment from the job site.
7. **MAINTENANCE AND FUELING OF VEHICLES AND EQUIPMENT:** Maintenance and fueling of equipment must not result in any pollution at the job site. The Permittee must immediately clean up spills/leaks, and properly dispose of contaminated soil and materials.
8. **CLEANING VEHICLES AND EQUIPMENT:** Limit vehicle and equipment cleaning or washing at the job site except what is necessary to control vehicle tracking or hazardous waste. The Permittee must clean all equipment within a bermed area or over a drip pan large enough to prevent run-off. No soaps, solvents, degreasers, etc. must be used in State right-of-way. Any water from this operation must be collected and disposed of at an appropriate site. Containment berms or dikes must be used for fueling, washing, maintaining and washing vehicles or equipment in outside areas. Containment must be performed at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain. Keep adequate quantities of absorbent spill- cleanup material and spill kits in the fueling or maintenance area and on fueling trucks.
9. **DIESEL FUELS:** The use of diesel fuel from petroleum or other fossil fuel as a form-oil or solvent is not allowed.
10. **WEATHER CONDITIONS AT WORKSITE:** Any activity that would generate fine particles or dust that could be transported off site by stormwater must be performed during dry weather.
11. **WIND EROSION PROTECTION:** The use of Wind Erosion BMPs must be deployed year-round in instances where dust or fine particles could be transported off site.
12. **HOT MIX ASPHALT:** Runoff from washing hot mix asphalt must not enter into any drainage conveyances.
13. **PROTECTION OF DRAINAGE FACILITIES:** The Permittee must protect/cover gutters, ditches, drainage courses, and inlets with gravel bags, fiber rolls, State approved fabric filters, etc., to the satisfaction of the State representative during grading, paving, saw-cutting, etc. and materials must conform to Section 13-6.02 Materials for Water Pollution Control of Caltrans' Standard Specifications. No such protection measures must cause an obstruction to the traveling public. The Permittee must implement spill and leak prevention procedures for chemicals and hazardous substances stored on the job site (including secondary containment requirements) in accordance to section 13-4.03B Spill Prevention and Control, and 14-11 Hazardous Waste and Contamination, Water Pollution Control of Caltrans' Standard Specifications.
14. **PAINT:** Rinsing of painting equipment and materials is not permitted in State right-of-way. When thoroughly dry, dispose of

the following as solid waste: dry latex paint, paint cans, used brushes, rags, gloves, absorbent materials, and drop cloths. Oil based paint sludge and unusable thinner must be disposed of at an approved hazardous waste site.

15. **CONSTRUCTION MATERIALS:** Stockpile of all construction materials, including, but not limited to: pressure treated wood, asphalt concrete, cold mix asphalt concrete, concrete, grout, cement containing premixes, and mortar, must conform to section 13-4.03C (2) Material Storage & 13-4.03C (3) Stockpile Management of Caltrans' Standard Specifications.
16. **CONCRETE EQUIPMENT:** Concrete equipment must be washed in a designated washing area in a way that does not contaminate soil, receiving waters, or storm drain systems.
17. **EXISTING VEGETATION:** Established existing vegetation is the best form of erosion control. Minimize disturbance to existing vegetation. Damaged or removed vegetation must be replaced as directed by the State Representative.
18. **SOIL DISTURBANCE:** Soil disturbing activities must be avoided during the wet weather season. If construction activities during wet weather are allowed in your permit, all necessary erosion control and soil stabilization measures must be implemented in advance of soil disturbing activity.
19. **SLOPE STABILIZATION AND SEDIMENT CONTROL:** Consider a certified expert in Erosion and Sediment control in cases where slopes are disturbed during construction. The Permittee is directed to comply with Section 13.5 Temporary Soil Stabilization and Section 21 Erosion Control of Caltrans' Standard Specifications during application of temporary soil stabilization measures to the soil surface. Fiber rolls or silt fences may be required down slope until permanent soil stabilization is established. Remove the accumulated sediment whenever the sediment accumulates to 1/3 of the linear sediment barrier height. The Permittee must limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist or when environmental regulations prohibit their use within the project.
20. **STOCKPILES:** Stockpiles containing aggregate and/or soil must be stored at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain, and must be covered and protected with a temporary perimeter sediment barrier. Cold mix stockpiles must be stored on an impermeable surface and covered with 9 mil plastic to prevent contact with water. Minimize stockpiling of materials on the job site. Manage stockpiles by implementing the water pollution control practices in Section 13-4.03C (3) Stockpile Management of the State of California standard specifications for construction.
21. **DISCOVERY OF CONTAMINATION:** The State Representative must be notified in case any unusual discoloration, odor, or texture of ground water, is found in excavated material or if abandoned, underground tanks, pipes, or buried debris are encountered.
22. **SANITARY AND SEPTIC WASTE:** Do not bury or discharge wastewater from a sanitary or septic system within the highway. Properly connected sewer facilities are free from leaks. With State Representative approval place portable sanitary facility at least 50 feet away from storm drains, receiving waters, and flow lines. Permittee must comply with local health agency provisions when

using an on-site disposal system.

23. **LIQUID WASTE:** Prevent job site liquid waste from entering storm drain systems and receiving waters. Drilling slurries, grease or oil-free waste water or rinse water, dredging, wash water or rinse water running off a surface or other non-storm water liquids not covered under separate waste water permits must be held in structurally sound, leak-proof containers, such as portable bins or portable tanks. Store containers at least 50 feet away from moving vehicles and equipment. Liquid waste may require testing to determine hazardous material content prior to disposal. All measures must conform to section 13-4.03D (5) Liquid Waste, Water Pollution Control of Caltrans' Standard Specifications.
24. **WATER CONTROL AND CONSERVATION:** Manage water use in a way that will prevent erosion and the discharge of pollutants into storm drain systems and receiving waters. Direct runoff, including water from water line repair from the job site to areas where it can infiltrate into the ground. Direct water from off-site sources around the job site or from contact with jobsite runoff.
25. **PILE DRIVING:** Keep spill kits and cleanup materials at pile driving locations. Park pile driving equipment over drip pans, absorbent pads, or plastic sheeting with absorbent material, and away from stormwater run-on when not in use.
26. **DEWATERING:** Dewatering consists of discharging accumulated storm water, groundwater, or surface water from excavations or temporary containment facilities. All dewatering operations must comply with the latest Caltrans guidelines including the Field Guide for Construction Site Dewatering. Contact State representative for approval of dewatering discharge by infiltration or evaporation, otherwise, any effluent discharged into a permitted storm water system requires approval from the Regional Water Quality Control Board. Prior to the start of dewatering, the Permittee must provide the State Representative with a dewatering and discharge work plan that complies with section 13-4.03G Dewatering, Water Pollution Control of Caltrans' Standard Specifications. A copy of the Waste Discharge Permit and a copy of a valid WDID number issued by the Regional Board must be provided to the State representative.

STATE	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	NO. SHEETS

REGISTERED CIVIL ENGINEER DATE: MAY 31, 2018 PLANS APPROVAL DATE:	
THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DIVISION OF TRAFFIC ENGINEERING DIVISION OF PLANNING DIVISION OF DESIGN DIVISION OF CONSTRUCTION DIVISION OF MAINTENANCE DIVISION OF RESEARCH DIVISION OF SPECIAL SERVICES DIVISION OF TRAFFIC SIGNALS DIVISION OF TRAFFIC STUDIES DIVISION OF TRAFFIC TRAINING DIVISION OF TRAFFIC VIDEO DIVISION OF TRAFFIC WORKS DIVISION OF TRAFFIC ZONING DIVISION OF TRAFFIC SIGNALS DIVISION OF TRAFFIC STUDIES DIVISION OF TRAFFIC TRAINING DIVISION OF TRAFFIC VIDEO DIVISION OF TRAFFIC WORKS DIVISION OF TRAFFIC ZONING	

TABLE 1

SPEED (S)	TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING									
	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)					MAXIMUM CHANNELIZING DEVICE SPACING				
	TANGENT 2L	MERCING L	SHIFTING L/2	SHOULDER L/3	TAPER	X	Y	TANGENT	CONFLICT	Z **
20	160	80	40	27	20	20	40	10	10	12
25	250	125	63	42	25	25	50	12	12	15
30	360	180	90	60	30	30	60	15	15	17
35	490	245	123	82	35	35	70	17	17	20
40	640	320	160	107	40	40	80	20	20	22
45	1060	540	270	180	45	45	90	22	22	25
50	1200	600	300	200	50	50	100	25	25	28
55	1320	660	330	220	50	50	100	25	25	30
60	1440	720	360	240	50	50	100	25	25	32
65	1560	780	390	260	50	50	100	25	25	34
70	1680	840	420	280	50	50	100	25	25	36
75	1800	900	450	300	50	50	100	25	25	38

\* - For other offsets, use the following merging taper length formula for L:  
 For speed of 40 mph or less,  $L = WS^2/60$   
 For speed of 45 mph or more,  $L = WS$

Where: L = Taper length in feet  
 W = Width of offset in feet

S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

SPEED *	LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
	Min D **	DOWNGRADE Min D ***			***
		-3%	-6%	-9%	
20	115	115	120	126	126
25	155	158	165	172	172
30	200	205	215	227	227
35	250	257	271	287	287
40	305	315	333	354	354
45	360	378	400	427	427
50	425	446	474	507	507
55	495	520	553	593	593
60	570	598	638	686	686
65	645	682	728	785	785
70	730	771	825	891	891
75	820	866	927	1003	1003

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Longitudinal buffer space or flagger station spacing

\*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ROAD TYPE	ADVANCE WARNING SIGN SPACING				
	A	B	C	D	E
URBAN - 25 mph or less	100	100	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250	250	250
URBAN - MORE THAN 40 mph	350	350	350	350	350
RURAL	500	500	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640		

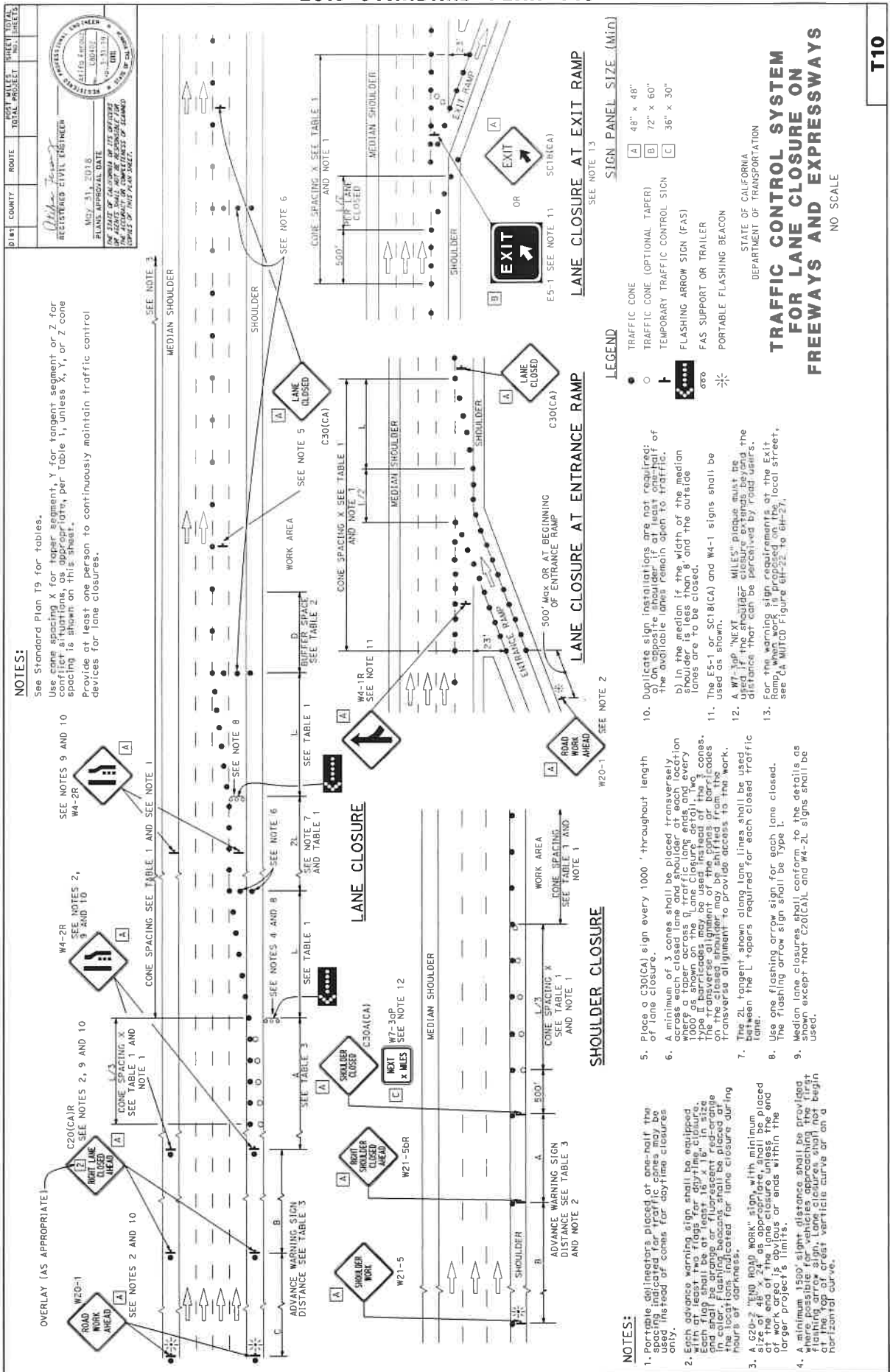
\* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

## TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

T9



# 2018 REVISED STANDARD PLAN RSP T13

## NOTES:

- See Standard Plan T9 for tables.  
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.
- Provide at least one person to continuously maintain traffic control devices for lane closures.

TO ACCOMPANY PLANS DATED

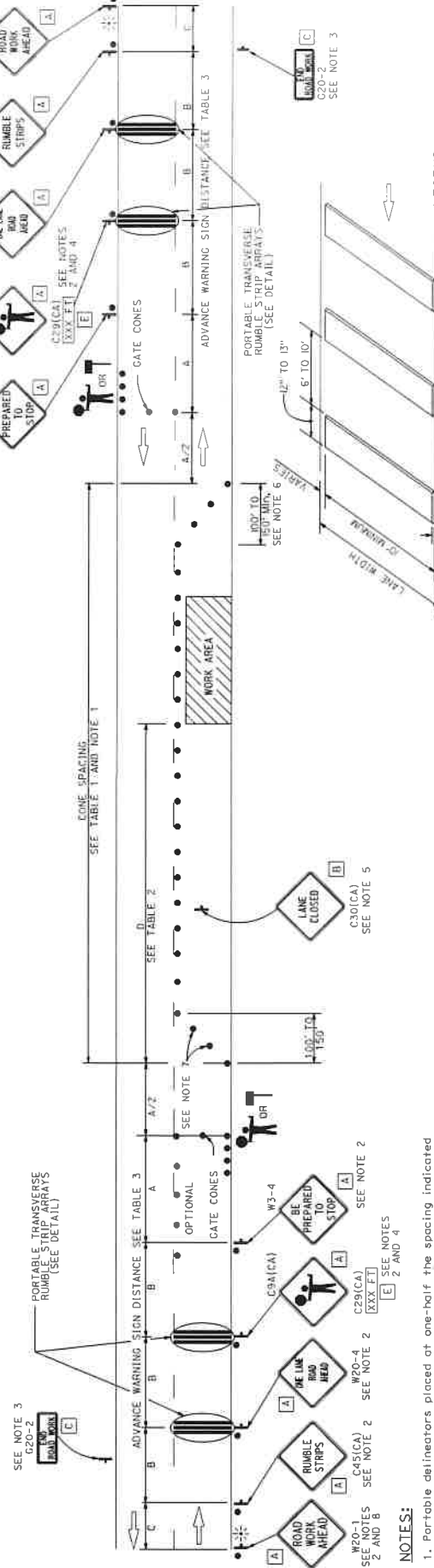
SEE NOTE 2  
W3-4

SEE NOTE 2  
C9A(CA)

SEE NOTE 2  
C45(CA)

SEE NOTE 2  
W20-4

SEE NOTE 2  
W20-1



## LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER
- AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

## PORTABLE TRANSVERSE RUMBLE STRIP ARRAY DETAIL

SIGN PANEL SIZE (min)

- |   |           |
|---|-----------|
| A | 48" x 48" |
| B | 30" x 30" |
| C | 36" x 18" |
| D | 36" x 42" |
| E | 20" x 7"  |

## TRAFFIC CONTROL SYSTEM WITH REVERSIBLE CONTROL ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## REVISED STANDARD PLAN RSP T13

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START	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	NO. SHEETS

**REGISTERED CIVIL ENGINEER**  
*Alvin Fung*  
 April 16, 2021  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA IN ITS OFFICE OF  
 THE ATTORNEY GENERAL HAS REVIEWED THESE  
 PLANS AND FINDS THEM TO BE IN ACCORDANCE WITH THE  
 REQUIREMENTS OF THE CALIFORNIA CIVIL ENGINEERING  
 BOARD'S REGULATION OF PROFESSIONAL ENGINEERS

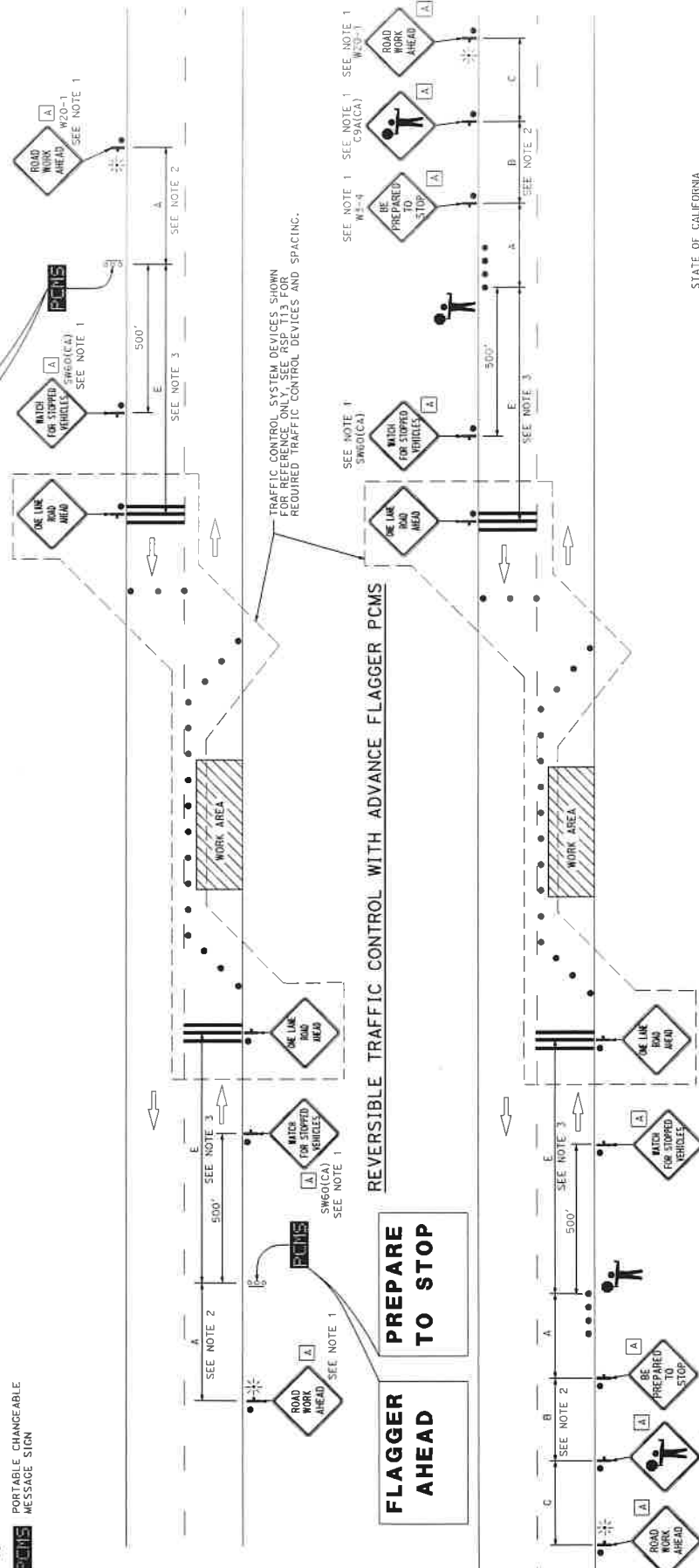
**FLAGGER  
AHEAD**

**PREPARE  
TO STOP**

**SIGN PANEL SIZE (Min):**  
 48" x 48"

- LEGEND:**
- TRAFFIC CONE
  - TEMPORARY TRAFFIC CONTROL SIGN
  - PORTABLE FLASHING BEACON
  - TRAILER
  - FLAGGER
  - PORTABLE CHANGEABLE MESSAGE SIGN

TO ACCOMPANY PLANS DATED



**REVERSIBLE TRAFFIC CONTROL WITH ADVANCE FLAGGERS**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 TWO LANE CONVENTIONAL  
 HIGHWAYS**  
 NO SCALE

- NOTES:**
- Sign must be equipped with at least two flags for daytime closures. Flashing beacons must be at least 16 inches by 16 inches in size. Place flashing beacons as shown for closures during hours of darkness.
  - See Standard Plan T9, Table 3 for advanced warning sign spacing.
  - See Standard Specification 12-4.02C.

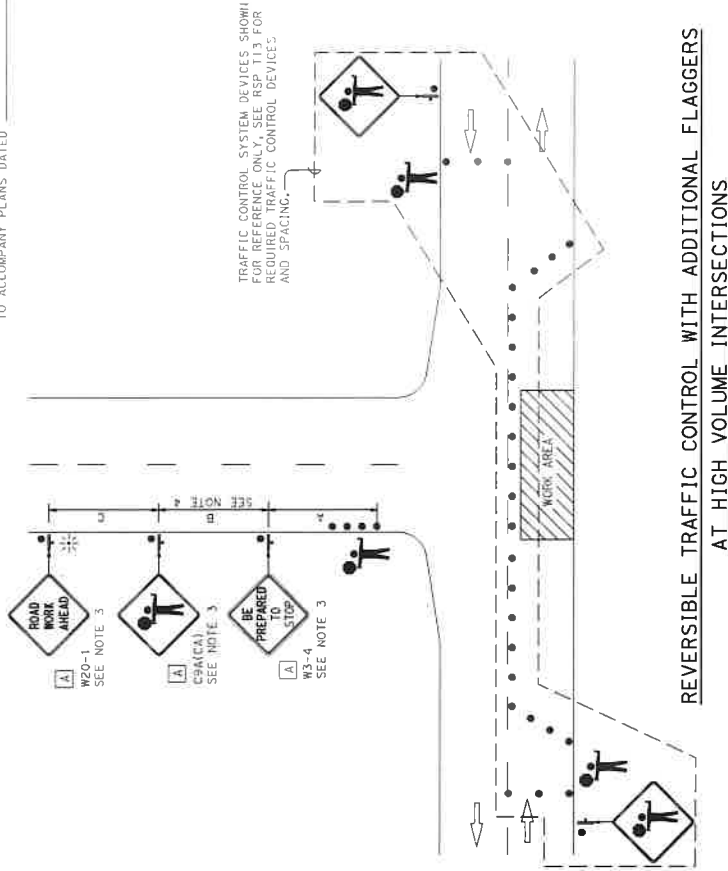
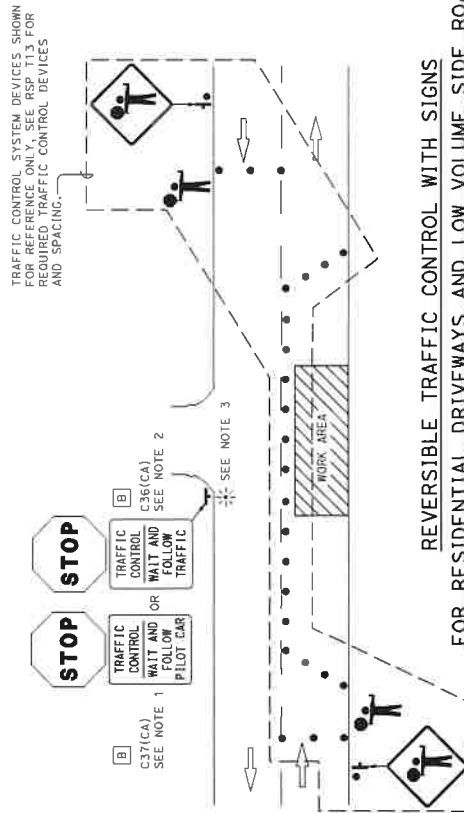
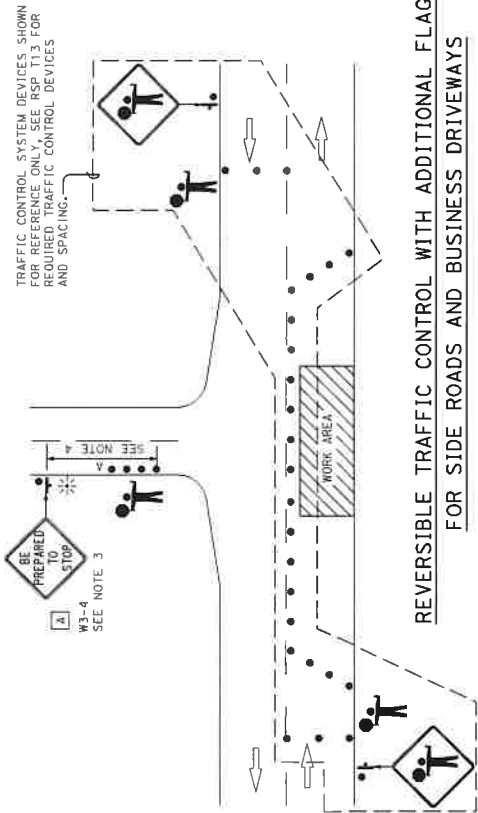
RSP T13A DATED APRIL 16, 2021 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2018.  
**REVISED STANDARD PLAN RSP T13A**

# 2018 REVISED STANDARD PLAN RSP T13B

DATE	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL

  
 REGISTERED CIVIL ENGINEER  
 April 16, 2021  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA IN ITS OFFICE  
 OF THE REGISTERED PROFESSIONAL ENGINEERS  
 HAS REVIEWED THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED \_\_\_\_\_



## NOTES:

1. Place C37(CA) sign when pilot car is used.
2. Place C36(CA) sign when pilot car is not used.
3. Sign must be equipped with at least two flags for daytime closures. Flags must be orange in color and at least 16 inches by 16 inches in size. Place flashing beacons as shown for closures during hours of darkness.
4. See Standard Plan T9, Table 3 for advance warning sign spacing.

## LEGEND:

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

## SIGN PANEL SIZE (MIN)

- A 48" x 48"
- B 36" x 42"

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

# TRAFFIC CONTROL SYSTEM TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

RSP T13B DATED APRIL 16, 2021 SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2018.

## REVISED STANDARD PLAN RSP T13B

SHEET NO.	POST MILES	TOTAL PROJECT	SHEET TOTAL
1			

DATE	DESIGNED BY	CHECKED BY
MAY 31, 2018		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

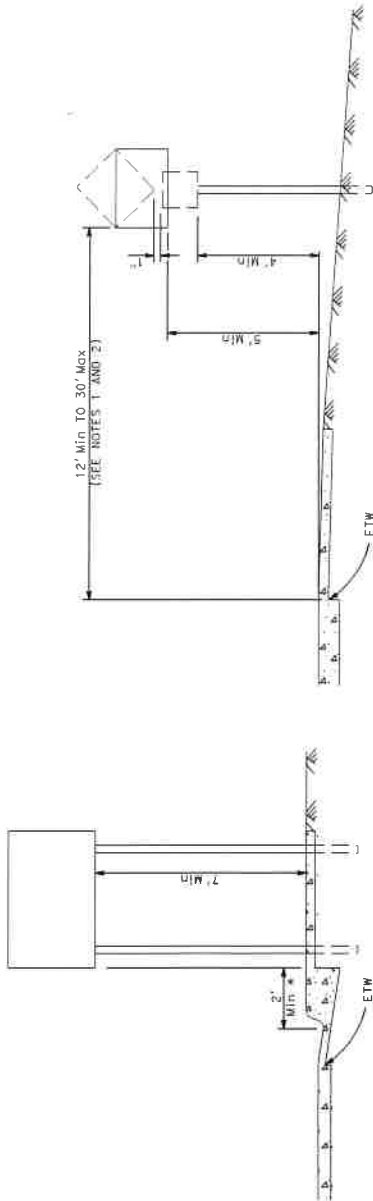
THE STATE OF CALIFORNIA OR ITS OFFICERS  
DO NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF PLANS  
UNLESS THEY ARE SO STATED ON THE PLANS.

NOTES:

- When clear roadside recovery areas are provided, signs shall be placed as far from the edge of traveled way as possible, up to a maximum of 50'. When possible, they shall be placed in protected locations.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30' from edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.
- Does not apply to locations where minimum horizontal distance is not reasonable due to terrain or other factors. Signs shall be placed on structures or lighting standards.

ABBREVIATION:

EPS = Edge of Paved Shoulder

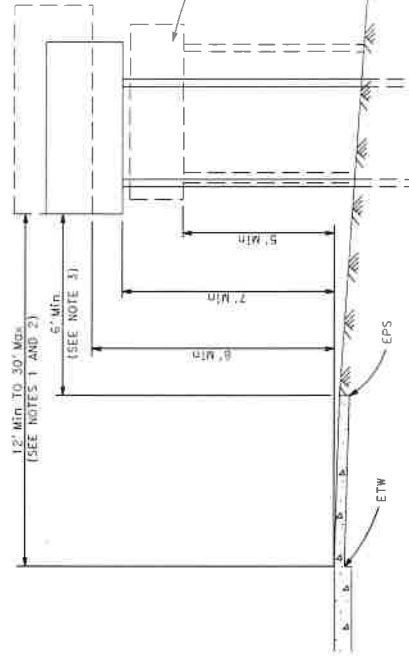


\* 1' Min Where Lateral Clearance Limited

URBAN LOCATIONS

RURAL LOCATIONS

CONVENTIONAL HIGHWAYS AND INTERCHANGE AREAS



REGULATORY AND WARNING SIGNS  
AND ROUTE SHIELDS

\* 5' Min AT 30' FROM ETW

GUIDE SIGNS

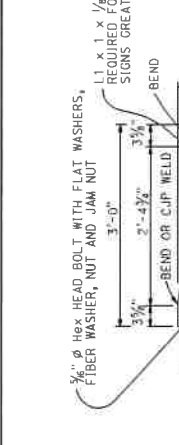
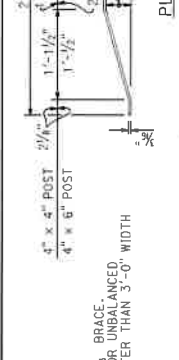
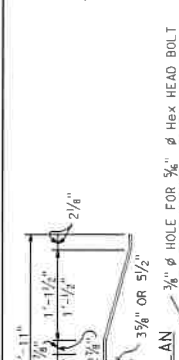
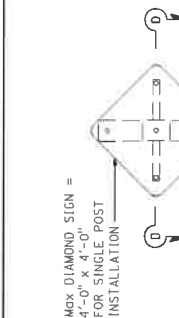
FREEWAY AND EXPRESSWAY LOCATIONS

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ROADSIDE SIGNS  
TYPICAL INSTALLATION  
DETAILS No. 1**

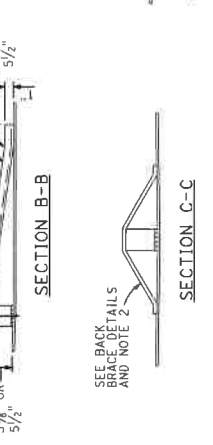
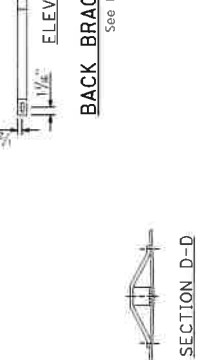
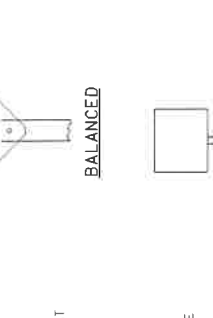
NO SCALE

RS1

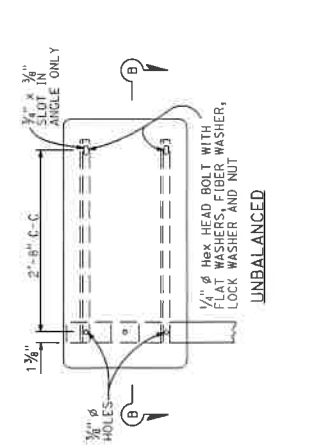
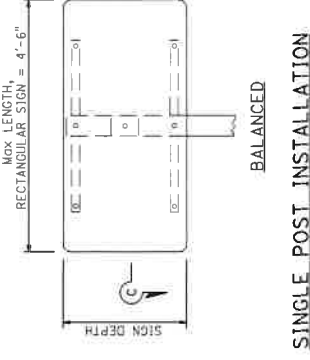
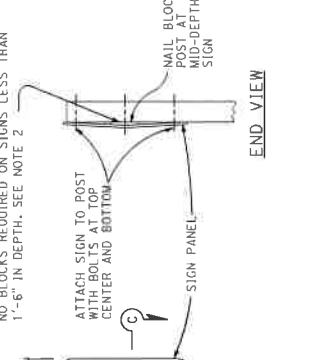
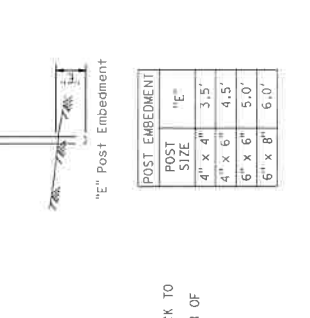
PROJECT MILES: \_\_\_\_\_ SHEET TOTAL: \_\_\_\_\_  
 COUNTY: \_\_\_\_\_ ROUTE: \_\_\_\_\_  
 PROJECT: \_\_\_\_\_  
 DATE: MAY 31, 2018  
 REGISTERED CIVIL ENGINEER  
 STATE OF CALIFORNIA  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 DIVISION OF HIGHWAYS  
 DIVISION OF HIGHWAYS



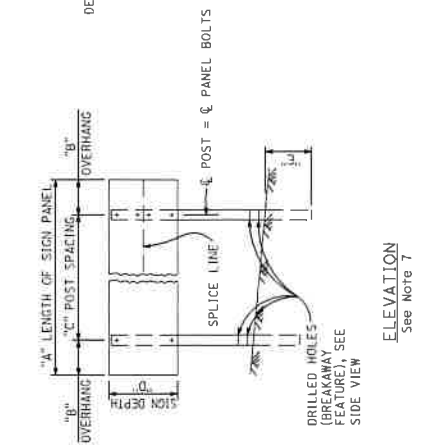
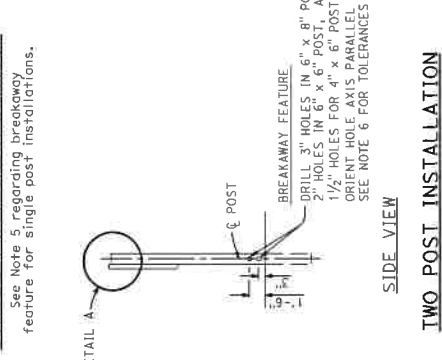
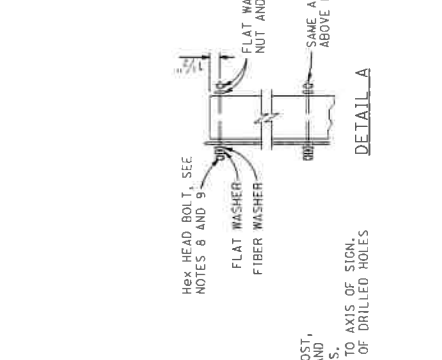
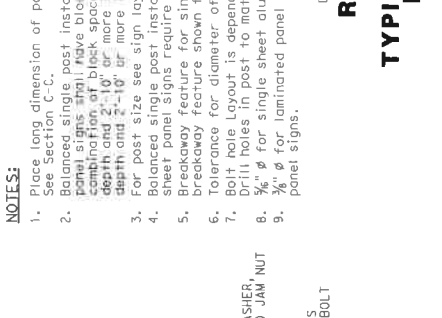
SIGN PANEL LENGTH	SIGN PANEL OVERHANG	POST SPACING
4'-6"	6"	3'-6"
4'-8" TO 5'-6"	7" TO 1'-0"	3'-6"
6'-0" & 6'-6"	1'-0" & 1'-3"	4'-0"
7'-0" & 7'-6"	1'-3" & 1'-6"	4'-0"
8'-0"	1'-6"	4'-0"
8'-6"	1'-8"	5'-0"
9'-0"	1'-10"	5'-4"
9'-6"	1'-11"	5'-8"
10'-0"	2'-0"	6'-0"
10'-6"	2'-0"	6'-6"
11'-0", 11'-6", 12'-0"	2'-0", 2'-3", 2'-6"	7'-0"
12'-6"	2'-6"	7'-6"
13'-0"	2'-6"	8'-0"
13'-6", 14'-6"	2'-6" & 3'-0"	8'-0"
14'-0", 15'-0"	2'-6" & 3'-0"	9'-0"
15'-6", 16'-0"	3'-0" & 3'-3"	9'-6"
16'-6"	3'-3"	10'-0"
17'-0", 17'-6"	3'-3" & 3'-6"	10'-0"
18'-0", 18'-6"	3'-6" & 3'-9"	11'-0"
19'-0"	3'-9"	11'-6"
19'-6", 20'-0"	3'-9" & 4'-0"	12'-0"
20'-6", 21'-0"	4'-0" & 4'-3"	12'-6"
21'-6"	4'-3"	13'-0"
22'-0", 22'-6"	4'-3" & 4'-6"	13'-6"
23'-0"	4'-6"	14'-0"
23'-6", 24'-0"	4'-6" & 4'-9"	14'-6"



POST SIZE	"E" POST EMBEDMENT
4" x 4"	3'-5"
4" x 6"	4'-5"
6" x 6"	5'-0"
6" x 8"	6'-0"



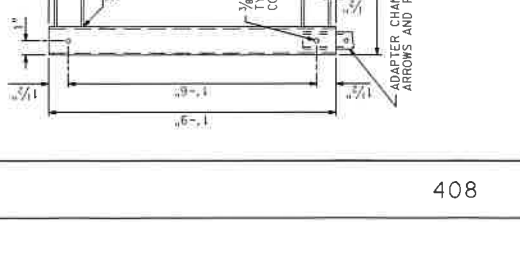
- NOTES:**
1. Place long dimension of post cross section normal to sign axis.
  2. See Section C-C.
  3. Balanced single post installations of unframed single sheet aluminum signs shall be installed on unframed single sheet aluminum signs and a combination of black spaces and back braces. Back braces shall be in depth and 2'-10" or more in width. Sign panels less than 1'-6" in depth and 2'-10" or more in width shall have back braces only.
  4. For post size see sign layout, format or quantity sheets.
  5. Balanced single post installations of Laminated Panel and Framed Single sheet panel signs require back braces when 2'-10" or more in length.
  6. Breakaway feature for single post installation shall be the same as the Breakaway feature shown for the two post installation.
  7. Tolerance for diameter of drilled holes in breakaway feature is  $\pm 1/8$ ".
  8. Drill hole layout is dependent on type of panel.
  9.  $3/8$ "  $\phi$  for single sheet aluminum panel signs.
  10.  $3/8$ "  $\phi$  for laminated panel signs or framed single sheet aluminum panel signs.



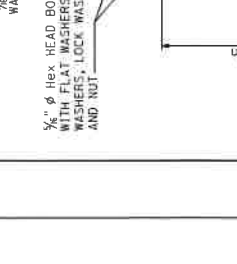
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ROADSIDE SIGNS**  
**WOOD POST**  
**TYPICAL INSTALLATION**  
**DETAILS No. 2**  
 NO SCALE

**RS2**

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# CA FTBL Dumont Dunes - Highway Encroachment Permit

## Summary

<b>SCH Number</b>	2021110177
<b>Public Agency</b>	California Department of Transportation, District 9 (DOT)
<b>Document Title</b>	CA FTBL Dumont Dunes - Highway Encroachment Permit
<b>Document Type</b>	NOE - Notice of Exemption
<b>Received</b>	11/10/2021
<b>Posted</b>	11/10/2021
<b>Document Description</b>	FHWA, in coordination with BLM, have requested a state highway encroachment permit. The proposed work will rehabilitate roadway pavement at the State Highway (SR) 127 intersections of Dumont Dunes Access Rd and Little Dumont Dunes Access Rd.

## Contact Information

<b>Name</b>	Benjamin Downard
<b>Agency Name</b>	Caltrans District 9
<b>Contact Types</b>	Lead/Public Agency
<b>Address</b>	500 S. Main St. Bishop, CA 93514
<b>Phone</b>	(760) 874-8319
<b>Email</b>	ben.downard@dot.ca.gov

## Location

<b>Counties</b>	San Bernardino
<b>Regions</b>	Countywide, Southern California
<b>Cross Streets</b>	Intersections of State Route (SR) 127, Dumont Dunes Access Rd and Little Dumont Dunes Access Rd
<b>State Highways</b>	State Route 127
<b>Other Location Info</b>	State Highway 127 Post Miles 30.81 and 33.83

## Notice of Exemption

<b>Exempt Status</b>	Categorical Exemption
<b>Type, Section or Code</b>	15301. Class 1(c)
<b>Reasons for Exemption</b>	After a review of the proposed permit work for SR-127 it has been determined that no known environmental resources will be impacted in Caltrans' right-of-way. In addition to this FHWA has prepared a NEPA CE and entered into an MOA with BLM (land owner) that includes environmental avoidance measures.
<b>County Clerk</b>	San Bernardino

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION  
**STANDARD ENCROACHMENT PERMIT APPLICATION**

TR-0100 (REV 12/2018)

Page 1 of 4

Complete ALL fields, write "N/A" if not applicable. Type or print clearly.

This application is not complete until all requirements have been approved.

Permission is requested to encroach on the State Highway right-of-way as follows:

1. COUNTY San Bernardino		2. ROUTE 127	3. POST MILE 30.81 and 33.83
4. ADDRESS OR STREET NAME N/A		5. CITY Baker, CA.	
6. CROSS STREET (Distance and direction from project site) 25' W of Dumont Dunes Rd jct., & 3.05 Miles S, at Little Dumont Dunes Rd jct.			DATE OF SIMPLEX STAMP 10/14/2021
7. WORK TO BE PERFORMED BY <input type="checkbox"/> APPLICANT <input checked="" type="checkbox"/> CONTRACTOR		8. IS THIS APPLICATION FOR THE CONTRACTOR'S (DOUBLE) PERMIT? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES. If "YES", provide the Parent Permit Number	
9. ESTIMATE START DATE 05/02/2022		10. ESTIMATED COMPLETION DATE 08/05/2022	
11. ESTIMATED NUMBER OF WORKING DAYS WITHIN STATE HIGHWAY RIGHT-OF-WAY 65			
12. ESTIMATED CONSTRUCTION COSTS WITHIN STATE HIGHWAY RIGHT-OF-WAY \$200,000			
13. HAS THE PROJECT BEEN REVIEWED BY ANOTHER CALTRANS BRANCH? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES. If "YES", which branch?			
14. FUNDING SOURCE(S) <input checked="" type="checkbox"/> FEDERAL <input type="checkbox"/> STATE <input type="checkbox"/> LOCAL <input type="checkbox"/> PRIVATE <input type="checkbox"/> SB 1 (ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017)			
15. CALTRANS PROJECT CODE (ID) N/A		16. APPLICANT'S REFERENCE / UTILITY WORK ORDER NUMBER N/A	

17. DESCRIBE WORK TO BE DONE WITHIN STATE HIGHWAY RIGHT-OF-WAY (in 20 lines or less)

Attach 6 complete sets of plans (folded to 8.5" x 11") and any applicable specifications, calculations, maps, traffic control plans, etc.

At Dumont Dunes Road intersection (MP 33.83), there will be full-depth reconstruction and re-paving, using asphalt concrete pavement, of the road approach, starting at the edge of pavement of Highway 127. There will also be stop bar installation and white fog line pavement marking. See Sheet D2 of the attached project plans for more details of the proposed work in this area.

At Little Dumont Dunes Road intersection (MP 30.81), similar re-construction and re-paving work (refer again to Sheet D2) will occur. Pavement marking will also include white fog line and double yellow pavement marking on Little Dumont Dunes Road.

18 (a). PORTION OF STATE HIGHWAY RIGHT-OF-WAY WHERE WORK IS BEING PROPOSED (check all that apply)

☒ Traffic lane ☒ Shoulder ☐ Sidewalk ☐ Median ☒ At or near an intersection ☐ Mobile work  
☐ Outside of the shoulder, \_\_\_\_\_ feet from edge of pavement ☐ Other \_\_\_\_\_

18 (b). PROPOSED TRAFFIC CONTROL PLANS AND METHOD

☐ No traffic control needed ☐ State Standard Plans (T-Sheets) # \_\_\_\_\_

☒ Project specific Traffic Control Plans included ☒ To be submitted by contractor

TRACKING NO.  
 0921-NRP-0225

19. EXCAVATION	MAX. DEPTH (in) 11	MIN. DEPTH (in) 4.5	AVG. WIDTH (in) 44	LENGTH (ft) 44	SURFACE TYPE (e.g. Asphalt, concrete, soil, etc.) Asphalt
20. PIPES	PRODUCT BEING TRANSPORTED N/A		CARRIER PIPE DIAMETER _____ (in.) MATERIAL _____		CASING PIPE DIAMETER _____ (in.) MATERIAL _____
PROPOSED INSTALLATION METHOD (e.g. HDD, Bore & Jack, Open Cut, etc.) N/A					VOLTAGE / PSIG N/A

DOES THE PROPOSED PROJECT INVOLVE THE REPLACEMENT AND/OR ABANDONMENT OF AN EXISTING FACILITY?

☒ NO ☐ YES. If "YES", provide a description

21. IS A CITY, COUNTY OR OTHER PUBLIC AGENCY INVOLVED IN THE APPROVAL OF THIS PROJECT?

☐ YES (if "YES", check the type of project AND attach the environmental documentation and conditions of approval)

☐ COMMERCIAL DEVELOPMENT ☐ BUILDING ☐ GRADING ☐ OTHER \_\_\_\_\_

☐ CATEGORICALLY EXEMPT ☐ NEGATIVE DECLARATION ☐ ENVIRONMENTAL IMPACT REPORT ☐ OTHER \_\_\_\_\_

☒ NO (if "NO", check the category below which best describes the project AND answer questions A-K)

☒ DRIVEWAY OR ROAD APPROACH, RECONSTRUCTION,  
 MAINTENANCE OR RESURFACING

☐ FENCE ☐ EROSION CONTROL

☐ PUBLIC UTILITY MODIFICATION, EXTENSIONS, HOOKUPS

☐ MAILBOX ☐ LANDSCAPING

☐ FLAGS, SIGNS, BANNERS, DECORATIONS, PARADES AND CELEBRATIONS ☐ OTHER \_\_\_\_\_

The following questions must be answered when a City, County or other public agency IS NOT involved in the approval of this project.

Your answers to these questions will assist Caltrans staff in identifying any physical, biological, social or economic resources that may be affected by your proposed project within State Highway right-of-way and to determine which type of environmental studies may be required to approve your application for an encroachment permit. It is the applicant's responsibility for the production of all required environmental documentation and supporting studies and in some cases this may be costly and time consuming. If possible, attach photographs of the location of the proposed project. Answer these questions to the best of your ability. Provide a description of any "YES" answers (type, name, number, etc.).

A. Will any existing vegetation and/or landscaping within State Highway right-of-way be disturbed?

No

B. Are there waterways (e.g. river, creek, pond, natural pool or dry streambed) adjacent to or within the limits of the proposed project?

No

C. Is the proposed project located within five miles of the coast line?

No

D. Will the proposed project generate construction noise levels greater than 86 decibels (dBA) (e.g. Jack-hammering, pile driving)?

No

E. Will the proposed project incorporate land from a public park, recreation area or wildlife refuge open to the public?

Yes

F. Are there any recreational trails or paths within the limits of the proposed project?

Yes

G. Will the proposed project impact any structures, buildings, rail lines or bridges within State Highway right-of-way?

No

H. Will the proposed project impact access to any businesses or residences?

No

I. Will the proposed project impact any existing public utilities or public services?

No

J. Will the proposed project impact any existing pedestrian facilities, such as sidewalks, crosswalks or overcrossings?

No

K. Will new lighting be constructed within or adjacent to State Highway right-of-way?

No

TRACKING NO.  
0921-NRP-0225

22. Will the proposed project cause a substantial change in the significance of a historical resource (45 years or older), or cultural resource? ☐ YES ☒ NO (if "YES", provide a description)
23. Will the proposed project be on an existing State Highway or street where the activity involves removal of a scenic resource? (e.g. A significant tree or stand of trees, a rock outcropping or a historic building) ☐ YES ☒ NO (if "YES", provide a description)
24. Is work being done on the applicant's property in addition to State Highway right-of-way? ☐ YES ☒ NO  
(If "YES", attach 6 complete sets of site and grading plans)
25. Will the proposed project require the disturbance of soil? ☐ YES ☒ NO  
If "YES", estimate the area of disturbed soil within State Highway right-of-way in acres: \_\_\_\_\_  
and estimate the area of disturbed soil outside State Highway right-of-way in acres: \_\_\_\_\_
26. Will the proposed project require dewatering? ☐ YES ☒ NO  
If "YES", estimate Total gallons AND gallons/month. \_\_\_\_\_ (Total gallons) AND \_\_\_\_\_ (gallons/month)  
SOURCE\*: ☐ STORMWATER ☐ NON-STORMWATER  
(\*See Caltrans SWMP for definition of non-storm water discharge: <http://www.dot.ca.gov/env/stormwater/> )
27. How will any storm water or ground water be disposed?  
☐ Storm Drain System ☐ Combined Sewer / Stormwater System ☐ Stormwater Retention Basin ☒ N/A  
☐ Other (explain) \_\_\_\_\_

TRACKING NO.  
0921-NRP-0225

**READ THE FOLLOWING CLAUSES PRIOR TO SIGNING THIS ENCROACHMENT PERMIT APPLICATION.**

The applicant's submission of this application to the California Department of Transportation constitutes the applicant's agreement and representation that the work or other activity contemplated by the encroachment permit application shall comply with all applicable standards, specifications, policies, requirements, conditions, and regulations of the California Department of Transportation, and the applicant understands the application may be denied if there is non-compliance with any of the above. An exception process exists and may result in approval of a non-compliant encroachment, in the discretion of the California Department of Transportation, but the exception process may require additional time to complete. The applicant understands and agrees all work or other activity contemplated by the encroachment permit application is subject to inspection and oversight by the California Department of Transportation. The applicant understands and agrees encroachment permit fees must still be paid if an application is withdrawn or denied. The applicant understands a denial may be appealed, in accordance with California Streets and Highways Code, Section 671.5, and the related regulations found in California Code of Regulations, Title 21, Division 2, Chapter 8, Article 2.

The applicant understands and agrees that immediately upon issuance of the encroachment permit the applicant is bound by, subject to, and must comply with the "Encroachment Permit General Provisions" (TR-0045), "Stormwater Special Provisions" (TR-0400) and any other applicable Special Provisions and Conditions of the encroachment permit. The "Encroachment Permit General Provisions" (TR-0045), and the Stormwater Special Provisions (TR-0400) are available at: [http://www.dot.ca.gov/trafficops/ep/docs/Appendix\\_K\\_\(WEB\).pdf](http://www.dot.ca.gov/trafficops/ep/docs/Appendix_K_(WEB).pdf). If a paper copy is needed of the "Encroachment Permit General Provisions" (TR-0045) and/or "Stormwater Special Provisions" (TR-0400), please contact the District Office of Encroachment Permits. Their contact information is available at: [http://www.dot.ca.gov/trafficops/ep/docs/Appendix\\_G\\_\(WEB\).pdf](http://www.dot.ca.gov/trafficops/ep/docs/Appendix_G_(WEB).pdf). The "Encroachment Permit General Provisions" (TR-0045) and any other applicable Special Provisions and Conditions will be provided as part of the encroachment permit. Information about Stormwater requirements is available at the Internet address: <http://www.dot.ca.gov/hq/construc/stormwater/>.

The applicant understands an encroachment permit may be denied, revoked, and/or a bond may be required, for non-payment of prior or present encroachment permit fees. An encroachment permit is not a property right and does not transfer with the property to a new owner. Each of the persons purporting to execute this application on behalf of the applicant and/or on behalf of the applicant's authorized agent or engineer represents and warrants such person has full and complete legal authority to do so and to thereby bind applicant to the terms and conditions herein and to the terms and/or conditions of the encroachment permit. Applicant understands and agrees this application may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Executed copies of this application and/or its counterparts may be reproduced and/or exchanged by copy machine, mailing, facsimile, or electronic means (such as e-mail), and such copies shall be deemed to be effective as originals.

28. NAME OF APPLICANT (Project or Property Owner or Organization) Federal Highway Administration, Central Federal Lands Highway Division, Attn.: Michael Daigler, Project Manager		
ADDRESS OF APPLICANT (Include City, State and Zip Code) 12300 W. Dakota Ave., Ste. 380, Lakewood, CO. 80228		
E-MAIL ADDRESS michael.daigler@dot.gov	PHONE NUMBER 720-963-3620	FAX NUMBER 720-963-3596
29. NAME OF AUTHORIZED AGENT / ENGINEER (A "Letter of Authorization" is required if different from #28) Michael Daigler, P.E.		IS A LETTER OF AUTHORIZATION ATTACHED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
ADDRESS OF AUTHORIZED AGENT / ENGINEER (Include City, State and Zip Code) (Same as #28)		
E-MAIL ADDRESS (Same as #28)	PHONE NUMBER (Same as #28)	FAX NUMBER (Same as #28)
30. NAME OF BILLING CONTACT (Same as #28 <input type="checkbox"/> Same as #29 <input type="checkbox"/> Eric Grosskreuz		
BILLING ADDRESS WHERE INVOICE(S) IS / ARE TO BE MAILED (Include City, State and Zip Code) 12300 W. Dakota Ave., Lakewood, CO. 80228		
E-MAIL ADDRESS eric.grosskreuz@dot.gov	PHONE NUMBER (720) 963-3417	FAX NUMBER (720) 963-3437

\* I hereby certify under penalty of perjury under the laws of the State of California that the information in this application and any document submitted with or in support of this application are true and correct to the best of my knowledge and belief, and that copies of any documents submitted with or in support of this application are true and correct copies of unaltered original documents. I further understand that if I have provided information that is false, intentionally incomplete, or misleading I may be charged with a crime and subjected to fine or imprisonment, or both fine and imprisonment. (Penal Code Section 72)

31. SIGNATURE OF APPLICANT OR AUTHORIZED AGENT* MICHAEL D DAIGLER <small>Digitally signed by MICHAEL D DAIGLER Date: 2021.08.30 10:07:36 -06'00'</small>	32. PRINT OR TYPE NAME Michael Daigler
33. TITLE Project Manager	34. DATE 8/30/2021

## INSTRUCTIONS

**Complete ALL fields, write "N/A" if not applicable. Type or print clearly.** All dimensions must be in U.S. Customary (English) units.

Print your application single sided and submit all of the required attachments (See Section VII A&B of the "Encroachment Permit Application Guide Booklet" found at: [http://www.dot.ca.gov/trafficops/ep/docs/EP\\_Application\\_Guide\\_Booklet.pdf](http://www.dot.ca.gov/trafficops/ep/docs/EP_Application_Guide_Booklet.pdf)).

1. County (e.g. Fresno, San Francisco, Los Angeles, etc.)
2. State Highway Route Number (e.g. I-5, SR-99, etc.)
3. Highway Postmile: (location of work, see <https://postmile.dot.ca.gov/>)  
If unable to determine, contact the appropriate District Encroachment Permits Office for assistance at: [http://www.dot.ca.gov/trafficops/ep/docs/Appendix\\_G\\_\(WEB\).pdf](http://www.dot.ca.gov/trafficops/ep/docs/Appendix_G_(WEB).pdf)
4. Address of project site (if the property has a physical address with a Number and Street/Road Name)
5. City (e.g. Sacramento, Redding, Irvine, etc.)
6. Distance and the direction from the nearest cross street to the project site (e.g. 500 ft. north of "C" Street).
7. Indicate whether the work will be performed by the applicant (your own forces) or by a contractor.
8. Indicate if you are applying for a "Contractor's (Double) Permit" and provide the "Parent Permit Number".
9. Estimated start date for the proposed work. (Allow a minimum of 60 calendar days from the submittal date of your application for processing)
10. Estimated completion date for the proposed work.
11. Estimated number of working days within State Highway right-of-way.
12. Estimated construction costs for all work to be done within State Highway right-of-way.
13. Has another Caltrans' branch seen or reviewed your project? Which branch? (e.g. Design, Project Management, Right-of-Way, Environmental, etc.)
14. Identify funding source(s) for the proposed work.
15. Caltrans' Project Code (ID) if this is a State project, capital project, or joint venture project.
16. Your company's reference number or utility work order number for this project.
17. Describe the proposed work to be done entirely. If applicable, attach six (6) complete sets of FOLDED plans (folded 8-½" X 11") and any applicable specifications, calculations, maps, etc.
18. (a) Identify portion(s) of State right-of-way where work will occur and (b) proposed traffic control plans to be used if any.
19. Maximum and minimum depth, average width, and length of the excavation area. Existing surface type (e.g. Asphalt, concrete, soil, etc.)
20. Product being transported (e.g. water, natural gas, etc.)  
Carrier pipe, diameter (inches) and material (e.g. Steel, HDPE, etc.)  
Casing pipe (if any), diameter and material Proposed installation method, Voltage of electrical current or pressure of liquid or gas.
- Replacement and/or abandonment of an existing facility (e.g. Abandoning pipe and filling it with two-sack slurry cement)
21. Check "YES", if you are getting a permit or approval from another agency (City, County, etc.), and an environmental determination has been made. Then check the Categorically Exempt, Negative Declaration, Environmental Impact Report box or Other if one has been prepared. Attach a copy of the approved document and a copy of the Notice of Determination. Skip questions A-K.  
  
If you checked "NO", check the box of the appropriate type of work to be done, or check "other" and fill in the type of work to be done. Also answer questions A-K.
22. A Historical Resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that has historical or archaeological significance, or significance in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.
23. In this context a Scenic Resource includes, but is not limited to, trees that display outstanding features of form or age; unique, massive rock formations; historic buildings that are rare examples of their period, style, design, or which have special architectural features and details of importance.
24. Is there any work being done on the applicant's property?
25. Indicate if the proposed project will require the disturbance of soil. If "YES," estimate the area within AND outside of State Highway right-of-way in acres.
26. Indicate if the proposed project will require dewatering. If "YES," estimate volume in total gallons AND gallons per month. Also indicate the source: Stormwater or Non-Stormwater (see Caltrans Stormwater Management Plan for definitions of non-stormwater discharge at: <http://www.dot.ca.gov/hq/env/stormwater/>).
27. Indicate how any stormwater or ground water will be disposed of from or near the limits of the proposed project.
28. Name of the applicant or organization applying for the permit. List the mailing address, e-mail address, phone and fax numbers.
29. Name of the authorized agent or engineer acting on behalf of the applicant or organization. Attach a letter of authorization signed by the applicant or organization. List the mailing address, e-mail address, phone and fax numbers.
30. Name of the billing contact. List the mailing address where invoices are to be mailed, email address, phone and fax numbers.
31. Signature of the applicant or applicant's authorized agent.
32. Name of the applicant or applicant's authorized agent.
33. Title (owner, president, etc.) of the applicant or applicant's authorized agent.
34. Date of the signature.