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US-191 - Colorado River Bridge
Project No.: BHF-0191(27)129E

Noise Analysis
for
Bridge / Roadway
Reconstruction and Widening on
US-191, from 400 North in Moab City
to SR-279 (Potash Road)
in Grand County, Utah

Utah Department of Transportation
May 2006
Amended February 2007

Submitted by:

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1.0 INTRODUCTION

A noise analysis was undertaken to identify and evaluate the potential noise impacts of the proposed project. The analysis was amended in February 2007 to include potential noise impacts of the proposed project for two commercial business properties that were previously assumed to be acquired as part of the right-of-way. The first is Moab Desert Adventures (receptor 3A), located in between receptors 2 and 6 near the southern terminus of the project. The second is a commercial office building located at 550 North Main adjacent to receptor 13 (the North Main Shopping Center). For the purpose of this analysis, the four businesses located within the office building at 550 North Main are reflected as one commercial receptor. Additionally, the text in Table 5 in Chapter 11.6 regarding receptor 11 (Adventure Inn) was modified to identify the on-site residence within the Inn's office building. This hotel receptor (including the residence) is a Category B receptor site.

This analysis identifies the basic fundamentals of noise, noise sensitive areas contiguous to the project, impact criteria prescribed by Federal Regulations and the Utah Department of Transportation (UDOT), UDOT recommended analysis procedures specific to this project, and assumptions used for traffic data.

Additionally, it contains quantitative modeling results of the existing, design year No Build, and design year Build Alternative. A comparison of the predicted design year Build Alternative sound level environment is made to the existing and design year No Build environments and to the Federal Highway Administration (FHWA) and UDOT noise abatement criteria. Construction impacts are also described.

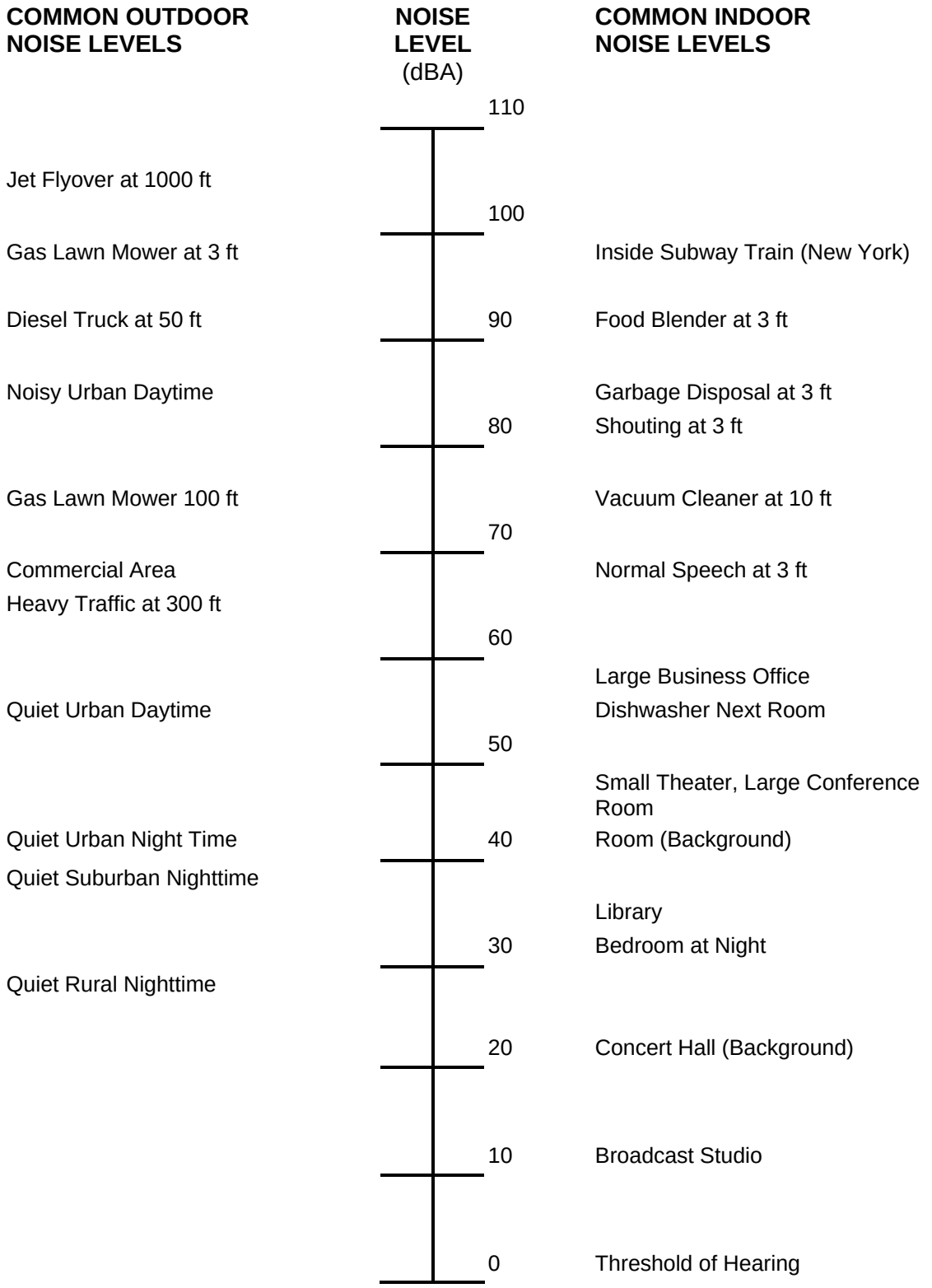
Finally, the analysis includes noise abatement consideration measures and those likely to be incorporated in the project, related coordination, and an overall summary. Noise issues for which no prudent solution is reasonably available are also discussed in detail. Under UDOT R930-3-5 Noise Abatement Conditions (3) (e), Noise abatement shall not be planned for Land Use Category C. However, the receptors must still be identified and analyzed according to UDOT policy.

2.0 FUNDAMENTALS OF SOUND AND NOISE

Sound is the vibration of air molecule waves similar to ripples on water. When these vibrations reach our ears, we hear what we call sound. Objects that move back and forth very rapidly, such as vocal chords when we speak produce these waves. The rate at which these objects move is called their frequency. Human ears can only hear sound waves with a frequency between approximately 20 cycles per second and 15,000 cycles per second. The word "noise" is typically defined as unwanted sound.

The loudness of sound is measured in units called decibels (dB). However, since the human ear does not hear sound waves of different frequencies at the same subjective loudness, an adjustment (weighting) of the high- and low-pitched sounds is made to approximate human

Figure 1: Common Outdoor and Indoor Noise Levels



Source: FHWA, Highway Noise Fundamentals, September, 1980.

perception. When such adjustments to the sound levels are made, they are called “A-weighted levels” and are labeled “dBA.” **Figure 1** illustrates some common A-weighted noise levels.

The dBA scale for measuring the intensity of sound is based on the logarithm or sound level pressure relative to a reference pressure. Logarithmic scales are based on powers of ten, not linear like a ruler. Generally, a 3 dBA change is the threshold on which a typical person can hear a change in the sound level environment, a 5 dBA change is considered noticeable and a 10 dBA change in the sound level is equivalent to a doubling (or halving) of the sound level.

Additionally, the level of highway traffic noise is never constant; therefore, it is necessary to use a statistical descriptor to describe the varying traffic noise levels. The equivalent continuous sound level (L_{eq}) (h) dBA is the statistical descriptor used in this report. The L_{eq} sound level is the steady A-weighted sound energy that would produce the same A-weighted sound energy over a stated period of time (1-hour (h), in this case) as a specified time-varying sound.

3.0 LOCAL AREA LAND USES

The land use immediately near the proposed project consists of a mixed use commercial, residential, and recreation. The density is heaviest in the southern part of the project area and rather sparse in the northern area.

4.0 NOISE IMPACT CRITERIA

Title 23 of the Code of Federal Regulations Part 772 (23 CFR 772) defines traffic noise impacts as “impacts which occur when predicted traffic noise levels approach or exceed Noise Abatement Criteria (NAC), or when the predicted traffic noise levels substantially exceed the existing noise levels.” **Table 1** shows the UDOT and FHWA Noise Abatement Criteria reflecting UDOT’s approach criteria levels. UDOT considers a traffic noise level approaching the NAC if the noise levels at a receptor come within 2 dBA of the NAC, or if the project increases noise levels by 10 dBA.

Potential substantial increase impacts at sensitive receptors were also analyzed. UDOT’s substantial increase criteria impacts are defined as a 10 dBA (or more) increase over the existing condition. For this project, a typical widening endeavor, there were no substantial increase criteria impacts as a result of the proposed improvements.

Table 1: Noise Abatement Approach Criteria*

HOURLY A-WEIGHTED SOUND LEVEL - DECIBELS (dBA)			
Activity Category	**L_{eq} (h) dBA***	**L_{10} (h) dBA***	**Description of Land Use Category**
A	55 (exterior)	58 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	65 (exterior)	68 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	70 (exterior)	73 (exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	-	-	Undeveloped lands.
E	50 (interior)	53 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

**Reflects UDOT's approach criteria levels since a noise impact occurs at this level. Either Leq(h) or L10(h) (but not both) may be used on a project.*

Note: Tabulated sound levels are threshold values used to define impact and where abatement will be considered. Noise abatement will be designed to achieve a substantial noise reduction - not necessarily achieving the noise abatement criteria.

Source: Michael Baker., Jr., Inc., 23 CFR 772, and UDOT.

5.0 NOISE LEVEL MEASUREMENTS

Sound level measurements were made at 8 representative sites using a Metrosonics dB-312 Sound Level Analyzer during peak traffic hours. The calibration of the Sound Level Analyzer was checked with its complementing Metrosonics Acoustical Calibrator before and after each measurement was taken. After samples of the noise level had been collected, the analyzer computed the L_{eq} noise level for the period during which the samples were collected. The field results are presented in **Table 2**.

Measurements were performed for this project under the direction of current UDOT and FHWA guidance. These field measurements were used to validate and calibrate the model to the predicted field conditions.

Table 2: Measured Sound Levels

Monitoring Site Number	Land Use	Location	Measured Sound Level (dBA)	Model Validated Sound Level (dBA)	Variance	Dominant Noise Source
1	Recreational	Lions Park	56	59	+3	US-191
2	Recreational	Riverside Oasis Campground	61	63	+2	US-191, campground maintenance
3	Recreational	Slickrock Campground & RV Park	58	61	+3	US-191
4	Residential	500 West, behind Denny's	60	57	-3	US-191, local traffic
5	Residential, Resort, Restaurant	Moab Springs Condos	62	61	-1	US-191
6	Residential, Commercial	North Cermak Road	55	52	-3	US-191
7	Residential	Mivida Drive	57	57	0	US-191, Local Traffic
8	Residential	Rosalie Court	59	59	0	US-191

Source: Michael Baker Jr., Inc., Nov., 2005

6.0 METHODOLOGY

Estimates of the exterior noise levels at sensitive receptors in the vicinity of the proposed project were based on the FHWA approved Traffic Noise Model (TNM), version 2.5. The modeling predicted the sound levels for the existing year, design year No Build, and design year Build Alternative. In making these estimates, the traffic volume, fleet mix, operating speed, tree shielding, shielding from buildings, terrain, ground zones, and site elevation were considered.

Category B receptors were analyzed as part of this project. These receptors typically include picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.

Typically, commercial and industrial sites (Category C receptors) are not considered sensitive noise sites. Typically, these establishments do not want to have their visibility blocked from the roadway for business purposes. As a result, proposed mitigation when only in the form of noise barriers, may be unlikely and typically undesired. Title 23 CFR 772.11(a) states that in determining and abating traffic noise impacts, primary consideration is to be given to exterior areas. Abatement will usually be necessary only where frequent human use occurs and a

lowered noise level would be of benefit. Additionally, under UDOT R930-3-5 Noise Abatement Conditions (3) (e), Noise abatement is not be planned for Land Use Categories C.

Additionally, where no bonafide exterior sites existed at various Category B or C sites, the Category E criteria were applied. Table 12 (page 117) in the FHWA Highway Noise Fundamentals Training Document identifies the representative outside to inside noise reduction for Category E receptors. For open window scenarios, it is listed as 20 dBA. For closed windows, it is listed as 30 dBA. Since existence or non-existence of windows at these locations, the temperature, the season, and / or personal preference for open / closed windows varies for each location, a conservative 25 dBA value was used as an average between the two suggested values.

Finally, estimates of the 65 and 70 dBA sound level contour were made for the design year Build Alternative for future planning purposes.

7.0 ASSUMPTIONS FOR TRAFFIC DATA

Traffic data was obtained from the traffic analysis conducted for the US-191 Colorado River Bridge Study, Project No. BRF-0191(23)128, dated October, 2004. Paragraph b, Section 772.17 of 23 CFR 772 states that, "in predicting noise levels and assessing noise impacts, traffic characteristics which will yield the worst hourly traffic noise impact on a regular basis for the design year shall be used." Since the level of highway traffic noise is normally related to the traffic volume, the traffic characteristics that yield the worst hourly traffic noise impact on a regular basis for the design year will be the peak hourly volume for the highest hour of the day. For planning purposes, the peak hour traffic volume was estimated to be 14% of the Average Daily Traffic (ADT).

8.0 EXISTING NOISE ENVIRONMENT

Approximately 70 receptor representing about 80 total receptors / dwelling units were modeled in the immediate vicinity of the project corridor. These included second and third row receptors that may potentially be affected by the proposed improvement. Of these 70 sites, approximately 20 are commercial businesses, eight are motels, five are campgrounds and / or recreational parks, one church, and the rest are residential dwelling units.

There are nine receptors that have sound levels that approach, equal, or exceed the UDOT criteria in the existing year. These include one single family residence (2 Rosalie Court), two motels (Days Inn and Adventure Inn) and six commercial businesses (Moab Desert Adventures, Office Building at 550 North, Cycle Shop, Maverick Shop, Poison Spider, and Century 21). **Table 3** shows the total number of receptors that approach, equal, or exceed the UDOT criteria. Appendix A summarizes the existing sound levels at each receptor.

9.0 DESIGN YEAR NO BUILD ALTERNATIVE ENVIRONMENT

There are ten receptors that have sound levels that approach, equal, or exceed the UDOT criteria in the design year No Build condition. These include two motels, two single family residences and six commercial businesses. In addition to the receptors impacted in the existing year, the single family residence at 3 Rosalie Court is also impacted in the design year No Build condition. On average, the increase over the existing condition is about 2 dBA (0-3 dBA range). **Table 3** shows the total number of receptors that approach, equal, or exceed the UDOT criteria. Appendix A summarizes the existing sound levels at each receptor. (Please note that these sound levels are rounded.)

10.0 DESIGN YEAR BUILD ALTERNATIVE ENVIRONMENT

There are 11 receptors that have sound levels that approach, equal, or exceed the UDOT criteria in the design year Build condition. These include three motels, two single family residences, and six commercial businesses. In addition to the receptors impacted in the design year no-build condition, the Hampton Inn is also impacted in the design year Build condition. **Table 3** shows the total number of receptors that approach, equal, or exceed the UDOT criteria. Appendix A summarizes the existing sound levels at each receptor. (Please note that the sound levels in Appendix A are rounded.)

The average sound level change is approximately 2 dBA (0-6 dBA range) over the No Build condition and approximately 4 dBA (0-8 range) over the existing year. These sound level changes are primarily the result of a combination of the following variables: minor alignment centerline shifts closer or farther away from noise sensitive sites, changes to the posted speed limit (depending on the section), the addition of through lane capacity, existing shielding, and the added reflective surface (additional lane, center turning lane, shoulders, bike trail, etc.). **Figure 2** shows the analyzed receptor sites in the project area.

Table 3: Receptors that Approach, Equal, or Exceed the NAC

NAC Category	Existing Year	Design Year 2030 No Build	Design Year 2030 Build*
B	3	4	5
C	6	6	6
E	0	0	0
Total	9	10	11

**FHWA / UDOT NAC impacts only. There are no predicted UDOT substantial increase criteria impacts.*
Source: Michael Baker Jr., Inc.

11.0 TRAFFIC NOISE ABATEMENT

Steps should be taken to ensure that reasonable and feasible abatement measures are incorporated into the plans and specifications. UDOT will typically not approve the environmental documentation and plans and specifications unless such measures are identified and incorporated to reduce or eliminate the noise impact on existing activities, developed lands, or undeveloped lands for which development is planned, designed, and programmed as of the date of environmental approval.

Typically, commercial and industrial sites (Category C receptors) are not considered sensitive noise sites. Though they were tabulated for total impacts, there were no bonafide exterior people activity area sites at these locations (parking lots do not count). Additionally, these establishments typically do not want to have their visibility blocked from the roadway for business purposes. As a result, proposed mitigation when in the form of noise barriers, may be unlikely and typically undesired. Title 23 CFR 772.11(a) also states that in determining and abating traffic noise impacts, primary consideration is to be given to exterior areas. Abatement will usually be necessary only where frequent human use occurs and a lowered noise level would be of benefit. As a result, Category C receptors were dismissed from further abatement consideration. And furthermore, under UDOT R930-3-5 Noise Abatement Conditions (3) (e), Noise abatement is not to be planned for Land Use Category C (commercial / industrial businesses operations).

The following noise abatement measures have been considered according to FHWA guidelines at the impacted sensitive receptor locations for Type I noise projects (projects that add capacity) to reduce highway-generated noise impacts. These include traffic management measures, alteration of horizontal and vertical alignments, acquisition of property rights for construction of sound walls, creation of buffer zones, sound insulation for public institutions, and construction of noise barriers or devices (including landscaping for aesthetic purposes) within the highway right-of-way.

11.1 TRAFFIC MANAGEMENT MEASURES

Traffic management in the form of speed reduction, detours, truck restrictions, and exclusive lane designations is not practical abatement for this project. Speed reduction is not considered effective because changes are already expected for both the design year no-build and build alternatives in various parts of the project area. Comparably, truck detours and restrictions are not reasonable because it is an important north-south arterial. As a result, it would not help to serve the need to move people, goods, and services in the area. Exclusive lane designations for trucks and buses are also not effective for this project because making every heavier / louder vehicle use the right lane exclusively would move this sound level generation closer to the sensitive receptors.

11.2 ALTERATION OF HORIZONTAL AND VERTICAL ALIGNMENTS

Modifications to the horizontal and vertical alignment would be bound by the engineering limitations required within the relative and reasonable right-of-way (existing and proposed) and the existing corridor that the project currently occupies.

Horizontal modifications to reduce sound levels at impacted locations would require large shifts in the alignment, potential changes to the super-elevation, and would require a realignment of the cross-streets for proper approach angles, taking even more property. In addition to the property acquisition, this would also require removing more buildings, which act as noise shielding for some residences in the study area that are farther removed from the immediate roadway. The topography in the project area is also a constraint because of the steep slopes.

Vertical alignment alteration was also not considered to be a feasible noise abatement measure. Depressing the roadway would also entail impacts similar to horizontal changes, such as property acquisition to maintain proper slopes and cross-street connections. There would also be probable variances with the utilities and water features. Elevating the roadway would only propagate the sound levels deeper into the residential areas and would reduce the effect of right-of-way shielding from existing trees or buildings.

11.3 ACQUISITION PROPERTY RIGHTS FOR BARRIER CONSTRUCTION

Much of the proposed project would be constructed in the existing right-of-way. Where additional land is required, it is likely to incorporate enough property to integrate the necessary sloping. As a result, no additional property for any proposed barrier construction is foreseen, if applicable. If this condition changes, then the mitigation analysis would be reviewed to see if it creates a situation where additional land is needed. Otherwise, it is anticipated that any planned reasonable and feasible barriers would be accommodated within the proposed right-of-way.

11.4 CREATION OF BUFFER ZONES

The project corridor immediately near US-191 is a mix of commercial, residential and recreational land uses. Where active commercial or non-residential building areas already exist, then a buffer is already present to shield sensitive sites farther away from US-191. Where

abutting residential or other sensitive areas exist, it is unlikely that commercial activities will be proposed in these areas and buffer zones cannot be proposed. For non-planned or non-permitted undeveloped land, it is suggested that commercial development be proposed in future land use zoning to create a buffer zone between US-191 and sensitive areas. Nonetheless, in an effort to help create a buffer zone for future planning purposes of undeveloped land, the worst-case 65 and 70 dBA contours for the build alternative were developed for the two sections of US-191 that are proposed to operate at different speeds.

Table 4 shows these distances. The distances are from the proposed roadway centerline and are a straight-line distance estimate for planning purposes only. They do not take into account sound level variations as a result of numerous local sound wave changing dynamics such as building shielding, terrain, tree zones, and ground zone changes (such as parking lots, for example). It does, however, incorporate the effects of the additional noise reflective pavement proposed from the construction of center turning lanes, shoulders, and bike paths, as applicable. Additionally, the distances are rounded to the nearest 10 feet for planning convenience purposes.

Table 4: Worst-Case 65 and 70 dBA Contour Distances (in feet)

Build Alternative	400 North to Colorado River Bridge	Colorado River Bridge to Potash Road
	Approximate distances to 65 dBA contour line / 70 dBA contour line*	
Year 2030	140 / 60	270 / 130

Notes:

** Distance measured from the proposed roadway centerline, rounded to the nearest ten feet, varies slightly based on typicals. This is a straight-line estimate for planning purposes only. It does not take into account sound level variations as a result of numerous local sound wave changing dynamics such as building shielding, terrain, tree zones, and ground zone changes. It does, however, incorporate the effects of the additional noise reflective pavement proposed from the construction of center turning lanes, shoulders, and bike paths, as applicable.*

Source: Michael Baker Jr., Inc.

11.5 SOUND INSULATION FOR PUBLIC INSTITUTIONS

There are zero (0) public institutions that meet this criteria. Therefore, no further analysis is required for this type of abatement.

11.6 NOISE BARRIERS

UDOT is committed to providing feasible and reasonable noise abatement as a result of highway traffic noise. In determining this feasibility and reasonableness, appropriate consideration shall be given to UDOT's Traffic Noise Abatement policy (UDOT 08A2-1; revised March 8, 2004) and the June 1995 Policy and Guidance issued by the Federal Highway Administration regarding, "Highway Traffic Noise Analysis and Abatement."

A key measure of feasibility states that a noise barrier shall reduce traffic noise levels generated on the facility by a minimum insertion loss of 5 dBA at the closest receptor(s). An insertion loss is defined as a decibel level reduction (loss) from an insertion of a barrier between the roadway and the sensitive receptors.

This condition was achieved at two of the impacted site areas (receptors 17 and 20, both single family homes). It was not achieved where cross-street and driveway access points had to be maintained. The primary reason is that proposed noise abatement structures would be constrained by the need to maintain access to these cross-streets and / or driveways. Subsequently, resulting 'gaps' in proposed barriers would render them ineffective (not feasible) in an effort to meet the minimum goal of 5 dBA. There would also be the need to maintain line-of-sight safety requirements (sight triangles) in these cases.

Based on the recent three-year cost index that UDOT uses to estimate noise barrier costs, the square foot outlay is estimated to be approximately $14 per square foot, not including ancillary costs such as right-of-way, landscaping, utilities, structure mounted barriers, etc. The UDOT cost limit per benefited receptor is approximately $25,000 for reasonableness. The two impacted feasible receptor sites did not meet UDOT's cost-reasonableness criteria.

The mitigation consideration assessments are discussed in **Table 5**. Additionally, areas that were deemed to not be feasible under UDOT policy are also discussed.

Table 5. Preliminary Noise Abatement Mitigation Summary

RECEPTORS	EVALUATION COMMENTS
1-Days Inn at pool	The motel has direct access to US-191. The exterior people activity is at the pool, which is ~35-40 feet from the edge of pavement. The pool area also abuts the motel driveway. Current peak hour sound levels are 66 dBA and the predicted design year No Build Alternative is 67 dBA as a result of the increased traffic volumes and the proposed posted speed change. With the design year Build Alternative, there is no change in the number of through lanes, posted speed or traffic volumes in front of this receptor. It is in the current four-lane section. Therefore, the sound levels are predicted to remain at 67 dBA. Nonetheless, driveway access would need to be maintained and a continuous noise barrier would restrict access to these receptors. Gaps in a noise barrier would satisfy the access requirements but the resulting non-continuous segments would not be sufficient to achieve the minimum feasible reduction of 5 dBA for the impacted receptor. There would also be safety line-of-sight requirements for the access point. Furthermore, as a commercial entity, it is not typical that any such establishment would desire to have its view blocked from the general public for business reasons.
5-Hampton Inn at pool	The motel has direct access to US-191. The exterior people activity is at the pool, which is ~70 feet from the edge of pavement. The pool area is also ~80 feet from the motel's driveway and is surrounded by the motel's internal circulation road. Current peak hour sound levels at this proposed motel are 63 dBA and the predicted design year No Build Alternative sound level is 64 dBA as a result of the increased traffic volumes and the proposed posted speed change. This receptor is in the existing four-lane to two-lane transition zone. With the design year Build Alternative, the northbound travelway is moved slightly closer to the motel, resulting in a predicted sound level of 65 dBA, a 1 dBA increase over the No Build Alternative. Nonetheless, driveway access would need to be maintained and a continuous noise barrier would restrict access to this site. A gap in the noise barrier would satisfy the access requirements but the resulting non-continuous segments would not be sufficient to achieve the minimum feasible reduction of 5 dBA for the impacted receptor. There would also be safety line-of-sight requirements for the access point. Furthermore, as a commercial entity, it is not typical that any such establishment would desire to have its view blocked from the general public for business reasons.
3A-Moab Desert Adventures 6-Cycle Shop 7-Maverick Shop 9-Poison Spider 10-Century 21	These five adjacent commercial businesses each have multi-access points to US-191 and the travel lanes are very close to the businesses. There are no exterior people activity areas at these sites (parking lots do not count). Therefore, if an exterior to interior conversion was made (a 25 dBA subtraction), then none of these receptors would be impacted according to the Category E interior approach criteria of 50 dBA. Current exterior peak hour sound levels are ~70-71 dBA and the predicted design year No Build Alternative sound levels increase by approximately one dBA. There is no change in the number of through lanes in front of these receptors since it is in the current four-lane section. These sound levels are predicted to have a predicted increase of 0-<1 dBA. Nonetheless, driveway access would need to be maintained and a continuous noise barrier would restrict access to these receptors. Gaps in a noise barrier would satisfy access requirements but the resulting non-continuous segments would not be sufficient to achieve the minimum feasible reduction of 5 dBA for the impacted receptor. There would also be safety line-of-sight requirements for the numerous access points. Furthermore, as commercial entities, it is not typical that any such establishments would desire to have their view blocked from the general public for business reasons. Additionally, under UDOT R930-3-5 Noise Abatement Conditions (3) (e), Noise abatement shall not be planned for Land Use Category C.

Table 5. Preliminary Noise Abatement Mitigation Summary (continued)

RECEPTORS	EVALUATION COMMENTS
11-Adventure Inn Moab Motel	The motel has direct access to US-191 and may be partially taken as part of the right-of-way requirements. There is no exterior people activity at this location, but there is an on-site residence located within the Inn's office building. Current peak hour sound levels are 70 dBA at the building's nearest location to US-191 and the predicted design year No Build Alternative is 71 dBA. (The rear building is not predicted to have a noise impact.) This receptor is at the northern end of the current four-lane to two-lane transition zone. The design year build alternative sound levels are predicted to remain at 71 dBA. The office location is unshielded, but the sound levels at the on-site residence area are shielded by the office and other hotel building. Existing sound levels for the residence were calculated to be 60 dBA, and the No Build and Build sound levels were predicted to be 61dBA. Nonetheless, if this property is not acquired, driveway access would need to be maintained and a continuous noise barrier would restrict access to these receptors. Gaps in a noise barrier would satisfy access requirements but the resulting non-continuous segments would not be sufficient to achieve the minimum, feasible reduction of 5 dBA for the impacted receptor. There would also be safety line-of-sight requirements for the access point. Furthermore, as a commercial entity, it is not typical any such establishment would desire to have its view blocked from the general public for business reasons.
13A Office Building at 550 North Main	The four commercial businesses currently within this single office building have direct access to US-191 and the travel lanes are very close to the building. There are no exterior people activity areas at these sites (parking lots are not considered an activity area). Therefore, if an exterior to interior conversion was made (a 25 dBA subtraction), then none of these receptors would be impacted according to the Category E interior approach criteria of 50 dBA. Current exterior peak hour sound levels are 70 dBA and the predicted design year No Build Alternative sound levels increase by approximately one dBA. This receptor is at the northern end of the current four-lane to two-lane transition zone. These sound levels are predicted to have an increase of 0-<1 dBA over the No-Build Alternative. Nonetheless, driveway access would need to be maintained and a continuous noise barrier would restrict access to this receptor site. Gaps in a noise barrier would satisfy access requirements but the resulting non-continuous segments would not be sufficient to achieve the minimum feasible reduction of 5 dBA for the impacted receptor. There would also be safety line-of-sight requirements for the numerous access points. Furthermore, as commercial entities, it is not typical that any such establishments would desire to have their view blocked from the general public for business reasons. Additionally, under UDOT R930-3-5 Noise Abatement Conditions (3) (e), Noise abatement shall not be planned for Land Use Category C.
17 & 20, Residences; 3 Rosalie Court, 2 Rosalie Court	These two residences are located at the end of the Rosalie Court cul-de-sac with no direct access to US-191 and their back or side yards abutting US-191. An initial eight-foot high and 800-foot long barrier was analyzed to cover flanking around the barrier. It was possible to achieve the minimum barrier insertion sound level reduction of 5 dBA for both sites (6 dBA and 8 dBA for Sites 17 and 20, respectively.). These two homes were the only ones able to get the minimum reduction because the others were farther away. The other non-impacted homes had predicted reductions ranging from 1-4 dBA. But at a total cost of ~$88,700, the cost per benefited receptor was $44,350, which is above UDOT's cost reasonableness value of $25,000. Shorter barrier lengths were investigated with the eight-foot height to bring the cost down and still meet the minimum reduction. (Lower barrier heights would not have achieved the minimum.) However, the shortest length needed to meet the minimum 5 dBA reduction for the two impacted homes was 500 feet. At a cost of ~$56,100, the cost per benefited receptor was $28,050, which is above UDOT's cost reasonableness policy criteria. Furthermore, the TNM Line of Sight analysis indicates that this barrier dimension would not mitigate for truck exhaust stack noise, though the barrier would still reduce the noise by the minimum 5 dBA by mitigating the tire and engine noise sources.

Source: Michael Baker Jr., Inc.

11.7 CONCLUSIONS

In accordance with UDOT's Traffic Noise Abatement policy (UDOT 08A2-1; revised March 8, 2004)), noise abatement walls are not proposed for this project for the following reasons. Generally:

- The minimum decibel reduction goal of 5 dBA can not be achieved at most impacted locations.
- Where the minimum 5 dBA reduction was achieved, the predicted costs were above the UDOT cost reasonableness criteria for benefited receptors.
- Direct access to driveways and cross-streets must be maintained and can not be restricted with noise barriers placed across these ingresses and egresses.
- Line-of-sight safety requirements must be maintained and can not be compromised for those vehicles that would be turning from the driveways and/or side streets onto US 191.

12.0 CONSTRUCTION NOISE ABATEMENT

The potential for temporary increases in the sound level environment because of construction activities is expected to occur at the studied receptor sites. Although temporary, there will be occurrences where construction noise is perceptible to the general public. This analysis is consistent with Federal Regulation 23 CFR 772 - Procedures for Abatement of Highway Traffic Noise and Construction Noise and Utah Code 72-6-111 and 112.

Generally, the control, timing, and phasing of construction noise will be governed by UDOT construction specifications. The project falls within a "noise sensitive zone" (the land enclosed within a 1,500 foot radius circle of any receptor) as defined by UDOT construction standard specification Section 01355 (Environmental Protection) Part 1.8 Noise and Vibration Control. This specification states that the contractor will be required to prohibit construction activity in a noise sensitive zone if the sound level within 10 feet of the nearest receptor exceeds 95 dBA in daytime (from 7 am to 9 pm) or 55 dBA in nighttime (from 9 pm to 7 am), as well as Sundays and State Holidays.

Construction noise levels would not be continuous for any given receptor but would be intermittent and vary by location. For example, a receptor may experience noise due to removal / excavation, drainage installations, and paving operations at different timeframes during the construction. Furthermore, these disruptions could occur while these activities are performed in a northbound direction, and then again for construction in the southbound direction. These individual disruptions should be for a limited period of time.

Table 6 shows the typical sound levels for construction equipment normally used in highway construction operation.

Table 6: Typical Construction Equipment Noise

Equipment	Typical Noise Level (L_{eq} dBA) 50 Feet from Source
Earth Moving	
Front Loader	85
Back Hoe	80
Dozer	85
Scraper	89
Grader	85
Truck	88
Paver	89
Scarifier	83
Shovel	82
Materials Handling	
Concrete Mixer	85
Concrete Pump	82
Crane, Mobile	83
Crane, Derrick	88
Stationary	
Pump	76
Generator	81
Air Compressor	81
Impact	
Pile Driver (Impact)	101
Pile Driver (Sonic)	96
Jackhammer	88
Rock Drill	98
Other	
Saw	76
Vibrator	76
Compactor	82
Pneumatic Tool	85
Roller	74

Source: EPA, Northeast Corridor Improvement Project and other measured data.

APPENDIX A

PREDICTED EXTERIOR SOUND LEVELS (dBA) EXISTING AND DESIGN YEAR CONDITIONS

Receptor # and Location	2005 Noise Level	2030 No Build Noise Levels	2030 Build Noise Levels	2030 Noise Level with Abatement	Reasonable and Feasible?
1-Days Inn at pool	66	67	67	N/A	N/A
2-Jeep Rental	68	69	69	N/A	N/A
3-A&B Auto	66	67	68	N/A	N/A
3A-Moab Desert Adventures	70	71	71	N/A	N/A
4-Expedition Shop	69	69	69	N/A	N/A
5-Hampton Inn at pool	63	64	65	N/A	N/A
6-Cycle Shop	70	71	71	N/A	N/A
7-Maverick Shop	71	72	72	N/A	N/A
8-Church of Christ	56	57	58	N/A	N/A
9-Poison Spider	70	71	71	N/A	N/A
10-Century 21	70	71	71	N/A	N/A
11-Adventure Inn Moab Motel	70	71	71	N/A	N/A
12-Hummer Tours	67	68	69	N/A	N/A
13-North Main Shopping Center	62	63	66	N/A	N/A
13A-Office Building at 550 North Main	70	71	71	N/A	N/A
14-Rock Shop	66	67	68	N/A	N/A
15-Residence; Cermak Drive	57	59	62	N/A	N/A
16-Residence; Cermak Drive	54	56	60	N/A	N/A
17-Residence; 3 Rosalie Court	64	66	67	62	No
18-Residence; 4 Rosalie Court	58	60	61	N/A	N/A
19-Residence; 5 Rosalie Court	56	59	61	N/A	N/A
20-Residence; 2 Rosalie Court	65	67	68	62	No
21-Residence; 1 Rosalie Court	58	61	63	N/A	N/A
22-Residence; 646 Mivida Drive	57	59	61	N/A	N/A
23-Residence; 654 Mivida Drive	57	60	62	N/A	N/A
24-Residence; Mivida Drive	55	58	60	N/A	N/A
25-Residence; Hobbs Street	57	60	61	N/A	N/A
26-Residence; Hobbs Street	57	59	61	N/A	N/A
27-Residence; Hobbs Street	58	60	62	N/A	N/A
28-Residence; Hobbs Street	58	61	62	N/A	N/A
29-Residence; Hobbs Street	58	60	62	N/A	N/A
30-Residence; Hobbs Street	58	60	61	N/A	N/A
31-Residence; Hobbs Street	58	60	60	N/A	N/A
32-Residence; Hobbs Street	55	58	59	N/A	N/A
33-Residence; Marcus Court	56	58	59	N/A	N/A
34-Residence; 350 Marcus Court	60	63	64	N/A	N/A
35-Residence; Marcus Court	59	62	63	N/A	N/A
36-Residence; Marcus Court	57	60	61	N/A	N/A
37-Residence; Marcus Court	56	58	60	N/A	N/A
38-Riverside Inn at pool	57	59	62	N/A	N/A
39-Super 8 Motel at pool	58	61	62	N/A	N/A
40-Denny's	65	68	68	N/A	N/A
41-Residence; Westwood Avenue	54	56	59	N/A	N/A
42-Residence; N 500 W	59	61	63	N/A	N/A

43-Black Oil Co.	58	60	62	N/A	N/A
44-Residence; US-191	60	62	64	N/A	N/A
45-Arthur Taylor House-Restaurant-Planned hotel	57	59	61	N/A	N/A
46-Moab Springs Dwelling Units; front	61	63	64	N/A	N/A
47-MSDU; front	55	57	58	N/A	N/A
48-MSDU; front	54	57	58	N/A	N/A
49-MSDU; second row	53	55	57	N/A	N/A
50-MSDU; second row	51	53	56	N/A	N/A
51-MSDU; second row	50	52	56	N/A	N/A
52-MSDU; second row	50	53	56	N/A	N/A
53-MSDU; second row	51	53	57	N/A	N/A
54-MSDU; second row	51	53	57	N/A	N/A
55-MSDU; second row	51	53	57	N/A	N/A
56-Red River Raft	62	64	65	N/A	N/A
57-Bucks Grillhouse	61	63	64	N/A	N/A
58-Slick Rock Campground & RV Park at pool	61	63	64	N/A	N/A
59-Butch Cassidy Waterpark	57	59	62	N/A	N/A
60-Holiday Inn Express	57	59	61	N/A	N/A
61-Aarchway Inn at pool	48	50	50	N/A	N/A
62-Moab Valley River Camp Park at pool/recreation area	57	60	61	N/A	N/A
63-Lions Park at pavillion	57	60	62	N/A	N/A
64-Canyonlands By Night Tours	56	58	61	N/A	N/A
65-Riverside Oasis Campground & RV Park	55	57	63	N/A	N/A
66-Motel 6 at pool	60	62	63	N/A	N/A
67-Bank-Credit Union	63	66	67	N/A	N/A
68-Anasazi Real Estate	63	65	67	N/A	N/A
69-Proposed Motel	57	59	61	N/A	N/A

Note1: Shaded areas indicate receptors that equal or exceed UDOT's approach criteria for either NAC B (65 dBA) or NAC C (70 dBA) categories. There are zero (0) predicted substantial increase criteria impacts.

Note2: Sound level values are rounded off.

N/A = Not Applicable for reasonableness and/or feasibility reasons such as access restrictions, line of sight (safety), additional right-of-way required, and/or cost per benefited receptor.

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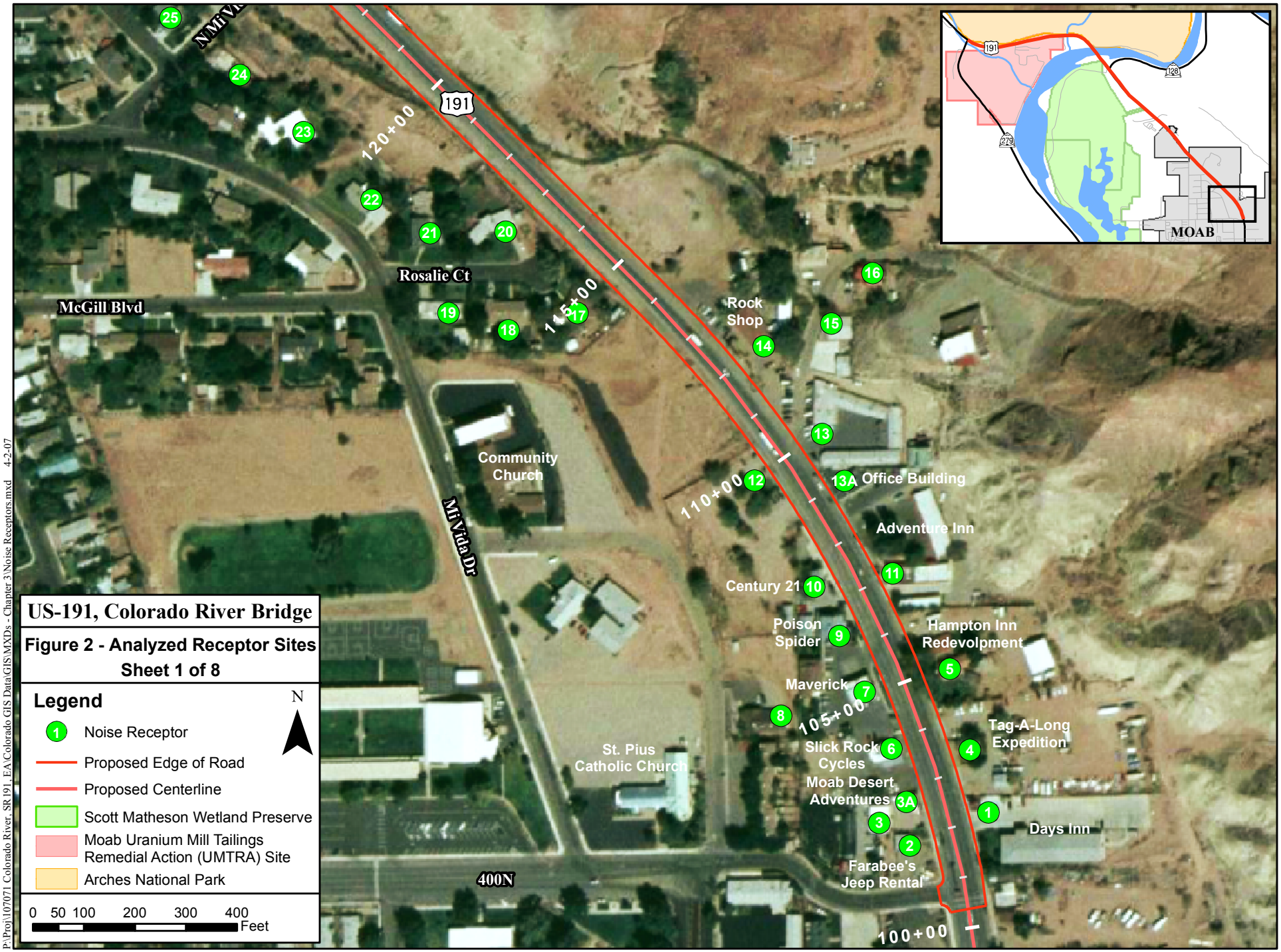
US-191, Colorado River Bridge
Figure 2 - Analyzed Receptor Sites
Sheet 1 of 8
Legend
N
Noise Receptor
Proposed Edge of Road
Proposed Centerline
Scott Matheson Wetland Preserve
Moab Uranium Mill Tailings Remedial Action (UMTRA) Site
Arches National Park
0 50 100 200 300 400 Feet
191
120+00
115+00
110+00
105+00
100+00
Rosalie Ct
McGill Blvd
Mi Vida Dr
400N
Community Church
Rock Shop
Office Building
Adventure Inn
Century 21
Poison Spider
Hampton Inn Redevelopment
Maverick
Slick Rock Cycles
St. Pius Catholic Church
Moab Desert Adventures
Tag-A-Long Expedition
Days Inn
Farabee's Jeep Rental
MOAB
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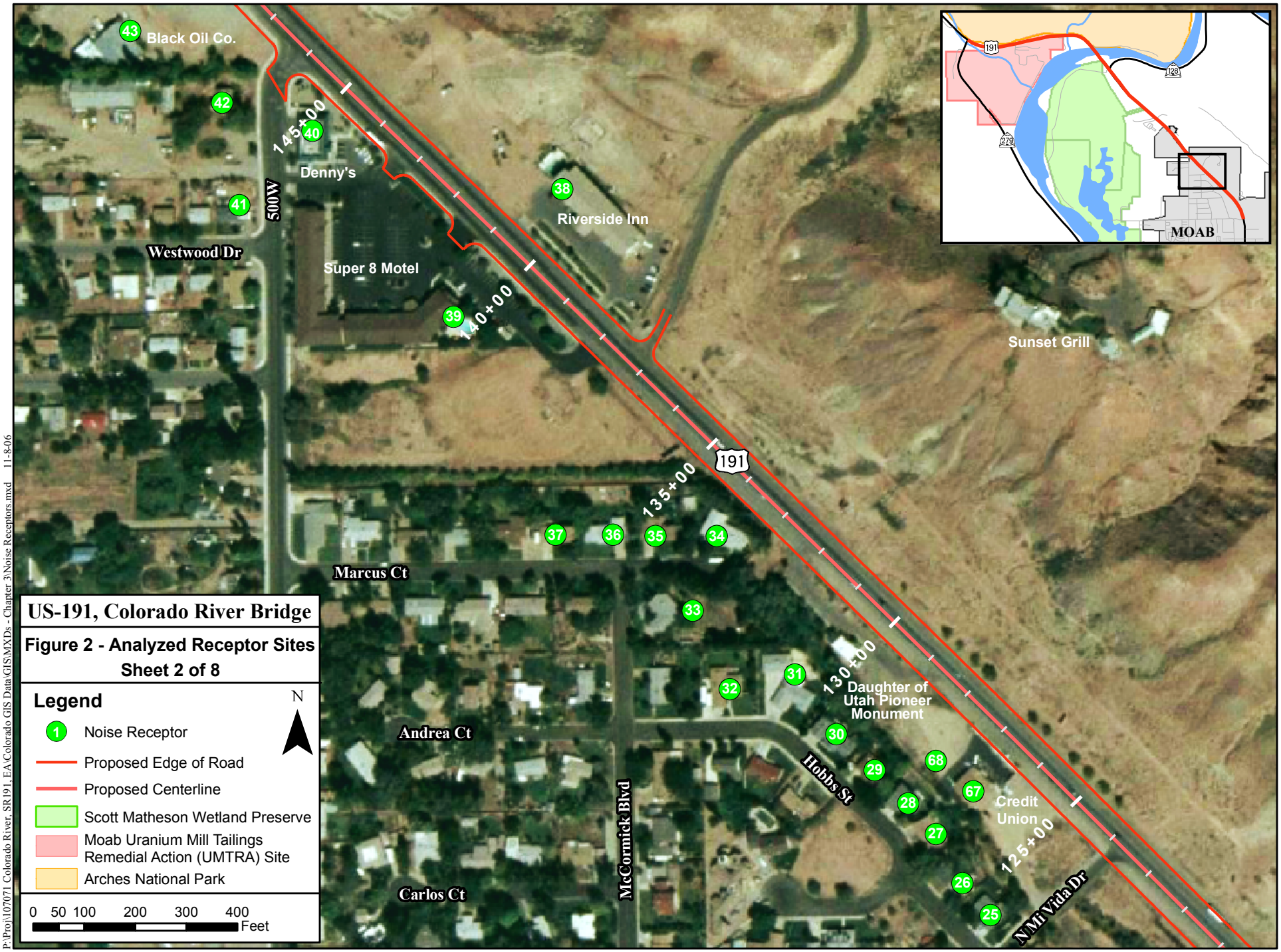

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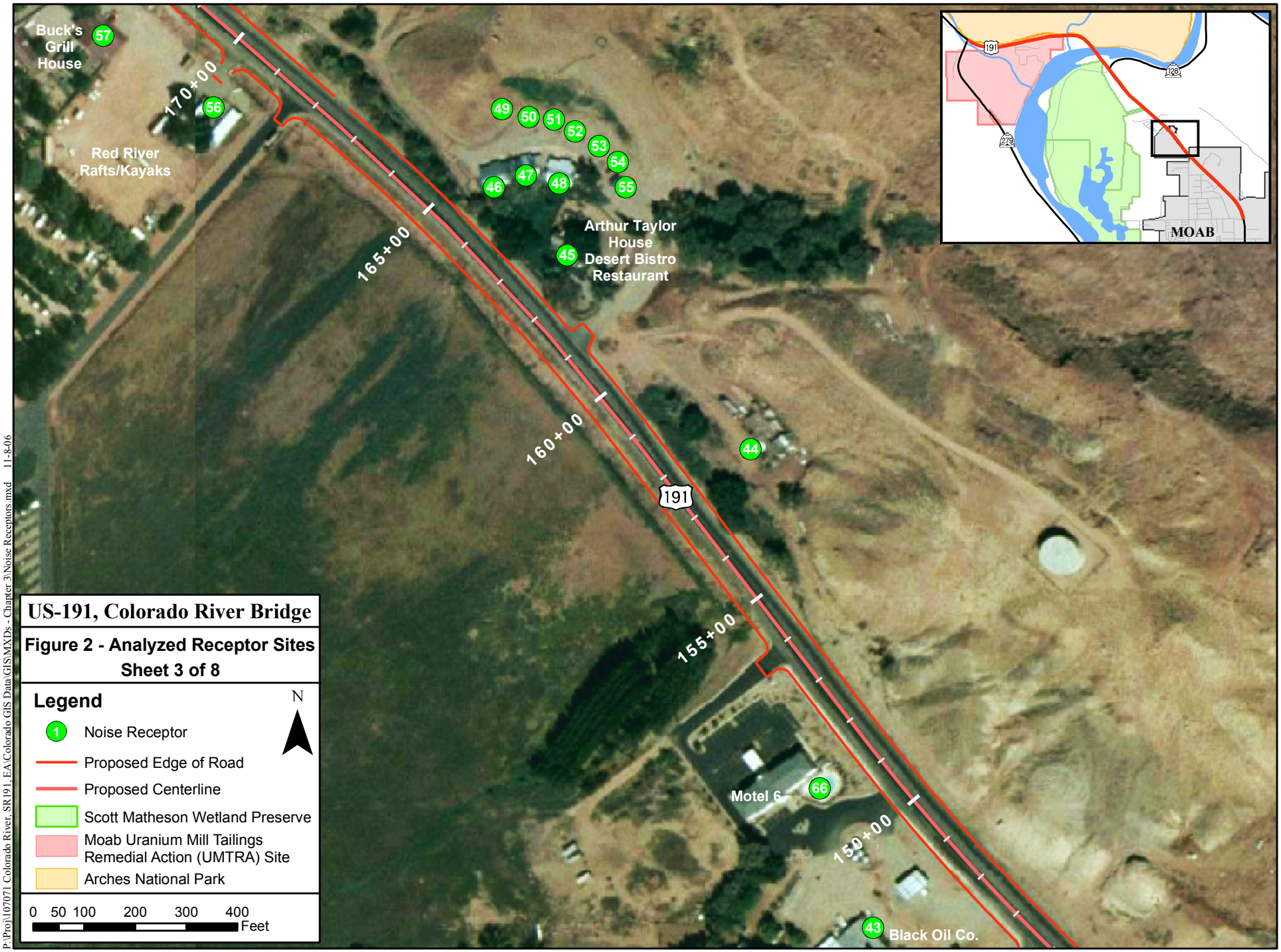

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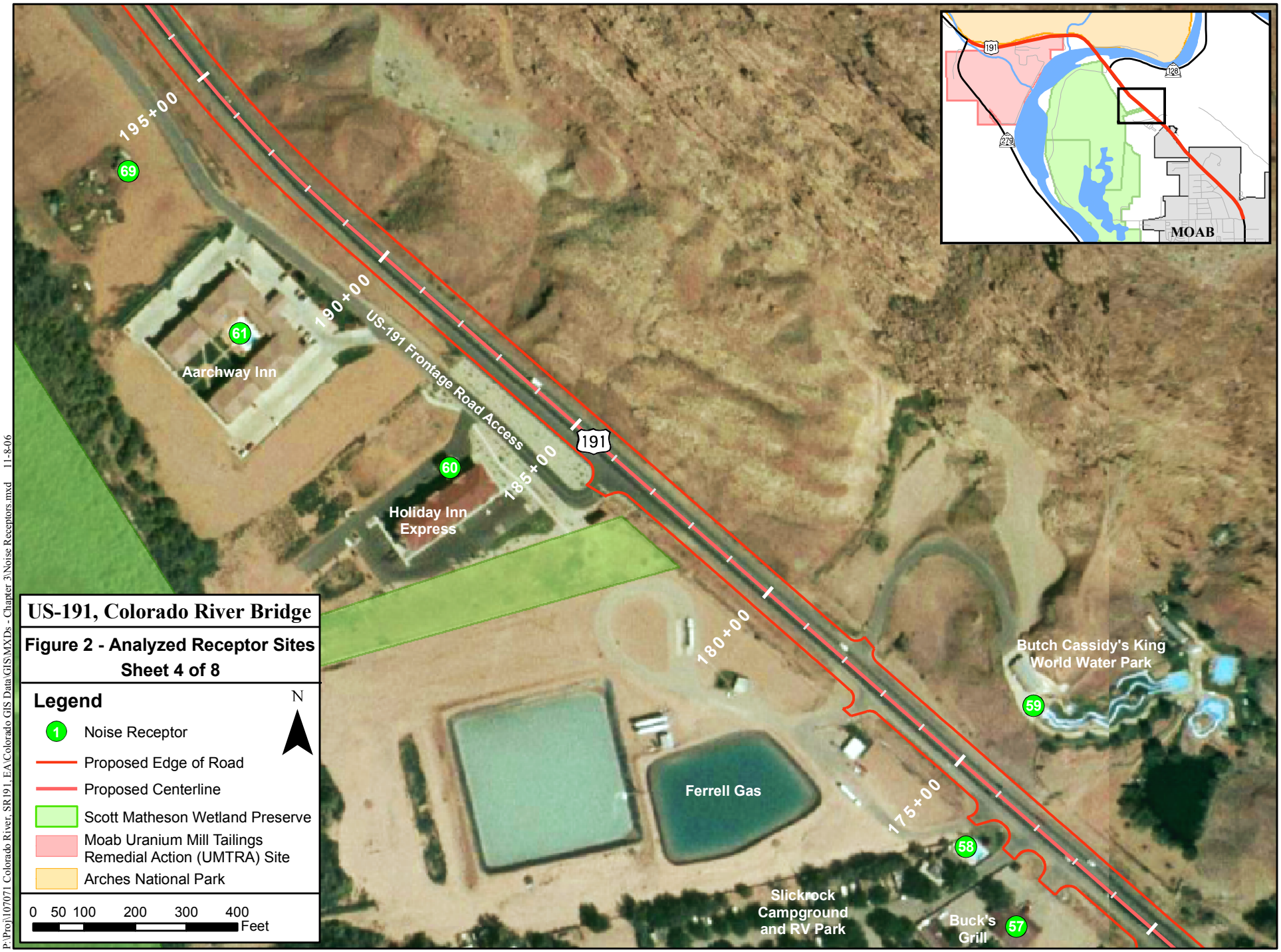
195+00
190+00
185+00
180+00
175+00
US-191 Frontage Road Access
191
69
61
60
59
58
57
Aarchway Inn
Holiday Inn Express
Butch Cassidy's King World Water Park
Ferrell Gas
Slickrock Campground and RV Park
Buck's Grill
MOAB
US-191, Colorado River Bridge
Figure 2 - Analyzed Receptor Sites
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Proposed Centerline
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N
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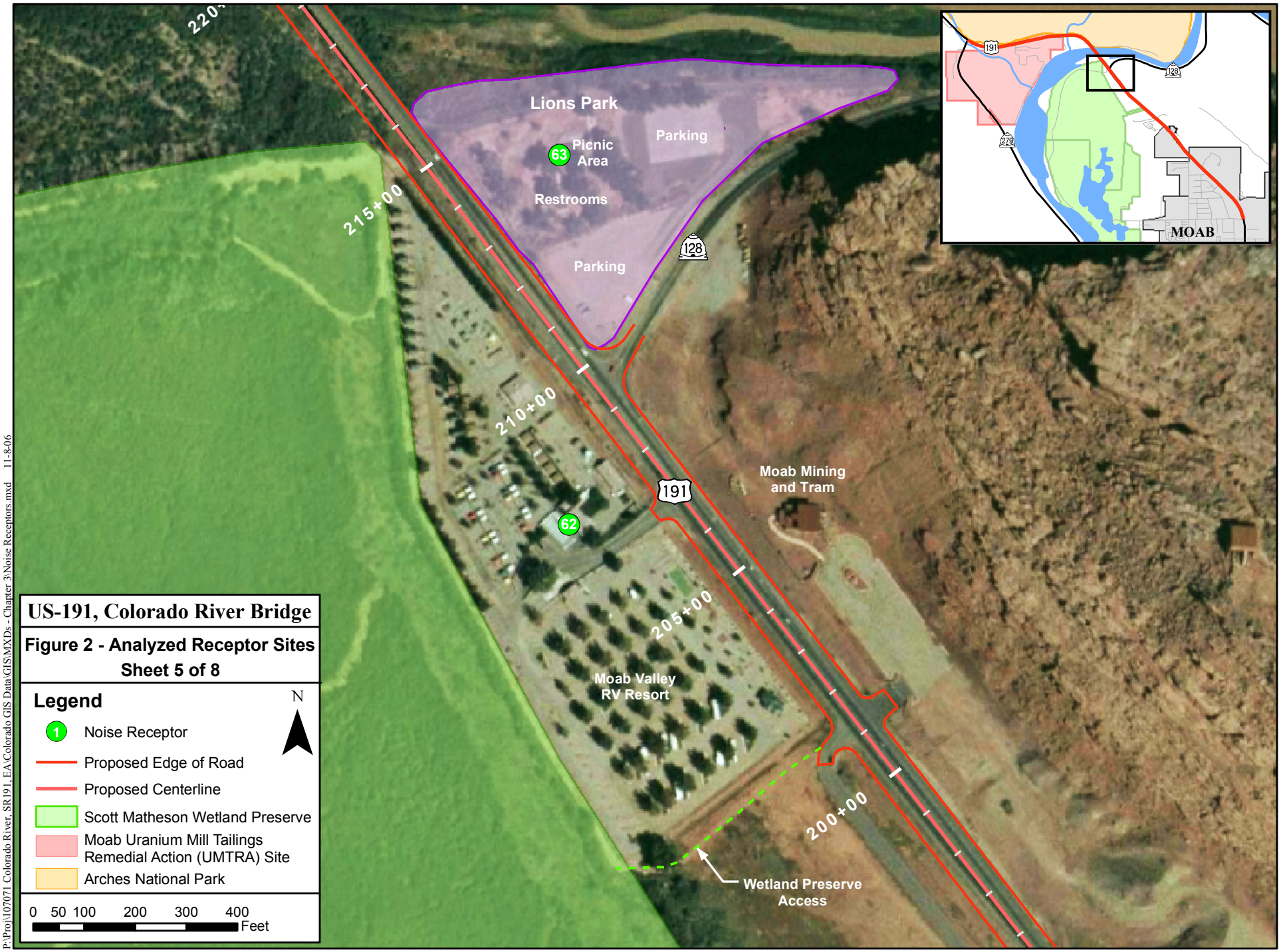

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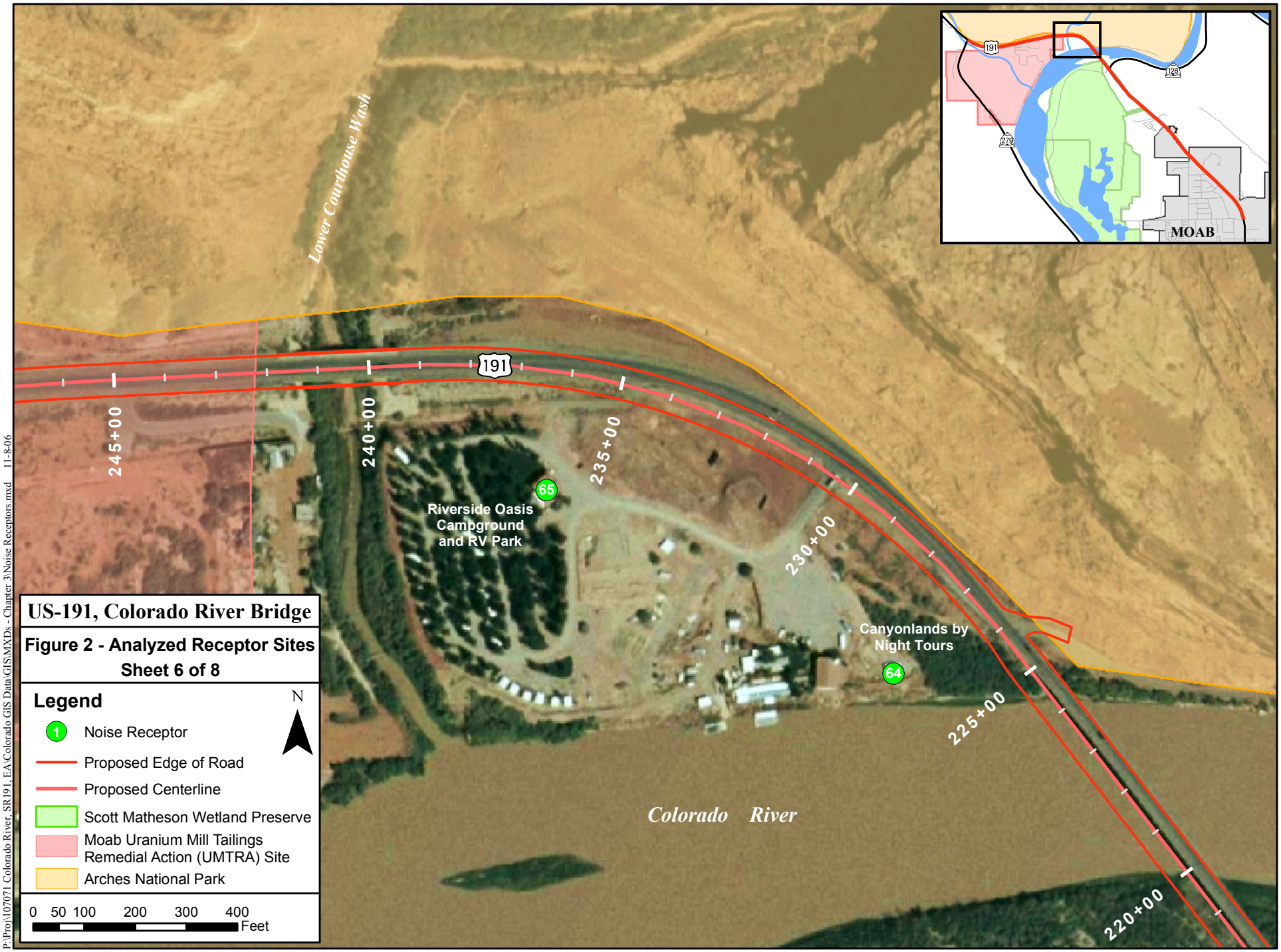
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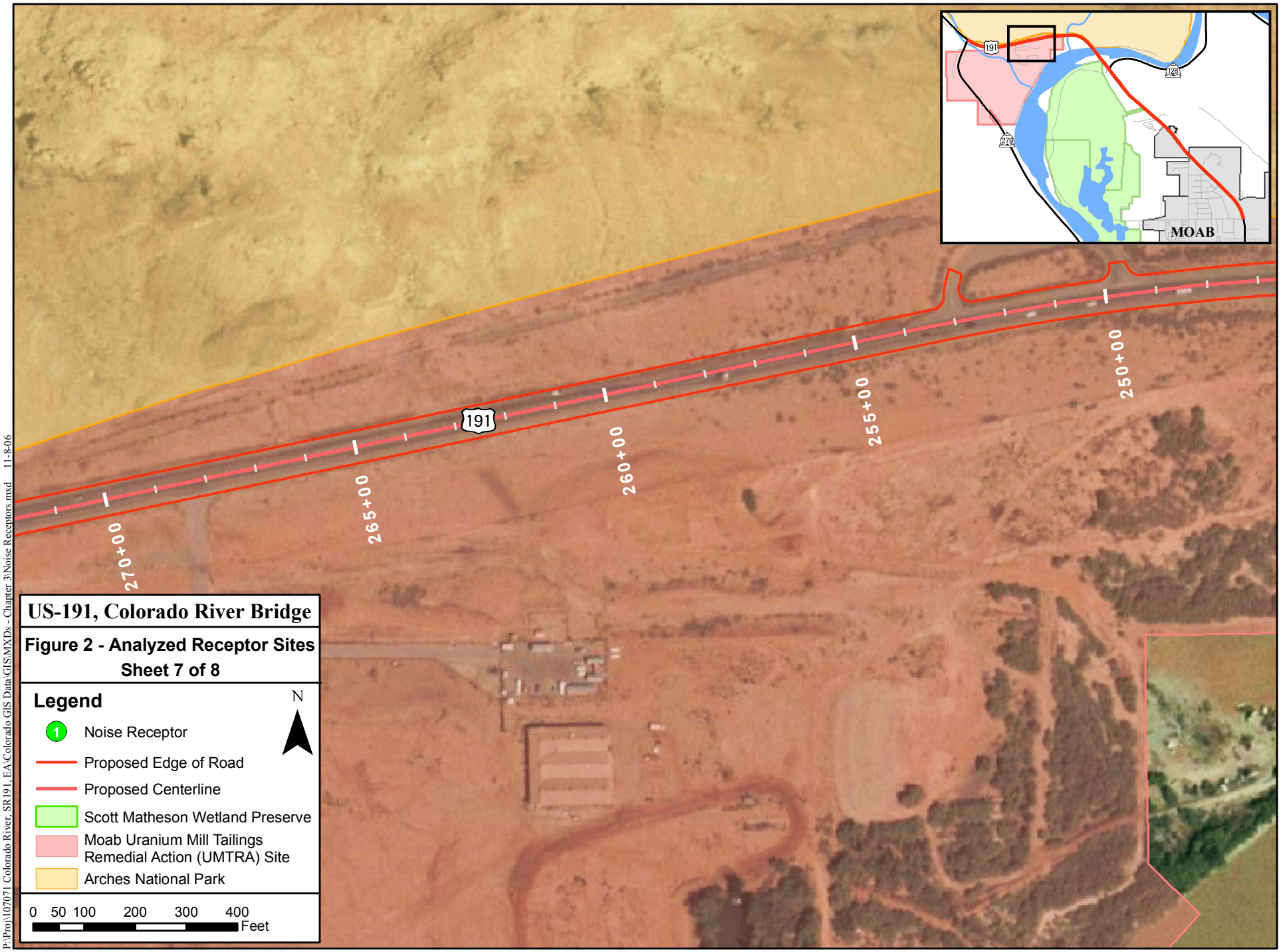
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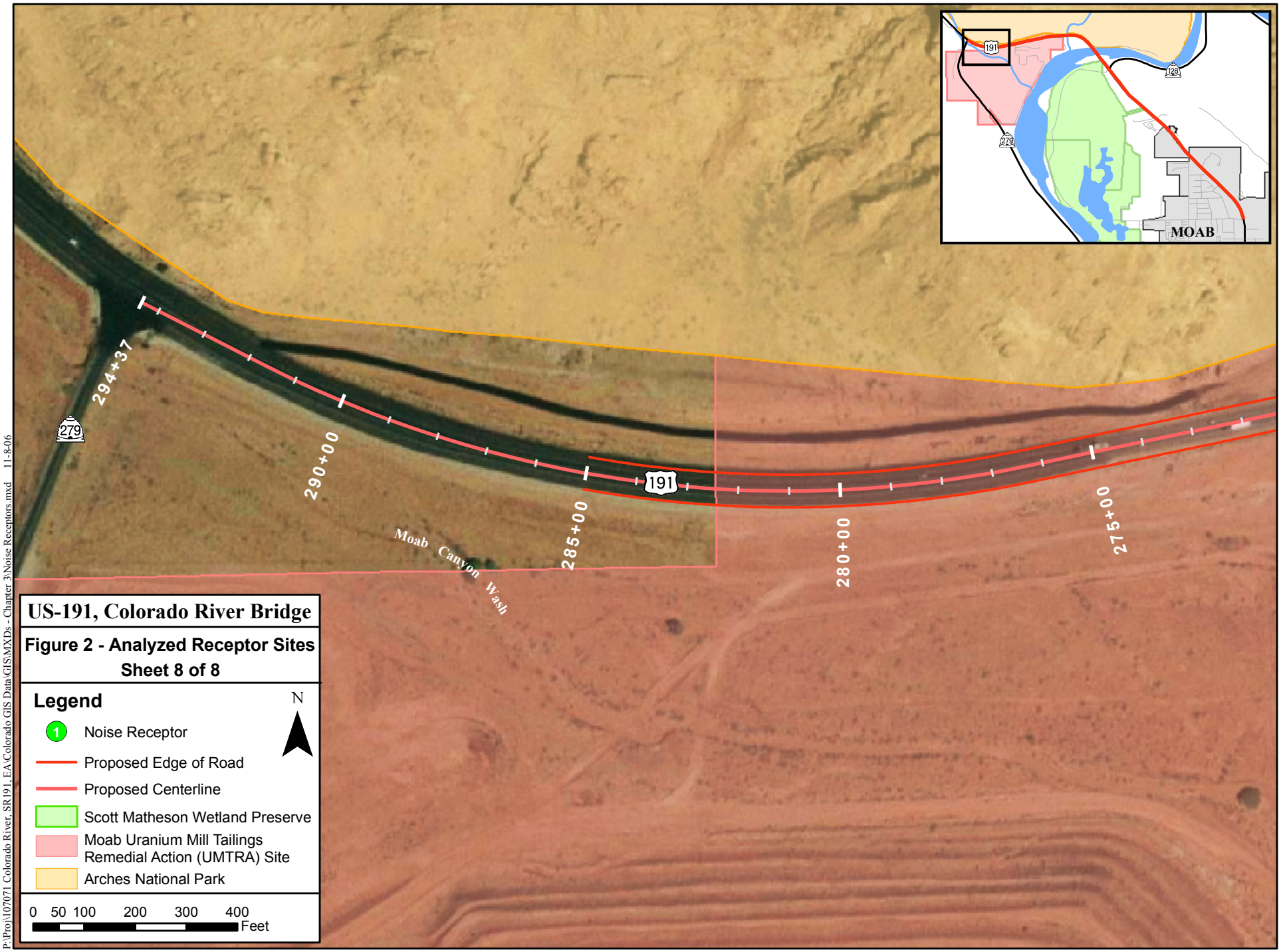
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United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

October 10, 2006

In Reply Refer To
FWS/R6
ES/UT
6-UT-06-F-028
F-0260

Mr. Carlos Machado, Program Manager
Federal Highway Administration, Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, Utah 84118-1880

Subject: Final Biological Opinion for US-191, Colorado River Bridge #C-285; Project No. BHF-019(27)129E

Dear Mr. Machado,

In accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), and the Interagency Cooperation Regulations (50 CFR 402), this transmits the Fish and Wildlife Service's biological opinion for impacts to federally listed endangered species for Federal Highway Administration's (FHWA) proposed action to replace the US-191 Hwy Bridge across the Colorado River and to widen the roadway crossing Lower Courthouse Wash in Grand County, Utah. Reference is made to your July 20, 2006, correspondence (received in our Utah Field office on July 24, 2006) which transmitted a biological assessment (BA) for our approval and requested initiation of formal consultation for the subject project. This biological opinion is based on information presented in the July 2006 biological assessment.

Based on the information provided in the biological assessment, I concur with your determination that the proposed action may affect, but will not likely adversely affect humpback chub (*Gila cypha*; endangered); bald eagle (*Haliaeetus leucocephalus*; threatened); Mexican spotted owl (*Strix occidentalis*; threatened); Southwestern willow flycatcher (*Empidonax trailii extimus*; endangered) and the candidate Western yellow-billed cuckoo (*Coccyzus americanus*). The bald eagle, southwestern willow flycatcher, and western yellow-billed cuckoo have been reported near the project area, but their presence is seasonal and likely infrequent due to their migratory nature. Potential habitat exists for the Mexican spotted owl west of the site, although not close to the site. Therefore, potential effects on these species would be considered discountable.

This document represents the Service's biological opinion of the effects of the action on the endangered Colorado pikeminnow *(Ptychocheilus lucius)*, bonytail (*Gila elegans*), and razorback

sucker (*Xyrauchen texanus*) and their designated critical habitat in accordance with sectin 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). A complete administrative record of this consultation is on file at this office.

This biological opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR 402.02. Instead, we have relied upon the statutory provisions of the Act to complete the following analysis with respect to critical habitat. Section 3(5)(A) of the Act defines critical habitat as: (i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features, (I) essential to the conservation of the species, and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary.

CONSULTATION HISTORY

On April 11, 2006, the Utah Department of Transportation (UDOT) held a meeting with the USFWS, BLM, and UDWR to determine the effect, if any, the US-191 Colorado River Bridge Project had on the federally listed and candidate species for Grand County, Utah. From this meeting, it was determined that the project, as proposed, had the potential to affect seven federally listed and one candidate species. These species were included for analysis in the BA, which was transmitted to the Service on July 20, 2006.

DESCRIPTION OF THE PROPOSED ACTION

Action Area

The action area for the proposed project is defined as the river and riparian corridor and the 100-year floodplain within the disturbance area for the project. The disturbance area is the river section where the uppermost limit of project construction activity occurs downstream to where any negative impacts are ameliorated. The US-191 bridge site is located at approximately river mile 65, i.e. 65 river miles upstream of the confluence of the Colorado and Green Rivers. For the purposes of this project analysis and given the level of construction activity, the anticipated downstream disturbance area is approximately 2 river miles.

Project Description

The proposed action includes construction along a 3.7-mile portion of US-191 from 400 North in Moab, Utah to SR-279 (Potash Road). The existing US-191 Colorado River Bridge does not meet current state and federal design standards and is eligible for replacement. Within the study area, US-191 is typically two lanes and transitions from a rural road on the northern end of the project to a city street on the southern end of the project. Additional capacity is needed on the bridge and through the study area to provide an acceptable level of service (LOS) for projected

traffic demands and to provide continuity between the four-lane sections of roadway on either end of the study area.

The first phase of the proposed project consists of replacing the Colorado River Bridge. The US-191 Colorado River Bridge would include four 12-foot travel lanes, a six-foot open median, eight-foot shoulders, plus a two-foot offset to the barrier. The bridge type would be determined during final design, but is expected to consist of a new steel or concrete girder bridge with four to seven spans. Phase 1 would also include associated roadway approaches, improving the SR-128 intersection, and upgrading the pedestrian bike path between the Colorado River Bridge and the Courthouse Wash Kiosk. The upgraded path would provide a paved 10-foot wide separated path for non-motorized pedestrian and bicycle traffic between the bridge and the Courthouse Wash Kiosk. However, the existing attached path on the Lower Courthouse Wash structure would not be widened in Phase 1.

Future phase(s) would require additional funding to widen the Lower Courthouse Wash structure and roadway between 400 North and Potash Road. The widened structure would provide four 12-foot lanes, a six-foot open median, and five-foot shoulders, as well as a 10-foot attached path for non-motorized bicycle and pedestrian traffic. Most widening would occur to the south; however, some widening to the north would be needed to accommodate the two-way attached path. The proposed roadway section between 400 North and the Colorado River Bridge would include four 12-foot lanes, a 12-foot median, and eight-foot shoulders. In this section, the proposed alignment would typically follow the centerline of the existing road. Since the design in this section includes curb and gutter, the elevation of the road varies from the existing condition where the minimum slope requirements could not be achieved otherwise. The roadway section between the Colorado River Bridge and Potash Road would provide four 12-foot lanes, a six-foot open median, and five-foot shoulders. The location and elevation of this roadway section would tie into the constraints associated with the existing Lower Courthouse Wash structure and the recently completed section of roadway just south of Potash Road. Shoulders would transition from eight to five feet between the Colorado River and Lower Courthouse Wash.

The proposed project would require the following primary construction methods: bridge replacement, widening, and removal construction; and roadway widening and reconstruction. Primary activities associated with each method are outlined in the following paragraphs.

Colorado River Bridge Replacement:

To accommodate traffic during construction and minimize impacts, the bridge would be constructed in two stages. The initial stage would be built west of the existing bridge and would include two through lanes of traffic, shoulders, and barriers. Once this work is completed, traffic would be moved to the completed section of the new structure and the second stage would remove the existing bridge to complete the widening. Two lanes of traffic would be maintained during peak traffic periods, but short-term closures may be needed to move equipment or set girders.

The bridge type would be determined during final design, but is expected to consist of a new steel or concrete girder bridge with four to seven spans. Abutment construction would include excavating for the placement of the new abutments, driving piles, forming and placing concrete for new abutments, and removing existing abutments. Construction of the new piers could include drilling circular columns into bedrock. In the deep water, this would require the contractor to mobilize a drill rig mounted on a barge. The contractor would drive a steel casing to bedrock, drill into bedrock from inside the casing, place a reinforcing cage inside the casing, and then place concrete in the casing. The steel casing could be designed to be removed or to remain in place.

Another option would be to drive sheet piling and create a cofferdam in the river areas. This would include placing a mud slab, driving piling or drilling circular shafts, and dewatering. The steel sheet piling would be removed after construction is completed. Either barge mounted cranes or cranes in the cofferdams would be used to install the spans. In order to construct the new piers, abutments, or spans on the river bank the contractor would need to construct a path approximately 15-feet wide for equipment access.

Colorado River Bridge Removal:

The existing piers consist of eight-foot diameter and 16.5-foot tall columns sitting on a circular foundation. The circular foundation has several steps. The first step is 14 feet in diameter and steps down three feet. The next step is either 20 or 22 feet in diameter and steps down three feet. The final step is 22 to 24 feet in diameter and steps down eight feet. The bottom eight feet is unreinforced and rests on piles. This bottom section was also originally below the mudline. All portions of the foundation above the bottom section should be removed so that the remaining foundation is three to six feet below the very low flow condition. If a new footing overlaps the existing footing, the entire existing footing must be removed.

The method used to remove the existing bridge deck depends on feasibility. A structure removal plan would be prepared and approved by UDOT. The method used to remove the existing bridge will meet the requirements of the structure removal specification. A structure removal plan would be prepared by the contractor and submitted to UDOT for approval. UDOT will approve the removal plan if the plan meets the requirements of the structure removal specification. The structure removal specification will list specific performance requirements required by governing agencies. Possible removal methods include building a platform below the existing deck in between the girders to catch falling debris, using a barge to catch the debris, or cutting the deck into slabs and using cranes to remove them.

Lower Courthouse Wash Structure Widening:

The existing abutments would be widened and new girders set from either side of the structure. The deck would then be formed and poured. If necessary, protective riprap may be added and/or the existing riprap replaced. Riprap may extend down to the edge of the channel and would be anchored to the bank. However, construction activity would take place from the banks and riprap placement and anchoring would occur outside of the water channel.

Existing Roadway Widening and Reconstruction:

Primary activities include clearing and grubbing; removal of asphalt and roadway excavation; placement of granular borrow, untreated base course, asphalt roadway/bike path surface, and concrete curb, gutter, and sidewalk; signing and striping; and erosion control. Proposed utility and storm drain relocations and adjustments would be placed prior to new subgrade placement. Material would be obtained from or disposed of in approved location(s). Two lanes of traffic would be maintained during peak traffic periods, but limited off-peak short-term localized closures may be needed.

CONSERVATION MEASURES

The following actions are protective measures and Best Management Practices (BMPs) that FHWA / UDOT will incorporate to minimize impacts to floodplain, riparian corridor, and critical habitat. These measures are intended to minimize potential effects to listed species and their habitat from the activities associated with the proposed action:

- Install silt fencing to prevent material from entering the river or side drainages.
- Install erosion control barriers and bank stabilization techniques to reduce possible erosion of riverbanks during construction.
- Minimize large equipment access in the river and adjacent floodplains.
- Replace monotypic stands of tamarisk along the Colorado River Bridge corridor that are impacted by equipment or other construction activities with a native cottonwood and willow complex, which are the historical substrates for nesting and foraging for the southwestern willow flycatcher and the yellow-billed cuckoo.
- Native willow and cottonwood cuttings will be used for revegetation rather than containerized stock.
- Implement soil stabilization and erosion control devices to ensure river banks and drainages are stable.
- Use native grasses and forbs to re-seed disturbed soils.
- The potential for accidental spills of hazardous materials will be identified, minimized, and avoided through implementation of BMPs and measures specified in the SWPPP. A project Spill Prevention and Countermeasures (SPCC) Plan will be developed and followed during construction. This plan will identify riparian zones and drainages and outline conservation measures to ensure protection. UDOT will implement a plan to identify and protect sensitive resources through applicable BMPs. The SPCC and SWPP plan will address:
    - Refueling of construction equipment near riparian zones and drainages will be done in accordance with applicable state and county codes.
    - Riparian zones and drainages will be defined by staking and flagging in appropriate areas.
    - Equipment near aquatic habitat, as defined, will contain a hazardous materials response kit to prevent impacts to aquatic habitat.

- Obtain fill materials from a validated clean source. In areas of contact with water, use clean fill materials where possible rather than concrete or other artificial materials. Confine construction activities and equipment to the designated construction work areas. These areas will be surveyed by a qualified biologist for sensitive resources and defined by lathes and flagging. Construction activities will be contained in these areas. New areas will need approval.
- Areas of important resources will be restricted and no access will be identified and marked "restricted".
- The installation of cofferdams will be completed outside the spawning season of the Colorado River endangered fishes (May - August). During operation of cofferdam pumps, May - August, a qualified biologist will monitor pumps for impacts to these species.
- Construction activities within the Colorado River during the spawning period for the endangered Colorado River fish will be limited to within the cofferdams.
- Prohibit construction activities within the water channel of Lower Courthouse Wash. Place riprap, if necessary, from the bank and anchor riprap outside of water channel.
- If construction activities extend into the Southwestern willow flycatcher (May - August) breeding season, and these activities will be conducted within 1,000 feet of suitable habitat, a qualified biologist will conduct preconstruction surveys in accordance with approved survey protocols (Sogge, et all, 1997). If present, a 1,000 foot "No disturbance" buffer zone will be established around this site and no construction activities will be allowed within the buffer zone during the SWWF breeding season.
- Require construction workers to attend environmental awareness training on the protective measures to ensure compliance.
- Take photographs and documentation of existing environment to assist in restoring habitat alterations and degradation from construction activities to preconstruction baseline levels.
- Locate pumps for water depletion at cofferdam locations (if applicable) in the water column where chance of larval fish entrainment is minimized. Monitoring will be needed to ensure location and screening is correct.
- A UDOT Certified Environmental Control Supervisor (ECS) will monitor all environmental sensitive areas in addition to BMP's and erosion control devices.
- Perform monitoring by a qualified biologist during construction in areas of potential impact to species or breeding habitat to monitor and record any incidental take.

STATUS OF THE SPECIES/CRITICAL HABITAT

Colorado Pikeminnow

Species/Critical Habitat Description

The Colorado pikeminnow is the largest cyprinid fish (minnow family) native to North America and evolved as the main predator in the Colorado River system. It is an elongated pike-like fish that during predevelopment times may have grown as large as 6 feet in length and weighed nearly 100 pounds (Behnke and Benson 1983). Today, Colorado pikeminnow rarely exceed 3

feet in length or weigh more than 18 pounds; such fish are estimated to be 45-55 years old (Osmundson et al. 1997). The mouth of this species is large and nearly horizontal with long slender pharyngeal teeth (located in the throat), adapted for grasping and holding prey. The diet of Colorado pikeminnow longer than 3 or 4 inches consists almost entirely of other fishes (Vanicek and Kramer 1969). Males become sexually mature earlier and at a smaller size than do females, though all are mature by about age 7 and 500 mm (20 inches) in length (Vanicek and Kramer 1969, Seethaler 1978, Hamman 1981). Adults are strongly countershaded with a dark, olive back, and a white belly. Young are silvery and usually have a dark, wedge-shaped spot at the base of the caudal fin.

Critical habitat, as defined in section 3(5)(A) of the Act, means: "(I) the specific areas within the geographical area occupied by the species at the time it is listed . . . , on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed . . . , upon a determination by the Secretary that such areas are essential for the conservation of the species."

Designated critical habitat for the endangered Colorado River fishes includes those portions of the 100-year floodplain that contain constituent elements. The constituent elements are those physical and biological features that the USFWS considers essential for the conservation of the species and include, but are not limited to, the following items: (1) Space for individual and population growth, and for normal behavior; (2) Food, water, air, light, minerals, or other nutritional or physiological requirements; (3) Cover or shelter; (4) Sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally (5) Habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of the species. The primary constituent elements determined necessary for the survival and recovery of the four endangered Colorado River fishes include, but are not limited to:

> Water - A quantity of water of sufficient quality (i.e., temperature, dissolved oxygen, lack of contaminants, nutrients, turbidity, etc.) that is delivered to a specific location in accordance with a hydrologic regime that is required for the particular life stage for each species;
>
> Physical Habitat - Areas of the Colorado River system that are inhabited or potentially habitable by fish for use in spawning, nursing, feeding, and rearing, or corridors between these areas. In addition to river channels these areas also include bottom lands, side channels, secondary channels, oxbows, backwaters, and other areas in the 100-year floodplain, which when inundated provide spawning, nursery, feeding, and rearing habitats, or access to these habitats;
>
> Biological Environment - Food supply, predation, and competition are important elements of the biological environment and are considered components of this constituent element. Food supply is a function of nutrient supply, productivity, and availability to each life stage of the species. Predation and competition,

although considered normal components of this environment, are out of balance due to introduced nonnative fish species in many areas.

Designated critical habitat makes up about 29% of the species' original range and occurs exclusively in the Upper Colorado River Basin. Critical habitat has been designated within the 100-year floodplain of the Colorado pikeminnow's historical range in the following sections of the Upper Basin, excluding the San Juan River Basin (59 FR 13374).

Colorado, Moffat County. The Yampa River and its 100-year floodplain from the State Highway 394 bridge in T. 6 N., R. 91 W., section 1 (6th Principal Meridian) to the confluence with the Green River in T. 7 N., R. 103 W., section 28 (6th Principal Meridian).

Utah, Uintah, Carbon, Grand, Emery, Wayne, and San Juan Counties; and Colorado, Moffat County. The Green River and its 100-year floodplain from the confluence with the Yampa River in T. 7 N., R. 103 W., section 28 (6th Principal Meridian) to the confluence with the Colorado River in T. 30 S., R. 19 E., section 7 (Salt Lake Meridian).

Colorado, Rio Blanco County; and Utah, Uintah County. The White River and its 100-year floodplain from Rio Blanco Lake Dam in T. 1 N., R. 96 W., section 6 (6th Principal Meridian) to the confluence with the Green River in T. 9 S., R. 20 E., section 4 (Salt Lake Meridian).

Colorado, Delta and Mesa Counties. The Gunnison River and its 100-year floodplain from the confluence with the Uncompahgre River in T. 15 S., R. 96 W., section 11 (6th Principal Meridian) to the confluence with the Colorado River in T. 1 S., R. 1 W., section 22 (Ute Meridian).

Colorado, Mesa and Garfield Counties; and Utah, Grand, San Juan, Wayne, and Garfield Counties. The Colorado River and its 100-year floodplain from the Colorado River Bridge at exit 90 north off Interstate 70 in T. 6 S., R. 93 W., section 16 (6th Principal Meridian) to North Wash, including the Dirty Devil arm of Lake Powell up to the full pool elevation, in T. 33 S., R. 14 E., section 29 (Salt Lake Meridian).

Status and Distribution

Based on early fish collection records, archaeological finds, and other observations, the Colorado pikeminnow was once found throughout warmwater reaches of the entire Colorado River Basin down to the Gulf of California, and including reaches of the upper Colorado River and its major tributaries, the Green River and its major tributaries, and the Gila River system in Arizona (Seethaler 1978). Colorado pikeminnow apparently were never found in colder, headwater areas. The species was abundant in suitable habitat throughout the entire Colorado River Basin prior to the 1850s (Seethaler 1978). By the 1970s they were extirpated from the entire lower basin (downstream of Glen Canyon Dam) and portions of the upper basin as a result of major

alterations to the riverine environment. Having lost some 75 to 80 percent of its former range due to habitat loss, the Colorado pikeminnow was federally listed as an endangered species in 1967 (Miller 1961, Moyle 1976, Tyus 1991, Osmundson and Burnham 1998). Full protection under the Act of 1973 occurred on January 4, 1974.

Colorado pikeminnow are presently restricted to the Upper Colorado River Basin and inhabit warmwater reaches of the Colorado, Green, and San Juan rivers and associated tributaries. The Colorado pikeminnow recovery goals (USFWS 2002a) identify occupied habitat of wild Colorado pikeminnow as follows: the Green River from Lodore Canyon to the confluence of the Colorado River; the Yampa River downstream of Craig, Colorado; the Little Snake River from its confluence with the Yampa River upstream into Wyoming; the White River downstream of Taylor Draw Dam; the lower 89 miles of the Price River; the lower Duchesne River; the upper Colorado River from Palisade, Colorado, to Lake Powell; the lower 34 miles of the Gunnison River; the lower mile of the Dolores River; and 150 miles of the San Juan River downstream from Shiprock, New Mexico, to Lake Powell.

Although Colorado pikeminnow use the entire Colorado River, there are distinct differences in distribution among age classes. In general, most adults are found in the upper reaches of the river and most subadults, juveniles, and YOY are found in the lower reaches (Valdez et al. 1982a; Archer et al. 1985; McAda and Kaeding 1991b; Osmundson et al. 1997). This corresponds to the general distribution of different age classes in the Green River as well (Tyus 1991). Osmundson and Burnham (1998) conducted the first intensive river-wide study using mark-recapture to estimate the population size of subadult (250–500 mm long) and adult Colorado pikeminnow (>500 mm long) in the Colorado River. They divided the river into two subreaches — Westwater Canyon to Price Stubb Dam (RM 125–188) and confluence with Green River to Westwater Canyon (RM 0–113; Westwater Canyon itself was not sampled). They estimated the average population size in 1991–1994 was 253 (95% CI, 161–440) for the upper reach and 344 (95% CI, 196–604) for the lower reach. They noted that almost all fish captured in the upper reach were adults (i.e. >500 mm), whereas most fish captured from the lower reach were subadults. Although most adults were captured from the upper river, they were not distributed equally throughout the reach. Catch rates in two segments of the upper reach — known as the 18-mile reach (RM 154–171) and the 15-mile reach (RM 171–185) — were five to six times higher than in the lower third of the reach (Osmundson 2000). These reaches contain 8 to 10 times more adult Colorado pikeminnow per mile than the lower 100 mile of the Colorado River.

Osmundson (2002a) repeated the population estimate in 1998–2000 period using the same techniques used by Osmundson and Burnham (1998). He also revised the previous estimate using length criteria for adults corresponding to recovery goals established in 2002 (USFWS 2002c; ≥450 mm total length [TL]) and provided a river-wide estimate. Average population size for the Colorado River was 503 adult Colorado pikeminnow for 1992–1994 and 604 for 1998–2000 (Osmundson 2002a). Although the average point estimate increased for the second period, the difference was not significant because of wide confidence intervals. An increase in the adult population during the 1990s was also suggested by an increasing catch rate during spring ISMP electrofishing (Figure 3.6; McAda 2002a). However, electrofishing catch rates dropped off in 1999 and 2000, whereas population estimates did not.

The USFWS recently completed a third rotation of 3-yr (2003-2005) pikeminnow population estimates throughout the occupied portion of the Colorado River (Colorado and Utah) (Osmundson 2005). Sampling conditions were favorable in 2005 and yielded the most precise estimate, as described by coefficient of variation, during the 2003-2005 period. A total of 306 pikeminnow (≥250mm total length) were collected in 2005. Preliminary analysis of the data indicates that the average population size for the three year period was 712 adult Colorado pikeminnow (≥450mmTL). During this three year period researchers were able to track a strong cohort of juvenile fish working their way into the adult contingent of the population. Unfortunately, preliminary length frequency analysis does not reveal a similar recruitment event in the foreseeable future. A review of past population estimates (collected over the past 13 years) indicates a positive trend in adult pikeminnow abundance in the Colorado River.

Larval Colorado pikeminnow have been collected upstream of the mouth of the Gunnison River in 1982 (McAda and Kaeding 1991b) and in 1995 (Anderson 1999), howver, no YOY and only one yearling have ever been captured there (Osmundson and Burnham 1998). The number of YOY captured in the river between the mouth of the Gunnison River and Westwater Canyon has decreased since the mid 1980s, with no YOY Colorado pikeminnow captured upstream from Westwater Canyon during autumn ISMP surveys since 1992 and only one captured each year from 1988 to 1992 (McAda and Ryel 1999).

Recovery goals for the Colorado pikeminnow (USFWS 2002a) were approved on August 1, 2002. According to these recovery goals, downlisting can be considered if, over a 5-year period:

- a genetically and demographically viable, self-sustaining population is maintained in the Green River subbasin such that (a) the trends in separate adult (age 7+; > 450 mm total length) point estimates for the middle Green River and the lower Green River do not decline significantly, and (b) mean estimated recruitment of age-6 (400–449 mm total length) naturally produced fish equals or exceeds mean annual adult mortality for the Green River subbasin, and (c) each population point estimate for the Green River subbasin exceeds 2,600 adults (2,600 is the estimated minimum viable population needed to ensure long-term genetic and demographic viability); and

- a self-sustaining population of at least 700 adults (number based on inferences about carrying capacity) is maintained in the upper Colorado River subbasin such that (a) the trend in adult point estimates does not decline significantly, and (b) mean estimated recruitment of age-6 naturally produced fish equals or exceeds mean annual adult mortality; and

- a target number of 1,000 age-5+ fish (> 300 mm total length; number based on estimated survival of stocked fish and inferences about carrying capacity) is established through augmentation and/or natural reproduction in the San Juan River subbasin; and

- certain site-specific management tasks to minimize or remove threats have been identified, developed, and implemented.

Delisting can be considered if, over a 7-year period beyond downlisting:

- a genetically and demographically viable, self-sustaining population is maintained in the Green River subbasin such that (a) the trends in separate adult point estimates for the middle Green River and the lower Green River do not decline significantly, and (b) mean estimated recruitment of age-6 naturally produced fish equals or exceeds mean annual adult mortality for the Green River subbasin, and (c) each population point estimate for the Green River subbasin exceeds 2,600 adults; and

- either the upper Colorado River subbasin self-sustaining population exceeds 1,000 adults or the upper Colorado River subbasin self-sustaining population exceeds 700 adults and San Juan River subbasin population is self-sustaining and exceeds 800 adults (numbers based on inferences about carrying capacity) such that for each population (a) the trend in adult point estimates does not decline significantly, and (b) mean estimated recruitment of age-6 naturally produced fish equals or exceeds mean annual adult mortality; and

- certain site-specific management tasks to minimize or remove threats have been finalized and implemented, and necessary levels of protection are attained.

Life History

The Colorado pikeminnow is a long-distance migrator; adults move hundreds of miles to and from spawning areas, and require long sections of river with unimpeded passage. Adults require pools, deep runs, and eddy habitats maintained by high spring flows. These high spring flows maintain channel and habitat diversity, flush sediments from spawning areas, rejuvenate food production, form gravel and cobble deposits used for spawning, and rejuvenate backwater nursery habitats. Spawning occurs after spring runoff at water temperatures typically between 18 and 23°C. After hatching and emerging from spawning substrate, larvae drift downstream to nursery backwaters that are restructured by high spring flows and maintained by relatively stable base flows. Flow recommendations have been developed that specifically consider flow-habitat relationships in habitats occupied by Colorado pikeminnow in the upper basin, and were designed to enhance habitat complexity and to restore and maintain ecological processes. The following is a description of observed habitat uses in the Upper Colorado River Basin.

Colorado pikeminnow live in warm-water reaches of the Colorado River mainstem and larger tributaries, and require uninterrupted stream passage for spawning migrations and dispersal of young. The species is adapted to a hydrologic cycle characterized by large spring peaks of snow-melt runoff and low, relatively stable base flows. High spring flows create and maintain in-channel habitats, and reconnect floodplain and riverine habitats, a phenomenon described as

the spring flood-pulse (Junk et al. 1989; Johnson et al. 1995). Throughout most of the year, juvenile, subadult, and adult Colorado pikeminnow use relatively deep, low-velocity eddies, pools, and runs that occur in nearshore areas of main river channels (Tyus and McAda 1984; Valdez and Masslich 1989; Tyus 1990, 1991; Osmundson et al. 1995). In spring, however, Colorado pikeminnow adults use floodplain habitats, flooded tributary mouths, flooded side canyons, and eddies that are available only during high flows (Tyus 1990, 1991; Osmundson et al. 1995). Such environments may be particularly beneficial for Colorado pikeminnow because other riverine fishes gather in floodplain habitats to exploit food and temperature resources, and may serve as prey. Such low-velocity environments also may serve as resting areas for Colorado pikeminnow. River reaches of high habitat complexity appear to be preferred.

Because of their mobility and environmental tolerances, adult Colorado pikeminnow are more widely distributed than other life stages. Distribution patterns of adults are stable during most of the year (Tyus 1990, 1991; Irving and Modde 2000), but distribution of adults changes in late spring and early summer, when most mature fish migrate to spawning areas (Tyus and McAda 1984; Tyus 1985, 1990, 1991; Irving and Modde 2000). High spring flows provide an important cue to prepare adults for migration and also ensure that conditions at spawning areas are suitable for reproduction once adults arrive. Specifically, bankfull or much larger floods mobilize coarse sediment to build or reshape cobble bars, and they create side channels that Colorado pikeminnow sometimes use for spawning (Harvey et al. 1993).

Colorado pikeminnow spawning sites in the Green River subbasin have been well documented. The two principal locations are in Yampa Canyon on the lower Yampa River and in Gray Canyon on the lower Green River (Tyus 1990, 1991). These reaches are 42 and 72 km long, respectively, but most spawning is believed to occur at one or two short segments within each of the two reaches. Another spawning area may occur in Desolation Canyon on the lower Green River (Irving and Modde 2000), but the location and importance of this area has not been verified. Although direct observation of Colorado pikeminnow spawning was not possible because of high turbidity, radiotelemetry indicated spawning occurred over cobble-bottomed riffles (Tyus 1990). High spring flows and subsequent post-peak summer flows are important for construction and maintenance of spawning substrates (Harvey et al. 1993). In contrast with the Green River subbasin, where known spawning sites are in canyon-bound reaches, currently suspected spawning sites in the upper Colorado River subbasin are at six locations in meandering, alluvial reaches (McAda 2000).

After hatching and emerging from the spawning substrate, Colorado pikeminnow larvae drift downstream to backwaters in sandy, alluvial regions, where they remain through most of their first year of life (Holden 1977; Tyus and Haines 1991; Muth and Snyder 1995). Backwaters and the physical factors that create them are vital to successful recruitment of early life stages of Colorado pikeminnow, and age-0 Colorado pikeminnow in backwaters have received much research attention (e.g., Tyus and Karp 1989; Haines and Tyus 1990; Tyus 1991; Tyus and Haines 1991; Bestgen et al. 1997). It is important to note that these backwaters are formed after cessation of spring runoff within the active channel and are not floodplain features. Colorado pikeminnow larvae occupy these in-channel backwaters soon after hatching. They tend to occur in backwaters that are large, warm, deep (average, about 0.3 m in the Green River), and turbid

(Tyus and Haines 1991). Recent research (Day et al. 1999a, 1999b; Trammell and Chart 1999) has confirmed these preferences and suggested that a particular type of backwater is preferred by Colorado pikeminnow larvae and juveniles. Such backwaters are created when a secondary channel is cut off at the upper end, but remains connected to the river at the downstream end. These chute channels are deep and may persist even when discharge levels change dramatically. An optimal river-reach environment for growth and survival of early life stages of Colorado pikeminnow has warm, relatively stable backwaters, warm river channels, and abundant food (Muth et al. 2000).

Threats to the Species

Major declines in Colorado pikeminnow populations occurred during the dam-building era of the 1930s through the 1960s. Behnke and Benson (1983) summarized the decline of the natural ecosystem, pointing out that dams, impoundments, and water use practices drastically modified the river's natural hydrology and channel characteristics throughout the Colorado River Basin. Dams on the mainstem broke the natural continuum of the river ecosystem into a series of disjunct segments, blocking native fish migrations, reducing temperatures downstream of dams, creating lacustrine habitat, and providing conditions that allowed competitive and predatory nonnative fishes to thrive both within the impounded reservoirs and in the modified river segments that connect them. The highly modified flow regime in the lower basin coupled with the introduction of nonnative fishes decimated populations of native fish.

The primary threats to Colorado pikeminnow are stream flow regulation and habitat modification; competition with and predation by nonnative fishes; and pesticides and pollutants (USFWS 2002a). The existing habitat, altered by these threats, has been modified to the extent that it impairs essential behavior patterns, such as breeding, feeding, and sheltering. These impairments are described in further detail below.

Stream flow regulation includes mainstem dams that cause the following adverse effects to Colorado pikeminnow and its habitat:

- block migration corridors,
- changes in flow patterns, reduced peak flows and increased base flows,
- release cold water, making temperature regimes less than optimal,
- change river habitat into lake habitat, and
- retain sediment that is important for forming and maintaining backwater habitats

In the Upper Basin, 435 miles of Colorado pikeminnow habitat has been lost by reservoir inundation from Flaming Gorge Reservoir on the Green River, Lake Powell on the Colorado River, and Navajo Reservoir on the San Juan River. Cold water releases from these dams have eliminated suitable habitat for native fishes, including Colorado pikeminnow, from river reaches downstream for approximately 50 miles below Flaming Gorge Dam and Navajo Dam. In addition to main stem dams, many dams and water diversion structures occur in and upstream from critical habitat that reduce flows and alter flow patterns, which adversely affect critical habitat. Diversion structures in critical habitat divert fish into canals and pipes where the fish are

permanently lost to the river system. It is unknown how many endangered fish are lost in irrigation systems, but in some years, in some river reaches, majority of the river flow is diverted into unscreened canals. High spring flows maintain habitat diversity, flush sediments from spawning habitat, increase invertebrate food production, form gravel and cobble deposits important for spawning, and maintain backwater nursery habitats (McAda 2000; Muth et al. 2000). Peak spring flows in the Green River at Jensen, Utah, have decreased 13–35 percent and base flows have increased 10–140 percent due to regulation by Flaming Gorge Dam (Muth et al. 2000).

Predation and competition from nonnative fishes have been clearly implicated in the population reductions or elimination of native fishes in the Colorado River Basin (Dill 1944, Osmundson and Kaeding 1989, Behnke 1980, Joseph et al. 1977, Lanigan and Berry 1979, Minckley and Deacon 1968, Meffe 1985, Propst and Bestgen 1991, Rinne 1991). Data collected by Osmundson and Kaeding (1991) indicated that during low water years nonnative minnows capable of preying on or competing with larval endangered fishes greatly increased in numbers. More than 50 nonnative fish species were intentionally introduced in the Colorado River Basin prior to 1980 for sportfishing, forage fish, biological control and ornamental purposes (Minckley 1982, Tyus et al. 1982, Carlson and Muth 1989). Nonnative fishes compete with native fishes in several ways. The capacity of a particular area to support aquatic life is limited by physical habitat conditions. Increasing the number of species in an area usually results in a smaller population of most species. The size of each species population is controlled by the ability of each life stage to compete for space and food resources and to avoid predation. Some life stages of nonnative fishes appear to have a greater ability to compete for space and food and to avoid predation in the existing altered habitat than do some life stages of native fishes. Tyus and Saunders (1996) cite numerous examples of both indirect and direct evidence of predation on razorback sucker eggs and larvae by nonnative species.

Threats from pesticides and pollutants include accidental spills of petroleum products and hazardous materials; discharge of pollutants from uranium mill tailings; and high selenium concentration in the water and food chain (USFWS 2002a). Accidental spills of hazardous material into critical habitat can cause immediate mortality when lethal toxicity levels are exceeded.

Management actions identified in the recovery goals for Colorado pikeminnow (USFWS 2002a) to minimize or remove threats to the species included:

- provide and legally protect habitat (including flow regimes necessary to restore and maintain required environmental conditions) necessary to provide adequate habitat and sufficient range for all life stages to support recovered populations;
- provide passage over barriers within occupied habitat to allow adequate movement and, potentially, range expansion;
- investigate options for providing appropriate water temperatures in the Gunnison River;
- minimize entrainment of subadults and adults in diversion canals;
- ensure adequate protection from overutilization;
- ensure adequate protection from diseases and parasites;

- regulate nonnative fish releases and escapement into the main river, floodplain, and tributaries;
- control problematic nonnative fishes as needed;
- minimize the risk of hazardous-materials spills in critical habitat; and
- remediate water-quality problems.

Razorback sucker

Species/Critical Habitat Description

Like all suckers (family Catostomidae, meaning "down mouth"), the razorback sucker has a ventral mouth with thick lips covered with papillae and no scales on its head. In general, suckers are bottom browsers, sucking up or scraping off small invertebrates, algae, and organic matter with their fleshy, protrusible lips (Moyle 1976). The razorback sucker is the only sucker with an abrupt sharp-edged dorsal keel behind its head. The keel becomes more massive with age. The head and keel are dark, the back is olive-colored, the sides are brownish or reddish, and the abdomen is yellowish white (Sublette et al. 1990). Adults often exceed 3 kg (6 pounds) in weight and 600 mm (2 feet) in length. Like Colorado pikeminnow, razorback suckers are long-lived, living 40-plus years.

Critical habitat was designated for razorback sucker on March 21, 1994 (59 FR 13374). Designated critical habitat makes up about 49% of the species' original range and occurs in both the Upper and Lower Colorado River Basins. The primary constituent elements are the same as those described for Colorado pikeminnow.

Critical habitat has been designated within the 100-year floodplain of the razorback sucker's historical range in the following sections of the Upper Basin, excluding the San Juan River Basin (59 FR 13374).

> Colorado, Moffat County. The Yampa River and its 100-year floodplain from the mouth of Cross Mountain Canyon in T. 6 N., R. 98 W., section 23 (6th Principal Meridian) to the confluence with the Green River in T. 7 N., R. 103 W., section 28 (6th Principal Meridian).
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> Utah, Uintah County; and Colorado, Moffat County. The Green River and its 100-year floodplain from the confluence with the Yampa River in T. 7 N., R. 103 W., section 28 (6th Principal Meridian) to Sand Wash in T. 11 S., R. 18 E., section 20 (6th Principal Meridian).
>
> Utah, Uintah, Carbon, Grand, Emery, Wayne, and San Juan Counties. The Green River and its 100-year floodplain from Sand Wash at river mile 96 at T. 11 S., R. 18 E., section 20 (6th Principal Meridian) to the confluence with the Colorado River in T. 30 S., R. 19 E., section 7 (6th Principal Meridian).

Utah, Uintah County. The White River and its 100-year floodplain from the boundary of the Uintah and Ouray Indian Reservation at river mile 18 in T. 9 S., R. 22 E., section 21 (Salt Lake Meridian) to the confluence with the Green River in T. 9 S., R 20 E., section 4 (Salt Lake Meridian).

Utah, Uintah County. The Duchesne River and its 100-year floodplain from river mile 2.5 in T. 4 S., R. 3 E., section 30 (Salt Lake Meridian) to the confluence with the Green River in T. 5 S., R. 3 E., section 5 (Uintah Meridian).

Colorado, Delta and Mesa Counties. The Gunnison River and its 100-year floodplain from the confluence with the Uncompahgre River in T. 15 S., R. 96 W., section 11 (6th Principal Meridian) to Redlands Diversion Dam in T. 1 S., R. 1 W., section 27 (Ute Meridian).

Colorado, Mesa and Garfield Counties. The Colorado River and its 100-year floodplain from Colorado River Bridge at exit 90 north off Interstate 70 in T. 6 S., R. 93 W., section 16 (6th Principal Meridian) to Westwater Canyon in T. 20 S., R. 25 E., section 12 (Salt Lake Meridian) including the Gunnison River and its 100-year floodplain from the Redlands Diversion Dam in T. 1 S., R. 1 W., section 27 (Ute Meridian) to the confluence with the Colorado River in T. 1 S., R. 1 W., section 22 (Ute Meridian).

Utah, Grand, San Juan, Wayne, and Garfield Counties. The Colorado River and its 100-year floodplain from Westwater Canyon in T. 20 S., R. 25 E., section 12 (Salt Lake Meridian) to full pool elevation, upstream of North Wash, and including the Dirty Devil arm of Lake Powell in T. 33 S., R. 14 E., section 29 (Salt Lake Meridian).

Status and Distribution

On March 14, 1989, the USFWS was petitioned to conduct a status review of the razorback sucker. Subsequently, the razorback sucker was designated as endangered under a final rule published on October 23, 1991 (56 FR 54957). The final rule stated "Little evidence of natural recruitment has been found in the past 30 years, and numbers of adult fish captured in the last 10 years demonstrate a downward trend relative to historic abundance. Significant changes have occurred in razorback sucker habitat through diversion and depletion of water, introduction of nonnative fishes, and construction and operation of dams" (56 FR 54957). Recruitment of razorback suckers to the population continues to be a problem.

Historically, razorback suckers were found in the mainstem Colorado River and major tributaries in Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming, and in Mexico (Ellis 1914; Minckley 1983). Bestgen (1990) reported that this species was once so numerous that it was commonly used as food by early settlers and, further, that commercially marketable quantities were caught in Arizona as recently as 1949. In the Upper Basin, razorback suckers were reported in the Green River to be very abundant near Green River, Utah, in the late 1800s (Jordan 1891). An account in Osmundson and Kaeding (1989) reported that residents living along the Colorado River near Clifton, Colorado, observed several thousand razorback suckers

during spring runoff in the 1930s and early 1940s. In the San Juan River drainage, Platania and Young (1989) relayed historical accounts of razorback suckers ascending the Animas River to Durango, Colorado, around the turn of the century.

Currently, the largest concentration of razorback sucker remaining in the Colorado River Basin is in Lake Mohave on the border of Arizona and California. Estimates of the wild stock in Lake Mohave have fallen precipitously in recent years from 60,000 as late as 1991, to 25,000 in 1993 (Marsh 1993, Holden 1994), to about 9,000 in 2000 (USFWS 2002b). Until recently, efforts to introduce young razorback sucker into Lake Mohave have failed because of predation by non-native species (Minckley et al. 1991, Clarkson et al. 1993, Burke 1994). While limited numbers of razorback suckers persist in other locations in the Lower Colorado River, they are considered rare or incidental and may be continuing to decline.

In the Colorado River upstream from Lake Powell, most razorback suckers have been captured in the Grand Valley (Loma, Colorado to Palisade, Colorado) near the confluence of the Gunnison and Colorado rivers. However, their abundance has decreased to the point that they are only infrequently captured there. During intensive efforts specifically targeted at known concentration areas, Kidd (1977) and McAda and Wydoski (1980) captured a combined total of 54 razorback suckers in 1974 and 204 in 1975 from two gravel-pit ponds connected to the Colorado River near Grand Junction. These numbers reflect the combined total of independent collections, but probably include some recaptures of the same fish because sampling was done in the same areas and Kidd (1977) did not mark fish before release. All of these fish were adults that exhibited signs of old age such as large size, missing eyes, and heavy scarring (C. McAda, personal observation).

A variety of investigators have sampled the Colorado River in subsequent years, but sampling effort varied considerably and sampling did not always target razorback sucker. The high numbers of razorback suckers captured in 1975 were not repeated in subsequent years (summarized by Osmundson and Kaeding 1991). The highest number captured in later years was 30 fish that were collected in 1982 from the same gravel-pit ponds sampled by Kidd (1977) and McAda and Wydoski (1980). Total fish captured declined dramatically after 1975, and few wild razorback suckers have been captured in recent years. Only 11 wild razorback suckers have been collected in the Grand Valley since 1990 despite intensive sampling in some years (Osmundson and Kaeding 1991; CDOW and USFWS, unpublished data). All of these fish were removed from the river to support propagation activities for the Recovery Program (M. Baker, unpublished data).

Although razorback suckers have declined dramatically in abundance in recent years, the Recovery Program considers the Colorado and Gunnison rivers to be suitable habitat for razorback suckers and has begun a reintroduction program to restore populations in the two rivers (Burdick 1992; Nesler 1998; Hudson, et al. 1999). Whereas the focus of this reintroduction program is still on building a broodstock for future use, to date about 19,000 razorback suckers have been stocked into the Gunnison River near Delta and about 44,000 razorbacks have been stocked into the Colorado River upstream from Grand Junction

(Burdick 2003; C. McAda, personal communication). The Recovery Program met its annual targeted stocking goal of 9,930 hatchery produced razorback sucker ($\geq$ 300mm TL) for the Colorado River, in 2005. These fish were released in equal lots at three locations: one in the Gunnison River and two in the Colorado River in Colorado.

The reintroduction program is scheduled to continue until a self-sustaining population of at least 5,800 individuals is established in the Gunnison and upper Colorado Rivers (USFWS 2002d). Some of the stocked razorback suckers have survived to adulthood and spawned successfully — wild produced larval razorback suckers were captured from the Gunnison River in 2002 (Osmundson 2002b) and in subsequent years.

Razorback suckers are in imminent danger of extirpation in the wild. As Bestgen (1990) pointed out:

> "Reasons for decline of most native fishes in the Colorado River Basin have been attributed to habitat loss due to construction of mainstream dams and subsequent interruption or alteration of natural flow and physio-chemical regimes, inundation of river reaches by reservoirs, channelization, water quality degradation, introduction of nonnative fish species and resulting competitive interactions or predation, and other man-induced disturbances (Miller 1961, Joseph et al. 1977, Behnke and Benson 1983, Carlson and Muth 1989, Tyus and Karp 1989). These factors are almost certainly not mutually exclusive, therefore it is often difficult to determine exact cause and effect relationships."

The virtual absence of any recruitment suggests a combination of biological, physical, and/or chemical factors that may be affecting the survival and recruitment of early life stages of razorback suckers. Within the Upper Basin, recovery efforts endorsed by the Recovery Program include the capture and removal of razorback suckers from all known locations for genetic analyses and development of discrete brood stocks. These measures have been undertaken to develop refugia populations of the razorback sucker from the same genetic parentage as their wild counterparts such that, if these fish are genetically unique by subbasin or individual population, then separate stocks will be available for future augmentation. Such augmentation may be a necessary step to prevent the extinction of razorback suckers in the Upper Basin.

Recovery goals for the razorback sucker (USFWS 2002b) were approved on August 1, 2002. According to these recovery goals, downlisting can be considered if, over a 5-year period:

- genetically and demographically viable, self-sustaining populations are maintained in the Green River subbasin and either in the upper Colorado River subbasin or the San Juan River subbasin such that (a) the trend in adult (age 4+; > 400 mm total length) point estimates for each of the two populations does not decline significantly, and (b) mean estimated recruitment of age-3 (300–399 mm total length) naturally produced fish equals or exceeds mean annual adult mortality for each of the two populations, and (c) each point estimate for each of the two populations exceeds 5,800 adults (5,800 is

the estimated minimum viable population needed to ensure long-term genetic and demographic viability); and

- a genetic refuge is maintained in Lake Mohave of the lower basin recovery unit; and

- two genetically and demographically viable, self-sustaining populations are maintained in the lower basin recovery unit (e.g., mainstem and/or tributaries) such that (a) the trend in adult point estimates for each population does not decline significantly, and (b) mean estimated recruitment of age-3 naturally produced fish equals or exceeds mean annual adult mortality for each population, and (c) each point estimate for each population exceeds 5,800 adults; and

- certain site-specific management tasks to minimize or remove threats have been identified, developed, and implemented.

Delisting can be considered if, over a 3-year period beyond downlisting:

- genetically and demographically viable, self-sustaining populations are maintained in the Green River subbasin and either in the upper Colorado River subbasin or the San Juan River subbasin such that (a) the trend in adult point estimates for each of the two populations does not decline significantly, and (b) mean estimated recruitment of age-3 naturally produced fish equals or exceeds mean annual adult mortality for each of the two populations, and (c) each point estimate for each of the two populations exceeds 5,800 adults; and

- a genetic refuge is maintained in Lake Mohave; and

- two genetically and demographically viable, self-sustaining populations are maintained in the lower basin recovery unit such that (a) the trend in adult point estimates for each population does not decline significantly, and (b) mean estimated recruitment of age-3 naturally produced fish equals or exceeds mean annual adult mortality for each population, and (c) each point estimate for each population exceeds 5,800 adults; and

- certain site-specific management tasks to minimize or remove threats have been finalized and implemented, and necessary levels of protection are attained.

Life History

McAda and Wydoski (1980) and Tyus (1987) reported springtime aggregations of razorback suckers in off-channel habitats and tributaries; such aggregations are believed to be associated with reproductive activities. Tyus and Karp (1990) and Osmundson and Kaeding (1991)

reported off-channel habitats to be much warmer than the mainstem river and that razorback suckers presumably moved to these areas for feeding, resting, sexual maturation, spawning, and other activities associated with their reproductive cycle. Prior to construction of large mainstem dams and the suppression of spring peak flows, low velocity, off-channel habitats (seasonally flooded bottomlands and shorelines) were commonly available throughout the Upper Basin (Tyus and Karp 1989; Osmundson and Kaeding 1991). Dams changed riverine ecosystems into lakes by impounding water, which eliminated these off-channel habitats in reservoirs. Reduction in spring peak flows eliminates or reduces the frequency of inundation of off-channel habitats. The absence of these seasonally flooded riverine habitats is believed to be a limiting factor in the successful recruitment of razorback suckers in their native environment (Tyus and Karp 1989; Osmundson and Kaeding 1991). Wydoski and Wick (1998) identified starvation of larval razorback suckers due to low zooplankton densities in the main channel and loss of floodplain habitats which provide adequate zooplankton densities for larval food as one of the most important factors limiting recruitment.

While razorback suckers have never been directly observed spawning in turbid riverine environments within the Upper Basin, captures of ripe specimens (in spawning condition), both males and females, have been recorded (Valdez et al. 1982a; McAda and Wydoski 1980; Tyus 1987; Osmundson and Kaeding 1989; Tyus and Karp 1989; Tyus and Karp 1990; Osmundson and Kaeding 1991; Platania 1990) in the Yampa, Green, Colorado, and San Juan rivers. Sexually mature razorback suckers are generally collected on the ascending limb of the hydrograph from mid-April through June and are associated with coarse gravel substrates (depending on the specific location).

Outside of the spawning season, adult razorback suckers occupy a variety of shoreline and main channel habitats including slow runs, shallow to deep pools, backwaters, eddies, and other relatively slow velocity areas associated with sand substrates (Tyus 1987; Tyus and Karp 1989; Osmundson and Kaeding 1989; Valdez and Masslich 1989; Osmundson and Kaeding 1991; Tyus and Karp 1990).

Habitat requirements of young and juvenile razorback suckers in the wild are not well known, particularly in native riverine environments. Prior to 1991, the last confirmed documentation of a razorback sucker juvenile in the Upper Basin was a capture in the Colorado River near Moab, Utah (Taba et al. 1965). In 1991, two early juvenile (36.6 and 39.3 mm total length (TL)) razorback suckers were collected in the lower Green River near Hell Roaring Canyon (Gutermuth et al. 1994). Juvenile razorback suckers have been collected in recent years from Old Charley Wash, a wetland adjacent to the Green River (Modde 1996). Between 1992 and 1995 larval razorback suckers were collected in the middle and lower Green River and within the Colorado River inflow to Lake Powell (Muth 1995). In 2002, eight larval razorback suckers were collected in the Gunnison River (Osmundson 2002b). No young razorback suckers have been collected in recent times in the Colorado River.

Threats to the Species

A marked decline in populations of razorback suckers can be attributed to construction of dams and reservoirs, introduction of nonnative fishes, and removal of large quantities of water from the Colorado River system. Dams on the mainstem Colorado River and its major tributaries have segmented the river system, blocked migration routes, and changed river habitat into lake habitat. Dams also have drastically altered flows, temperatures, and channel geomorphology. These changes have modified habitats in many areas so that they are no longer suitable for breeding, feeding, or sheltering. Major changes in species composition have occurred due to the introduction of numerous nonnative fishes, many of which have thrived due to human-induced changes to the natural riverine system. These nonnative fishes prey upon and compete with razorback suckers.

The primary threats to razorback sucker are stream flow regulation and habitat modification; competition with and predation by nonnative fishes; and pesticides and pollutants (USFWS 2002b). The existing habitat, altered by these threats, has been modified to the extent that it impairs essential behavior patterns, such as breeding, feeding, and sheltering. The threats to razorback sucker are essentially the same threats identified for Colorado pikeminnow.

Management actions identified in the recovery goals for razorback sucker (USFWS 2002b) to minimize or remove threats to the species included:

- provide and legally protect habitat (including flow regimes necessary to restore and maintain required environmental conditions) necessary to provide adequate habitat and sufficient range for all life stages to support recovered populations;
- provide passage over barriers within occupied habitat to allow unimpeded movement and, potentially, range expansion;
- investigate options for providing appropriate water temperatures in the Gunnison River;
- minimize entrainment of subadults and adults in diversion/out-take structures;
- ensure adequate protection from overutilization;
- ensure adequate protection from diseases and parasites;
- regulate nonnative fish releases and escapement into the main river, floodplain, and tributaries;
- control problematic nonnative fishes as needed;
- minimize the risk of hazardous-materials spills in critical habitat;
- remediate water-quality problems; and
- minimize the threat of hybridization with white sucker.

Bonytail

Species/Critical Habitat Description

Bonytail are medium-sized (less than 600 mm) fish in the minnow family. Adult bonytail are gray or olive colored on the back with silvery sides and a white belly. The adult bonytail has an elongated body with a long, thin caudal peduncle. The head is small and compressed compared

to the rest of the body. The mouth is slightly overhung by the snout and there is a smooth low hump behind the head that is not as pronounced as the hump on a humpback chub.

The bonytail is endemic to the Colorado River Basin and was historically common to abundant in warm-water reaches of larger rivers of the basin from Mexico to Wyoming. The species experienced a dramatic, but poorly documented, decline starting in about 1950, following construction of several mainstem dams, introduction of nonnative fishes, poor land-use practices, and degraded water quality (USFWS 2002d).

Currently, no self-sustaining populations of bonytail are known to exist in the wild, and very few individuals have been caught anywhere within the basin. An unknown, but small number of wild adults exist in Lake Mohave on the mainstem Colorado River. Since 1977, only 11 wild adults have been reported from the upper basin (Valdez 1990).

A total of 499 km (312 miles) of river has been designated as critical habitat for the bonytail in the Colorado River Basin, representing about 14% of the species' historic range (59 FR 13374). The primary constituent elements are the same as those described for the Colorado pikeminnow.

Critical habitat has been designated within the bonytail's historical range in the following sections of the Upper Basin (59 FR 13374).

> Colorado, Moffat County. The Yampa River from the boundary of Dinosaur National Monument in T. 6 N., R. 99 W., section 27 (6th Principal Meridian) to the confluence with the Green River in T. 7 N., R. 103 W., section 28 (6th Principal Meridian).
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> Utah, Uintah County; and Colorado, Moffat County. The Green River from the confluence with the Yampa River in T. 7 N., R. 103 W., section 28 (6th Principal Meridian) to the boundary of Dinosaur National Monument in T. 6 N., R. 24 E., section 30 (Salt Lake Meridian).
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> Utah, Uintah and Grand Counties. The Green River (Desolation and Gray Canyons) from Sumner's Amphitheater (river mile 85) in T. 12 S., R. 18 E., section 5 (Salt Lake Meridian) to Swasey's Rapid (river mile 12) in T. 20 S., R. 16 E., section 3 (Salt Lake Meridian).
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> Utah, Grand County; and Colorado, Mesa County. The Colorado River from Black Rocks in T. 10 S., R. 104 W., section 25 (6th Principal Meridian) to Fish Ford in T. 21 S., R. 24 E., section 35 (Salt Lake Meridian).
>
> Utah, Garfield and San Juan Counties. The Colorado River from Brown Betty Rapid in T. 30 S., R. 18 E., section 34 (Salt Lake Meridian) to Imperial Canyon in T. 31 S., R. 17 E., section 28 (Salt Lake Meridian).

Status and Distribution

The bonytail is the rarest native fish in the Colorado River. Little is known about its specific habitat requirements or cause of decline, because the bonytail was extirpated from most of its historic range prior to extensive fishery surveys. It was listed as endangered on April 23, 1980. Currently, no documented self-sustaining populations exist in the wild. Formerly reported as widespread and abundant in mainstem rivers (Jordan and Evermann 1896), its populations have been greatly reduced. Remnant populations presently occur in the wild in low numbers in Lake Mohave and several fish have been captured in Lake Powell and Lake Havasu (USFWS 2002d). The last known riverine area where bonytail were common was the Green River in Dinosaur National Monument, where Vanicek (1967) and Holden and Stalnaker (1970) collected 91 specimens during 1962-1966. From 1977 to 1983, no bonytail were collected from the Colorado or Gunnison rivers in Colorado or Utah (Wick et al. 1979, 1981; Valdez et al. 1982; Miller et al. 1984). However, in 1984, a single bonytail was collected from Black Rocks on the Colorado River (Kaeding et al. 1986). Several suspected bonytail were captured in Cataract Canyon in 1985-1987 (Valdez 1990). Current stocking plans for bonytail identify the middle Green River and the Yampa River in Dinosaur National Monument as the highest priority for stocking in Colorado and the plan calls for 2,665 fish to be stocked per year over the next six years (Nesler et al. 2003).

Recovery goals for the bonytail (USFWS 2002d) were approved on August 1, 2002. According to these recovery goals, downlisting can be considered if, over a 5-year period:

- genetically and demographically viable, self-sustaining populations are maintained in the Green River subbasin and upper Colorado River subbasin such that (a) the trend in adult (age 4+; > 250 mm total length) point estimates for each of the two populations does not decline significantly, and (b) mean estimated recruitment of age-3 (150–249 mm total length) naturally produced fish equals or exceeds mean annual adult mortality for each of the two populations, and (c) each point estimate for each of the two populations exceeds 4,400 adults (4,400 is the estimated minimum viable population needed to ensure long-term genetic and demographic viability); and

- a genetic refuge is maintained in a suitable location (e.g., Lake Mohave, Lake Havasu) in the lower basin recovery unit; and

- two genetically and demographically viable, self-sustaining populations are maintained in the lower basin recovery unit (e.g., mainstem and/or tributaries) such that (a) the trend in adult point estimates for each population does not decline significantly, and (b) mean estimated recruitment of age-3 naturally produced fish equals or exceeds mean annual adult mortality for each population, and (c) each point estimate for each population exceeds 4,400 adults; and

- certain site-specific management tasks to minimize or remove threats have been identified, developed, and implemented.

Delisting can be considered if, over a 3-year period beyond downlisting:

- genetically and demographically viable, self-sustaining populations are maintained in the Green River subbasin and upper Colorado River subbasin such that (a) the trend in adult point estimates for each of the two populations does not decline significantly, and (b) mean estimated recruitment of age-3 naturally produced fish equals or exceeds mean annual adult mortality for each of the two populations, and (c) each point estimate for each of the two populations exceeds 4,400 adults; and

- a genetic refuge is maintained in the lower basin recovery unit; and

- two genetically and demographically viable, self-sustaining populations are maintained in the lower basin recovery unit such that (a) the trend in adult point estimates for each population does not decline significantly, and (b) mean estimated recruitment of age-3 naturally produced fish equals or exceeds mean annual adult mortality for each population, and (c) each point estimate for each population exceeds 4,400 adults; and

- certain site-specific management tasks to minimize or remove threats have been finalized and implemented, and necessary levels of protection are attained.

Life History

The bonytail is considered a species that is adapted to mainstem rivers, where it has been observed in pools and eddies (Vanicek 1967; Minckley 1973). Spawning of bonytail has never been observed in a river, but ripe fish were collected in Dinosaur National Monument during late June and early July suggesting that spawning occurred at water temperatures of about 18°C (Vanicek and Kramer 1969). Similar to other closely related *Gila* species, bonytail probably spawn in rivers in spring over rocky substrates; spawning has been observed in reservoirs over rocky shoals and shorelines. It has been recently hypothesized that flooded bottomlands may provide important bonytail nursery habitat. Of five specimens captured most recently in the upper basin, four were captured in deep, swift, rocky canyons (Yampa Canyon, Black Rocks, Cataract Canyon, and Coal Creek Rapid), but the fifth was taken in Lake Powell. Since 1974, all bonytails captured in the lower basin were caught in reservoirs.

Threats to the Species

The primary threats to bonytail are stream flow regulation and habitat modification; competition with and predation by nonnative fishes; hybridization with other native *Gila* species; and pesticides and pollutants (USFWS 2002d). The existing habitat, altered by these threats, has been modified to the extent that it impairs essential behavior patterns, such as breeding, feeding, and sheltering. The threats to bonytail in relation to flow regulation and habitat modification, predation by nonnative fishes, and pesticides and pollutants are essentially the same threats

identified for Colorado pikeminnow. Threats to bonytail in relation to hybridization are essentially the same threats identified for humpback chub.

Management actions identified in the recovery goals for bonytail (USFWS 2002d) to minimize or remove threats to the species included:

- provide and legally protect habitat (including flow regimes necessary to restore and maintain required environmental conditions) necessary to provide adequate habitat and sufficient range for all life stages to support recovered populations;
- provide passage over barriers within occupied habitat to allow unimpeded movement and, potentially, range expansion;
- investigate options for providing appropriate water temperatures in the Gunnison River;
- minimize entrainment of subadults and adults at diversion/out-take structures;
- investigate habitat requirements for all life stages and provide those habitats;
- ensure adequate protection from overutilization;
- ensure adequate protection from diseases and parasites;
- regulate nonnative fish releases and escapement into the main river, floodplain, and tributaries;
- control problematic nonnative fishes as needed;
- minimize the risk of increased hybridization among *Gila* spp.;
- minimize the risk of hazardous-materials spills in critical habitat; and
- remediate water-quality problems.

Analysis of the species/critical habitat likely to be affected

In summary, three species of endangered Colorado River fish and their critical habitat are likely to be adversely affected by components of the proposed action. These species will be considered further in the remaining sections of this biological opinion.

ENVIRONMENTAL BASELINE

The environmental baseline includes the status of the species within the action area (the Colorado River near Moab, Utah) as well as the factors affecting the environment of the species or critical habitat in the action area. The baseline includes; State, tribal, local and private actions already affecting the species or that will occur contemporaneously with the consultation in progress; unrelated Federal actions affecting the same species or critical habitat that have completed formal or informal consultation; and Federal and other actions within the action area that may benefit listed species or critical habitat. The environmental baseline does not include the effects of the action under review in the consultation.

The Service has identified water, physical habitat, and the biological environment as the primary constituent elements of the fishes' designated critical habitat. This includes a quantity of water of sufficient quality that is delivered to a specific location in accordance with a hydrologic regime that is required for the particular life stage for each species. The physical habitat includes

areas of the Colorado River system that are inhabited or potentially habitable for use in spawning and feeding, as a nursery, or serve as corridors between these areas. In addition, oxbows, backwaters, and other areas in the 100-year floodplain, when inundated, provide access to spawning, nursery, feeding, and rearing habitats. Food supply, predation and competition are important elements of the biological environment.

Status of the Species Within the Action Area

Colorado pikeminnow

Colorado pikeminnow are distributed throughout the Colorado River from Price Stubb Dam, an impassible barrier at the upper end of the Grand Valley (RM 188.3), downstream to Lake Powell (Osmundson and Burnham 1998). The Recovery Program is scheduled to provide passage at the structure, but it currently remains an obstacle to fish movement.

The Recovery Program stocked hatchery reared Colorado pikeminnow into the upper reaches of the Colorado and Gunnison Rivers in 2003 and 2004 (n=5,074). The purpose was to reestablish pikeminnow into unoccupied, historical habitats, which until recently were isolated by irrigation diversion structures. In the spring of 2003, Recovery Program biologists recaptured 8 of those stocked adult pikeminnow between river miles 60 and 64; 4 between river miles 64 and 70; and 20 between river miles 50 and 60 (USF&WS 2004b).

The lower 65 miles of the Colorado River has a large number of backwaters and embayments, which are characterized by the warmest summer water temperatures in the Colorado River upstream from Lake Powell (Osmundson 1999). These backwaters provide important nursery habitat for young-of-the-year (YOY) Colorado pikeminnow during the first year of their life (Tyus and Haines 1991). Density and distribution of YOY Colorado pikeminnow have been monitored in the Colorado River since 1982 (McAda and Ryel 1999). Density has been highly variable over that period, but YOY have been captured every year since monitoring began. High densities of YOY Colorado pikeminnow occurred in 1985, 1986, and 1996; low densities occurred in 1984, 1995, 1997, and 2003 when none were collected. Young-of-the-year Colorado pikeminnow have been found throughout the Colorado River downstream from the confluence with the Gunnison River, but have always been most abundant throughout the 65 river miles between Moab, Utah and the mouth of the Green River. In the autumn 2005, 19 YOY pikeminnow were collected in the lower Colorado River, which is consistent with numbers collected over the previous four years, but is drastically low compared with annual catch rates reported from a four year period in the early to mid-1990's (range; year 1995: N= 84 to year 1996: N=866). In 2005, 73% of the total catch was collected between Colorado River miles 40-55, which begins approximately 10 miles downstream of the US-191 Bridge (Goddard et al. 2005).

Razorback Sucker

Few razorback suckers have been captured downstream from the Grand Valley, between Loma and Lake Powell. Taba et al. (1965) captured eight juveniles in backwaters of the Colorado River

downstream of Moab, within the project area. One adult was captured near Salt Wash (RM 144.2) in 1988 (McAda et al. 1994b). Further downstream, Valdez et al. (1982b) captured two razorback suckers within 2 miles of the confluence with the Green River, and Valdez (1990) captured one more in the same area.

The only small razorback suckers reported from the Colorado River were captured by Taba et al. (1965), who found eight juveniles (90–115 mm TL) in "quiet backwater areas" during a 2-yr survey of the river between Moab and Dead Horse Point. That observation is consistent with collections of juveniles from the Green River. Gutermuth et al. (1994) captured two age-0 juveniles in backwaters along the lower Green River in 1991, and Modde (1996) found two in similar habitats in the middle Green River in 1993. Most recently, Modde (1996) found age-0 juveniles in an experimental flooded bottomland (Old Charlie Wash) along the middle Green River when it was drained at the end of the growing season — 28 in 1995 and 45 in 1996.

Initial surveys indicate that some of the hatchery reared razorback suckers stocked in the Colorado River are remained near their stocking location, and others have moved and are surviving further downstream in the Colorado River (Burdick 2003). In 2003, USFWS captured 3 stocked adult razorback suckers between river miles 60 and 64, 10 between river miles 64 and 70, and 8 between river miles 50 and 60 (USFWS 2004b). USFWS sampled this stretch of river in the spring of 2004 and captured 6 stocked adults between river miles 64 and 70, 2 between river miles 60 and 64, and 3 between river miles 45 and 60 (USFWS 2004c).

Bonytail

Few bonytails have been captured from the upper Colorado River since intensive sampling began in the 1970s, even though anecdotal and photographic evidence suggest that they were common in the river early in this century (Quartarone 1993). Valdez et al. (1982b) did not capture bonytails during an intensive 3-yr study of the Colorado River between Rifle and Lake Powell. Kaeding et al. (1986) captured one adult at Black Rocks near the Colorado-Utah state line, and Valdez (1990) captured 14 *Gila* spp. from Cataract Canyon that were suspected to be bonytails (1 YOY, 7 juveniles, and 6 adults).

The Recovery Program began a reintroduction program in 1996 and has stocked about 84,600 bonytails into the Colorado River since then (Badame and Hudson 2003). Developing a self-sustaining bonytail population in the upper Colorado River will require accomplishments in all phases of the Recovery Program including nonnative fish control, habitat restoration, and instream flow protection. Recaptures of these stocked individuals have been increasing in recent years throughout the river, including near the US-191 Bridge (USFWS 2004a). In 2003, a stocked adult bonytail was captured by USFWS at river mile 66.2, just upstream of the bridge (USFWS 2004b). In 2004, a stocked adult was captured at river mile 69.2. (USFWS 2004c). Recovery goals call for a self-sustaining population of 4,400 adults in the upper Colorado River (USFWS 2002a). The Recovery Program met its targeted stocking goal of 5,330 hatchery produced bonytail ($\geq$ 200mm TL) for the Colorado River, in 2005. These fish were released in equal lots at two locations in the Colorado River in Colorado. Researchers continue to recapture

these hatchery reared fish (in fewer numbers than reported for the razorback sucker) throughout the Colorado River system including locations near the project area.

Because of its extreme rarity, little is known about the habitat requirements of bonytail in the upper Colorado River. However, all four of the endangered fish evolved together in the Colorado River ecosystem, and flow recommendations and water quality needs based on habitat requirements of the more common species and basic river restoration principals (Stanford et al. 1996) should also benefit bonytail.

Factors Affecting the Species Environment Within the Action Area

Designated critical habitat for both Colorado pikeminnow and razorback sucker includes the Colorado River and its 100-year floodplain throughout the project area. Designated critical habitat for the humpback chub and bonytail is located approximately 50 miles upstream of the project and approximately 60 miles downstream. Primary constituent elements include, but are not limited to, water (in sufficient quantity and quality to sustain all life stages), physical habitat, and the biological environment (including competition and predation with nonnative species).

Impoundments and diversions have reduced peak discharges in various river reaches throughout the Upper Colorado River Basin since the 1890's, while increasing base flows in other reaches. These depletions, along with a number of other factors, including the introduction of nonnative fishes and increases in salinity and contaminants in the system, have resulted in such drastic reductions in populations of Colorado pikeminnow, humpback chub, razorback sucker and bonytail chub that the USFWS has listed these species as endangered, designated their critical habitats, and has implemented programs to prevent them from becoming extinct.

The numerous impoundments in the upper Colorado River, including Granby, Dillon, Blue Mesa and McPhee Reservoirs, have altered the natural hydrograph of the Colorado River. Reductions in water quantity and changes in flow regime have resulted from upstream developments (USFWS 1993a). A comparison of the frequency of the $Q_{1.5}$ peak flow (a river flow that was equaled or exceeded in 2 out of 3 years) at the Colorado River at the USGS gage near Cisco, Utah (the closest upstream gage) for three development periods (1914-1936, 1937-1965, and 1966-1997) declined from 37,200 cfs to 27,900 cfs to 21,600 cfs (summarized in McAda 2000). Changes in the hydrologic regime through the closure of main stem impoundments has altered sediment transport and resulted in channel degradation (Lyons 1989). Changes in the hydrograph can also lead to changes in the channel geometry. Reduction in channel width has increased the average velocity in the main channel and decreased the number of low-velocity backwaters (Wick et al. 1982). Important backwater habitats and low-velocity shoreline habitats have been eliminated through siltation and subsequent vegetative growth (Wick et al. 1982). In particular, river shorelines have been altered by establishment of the exotic plant tamarisk (*Tamarisk chinensis*). For example, in Canyonlands National Park, the establishment of tamarisk on islands, sandbars, and river shorelines has decreased channel width by an average of 25 percent (Graff 1978). All these species can be found to varying degrees in the project area.

The impoundment of tributaries and mainstem waters also has led to the stocking of a number of nonnative sport and bait fishes for use by local residents and visitors to the basin. While the acceptance of these fishes has been generally favorable to the public, their presence has led to predation, competition, and the general demise of native species (Tyus 1990, Tyus and Saunders 1996). The stocking of nonnative warm water fishes such as channel catfish (*Ictalurus punctatus*), smallmouth bass (*Micropterus dolomieu*), and walleye (*Stizostedion vitreum*) have resulted in the continuing high probability of predation on native fishes. Red shiners (*Cyprinella lutrensis*), for example, have been documented as preying on larval suckers, including razorbacks (Rupert et al. 1993, Modde 1997). Other exotics such as sand shiners (*Notropis stramineus*) and fathead minnows (*Pimephales promelas*) compete for food and space in remaining habitats. Some scientists believe (Tyus and Saunders 1996) that changes in the biological environment as a result of fish introductions may currently be the most significant threat to the native fish fauna of the Colorado River basin.

Water quality has been altered in the Colorado River Basin and also has been identified as a factor resulting in the decline of the endangered fishes. Both the Draft Razorback Sucker Recovery Plan (USFWS 1997) and Colorado Squawfish (name later changed to Colorado pikeminnow) Recovery Plan (USFWS 1991) identify changes in water quality and introduction of environmental contaminants as factors in the decline of the endangered fish. While several general trends in water quality changes have been identified for the Colorado River system (for example, increasing pH and decreasing turbidity), the water quality parameters and environmental contaminants of concern to the endangered fish tend to be site specific.

EFFECTS OF THE ACTION

Factors to be Considered

Implementation of the proposed projects will result in construction activity within critical habitat for the Colorado pikeminnow, bonytail, and the razorback sucker. We focus on the US-191 Bridge Replacement and the Lower Courthouse Wash Structure Widening aspects of the overall project as these two activities encompass the overwhelming majority of effects to these aquatic species and their habitats. Destruction or adverse modification of critical habitat is defined in 50 CFR 402.02 as a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.

US-191 Bridge Replacement

Constructing the bridge will entail fabrication of approach and abutment structures on both sides of the river and the installation of between 3 and 6 piers into the river channel. Both activities will alter the river channel bottom and introduce sediment and possibly nonnative materials into the water column from excavation and dewatering. There is the possibility of cement contamination from spillage and from general contact with river water. Equipment or equipment supported by a barge will be in the river during excavation and construction. The greatest risk to fish would be during spawning (adults mirgrating through the project area) and when the earliest life stages are present. Deconstruction of the

existing bridge presents the chance for loss of materials into the Colorado River and subsequent retrieval activities, i.e more in-channel disturbance and modification of physical habitat.

Lower Courthouse Wash Structure Widening

Courthouse Wash provides a perennial, low tributary flow to the Colorado River with the exception that during storm events spike flows can exceed those of the Colorado River. The proposed action will result in permanent stream bank alteration upstream and downstream of the wash crossing. As with the US-191 bridge construction, all the attendant impacts of construction activities along a water course will apply to this portion of the project as it affects this tributary directly and Colorado River flows indirectly.

Analyses for Effects of the Action

The proposed bridge construction activity will be located in and along the banks of the Colorado River. This reach of the river lies within Critical Habitat for the endangered Colorado River fishes, of which Colorado pikeminnow, bonytail chub, and razorback sucker are known to occur. Primary constituent elements have been identified as necessary for survival and recovery of the endangered fishes, including, but not limited to: water, physical habitat, and the biological environment. The construction activities may affect physical habitat and water quality.

Colorado pikeminnow is the most abundant of the three endangered species potentially affected by project activities. Whereas, the Recovery Program has documented the presence of wild-produced larval razorback sucker in the Gunnison River upstream, we focus our discussion on effects to pikeminnow for which there is a greater information base. We assume that our analysis of effects to pikeminnow are representative of effects to the other two species, unless noted otherwise.

Physical Habitat: The construction of either cofferdams or placement of steel casings will alter flows while forms are built and piers are poured, and could strand fish in isolated pools. The installation of piers into the riverbed will cause disturbance to the channel bottom. Disturbance to the channel and river bed could negatively affect the endangered fish and their habitat.

Altered flow and disturbance from the cofferdam to the channel bottom will be temporary and will be completed before spring high water flows, thus avoiding any alteration to migrational efforts, spawning, and incubation that may occur the following year. The bridge foundation will be permanent, altering channel bottom and flow patterns within the immediate area.

Spawning has been known to occur upstream from this site. Based on spawning movements documented for pikeminnow in the Green River we assume that adult Colorado pikeminnow that reside in the lower Colorado River (the lower 65 miles) migrate upstream through the project area during the spring to reach upstream spawning habitats. Adult pikeminnow subsequently down-migrate during the summer after spawning to return to a home range. There is the potential for any life stage of pikeminnow (larval, juvenile, and adult) to be present in the construction site area immediately following the spawning season (late June through August). Young juveniles ($\geq$30mm total length)

through adult size classes could occur in the project area any time of the year. Although activities that are specifically detrimental to spawning and hatching (any in-channel disturbances) will be avoided during designated critical times, other activities determined not directly detrimental to spawning (eg. streambank disturbance) or activities occurring after the spawning period may negatively affect the young of the year.

Water Quality: Construction associated with the building of the new bridge and removal of the old bridge will cause disturbance to the soil in this area and could affect water quality. Fugitive dust and run off carrying silt loads from rainstorms could increase the turbidity of the water in this area and downstream. Construction methods involving building bridge foundations, pouring concrete into forms, constructing and using cofferdams, laying asphalt, installing retaining walls, and bridge deconstruction; combined with the use of heavy equipment; will disturb the river bed and surrounding soil adjacent to the river. This activity will add sediment to the water when runoff occurs, however the Colorado River fish are relatively tolerant of increases in suspended sediments.

Possible contamination could also result from the concrete when poured into pier forms. Care should be taken by the contractor to minimize spillover during concrete pouring.

Water Depletion: The proposed action specifies that municipal sources will be used to acquire project water. According to the Recovery Program's Section 7 Agreement, any depletion of the Colorado River will result in a jeopardy to endangered fish. FHWA / UDOT must reinitiate formal Section 7 consultation with the Service if new water depletions from the Colorado River will occur. If water will be taken directly from the Colorado River, fish populations that reside within this area, including the endangered fish of the Colorado River, may be affected. Water depletion can negatively affect larval and small fish if pumps are not located in a proper area of the water column and correct screening is not used.

Species' Response to a Proposed Action

Alteration of physical habitat and water quality are the primary impacts of the proposed bridge replacement. Fill material would be placed in an area of the floodplain that is currently floodable and provides habitat for fishes during high flows.

Floodplain habitat along the Colorado River has been identified as very important to Colorado pikeminnow, bonytail chub and razorback sucker and therefore, has been designated as critical habitat. Physical habitat is a primary constituent element of critical habitat and reducing physical habitat in a floodplain area by the placement of fill material is a direct alteration of critical habitat.

The reduced availability of flooded bottomlands and backwater habitats in the upper Colorado River Basin has been identified as a limiting factor in the recovery of the endangered Colorado River fish (Irving and Burdick 1995). Flooded bottomland and backwater habitats enhance the survival of larval and juvenile fish to breeding age (Modde et al. 1996). Any reduction in the survival rate of adult, larval, and juvenile fish would reduce recruitment into the breeding population and significantly reduce the overall population viability of these species in the upper Colorado River Basin.

Water quality is defined by parameters such as temperature, dissolved oxygen, environmental contaminants, nutrients, turbidity, and others. Fish exhibit both lethal and sublethal responses to environmental contamination. There is the possibility of contamination from oil or gas leaks from construction equipment. Exposure to oil or gas could cause heart and respiratory rate changes, enlarged livers, reduced growth, and fin erosion.

Channel bottom disturbance and riverbed alterations from the construction activities will cause sedimentation. Increases in sediment reduce water clarity and increase turbidity, thus reducing primary productivity. High sediment concentrations can also harm fish directly by causing death, reducing growth or resistance to disease or preventing successful egg and larval development, affecting natural migrations, and indirectly by reducing the abundance of food.

Construction activities could impact critical habitat by increasing sediments in the water that could harm fish if construction occurs during the spawning period or soon after when larval Colorado pikeminnow, bonytail, and razorback suckers are present in the river system. However, the low level and temporary nature of this added sediment to the water should not negatively affect the environment of these endemic fish, as they have evolved in highly variable environments that include high sediment loads, and thus are adapted to increased turbidity within the system. This short term habitat impact will be minimized by restricted construction timeframes and applicant committed conservation measures.

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 Moab area receives intensive seasonal recreational use that is increasing over 13% annually (USFWS 1998). The purpose of the proposed action is in part to respond to increased visitation to Southeaster Utah. Recreational use of the Colorado River corridor is expected to increase as visitor numbers rise. Traffic use of state Highway 128 will increase. This could lead to an increase in use from private business that own recreational venues that cater to rafting, boating, photography, scenic tours on boat, bikes, and afoot, and fishing. Private use of the corridor will increase due to the scenic views and recreational opportunities offered here.

There are no known State, tribal or local actions identified which are reasonably certain to occur in the action area.

CONCLUSION

After reviewing the current status of the Colorado pikeminnow, bonytail chub, and razorback sucker; the environmental baseline for the action area; the effects of the action and the cumulative effects; it is the Service's biological opinion that the US-191 Bridge Replacement and the Lower Courthouse Wash

Structure Widening are not likely to jeopardize the continued existence of the Colorado pikeminnow, bonytail chub, and razorback sucker and are not likely to result in destruction or adverse modification of critical habitat.

The Service reached this conclusion for the following reasons:

- The proposed action includes measures to offset impacts to physical habitat and minimize negative impacts to water quality within the floodplain and riverine environments.

- The disturbance and temporary modification of riparian habitat (estimated to be less than 5 acres) will not appreciably diminish the value of designated critical habitat in the survival and recovery of the Colorado pikeminnow, bonytail chub, and razorback sucker.

- The proposed action is not expected to affect the river's ability to communicate with its active floodplain (baseline condition).

- Construction activity for the bridge would be confined to areas that have been heavily modified by past construction activity, including past bridge construction.

- Riparian habitat loss, alterations, and degradation from construction activity along the Colorado River will be offset through planned applicant-committed measures.

- To minimize incidental take and disturbance to migrating adults, eggs, and fry, all construction activities that involve any disturbance to the river waters or associated drainages will not take place during spawning, incubation, and fry stages of the Colorado endangered fish (May-August).

- Altered flow and disturbance from cofferdam construction to the channel bottom will be temporary and will be completed before spring high water flows, thus helping to avoid alteration to migrational efforts, spawning, and incubation that may occur the following year.

- Scheduled construction activities are not expected to span more than two consecutive spawning seasons.

- Temporary increases of sediment in the water should not negatively affect the environment of these endemic fish in the long term. The fish have evolved in highly variable environments that include high sediment loads, and thus are adapted to increased turbidity within the system.

- The proposed action will not require new water depletions from the Colorado River.

The conclusions of this biological opinion are based on full implementation of the project as described in the biological assessment, description of the proposed action section of this document; including all applicant-committed conservation measures that were incorporated into the project design.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations 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 defined (50 CFR 17.3) 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 (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species 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 intended as part 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.

The measures described below are non-discretionary, and must be undertaken by FHWA / UDOT so that they become binding conditions of any grant or permit issued to an applicant, as appropriate, for the exemption in section 7(o)(2) to apply. FHWA / UDOT has a continuing duty to regulate the activity covered by this incidental take statement. If FHWA / UDOT (1) does not assume and implement the terms and conditions or (2) does not require any applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, FHWA / UDOT must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(i)(3)].

Amount or Extent of Take

The Service anticipates a small number of Colorado pikeminnow, bonytail chub, and razorback sucker will be taken as a result of this proposed action. Incidental take is expected to be in the form of death or physical injury from construction activities in the main channel and in nursery areas, changes in water quality, and possible stranding of fish during construction of cofferdams.

The Service anticipates that this take would be temporary because remedial actions will be implemented immediately by FHWA / UDOT if highly increased sediment or concrete contaminant levels, or stranded fish are detected at any time during project operations and that appropriate reclamation and restoration plans will be developed and effectively implemented.

The exact number of individuals that may be taken as a result of the proposed action is difficult to detect for the following reasons: 1) in a large river system such as the Colorado River, finding a dead or impaired specimen is unlikely, 2) the Service assumes that younger life stages will be more susceptible to harm and these are more difficult to observe, 3) sublethal effects will be difficult to detect and more likely, could only be speculated based on results of water quality monitoring, and 4) aquatic resource monitoring may not be sensitive enough to detect low level changes in the environment. However, with

the implementation of the conservation measures that are part of the proposed action, and the small number of fish likely in the potentially affected area, the number of individuals taken should be very low. If the numbers of individuals taken are higher than expected, this would be a concern for the efficiency of the conservation measures and the assumptions on the populations present in the area.

The Recovery Program has monitored distribution and abundance of Age-0 Colorado pikeminnow since the 1980's. This standardized monitoring program entails sampling nursery habitats (backwaters) at a rate of two habitats per 5 river miles. Sampling occurs throughout the lower 110 miles of the Colorado River. Results indicate that the majority of Age-0 pikeminnow are found in the lower 65 miles of the river. Updated results of those efforts can be found in Annual Report form at the Recovery Program's website: http://www.r6.fws.gov/crrip/anr.htm. Monitoring results vary greatly from year to year and have yielded as many as 866 Age-0 pikeminnow in 1996 to none in 2003. The Service assumes that Age-0 endangered species are the most susceptible to incidental take in the form of death or physical injury and that Age-0 pikeminnow monitoring is an indicator of their density in the ecosystem. The Service will permit take commensurate with the most recent available Age-0 pikeminnow monitoring results. Annual take of young Colorado River endangered fish (any species; < 50 mm TL) is permitted in the amount of up to 5% of the total number of Age-0 pikeminnow collected during the most recent annual standardized monitoring effort. No take of endangered fish greater than 50 mm TL is permitted.

Effect of the Take

In the accompanying biological opinion, the FWS determined that this level of anticipated take is not likely to result in jeopardy to the species.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of the Colorado pikeminnow, bonytail chub, and razorback sucker.

1. Conduct all proposed actions in a manner that will minimize potential for soil, water, and other biological impacts to the endangered fish species from construction activities.

2. Conduct all proposed actions in a manner that will minimize disturbance of critical habitat for the Colorado pikeminnow, bonytail chub, and razorback sucker.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the FHWA / UDOT must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The following actions and protective measures in addition to the previously listed applicant-committed environmental protection measures will be taken by construction contractors and crews to minimize

impacts to the floodplain and riparian corridor, and the adverse modification of critical fish habitat; minimizing direct take of fish:

To Implement RPM #1 and #2:

1. All previously listed applicant-committed environmental protection measures will be fully implemented during project planning and construction activities.

2. Construction activities that involve any disturbance to river waters or associated drainages will not take place during spawning, post-spawning, incubation, and fry stages of the Colorado pikeminnow, bonytail, and razorback sucker (May-August).

3. Construction activities will span no more than two consecutive endangered fish spawning seasons.

4. Construction activities that involve any disturbance to the rivers waters or associated drainages will avoid creation of isolated pools or stranding of fish within microhabitats.

5. Where isolated pools are formed, UDWR or qualified personnel approved by the Service will be contacted to remove and seine any entrapped endangered fish.

6. Provisions to maintain UDWR or other qualified biologists on-site must be made prior to commencement of construction activities.

7. FHWA / UDOT, the applicant, and contractor will ensure that construction equipment is not leaking hazardous substances. Any spills or leaks will be immediately cleaned up.

8. Upon completion of the project, FHWA / UDOT will provide the Service with a report documenting how the reasonable and prudent measures and the terms and conditions were implemented and numbers of any fish taken.

REPORTING REQUIREMENTS

The incidental take statement provided in this biological opinion satisfies the requirements of the Endangered Species Act of 1973, as amended.

Upon locating dead, injured, or sick fish, immediate notification must be made to the Service's Salt Lake City Field Office at (801) 975-3330 and the Service's Division of Law Enforcement, Ogden, Utah, at (801) 625-5570. Pertinent information including the date, time, location, and possible cause of injury or mortality of each Colorado pikeminnow, bonytail chub, or razorback sucker taken shall be recorded and provided to the Service. Instructions for proper care, handling, transport, and disposition of such specimens will be issued by the Service's Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act 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.

The conservation recommendations contained in the previously listed applicant-committed environmental protection measures and reasonable and prudent measures are sufficient to minimize or avoid adverse effects of the proposed action. No additional recommendations are identified.

REINITIATION-CLOSING STATEMENT

This concludes formal consultation on the actions outlined in the request for consultation on the impact of the proposed project. As provided in 50 CFR 402.16, reinitiation 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 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 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, any operations causing such take must cease pending reinitiation.

Thank you for your cooperation in the formulation of this biological opinion and your continued interest in the conservation of endangered, threatened, and proposed species. If you have any questions or comments, please contact Tom Chart at (801) 975-3330 ext. 144.

Sincerely,

Larry Crist
Utah Field Supervisor

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MEMORANDUM OF AGREEMENT
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
PURSUANT TO 36 CFR PART 800.6(c)

by

THE FEDERAL HIGHWAY ADMINISTRATION, UTAH DIVISION

and

THE UTAH STATE HISTORIC PRESERVATION OFFICE

Concurring Parties Include

THE UTAH HISTORIC TRAILS CONSORTIUM

THE UTAH DEPARTMENT OF TRANSPORTATION

PROJECT NO. BHF-0191(27)129E;
US-191, COLORADO BRIDGE REPLACEMENT

WHEREAS, the Federal Highway Administration, Utah Division, (FHWA), acting as lead agency for implementing Section 106 of the National Historic Preservation Act, has determined that the BHF-0191(27)129E; US-191, Colorado Bridge Replacement will affect properties eligible for inclusion in the National Register of Historic Places, and has consulted with the Utah State Historic Preservation Officer (USHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) and Section 4(f) of the Department of Transportation Act of 1966 (23 CFR 771.135); and

WHEREAS, the Utah Trails Consortium and the Utah Department of Transportation (UDOT), have participated in consultation, and have been invited to be signatory in this Memorandum of Agreement (MOA);

NOW THEREFORE, the FHWA and the USHPO agree that the undertaking shall be implemented in accordance with the following stipulations to take into account the effect of the undertaking on historic properties.

Stipulations

To mitigate adverse effects to historic properties, site 42GR3627, prehistoric lithic scatter, and the UDOT structure 0C-285-0, bridge over the Colorado River, the FHWA shall ensure that the following measures are carried out:

1. SITE 42GR3627: DATA RECOVERY. The FHWA and the UDOT shall ensure that a data recovery plan is developed in consultation with the BLM and the USHPO for the recovery of archaeological information from site 42GR3627. The plan shall be consistent with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 44734-37) and take into account Council's publication, Treatment of Archeological Properties: A Handbook (1980) and the relevant concerns of the BLM. The plan will be submitted to the PITU for comment. The data recovery plan shall at minimum specify:

* the portion of the sites where data recovery is to be carried out;
* the portion of the properties that will be destroyed without data recovery;
* the research questions to be addressed through data recovery, with an explanation of their relevance and importance;
* the methods to be used, with an explanation of their relevance to the research questions;
* the methods to be used in analysis, data management and dissemination of data, including a schedule;
* the disposition of recovered materials and records;
* a proposed schedule for the submission of progress reports to the USHPO and any other interested parties.

The data recovery plan shall be submitted by the FHWA to the USHPO and the PITU for a 30-day review. Unless any of the parties object within 30 days after receipt of the plan, the FHWA and the UDOT shall ensure that it is implemented before construction at site 42WN2489. A limitation of operations so stating will be included in the contract.

Further, the FHWA shall ensure that all materials, artifacts and records resulting from the data recovery conducted at these sites are curated at the Edge of the Cedars State Park Museum in accordance with 36 CFR Part 79.

2. RECORDATION. The FHWA shall ensure that archival documentation of UDOT Structure 0C-285-0, Bridge over the Colorado River, is completed according to Utah State standards on Intensive Level Survey (ILS) forms plus large format black and white photographic documentation before demolition. Photos

and negatives will be included in the final ILS package. Temporary fencing will be placed on unaffected site portions to prevent accidental encroachment during construction.

3. FEDERAL AND/OR STATE NAGPRA. If human remains are encountered, the FHWA and the UDOT will comply with the Federal Native American Grave Protection and Repatriation Act of 1990 and any state equivalent. Federal and State NAGPRA applies to human remains discovery under the clause below.

4. DISCOVERY. In accordance with 36 CFR 800.11(a) and (b) (1), the FHWA and the UDOT are providing for the protection, evaluation, and treatment of any historic property discovered before or during construction. UDOT CSI 01355 - Environmental Protection Part 1.10, Discovery of Historic, Archaeological, and Paleontological Resources, applies to this project, stipulating instructions to the contractor for the protection of any discovery in the course of construction. Specifically, upon discovery, construction operations shall be immediately stopped in the vicinity and the Engineer shall be verbally notified of the nature and exact locations of the findings. The Contractor shall not damage the discovered objects and shall provide written confirmation of the discovery to the Engineer within two (2) calendar days. The Engineer then contacts the State archeological authorities and FHWA. The FHWA will consult with the USHPO, the Council, and other affected/ interested parties (includes all potentially interested tribal organizations) in accordance with 36 CFR 800.13(b)(3) toward developing and implementing an appropriate treatment plan before resuming construction. The Engineer will inform the Contractor when the restriction is terminated, with written confirmation following within two (2) calendar days. *(SEE Exhibit A).*

5. REPORTING. The FHWA shall ensure that any/all reports on activities carried out pursuant to this agreement are provided to the USHPO and the Council, and upon request, to any other interested parties.

6. PERSONNEL QUALIFICATIONS. The FHWA and UDOT shall ensure that all historic work carried out pursuant to this agreement is completed by or under the direct supervision of a person or persons meeting or exceeding the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

7. DISPUTE RESOLUTION. Should the USHPO or any party to this MOA object within 30 days to any plans, findings, or data provided for review pursuant to this agreement, the FHWA shall consult with them to resolve the objection. If the FHWA determines that the objection cannot be resolved, the FHWA shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all pertinent documentation, the Council will either:

> (a) provide the FHWA with recommendations, which the FHWA will take into account in reaching a final decision regarding the dispute; or
>
> (b) notify the FHWA that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.

Further, at any time during implementation of the measures stipulated in this agreement, should an objection to any such measure be raised by a member of the public, the FHWA shall take the objections into account and consult as needed with the objecting party, the USHPO, or the Council to resolve the objection.

8. AMENDMENTS. Any party to this MOA may request that it be amended, whereupon the parties will consult in accordance with 36CFR800.6(c)(7) to consider such amendment.

9. COPIES. The FHWA will provide each consulting party with a copy of any memorandum of agreement executed pursuant to stipulation 7.

10. TERMINATION. Any one of the parties, in writing, may terminate their portion of this instrument in whole, or in part, at any time before the date of expiration.

11. REVIEW OF IMPLEMENTATION. If any of the stipulations above have not been implemented by January 1, 2008, the parties to this agreement shall review this agreement to determine whether revisions are needed. If revisions are needed, the parties to this agreement will consult in accordance with 36 CFR 800 to make such revisions.

12. COMPLETION DATE. This instrument is executed as of the date of last signature and, unless sooner terminated, is effective through July 31, 2008 at which time it will expire unless renewed.

13. PRINCIPAL CONTACT. The principal contact for this instrument is:

Pamela Higgins
NEPA/NHPA Specialist
Utah Department of Transportation
Region 4
1345 South 350 West
Richfield, Utah 84701
435-893-4740

Execution of this MOA by FHWA and the USHPO, its subsequent acceptance by the Council, and implementation of its terms, evidence that FHWA has afforded the Council an opportunity to comment on the BHF-0191(27)129E; US-191, Colorado Bridge Replacement undertaking and its effects on historic properties, and that the FHWA has taken into account the effects of the undertaking on historic properties.

THE FEDERAL HIGHWAY ADMINISTRATION

BY: _____ DATE: 4/3/07

Mr. Walter Waidelich, PE, Utah Division Administrator

THE UTAH STATE HISTORIC PRESERVATION OFFICER

BY: _____ DATE: 3/16/2007

Mr. Wilson G. Martin, Deputy Utah SHPO/Preservation Program Manager

CONCUR:

THE UTAH DEPARTMENT OF TRANSPORTATION

BY: _____ DATE: 1/23/07

Mr. Dal Hawks, P.E., Region 4 Director

CONCUR:

THE UTAH THISTORIC TRAILS CONSORTIUM

BY: Gerald Haycock DATE: 2 Oct 2007

Mr. Gerald Haycock

DETERMINATION OF ELIGIBILITY

AND

FINDING OF EFFECT

for

Utah Department of Transportation
Project No. BHF-0191(27)129E; Colorado River Bridge Replacement

Developed by the

UTAH DEPARTMENT OF TRANSPORTATION

For

UTAH DIVISION, FEDERAL HIGHWAY ADMINISTRATION

May 12, 2006

Submitted to the

UTAH STATE HISTORIC PRESERVATION OFFICE

Wilson Martin, State Historic Preservation Officer

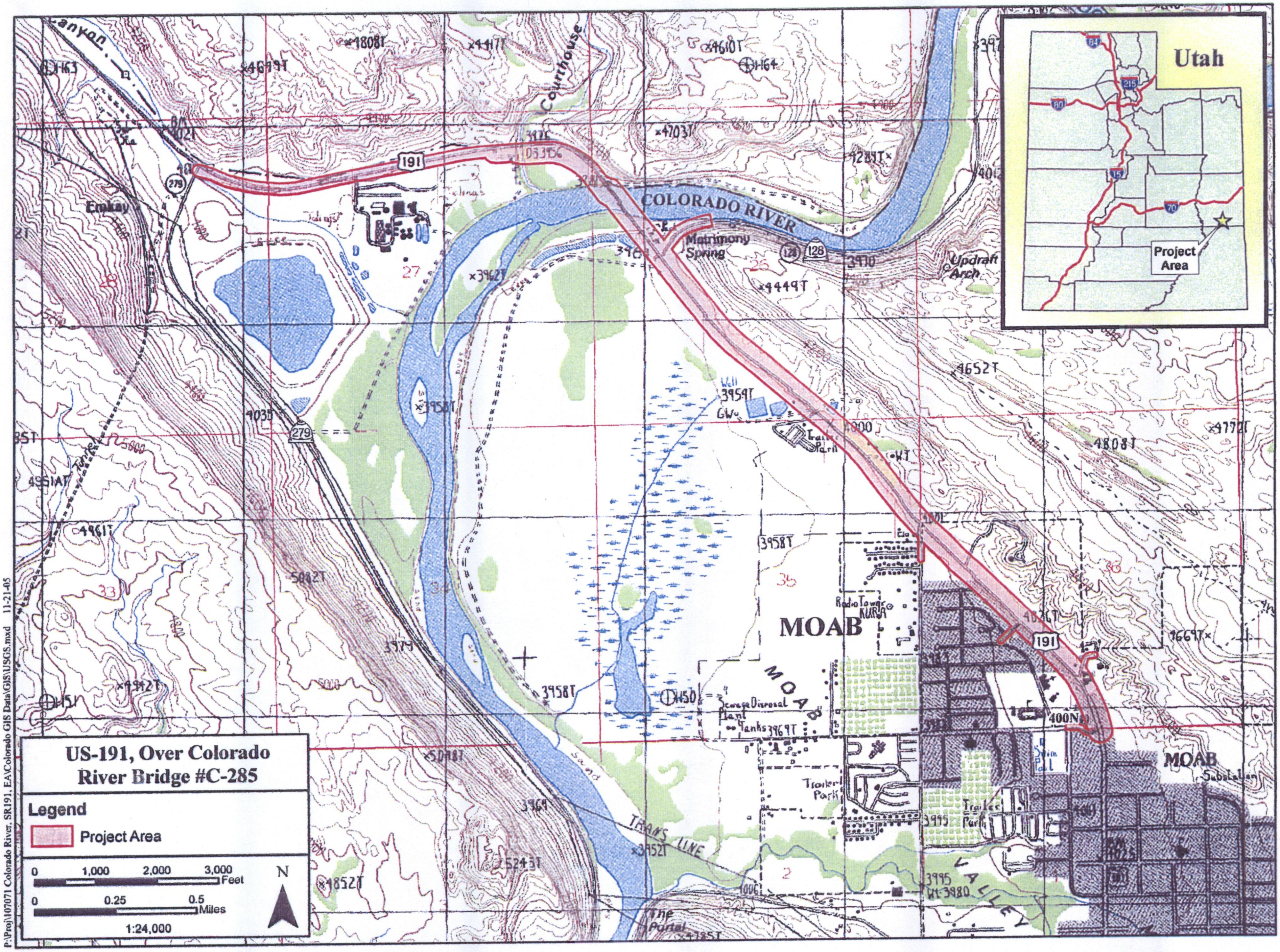
INTRODUCTION

This document specifies the consideration given to historic properties in accordance with Section 106 of the National Historic Preservation Act of 1966 as amended and Utah State Code 9-8-404 of the Utah Antiquities Act as amended , for Project No. BHF-0191(27)129E; Colorado River Bridge Replacement. The project extends from milepost 126.2 at about 400 North, where the four-lane road ends in the northern portion of Moab, and continues north to the Potash Road (SR-279) intersection at about milepost 129.79 (Figure 1). The following Determination of Eligibility and Finding of Effect has been prepared to assist the Federal Highway Administration in consultation with potentially interested parties, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation. The FHWA is the lead agency for purposes of Section 106, and an Environmental Assessment is being prepared in accordance with the National Environmental Policy Act. The project involves lands under Utah Department of Transportation (UDOT), Department of Energy (DOE), Bureau of Land Management (BLM), the State Division of Wildlife Resources (DWR) management, and Moab City. Arches National Park (NPS) boundaries extend to the middle of US-191 in some locations and it would require an act of Congress to change the boundary. The project does not extend onto the park that has natural and cultural resources of value. All of these agencies are invited Consulting Parties in the Section 106 process.

THE PROJECT

UDOT is evaluating the best alternative for addressing deficiencies of the existing Colorado River Bridge on US-191, and the roadway between MP 126.2 and 129.79. The purpose of the project includes: provide a safe bridge that accommodates traffic over the Colorado River, improve safety in the study area (including the Courthouse Wash bridge), meet the existing and projected travel demand, provide continuity between the four-lane sections on either end of the study area, and facilitate movement of bicycle/pedestrian traffic along US-191. The Colorado River Bridge is in poor condition and is eligible for federal funds to replace it. It is too narrow, cannot support modern three-axle vehicle loads, it has no shoulders, it has parapets that no longer meet crash safety criteria, the abutments and piers are being scoured by the river, the bridge foundations are cracked and have voids, and areas of soft concrete. In the current project area, US-191 is a 3.7-mile two-lane highway sandwiched between four-lane highway to the north and south. To increase capacity for existing and projected traffic, the roadway needs to be four lanes. The Courthouse Wash Bridge is a two-lane bridge and would need to be widened to four-lanes to provide continuity in the roadway cross section and increase capacity. Because of the recreational destinations in the Moab area, substantial bicycle and pedestrian traffic between town and destinations north of Potash Road are using the shoulder of US-191 on both sides of the highway. The Colorado River Bridge has no shoulder or sidewalk for use, and bikes and pedestrians are forced into the traffic lanes.

The alternatives being considered for addressing these needs include the No Build and the Build Alternative (preferred). Given that the Colorado River Bridge is classified as functionally obsolete, the No Build Alternative would consist of the continuous maintenance and rehabilitation projects that UDOT considers necessary to maintain the bridge, but eventually the bridge would have to be replaced, or the safety, continuity, and capacity needs would not be met.



P:\Proj\107071 Colorado River, SR191, EA\Colorado GIS Data\GIS\USGS.mxd 11-21-05

The Build Alternative would construct a new Colorado River Bridge using a staged process that would provide four travel lanes, with median and shoulders. The Courthouse Wash Bridge and US-191 highway will be widened to four lanes with a median and shoulders, and new right of way will be required. Moab City has successfully acquired Transportation Enhancement funding to construct a pedestrian/bike path that will partially be on independent alignment, with some sections part of the US-191 roadway. Phase 1 construction will replace the Colorado River Bridge and its approaches. Between the bridge and the Courthouse Wash parking lot, a bike/ped path will be constructed as Phase I. The Courthouse Wash Bridge and roadway widening between 400 North and the Potash Road will remain in its current condition until funding is obtained. The funding may not be acquired for many years.

Moab City and Grand County are in the process of designing a 10-foot meandering bicycle and pedestrian path along the east side of US-191 (from approximately 600 North to SR-128) and expect construction in 2007. Though UDOT is coordinating both projects, portions of the proposed path would likely need to be rebuilt as part of the Preferred Alternative to accommodate the widened road. This situation is expected to occur in areas where substantial cuts and/or retaining walls would be required. The exact locations of the reconstructed trail segments would be identified during final design of the roadway and are expected to be within the proposed right-of-way by retaining walls, as necessary. Plans for a potential landscaped median would also be finalized during design in coordination with Moab City and Grand County. A six-foot sidewalk is proposed in developed areas where the meandering path is not provided. In undeveloped urbanized areas, the proposed right-of-way width would accommodate a future sidewalk where the meandering path is not provided.

CULTURAL RESOURCES

Determination of Eligibility

The Area of Potential Effects (APE) has been intensively inventoried for cultural resources by Montgomery Archaeological Consultants of Moab (Whitfield et al. 2006a,b). Exhibit 1 presents the archaeological site and historic architectural properties locations found on design sheets and Exhibit 2 presents the site locations on the USGS maps. Table 1 presents the archeological site inventory results, and Table 2 presents the historic architectural properties inventory of in-period buildings The width of the inventory between 400 North and the Colorado River Bridge was generally 200 ft either side of US-191 existing centerline. From the Colorado River to the Potash Road the survey varied between 100-300 ft on the north or east side, to avoid going on National Park Service lands, and on the southwest side varied 100-300 ft as well. The intersecting roads at 400 North, Cermak Drive, N. Mi Vida Drive and 500 West were surveyed for a distance of 500 ft and 100 wide. State Route 128 was surveyed for 1,000 ft and 200 ft wide.

An Intensive Level Survey (ILS) of architectural historic properties was completed by MOAC and is reported separately by Whitfield et al. (2006b). Exhibit 1 presents the architectural properties on design sheets.

Table 1. Archeological sites documented.

State Site Number	Ownership	Site Type	NRHP Eligibility	Finding of Effect	Mitigation
42Gr190	UDOT/Private	Prehistoric Habitation/Historic Spring Development	Eligible C and D	No Effect	--
42Gr2074	NP/UDOT	Rock Shelter	Not Eligible	--	--
42Gr2565.14	UDOT/Private/DOE	Historic U.S. 160	Eligible A & C	No Effect	--
42Gr2565.15		Destroyed bridge/road	Non-contributory	No effect	--
42Gr2565.16		Part destroyed/ isolated	Non-contributory	No effect	--
42Gr2565.17		Historic U.S. 160	Eligible A	No Effect	--
42Gr2710.15	UDOT/Private	Central Stock Driveway	Eligible A	No Effect	--
42Gr2813 (2 segments)	UDOT/Private	Moab to Thompson Wagon Road	Eligible A & D	No Effect	--
42Gr2923	UDOT/Private	Telephone Line	Eligible A	No Effect	--
42Gr3223	Private	Rock Shelter/Trash Scatter	Eligible D	No Effect	--
42Gr3622	UDOT/Private	Historic Ditch	Not Eligible	--	--
42Gr3623	UDOT/Private	Historic Ditch	Not Eligible	--	--
42Gr3624	UDOT/Private	Foundations	Not Eligible	--	--
42Gr3625	UDOT/Private	Historic Ditch	Not Eligible	--	--
42Gr3626	Private	Lithic Scatter	Eligible D	No Effect	--
42Gr3627	UDOT/Private	Lithic Scatter	Eligible D	Adverse	Data Recovery
42Gr3628	UDOT/Private	Lithic Scatter	Eligible D	No Effect	--
42Gr3629	UDOT/Private	Historic Trash Scatter	Not Eligible	--	--
42Gr3630	UDOT/Private	Historic Sandstone Quarry	Eligible A	No Effect	--
42Gr3631	UDOT/Private	State Route 128	Not Eligible	--	--
42Gr3632	UDOT/Private	Historic Inscription	Eligible A	No Effect	--
42Gr3633	UDOT/Private	Lithic Scatter	Not Eligible	--	--
42Gr3634	UDOT/Private	Prehistoric Petroglyph Panel	Eligible D	No Effect	--

42Gr3635	UDOT/Private	Metal Pipes in Cliff	Not Eligible	--	--
42Gr3667	Private	Bridge Abutment, Historic Inscription, Petroglyphs	Eligible A, C & D	No Effect	--

Table 2. Historic structures documented.

Property Name/ Address	Building Style/ Type	NRHP Eligibility	Finding of Effect	Section 4(f)	Mitigation
1 Rosalie Ct.	Modern Contemporary	Eligible	No Effect	No	--
1001 N. 500 West	Vernacular Cottage	Not Eligible	--	--	--
St. Pius X Catholic Church 122 W. 400 North	Vernacular	Eligible	No Effect	No	--
Arthur Taylor House/Desert Bistro Restaurant 1266 N. Hwy 191	2-Story T-plan Farmhouse	Eligible	No Effect	No	--
Bridge over Colorado River (Structure 0C-285-0)	Multi-span Steel Plate Girder/Concrete Piling with Concrete Deck	Eligible	Adverse	Yes	ILS
2 Rosalie Ct.	Modern Contemporary	Not eligible	--	--	--
3 Rosalie Ct.	Modern Contemporary	Not eligible	--	--	--
Farabee's Jeep Rental 401 N. Main	Vernacular	Eligible	No Effect – temporary construction easement	No	--
4 Rosalie Ct.	Modern Contemporary	Not eligible	--	--	--
Commercial building 415 N. Main	Vernacular	Not eligible	--	--	--
Cottage Inn 488 N. Main	Vernacular	Not eligible	--	--	--
Adventure Inn 512 N. Main	Vernacular	Not eligible	--	--	--
543 N. Main	Vernacular	Not eligible	--	--	--
La Hacienda Restaurant/Inca Inn Motel 570 N. Main	Vernacular	Not eligible	--	--	--

Splore 610 N. Cermak	Modern Contemporary	Not eligible	--	--	--
Elks Lodge 611 N. Cermak	Vernacular	Eligible	No Effect	No	--
646 N. MiVida	Modern Contemporary	Eligible	No Effect	No	--
654 N. MiVida	Modern Contemporary	Eligible	No Effect	No	--
Sunset Grill 900 N. Hwy 191	Modern Contemporary	Eligible	No Effect – temporary construction easement	No	--
999 N. 500 West	Vernacular	Eligible	No effect	No	--

All documented cultural resource sites are evaluated for National Register of Historic Places (NRHP) eligibility in accordance with 36 CFR 800.4(a-d) (see Tables 1 and 2). All of the inventoried historic properties reach only the local level of significance. The total number of archaeological sites or segments of sites identified within the current APE is 26. Of these, 17 are historic sites, seven are prehistoric only, and two are multi-component historic/prehistoric. Seventeen archeological sites/segments are determined eligible for the NRHP (Table 1).

The total number of buildings documented is 19, and the existing Colorado River Bridge built in 1950 is recorded as well. Buildings and structures that predate 1960 are included in the inventory and evaluated, providing a buffer for properties that may become older than 50 yrs in the preconstruction phase of the project. The structures date from between 1896 to 1960. Of these, the Arthur Taylor house is listed on the National Register of Historic Places, and nine additional properties are found eligible for the Register, including the Colorado River Bridge. According to federal regulation, properties younger than 50 years of age may be evaluated for National Register eligibility under special circumstances; none of these circumstances occurs on this project.

Finding of Effect

Only historic properties (i.e. NRHP-eligible) are evaluated for effects. Thus, those sites that have been determined not eligible do not receive consideration of avoidance of effect by the project. Tables 1-2 present the findings of effect and Exhibit 3 shows the relationship of design to NRHP eligible sites. The only archeological site that cannot be avoided is 42GR3627, a prehistoric lithic scatter, hence it is adversely affected by the project. At site 42WS3628, the project requires extending two feet into the northern site boundary to provide enough room for construction. As stated by MOAC, the site has recently been bladed and shallow fill has been laid on most of its surface. When originally recorded It consisted of only 12 flakes and a biface fragment. Since the area is largely disturbed and the contractor only needs to drive over the two-foot area encroaching on the original site boundary, the UDOT has made a finding of no effect for this site. The only architectural property adversely affected is the Colorado River Bridge.

Every effort has been made to avoid impacting the eligible sites in the project APE through minor alignment adjustments, narrowing medians, and/or pulling in slopes and cuts. In those cases where avoidance is not possible, it is because safety for the traveling public would be unacceptably compromised, or moving the roadway would impact other or even a greater number of historic properties. Please see the Section 4(f) part below for the detailed avoidance measures considered.

SECTION 4(f) CONSIDERATIONS

This section has been included to facilitate USHPO and Council consultation concerning the applicability of Section 4(f) of the Department of Transportation Act of 1966, as amended. Consultation with the USHPO and Council regarding Section 4(f) is required by 23 CFR 771.135 (52 Federal Register 167).

Title 23 of the Code of Federal Regulations states that "The Administration may not approve the use of land from...any significant historic site unless a determination is made that:

(I) There is no feasible and prudent alternative to the use of land from the property; and

(ii) The action includes all possible planning to minimize harm to the property resulting from such use.

Paragraph (g)(2) of this regulation states that "Section 4(f) does not apply to archeological sites where the Administration, after consultation with the SHPO and the ACHP, determines that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place." Thus, eligible sites that are "important for preservation in place" are those that are eligible under criteria other than "D", or information potential alone. New regulations have recently been established under 23 CFR 138, as amended, and Section 6009 of the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) have streamlined Section 4(f) under certain conditions. When the finding of effect under Section 106 for a Section 4(f) property is no effect or no adverse effect may be considered a *de minimis* impact. Detailed avoidance analyses are no longer required for these findings.

Section 4(f) Resources

The archeological and/or segments of sites within the project area that Section 4(f) may apply to are listed in Table 3 and illustrated in Exhibits 1 and 3. All of these 12 sites/segments are important for preservation in place, as they are NRHP eligible under criteria other than D, and/or have qualities that embody the site with values beyond its information potential alone. The ten historic architectural properties that are important for preservation in place are listed in Table 4 and illustrated on Exhibits 1 and 3. The boundaries of these 10 historic sites correspond to their current legal property definitions, as these capture their historic boundaries as well.

Impacts to Section 4(f) Resources

The only site that qualifies for Section 4(f) protection that is adversely affected through direct impacts is the Colorado River Bridge. Of the archeological Section 4(f) properties, eight are completely avoided by the project by implementing avoidance alternatives as iterated below.

Table 3. Section 4(f) archeological sites.

SITE NUMBER	TYPE	AVOIDANCE MEASURE	SECTION 4(F) USE
42GR190	Prehistoric Habitation/ Historic Spring	Out of APE	No
42GR2565.14	Historic US-160	Use 2:1 slope, fence 1 ft from North site boundary	No
42GR2565.15-17	Historic US-160	No avoidance necessary or out of APE	No
42GR2710.15	Central Stock Driveway	25 ft from construction	No
42GR2813 (2 segments)	Moab to Thompson Wagon Road	Sht 5: use retaining wall Sht 8: 37 ft from Right of way with retaining wall	No
42GR2923	Telephone Line	Out of APE	No
42GR3632	Prehistoric petroglyph	Out of APE	No
42GR3667	Bridge abutment, Historic Inscription Prehistoric Petroglyphs	Out of APE	No
42Gr3634	Prehistoric Petroglyph Panel	Out of APE	No

Table 4. Historic architectural Section 4(f) properties.

Property Name/Address	Avoidance Measure	
1 Rosalie Court	Out of ROW	No
St Pius X Catholic Church	Out of ROW	No
Arthur Taylor House	Match existing driveway, remove modern wall in UDOT Right of way, reconstruct modern path in existing location, retaining wall near spring	No
Colorado River Bridge	None possible	Yes
Farabees Jeep Rental	Temporary construction easement	No
Elks Lodge	Out of ROW	No
646 N. Mi Vida	Out of ROW	No

654 N. Mi Vida	Out of ROW	No
Mi Vida Estate/Sunset Grill	Temporary Construction Easement	No
999 North 500 West	Out of ROW	No

Of the architectural Section 4(f) properties, seven are completely avoided. The Farabee's Jeep property will have a temporary construction easement to 12 ft of its frontage along US-191 (Table 4 and Exhibit 3). At the Mi Vida estate (now the Sunset Grill) at 900 North, a temporary construction easement will be needed to reconstruct the driveway access to the property off US-191. These temporary easements have no effect on these two historic properties.

Avoidance Alternatives Considered

Various alternatives have been considered to avoid impacting the Colorado River Bridge section 4(f) property used by the project. These include: Do Nothing, build on new location without using the old bridge at some distant alternate location or to either side of the bridge, incorporation as a one-way couplet with a new structure, and rehabilitate the bridge without affecting its historic qualities. The Do Nothing alternative is not prudent and feasible since the safety and geometric deficiencies of the bridge cannot be addressed through normal maintenance. The bridge is too narrow, cannot support modern loads, has parapets that no longer meet current crash safety criteria, the abutments are scouring and the concrete is seriously degraded. Relocating the crossing at another point over the Colorado River some distance from the current crossing is not feasible and prudent. The bridge is already at the most logical crossing dictated by topography and the historical development of towns and roads in the region. This area is dissected by canyons and has great variation in surface elevation. The bridge is on major route US-191 and is the gateway into Moab. If the current crossing were closed, an approximately 110-mile detour along Interstate 70 and SR-128 would be required.

Relocation to either side of the existing bridge is also not prudent and feasible. Arches National Park borders US-191 on the north and east, and there are steep cliffs along the highway all the way through the project until in the town of Moab proper. Also on the north side are Section 4(f) properties 42GR190, 42GR2656.17, 42GR2923, 42GR3632, 42GR3634, and 42GR3667. Relocating to the west or south on new alignment is also not feasible, as the Matheson Wetland Preserve borders the highway. Any significant alignment departure would require relocating the Courthouse Wash Bridge as well, and potentially impact the Department of Energy hazardous waste site at the Atlas Mine. The added costs for new roadway and two new bridges would be significant, and it would expand adverse effects on the floodplain and riparian zone of the Colorado River. Incorporation as a one couplet also is not feasible, since the deteriorated condition of the concrete is so advanced, and the abutments and piers are being scoured, and it would still require construction of a new on-way bridge to the north or south of the existing one to provide adequate capacity. Finally, rehabilitation without affecting the historic qualities of the bridge is not possible. The insufficient width, lack of shoulder, concrete deterioration, and substandard parapets cannot be addressed without affecting the historic design, materials, and workmanship that make the bridge eligible for the NRHP. In addition, because both of the steel girders supporting the superstructure must be intact to keep the bridge up, the bridge is fracture critical. Only two girders means that the bridge also has only the elements of support needed for stability, and thus has no redundancy in case of a crash that destroys a girder.

Preservation Alternatives

The historic Colorado River Bridge cannot be preserved in place while maintaining its historic qualities. Other preservation alternatives often considered include marketing the bridge for relocation, retrieval of selected components, dismantling for storage, and documentation in advance of demolition. The bridge is a multi-plate steel Girder with concrete pilings and deck. The bridge is 1,000 ft long and has eight spans. The spans vary in length from 113 ft to about 127 ft and are quite heavy. The bridge cannot be relocated or dismantled for alternative use without affecting its historic qualities. The UDOT proposes the bridge receive detailed Intensive Level Survey documentation in advance of demolition.

Measures to Minimize Harm

The measures proposed to minimize harm will be stipulated in the draft Memorandum of Agreement between the FHWA, the SHPO and the consulting parties. The document includes archival documentation to state standards for adversely affected Colorado River Bridge. Temporary fencing will be placed on unaffected site portions to prevent accidental encroachment during construction. Standard specifications dealing with discoveries of historic and archeological resources during construction will provide notification to consulting parties and development of treatment plans.

Coordination

The National Register of Historic Places eligibility and the Draft Section 4(f) Evaluation have been developed in coordination with the FHWA, UDOT, the SHPO, the BLM, NPS, DOE, DWR, Paiute Indian Tribe of Utah, Hopi Tribe, and the Utah Historic Trails Consortium. The final Section 4(f) Evaluation will be coordinated with the federal Advisory Council on Historic Preservation as well.

Conclusion: Section 4(f) Determination

Because a Section 4(f) site is affected, the site is "used" by the project, Section 4(f) applies. A Programmatic Section 4(f) Evaluation for the Use of Historic Bridges will be completed and included in the Draft Environmental Assessment.

MITIGATION

The FHWA will invite the USHPO, UDOT and consulting parties to participate in development of a Memorandum of Agreement (MOA.) (Exhibit 6) that stipulates archeological data recovery at site 42GR3627, and state level archival documentation of the Colorado River Bridge. In accordance with 36 CFR 800.5-6, FHWA will notify the Advisory Council on Historic Preservation of the finding of an adverse effect, and they will decide if they will participate in the execution of the MOA. UDOT will draft a preliminary MOA for review by the consulting parties.

CONSULTING PARTIES

Potential tribal government consulting parties that have been contacted by

FHWA/UDOT both in 2004 and 2005 include: the White Mesa Ute Council, the Ute Mountain Ute, Paiute Indian Tribe of Utah, the Southern Ute Tribe, the Uintah Ouray Ute, and the Hopi Tribe (see Exhibit 4). The Southern Ute Tribe declined to participate (Exhibit4). The Hopi and Paiute Indian Tribe of Utah requested consulting party status (Exhibit 4). The inventory report and this document are being provided to these latter two tribes.

Other potential consulting parties were contacted by UDOT on December 7, 2005 include the Grand County Historic Preservation Commission and Certified Local Government, the Moab Chapter of the Utah Statewide Archaeological Society, and the Utah Historic Trails Consortium. The Trails Consortium replied, requesting consulting party status (Exhibit 5). The PITU were contacted via e-mail on July 28, 2006 regarding further participation in this project. They replied that it out of the area of Tribal interest and declined consultation rights (Exhibit 4). Agencies that have jurisdiction within the area of potential effect as listed in the introduction are also participating as consulting parties in the Section 106 process. All of these parties are being provided this draft document and inventory reports.

PRESERVATION OF UNAFFECTED SITE PORTIONS

To ensure the contractor does not encroach into any site areas not specified for construction use, the UDOT will include a special provision in the construction contract that explicitly identifies the areas needing protection by roadway stationing and erecting temporary fencing as a barrier to unaffected site portions. Standard Specifications governing the contract require that any damage incurred by the contractor will be mitigated at contractor expense.

PLANNING FOR DISCOVERY

Although the project APE has been 100% inventoried, it is always possible that archeological or historical resources could be discovered during construction. UDOT is providing for the protection, evaluation, and treatment of any historic property discovered prior to or during construction. UDOT Standard CSI 01355 Environmental Protection Part 1.9 - Discovery of Historic, Archeological, and Paleontological Resources applies to this project (Exhibit 6), and stipulates instructions to the contractor for the protection of any archaeological, historical, or paleontological resource discovered in the course of construction.

Should a discovery occur, UDOT will consult with the SHPO and relevant Consulting Parties toward developing and implementing an appropriate treatment plan prior to resuming construction.

CHANGES DURING CONSTRUCTION

Quite often, the construction contractor will need locations to either acquire or stockpile material within the construction project limits and other minor adjustments. UDOT proposes that the UDOT Archeologist be able to approve without additional consultation locations that avoid all eligible historic properties within the Colorado River

Bridge Replacement right of way in the project limits during construction

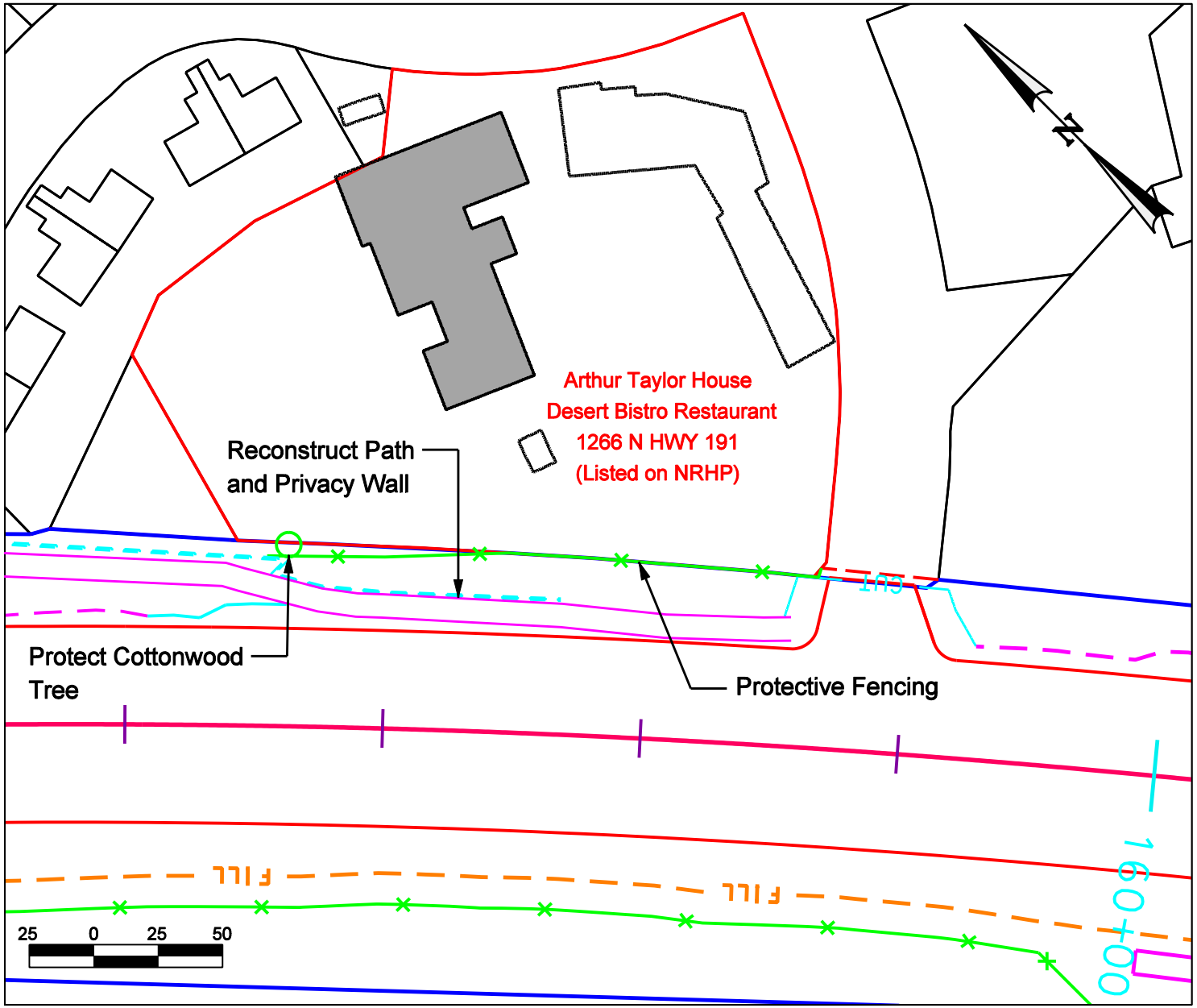
REFERENCES CITED

Whitfield, Angela, R. Stash, and A. Hamblin

2006a Draft Cultural and Fossil Resource Inventory of Utah Department of Transportation's Colorado River Bridge Replacement Project, Grand County, Utah. Prepared by Montgomery Archaeological Consultants, Moab. On file at Utah Department of Transportation Region 4, 1345 South 350 West, Richfield Utah.

'Whitfield, Angela, R. Stash, and D. Shank

2006b Historic Standing Structure Inventory for the Utah Department of Transportation's Colorado River Bridge Replacement Project, Grand County, Utah. Prepared by Montgomery Archaeological Consultants, Moab. On file at Utah Department of Transportation Region 4, 1345 South 350 West, Richfield Utah.



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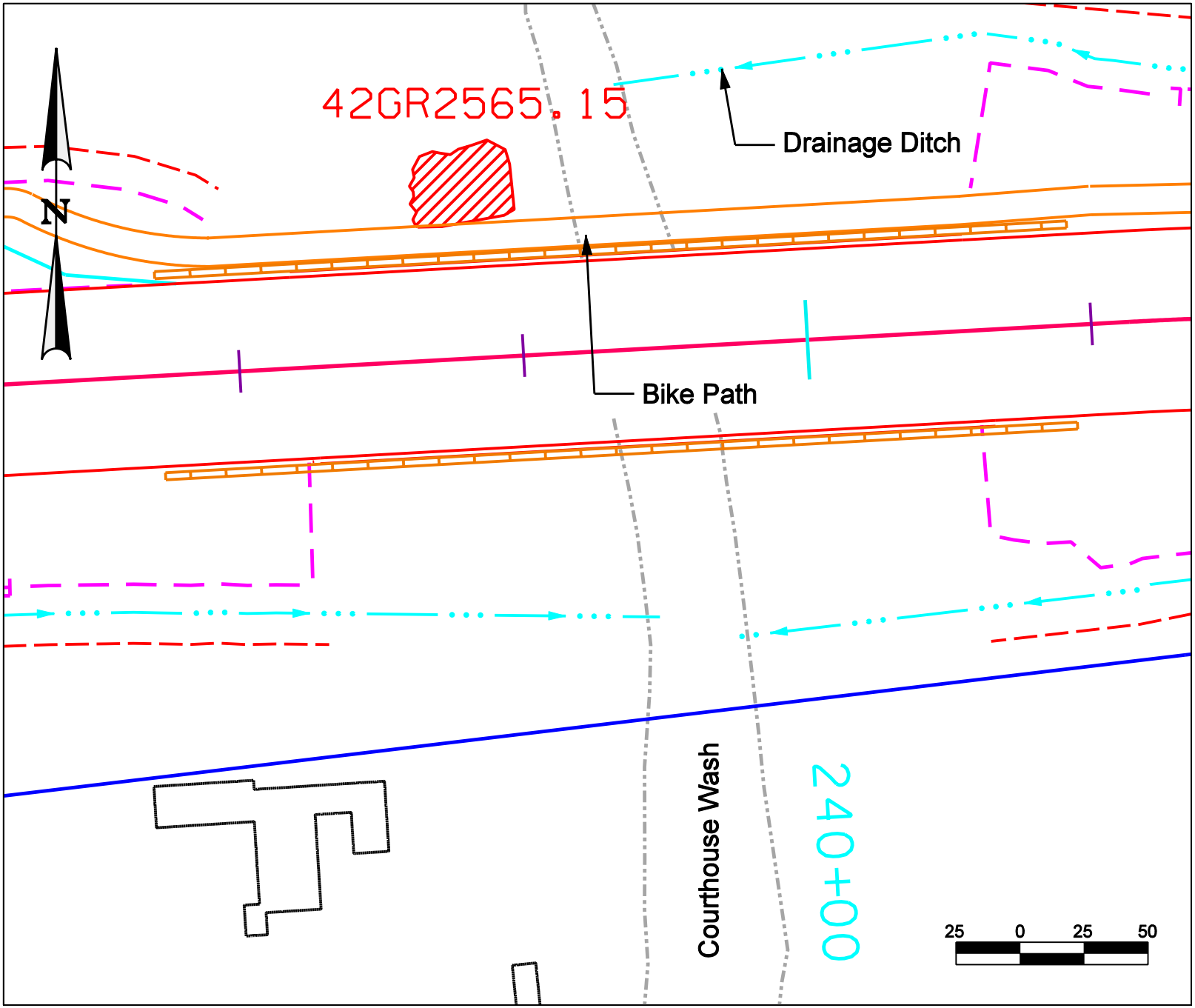

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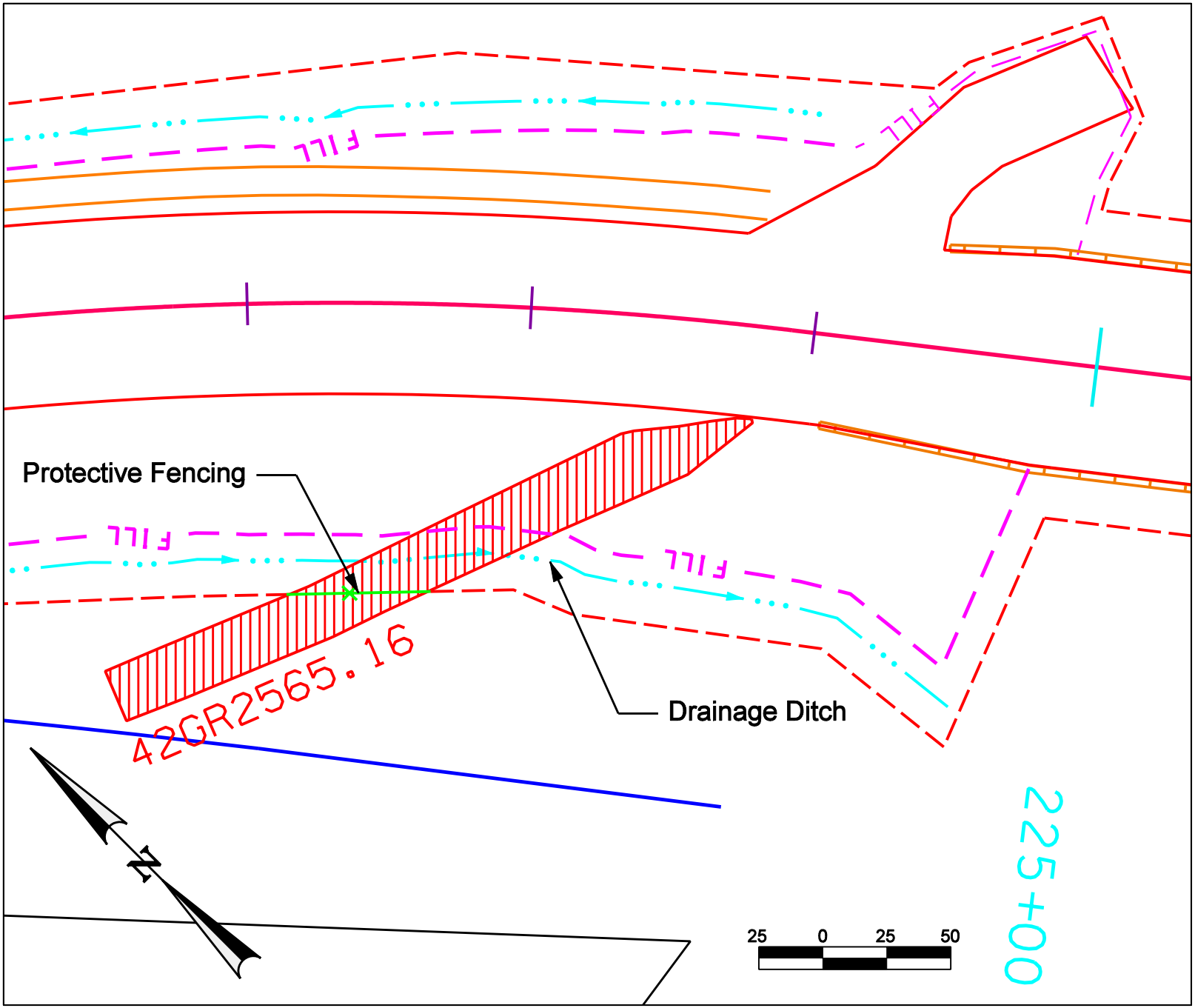

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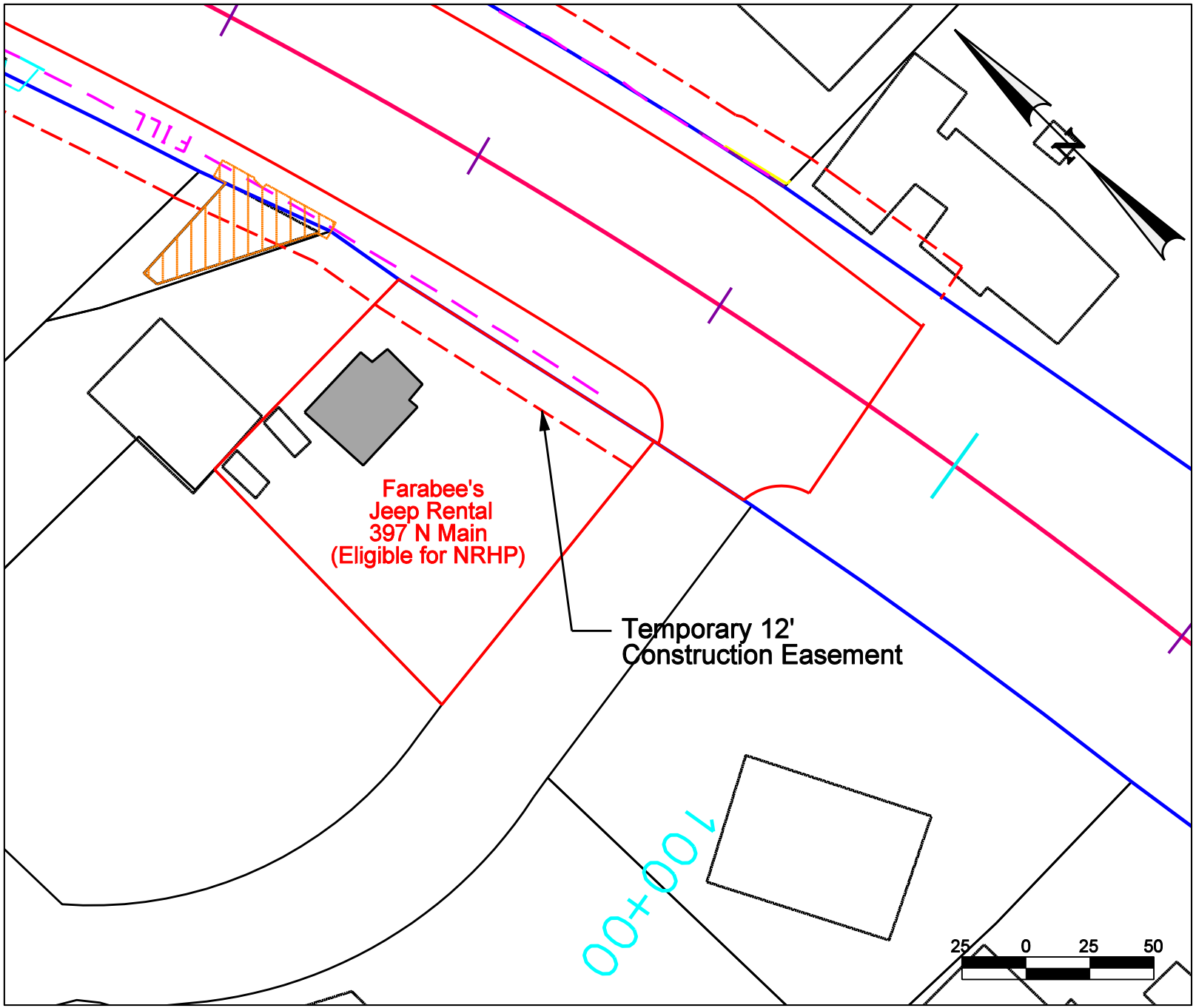

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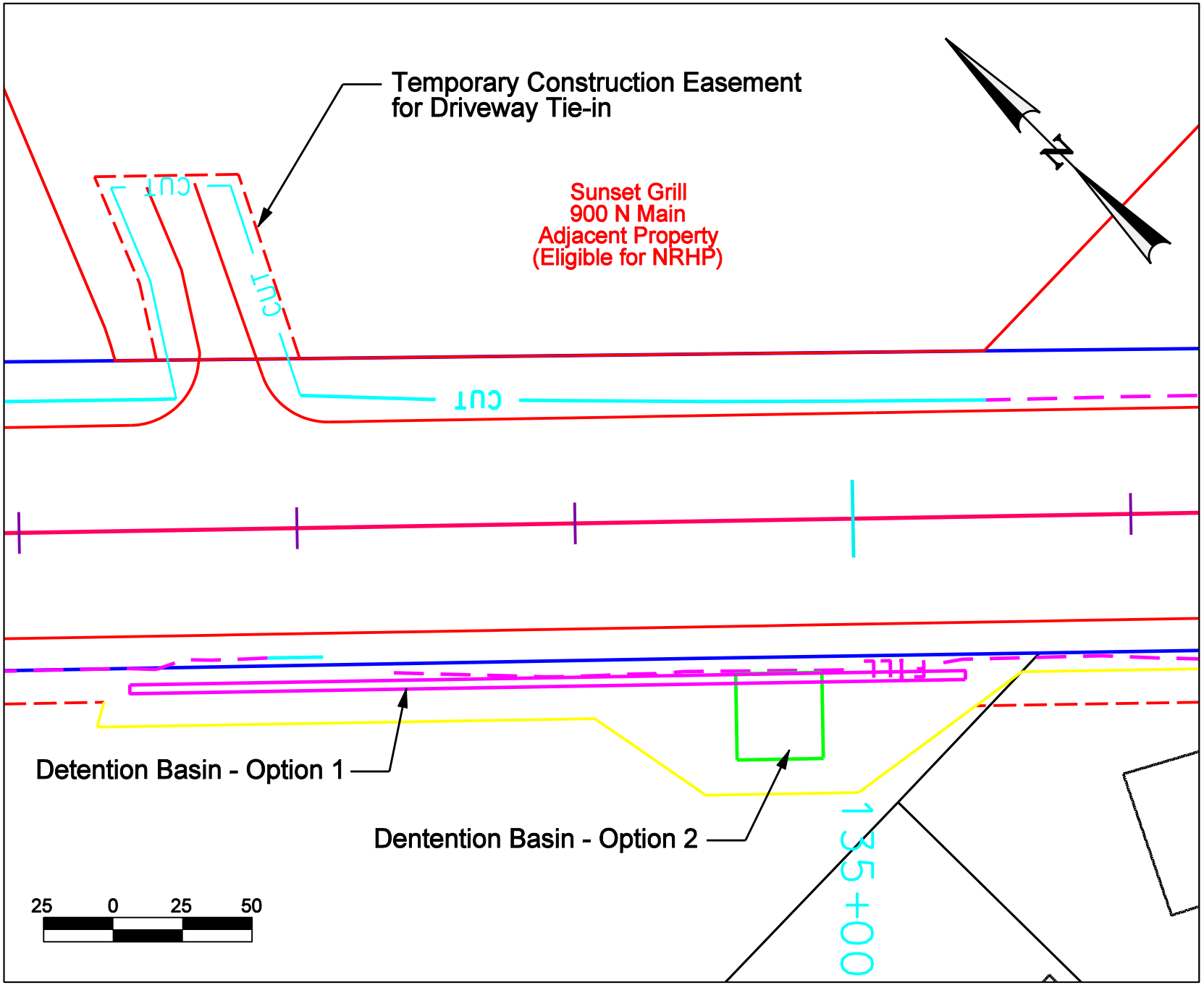

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Table D-1 Consultation with Agencies and Other Interested Parties

Date	From	To	Date of Response	Regarding
2/13/2004	HDR	Federal and State Agencies (list with letter)	2/19/2004 2/20/2004 2/23/2004 2/24/2004 2/24/2004 3/2/2004 3/4/2004 3/9/2004 3/16/2004 3/24/2004 3/26/2004 4/2/2004 4/21/2004	Initiate Scoping
2/13/2004	UDOT	Historic Preservation Groups (list with letter)	NA	Cultural
2/19/2004	Division of Radiation Control	HDR	NA	Defer to USDOE
2/20/2004	Division of Wildlife Resources	HDR	NA	Defer to USFWS
2/23/2004	UDOT	SHPO	NA	Cultural
2/23/2004	DAQ	HDR	NA	Defer to UDOT
2/24/2004	USACE	HDR	NA	Defer to Division of Water Rights
2/24/2004	DAQ	HDR	NA	No comments
2/26/2004	FHWA	Tribal Governments (list with letter)	3/2/2004 4/5/2004	Cultural
3/2/2004	The Hopi Tribe	FHWA	8/11/2004	Cultural
3/2/2004	Division of Oil, Gas, and Mining	HDR	NA	Colorado River Arches National Park Scott Matheson Wetland Preserve
3/4/2004	USACE	HDR	NA	Waters of the United States
3/9/2004	EPA	HDR	NA	Will not be participating
3/16/2004	The Nature Conservancy	HDR	NA	Scott Matheson Wetland Preserve Threatened and Endangered Species

Date	From	To	Date of Response	Regarding
3/24/2004	Resource Development Coordinating Committee (RDCC)	HDR	NA	Cultural Pedestrians and Bicyclists
Received 3/26/2004	Division of Forestry, Fire, and State Lands	HDR	NA	Scott Matheson Wetland Preserve Threatened and Endangered Species
4/2/2004	USFWS	HDR	NA	Threatened and Endangered Species
4/5/2004	The Paiute Indian Tribe of Utah	FHWA	8/11/2004	Cultural
4/21/2004	DAQ	HDR	NA	Remove name from mailing list
6/17/2004	Individual [Jones]	Study Team	NA	Bypass
8/11/2004	UDOT	Tribal Governments (list with letter)	8/20/2004	Cultural
8/11/2004	UDOT	USDOE BLM Arches National Park	NA	Cultural
8/20/2004	The Hopi Tribe	UDOT	NA	Cultural
11/15/2005	Michael Baker Jr., Inc.	Adjacent Property Owners (list on file)	NA	Re-initiate project Property surveys
11/29/2005	Michael Baker Jr., Inc.	Local Entities (list with letter)	NA	Re-initiate project
11/30/2005	Michael Baker Jr., Inc.	Federal and State Agencies (list with letter)	12/20/2005 1/10/2006 2/23/2006	Re-initiate project
12/7/2005	UDOT	Historic Preservation Groups (list with letter)	12/13/2005	Cultural
12/13/2005	Utah Historic Trails Consortium	UDOT	5/12/2006	Cultural
12/14/2005	FHWA	Tribal Governments (list with letter)	12/19/2005 12/27/2005 1/25/2006	Cultural
12/19/2005	The Paiute Indian Tribe of Utah	FHWA	5/12/2006	Cultural
12/20/2005	RDCC	Michael Baker Jr., Inc.	1/31/2006	Air Quality Threatened and Endangered Species
12/20/2005	USDOE	Michael Baker Jr., Inc.	NA	Moab UMTRA Site

Date	From	To	Date of Response	Regarding
12/27/2005	The Hopi Tribe	FHWA	5/12/2006	Cultural
1/10/2006	Quintstar Management, Inc.	Michael Baker Jr., Inc.	NA	Design (Drainage, capacity, median, bike path, driveways) 1/29/2004 letter to City Council (attached)
1/25/2006	Southern Ute Indian Tribe	UDOT	NA	Cultural
1/31/2006	Michael Baker Jr., Inc.	RDCC	NA	Response to letter dated 12/20/2005
2/14/2006	Michael Baker Jr., Inc.	Federal and State Agencies and Other Interested Parties (entire project mailing list on file)	2/27/2006 4/17/2006	Focus Workshop
2/27/2006	U.S. Coast Guard	Michael Baker Jr., Inc.	NA	Colorado River
3/3/2006	Michael Baker Jr., Inc	Utah Natural Heritage Program	3/14/2006	Threatened and Endangered Sensitive Species
3/14/2006	Utah Natural Heritage Program	Michael Baker Jr., Inc.	NA	Threatened and Endangered Sensitive Species
3/29/2006	Moab [Olsen]	Michael Baker Jr., Inc.	NA	Medians Trails
3/31/2006	Moab [Olsen]	Michael Baker Jr., Inc.	NA	Medians Trails
4/17/06	Michael Baker Jr., Inc.	Individual [Tangren]	Received 5/1/2006	Traffic Report Project Handout (Response to Phone Request)
Received 5/1/2006	Individual [Tangren]	Michael Baker Jr., Inc.	5/17/2006	Bypass
5/12/2006	UDOT	Utah Historic Trails Consortium The Paiute Indian Tribe of Utah The Hopi Tribe BLM USDOE Division of Wildlife Resources Arches National Park (list with letter)	5/30/2006	Cultural
5/17/2006	Michael Baker Jr., Inc.	Individual [Tangren]	NA	Response to letter received 5/1/2006

Date	From	To	Date of Response	Regarding
5/19/2006	Michael Baker Jr., Inc.	Arches National Park	Concurred 1/17/2007	Section 4(f)
5/19/2006	Michael Baker Jr., Inc.	Division of Wildlife Resources	Concurred 9/12/2006	Section 4(f)
5/22/2006	Michael Baker Jr., Inc.	Grand County	Concurred 2/12/2007	Section 4(f)
5/30/2006	The Paiute Indian Tribe of Utah	UDOT	7/27/2006	Cultural
5/30/2006	The Nature Conservancy	Michael Baker Jr., Inc.	Meeting held 6/21/2006	Scott Matheson Wetland Preserve
6/7/2006	Michael Baker Jr., Inc.	EPA	6/13/2006	Glen Canyon Aquifer
6/13/2006	EPA	Michael Baker Jr., Inc.	NA	Glen Canyon Aquifer
7/20/2006	FHWA	USFWS	10/10/2006 (located in Appendix B)	Threatened and Endangered Species
7/27/2006	UDOT	The Paiute Indian Tribe of Utah	7/28/2006	Cultural
7/28/2006	The Paiute Indian Tribe of Utah	UDOT	NA	Cultural
8/10/2006	UDOT	SHPO	Concurred 9/26/2006	Cultural Section 4(f)
9/26/2006	USACE	Michael Baker Jr., Inc.	NA	Waters of the United States
11/30/2006	UDEQ	Michael Baker Jr., Inc.	See Appendix E	Comment on Draft EA
12/29/2007	RDCC	Michael Baker Jr., Inc.	See Appendix E	Comment on Draft EA
1/2/2007	Moab	Michael Baker Jr., Inc.	See Appendix E	Comment on Draft EA
2/5/2007	The Hopi Tribe	UDOT	NA	Cultural
3/1/2007	ACHP	FHWA	NA	Cultural

3.5
AR071

February 13, 2004

Erin Bell
Natural Resource Conservation Service
Ogden Satellite Office
2871 S. Commerce Way
Ogden, Utah 84401

Subject: Colorado River Bridge Feasibility Study; Moab, Utah
Request for Scoping Comments

Dear Erin Bell:

The Federal Highway Administration (FHWA), in cooperation with the Utah Department of Transportation (UDOT), is initiating a feasibility study for improvements to the US 191 crossing of the Colorado River from milepost 126.5 to milepost 129.5 near Moab in Grand County, Utah. The bridge is adjacent to Arches National Park on the northeast, the Department of Energy Moab Uranium Tailings Site on the northwest, the Matheson Wetland Preserve on the southwest, and the Grand County's Lions Park on the southeast.

The feasibility study will address the need for a new structure, future travel demand, and safety. The study includes the NEPA scoping process including public and agency scoping meetings, determining the purpose of and need for the project, identifying project alternatives, and identifying environmental concerns. Following the feasibility study FHWA and UDOT will prepare an environmental document.

To ensure that a full range of issues related to the proposed action are addressed and all significant issues are identified, comments and suggestions are invited from all interested parties. Your comments are being solicited as part of the NEPA public scoping process and will be used to identify alternatives and environmental concerns to be evaluated in the environmental document.

UDOT is holding an agency scoping meeting to discuss the proposed project on March 3, 2004 from 10:00 am to noon at the Grand County Council Chambers, 125 E. Center Street in Moab. You may also attend a public meeting on March 3 at the same location from 4-6 pm. The meeting will break into small group workshops from 6-8 pm. Please contact Laynee Jones by email or phone before February 27, 2004 to let us know if you will be able to attend.

We would appreciate your written comments before April 2, 2004 addressed to:

Laynee Jones
HDR Engineering, Inc.
3995 South 700 East, Suite 100
Salt Lake City, UT 84107
laynee.jones@hdrinc.com
(801) 281-8892

We look forward to your response to this request and to working with you on this project.

Sincerely,

HDR ENGINEERING, INC.

for

Laynee Jones, P.E.
Environmental Lead

Identical Copies of this Letter Sent to the Following:

Erin Bell Natural Resource Conservation Service Odgen Satellite Office 2871 S. Commerce Way Ogden, UT 84401	Forrest Cuch Utah Community and Economic Development Division of Indian Affairs 324 South State Street, Suite 500 Salt Lake City, UT 84114
Bob Cox FEMA Region VIII PO Box 25267 Denver, CO 80225-0267	Rick Sprott, Director UDEQ Division of Air Quality 168 North 1950 West Salt Lake City, UT 84116
Nick Mezei US Army Corps of Engineers Colorado Basin Regulatory Office 400 Rood Avenue, Room 142 Grand Junction, CO 81501	Kevin Brown, Director UDEQ Division of Drinking Water 150 North 1950 West PO Box 144830 Salt Lake City, UT 84114-4830
Deborah Lebow EPA Region VIII USEPA Mail Code 8-EPR-N 999 18th Street; Suite 300 Denver, CO 80202-2466	Brad Johnson, Director UDEQ Division of Environmental Response and Remediation 168 North 1950 West Salt Lake City, UT 84114
Henry Maddox US Fish and Wildlife Service 2369 West Orton Circle West Valley City, UT 84119	Robert Morgan, P.E., Executive Director UDNR Division of Wildlife Resources PO Box 145610 Salt Lake City, UT 84114-5610
Don Ostler, Director UDEQ Division of Water Quality 288 North 1460 West PO Box 144870 Salt Lake City, UT 84114-4870	Carolyn Wright Utah Governor's Office Resource Development 1594 West North Temple Salt Lake City, UT 84102
Sally Wisely, State Director Bureau of Land Management Utah State Office PO Box 45155 Salt Lake City, UT 84145-0155	James Dykemann State Historic Preservation Office 300 South Rio Grande Salt Lake City, UT 84114
Phillip Breuck, Acting Superintendent Southeast Utah Group US National Park Service PO Box 907 Moab, UT 84532-0907	Donald R. Metzler Moab Program Manager US Department of Energy 2597 B ¾ Road Grand Junction, CO 81503
Chris Colt, Habitat Manager UDNR Division of Wildlife Resources Southeastern Region 475 West Price River Drive, Suite C Price, UT 84501	Dane Finerfrock, Director UDEQ Division of Radiation Control PO Box 144850 Salt Lake City, UT 84114
Maggie Wyatt Moab Field Office Manager Bureau of Land Management 82 East Dogwood Avenue Moab, UT 84532	Diane Nielson, Executive Director Utah Department of Environmental Quality PO Box 144810 Salt Lake City, UT 84114
Casey Ford Price Regional Office UDNR Division of Water Rights 453 South Carbon Avenue Price, UT 84501	

3.5
AR072

State of Utah

OLENE S. WALKER
Governor

GAYLE McKEACHNIE
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

February 13, 2004

Mr. Dave Sakrison
Mayor, City of Moab
115 West 200 South
Moab, Ut 84532

Subject: Project #: BRF-0191(23)128
Colorado River Bridge Feasibility Study; Moab, Utah

Dear Mr. Sakrison:

The Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT) are conducting a feasibility study for improvements to the US 191 crossing of the Colorado River from milepost 126.5 to milepost 129.5 near Moab in Grand County, Utah, as shown on the attached map. The bridge is adjacent to Arches National Park on the northeast, the Department of Energy Moab Uranium Tailings Site on the northwest, the Matheson Wetland Preserve on the southwest, and Grand County's Lions Park on the southeast.

The feasibility study will address the need for a new structure, future travel demand, and safety. The study includes public and agency scoping meetings, completing a cultural resource literature search and initial project notification, determining the purpose of and need for the project, identifying project alternatives, and identifying environmental concerns. Following the feasibility study FHWA and UDOT will prepare an environmental document in accordance with the National Environmental Policy Act, and complete a cultural resource inventory.

The project may extend beyond the existing UDOT right-of-way, depending on the alternatives developed in the feasibility study. The potential alternatives are not expected to extend beyond the limits shown on the attached map.

FHWA and the UDOT request that you review this information to determine if there are any historic properties of cultural importance that may be affected by this undertaking. If you feel that there are any historic properties that may be impacted, we request your notification as such and your participation as a consulting party during the development of the environmental document.

Region Four Headquarters, 1345 South 350 West, Richfield, Utah 84701
telephone 435-893-4799 • facsimile 435-896-6458 • www.udot.utah.gov

UDOT is holding a public meeting on March 3, 2004 at the Grand County Council Chambers, 125 E. Center Street in Moab 4-6 pm. The meeting will break into small group workshops from 6-8 pm. Please feel free to attend for more information on the project.

Sincerely,

Susan Miller, NEPA/NHPA Specialist
Region Four Environmental

Enclosure
USGS 1:24000 Project Map

Cc: (w/enclosure)
Sandra Garcia, FHWA
Mike Miles, UDOT Region 4
Daryl Friant, Environmental Engineer
Laynee Jones, HDR

Identical Copies of this Letter Sent to the Following:

Mr. Dave Sakrison Mayor, City of Moab 115 West 200 South Moab, UT 84532	Mr. Al McLeod Council Member, Grand County 125 East Center Street Moab, UT 84532
Mr. Rex Tanner Council Member, Grand County 125 East Center Street Moab, UT 84532	Mr. Jim Lewis Council Member, Grand County 125 East Center Street Moab, UT 84532
Mr. Nat Knight Council Member, Grand County 125 East Center Street Moab, UT 84532	Ms. Margaret Patterson Moab Chapter of the Utah Statewide Archaeological Society PO Box 40031 Thompson Springs, UT 84540
Ms. Judy Carmichael Council Member, Grand County 125 East Center Street Moab, UT 84532	Mr. Ron Anderson Utah Historic Trails Consortium 3651 Jasmine Street West Valley City, UT 84120
Ms. Joette Langianese Council Member, Grand County 125 East Center Street Moab, UT 84532	Ms. Rusty Salmon Grand County Historic Preservation Commission & Certified Local Government Programs HC 64 Box 2012 Castle Valley, UT 84532
Mr. Jerry McNeely Council Member, Grand County 125 East Center Street Moab, UT 84532	

1.4
AR028

Jones, Laynee G.

From: Loren Morton [lmorton@utah.gov]
Sent: Thursday, February 19, 2004 5:44 PM
To: Jones, Laynee G.
Cc: Donald.Metzler@gjo.doe.gov; Dane Finerfrock; Daryl Friant; Kim Manwill
Subject: UDOT EIS for Moab Bridge Improvements

Laynee,

This email is in response to your February 13 letter regarding the upcoming NEPA public scoping process for the proposed improvements for Highway 191 bridge over the Colorado River near Moab, Utah.

We appreciate your invitation to participate in this process. However, we would suggest that you would be better served by involving the staff of the U.S. Department of Energy (DOE) in Grand Junction Colorado, who own and operate the nearby Moab Tailings site found a short distance north of the bridge.

Currently, DOE staff are in process of preparing a draft Environmental Impact Statement for reclamation of the historic Moab Tailngs site.
These reclamation activities may include a significant amount of truck traffic during haulage of either the tailings to another location, or for import of cover system borrow materials from gravel pits found in the southern portion of Spanish Valley. I would recommend you contact the following staff at the DOE Grand Junction Office:

Don Metzler
Project Manager
Grand Junction Office
U.S. Department of Energy
2597 B 3/4 Road
Grand Junction, CO 81503
970-248-7612
Donald.Metzler@gjo.doe.gov

If you have questions, please call me at the number below. Thanks again for the invitation to participate in the upcoming NEPA process.

Respectfully,

Loren Morton
Utah Division of Radiation Control
Phone 801-536-4262
Fax 801-533-4097
Email lmorton@utah.gov

1.4
AR030

HDR | ONE COMPANY *Many Solutions*℠

Telephone Record

Project:	Colorado River Bridge Feasibility Study	Project No:	10293
Date:	Feb 20, 04	Subject:	Agency Coordination
Call to:	Laynee Jones	Phone No:	281-8892
Call from:	Chris Colt Utah Division of Wildlife Resourcesq	Phone No:	

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Discussion, Agreement and/or Action:

Chris called to respond to the Feb 13 letter. He said that since USFWS would be involved, UDWR would defer to USFWS. He indicated that UDNR owns part of the Matheson wetlands preserve. He did not have any comments at this time and said he would not be attending the scoping meeting.

State of Utah

DEPARTMENT OF TRANSPORTATION
JOHN R. NJORD, P.E.
Executive Director
CARLOS M. BRACERAS, P.E.
Deputy Director

OLENE S. WALKER
Governor
GAYLE McKEACHNIE
Lieutenant Governor

1.4
AR031

FEB 2 6 2004

February 23, 2004

Mr. James Dykmann, Deputy SHPO – Archaeology
Division of State History
300 Rio Grande
Salt Lake City, Utah 84101-1182

RE: BRF-0191(23)128; Colorado River Bridge Feasibility Study
Section 106 & U.C.A. 9-8-404 compliance
Project Notification

Dear Mr. Dykmann:

The Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT) are conducting a feasibility study for improvements to the US 191 crossing of the Colorado River from milepost 126.5 to milepost 129.5 near Moab in Grand County, Utah, as shown on the attached map. The bridge is adjacent to Arches National Park on the northeast, the Department of Energy Moab Uranium Tailings Site on the northwest, the Matheson Wetland Preserve on the southwest, and Grand County's Lions Park on the southeast.

The feasibility study will address the need for a new structure, future travel demand, and safety. The study includes public and agency scoping meetings, completing a cultural resource literature search and initial project notification, determining the purpose of and need for the project, identifying project alternatives, and identifying environmental concerns. No cultural resource inventory is being undertaken at this time. Following the feasibility study, FHWA and UDOT will prepare an environmental document in accordance with the National Environmental Policy Act and will complete a cultural resource inventory.

The project may extend beyond the existing UDOT right-of-way, depending on the alternatives developed in the feasibility study. The potential alternatives are not expected to extend beyond the limits shown on the attached map. Please review the enclosed and comment on the adequacy of these boundaries as the area of potential effects.

The FHWA and UDOT are also notifying a number of potential consulting parties in the Section 106 process: the White Mesa Ute Council, the Ute Mountain Ute, the Navajo Nation, the Paiute Indian Tribe of Utah, the Uintah/Ouray Ute, the Southern Ute, and the Hopi Tribe. Other potential consulting parties contacted include the Grand County Historic Preservation Commission, the Moab Chapter of the Utah Statewide Archaeological Society, the Utah Historic Trails Consortium, the Grand County Council, and the city of Moab. Please recommend other potential consulting parties that you may know.

A response within 30 days would be appreciated should you have concerns about this project. Please feel free to contact me at (435) 893-4573 to answer any questions or provide any additional information.

UDOT is holding a public meeting on March 3, 2004 at the Grand County Council Chambers, 125 E. Center Street in Moab 4-6 pm. The meeting will break into small group workshops from 6-8 pm. Please feel free to attend.

Thank you for your attention to this project notification and any comments you may have.

Respectfully,

Susan G. Miller, NEPA/NHPA Specialist
Region Four Environmental

Enclosures
USGS 1:24000 Project Map

cc: Sandra Garcia, FHWA
Daryl Friant, Environmental Engineer
Kim Manwill, Project Manager
Laynee Jones, HDR

1.4
AR114

Jones, Laynee G.

From: Steven Parkin [sparkin@utah.gov]
Sent: Monday, February 23, 2004 11:57 AM
To: Jones, Laynee G.
Subject: March 3rd, Moab, US 191

Laynee,

Thank you for the invitation to participate in your scoping meeting(s) of March 3, 2004 in Moab to discuss proposed improvements to US 191 crossing the Colorado River.

Unfortunately, we do not have staff and resources to attend and respectfully defer responsible decisions to UDOT who is familiar with their obligations to reduce/control fugitive dust during bridge, embankment and road work projects of this kind.

Regards,

Steven Parkin,
UDEQ Division Of Air Quality
(801)536-4014

1.3
AR012

HDR | ONE COMPANY *Many Solutions*℠

Telephone Record

Project:	Colorado River Bridge Feasibility Study	Project No:	10293
Date:	Feb 24, 04	Subject:	Agency Coordination
Call to:	Laynee Jones	Phone No:	281-8892
Call from:	Nick Mezei USACOE	Phone No:	970-243-1199 x 13

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Discussion, Agreement and/or Action:

Nick called to respond to the Feb 13 letter he received. He suggested that we include the Utah Division of Water Rights since the stream may be impacted but there will not be a lot of wetlands impacted. He said as long as the UDWR was involved impacts USACOE would not participate or provide any comments. He is aware of the Matheson wetlands preserve but did not think we would impact a large number of wetlands there. He requested that we minimize impacts to wetlands.

1.4
AR032

HDR | ONE COMPANY *Many Solutions*℠

Telephone Record

Project:	Colorado River Bridge Feasibility Study	Project No:	10293
Date:	Feb 24, 04	Subject:	Agency Coordination
Call to:	Laynee Jones	Phone No:	281-8892
Call from:	Cheryl Heying Utah Division of Air Quality	Phone No:	536-4015

I:\templates\HDR_Telephone_Record.doc

Discussion, Agreement and/or Action:

Cheryl called to confirm that the UDAQ would not be attending the agency scoping meeting or providing comment on the project in response to our Feb 13 letter

HDR Engineering, Inc.

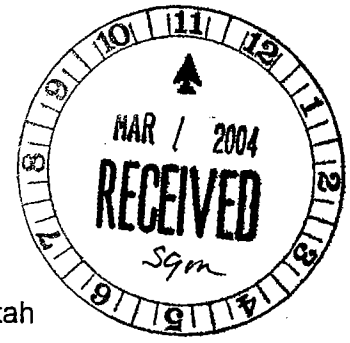
3995 South 700 East
Suite 100
Salt Lake City, UT, 84107

Phone (801) 281-8892
Fax (801) 281-8693
www.hdrinc.com

U.S. Department
Of Transportation
Federal Highway
Administration

Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, UT 84118-1847

February 26, 2004



Ms. Judy Knight Frank, Chairperson
Ute Mountain Ute Tribe
P.O. Box 109
Towaoc, CO 81334

Subject: Project #: BRF -0191(23)128
Colorado River Bridge Feasibility Study; Moab, Utah
Request to be a Consulting Party

Dear Ms. Frank:

The Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT) are conducting a feasibility study for improvements to the US 191 crossing of the Colorado River from milepost 126.5 to milepost 129.5 near Moab in Grand County, Utah, as shown on the attached map. The bridge is adjacent to Arches National Park on the northeast, the Department of Energy Moab Uranium Tailings Site on the northwest, the Matheson Wetland Preserve on the southwest, and Grand County's Lions Park on the southeast.

The feasibility study will address the need for a new structure, future travel demand, and safety. The study includes public and agency scoping meetings, completing a cultural resource literature search and initial project notification, determining the purpose of and need for the project, identifying project alternatives, and identifying environmental concerns. No cultural resource inventory is being undertaken at this time. Following the feasibility study FHWA and UDOT will prepare an environmental document in accordance with the National Environmental Policy Act.

In accordance with the regulations published by the Advisory Council on Historic Preservation, 36 CFR Part 800, the FHWA and the UDOT request that you review this information to determine if there are any historic properties of traditional religious and/or cultural importance that may be affected by this undertaking. If you feel that there are any historic properties that may be impacted, we request your notification as such and your participation as a consulting party during the development of the environmental document.

The project may extend beyond the existing UDOT right-of-way, depending on the alternatives developed in the feasibility study. The potential alternatives are not expected to extend beyond the limits shown on the attached map.

At your request, FHWA and UDOT staff will be available to meet with you to discuss any concerns you might have. Please be assured that we will maintain strict confidentiality about certain types of information regarding traditional religious and/or cultural historic properties that might be affected by this proposed undertaking. We would also appreciate any suggestions you might have about any other groups or individuals that we should contact regarding this project.

A response within 30 days would be appreciated should you have concerns about this project and/or wish to be a consulting party. Please feel free to contact me at 801-963-0078, extension 235, to answer any questions or provide any additional information.

UDOT is holding a public meeting on March 3, 2004, at the Grand County Council Chambers, 125 E. Center Street in Moab 4-6 pm. The meeting will break into small group workshops from 6-8 pm. Please feel free to attend.

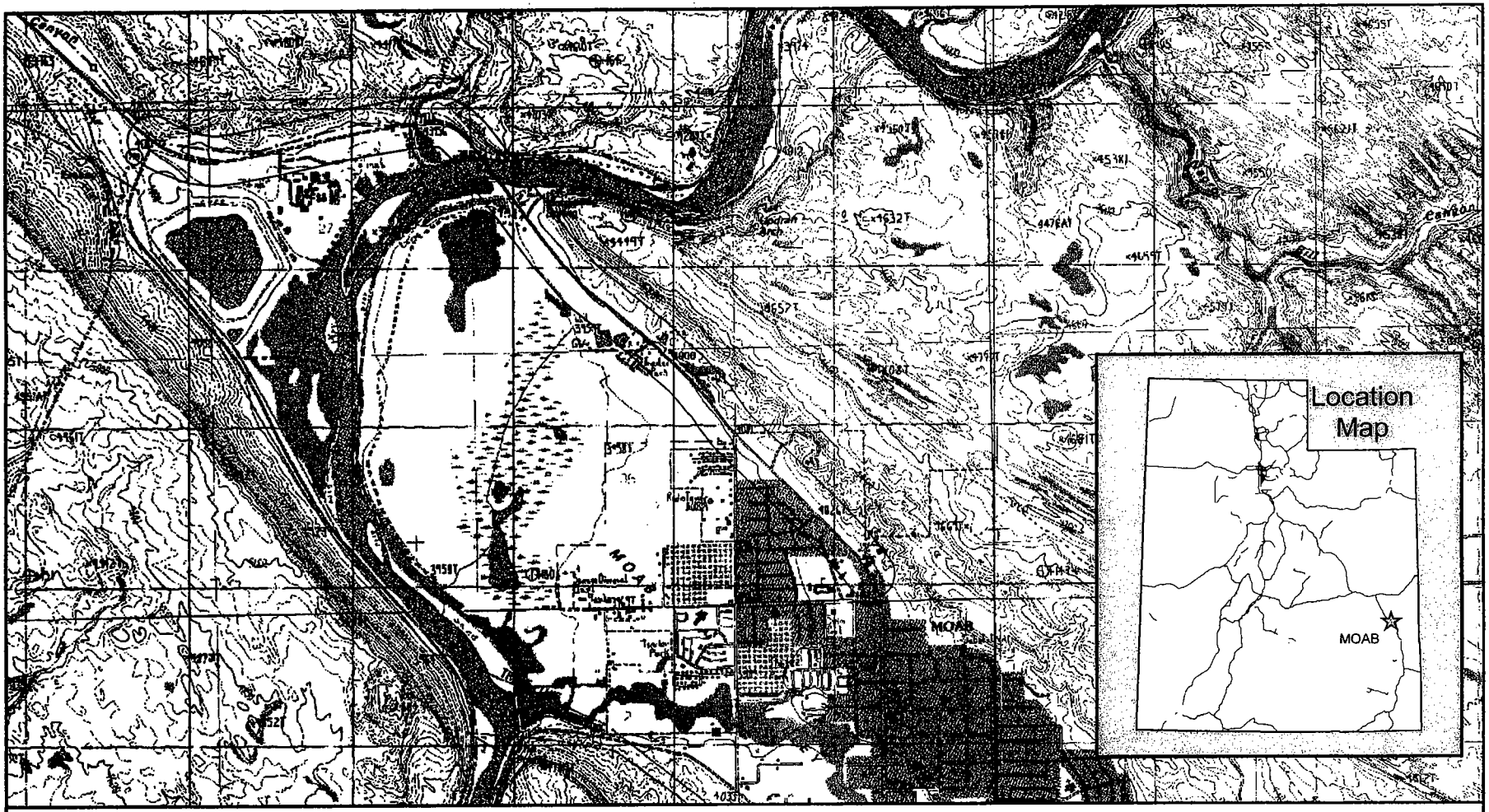
Thank you for your attention to this project notification and any comments you may have.

Respectfully

Jeff Berna
Environmental Specialist

Enclosures
USGS 1:24000 Project Map ([redacted])

cc: Susan Miller, UDOT Region 4
Mr. Terry Knight, Cultural Representative, Ute Mountain Ute Tribe



LEGEND

Preliminary Study Area (Approximately 1000 Feet Wide)

Colorado River Bridge

February 2004

0 0.2 0.4 0.8 1.2 1.6 Miles

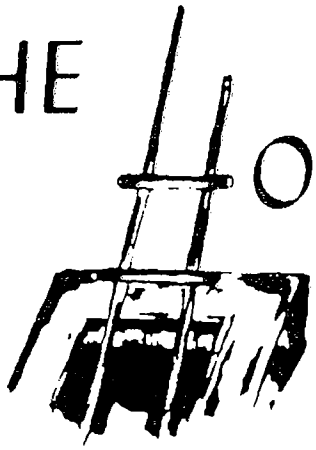
1:24,000

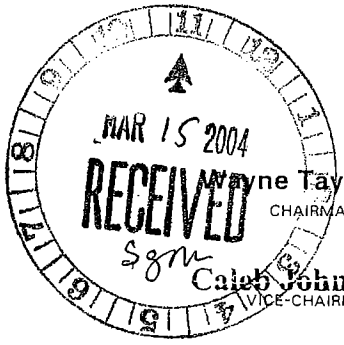
IDENTICAL COPIES OF THIS LETTER SENT TO THE FOLLOWING:

Tribal Contacts List For : Project #: BRF-0191(23)128, PIN: 3418
Project Description: Colorado River Bridge Feasibility Study
Moab, Utah

Original to:	**CC to:**
Mr. Liegh Kuwanwisiwma Director, Hopi Cultural Preservation Office P.O. Box 123 Kykotsmovi, AZ 86039	
Dr. Alan Downer, Director. Historic Preservation Department Navajo Nation P.O. Box 4950 Window Rock, AZ 86515	
Mr. Terry Knight Cultural Representative Ute Mountain Ute Tribe P.O. Box 53 Towaoc, CO 81334	~~Ms. Judy Knight Frank~~ Manuel Heart ~~Chairwoman~~ Ute Mountain Ute Tribe P.O. Box 109 Towaoc, CO 81334 563-0100
Ms. Elaine Atcitty Chair, White Mesa Ute Council P.O. Box 7096 White Mesa, UT 84511	
Ms. Maxine Natchees Chairwoman Ute Indian Tribe of the Uintah/Ouray Agency P.O. Box 190 Fort Duchesne, UT 84026	Ms. Betsy Chapoose Director of Cultural Rights and Protection Ute Indian Tribe of the Uintah/Ouray Agency P.O. Box 190 Fort Duchesne, UT 84026
Mr. Leonard Burch Chair, Southern Ute Tribe P.O. Box 737 Ignacio, Colorado 81137	Chairman Clemette J. Roth PO 737
Ms. Lora E. Tom Chairwoman, The Paiute Indian Tribe of Utah 440 North Paiute Drive Cedar City, UT 84720	Ms. Dorena Martineau Cultural Resource Director The Paiute Indian Tribe of Utah 440 North Paiute Drive Cedar City, UT 84720

THE HOPI TRIBE





Wayne Taylor, Jr.
CHAIRMAN
Caleb Johnson
VICE-CHAIRMAN

March 2, 2004

Jeffery Berna, Environmental Specialist
Federal Highway Administration, Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, Utah 84118-1847

Re: Project #: BRO-LC19 (7) Thompson Wash Bridge Replacement
Project #: BRF-0191(23)128, Colorado River Bridge Feasibility Study, Moab, Utah

Dear Mr. Berna,

Thank you for your correspondences dated February 25 and 26, 2004, regarding the Federal Highway Administration and Utah Department of Transportation initiating an environmental study for the Thompson Wash Bridge Replacement in Thompson Springs, and conducting a feasibility study for improvements to the US 191 crossing of the Colorado River from mileposts 126.5 to 129.5 near Moab. As you know, the Hopi Tribe claims cultural affiliation to prehistoric cultural groups in Utah, and the Hopi Cultural Preservation Office supports identification and avoidance of prehistoric archaeological sites.

Therefore, in response to your letters, we would like to be kept informed of these proposals. Please provide us for review and comment with a copy of the cultural resource survey report by EarthTouch for the Thompson Wash Bridge Replacement project, and the literature search report for the Colorado River Bridge feasibility study. Following the feasibility study, we also request the opportunity to review and comment on a cultural resource survey report on the Colorado River Bridge project area.

As you also know, we appreciate the Federal Highway Administration and the Utah Department of Transportation's continuing solicitation of our input and your efforts to address our concerns. Should you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office. Thank you again for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Susan Miller, Utah Department of Transportation
Utah State Historic Preservation Office

5.1.1
AR083

Jones, Laynee G.

From: Lowell Braxton [lowellbraxton@utah.gov]
Sent: Tuesday, March 02, 2004 1:24 PM
To: Jones, Laynee G.
Subject: RE: Scoping Comments Colorado River Bridge Feasibility Study, Moab, Utah

Laynee, Please send to Bob Morgan with a copy to Val Payne at the same address. Thanks

>>> "Jones, Laynee G." <Laynee.Jones@hdrinc.com> 03/02/04 12:46PM >>>
Lowell:

Thank you for your response. I will keep UDNR on the agency correspondence list for the project. Should future correspondce be addressed to you or Bob Morgan or both?

Laynee Jones
801-281-8892 x136

-----Original Message-----
From: Lowell Braxton [mailto:lowellbraxton@utah.gov]
Sent: Tuesday, March 02, 2004 12:03 PM
To: Jones, Laynee G.
Cc: Bob Morgan; Val Payne
Subject: Scoping Comments Colorado River Bridge Feasibility Study, Moab, Utah

Laynee, I am responding to your letter asking for scoping comments for the above Feasibility Study, per your letter to Bob Morgan, Executive Director, Utah Department of Natural Resources. Any construction activity in the Colorado River corridor must weigh the benefits to human health and safety against the possible environmental impacts. Increased
vehicular and non-motorized traffic in the area of the proposed study clearly support the Feasibility Study, and the Utah Department of Natural Resources is supportive of the study on this basis.
As indicated in your letter, the juxtaposition of the Arches National Park entrance, the Matheson Wetlands Preserve and the Grand County Lions Park to the project plus the value of the river corridor and its use by wildlife all support careful environmental analysis should the project proceed beyond the Feasibility Study phase. The Utah Department of Natural Resources will be an active player in any NEPA environmental analysis subsequent to scoping. We have no plans to attend the March 3 scoping meeting in Moab, however. Please keep the Utah Department of Natural Resources on your correspondence list for this project, and thank you for the opportunity of providing this comment.

Lowell Braxton
Director, Utah Division of Oil, Gas and Mining

5.1.1
AR085

Jones, Laynee G.

From: Mezei, Nick SPK [Nick.Mezei@usace.army.mil]
Sent: Thursday, March 04, 2004 10:03 AM
To: Jones, Laynee G.
Subject: US 191 bridge improvement scoping comments

Laynee:

Sorry I missed your scoping meeting yesterday. I would like to forward several comments to you to consider as part of the scoping process.

1. The Corps of Engineers' jurisdiction under Section 404 of the Clean Water Act extends to regulating of fills in jurisdictional wetlands, and in rivers and streams below the level of the ordinary high water elevation. Excavation is not regulated unless there is a fill associated. Activities falling within our jurisdiction require a Department of the Army permit (404 permit) in order to be compliant with the Clean Water Act. In the State of Utah, the Corps and the state share a general permit for stream modifications, and the state typically takes the lead for stream modification activities.

2. Based on conversations, it appears that there may be wetland areas along the river channel in the vicinity of the bridge over the Colorado River, which may be impacted by bridge modification. There may be other locations along the proposed 3 mile stretch of highway that may involve wetland areas also. In addition, fills below the ordinary high water level of the river, such as piers and cofferdams, are also regulated.

3. A mapping of the jurisdictional areas, and delineation of wetlands if any exist, within the work corridor is highly recommended, in order to assess whether a 404 permit may be required. If impacts can be avoided, then such actions must be taken. If impacts cannot be reasonably be avoided, then permitting and mitigation of impacts must be considered. Even if impacts can be avoided, mapping of jurisdictional areas can be valuable so that workers in the vicinity can be instructed to avoid the jurisdictional areas.

4. Temporary work in waters of the U.S. may also be regulated, even if there will not be permanent impacts.

5. It is our understanding that the reach of the Colorado River in the project area is critical habitat for several native fish, and we recommend that you contact the U.S. Fish and Wildlife Service to determine their concerns, in case you have not yet done so.

It is the intent of the Corps of Engineers to cooperate with potential permit applicants to attain project goals in an environmentally sensitive manner. Please feel free to contact me with any questions or comments relating to your project.

Nick

Nick.Mezei@usace.army.mil
970.243.1199 x-13

1.3
AR013

Project: BRF-019(23)128

TELEPHONE RECORD

Date: March 9, 2004; 11:55 am

Call to: Deborah Lebow, EPA Denver
Phone Number: 303-312-6226

Call from: Laynee Jones, HDR

Purpose: Agency Coordination, Response to Feb. 13, 2004 letter to EPA

Discussion

- Deborah called to discuss the February 13, 2004 letter to EPA describing the project and requesting comments. I returned her call.
- Deborah asked about what COE permits would be required for the project. I said that there may be a 404 permit required for wetland impacts and a stream alteration permit would probably be required. I told her that the COE deferred to the Utah Division of Water Rights for any stream alteration permits because COE thought that any wetland impacts would be minor.
- Deborah asked if the project would require an EA or an EIS. I said we wouldn't make that determination until later in the feasibility study, but anticipated an EA at this time.
- Deborah asked what bridge alternatives would be evaluated. I said that most likely the bridge will be re-constructed near its present location. One alternative may be constructing another bridge next to the current one while traffic moved on the old bridge. Then the new bridge could be opened to traffic and the old bridge reconstructed.
- Deborah said based on our conversation EPA would not be involved in this project and had no comment. She requested that we contact EPA if we determined that an EIS is required.

Distribution: Project File

This report represents the understanding of the Preparer. If you feel that an item needs clarification or correction, please provide your comments to the Preparer in writing. The Preparer will resolve the issue and distribute the revised minutes in a legislative format.

5.1.2
AR090

The Nature Conservancy®
OF UTAH
Moab Project Office

Moab Project Office
P. O. Box 1329
Moab, Utah
84532
TEL 435 259-4629
FAX 435 259-2677

Utah Field Office
559 East South Temple
Salt Lake City, Utah
84102
TEL 801 531-0999
FAX 801 531-1003

International Headquarters
Arlington, Virginia
TEL 703 841-5300

MAR 19 2004

March 16, 2004

Nicole Donegan
c/o Colorado River Bridge Project
3995 South 700 East, Suite 100
Salt Lake City, UT 84107

Dear Ms. Donegan,

Thank you for this opportunity to provide comments during this public scoping period for the Colorado River Bridge Study. The Nature Conservancy (the Conservancy), has worked cooperatively in the past with the UDOT in Utah toward the conservation of biological resources, and has a lengthy involvement in land management issues. This is consistent with the Conservancy's stated mission, which is to maintain the existence of native plants and animals by conserving the habitats and ecological processes that they need to survive. The Conservancy also recognizes that conservation of scarce or sensitive biological resources must occur in conjunction with land-use activities that meet the social and economic needs of people.

Proceeding from this background, the Conservancy is interested in the following issues.

Protection of our private property and DWR property

- The Nature Conservancy and the Utah Division of Wildlife Resources jointly own and manage an approximately 900 acre wetland preserve adjacent to the current river bridge. We are concerned about any potential impacts to our property as a result of construction and other activities associated with building a new bridge.

- Furthermore our property protects a significant wetland ecosystem along the Colorado River. Wetlands harbor an incredible diversity of plants and animals and provide a number of important functions including groundwater storage and release, flood water attenuation, filtration, and purification of water, to name a few. Any impacts to this system that would interrupt these natural functions would be considered unacceptable.

- Management concerns such as fire potential, access to existing utility lines, natural gas pipelines, hunter access on the north end, and access to wells and other infrastructure, require unimpeded access into our property. Consideration must be given to maintaining these entry points at all times during any construction of the river bridge and associated activities.

T & E and Special Status Species

The Conservancy would like to see primacy given to protection of Endangered, Threatened and Sensitive species where they may be adversely affected by any activities associated with the construction of the river bridge.

- Through our ecoregional planning efforts we have identified several endangered, threatened and sensitive species found both in the river and in the adjacent riparian area. These species include: Southwestern willow flycatcher, Lucy's warbler, neotropical migratory birds, bonytail chub, humpback chub, razorback sucker and pikeminnow. This study needs to take these species into consideration and ensure their protection before proceeding with plans for a new bridge.

Finally, we would like to offer a Preferred Alterative for your consideration as the study proceeds. To minimize impacts to the Matheson Wetlands Preserve including the concerns cited above, we recommend the new river bridge be built in place where the existing bridge now sits. Recognizing that there will be inconveniences no matter what alternative is selected, we feel this would create the minimal impact. Furthermore we recommend including in the design a pedestrian bridge that could be attached to the new bridge structure.

Once again, thank you for your consideration of these comments. We look forward to a productive working relationship as the Colorado River Bridge Study proceeds.

Sincerely,

Linda Whitham

Linda Whitham
San Rafael Area Program Manager
The Nature Conservancy

CC: Chris Montague, TNC in Utah Conservation Program Director

5.1.1
AR079

State of Utah

OLENE S. WALKER
Governor

GAYLE McKEACHNIE
Lieutenant Governor

Governor's Office of Planning and Budget
WES CURTIS
State Planning Coordinator

Resource Development Coordinating Committee
GLADE SOWARDS
Committee Chairman

JOHN A. HARJA
Executive Director

March 24, 2004

Laynee Jones
HDR Engineering, Inc.
3995 South 700 East, Suite 100
Salt Lake City, Utah 84107

SUBJECT: Colorado River Bridge Feasibility Study, Moab, Utah
Project No. 04-3713

Dear Ms. Jones:

The Resource Development Coordinating Committee (RDCC), representing the State of Utah, has reviewed this proposal, and state agencies comments are as follows:

Utah Geological Survey, Environmental Sciences Program

There are known significant vertebrate track localities in the highway right-of-way adjacent to the Colorado River Bridge. The office of the State Paleontologist therefore recommends that potential impacts to paleontological resources be identified as one of issues to be addressed in this feasibility study.

Division of Parks and Recreation

We encourage wide pedestrian/bike lanes in association with the motor vehicle bridge for north-south and east-west bike traffic--consistent with the Governor's Olympic Trail Initiative.

The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this correspondence to the Resource Development Coordinating Committee at the above address or call Carolyn Wright at (801) 538-5535 or myself at (801) 538-5559.

Sincerely,

John Harja
Executive Director
Resource Development Coordinating Committee

5.1.1
AR078

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FORESTRY, FIRE AND STATE LANDS

Michael O. Leavitt
Governor
Kathleen Clarke
Executive Director
Arthur W. DuFault
State Forester/Director

Southeastern Area
1165 South Highway 191, Suite 6
Moab, Utah 84532-3062
435-259-3766
435-259-3755 (Fax)

MAR 2 5 2004

Laynee Jones
HDR Engineering, Inc
3005 South 700 East, Suite 100
Salt Lake City, Ut 84107

Dear Ms. Jones:

The Utah Division of Forestry, Fire and State Lands supports the concept that the highway bridge over the Colorado River will need to be replaced in the fore-seeable future. This need is based on safety issues primarily dealing with its structural integrity, lane width standards/shoulders and the current bridge not accommodating pedestrians and bicyclists, as well as the capacity may not meet future travel demand. The lead contact for this project will be James Montella who may be reached by mail at 1165 So HWY 191, Suite 6, Moab, Ut 84532, phone 435-259-3762 or e-mail jamesmontella@utah.gov.

The Division has several issues that we are concerned about with this project. One concern is the potential impact on surface water flows into the Matheson Preserve. The construction and re-alignment of the bridge could have a negative affect on the preserve. The preserve is a critical use area by numerous birds and water fowl.
Another concern is the potential impact on various endangered fish in the river system. The project could have a negative impact on habitat and/or reproduction.
We would encourage you to work with the appropriate entities on determining if any negative impacts may occur and the mitigation of these impacts.
A concern may exist if construction work occurs during the summer when a wildfire hazard may exist in the riparian zone. Equipment and workers could pose a risk of starting a fire along the river. This concern may be mitigated by using some standard fire prevention actions.

Sincerely,

Gary Cornell
Gary Cornell
Area Manager SE

5.1.1
AR086

United States Department of the Interior
FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

In Reply Refer To
FWS/R6
ES/UT
04-0555

April 2, 2004

APR 0 8 2004

Laynee Jones
HDR Engineering, Inc.
3995 South 700 East, Suite 100
Salt Lake City, Utah 84107

RE: Colorado River Bridge Feasibility Study, Moab, Utah

Dear Ms. Jones:

The Fish and Wildlife Service (Service) has reviewed the scoping documents related to the feasibility study for improvements to the US-191 crossing of the Colorado River, near Moab, Utah. The purpose of the project is to correct structural deficiencies in the current bridge. We understand you have already received a species list from this office. We are providing the following comments for your consideration in your environmental analysis.

In Section 1 of this letter we convey our concerns that should be addressed in the NEPA compliance document for this project. Section 2 of this letter addresses your Endangered Species Act (ESA) section 7 responsibilities.

Section 1.

This reach of the river lies within critical habitat for the Colorado pikeminnow, bonytail chub, and razorback sucker; where they are known to occur and spawning may take place. The construction activities for both projects could affect physical habitat and water quality. Construction of a new bridge structure could result in the following effects on species within the project area:

1. Habitat loss, modification, and degradation within designated critical habitat.

2. Lethal or sublethal water or soil contamination from the construction operations. Even small, nonlethal amounts of contaminants may impair olfactory responses of the fish with potential behavior and reproductive success implications.

3. Channel bottom disturbance and flow alterations will occur due to cofferdam construction and permanent bridge foundations in the riverbed. Excessive sedimentation could inhibit the prey base for fish species by filling interstitial spaces where macroinvertebrates reside, as well as reducing potential spawning habitat. Dewatering may negatively affect migration.

The feasibility of combining this project with the nearby proposed pedestrian bridge project should be examined. We note that the pedestrian bridge is projected to begin construction within two years, thereby precluding combining the two projects. If, however, this project is delayed such that combining the two bridges could become feasible, we encourage UDOT and FHWA to consider an integrated bicycle-pedestrian-motorized function for a single bridge at the US-191 crossing. Combining the two structures into one would: require only one set of bridge foundations; constrict the river in only one location; and reduce the number of cofferdam intrusions during construction. With the two projects being in relatively close proximity, we recommend keeping open the possibility of satisfying the needs of the two projects with one structure. This would be the least impactful alternative relative to fish and wildlife.

The proposed project is within the migratory and breeding range of the Southwestern willow flycatcher (*Empidonax traillii extimus*), a small bird that inhabits riparian areas in southern Utah. Southwestern willow flycatcher breeding habitat is typified by areas of dense riparian vegetation. Breeding sites are normally near standing water or saturated soil. Please review the proposed action and determine if the action could have an impact on potential Southwestern willow flycatcher habitat.

We recommend that your environmental analysis specifically examine potential short-term and long-term impacts to migratory birds and their habitat. The analysis should identify any conservation and mitigation measures in the alternatives aimed at conserving migratory bird habitats and populations. The *Utah Partners in Flight Avian Conservation Strategy* (Parrish et al., 2002) may be useful in preparing this analysis.

In addition, we recommend use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin and Muck, 2002) which were developed in part to provide consistent application of raptor protection measures statewide and provide full compliance with environmental laws regarding raptor protection. Raptor surveys and mitigation measures are provided in the Raptor Guidelines as recommendations to ensure that proposed projects will avoid adverse impacts to raptors.

Section 2.

Federal agencies have specific additional responsibilities under section 7 of the ESA. To help you fulfill these responsibilities, we are providing an updated list of threatened (T), endangered (E) and candidate (C) species that may occur within the area of influence of your proposed action.

Common Name	Scientific Name	Status
Jones Cycladenia	*Cycladenia humilis* var. *jonesii*	T
Bonytail[1,2]	*Gila elegans*	E
Colorado Pikeminnow[1,2]	*Ptychocheilus lucius*	E
Humpback Chub[1,2]	*Gila cypha*	E
Razorback Sucker[1,2]	*Xyrauchen texanus*	E
Bald Eagle[3]	*Haliaeetus leucocephalus*	T
California Condor[4]	*Gymnogyps californianus*	E
Gunnison Sage Grouse	*Centrocercus minimus*	C
Mexican Spotted Owl[1,3]	*Strix occidentalis lucida*	T
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	E
Western Yellow-billed Cuckoo	*Coccyzus americanus occidentalis*	C
Black-footed Ferret[5]	*Mustela nigripes*	E

[1] Critical habitat designated in this county.
[2]Water depletions from *any* portion of the occupied drainage basin are considered to adversely affect or adversely modify the critical habitat of the endangered fish species, and must be evaluated with regard to the criteria described in the pertinent fish recovery programs.
[3] Nests in this county of Utah.
[4] Experimental nonessential population.
[5] Historical range.

The proposed action should be reviewed and a determination made if the action will affect any listed species or their critical habitat. If it is determined by the Federal agency, with the written concurrence of the Service, that the action is not likely to adversely affect listed species or critical habitat, the consultation process is complete, and no further action is necessary.

Formal consultation (50 CFR 402.14) is required if the Federal agency determines that an action is "likely to adversely affect" a listed species or will result in jeopardy or adverse modification of critical habitat (50 CFR 402.02). Federal agencies should also confer with the Service on any action which is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10). A written request for formal consultation or conference should be submitted to the Service with a completed biological assessment and any other relevant information (50 CFR 402.12).

Candidate species have no legal protection under the ESA. Candidate species are those species for which we have on file sufficient information to support issuance of a proposed rule to list under the ESA. Identification of candidate species can assist environmental planning efforts by providing advance notice of potential listings, allowing resource managers to alleviate threats and, thereby, possibly remove the need to list species as endangered or threatened. Even if we subsequently list this candidate species, the early notice provided here could result in fewer restrictions on activities by prompting candidate conservation measures to alleviate threats to this species.

Only a Federal agency can enter into formal ESA section 7 consultation with the Service. A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment by giving written notice to the Service of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

Your attention is also directed to section 7(d) of the ESA, as amended, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their actions on any endangered or threatened species.

We appreciate the opportunity to provide these comments. If you need further assistance, please contact Betsy Herrmann, Ecologist, at the letterhead address or (801) 975-3330 ext. 139.

Sincerely,

Henry R. Maddux
Utah Field Supervisor

cc: UDWR - SLC

THE PAIUTE INDIAN TRIBE OF UTAH
440 North Paiute Drive · Cedar City, Utah 84720 · (435) 586-1112

April 05, 2004

Jeff Berna
Environmental Specialist
U. S. Dept. Of Transportation
Federal Highway Administration
Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, Utah 84118-1847

Dear Mr Berna:

SUBJECT: Colorado River Bridge Feasibility Study; Moab, Utah

The Paiute Indian Tribe of Utah is in Receipt of your letter February 26, 2004 and have reviewed the material and have no objections pertaining to the project. Our interest is not limited to cultural resources but include plants and natural springs or other places of interest. These particular areas that the proposed project is being considered for, is lands that are part of the aboriginal Southern Paiute home lands. At this time we are not aware of any archaeological resources in or near the proposed site.

Please notify the Paiute Indian Tribe of Utah of any cultural information that is found including type and location, also updates or changes to the Project.

Sincerely,

Dorena Martineau

Dorena Martineau
Culture Resource Manager
Paiute Indian Tribe of Utah

1.4
AR113

Jones, Laynee G.

From: Steven Parkin [sparkin@utah.gov]
Sent: Wednesday, April 21, 2004 9:05 AM
To: Jones, Laynee G.
Subject: RE: Request for Overview

Laynee, I've read enough about the Colorado River Bridge project. You may now remove my name from your distribution list. Best wishes.

Steve Parkin
Division Of Air Quality

>>> "Jones, Laynee G." <Laynee.Jones@hdrinc.com> 03/17/04 10:58AM >>>
Steven:

Here are the draft minutes. Would you like me to leave you on the distribution list for materials pertaining to this project?

Laynee
281-8892

From: Steven Parkin [mailto:sparkin@utah.gov]
Sent: Wednesday, March 17, 2004 10:29 AM
To: Jones, Laynee G.
Subject: Request for Overview

I respectfully request an email copy of prepared notes, minutes, letters or memos resulting from the scoping and public meetings which focus on the Colorado River Bridge Feasibility Study; mainly, the events of March 3rd. This is a request for overview only; no special care is needed to type/prepare any information that is not already in email-able format.

Steven Parkin
Division Of Air Quality
801-536-4014

5.3
AR106

JUN 2 1 2004

June 17, 2004

Kalen Jones
P.O. Box 1171
Moab, UT 84532

Colorado River Bridge Study Team
3995 South 700 East Suite 100
Salt Lake City UT 84107

Dear Study Team Members;

I am a resident of Moab, and am deeply concerned that the replacement bridge on UT 191 over the Colorado River may not be as well designed or funded as possible, due to an intractable belief by a few community members that a bypass would somehow be in this town's best interest. I encourage you to make the replacement bridge as functional, as far into the future, as possible. Although I would prefer there were no heavy trucks on UT 191, I believe routing them through Moab on the existing highway is, and will continue to be, the best location for them. Please prioritize and fund traffic calming, other ways to slow down trucks and cars, and pedestrian and bicycle safety in you designs for Moab's Main St. / 191. Please do not make any decisions that presuppose that a bypass might be a good idea, or that a bypass would not be highly contentious within this community.

Sincerely,

Kalen Jones

Cc: Kim Manwill

1.3
AR017

State of Utah

OLENE S. WALKER
Governor

GAYLE McKEACHNIE
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

August 11, 2004

Mr. Leigh Kuwanwisiwma
Director, Hopi Cultural Preservation Office
P.O. Box 123
Kykotsmovi, AZ 86039

Subject: BRF-0191(23)128; Colorado River Bridge Feasibility Study
Cultural Literature Search Review

Dear Mr. Kuwanwisiwma:

Thank you for your letter to the Utah Division of the Federal Highway Administration, dated March 2, 2004, requesting consulting party status on this project located near Moab, Utah. As you are aware, the Federal Highway Administration and UDOT are in the process of conducting a feasibility study for improvements to the US-91 crossing of the Colorado River from milepost 126.5 to milepost 129.5, near Moab. The study area is defined as 500 ft either side of the US-191 centerline, which includes Department of Energy, Arches National Park, and Bureau of Land Management lands. The feasibility study will address the need for a new structure, future travel demand, and safety. The study includes public and agency scoping meetings, completing a cultural resource literature search and initial project notification, determining the purpose of and need for the project, identifying project alternatives, and identifying environmental concerns. Following the feasibility study, FHWA and UDOT will prepare an environmental document in accordance with the National Environmental Policy Act and will complete a cultural resource inventory.

In accordance with your request, please find enclosed for your review and comment a copy of the cultural resources literature search completed by Montgomery Archaeological Consultants. If you are aware of any additional sites that are not discussed in the enclosed, please let me know. Also please indicate if you have any concerns with the National Register of Historic Places eligibility determinations of the previously recorded sites.

Thank you for your efforts. Should you require additional information or assistance, please contact me at (435) 893-4753 or susanmiller@utah.gov.

Respectfully,

Susan G. Miller

Susan G. Miller, NEPA/NHPA Specialist
Region Four Environmental

sgm/enclosure

cc: (w/enclosure)
Jeff Berna, FHWA
(w/out enclosure)
Sandra Garcia, FHWA
Daryl Friant, Environmental Engineer
Kim Manwill, Project Manager
Laynee Jones, HDR Engineering

IDENTICAL COPIES OF THIS LETTER SENT TO THE FOLLOWING:

Tribal Contacts List For : Project #: BRF-0191(23)128, PIN: 3418
Project Description: Colorado River Bridge Feasibility Study
Moab, Utah

Original to:	CC to:
Mr. Liegh Kuwanwisiwma Director, Hopi Cultural Preservation Office P.O. Box 123 Kykotsmovi, AZ 86039	
Mr. Joe Shirley, Jr. President, Navajo Nation P.O. Box 9000 Highway 264, Tribal Hills Drive Window Rock, AZ 86515	
Mr. Terry Knight Cultural Representative Ute Mountain Ute Tribe P.O. Box 53 Towaoc, CO 81334	Ms. Judy Knight Frank Chairwoman Ute Mountain Ute Tribe P.O. Box 109 Towaoc, CO 81334
Ms. Elaine Atcitty Chair, White Mesa Ute Council P.O. Box 7096 White Mesa, UT 84511	
Ms. Betsy Chapoose Director of Cultural Rights and Protection Ute Indian Tribe of the Uintah/Ouray Agency P.O. Box 190 Fort Duschene, UT 84026	Ms. Maxine Natchees Chairwoman Ute Indian Tribe of the Uintah/Ouray Agency P.O. Box 190 Fort Duschene, UT 84026
Mr. Leonard Burch Chair, Southern Ute Tribe P.O. Box 737 Ignacio, Colorado 81137	
Ms. Lora E. Tom Chairwoman, Paiute Indian Tribe of Utah 440 North Paiute Drive Cedar City, UT 84720	Ms. Dorena Martineau Cultural Resource Director Paiute Indian Tribe of Utah 440 North Paiute Drive Cedar City, UT 84720

1.3
AR019

State of Utah

OLENE S. WALKER
Governor

GAYLE McKEACHNIE
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

August 11, 2004

Ms. Marilyn Kastens, Archaeologist
U.S. Department of Energy
2597 B ¾ Road
Grand Junction, Colorado 81503

RE: BRF-0191(23)128; Colorado River Bridge Feasibility Study
Lit Search Report Review

Dear Ms. Kastens:

The Federal Highway Administration and UDOT are in the process of conducting a feasibility study for improvements to the US-191 crossing of the Colorado River from milepost 126.5 to milepost 129.5, near Moab. The study area is defined as 500 ft either side of the US-191 centerline, which includes Department of Energy Lands. The feasibility study will address the need for a new structure, future travel demand, and safety. The study includes public and agency scoping meetings, completing a cultural resource literature search and initial project notification, determining the purpose of and need for the project, identifying project alternatives, and identifying environmental concerns. Following the feasibility study, FHWA and UDOT will prepare an environmental document in accordance with the National Environmental Policy Act and will complete a cultural resource inventory.

Montgomery Archaeological Consultants recently completed a literature search for cultural resources. Please find enclosed a copy of their results for your review and comment. If you are aware of any cultural resources within the study area that are not presented, please let me know. Also, please indicate if you have any concerns with the National Register of Historic Places eligibility determinations of the previously recorded sites. FHWA is also consulting with Native American tribal governments, who may identify additional sites.

Thank you for your efforts. Should you require additional information or assistance, please feel free to contact me at (435) 893-4753 or susanmiller@utah.gov.

Respectfully,

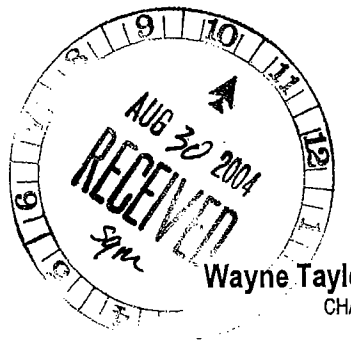
Susan G. Miller, NEPA/NHPA Specialist
Region Four Environmental

sgm/enclosure
cc: (w/out enclosure)
Sandra Garcia, FHWA
Daryl Friant, Environmental Engineer
Kim Manwill, Project Manager
Laynee Jones, HDR Engineering

Identical Copies of this Letter Sent to the Following:

Ms. Marilyn Kastens, Archaeologist US Department of Energy 2597 B ¾ Road Grand Junction, CO 81503	Ms. Chris Goetze, Archaeologist Arches National Park 2282 SW Resource Blvd Moab, UT 84532
Ms. Donna Turnipseed, Archaeologist Moab Field Office Bureau of Land Management 82 East Dogwood Moab, UT 84532	

THE HOPI TRIBE



Wayne Taylor, Jr.
CHAIRMAN

Caleb Johnson
VICE-CHAIRMAN

August 20, 2004

Susan G. Miller, NEPA/NHPA Specialist
Utah Department of Transportation, Region Four Environmental
1345 South 350 West
Richfield, Utah 84701

Re: BRF-0191(23)128, Colorado River Bridge Feasibility Study, Moab Utah

Dear Ms. Miller,

This letter is in response to your correspondence dated August 11, 2004, with an enclosed cultural resources literature search, in response to our March 2, 2004, letter regarding the Federal Highway Administration (FHWA) and Utah Department of Transportation (UDOT) Colorado River Bridge Feasibility Study for improvements to US 91 crossing the Colorado River between mileposts 126.5 and 129.5, near Moab. As you know, the Hopi Tribe appreciates FHWA and UDOT's continuing solicitation of our input and your efforts to address our concerns.

As you also know, the Hopi Cultural Preservation Office supports the identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties. We have reviewed the enclosed *Class I Cultural Resource Study for the Colorado River Bridge Project, Grand County, Utah* by Montgomery Archaeological Consultants. The report identifies three previously recorded prehistoric sites in this project area, including Courthouse Was Pictograph Panel, 42Gr605, and two rock shelters, 42Gr2074 and 42Gr3223. In addition, the report states that several prehistoric rock art panels and structural sites are known to occur along the cliffs and talus slopes between the Colorado River and Courthouse Wash in Arches National Park. Therefore, we look forward to receiving a copy of the cultural resources inventory for review and comment and hope that all identified prehistoric sites can be avoided by project activities.

If you have any questions or need additional information, please contact the Hopi Cultural Preservation Office. Thank you again for consulting with the Hopi Tribe.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: James Dykmann, Utah State Historic Preservation Office
Superintendent, Arches National Park

P.O. BOX 123 KYKOTSMOVI, AZ. 86039 (928) 734-3000

Baker
Engineering & Energy

Michael Baker Jr., Inc.
A Unit of Michael Baker Corporation

6955 Union Park Center, Ste 370
Midvale, Utah 84047
(801) 255-4400
FAX (801) 255-0404

November 15, 2005

RE: US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E
Notice to Property Owners

Dear Property Owner:

On behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT), Michael Baker Jr., Inc. (Baker) is sending you this letter to notify you that surveys and other site evaluations may be necessary on your property as part of planning for a transportation improvement project along US-191. The limits of this project for the purpose of the environmental process extend from 400 North in Moab, Grand County, Utah, to the recently improved section of US-191 near the junction of SR-279 (see attached Project Location Map). Construction would be phased based on funding availability.

You may have already participated in the scoping for this project, or provided other valuable input to the project team, as part of the Colorado River Bridge Crossing Study (Project No. BRF-0191(23)128). That study established that the purpose of this project is to provide a bridge over the Colorado River that meets current structural design standards and sufficiency rating requirements, improve safety, meet the existing and projected travel demand to the year 2030, and provide continuity between the four-lane sections on either end of the bridge study area.

Members of the Baker team, including our subconsultant (Montgomery Archaeological Consultants), will be supplementing the information obtained during this previous study in order to complete the environmental process. Members of the project team will be conducting surveys and site evaluations that may require access to your property. These evaluations are expected to take place on various occasions throughout the upcoming year; however, the majority of fieldwork is expected to be completed by the end of this year.

If you have any questions or would like further information, please contact the project's Public Involvement Coordinator, Tiffany Carlson, at (801) 352-5995. You may also

contact Kim Manwill, Utah Department of Transportation, Project Manager, at (435) 893-4734 or myself at (801) 352-5974. Comments may be sent by e-mail to US191ColoradoRiver@mbakercorp.com. Further project information will also be available through the project website at www.udot.utah.gov/coloradoriverbridge/.

Thank you for your cooperation.

Sincerely,

Lorraine Richards

Lorraine Richards, AICP
Michael Baker Jr., Inc., Project Manager

ac: Project Location Map

cc: Kim Manwill, UDOT Region 4
Project File

Baker
Engineering & Energy

Michael Baker Jr., Inc.
A Unit of Michael Baker Corporation

6955 Union Park Center, Ste 370
Midvale, Utah 84047
(801) 255-4400
FAX (801) 255-0404

November 29, 2005

David Sakrison
Mayor
217 E Center St
Moab, UT 84532

RE: US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E
Next Phase Begins To Complete Environmental Assessment
Request for Additional Comments

Dear Mayor Sakrison:

On behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT), Michael Baker Jr., Inc. (Baker) is sending you this letter to notify you that the next phase of the above-mentioned project is underway. This phase will complete the environmental process to allow for the construction of improvements associated with the Colorado River Bridge as early as 2009. The Environmental Assessment (EA) will also look at other improvements between 400 North in Moab and SR-279 (Potash Road), but these improvements would not be implemented until additional funding becomes available.

Stakeholders have already provided valuable input to the project team as part of the Colorado River Bridge Crossing Study. This study established that the project needs to:

- Provide a bridge over the Colorado River that meets current structural design standards and sufficiency rating requirements,
- Improve safety,
- Meet the existing and projected travel demand to the year 2030, and
- Provide continuity between the four-lane sections on either end of the bridge study area.

The bridge study recommendations will be considered further as alternatives are refined and impacts assessed in much greater detail for the EA. The FHWA and UDOT expect to make a decision on the findings of the EA in 2007. A workshop to review alternatives is planned in 2006, and a Public Hearing to review the findings of the EA is anticipated in early 2007.

Though the project team will start this next phase using information obtained during the bridge study, we want to ensure that a full range of issues related to the proposed action are addressed and the potential for significant issues are identified. If you have any additional concerns or concepts you would like us to consider in the EA please let us know at this time. There are a variety of ways you can communicate with the project team.

Comments may be e-mailed to:

US191ColoradoRiver@mbakercorp.com

Comments can also be mailed to:

US-191 Colorado River Bridge
c/o Michael Baker Jr., Inc.
6955 Union Park Center, Suite 370
Midvale, Utah 84047

Further project and contact information will also be available through the project website:

www.udot.utah.gov/coloradoriverbridge/

If you have questions, please contact the project's Public Involvement Coordinator, **Tiffany Carlson, at Michael Baker Jr., Inc, (801) 352-5995**. You may also contact Kim Manwill, Utah Department of Transportation, Project Manager, at (435) 893-4734, or myself at (801) 352-5974.

Sincerely,

Lorraine Richards

Lorraine Richards, AICP
Michael Baker Jr., Inc., Project Manager

ac: Project Location Map

cc: Jeff Berna, FHWA Utah Division Office
Kim Manwill, UDOT Region 4
Project File

Identical letters sent to:

David Sakrison
Mayor
217 E Center St
Moab, UT 84532

Donna Metzler
City Manager
217 E Center St
Moab, UT 84532

Kyle Bailey
City Council
217 E Center St
Moab, UT 84532

Jeffrey Davis
City Council
217 E Center St
Moab, UT 84532

Keith Brewer
City Council
217 E Center St
Moab, UT 84532

Gregg Stucki
City Council
217 E Center St
Moab, UT 84532

Rob Sweeten
City Council
217 E Center St
Moab, UT 84532

Brent Williams
Public Works
217 E Center St
Moab, UT 84532

David Olsen
Planning Director
217 E Center St
Moab, UT 84532

Robert Hugie
City Planner
217 E Center St
Moab, UT 84532

Jerry McNeely, Chairman
County Council
125 E Center St
Moab, UT 84532

Rex Tanner, Vice Chairman
County Council
125 E Center St
Moab, UT 84532

Audrey Graham
County Council
125 E Center St
Moab, UT 84532

Joette Langianese
County Council
125 E Center St
Moab, UT 84532

Judy Carmichael
County Council
125 E Center St
Moab, UT 84532

Jim Lewis
County Council
125 E Center St
Moab, UT 84532

Nate Knight
County Council
125 E Center St
Moab, UT 84532

Baker
Engineering & Energy

Michael Baker Jr., Inc.
A Unit of Michael Baker Corporation

6955 Union Park Center, Ste 370
Midvale, Utah 84047
(801) 255-4400
FAX (801) 255-0404

November 30, 2005

Erin Bell
Natural Resource Conservation Service
Ogden Satellite Office
2871 S. Commerce Way
Ogden, UT 84401

RE: US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E
[formerly Project No. BRF-0191(23)128]
Notice to Agencies, NEPA Process Being Reactivated
Request for Additional Comments

Dear Erin:

On behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT), Michael Baker Jr., Inc. (Baker) is sending you this letter to notify you that the next phase of the above-mentioned project is underway. The limits of this project for the purpose of the environmental process extend from 400 North in Moab, Grand County, Utah, to the recently improved section of US-191 near the junction of SR-279 (see attached map of study area). Construction would be phased based on funding availability.

To ensure that a full range of issues related to the proposed action are addressed and the potential for significant issues are identified, comments and suggestions are invited from all interested parties. A scoping letter was sent as part of the Colorado River Bridge Feasibility Study and a NEPA scoping meeting was held on March 3, 2004, at the Grand County Council Chambers in Moab. This scoping process helped establish that the purpose of this project is to provide a bridge over the Colorado River that meets current structural design standards and sufficiency rating requirements, improve safety, meet the existing and projected travel demand to the year 2030, and provide continuity between the four-lane sections on either end of the bridge study area.

If your agency provided the team written correspondence as part of the scoping process, that correspondence is attached. UDOT has contracted with Michael Baker Jr., Inc., to advance the project through the next phase, which will complete the NEPA process. Based on information obtained during this scoping process, an Environmental Assessment is anticipated. **Should your agency have additional comments, we would appreciate receiving them by December 30, 2005.**

The FHWA has requested that your agency also provide information on how you would like to be coordinated with in regards to this project, including whether you would like the opportunity to review an advanced draft of the environmental document prior to its release to the public. Please address any additional comments your agency may have to:

US-191 Colorado River Bridge
Michael Baker Jr., Inc.
6955 S Union Park Center, Suite 370
Midvale, UT 84047
US191ColoradoRiver@mbakercorp.com

If you have any questions or would like further information, please feel free to contact me at (801) 352-5974. Thank you for your cooperation.

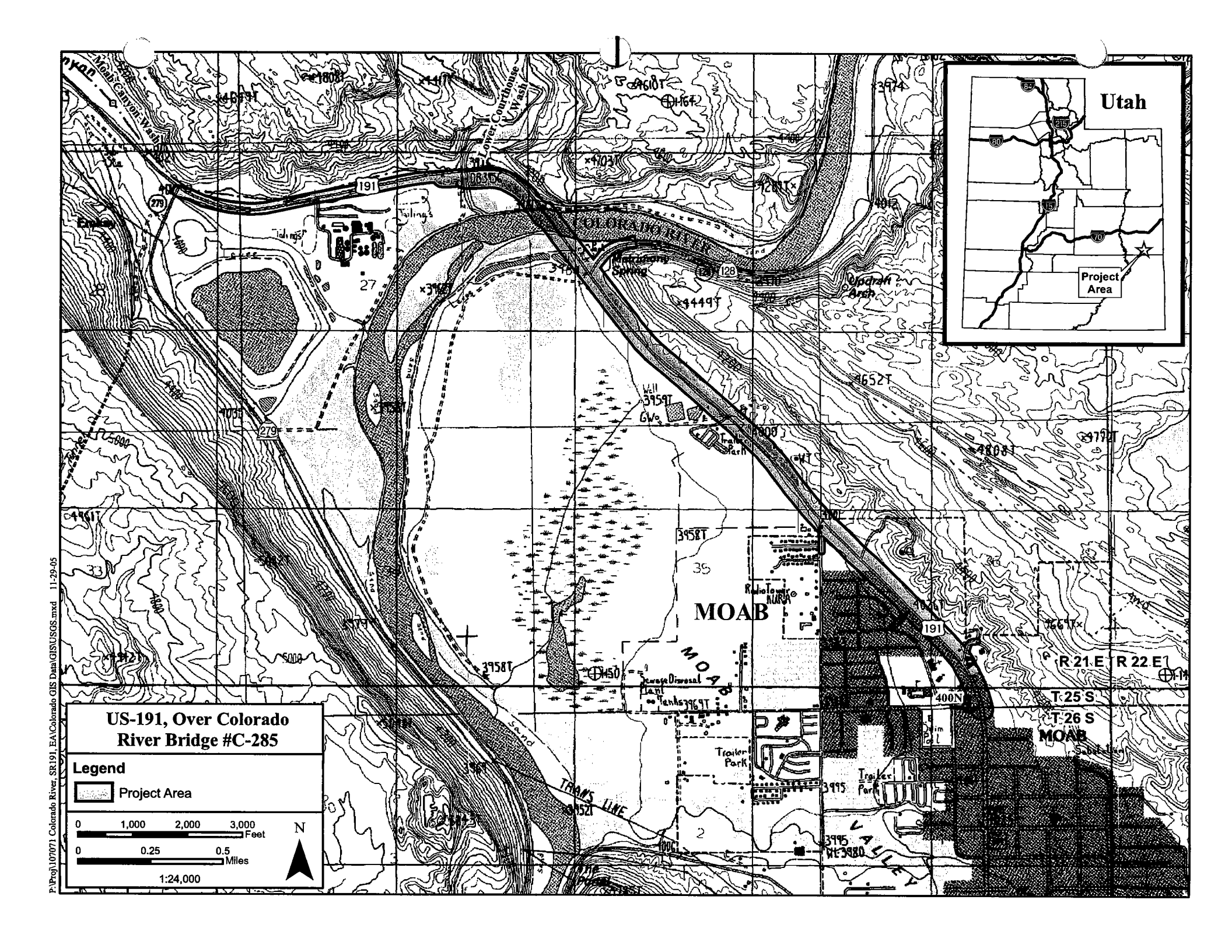
Sincerely,

Lorraine Richards

Lorraine Richards, AICP
Michael Baker Jr., Inc., Project Manager

ac: Study Area Map

cc: Jeff Berna, FHWA Utah Division Office
Kim Manwill, UDOT Region 4
Project File



P:\Proj\107071 Colorado River, SR191, EA\Colorado GIS Data\GIS\USGS.mxd 11-29-05

Erin Bell
NRCS Ogden Satellite Office
2871 S. Commerce Way
Ogden, UT 84401

Bob Cox
FEMA Region VIII
PO Box 25267
Denver, CO 80225-0267

Nick Mezei, USACOE
Colorado Basin Regulatory Office
400 Rood Avenue, Room 142
Grand Junction, CO 81501

Deborah Lebow, EPA Region VIII
USEPA Mail Code 8-EPR-N
999 18th Street, Suite 300
Denver, CO 80202-2466

Paul Mushovic, EPA Region VIII
USEPA Mail Code 8-EPR-N
999 18th Street, Suite 300
Denver, CO 80202-2466

Betsy Hermann, Ecologist
US Fish and Wildlife Service
2369 West Orton Circle
West Valley City, UT 84119

Russ Von Koch, Rec. Branch Chief
BLM Moab Field Office
82 East Dogwood Avenue
Moab, UT 84532

Maggie Wyatt, Office Manager
BLM, Moab Field Office
82 East Dogwood Avenue
Moab, UT 84532

Sally Wisely, State Director
BLM, Utah State Office
PO Box 45155
Salt Lake City, UT 84145-0155

Don Metzler, Fed. Project Director
US Department of Energy
2597 B 3/4 Road
Grand Junction, CO 81503

John Gilmore, Project Manager
US Department of Energy
2597 B 3/4 Road
Grand Junction, CO 81503

Phillip Brueck
NPS Southeast Utah Group
PO Box 907
Moab, UT 84532-0907

Wayne Nielsen, Facilities Manager
NPS Southeast Utah Group
PO Box 907
Moab, UT 84532-0907

Jim Webster
NPS Southeast Utah Group
PO Box 907
Moab, UT 84532-0907

Dave Wood
NPS Southeast Utah Group
PO Box 907
Moab, UT 84532-0907

John Harja, Executive Director
Utah Governor's Office, RDCC
1594 West North Temple
Salt Lake City, UT 84102

Carolyn Wright
Utah Governor's Office, RDCC
1594 West North Temple
Salt Lake City, UT 84102

Robert Morgan, Executive Director
Utah DNR
PO Box 145610
Salt Lake City, UT 84114-5610

Val Payne
Utah DNR
PO Box 145610
Salt Lake City, UT 84114-5610

Chris Colt, Habitat Manager
UDNR DWR, Southeastern Region
475 West Price River Drive, Suite C
Price, UT 84501

Casey Ford, UDNR
Div. of Water Rights, Price Office
453 South Carbon Avenue
Price, UT 84501

James Montella, UDNR
Div. Foresty, Fire, and State Lands
1165 So Hwy 191, Suite 6
Moab, UT 84532

Diane Nielson, Executive Director
UDEQ
PO Box 144810
Salt Lake City, UT 84114

Don Ostler, Director
UDEQ Division of Water Quality
288 North 1460 West
Salt Lake City, UT 84114-4870

Rick Sprott, Director
UDEQ, Division of Air Quality
168 North 1950 West
Salt Lake City, UT 84116

Kevin Brown, Director
UDEQ, Division of Drinking Water
150 North 1950 West
Salt Lake City, UT 84114-4830

Brad Johnson, Director
UDEQ, DERR
168 North 1950 West
Salt Lake City, UT 84114

Bob O'Brien
UDEQ DERR
Moab Uranium Mill Tailings Site
168 North 1950 West
Salt Lake City, UT 84114

Dane Finerfrock, Director
UDEQ Div. of Radiation Control
PO Box 144850
Salt Lake City, UT 84114

Commander, 11th Coast Guard Dist.
Bridge Section Building 50-3
Coast Guard Island
Alameda, CA 94501-5100

State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

December 7, 2005

Ms. Margaret Patterson
Moab Chapter USAS
Box 40031
Thompson Springs, Utah 84540

RE: Subject: BHF-0191(27)129e; Colorado River Bridge Replacement
Section 106 & U.C.A. 9-8-404 compliance
Project Notification

Dear Ms. Patterson:

The Utah Department of Transportation is planning to use federal funds to replace the Colorado River Bridge on US-191, just north of Moab, Utah (see enclosed maps). The Utah Division of the Federal Highway Administration is the lead agency for Section 106 compliance, and is in the process of completing an Environmental Assessment for this project. The limits for the current study extend from 400 North in Moab, to the recently improved section of US-191 near the junction of the Potash Road (SR-279). UDOT completed a feasibility study for the replacement of the bridge, and consulted with your office regarding the known cultural resources in that study in July of 2004; no new inventory was done during that phase of the project. Please review the following information, and let me know of any concerns you may have.

The project area begins on the south at 400 North in Moab, where the four-lane highway ends, and continues to Potash Road, where another four-lane section begins. This was recently completed by UDOT in Moab Canyon. The study corridor width is generally 200 ft either side of centerline from 400 North to the Colorado Bridge. Between the Colorado and Lower Courthouse Wash, the study area is 100 ft on the east and 200 ft on the west. Just north of Lower Courthouse Wash to the Potash Road the study area is within the existing 100 ft wide right of way on either side of centerline. Along SR-128 a 1000 ft long by 200 ft wide corridor will be inspected; this encompasses Matrimony Spring. At four other intersections, a 500 ft long by 100 ft wide corridor will be examined. Other lands involved besides UDOT's are under the Bureau of Land Management jurisdiction, Department of Energy lands, and private property. No lands from Arches National Park are in the current study area. The entire area of potential effects will be inventoried for cultural resources by Montgomery Archaeological Consultants of Moab.

If you would like to continue to be a consulting party on this project, please let me know at (435) 893-4753 or susanmiller@utah.gov.

Respectfully,

Susan G. Miller, NEPA/NHPA Specialist
Region Four Environmental

cc: (w/out enclosures)
Jeff Berna, FHWA
Lorraine Richards, Baker

Identical copies of this letter sent to the following:

Ms. Rusty Salmon Grand County CLG & Historical Preservation Commission HC64 Box 2012 Castle Valley, UT 84532	Mr. Gerald Haycock Utah Historic Trails Consortium 818 East Hibiscus Avenue Salt Lake City, UT 84094

From: Craig Fuller
To: susanmiller@utah.gov
Date: 12/13/2005 9:47:32 AM
Subject: Colorado River Bridge Replacement project

13 December 2005
Dear Susan Miller:
On behalf of the Utah Historic Trails Consortium, I'm responding to your letter to Gerald Haycock, Utah Historic Trails Consortium, dated 7 December 2005. We would very much like to continue as a consulting party on this and similar projects that may impact historic trails in Utah. A copy of your letter and map was forwarded to a representative of the Old Spanish Trail Association for his comments. As you may know, the Old Spanish Trail was officially designated by Congress as part of the National Historic Trail program.
Sincerely,
Craig Fuller
Secretary
Utah Historic Trails Consortium
300 Rio Grande
Salt Lake City, UT 84101
cfuller@utah.gov
801-533-3538

U.S. Department
Of Transportation
Federal Highway
Administration

Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, UT 84118-1847

December 14, 2005

File: : BHF-0191(27)129e

Ms. Elayne Atcitty, Chair
White Mesa Ute Council
P.O. Box 7096
White Mesa, Utah 84511

Subject: BHF-0191(27)129e; Colorado River Bridge Replacement
Section 106 & U.C.A. 9-8-404 compliance
Project Notification

Dear Ms. Atcitty:

The Utah Department of Transportation (UDOT) is planning to use federal funds to replace the Colorado River Bridge on US-191, just north of Moab, Utah (see enclosed maps). The Utah Division of the Federal Highway Administration (FHWA) is the lead agency for Section 106 compliance, and is in the process of completing an Environmental Assessment for this project. The limits for the current study extend from 400 North in Moab, to the recently improved section of US-191 near the junction of the Potash Road (SR-279). UDOT completed a feasibility study for the replacement of the bridge, and consulted with your office regarding the known cultural resources in that study in July of 2004; no new inventory was done during that phase of the project. Please review the following information, and let me know of any concerns you may have.

The project area begins on the south at 400 North in Moab, where the four-lane highway ends, and continues to Potash Road, where another four-lane section begins. This was recently completed by UDOT in Moab Canyon. The study corridor width is generally 200 ft either side of centerline from 400 North to the Colorado Bridge. Between the Colorado and Lower Courthouse Wash, the study area is 1000 ft. long on the east and 200 ft wide on the west. Just north of Lower Courthouse Wash to the Potash Road the study area is within the existing 100 ft wide right of way on either side of centerline. Along SR-128 (commonly known as the River Road), a 100 ft long by 200 ft wide corridor will be inspected; this encompasses Matrimony Spring. At four other intersections, a 500 ft long by 100 ft wide corridor will be examined. Other lands involved besides UDOT's are under the Bureau of Land Management jurisdiction, Department of Energy lands, and private property. No lands from Arches National Park are in the current study area. Montgomery Archaeological Consultants of Moab will inventory the entire area of potential effects for cultural resources.

At your request, FHWA and UDOT staff will be available to meet with you to discuss any concerns you might have about this project. Please be assured that we will maintain strict confidentiality about certain types of information regarding traditional religious and/or cultural historic properties that might be affected by this proposed undertaking.

We would also appreciate any suggestions you might have about any other groups or individuals that we should contact regarding this project. If you would like a field review, please contact me at the number below.

A response within 30 days would be appreciated. If you have any concerns, please contact me at 801-963-0078, extension 235 to answer any questions or provide any additional information.

Thank you for your attention to this project notification and any comments you may have.

Respectfully,

Jeffrey Berna
Environmental Specialist

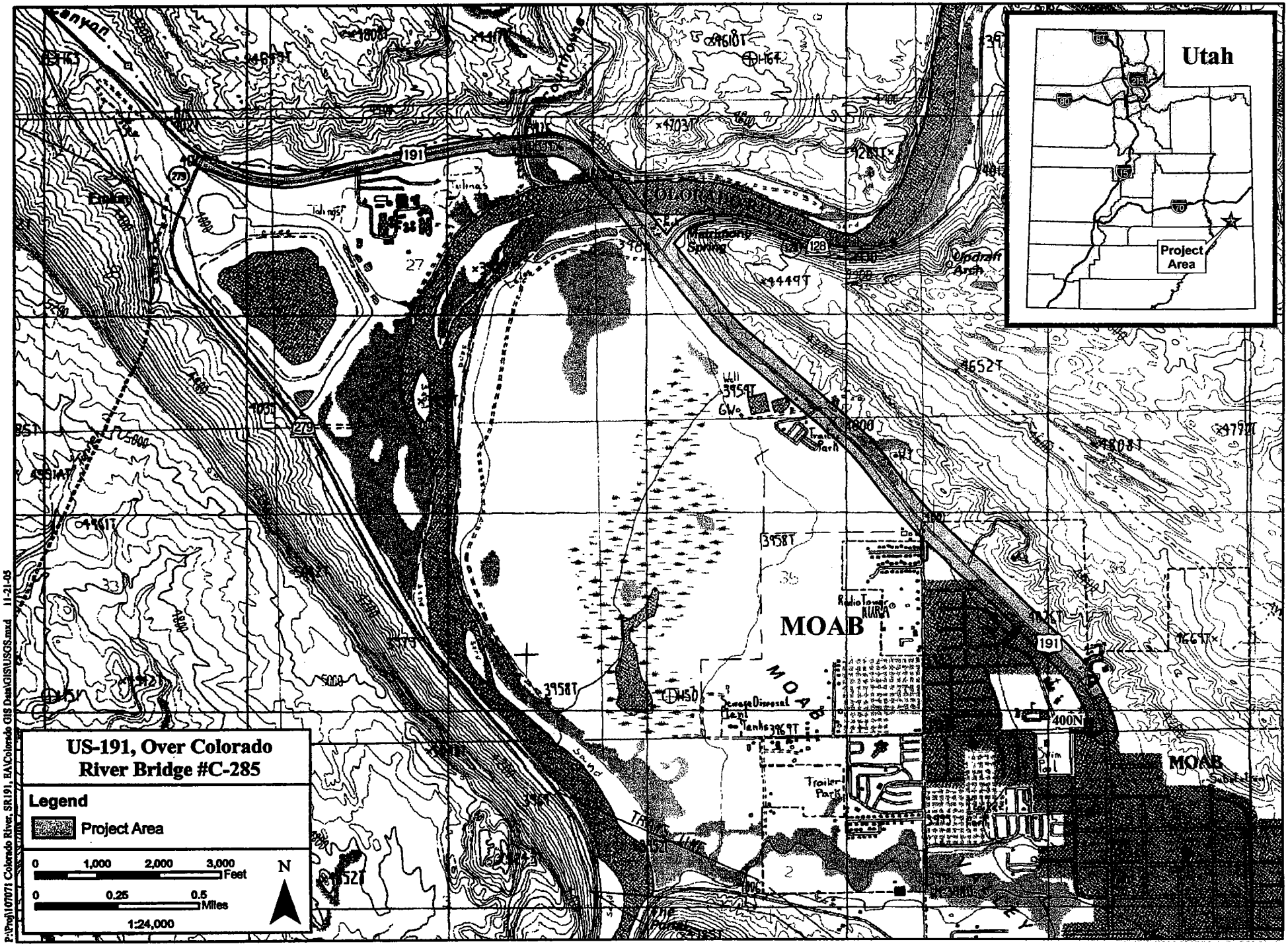
Enclosures (1)
cc: Susan Miller, UDOT NEPA/NHPA Specialist

JBerna:dm

IDENTICAL COPIES OF THIS LETTER SENT TO THE FOLLOWING:
Tribal Contacts List For : Project #: BHF-0191(27)129E;, PIN: 4486
Project Description: COLORADO RIVER BRIDGE

Original to:	CC to:
Mr. Clemete J. Roth, Chairman Southern Ute Tribe P.O. Box 737 Ignacio, Colorado 81137	Susan Miller, UDOT Region 4
Mr. Leigh Kuwanwisiwma, Director Cultural Preservation Office Hopi Tribe P.O. Box 123 Kykotsmovi, Arizona 86039	
Mr. Manuel Heart, Chairman Ute Mountain Ute Tribe P.O. Box 53 Towaoc, Colorado 81334	
Mr. Terry Knight, Cultural Representative Ute Mountain Ute Tribe P.O. Box 53 Towaoc, Colorado 81334	
Mr. Alan Downer, Director Historic Preservation Department Navajo Nation P.O. Box 4950 Window Rock, Arizona 86515	
Ms. Dorena Martineau, Cultural Resource Mgr The Paiute Indian Tribe of Utah 444 North Paiute Drive Cedar City, Utah 84720	
Ms. Elayne Atcitty, Chair White Mesa Ute Council P.O. Box 7096 White Mesa, Utah 84511	

Ms. Betsy Chapoose, Director Cultural Rights and Protection Uintah/Ouray Ute Tribe P.O. Box 190 Fort Duchesne, Utah 84026	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Project Area
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US-191, Over Colorado River Bridge #C-285
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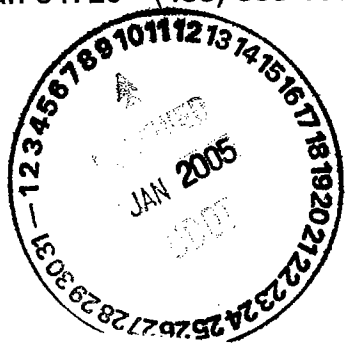
P:\Proj\107071 Colorado River, SR191, EA\Colorado GIS Data\GIS\USGS.mxd 11-21-05

THE PAIUTE INDIAN TRIBE OF UTAH

440 North Paiute Drive · Cedar City, Utah 84720 · (435) 586-1112



December 19, 2005

Jeffery Berna
Environmental Specialist
U. S. Department of Transportation
Federal Highway Administration
Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, Utah 84118-1847

Dear Mr. Berna,

Subject: BHF-0191(27)12E; Colorado River Bridge Replacement

The Paiute Indian Tribe of Utah is in receipt of your letter dated December 14, 2005 and have reviewed the material have no objections pertaining to the Colorado River Bridge Replacement project. Our interest is not limited to cultural resources but include plants and animals as well as natural springs or other places of cultural significance. At this time we are not aware of any archaeological resources in or near the proposed sites. We appreciate the UDOT's continuing solicitation of the Paiute Indian Tribe of Utah's input and your effort to address our concerns.

Please notify the Paiute Indian Tribe of Utah of any cultural information that is found including type and location, also any updates or changes to the project.

Thank You,

Dorena Martineau

Dorena Martineau
Cultural Resources
Paiute Indian Tribe of Utah
440 North Paiute Drive
Cedar City, Utah 84720

State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Office of The Governor
PUBLIC LANDS POLICY COORDINATION

LYNN STEVENS
Public Lands Policy Coordinator

RESOURCE DEVELOPMENT COORDINATING COMMITTEE
Public Lands Section

December 20, 2005

US-191 Colorado River Bridge
Michael Baker Jr., Inc.
6955 South Union Park Center, Suite 370
Midvale, Utah 84047

SUBJECT: US-191 Colorado River Bridge #C-285, Project No. BHF-0191 (27) 1229E
Project No. 05-5992

Dear Mr. Baker:

The Resource Development Coordinating Committee (RDCC) has reviewed this proposal. State agencies comment as follows:

Department of Environmental Quality/Division of Air Quality

The proposed bridge and highway construction project on US-191 in Grand County may require a permit, known as an Approval Order, from the Utah Division of Air Quality (UDAQ). If any rock crushing plants, asphalt plants, or concrete batch plants are located at the site, an Approval Order from the UDAQ will be required for operation of the equipment. A permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the UDAQ at 150 N. 1950 West, SLC, UT, 84116 for review according to Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. In addition, the project is subject to R307-205-3, Fugitive Dust, since the project will have a short-term impact on air quality due to the fugitive dust that is generated during the excavation and construction phases of the project. An Approval Order is not required solely for the control of fugitive dust, but steps need to be taken to minimize fugitive dust, such as, watering and/or chemical stabilization, providing vegetative or synthetic cover and windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm

Division of Wildlife Resources

The Utah Division of Wildlife Resources recently reviewed Utah Stream Channel Alteration Permit Application #05-05-0008 for a proposed pedestrian bridge across the Colorado

River only 800 feet from the proposed location of this project. With the construction of each of these bridges, there are potential impacts to the four federally endangered fish species found in the river. These impacts could be reduced if the two bridges were combined into one multi-function bridge.

If you have any questions, please call Leroy Mead, habitat biologist, at our Price office (435-636-0274).

The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this correspondence to the Resource Development Coordinating Committee, Public Lands Section, at the above address or call Carolyn Wright at (801) 537-9230.

Sincerely,

John Harja
Director
Resource Development Coordinating Committee
Public Lands Section

H-9

U.S. Department of Energy
2597 B ¾ Road
Grand Junction, CO 81503

December 20, 2005

Ms. Lorraine Richards
US-191 Colorado River Bridge
Michael Baker Jr., Inc.
6955 S Union Park Center, Suite 370
Midvale, UT 84047

Dear Ms. Richards:

Subject: Comments on Colorado River Bridge #C-285 Project

Thank you for the opportunity to comment on the Colorado River Bridge Project located at Moab, Utah. As you know the U.S. Department of Energy (DOE) is embarking on a major cleanup activity on the Moab (former Atlas mill tailings) site, now owned by the DOE, located south of Highway 191 within the proposed project area. DOE has completed an Environmental Impact Study (EIS) and Record of Decision and selected the preferred alternative to move the tailings by rail to Crescent Junction. The EIS is located on DOE's website at http://gj.em.doe.gov/moab/ and contains a lot of pertinent environmental information that you may find relevant to your study.

Over the next few years, DOE plans to initiate infrastructure improvements that include utilities and improvements and/or changes to the entrance from the highway into the DOE site prior to starting the haul of tailings and initiating a long-term construction project. Traffic will increase into the site as construction workers, supplies, and fuel deliveries increase. In addition, approximately 35,000 cubic yards of debris that cannot be moved by rail will be hauled by truck on Highway 191 to the Crescent Junction disposal cell site, located north of I-70.

A large portion of the highway right-of-way located in your project area from Courthouse Wash to the intersection with State Highway 279 is contaminated with residual radioactive material (RRM) from the former millsite. The RRM is primarily 6 to 12 inches deep. Although it exceeds EPA Standards (40CFR192) for cleanup, it is considered low-level radioactive contamination and poses no short-term risk to workers or the public. DOE intends to remediate the contamination in the right-of-way over the next few years if funding permits. DOE and Utah Department of Transportation have already remediated portions of the right-of-way so that the recent highway improvements were placed on "clean" ground.

In response to your request, DOE would appreciate the opportunity to review and comment on any advance NEPA documents before they are released to the public. If you prefer, we are

happy to review electronic files, so that you can avoid the cost of printing and mailing. If you have any questions please call me at 970-248-7612 or Joel Berwick at 970-248-6020.

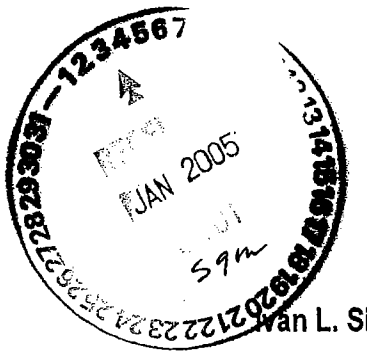
Sincerely,

Donald R. Metzler
Moab Federal Project Director

cc:
J. Berwick, DOE
J. Elmer, Stoller
K. Karp, Stoller
Project File MOA 42.1 (D. Osborne)

DRM\MOAB\Millsite\CommtsCORiverBridge.doc

THE HOPI TRIBE



Ivan L. Sidney, Sr.
CHAIRMAN

Todd Honyaoma, Sr.
VICE-CHAIRMAN

December 27, 2005

Jeffery Berna, Environmental Specialist
Federal Highway Administration, Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, Utah 84118-1847

Re: Project # BHF-0191(27)129e; Colorado River Bridge Replacement

Dear Mr. Berna,

Thank you for your correspondence dated December 14, 2005, regarding plans to replace the Colorado River Bridge on US-191 north of Moab. As you know, the Hopi Tribe claims cultural affiliation to prehistoric cultural groups in Utah, and the Hopi Cultural Preservation Office supports identification and avoidance of prehistoric archaeological sites.

Therefore, in response to your letter, we would like to be kept informed of this proposal and provided with a copy of the cultural resource survey report of the area of potential effect by Montgomery Archaeological Consultants for review and comment.

As you also know, we appreciate the Federal Highway Administration and the Utah Department of Transportation's continuing solicitation of our input and your efforts to address our concerns. Should you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office. Thank you again for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Susan Miller, Utah Department of Transportation

P .O. BOX 123 KYKOTSMOVI, AZ. 86039 (928) 734-3000

QUINTSTAR Management, INC.

January 10, 2006

By fax 801-255-0404

Lorraine Richards, AICP
Michael Baker, Jr., Inc. Project Manager
6955 Union Park Center, Ste 370
Midvale, UT 84047

RE: US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E
Notice to Property Owners

Dear Ms. Richards:

I have received your letter written on behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT).

You are welcome to access my property in relation to this job.

Since you are doing this study, I want to give you my input. I also attach a copy of the letter I wrote to the City of Moab last year when the City had a public hearing for UDOT's North Corridor Transportation Plan.

To my knowledge, the Moab City Council passed a resolution that recommended that UDOT put in a four-lane highway in the North Corridor with a modern designed storm drain on the East side.

The following are the highlights of my recommendation to UDOT:

1) The storm drain should be on the east side of the highway, all the way to the Colorado River. Preferably there will be no holes under the highway that would dump storm water on the businesses along the road on the west side.

2) I recommend a four-lane highway, but we do need a middle lane for slowing down to turn in to the businesses.

435-259-6869 • FAX 435-259-8989
quintstar@yahoo.com
168 East Center Street • Moab, Utah 84532 • U.S.A.

3) I recommend the bike path be built on the west side of the highway in the easement area.

a) If it was on the east side, the bicycles would compete with the storm drain and it would be congested, overly crowded and dangerous for the cyclists.
b) If it was on the west side, there is a wide easement that they can use to design a beautiful landscaped bike path all the way from town to the Colorado River Bike Trail Bridge.

4) I respectfully ask that you recommend to the UDOT to give the opportunity for all businesses along the north corridor on both sides to express their wish to have cuts for their customers to go in and out of their businesses.

If you have any questions, please feel free to call me at 435-259-6869.

Sincerely,

J. J. Wang, President
Quintstar Management Company

cc: Kim Manwill, UDOT Region 4
By fax: 435-896-6458

495

QUINTSTAR Management, INC.

July 29, 2004

The Mayor and Members
of Moab City Council
City of Moab
115 W. 200 S.
Moab, Utah 84532

Dear Mayor and City Council Members:

I have had a chance to read the draft report of the Moab Transportation Master Plan prepared by the DOT Planning Section.

Traffic Data

The traffic Data Chart in Section 2.6 "Traffic Data", "Table 1. Average Annual Daily Traffic" looks like this:

Road	Segment	Year	AADT
US-191	South of Moab	2002	8,835
US-191	Downtown Moab	2002	16,700
US-191	North of Moab	2002	6,179
US-191	South of Arches Entrance/SR 279 (Potash Road)	2002	5,745
US-191	North of Arches Entrance/SR 279 (Potash Road)	2002	2,975
SR128	East of US-191	2002	690
SR279	West of US-181	2002	200

According to the chart, TO SET THE PRIORITIES:

Priority No. 1 - Downtown Moab
Priority No. 2 - South of Moab
Priority No. 3 – North of Moab-"The North Corridor; the Gateway"
Priority No. 4 - South of the Arches Entrance
Priority No. 5 - North of Arches

435-259-6869 • FAX 435-259-8989
quintstar@yahoo.com

Now, Priority No. 1 Downtown, construction by the DOT will start.
Priority No. 2 South of Moab, already four lane highway in very good condition for quite a few years
Priority No. 4 & 5 Now is under construction.

The only thing that is not done is Priority No. 3 – North of Moab.

I think, naturally, the North of Moab (the North Corridor, the Gateway) now should be the Priority No. 1.

Next we should look at the "future land use" section of the Plan, Section 3.1.2. They have only listed and identified three items. We did not find anything even mentioning the north of Moab (the North Corridor, the Gateway). The DOT draft has not even listed the North Corridor development as a major item. I would like to point this out and make the Council aware of it.

I think it is apparent that right now the North Corridor should become the No. 1 priority of the Transportation Plan.

HISTORY – LOSS OF A BIG OPPORTUNITY

About two years ago the City and County had an opportunity to make a choice on how the DOT was going to use $9 Million in highway funds. The DOT gave to our City and our County a chance to choose:

1) A new highway from the river bridge to the Inca Inn;
2) Build a new river bridge; or
3) Improve the highway with lots of turning and passing lanes from Crescent Junction to the river bridge

The offer was declined and none were chosen. I and a few others do not know why.

ANNEXATION

The City now has an annexation plan and is working to annex all the land in the North Corridor all the way to the Colorado River. The City hopes it will bring in more business to that area and produce more sales tax income and the city can service and build more infrastructure to serve the community.

Also the City would like to see a beautified North Corridor - the entranceway to Moab. To my knowledge the City is working very hard, patiently and sincerely to get those lands annexed into the City. If in the near future this area is annexed into the City (which I believe will happen) the traffic on the highway from the Colorado River to the Inca Inn will increase tremendously.

DRAINAGE PROBLEM

A few years ago there was a flood from the hills that even covered the highway in the area from the Inca Inn all the way to the north. The storm water comes down from the hills, but there is no drainage by the highway to take care of the flood water. I visited the City officials about it and I recommended why not put a storm water drain along the highway all the way to the Colorado River. It seems the logical and best solution. The City official told me it is very hard to work with the County and we cannot tell DOT what to do.

According to the above observations, right now the Department of Transportation has a transportation plan for our area. The City has held public hearings and heard input from our citizens about how to develop the Plan in the future.

It is now time for our City to represent the whole community (if the County can be involved that would be great) and officially recommend the North Corridor from the bridge to the Inca Inn is our first priority and needs to be improved. Based on this Transportation Plan and feedback by the City for the whole community, the DOT will set up a budget in the near future to improve our transportation in the North Corridor. Now is the time, I hope we do not miss it again.

RECOMMENDATIONS:

As a citizen and not an expert or professional, I make these recommendations:

GOAL

1) Take care of the busy traffic and make that section of the highway safe for cars and people for now and for the future
2) Take care of the storm drain to drain water directly to the Colorado River from the hill side of the highway
3) Beautify our north entranceway to the City

4) Construct landscaping on the side of the highway to make the north entranceway to the City beautiful
5) Help the businesses in the North Corridor with a middle lane for turning and a takeoff lane. Provide the opportunity for the business owners to give input for building cuts needed for turnouts to the businesses to help the businesses to grow.
6) Have a safe and beautiful bike trail all the way and sidewalk and walking trail system to make the North Corridor a pedestrian friendly area.

THE PLAN

The ideal solution is to widen the highway to seven lanes in the North Corridor from the river bridge to the Inca Inn. The middle lane should be for the safety and convenience of our guests turning into the businesses. Each of the two outside lanes should also be for the safety and convenience of our guests in picking up speed and getting on to the highway. The two lanes in each direction should be for passing and for through traffic. Provide beautiful landscaping on each side of the highway with a bike trail and walking parkway system. To protect these from storm waters, construct a modern scientifically calculated storm drain on the hill side of the highway to drain all the way to the Colorado River.

CONCLUSION:

The Utah Department of Transportation (DOT) always helps us to make our community better. Now is our chance to put our input into their plan so they can set their budget. I respectfully ask the City Council to represent the community as a whole and in some official form give this input to the Department of Transportation.

I had a chance to present this idea to Mayor Sakrison and City Manager Metzler and Public Works Director Brent Williams. I appreciate the support they expressed for this idea. I would like to personally present this to Robert Hugey, the City Planner.

Sincerely,

J. J. Wang, President
Quintstar Management Company

Date: JANUARY 25, 2006

Re: BHE-0191(27)129E; COLORADO RIVER BRIDGE REPLACEMENT SECTION 106 & U.C.A. 9-8-404 COMPLIANCE PROJECT NOTIFICATION.

Dear SUSAN MILLER, UDOT NEPA/NHPA SPECIALIST

I have reviewed your Consultation Request under Section 106 of the National Historic Preservation Act regarding the proposed communications tower construction project referenced above and offer the following response as indicated by the box that is checked and my initials.

☐ NO INTEREST ____ (Initials of duly authorized Tribal official)
I have determined that there is not a likelihood of eligible properties of religious and cultural significant to the Southern Ute Indian Tribe in the proposed construction area.

☐ REQUEST ADDITIONAL INFORMATION _____ (Initials of duly authorized Tribal official)
I require the following additional information in order to provide a finding of effect for this Proposed undertaking:_____

☒ NO EFFECT NAC (Initials of duly authorized Tribal official)
I have determined that there are no properties of religious and cultural significance to the Southern Ute Indian Tribe that are listed on the National Register within the area of potential or that the proposed project will have no effect on any such properties that may be present.

☐ NO ADVERSE EFFECT _____ (Initial of duly authorized Tribal official)
I have identified properties of cultural and religious significance within the area of effect that I believe are eligible for listing in the National Register, for which that would be no adverse effect as a result of the proposed construction project.

☐ ADVERSE EFFECT_____ (Initial of duly authorized Tribal official)
I have identified properties of cultural and religious significance within the area of potential Effect that are eligible for listing in the National Register. I believe the proposed construction Project would cause and adverse effect on these properties.

Sincerely,

Neil B. Cloud

Neil B. Cloud
NAGPRA Coordinator

Baker

Michael Baker Jr., Inc.
6955 Union Park Center, Suite 370
Midvale, Utah 84047

801-255-4400
FAX 801-255-0404

January 31, 2006

Resource Development Coordinating Committee
Public Lands Section
5110 State Office Building
Salt Lake City, Utah 84114

Re: US-191, Over Colorado River Bridge #C-285, Project No. BHF-0191(27)1229E

Dear RDCC, State Lands Section:

This letter is in response to the letter we received from you on December 20, 2005. The Division of Wildlife Resources commented on the possibility of combining the proposed pedestrian bridge crossing with the proposed roadway bridge over the Colorado River in order to reduce impacts to the four federally endangered fish species found in the river.

There were two primary factors that were considered when determining the location of the pedestrian bridge in the Environmental Assessment approved in 2004 (*Utah's Colorado Riverway Recreation Area Management Plan Amendment 2: Pedestrian Bridge/Riverway Bike Lane Environmental Assessment*). First, building a separate pedestrian bridge would keep the pedestrians and bicyclists away from the main traffic flow and would be a safer facility. The second factor was the timing of available funds. The funding for the roadway bridge was not available and looked to be approximately 8-10 years out. Currently, the funding for the pedestrian bridge is in place, final design has been completed, and construction is planned to start this spring. The pedestrian bridge will be completed well before the proposed roadway bridge study is complete.

Another factor to consider is the visual appearance of the roadway structure. Building the separate structure allows the roadway structure to be a narrower structure, which would be less visually intrusive as an entrance to Moab. As alternatives for the roadway structure are developed, UDOT will continue to evaluate ways to minimize harm. This includes evaluating whether there are construction methods that could be used to reduce the duration and/or frequency of work needed in the river. UDOT will involve the US Fish and Wildlife Service, as well as UDWR, throughout this study regarding this issue.

If you have further questions, please contact me at (801) 352-5974.

Sincerely,

Lorraine Richards, AICP
Michael Baker Jr., Inc., Project Manager

cc: Leroy Mead, UDWR Price Habitat Biologist
Paul West, UDOT Biologist
Kim Manwill, UDOT Project Manager

Baker
Engineering & Energy

Michael Baker Jr., Inc.
A Unit of Michael Baker Corporation

6955 Union Park Center, Ste 370
Midvale, Utah 84047
(801) 255-4400
FAX (801) 255-0404

February 14, 2006

RE: US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E

Dear Stakeholder:

On behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT), Michael Baker Jr., Inc. (Baker) is sending you this letter to invite you to participate in focus workshops for the US-191 Colorado River Project. The project study area is shown in the attached map. You may have already participated in the scoping for this project as part of the Colorado River Bridge Crossing Study. That study established that the bridge over the Colorado River needs to be replaced. The US-191 Colorado River Project would provide a bridge that accommodates US-191 traffic over the Colorado River and also meets current structural design standards, improve safety throughout the US-191 Colorado River study area, meet the existing and projected travel demand through the design year 2030 and provide continuity between the four-lane sections on either end of the project, and facilitate the movement of bicycle and pedestrian traffic along US-191.

The intention of the focus workshops is to discuss the purpose and need for the project and to review the preliminary build alternative for the bridge and roadway. Everyone is invited to participate in these workshops; however, reservations are required so that each session can be conducted in a small group setting.

WHAT:	US-191 Colorado River Project Focus Workshop
WHERE:	Grand County Council Chambers 125 E. Center Street in Moab
WHEN:	Tuesday March 14, 2006 90 minute session - Time provided when reservation is made
RESERVATIONS:	***Reservations are required – Please call no later than March 7th*** Tiffany Carlson, at Michael Baker Jr., Inc, (801) 352-5995

Please note that this is the last public meeting scheduled for this project until the public hearing, when the draft Environmental Assessment will also be available for review. Your early participation helps the team better understand important issues and address them as part of the development of the Environmental Assessment. Improvements associated with the Colorado

River Bridge could be constructed as early as 2009. The Environmental Assessment (EA) will also look at other improvements between 400 North in Moab and SR-279 (Potash Road), but these improvements would not be implemented until additional funding becomes available. Further project and contact information is available through the project website:

www.udot.utah.gov/coloradoriverbridge/

To reserve a seat or if you have questions, please contact the project's Public Involvement Coordinator, **Tiffany Carlson, at Michael Baker Jr., Inc, (801) 352-5995** or myself at (801) 352-5974. If you would like to provide input but are unable to participate in one of these workshops, you may send your comments to:

US-191 Colorado River Project
Michael Baker Jr., Inc.
6955 S Union Park Center, Suite 370
Midvale, UT 84047
US191ColoradoRiver@mbakercorp.com

Thank you for your time and interest in this project.

Sincerely,

Lorraine Richards

Lorraine Richards, AICP
Michael Baker Jr., Inc., Project Manager

ac: Study Area Map

cc: Jeff Berna, FHWA Utah Division Office
Kim Manwill, UDOT Region 4
Project File

14. Please respond

RECD
FEB 23 2006
BRIDGE SEC.

Baker
Engineering & Energy

Michael Baker Jr., Inc.
A Unit of Michael Baker Corporation
6955 Union Park Center, Ste 370
Midvale, Utah 84047
(801) 255-4400
FAX (801) 255-4404

Under the provisions of the Coast Guard Authorization Act of 1982, the Coast Guard has determined this project does not require Coast Guard involvement for bridge permit purposes.

Signature: _____ Date: 12/20/05 2/27/06

DAVID H. SULOUFF
Chief, Bridge Section
11th Coast Guard District
By direction of District Commander

February 14, 2006

RE: US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E

Dear Stakeholder:

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www.udot.utah.gov/coloradoriverbridge/

To reserve a seat or if you have questions, please contact the project's Public Involvement Coordinator, **Tiffany Carlson, at Michael Baker Jr., Inc, (801) 352-5995** or myself at (801) 352-5974. If you would like to provide input but are unable to participate in one of these workshops, you may send your comments to:

US-191 Colorado River Project
Michael Baker Jr., Inc.
6955 S Union Park Center, Suite 370
Midvale, UT 84047
US191ColoradoRiver@mbakercorp.com

Thank you for your time and interest in this project.

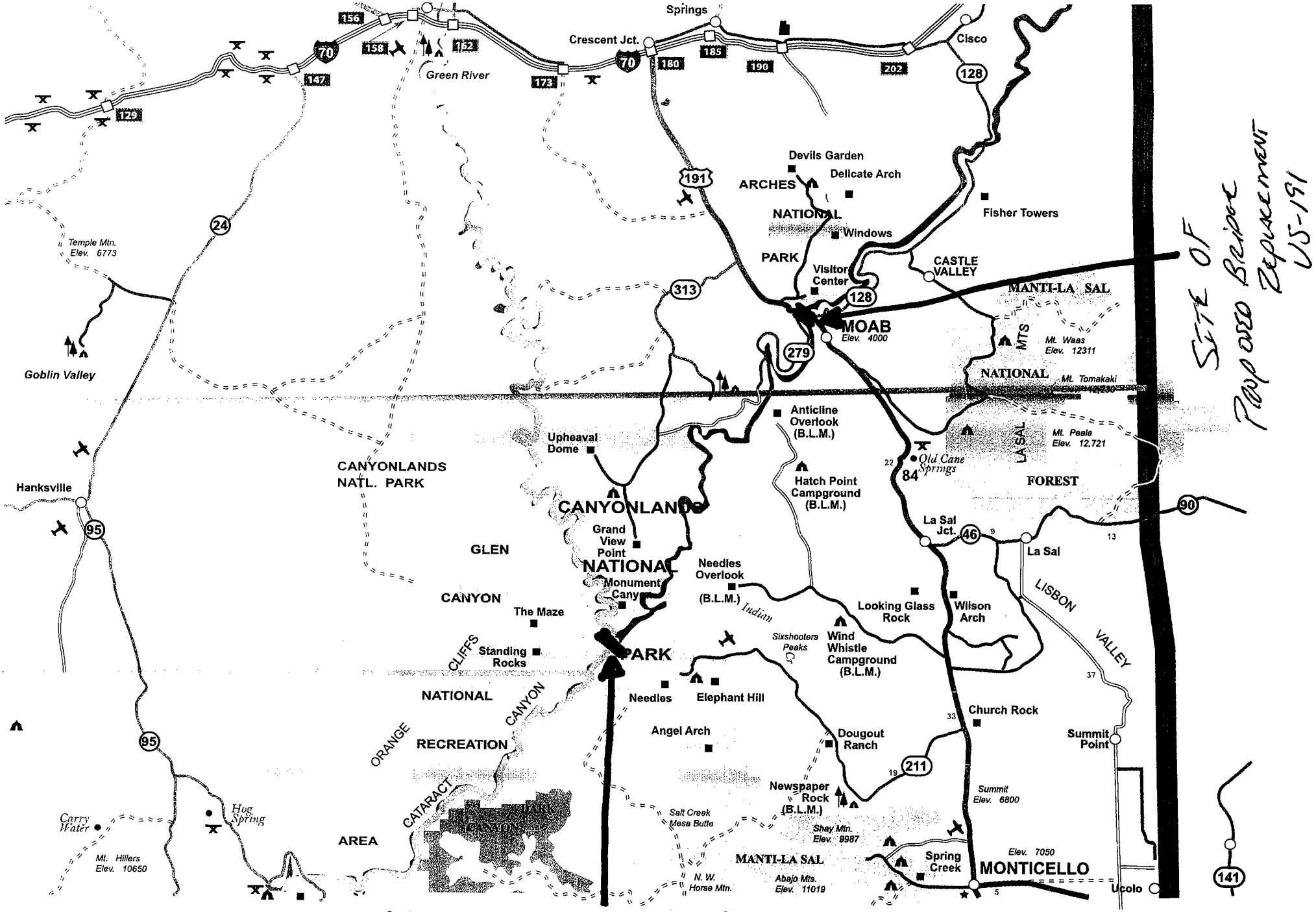
Sincerely,

Lorraine Richards

Lorraine Richards, AICP
Michael Baker Jr., Inc., Project Manager

ac: Study Area Map

cc: Jeff Berna, FHWA Utah Division Office
Kim Manwill, UDOT Region 4
Project File



SITE OF PROPOSED BRIDGE REPLACEMENT US-191

UPPER LIMIT OF CB JURISDICTION

From: Tamara Keefe
To: habitat@utah.gov
Date: 3/3/2006 10:24:58 AM
Subject: Request for Information

Hello,

I need a shapefile and a letter explaining what species are possibly in or around our project area.

I've attached a shapefile showing our study limits, it is in UTM NAD 1983 Zone 12.

If you need anything else, let me know.

Thank you very much!

Tamara

Tamara Keefe

GIS Specialist I
Michael Baker Jr., Inc.
(801) 255-4400
Direct: (801) 352-5983
Fax: (801) 255-0404

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources

JAMES F. KARPOWITZ
Division Director

March 14, 2006

Tamara Keefe
Michael Baker Jr., Inc.
6955 South Union Park Center, Suite 370
Midvale, UT 84047

Dear Ms. Keefe:

I am writing in response to your letter dated March 14, 2006 for information regarding species of special concern proximal to a project located in Grand County, Utah [Sections 22, 26-28, 36 of T025SR021E SLB&M].

The Utah Division of Wildlife Resources (UDWR) does not have records of occurrence for any threatened, endangered, or sensitive species within the project boundaries. However, within a one-mile vicinity of the project, there are recent records of occurrence for yellow-billed cuckoo, a candidate for federal-listing in Utah. In addition, there are recent records of occurrence for American white pelican, bluehead sucker, flannelmouth sucker and historical records of occurrence for corn snake. All of the aforementioned animal species are included on the *Utah Sensitive Species List.*

The information provided in this letter is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, and because data requests are evaluated for the specific type of proposed action, any given response is only appropriate for its respective request.

In addition to the information you requested, other significant wildlife values might also be present on the designated site. Please contact UDWR's habitat manager for the southeastern region, Chris Colt, at (435) 636-0279 if you have any questions.

Please contact our office at (801) 538-4759 if you require further assistance.

Sincerely,

Lenora B Sullivan

Lenora B. Sullivan
Information Manager
Utah Natural Heritage Program

cc: Chris Colt, SERO

From: "David Olsen" <david@moabcity.org>
To: "Tiffany Carlson" <tcarlson@mbakercorp.com>
Date: 3/29/2006 9:11:07 AM
Subject: Re: US-191 Workshop Summary

Tiffany,

On Thursday, March 23rd, Kim Manuel, Kim Schappert, Russ Von Koch, McKay Edwards, Larry Reasch (Horrocks Engineers) and myself discussed how the proposed 5 lane highway and the proposed non-motorized paths could fit within the limited Highway 191 right-of-way. Most of the participants felt that we should use the $500,000 of TEA-21 transportation enhancement funds and $100,000 of City and County funds, plus $20,000 of State NonMotorized Path funds to develop a 10' wide meandering path along the east side of the road. Since there are many fills proposed on the west side of the road, we felt that many portions of the path would be ruined when UDOT does their 5 lane road project. The path should be built next year.

I have attached a pdf file of the proposed east side allignment with some private property options for the path. Land below the Sunset Grill (and above the Mulberry trees along Hwy 191) may also be an option. In the short run, portions of the west side shoulder need to be widened for skinny tire bikes. In the long run, the east and west side should have bike lanes (mainly for skinny tire bikes) and the west side should have a sidewalk. The east side will hopefully have the meandering 10' wide path.

It is important that UDOT and Michael Baker, Jr. implement the Moab/Grand County North Corridor Gateway Plan as part of the proposed road project. The plan shows a landscaped boulevard or median. A future design should have medians where turn lanes are not needed. The City and County will discuss this issue at their next joint meeting and they will probably send a letter to UDOT requesting the medians. If you do not have the north corridor plan, I will send it to you.

Thanks for the aerials and all the work that you are doing.

David

----- Original Message -----
From: "Tiffany Carlson" <tcarlson@mbakercorp.com>
To: "US191ColoradoRiver US191ColoradoRiver"
<US191ColoradoRiver@mbakercorp.com>
Sent: Tuesday, March 28, 2006 5:04 PM
Subject: US-191 Workshop Summary

> Good afternoon,
>
> Thank you for attending the workshop held March 21st in Moab. I have

> included a summary of the workshop and comments collected. For those of
> you who were not able to attend, please let me know if you have any
> questions.
>
> The project team appreciates your interest in the US-191 project.
>
> Thanks,
> Tiffany
>
> Tiffany A. Carlson
> Michael Baker Jr., Inc.
> Direct: (801) 352-5995
> Fax : (801) 255-0404
>
>

CC: "Donna Metzler" <donna@moabcity.org>, <mayor@moabcity.org>

From: "David Olsen" <david@moabcity.org>
To: "Tiffany Carlson" <tcarlson@mbakercorp.com>
Date: 3/31/2006 4:12:28 PM
Subject: Medians & Meandering Paths

Tiffany,
Both the County and the City are definitely interested in seeing that the medians are designed and developed in the north corridor as part of the Moab/Grand County North Corridor Gateway Plan. The Chairman of the Grand County Council and the Mayor will send a letter to UDOT and to you stating their interest in the medians. They may also talk to the UDOT commissioners when they meet in Moab next Wednesday.
The County and City Councils also talked about the chances of getting meandering paths along the corridor. I told the Councils that we are doing the best that we can in such a confined space and that we may need to work with private property owners to obtain the meandering path goal. However, the R-O-W may be all that we can work with in most sections. I told the Councils that we are trying to develop the meandering path first on the east side of the road, and that will probably take all of our $620,000.
Anyway, thanks for listening.
David

----- Original Message -----
From: "Tiffany Carlson" <tcarlson@mbakercorp.com>
To: "David Olsen" <david@moabcity.org>
Sent: Wednesday, March 29, 2006 1:40 PM
Subject: Re: US-191 Workshop Summary

> David,
> Thank you for the information you provided. I have passed it along to
> the team. When is the next joint meeting between the City and County?
> Tiffany
>
>>>> "David Olsen" <david@moabcity.org> 03/29/06 8:49 AM >>>
> Tiffany,
>
>
>
> On Thursday, March 23rd, Kim Manuel, Kim Schappert, Russ Von Koch,
> McKay
> Edwards, Larry Reasch (Horrocks Engineers) and myself discussed how the
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> sidewalk.
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> Moab/Grand
> County North Corridor Gateway Plan as part of the proposed road
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> letter to UDOT requesting the medians. If you do not have the north
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> Thanks for the aerials and all the work that you are doing.
>
>
>
> David
>
>
>
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> ----- Original Message -----
> From: "Tiffany Carlson" <tcarlson@mbakercorp.com>
> To: "US191ColoradoRiver US191ColoradoRiver"
> <US191ColoradoRiver@mbakercorp.com>
> Sent: Tuesday, March 28, 2006 5:04 PM
> Subject: US-191 Workshop Summary
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>> Good afternoon,
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>> you who were not able to attend, please let me know if you have any

>> questions.
>>
>> The project team appreciates your interest in the US-191 project.
>>
>> Thanks,
>> Tiffany
>>
>> Tiffany A. Carlson
>> Michael Baker Jr., Inc.
>> Direct: (801) 352-5995
>> Fax : (801) 255-0404
>>
>>

Baker

LETTER OF TRANSMITTAL

6955 Union Park Center, Suite 370
Midvale, Utah 84047
(801) 255-4400 Fax (801) 255-0404

To:	Bud Tangren	Project:	US-191, Colorado River
	3114 Charleston Blvd.	Re:	Traffic Report and Project Handout
	Las Vegas, NV 89104		
Attn:		Date:	April 17, 2006

We are forwarding the following: ☒ Attached ☐ Under Separate Cover ☐

NO. COPIES	TITLE OR DESCRIPTION	COMMENTS
1 1	Traffic Report Project Handout – Proposed Build Alternative	

THESE ARE TRANSMITTED as checked below:

☒ As requested	☐ No exception taken	☐ Revise and resubmit
☐ For review and comment	☐ Rejected - See remarks	☐ Submit specified items
☐ For your information	☐ Proceed subject to corrections noted	☐

Bud,

Attached is the information you requested. Please let me know if you have further questions.

Thanks,
Lorraine Richards

Bud Tangren
3114 E Charleston Blvd
Las Vegas, Nev. 89104
702-641-1966

Mike Baker Jr.

My Name is Bud Tangren, I live in Las Vegas, Nev. I was born + raised in Moab, Ut and still have propty + interests in Moab.

My Concern at this time is the porposal to tear down the exist Bridge + build a new one in its Place.

My purpose is to build the new bridge down the river at the portal + leave the old bridge alone.

The goverments Canada - U.S.A. + Mexico are planing a new highway from Canada to Mexico City, and it will pass right thru Moab Ut!!!

Build the new Bridge at the portal - run the new Hwy. up the Valley next to the exist Hills - this will allow the thru traffic mostly Big Trucks to by pass the downtown of Moab!

If you still Want a tourist town in Moab you better seperate the traffic Now while you have the opportunity!!

I would like to hear from you ~~about~~ about this problem.

My address is 3114 E Charleston Blvd Las Vegas, Nev. 89104 My Phone # is 702-641-1966 - if you miss me leave a message + Dell Calleyon Back.

Thanks

Bud Tangren

State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

May 12, 2006

Mr. Craig Fuller, Secretary
Utah Historic Trails Consortium
300 Rio Grande
Salt Lake City, Utah 84101

RE: BHF-0191(27)129e; Colorado River Bridge Replacement
Section 106 & U.C.A. 9-8-404 compliance
Draft DOE/FOE

Dear Mr. Fuller:

Thank you for requesting to be a consulting party on the subject project located near Moab in Grand County. Please find enclosed for your review and comment a copy of the Determination of Eligibility and Finding of Effect for the project. Also enclosed is a draft copy of Montgomery Archaeological Consultants report on archeological sites. Because archeological site locations are not public information, the enclosed does not contain any maps with locational information for these sites. The historic standing structures are also covered in the enclosed DOE/FOE, however, I have not included a copy of that inventory report because I assume that you have no interest in them. Please review the enclosed and provide your comment to UDOT at your earliest convenience.

Thank you for your efforts. I am leaving UDOT for another job, so please address your comments to Mr. Randall Taylor, Environmental Engineer at the UDOT address on this letterhead. His phone is (435) 893-4753.

Respectfully,

Susan G. Miller, NEPA/NHPA Specialist
Region Four Environmental

Sgm/enclosures

Cc: (w/partial enclosures)
Greg Punske, FHWA
Randy Taylor, Environmental Engineer
Kim Manwill, Project Manager
Lorraine Richards, Baker
(w/out enclosures)
Jacki Montgomery, MOAC

Identical copies of this letter sent to the following:

Ms. Dorena Martineau, Cultural Resources The Paiute Indian Tribe of Utah 440 North Paiute Drive Cedar City, UT 84720	Mr. Leigh Kuwanwisiwma, Director Cultural Preservation Office Hopi Tribe P.O. Box 123 Kykotsmovi, AZ 86039
Ms. Donna Turnipseed, Archaeologist Moab Field Office Bureau of Land Management 82 East Dogwood Suite M Moab, UT 84532	Ms. Kathy Davies, Archaeologist Utah Division of Wildlife Resources 1594 West North Temple Ste 2110 Salt Lake City, UT 84114-6301
Ms. Marilyn Kastens, US Department of Energy 2597 B3/4 Road Grand Junction, CO 81053	Ms. Chris Goetze, Archaeologist Arches National Park 2282 SW Resource Blvd Moab, UT 84532

Baker

Michael Baker Jr., Inc.
6955 Union Park Center, Suite 370
Midvale, Utah 84047

801-255-4400
FAX 801-255-0404

May 17, 2006

Bud Tangren
3114 E. Charleston Blvd
Las Vegas, NV 89104

Re: US-191, Over Colorado River Bridge #C-285, Project No. BHF-0191(27)1229E

Dear Mr. Tangren:

This letter is in response to the letter we received from you on May 1, 2006 and our phone discussion of April 12, 2006. Based on this information, I understand that your concerns are two-fold: 1) that the existing bridge should be left in place; and 2) that a new bridge should be reconstructed downstream to accommodate an envisioned highway from Canada to Mexico.

As we discussed on the phone, the scoping process for this project was initiated in 2004 as part of a Bridge Feasibility Study. The Bridge Feasibility Study evaluated traffic demands and structural integrity of the US-191 bridge across the Colorado River. The primary purpose of the study was to determine the feasibility of rehabilitating, reconstructing, or replacing the existing bridge. The recommendation of the Bridge Feasibility Study was to replace the existing bridge because of a deteriorating structural integrity and because the bridge no longer meets the local traffic needs. Construction of a new bridge at an alternate location would not eliminate the need to replace the existing bridge in its current location. If you would like further information, the study can be accessed from the project website, http://www.udot.utah.gov/coloradoriverbridge/. Please note that the traffic analysis I mailed you is Appendix A of this study.

One of the alternatives considered as part of the Bridge Feasibility Study included constructing a new bridge downstream. The improvements would consist of constructing about 1.5 miles of new roadway, widening existing roadways and city streets, and acquiring new right-of-way with residential and farmland relocations. The improvements would extend over 4.5 miles (40% longer than following the existing US-191 alignment) and would involve constructing at least three major intersections or interchanges to connect with existing roads.

The new downstream crossing was not advanced because it would not provide for continuity of the US-191 system. Seventy-three percent of US-191 traffic uses the bridge to access Moab. Since this alternative would involve realigning US-191 around Moab, many existing businesses and residences, as well as planned development in the North Corridor, would not have immediate access to US-191 after the realignment. Though a realignment of US-191 does not meet the objectives identified for this project, this alternative has received some public support and may be considered in the future as a separate project for an additional bypass to divert trucks off of Main Street.

To summarize, constructing a crossing in an alternate location does not eliminate the need to replace the bridge in its existing location. An additional downstream crossing may be considered in the future as a separate project to divert trucks off of Main Street. This may occur as part of planning for a highway from Canada to Mexico or as a separate local project.

If you have further questions, please feel free to contact Kim Manwill, UDOT's Project Manager, at (435) 893-4734 or myself at (801) 352-5974.

Sincerely,

Lorraine Richards

Lorraine Richards, AICP
Michael Baker Jr., Inc., Project Manager

cc: Kim Manwill, UDOT Project Manager
Myron Lee, UDOT Public Involvement Coordinator
Project file

Baker

Michael Baker Jr., Inc.
6955 Union Park Center, Suite 370
Midvale, Utah 84047

801-255-4400
FAX 801-255-0404

May 19, 2006

Ms. Laura Joss, Superintendent
U.S. National Park Service - Arches National Park
P.O. Box 907
Moab, Utah 84532-0907

RE: Section 4(f) Coordination, Request Concurrence of *De Minimis* Finding
US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E [Formerly Project No. BRF-0191(23)128]

Dear Ms. Joss,

On behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT), Michael Baker Jr., Inc. (Baker) is requesting consultation with your office regarding the Arches National Park in accordance with Section 4(f) of the DOT Act and additional provisions under SAFETEA-LU. Section 4(f) of the DOT Act prohibits projects on publicly owned parks, recreation areas, wildlife and waterfowl refuges, or historic sites unless there is no feasible and prudent alternative and all possible mitigation is used. Under SAFETEA-LU, the agency can comply with Section 4(f) in a streamlined manner by finding that the program or project will have a *de minimis* impact on the area – i.e., there are no adverse effects of the project and the relevant State Historic Preservation Officer or other official with jurisdiction over a property concurs. For purposes of Section 4(f), the National Park Service is the official with jurisdiction over Arches National Park. Please note that Ms. Chris Goetze, Archeologist for Arches National Park, was recently sent separate consultation in regards to Section 106 of the National Historic Preservation Act of 1966 as amended and the Utah State Code 9-8-404 of the Utah Antiquities Act as amended (UDOT letter dated May 12, 2006).

As noted in previous correspondence from Baker, the limits of this project extend from 400 North in Moab, Grand County Utah to the recently improved section of US-191 near the junction of SR-279. The purpose of the project is to: 1) provide a bridge that accommodates US-191 traffic over the Colorado River and also meets current structural design standards; 2) improve safety throughout the US-191 Colorado River study area; 3) meet the existing and projected travel demand through the design year 2030 and provides continuity between the four-lane sections on either end of the US-191 Colorado River study area; 4) and facilitate the movement of bicycle and pedestrian traffic along US-191. A project handout is attached that describes the proposed alternative, and figures showing the project in relationship to Arches National Park are also attached.

The *General Management Plan and Development Concept Plan* for Arches National Park was completed by the U.S. Department of Interior's National Park Service in August 1989. Based on this plan, Arches National Park is divided into four management zones: natural, cultural, development, and special use. Within the project area, only two management zones are present: natural and cultural, with natural making up all of the area potentially affected by the project. The plan states that the natural zone is

managed to conserve the natural resources and processes of the park while accommodating uses that do not adversely affect those resources and processes. Facilities in this zone are dispersed and limited to those that have little effect on scenic quality and natural processes. Examples of such facilities include foot trails, signs, and trailside information displays.

In 2004, a highway easement deed was issued with the purpose of maintaining and operating a public highway and adjacent bicycle path. This easement typically extends about 200 feet from the centerline of the existing roadway. While the majority of the proposed improvements would avoid parklands by widening to the south, the park boundary near the Colorado River extends into the existing roadway section and is unavoidable. It is unclear as to whether the 2004 highway easement deed covers this section (T25S R21E Section 26). However, in accordance with the objectives of the 2004 highway easement, proposed improvements would provide for continued maintenance and operation of a public highway and adjacent bicycle path, and conditions outlined within the easement would be complied with. In addition, the proposed improvements are consistent with the Arches Management Plan.

A total of 0.6 acres of Arches National Park is within the construction limits of the project. Most of this acreage is already occupied by the existing roadway section and an adjacent unimproved trail. Proposed work within the park boundary would include roadway and drainage improvements, re-establishing the approach to the access road to the river north of the Colorado River Bridge, and enhancements to the existing unimproved foot trail. The relationship of the park and this trail is explained further in the following paragraph. Nearby rock slopes and other resources important to the park would be protected with fencing during construction, and the design of the widened Courthouse Wash Bridge would continue to accommodate an informal foot trail to the nearby rock art panel.

The unimproved foot trail that parallels US-191 is known locally as the Courthouse Wash to Colorado River Bridge Trail. This trail starts at the US-191 parking area and Courthouse Wash Kiosk near the southern boundary of Arches National Park and continues to the Colorado River adjacent to US-191. FHWA has determined that Section 4(f) applies to this trail and that Grand County is the jurisdictional authority of this trail. Proposed improvements include upgrading the trail to a 10-foot wide paved path. The trail would be separated from the US-191 roadway, ensuring the safety of pedestrian and bicycle users. The trail provides access to the informal Courthouse Wash Trail within Arches National Park and serves as a link to the paved Moab Canyon Bike Path that ties into the entrance of Arches National Park. Once completed, this trail would formally connect the existing Moab Canyon Bike Path with the planned Colorado River Non-Motorized Bridge crossing upstream of US-191. These enhancements would not only improve the safety of bicyclists and pedestrians visiting Arches National Park but would improve the connectivity of non-motorized trails within the area.

It is FHWA's opinion that the US-191 project's minor use of parklands would not adversely affect the activities, features, and attributes of the Arches National Park after taking into consideration mitigation and enhancement measures. Provided you concur with this finding, the FHWA is considering the impact to the resource to be *de minimis* as provided for under SAFETEA-LU and given that:

- The proposed use of Arches parkland is minimal,
- Efforts to avoid and minimize the use of parklands are incorporated into project design,
- Access to resources within Arches National Park would be enhanced via a paved trail, and
- The safety of bicyclists and pedestrians using the trail would be improved.

The FHWA requests written concurrence from the National Park Service in the above-described finding of *de minimis* impact on Arches National Park resulting from the proposed project. This written concurrence will be evidence that the concurrence and consultation requirements of Section 4(f) and SAFETEA-LU are satisfied. Concurrence can be provided either by signing and dating the signature block at the end of this letter, or by a separate letter from the National Park Service. Please return all written correspondence to me at the address on this letterhead.

I appreciate your efforts in taking the time to respond to this request. If you have any questions or need any further information, please contact me at (801) 352-5974.

Sincerely,
MICHAEL BAKER JR., INC.

Lorraine Richards

Lorraine Richards, AICP
Project Manager

cc: Kim Manwill (UDOT) kmanwill@utah.gov
Jeff Berna (FHWA) jeffrey.berna@fhwa.dot.gov

Enclosures:
- Project Handout – Proposed Alternative (April 2006)
- Figures Showing the Relationship of Property to the Proposed Alternative

---

By signing below, the National Park Service official with jurisdiction concurs with the above-described finding of *de minimis* impact.

Signed Laura E. Joss _____ 1/17/07
National Park Service Official with Jurisdiction Date

Laura E. Joss, Superintendent, Arches National Park
Please Print Name and Title

Baker

Michael Baker Jr., Inc.
6955 Union Park Center, Suite 370
Midvale, Utah 84047

801-255-4400
FAX 801-255-0404

May 19, 2006

Mr. Chris Colt, Habitat Manager
UDNR Division of Wildlife Resources
Southeastern Region
475 West Price River Drive, Suite C
Price, UT 84501

RE: Section 4(f) Coordination, Request Concurrence of *De Minimis* Finding
US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E [Formerly Project No. BRF-0191(23)128]

Dear Chris:

On behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT), Michael Baker Jr., Inc. (Baker) is requesting consultation with your office regarding the DWR's Scott M. Matheson Wetland Preserve (Preserve) in accordance with Section 4(f) of the DOT Act and additional provisions under SAFETEA-LU. Section 4(f) of the DOT Act prohibits projects on publicly owned parks, recreation areas, wildlife and waterfowl refuges, or historic sites unless there is no feasible and prudent alternative and all possible mitigation is used. Under SAFETEA-LU, the agency can comply with Section 4(f) in a streamlined manner by finding that the program or project will have a *de minimis* impact on the area – i.e., there are no adverse effects of the project and the relevant State Historic Preservation Officer or other official with jurisdiction over a property concurs. As the public land owner over the portion of the Preserve potentially affected by the project, DWR is considered the official with jurisdiction over the property. However, Ms. Linda Whitham with The Nature Conservancy is also being copied on this letter.

As noted in previous project correspondence from Baker, the limits of this project extend from 400 North in Moab, Grand County Utah to the recently improved section of US-191 near the junction of SR-279. The purpose of the project is to: 1) provide a bridge over the Colorado River that accommodates US-191 traffic over the Colorado River and also meets current structural design standards, 2) improve safety throughout the US-191 Colorado River study area; 3) meet the existing and projected travel demand through the design year 2030 and provides continuity between the four-lane sections on either end of the US-191 Colorado River study area; and 4) facilitate the movement of bicycle and pedestrian traffic along US-191. A project handout is attached that describes the proposed alternative, and figures showing the project in relationship to the Preserve are also attached.

It is our understanding that the DWR jointly owns the Scott M. Matheson Wetland Preserve with The Nature Conservancy. Through an agreement signed in October 1994, The Nature Conservancy is responsible for the overall management of the Preserve. Of the Preserve's 875 acres, the DWR owns 425.8 acres in the northern half of the Preserve and the Nature Conservancy owns the remaining acreage. The 1994 "Site Conservation Plan for the Scott M. Matheson Wetland Preserve, Moab, Utah" identifies both ecological and programmatic goals for the Preserve, as well as a protection, management, and implementation plan. As noted in the Site Conservation Plan:

> "The Preserve is an extremely rare ecosystem in an arid, desert region. It is vital to a number of rare species, as well as being an exceptional, highly diversified site for less unusual species. It is an integral part of the Colorado River flyway and represents the only high quality wetland habitat on the Colorado River in Utah. The Preserve operates as a collecting place, breeding site, and foraging area for what may be Utah's most diverse inventory of wildlife species, particularly migratory avian fauna."

The primary management goals of the Preserve are to protect, enhance, and preserve the wetlands and associated habitat for rare and/or desirable species. In addition, opportunities for compatible scientific, educational, sporting, and recreational uses that help further the goals of The Nature Conservancy and the DWR are also promoted. The Preserve is open year-round for visitors and offers a handicapped-accessible, mile-long loop trail for bird and wildlife viewing in the southern portion of the Preserve. In addition, a wetlands teaching circle and map station provides bird and wildlife lists and brochures for self-guided tours. While the southern end of the Preserve is closed to hunting, the northern end allows primitive weapons hunting (archery, muzzleloaders and shotguns firing slugs or buckshot) for waterfowl, upland game, and deer.

Access to the southern portion of the Preserve is provided via 400 North Street, Stewart Lane, and Kane Creek Road. Per our phone discussion on April 12, 2006, I understand that the north access to the Preserve is from the US-191 frontage road by way of a dirt road approximately 30 yards south of and parallel to the south fence of Moab Valley RV and Camp Park. Motorized vehicles and bikes are not permitted beyond the gate located at the entrance to the Preserve. Within the Preserve boundaries, a dirt road turns and follows the western boundary of the Camp Park before turning west again along the northern boundary of the Preserve.

During the development of the proposed alternative, every effort has been made to first avoid the Preserve and, where avoidance was not prudent, to then minimize and mitigate potential uses of this resource. The attached figures show the following proposed involvement of the project with the Preserve.

- **Detail A** – Just south of the Colorado River Bridge, the project design has incorporated the use of a 2:1 slope and retaining wall to avoid fill within the Preserve. Runoff is proposed to be discharged to a depressed area within the Preserve via a piped system. Based on conceptual design, the peak flow for a 10-year 24-hour event is expected to increase by 1.61 cfs and the volume is expected to increase by 7,619 cubic feet per event. A drainage easement encompassing 1,312 sq ft is expected. Runoff would be treated using an in-line oil/sediment separator prior to discharge to the Preserve. This controlled discharge is expected to provide improvement over existing conditions because it would allow for potential contaminants to be contained. In this area, runoff currently flows directly to the Preserve untreated.

- **Detail B** – South of the Moab Valley RV and Camp Park, runoff would be discharged into an existing ditch that lies north of and parallel to the Preserve's northern access road. Based on conceptual design, the peak flow for a 10-year 24-hour event is expected to increase by 3.28 cfs and the volume is expected to increase by 15,468 cubic feet per event. The ditch currently flows into the Preserve and would provide natural treatment of the runoff prior to discharge to the Preserve. No physical construction would occur within the Preserve at this location.

- **Detail C** – South of the Holiday Inn Express, the project requires a temporary construction easement consisting of a 12-ft linear strip parallel to US-191 and totaling 1,794 square feet to construct the roadway, curb, gutter, sidewalk, and slopes. Once constructed, the disturbed area would be revegetated. There are no wetlands and no known sensitive wildlife or waterfowl habitat in this area given its proximity to existing US-191. In addition, no formal public activities would be impacted by this temporary disturbance.

It is FHWA's opinion that the US-191 project's minor use of parklands would not adversely affect the activities, features, and attributes of the Preserve after taking into consideration mitigation and enhancement measures. Provided you concur with this finding, the FHWA is considering the impact to the resource to be *de minimis* as provided for under SAFETEA-LU and given that:

- The proposed use of the Scott M. Matheson Wetland Preserve is minimal,
- The wetland, plant, wildlife, and waterfowl preservation goals of the Preserve would not be adversely affected by the proposed project,
- Hunting access and opportunities would not be adversely affected,
- Recreational, educational, and scientific opportunities within the Preserve would not be adversely affected by the proposed impact, and
- Efforts to avoid and minimize the use of the Preserve have been incorporated into project design.

The FHWA requests written concurrence from the DWR in the above-described finding of *de minimis* impact on the Preserve resulting from the proposed project. This written concurrence will be evidence that the concurrence and consultation requirements of Section 4(f) and SAFETEA-LU are satisfied. Concurrence can be provided either by signing and dating the signature block at the end of this letter, or by a separate letter from the DWR. Please return all written correspondence to me at the address on the letterhead.

I appreciate your efforts in taking the time to respond to this request. If you have any questions or need any further information, please contact me at (801) 352-5974.

Sincerely,
MICHAEL BAKER JR., INC.

Lorraine Richards

Lorraine Richards, AICP
Project Manager

cc: LeRoy Mead (DWR) leroymead@utah.gov
Linda Whitham (The Nature Conservancy) lwhitham@tnc.org
Kim Manwill (UDOT): kmanwill@utah.gov
Jeff Berna (FHWA) jeffrey.berna@fhwa.dot.gov

Enclosures:

- Project Handout – Proposed Alternative (April 2006)
- Figures Showing the Relationship of Property to Proposed Alternative

---

By signing below, the Utah DNR, DWR concurs with the above-described finding of *de minimis* impact.

Signed _____ 9/12/06
Utah DNR, DWR Official With Jurisdiction — Date

Print Name and Title Deins Jones Southeastern Regional Supervisor

Baker

Michael Baker Jr., Inc.
6955 Union Park Center, Suite 370
Midvale, Utah 84047

801-255-4400
FAX 801-255-0404

May 22, 2006

Ms. Mary Hofhine
Grand County Planning Administrator
125 E. Center
Moab, Utah 84532

RE: Section 4(f) Coordination, Request Concurrence of *De Minimis* Finding
US-191, Over Colorado River Bridge #C-285
Project No. BHF-0191(27)129E [Formerly Project No. BRF-0191(23)128]

Dear Ms. Hofhine:

On behalf of the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT), Michael Baker Jr., Inc. (Baker) is requesting consultation with your office in accordance with Section 4(f) of the DOT Act and additional provisions under SAFETEA-LU. Section 4(f) of the DOT Act prohibits projects on publicly owned parks, recreation areas, wildlife and waterfowl refuges, or historic sites unless there is no feasible and prudent alternative and all possible mitigation is used. Under SAFETEA-LU, the agency can comply with Section 4(f) in a streamlined manner by finding that the program or project will have a *de minimis* impact on the area – i.e., there are no adverse effects of the project and the relevant State Historic Preservation Officer or other official with jurisdiction over a property concurs. For purposes of Section 4(f), Grand County is the official with jurisdiction over:

- Lions Park (a portion of the park is owned by UDOT),
- Colorado River Bridge Underpass Trail (a portion of the trail is located within UDOT right-of-way), and
- Courthouse Wash to Colorado River Bridge Trail (a portion of the trail is located within Arches National Park).

As noted in previous correspondence from Baker, the project is located in Grand County and the limits of the project extend from 400 North in Moab to the recently improved section of US-191 near the junction of SR-279. The purpose of the project is to: 1) provide a bridge that accommodates US-191 traffic over the Colorado River and also meets current structural design standards; 2) improve safety throughout the US-191 Colorado River study area; 3) meet the existing and projected travel demand through the design year 2030 and provides continuity between the four-lane sections on either end of the US-191 Colorado River study area; and 4) facilitate the movement of bicycle and pedestrian traffic along US-191.

A project handout is enclosed that describes the proposed alternative. Enclosures also include figures that illustrate the relationship of the project to these Section 4(f) resources. During the development of the proposed alternative, every effort was made to avoid recreation resources protected under Section 4(f) and, where avoidance was not prudent, to then minimize and mitigate potential uses of these resources. Each resource has been considered on an individual basis, as described in the following paragraphs.

Lions Park

UDOT and Grand County own Lions Park. Grand County is responsible for operating and maintaining the park. As such, Grand County is the jurisdictional authority for Lions Park. Per an agreement with Grand County, the Lions Club is responsible for day-to-day operations of the park. This being the case, Mr. Dave Stolfa with the Lions Club has been copied on this letter.

Lions Park is bordered by US-191, SR-128, and the Colorado River, as shown on the enclosed figure. The *Grand County General Plan Update* (April 13, 2004) states that available activities at the park include picnicking, meetings and reunions, trail hub, and parking. In the BLM's Environmental Assessment (EA) [1] prepared for the proposed Colorado River Bike/Pedestrian Bridge that will connect to the park, the BLM states that:

> The Lions Park area is frequently used for highway rest purposes, picnics, Lions Club activities, special events, and general river access. An existing bike lane follows a dike along the river channel for the length of the park and allows cyclists, runners, and pedestrians to safely bypass the US-191 / SR-128 intersection on a route that passes underneath the US-191 bridge. Other visitor use developments at Lions Park include a small building with kitchen facilities, a covered picnic area, additional picnic tables, a drinking water distribution system, interpretive exhibits, vault toilets, parking barriers, a large lower-level concrete parking and dancing area, a large upper level graveled parking area, and an asphalt road that connects the two parking areas . . .

This BLM EA also indicates that Grand County is working on plans to replace existing restrooms, picnic shelters, cookhouse, information exhibits, and drinking water systems, as well as install a new landscape watering system and shade trees. Additionally, based on information obtained during a workshop held for the US-191 project on March 14, 2006, a local shuttle service between Lions Park and Arches National Park will likely be included in Arches transportation plan. This plan is currently under development and expected to be complete by Summer 2006.

The proposed US-191 project would encroach into the portion of Lions Park owned by UDOT. A total of 0.25 acres paralleling US-191 is within the construction limits. Of this total, 0.09 acres would be occupied by fill, and 0.16 acres would be temporarily disturbed by construction activities associated with removing the old bridge and constructing the new bridge and approaches. Once construction is complete, the disturbed area would be revegetated. Avoidance of the park is not prudent because the proposed project involves replacing the existing bridge on essentially the same location, and there is a concurrent need to avoid or minimize impacts to the Matheson Wetland Preserve (another Section 4(f) resource) on the west side of US-191. Shifting the alignment further to the west would also result in additional impacts to private property, wetland areas, and endangered species critical habitat associated with the Colorado River. Additionally, the park would still be temporarily disturbed by construction activities associated with the removal of the existing bridge.

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[1] USDOI – Bureau of Land Management, Moab Field Office. *Environmental Assessment. Utah's Colorado River Recreation Area Management Plan. Amendment 2: Pedestrian Bridge/Riverway Bike Lane. Colorado River – Special Recreation Management Area.* EA # UT-062-04-014. Pages 5 and 6.

Efforts to minimize impacts to Lions Park have been incorporated into the development of the proposed alternative. The proposed fill slope was not steepened and a retaining wall was not recommended to avoid encroachment into the park because the ability to landscape slopes is a desirable goal of the park.

It is FHWA's opinion that this minor use of park land would not adversely affect the activities, features, and attributes of Lions Park after taking into consideration mitigation and enhancement measures. As such, the FHWA is considering the impact to the resource to be *de minimis* given that:

- The affected portion of the park parallels the existing US-191 facility and is owned by UDOT in order to operate and maintain US-191 and SR-128 and associated highway rest purposes,
- The public would still have access to the park,
- Parking would still be available for park facilities and trail hub parking, and
- The limited parking that is disturbed by construction activities would be restored once construction is complete.

Colorado River Bridge Underpass Trail

A portion of the existing Colorado River Bridge Underpass Trail is located within UDOT right-of-way. The trail is currently maintained by the Grand County/City of Moab's Trail Mix Committee for Non-Motorized Trails. Since the trail is located in Grand County, Grand County is currently the jurisdictional authority of this trail. Since the City of Moab has plans to annex lands in this area, future jurisdiction of this trail may become the responsibility of the City of Moab. Therefore, Mr. David Olsen, who is with the City of Moab and is also a member of the Grand County/Moab Trail Mix Committee, has been copied on this letter.

The Colorado River Bridge Underpass Trail is an approximately 0.3 mile-long paved path that begins on the western side of US-191 (near the intersection of SR-128) and continues eastward under the US-191 Colorado River Bridge through Lions Park. In the BLM's Environmental Assessment prepared for the proposed Colorado River Bike/Pedestrian Bridge that will connect to Lions Park, the BLM describes the trail as an existing bike lane that follows a dike along the river channel for the length of the park and allows cyclists, runners, and pedestrians to safely bypass the US-191 / SR-128 intersection on a route that passes underneath the US-191 bridge. No plans or formal agreements are in place between UDOT and Grand County regarding the specific location of the trail that is currently within the UDOT right-of-way. In order to accommodate the bridge replacement and widening, the trail would need to be relocated approximately 15 feet to the west of US-191. Avoidance of the trail is not prudent because the proposed project involves replacing and widening the existing bridge on essentially the same location. Because the existing trail is adjacent to the existing roadway, avoidance is not possible. Efforts to minimize impacts to the trail were incorporated into the development of the proposed alternative.

It is FHWA's opinion that the US-191 project's use of this trail would not adversely affect the activities, features, and attributes of the trail after taking into consideration mitigation and enhancement measures. Provided you concur with this finding, the FHWA is considering the impact to the resource to be *de minimis* as provided for under SAFETEA-LU and given that:

- The proposed impacts to the trail involve a minor shift in location within UDOT right-of-way and full reconstruction of the trail with similar design features, and
- Following reconstruction, the trail would continue to provide a safe route that passes underneath the new US-191 bridge.

Courthouse Wash to Colorado River Bridge Trail

The unimproved foot trail that parallels US-191 is known as the Courthouse Wash to Colorado River Bridge Trail. This approximately 0.5 mile-long trail starts at the US-191 parking area and Courthouse Wash Kiosk near the southern boundary of Arches National Park and continues to the Colorado River adjacent to US-191. FHWA has determined that Section 4(f) applies to this trail and that Grand County is the jurisdictional authority of this trail. Proposed improvements include upgrading the trail to a10-foot wide paved path. The trail would be separated from the US-191 roadway, ensuring the safety of pedestrian and bicycle users. The trail provides access to the informal Courthouse Wash Trail within Arches National Park and serves as a link to the paved Moab Canyon Bike Path that ties into the entrance of Arches National Park. Once completed, this trail would formally connect the existing Moab Canyon Bike Path with the planned Colorado River Non-Motorized Bridge crossing upstream of the existing US-191 Colorado River Bridge. These enhancements would not only improve the safety of bicyclists and pedestrians visiting Arches National Park but would improve the connectivity of non-motorized trails within the area.

In 2004, a highway easement deed was issued with the purpose of maintaining and operating a public highway and adjacent bicycle path. This easement typically extends about 200 feet from the centerline of the existing roadway. It is unclear as to whether the 2004 highway easement deed covers the area in T25S R21E Section 26. However, in accordance with the objectives of the 2004 highway easement, proposed improvements would provide for continued maintenance and operation of a public highway and adjacent bicycle path, and conditions outlined within the easement would be complied with. Avoidance is not prudent or necessary because part of the purpose of the project is to upgrade this trail. The easement, which refers to the trail as an adjacent bicycle path, does not identify a specific location for the trail. The proposed trail location avoids nearby rock slopes and protects other resources important to Arches National Park.

It is FHWA's opinion that the US-191 project's use of this trail would not adversely affect the activities, features, and attributes of the trail after taking into consideration mitigation and enhancement measures. Provided you concur with this finding, the FHWA is considering the impact to the resource to be *de minimis* as provided for under SAFETEA-LU and given that:

- The impacts to the trail are beneficial and would enhance the safety and connectivity of the trail system within the area, and
- Following construction, the trail could be used not just by pedestrians but by cyclists as well.

Summary

The FHWA requests written concurrence from Grand County in each of the above-described findings of *de minimis* impact for Lions Park, the Colorado River Bridge Underpass Trail, and the Courthouse Wash to Colorado River Bridge Trail resulting from the proposed project. This written concurrence will be evidence that the concurrence and consultation requirements of

Section 4(f) and SAFETEA-LU are satisfied for each of these findings. Concurrence can be provided either by signing and dating the signature block at the end of this letter, or by a separate letter from Grand County.

I would like to also note that the applicability of Section 4(f) to the planned Highway 191 Bike Path has also been given consideration. However, Section 4(f) does not apply to this resource because the specific location of this trail within UDOT right-of-way is not important, and the trail is being jointly developed and considered in conjunction with this project. We are currently coordinating with Larry Reese of Horrocks Engineering and provided our available engineering and environmental data to him in a meeting held May 16, 2006. Please let me know if we can support the development of this trail project in any other way. I appreciate your efforts in taking the time to respond to this request. If you have any questions or need any further information, please contact me at (801) 352-5974.

Sincerely,
MICHAEL BAKER JR., INC.

Lorraine Richards

Lorraine Richards, AICP
Project Manager

cc: David Olsen (City of Moab) david@moabcity.org
Dave Stolfa (Lions Club) dave@stolfa.net
Kim Manwill (UDOT) kmanwill@utah.gov
Jeff Berna (FHWA) jeffrey.berna@fhwa.dot.gov

Enclosures:
- Project Handout – Proposed Alternative (April 2006)
- Figures Showing the Relationship of Property to Proposed Alternative

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By signing below, the Grand County official with jurisdiction concurs with each of the above-described finding of *de minimis* impact for:
- Lions Park,
- The Colorado River Bridge Underpass Trail, and
- The Courthouse Wash to Colorado River Bridge Trail.

Signed _____ 2/12/07
Grand County Official with Jurisdiction — Date

JIM LEWIS COUNTY COUNCIL CHAIR
Please Print Name and Title

THE PAIUTE INDIAN TRIBE OF UTAH

440 North Paiute Drive • Cedar City, Utah 84720 • (435) 586-1112

May 30, 2006

Randall Taylor
Environmental Engineer
Department Of Transportation
Region Four Headquarters
1345 South 350 West
Richfield, Utah 84720

Dear Mr. Taylor,

Subjects: Draft Final Report: Colorado River Bridge Replacement

The Paiute Indian Tribe of Utah is in receipt of your letter dated May 12, 2006 and have reviewed the draft copy of the Determination of Eligibility and Finding of Effect for the Colorado River Bridge Replacement Project. Also the draft copy of Montgomery Archaeological Consultants report on archeological sites. In reading the draft copies, I find the draft copies to be well written, and have no objections with the material.

Please notify the Paiute Indian Tribe of Utah of any cultural information that is found including type and location, also any updates or changes to the project.

Thank You,

Dorena Martineau

Dorena Martineau
Cultural Resources
Paiute Indian Tribe of Utah
440 North Paiute Drive
Cedar City, Utah 84720
435-586-1112 (Ext. 107)

From: "Linda Whitham" <lwhitham@tnc.org>
To: "Lorraine Richards" <Larichards@mbakercorp.com>
Date: 5/30/2006 12:08:22 PM
Subject: RE: US-191 Colorado River Project

Hello Lorraine,
I appreciate being copied on your letter and attachments. I have been remisce to not have paid closer attention to the planning stages of this project since, after reviewing the documents, it appears there is one area in which The Nature Conservancy-owned portion of the Matheson Preserve is affected (Detail C). Because TNC owns this portion of the preserve, I believe we will need some sort of agreement before proceeding. I would be happy to discuss this with you at your convenience. In addition, I just learned that Chris Colt is leaving the Division of Wildlife, and have not heard of any replacement at this time. Please let me know how you would like to proceed.
Thank you,
Linda Whitham
Matheson Preserve Manager

-----Original Message-----
From: Lorraine Richards [mailto:Larichards@mbakercorp.com]
Sent: Friday, May 19, 2006 2:58 PM
To: chriscolt@utah.gov
Cc: berna@fhwa.dot.gov; lwhitham@tnc.org; kmanwill@utah.gov; leroymead@utah.gov
Subject: US-191 Colorado River Project

Hi Chris,

As we discussed on the phone a few weeks ago, I have attached a letter pertaining to the Matheson Wetland Preserve in accordance with the requirements of Section 4(f) of the DOT Act and additional provisions under SAFETEA-LU. Please review the attached information and if you have any questions or concerns, please do not hesitate to call me at (801) 352-5974. Provided you agree with the findings outlined in this letter, you may sign the last page of the letter and fax it to me at (801) 255-0404.

Also, if anyone receiving this e-mail would like a hard copy mailed to them, please let me know and I would be happy to do so.

Thank you for your time,

Lorraine Richards, AICP
Project Manager, Michael Baker Jr., Inc.
larichards@mbakercorp.com
(801) 352-5974 direct
(801) 556-4286 cell
(801) 255-0404 fax

From: <Guzzetti.Christopher@epamail.epa.gov>
To: Barbara Frommell <bfrommell@mbakercorp.com>
Date: 6/13/2006 1:54:18 PM
Subject: RE: Colorado River Bridge Replacement - near Glen Canyon sole source aquifer

Ms. Frommell,

I have reviewed the information you sent to me and it is difficult to determine exactly what potential impacts may effect the Glen Canyon Aquifer because the EIS is still in draft form and all the specifics are missing. I would suggest sending a copy of the final EIS to our office for review once it has been completed. I believe that our biggest concern will be the increased impervious surface and runoff.

Section 3.6.4.2 Surface Water Impacts discusses the impact of increased impervious surfaces and runoff and the use of BMPs such as detention basins to mitigate this problem. The use of detention basins (dry wells) would also be a concern under section 3.6.4.3 Groundwater Impacts because they are designed to filter out contaminants before runoff reaches groundwater. It would be preferable that all runoff from new construction be directed to a wastewater treatment plant but I understand that this is not always possible. If dry wells are needed then I would suggest that a routine maintenace schedule be developed to clean out the dry wells to minimize the build-up of sediment and other material, which could become an additional source of contaminants entering the groundwater.

If I can help out in any other way, please let me know.

Christopher J. Guzzetti
Underground Storage Tank Program
USEPA Region 8
(303) 312-6453
(303) 312-6741 Fax
Email: guzzetti.christopher@epa.gov

Barbara Frommell <bfrommell@mbakercorp.com>
06/07/2006 01:39 PM

To: Christopher Guzzetti/P2/R8/USEPA/US@EPA
cc:
Subject: RE: Colorado River Bridge Replacement - near Glen Canyon sole source aquifer

Mr. Guzzetti:

I have a more concise description of the project in Moab, including construction methods. Hopefully this will save you some time in reviewing our project. Thanks!

Barbara Frommell

1.1 PROPOSED ACTION/PROJECT DESCRIPTION

The first phase of the proposed project consists of replacing the Colorado River Bridge. The US-191 Colorado River Bridge would include four 12-foot travel lanes, a six-foot open median, eight-foot shoulders, plus a two-foot offset to the barrier. The bridge type would be determined during final design, but is expected to consist of a new steel or concrete girder bridge with four to seven spans. Phase 1 would also include associated roadway approaches, improving the SR-128 intersection, and upgrading the pedestrian / bike path between the Colorado River Bridge and the Courthouse Wash Kiosk. The upgraded path would provide a paved 10-foot wide separated path for nonmotorized pedestrian and bicycle traffic between the bridge and the Courthouse Wash Kiosk. However, the existing attached path on the Courthouse Wash structure would not be widened in Phase 1.

Future phase(s) would require additional funding to widen the Courthouse Wash structure and roadway between 400 North and Potash Road. The widened structure would provide four 12-foot lanes, a six-foot open median, and five-foot shoulders, as well as a 10-foot attached path for nonmotorized bicycle and pedestrian traffic. Most widening would occur to the south; however, some widening to the north would be needed to accommodate the two-way attached path. The proposed roadway section between 400 North and the Colorado River Bridge would include four 12-foot lanes, a 12-foot median, and eight-foot shoulders. In this section, the proposed alignment would typically follow the centerline of the existing road. Since the design in this section includes curb and gutter, the elevation of the road varies from the existing condition where the minimum slope requirements could not be achieved otherwise. The roadway section between the Colorado River Bridge and Potash Road would provide four 12-foot lanes, a six-foot open median, and five-foot shoulders. The location and elevation of this roadway section would tie into the constraints associated with the existing Courthouse Wash structure and the recently completed section of roadway just south of Potash Road. Shoulders would transition from eight to five feet between the Colorado River and Courthouse Wash.

1.2 PROJECT CONSTRUCTION/METHODOLOGY

The proposed project would require the following primary construction methods: bridge replacement, widening, and removal construction; channel improvement and flood control protection construction; and roadway widening and modification construction. Primary activities associated with each method are outlined in the following paragraphs.

Colorado River Bridge Construction:
To accommodate traffic during construction and minimize impacts, the bridge would be constructed in two stages. The initial stage would be built west of the existing bridge and would include two through lanes of traffic, shoulders, and barriers. Once this work is completed, traffic would be moved to the completed section of the new structure and the second stage would remove the existing bridge to complete the widening. Two lanes of traffic would be maintained during peak traffic periods, but short-term closures may be needed to move equipment or set girders.

Abutment construction would include excavating for the placement of the new abutments, driving piles, forming and placing concrete for new abutments, and removing existing abutments. Construction of the new piers could include drilling circular columns into bedrock. In the deep water, this would require the contractor to mobilize a drill rig mounted on a barge. The contractor would drive a steel casing to bedrock, drill into bedrock from inside the casing, place a reinforcing cage inside the casing, and then place concrete in the casing. The steel casing could be designed to be removed or to remain in place. Another option would be to drive sheet piling and create a cofferdam in the river areas. This would include placing a mud slab, driving piling or drilling circular shafts, and dewatering. The steel sheet piling would be removed after construction is completed. Either barge mounted cranes or cranes in the cofferdams would be used to install the spans. In order to construct the new piers, abutments, or spans on the river bank the contractor would need to construct a path approximately 15-feet wide for equipment access.

Colorado River Bridge Removal:
The existing piers consist of eight-foot diameter and 16.5-foot tall columns sitting on a circular foundation. The circular foundation has several steps. The first step is 14 feet in diameter and steps down three feet. The next step is either 20 or 22 feet in diameter and steps down three feet. The final step is 22 to 24 feet in diameter and steps down eight feet. The bottom eight feet is unreinforced and rests on piles. This bottom section was also originally below the mudline. All portions of the foundation above the bottom section should be removed so that the remaining foundation is three to six feet below the very low flow condition. If a new footing overlaps the existing footing, the entire existing footing must be removed.

The method used to remove the existing bridge deck depends on feasibility. A structure removal plan would be prepared and approved by UDOT. Different options include building a platform below the existing deck in between the girders to catch falling debris, using a barge to catch the debris, or cutting the deck into slabs and using cranes to remove them.

Existing Roadway Widening and Other Modifications:
Primary activities include clearing and grubbing; removal of asphalt and roadway excavation; placement of granular borrow, untreated base course, asphalt roadway surface, and concrete curb, gutter, and sidewalk; as well a signing, striping, and erosion control. Proposed utility and storm drain relocations and adjustments would be placed

prior to new subgrade placement. Material would be obtained from or disposed of in approved location(s). Two lanes of traffic would be maintained during peak traffic periods, but limited off-peak short-term localized closures may be needed.

Courthouse Wash Structure Widening:
The abutments would be widened and new girders set from one side of the structure. The deck would then be formed and poured. If necessary, protective riprap may be added and/or the existing riprap replaced. Riprap may extend down to the edge of the channel and would be anchored in. However, construction activity would take place from the banks. Riprap placement and anchoring would occur when the wash is dry..

U.S. Department
Of Transportation
Federal Highway
Administration

Utah Division
2520 West 4700 South, Ste. 9A
Salt Lake City, UT 84118-1880

July 20, 2006

Mr. Larry Crist, Acting Field Supervisor
U.S. Fish and Wildlife Service
Utah Field Office
2369 West Orton Circle
West Valley City, UT 84119

Project: US-191, Colorado River Bridge # C-285
Project No. BHF-0191(27)129E
Formerly Project No. BRF-0191(23)128

Subject: Request to Initiate Formal Section 7 Consultation and Submission of a Biological Assessment

Dear Mr. Crist:

Enclosed are two copies of the Biological Assessment (BA) for the subject project.

The BA describes the effect determination for the listed species in the project area. Seven federally listed threatened/endangered species may occur within the project corridor, including:

- Bonytail Chub (Gila elegans)
- Colorado Pikeminnow (Ptychocheilus lucius)
- Humpback Chub (Gila cypha)
- Razorback Sucker (Xyrauchen texanus)
- Bald Eagle (Haliaeetus leucocephalus)
- Mexican Spotted Owl (Strix occidentalis lucida)
- Southwestern Willow Flycatcher (Empidonax traillii extimus); and
- One candidate species: Yellow-billed Cuckoo (Coccyzus americanus occidentalis)

Critical habitat for four federally listed endangered fish species occurs within the project corridor, including critical habitat for: Bonytail Chub, Colorado Pikeminnow, Humpback Chub, and the Razorback Sucker.

It has been determined that the proposed project, "May Affect, likely to Adversely Affect" the Bonytail Chub, Colorado Pikeminnow and the Razorback Sucker and "May Affect, not likely to Adversely Affect", the Humpback Chub, Bald Eagle, Mexican Spotted Owl, Southwestern Willow Flycatcher, and the Yellow-billed Cuckoo.

With appropriate conservation measures, the proposed action will not result in the destruction or adverse modification of critical habitat for the Colorado Pikeminnow, the Humpback Chub, the Bonytail Chub, and the Hazorback Sucker. The proposed project would have no affect to any other federally listed threatened/endangered or candidate or proposed for listing species and/or list critical habitat.

In accordance with 50 CFR Subsection 402.14, we are forwarding the biological assessment, and requesting formal Section 7 consultation.

If you have any questions or need additional information, please contact me at (801) 963-0078, extension 231.

Sincerely,

Carlos C. Machado
Program Manager

Enclosures (2)

cc: Paul West, UDOT
Kim Manwill, UDOT R4
Randall Taylor, UDOT R4
Lorraine Richards, Michael Baker Jr., Inc.

CCMACHADO:dts

From: Pam Higgins [mailto:phiggins@utah.gov]
Sent: Thursday, July 27, 2006 5:13 PM
To: Martineau, Dorena
Subject: adverse effect to site 42GR3627

Hi Dorena -

This is a follow-up to the voice mail I just left on your phone. I would like to know if the PITU is interested in being a concurring party in the Memorandum of Agreement that will stipulate the mitigative treatment for the construction effect to site 42GR3627, a prehistoric lithic scatter, during the replacement of the Colorado River Bridge in Grand County. This project may be a little out of your tribal area of interest, but Ralph Pikyavit has expressed interest in this region in the past.

This project was originally under Susan's oversight. The treatment she has prescribed is data recovery. One other project adverse effect will be the dismantling of the bridge. The remaining archaeological sites and historic properties are out of the area of construction effect.

If you choose to participate, I will include your organization in the draft MOA.

Thanks for your consideration - Pam

From: Pam Higgins
To: Martineau, Dorena
Date: 7/28/2006 11:18:33 AM
Subject: RE: adverse effect to site 42GR3627

Good Morning -

Thanks for your quick response.

- Pam

>>> "Martineau, Dorena" <Dorena.Martineau@ihs.gov> 7/28/2006 10:35 AM >>>

Hello Ms. Higgins,

Got your message this morning, also the e-mail. As you stated it is a bit out of our Tribal area of interest, so in response to being a concurring party in the Memorandom of Agreement the Palute Indian Tribe of Utah will decline on this project. We do appreciate your notification on this.

Thank You

Dorena Martineau

06-1421

State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

DEPARTMENT OF TRANSPORTATION

JOHN R. NJORD, P.E.
Executive Director

CARLOS M. BRACERAS, P.E.
Deputy Director

RECEIVED
OCT 10 2006
UDOT
REGION 4

Received
AUG 14 2006
USHPO

August 10, 2006

Mr. Matthew Seddon, Deputy State Historic Preservation Officer
Division of State History
300 Rio Grande
Salt Lake City, Utah 84101-1182

RE: BHF-0191(27)129E, US 191, Colorado River Bridge Replacement
Section 106 and U.C.A. 9-8-404 compliance
Determination of historic properties are adversely affected

Dear Mr. Seddon:

The Utah Department of Transportation (UDOT) is proposing to replace the existing Colorado River Bridge on US-191, north of Moab, Grand County, Utah (see maps in enclosed documents). The project extends from milepost (MP) 126.2 (400 North, Moab) north to the intersection with Potash Road (State Route 279) at about MP 129.79. The purpose of the project includes: provide a safe bridge that accommodates traffic over the Colorado River, improve safety in the study area (including the Courthouse Wash bridge), meet the existing and projected travel demand, provide continuity between the two lane facility and four-lane sections on either end of the study area, and facilitate movement of bicycle/pedestrian traffic along US-191. The Colorado River Bridge is in poor condition and is eligible for federal funds for replacement. Please find the required SHPO cover sheet, a copy of the cultural resource survey report for the Antiquities Section and one for the Historic Preservation Section plus site records for review.

The entire APE as defined by 36 CFR 800.16(d) has been inventoried for cultural resources by the Montgomery Archaeological Consultants of Moab, Utah. This work was conducted under the authority of Utah State Antiquities Project Permit No. U-05-MQ-1239p,s. The width of the inventory between 400 North and the Colorado River Bridge was generally 200 ft either side of US-191 existing centerline. From the Colorado River to the Potash Road the survey varied between 100-300 ft on the north or east side, to avoid going on National Park Service lands, and on the southwest side varied 100-300 ft as well. The intersecting roads at 400 North, Cermak Drive, N. Mi Vida Drive and 500 West were surveyed for a distance of 500 ft and 100 wide. State Route 128 was

Region Four Headquarters, 1345 South 350 West, Richfield, Utah 84701
telephone 435-893-4799 • facsimile 435-896-6458 • www.udot.utah.gov

surveyed for 1,000 ft and 200 ft wide. An Intensive Level Survey (ILS) of architectural historic properties was completed by MOAC and reported separately.

The inventory resulted in the documentation of multiple historic time-period and prehistoric archaeological sites (including standing structures) and are summarized in the following tables:

TABLE 1: ARCHAEOLOGICAL SITES

State Site Number	Ownership	Site Type	NRHP Eligibility	Finding of Effect	Mitigation
42Gr190	UDOT/Private	Prehistoric Habitation/Historic Spring Development	Eligible C and D	No Effect	NA
42Gr2074	NP/UDOT	Rock Shelter	Not Eligible	NA	NA
42Gr2565.14	UDOT/Private/DOE	Historic U.S. 160	Eligible A & C	No Effect	NA
42Gr2565.15		Destroyed bridge/road	Non-contributory	No effect	NA
42Gr2565.16		Part destroyed/isolated	Non-contributory	No effect	NA
42Gr2565.17		Historic U.S. 160	Eligible A	No Effect	NA
42Gr2710.15	UDOT/Private	Central Stock Driveway	Eligible A	No Effect	NA
42Gr2813 (2 segments)	UDOT/Private	Moab to Thompson Wagon Road	Eligible A & D	No Effect	NA
42Gr2923	UDOT/Private	Telephone Line	Eligible A	No Effect	NA
42Gr3223	Private	Rock Shelter/Trash Scatter	Eligible D	No Effect	NA
42Gr3622	UDOT/Private	Historic Ditch	Not Eligible	NA	NA
42Gr3623	UDOT/Private	Historic Ditch	Not Eligible	NA	NA
42Gr3624	UDOT/Private	Foundations	Not Eligible	NA	NA
42Gr3625	UDOT/Private	Historic Ditch	Not Eligible	NA	NA
42Gr3626	Private	Lithic Scatter	Eligible D	No Effect	NA
42Gr3627	UDOT/Private	Lithic Scatter	Eligible D	Adverse	Data Recovery
42Gr3628	UDOT/Private	Lithic Scatter	Eligible D	No Effect	NA
42Gr3629	UDOT/Private	Historic Trash Scatter	Not Eligible	NA	NA

TABLE 1: ARCHAEOLOGICAL SITES CONTINUED

State Site Number	Ownership	Site Type	NRHP Eligibility	Finding of Effect	Mitigation
42Gr3630	UDOT/Private	Historic Sandstone Quarry	Eligible A	No Effect	NA
42Gr3631	UDOT/Private	State Route 128	Not Eligible	NA	NA
42Gr3632	UDOT/Private	Historic Inscription	Eligible A	No Effect	NA
42Gr3633	UDOT/Private	Lithic Scatter	Not Eligible	NA	NA
42Gr3634	UDOT/Private	Prehistoric Petroglyph Panel	Eligible D	No Effect	NA
42Gr3635	UDOT/Private	Metal Pipes in Cliff	Not Eligible	NA	NA
42Gr3667	Private	Bridge Abutment, Historic Inscription, Petroglyphs	Eligible A, C & D	No Effect	NA

TABLE 2. HISTORIC STRUCTURES

Property Name/ Address	Building Style/ Type	NRHP Eligibility	Finding of Effect	Section 4(f)	Mitigation
1 Rosalie Ct.	Modern Contemporary	Eligible	No Effect	No	NA
1001 N. 500 West	Vernacular Cottage	Not Eligible	NA	NA	NA
St. Pius X Catholic Church 122 W. 400 North	Vernacular	Eligible	No Effect	No	NA
Arthur Taylor House/Desert Bistro Restaurant 1266 N. Hwy 191	2-Story T-plan Farmhouse	Eligible	No Effect	No	--
Bridge over Colorado River (Structure 0C-285-0)	Multi-span Steel Plate Girder/Concrete Piling with Concrete Deck	Eligible	Adverse	Yes	ILS
2 Rosalie Ct.	Modern Contemporary	Not eligible	NA	NA	NA
3 Rosalie Ct.	Modern Contemporary	Not eligible	NA	NA	NA

TABLE 2. HISTORIC STRUCTURES CONTINUED

Property Name/ Address	Building Style/ Type	NRHP Eligibility	Finding of Effect	Section 4(f)	Mitigation
Farabee's Jeep Rental 401 N. Main	Vernacular	Eligible	No Effect – temporary construction easement	No	NA
4 Rosalie Ct.	Modern Contemporary	Not eligible	NA	NA	NA
Commercial building 415 N. Main	Vernacular	Not eligible	NA	NA	NA
Cottage Inn 488 N. Main	Vernacular	Not eligible	NA	NA	NA
Adventure Inn 512 N. Main	Vernacular	Not eligible	NA	NA	NA
543 N. Main	Vernacular	Not eligible	NA	NA	NA
La Hacienda Restaurant/Inca Inn Motel 570 N. Main	Vernacular	Not eligible	NA	NA	NA
Splore 610 N. Cermak	Modern Contemporary	Not eligible	NA	NA	NA
Elks Lodge 611 N. Cermak	Vernacular	Eligible	No Effect	No	NA
646 N. MiVida	Modern Contemporary	Eligible	No Effect	No	NA
654 N. MiVida	Modern Contemporary	Eligible	No Effect	No	NA
Sunset Grill 900 N. Hwy 191	Modern Contemporary	Eligible	No Effect – temporary construction easement	No	NA
999 N. 500 West	Vernacular	Eligible	No effect	No	NA

A Determination of Eligibility and Finding of Effect (doe/foe) document, written by Susan Miller in May 2006, is enclosed. The document details site types, eligibility status, construction effects, and 4(f) determinations. A review copy of the doe/foe was sent to Chris Goetze, Arches National Park archaeologist, Marilyn Kastens, US Department of Energy, Kathy Davies, Division of Wildlife Resources archaeologist, Donna Turnipseed, BLM archaeologist, Craig Fuller, Utah

Historic Trails Consortium, the Hopi Tribe of Arizona, and the Paiute Indian Tribe of Utah (PITU) on May12, 2006. The Hopi, the PITU, and the Utah Historic Trails Consortium have responded to the draft doe/foe (doe/foe Exhibits 4 and 5). A draft Memorandum of Agreement (MOA) (Exhibit 6), suggesting possible mitigation for the adverse effects is also enclosed for your review. If you concur with the determinations and the MOA, please sign on the line provided at the end of this letter.

In the cultural resource inventory report, the site record, and the doe/foe site 42GR3223 was listed as being inside the Arches National Park. According to a phone conversation with Chris Goetz, NPS archaeologist, on July 18, 2005, the site is on private property just outside of the park boundary. The ownership status has been corrected by hand in the enclosed documents.

Thank you for your efforts regarding this project. If you have any further questions, please feel free to call me at 435-893-4740.

Sincerely,

Pam Higgins

Pamela Higgins, NEPA/NHPA Specialist
UDOT, Region 4

PH/enclosures

cc: (w/out enclosures)
Greg Punske, FHWA Environmental Program Manager
Kim Manwill, UDOT Region 4 Project Manager
Randall Taylor, UDOT Region 4 Environmental Engineer

****

I concur with the above determinations of historic properties are adversely affected by the BHF-0191(27)129E, US 191, Colorado River Bridge Replacement project, and that the UDOT has taken into account effects on historic properties.

Mr. Matthew Seddon, Deputy State Historic Preservation Officer — Date 9/26/06

****

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
COLORADO/GUNNISON BASIN
REGULATORY OFFICE
400 ROOD AVENUE, ROOM 142
GRAND JUNCTION, COLORADO 81501-2563

RECEIVED
SEP 29 2006

REPLY TO
ATTENTION OF

September 26, 2006

Regulatory Branch (200675353)

Ms. Tiffany Carlson
Michael Baker Jr., Incorporated
6955 Union Park Center, Suite 370
Midvale, Utah 84047

Dear Ms. Carlson:

We are responding to your JD report submittal for an approved jurisdictional determination for the US Highway 191 Colorado River Bridge site. These sites are located at Colorado River and tributaries and wetlands adjacent to the Colorado River within Sections 25, 26, 27, 35 and 36, Township 25 South, Range 21 East, and within Section 1, Township 26 South, Range 21 East, Grand County, Utah.

Based on available information, we concur with the estimate of waters of the United States, as depicted on the May 2006 report entitled **Wetland Delineation and Waters of the U.S. Identification ADDENDUM** prepared by **Michael Baker, Incorporated**. There are approximately 1.14 acres of waters of the United States, including wetlands, within the surveyed area. We regulate these waters under Section 404 of the Clean Water Act since they are tributary and/or adjacent to the Colorado River.

The wetland identified as wetland 1 on the above drawing is an intrastate isolated water with no apparent interstate or foreign commerce connection. As such, this water is not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. A *Notification of Administrative Appeal Options and Process and Request for Appeal* form is enclosed. If you wish to appeal this approved jurisdictional determination, please follow the procedures on the form. You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Please refer to identification number 200675353 in correspondence concerning this project. If you have any questions, please contact Nathan Green at this office, or telephone 970-243-1199, extension 12. You may also use our website: *www.spk.usace.army.mil*/regulatory.html.

Sincerely,

Mark Gilfillan

Mark Gilfillan
Acting Chief, Colorado/Gunnison Basin
Regulatory Office

Enclosures

Copy furnished without enclosures:

Mr. Daren Rasmussen, Utah Division of Water Rights, 1594 West North Temple, Suite 220, Post Office Box 146300, Salt Lake City, Utah 84114-6300
Mr. Karl Kappe, Utah Division of Forestry, Fire and State Lands, 1594 West North Temple, Suite 3520, Post Office Box 145703, Salt Lake City, Utah 84114-5703
Ms. Mary Hofine, Grand County Planning, 125 East Center, Moab, Utah 84532

State of Utah

Department of Environmental Quality

Dianne R. Nielson, Ph.D.
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

JON M. HUNTSMAN, JR.
Governor

GARY HERBERT
Lieutenant Governor

November 30, 2006

US-191 Colorado River Bridge Project
c/o Ms. Lorraine Richards, AICP
Project Manager, Michael Baker Jr., Inc.
6955 Union Park Center, Suite 370
Midvale, Utah 84047

Re: US-191 Colorado River Bridge Project Draft EA

Dear Ms. Richards:

The Utah Division of Water Quality staff has reviewed the referenced Environmental Assessment Report. It is our opinion that applicable water quality standards may be violated unless appropriate Best Management Practices (BMPs) are incorporated to minimize the erosion-sediment load to the Colorado River or any adjacent waters or dry washes during project activities and operation of the facilities. We strongly recommend that appropriate water quality parameters be monitored for effectiveness of sediment control and other applicable BMPs.

Potential impacts from runoff during construction or during long-term operation of the bridge and road may include the degradation of water quality, increased quantities and intensities of peak flows, channel erosion, flooding, and geomorphologic deterioration that may directly or indirectly cause an inability of streams to achieve ecological balance and regain their designated beneficial uses. Emphasis in design should avoid concentration of storm water to fewer drainage locations. The intent should be to allow or mimic the natural flow patterns to the degree possible.

The Division of Water Quality requests the following conditions be included in the final Environmental Assessment Report (EA), as follows:

1. Whenever a construction project causes the water turbidity in an adjacent surface water to increase by 10 NTU's or more, the responsible party shall notify the Division of Water Quality.

2. The responsible party shall not use any fill material that may leach organic chemicals (e.g., discarded asphalt) or nutrients (e.g., phosphate rock) into the receiving water.

3. The responsible party shall protect any potentially affected fish spawning areas.

4. Coffer Dams are encouraged to be used to divert flow around instream construction activities and to reduce sediment loading to the river. Efforts should be made to control petroleum hydrocarbons (oil, antifreeze, diesel fuel, etc.) from entering the river from heavy equipment working from temporary barges.

5. The following permits from our Division are required during the construction phase of the project, as identified by the draft EA:

    a. Construction activities that grade one acre or more per common plan are required to obtain coverage under the Utah Pollutant Discharge Elimination System (UPDES) Storm Water General Permit for Construction Activities, Permit No. UTR100000. The permit requires the development of a storm water pollution prevention plan to be implemented and updated from the commencement of any grading activities at the site until final stabilization of the project. A fact sheet describing the permit requirements and application procedures is located on our web site waterquality.utah.gov.

    b. Dewatering activities, if necessary during the construction, may require coverage under the UPDES General Permit for Construction Dewatering, Permit No. UTG070000. The permit requires water quality monitoring every two weeks to ensure that the pumped water is meeting permit effluent limitations, unless the water is managed on the construction site.

6. In addition to these permitting requirements, the Division of Water Quality requires the submission of plan elements for permanent storm water runoff control and treatment. The plan should identify where the additional run off from the bridge and road expansion will be discharged to in addition to the detention ponds identified in the draft EA. The plan should also include BMPs for revegetation with native plants in disturbed areas and a buffer strip along the road to filter petroleum, sediments and other contaminants from entering waters of the State.

Thank you for the opportunity to partner with UDOT on this project. If you have any questions, please contact Shelly Quick at (801) 538-6516.

Sincerely,

Ed Macauley, Manager
Engineering Section

ELM:sq

File: squick\wp\401 certification projects\UDOT US191 Colorado River Bridge Project
Squick\401 certification \EA scoping comments\misc.

(14)

State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Office of the Governor
PUBLIC LANDS POLICY COORDINATION

LYNN H. STEVENS
Public Lands Policy Coordinator

RESOURCE DEVELOPMENT COORDINATING COMMITTEE
Public Lands Section

RECEIVED
JAN 04 2007

December 29, 2006

Michael Baker Jr., Inc
US-191 Colorado River Bridge
6955 Union Park Center, Suite 370
Midvale, Utah 84047

SUBJECT: US-191 Colorado River Bridge
Project No. 06-7323

Dear Mr. Baker:

The Resource Development Coordinating Committee (RDCC) has reviewed this proposal. The Division of Air Quality comments:

Based on the information provided, the proposed bridge and roadway construction project on US-191 from 400 North in Moab City to SR-279 in Grand County, will not require a permit. However, if any "non-permitted" rock crushing plants, asphalt plants, or concrete batch plants are located at the site, an Approval Order from the Executive Secretary of the Air Quality Board will be required for operation of the equipment, including all equipment not permitted in Utah. A permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 North, 1950 West, Salt Lake City, Utah, 84116 for review according to Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at:

http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf

In addition, the project is subject to R307-205-5, Fugitive Dust, since the project could have a short-term impact on air quality due to the fugitive dust that could be generated during the excavation and construction phases of the project. An Approval Order is not required solely for the control of fugitive dust, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at:

(14)

www.rules.utah.gov/publicat/code/r307/r307.htm

The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this correspondence to the Resource Development Coordinating Committee, Public Lands Section, at the above address or call the Director, Jonathan G. Jemming, at (801) 537-9023, or Carolyn Wright at (801) 537-9230.

Sincerely,

John Harja
Assistant Director
for Policy and Planning

(11)

RECEIVED

JAN 05 2007

CITY OF MOAB
115 WEST 200 SOUTH
MOAB, UTAH 84532-2534
MAIN NUMBER (435) 259-5121
FAX NUMBER (435) 259-4135

January 2, 2007

US-191 Colorado River Bridge
c/o Michael Baker Jr., Inc.
6955 Union Park Center
Suite 370, Midvale, Utah 84047

To Whom It May Concern:

Thank you for taking time to consider concerns voiced by Moab business owners who may be affected by proposals associated with the US-191 Colorado River Bridge Project.

According to the Draft Environmental Assessment, the Build Alternative anticipates widening portions of the Highway 191 within Moab City limits, and mentions the displacement of several businesses.

The City understands that design and engineering standards sometimes necessitate making decisions that have repercussions on landowners. That said, the City would like to strongly encourage UDOT to look at options that will allow the project to proceed while preserving access and use by these property owners. We also ask that every effort be made to communicate clearly with the affected property owners so that they may assist in developing fair, equitable and workable solutions to the design and location challenges of this project.

Thank you again for your consideration.

Sincerely,

Donna Metzler
City Manager

ADM LTR-07-01-002

THE HOPI TRIBE

Hopi Cultural Preservation Office
P.O. Bo 123
Kykotsmovi, AZ 86039
(928) 734-3613

CHAIRMAN
Todd Honyaoma, Sr.
VICE-CHAIRMAN

February 5, 2007

Pam Higgins, NEPA/NHPA Specialist
Utah Department of Transportation, Region 4
1345 South 350 West
Richfield, Utah 84701

Re: Project # BHF-0191(27)129E; Colorado River Bridge Replacement

Dear Ms Higgins,

Thank you for your correspondence dated January 23, 2007, regarding plans to replace the Colorado River Bridge on US-191 north of Moab. As you know, the Hopi Tribe claims cultural affiliation to prehistoric cultural groups in Utah, and the Hopi Cultural Preservation Office supports identification and avoidance of prehistoric archaeological sites.

In A letter dated December 27, 2005, to the Federal Highway Administration, we requested to be kept informed of this proposal and provided with a copy of the cultural resource survey report of the area of potential effect by Montgomery Archaeological Consultants for review and comment. In a correspondence dated May 12, 2006, from the Utah Department of Transportation, we received the draft Determination of Eligibility and Finding of Effect and draft cultural resources survey report that identify an adverse effect as a result of this proposal to site 42Gr3627, described as a prehistoric lithic scatter.

We understand the State Historic Preservation Office has concurred with the finding of project effect and we defer to the State Historic Preservation Office on the enclosed Memorandum of Agreement. However, please provide us with copies of the draft data recovery plan and report for review and comment.

As you also know, we appreciate the Federal Highway Administration and the Utah Department of Transportation's continuing solicitation of our input and your efforts to address our concerns. Should you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office. Thank you again for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

Preserving America's Heritage

March 1, 2007

Mr. Edward T. Woolford
Environmental & Realty Specialist
Utah Division
Federal Highway Administration
2520 West 4700 South, Suite 9A
Salt Lake City, UT 84118-1847

Re: *US 191, Colorado River Bridge Replacement*
Grand County, Utah
BHF-0191(27)129E
ACHP Ref. 5961

Dear Mr. Woolford:

On February 16, 2007, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on properties eligible for inclusion in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is warranted. However, should circumstances change and you or other consulting parties determine that our participation is required, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the Utah State Historic Preservation Office (SHPO), Indian tribes, and other consulting parties, and related documentation at the conclusion of the consultation process. The filing of this MOA with the ACHP and fulfillment of its stipulations are required to complete your compliance responsibilities under Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact me at (202) 606-8520 or kharris@achp.gov.

Sincerely,

Katry Harris

Katry Harris
Historic Preservation Specialist
Office of Federal Agency Programs

Table E-1 - Detailed Responses to Comments Received on the Draft EA

No.	Comment	Response
#1	The Utah Division of Water Quality staff has reviewed the referenced Environmental Assessment Report. It is our opinion that applicable water quality standards may be violated unless appropriate Best Management Practices (BMPs) are incorporated to minimize the erosion-sediment load to the Colorado River or any adjacent waters or dry washes during project activities and operation of the facilities. We strongly recommend that appropriate water quality parameters be monitored for effectiveness of sediment control and other applicable BMPs. Potential impacts from runoff during construction or during long-term operation of the bridge and road may include the degradation of water quality, increased quantities and intensities of peak flows, channel erosion, cause an inability of streams to achieve ecological balance and regain their designated beneficial uses. Emphasis in design should avoid concentration of storm water to fewer drainage locations. The intent should be to allow or mimic the natural flow patterns to the degree possible. The Division of Water Quality requests the following conditions be included in the final Environmental Assessment Report (EA), as follows: 1. Whenever a construction project causes the water turbidity in an adjacent surface water to increase by 10 NTU's or more, the responsible party shall notify the Division of Water Quality. 2. The responsible party shall not use any fill material that may leach organic chemicals (e.g., discarded asphalt) or nutrients (e.g., phosphate rock) into the receiving water. 3. The responsible party shall protect any potentially affected fish spawning areas. 4. Coffer Dams are encouraged to be used to divert flow around instream construction activities and to reduce sediment loading to the river. Efforts should be made to control petroleum hydrocarbons (oil, antifreeze, diesel fuel, etc.) from entering the river from heavy equipment working from temporary barges. 5. The following permits from our Division are required during the construction phase of the project, as identified by the draft EA: a. Construction activities that grade one acre or more per common plan are required to obtain coverage under the Utah Pollutant Discharge Elimination System (UPDES) Storm Water General Permit for Construction Activities, Permit No. UTR100000. The permit require the development of a storm water pollution prevention plan to be implemented and updated from the commencement of any grading activities at the site until final stabilization of the project. A fact sheet describing the permit requirements and application procedures is located on our web site waterquality.utah.gov b. Dewatering activities, if necessary during the construction, may require coverage under the UPDES General Permit for Construction Dewatering, Permit No. UTG070000. The permit requires water quality monitoring every two weeks to ensure that the pumped water is meeting permit effluent limitations, unless the water is managed on the construction site. 6. In addition to these permitting requirements, the Division of Water Quality requires the submission of plan elements for permanent storm water runoff control and treatment. The plan should identify where the	Appropriate BMPs will be incorporated to minimize the erosion-sediment load to the Colorado River, adjacent waters, and dry washes. Water quality parameters will be monitored to evaluate the effectiveness of sediment control and BMPs. The hydraulic analysis will be completed during design and the drainage design will be developed to avoid concentration of storm water and mimic natural flow patterns where reasonable to do so. The following requested conditions have been added to Section 3.9.8: • The DWQ will be notified if water turbidity in adjacent surface water is increased by 10 NTU's or more as a result of the construction activities. • As part of the Section 402 permitting process, a SWPPP will be developed and incorporated in the design plans and construction contract documents. Plan elements for permanent storm water runoff control and treatment that are included in the SWPPP will be submitted to and reviewed by the DWQ. • Dewatering activities, if necessary during the construction, may require coverage under the UPDES General Permit for Construction Dewatering (Permit No. UTG070000). This permit requires water quality monitoring to ensure pumped water is meeting permit effluent limitations, unless the water is managed on the construction site. The remaining requested conditions are already captured in existing commitments stated in Section 3.9.8 and Section 3.14.6.

Table E-1 - Detailed Responses to Comments Received on the Draft EA

No.	Comment	Response
	additional runoff from the bridge and road expansion will be discharged to in addition to the detention ponds identified in the draft EA. The plan should also include BMPs for revegetation with native plants in disturbed areas and a buffer strip along the road to filter petroleum, sediments and other contaminants from entering waters of the State. Thank you for the opportunity to partner with UDOT on this project. If you have any questions, please contact Shelly Quick at (801) 538-6516.	
#2	Good maps and different potential plans for road with paths or medians options. The present Main Street Hwy 191 section on the north end of town, specifically where 400 North connects to Main, is difficult to make a left turn from 400 North onto Main due to change of two lanes to one just to the north of 400 North.	The comment regarding the maps and plans is appreciated. The Preferred Alternative will improve the operation of this intersection. This alternative provides two travel lanes and a center turn lane through this section, eliminating the taper from two lanes to one that currently occurs just north of 400 North.
#3	The proposed plan shows responsiveness to comments made in original scoping. The cross-section from 600 North to Bridge now shows a detached meandering trail on the east side. Thank you. I look forward to further cooperation.	No response necessary.
#4	Thank you for looking at this project and not affecting all of the businesses from Century 21 to Canyon Voyages! Some issues that I see: 1) 4 Lanes = faster speeds into town. The traffic needs to be slowed down from 500 N – 400 N. 2) How will you enter the highway from 500 N and 400 N. There needs to be STOP LIGHTS. *This will also slow down the traffic* 3) Where and what do you do when the bike lane ends? Now where do I go? Have the city continue the bike lanes through town from 400 N and off of Main Street. 4) Major drainage issues need to be fixed behind La Hacienda. Main Street gets flooded way to often. Storm drains need to be installed with this project. Thanks for the time.	1) The design speed of the section from 400 North to the Colorado River Bridge would match the design speed of the Moab Main Street Project, which is 40 mph. 2) During design, these intersections will be evaluated to determine if a signal is warranted, based on UDOT signal warrant criteria. 3) Figure 1-3 identifies trails planned by Moab City. Shoulders will be designed to accommodate use by bicyclists. 4) As recognized in the Draft EA, Moab, Grand County, and UDOT are working jointly to address existing drainage problems and flooding concerns independent of this project.
#5	To start, let me explain our situation. We recently closed on a property located at 415 N Main, a property which has been marked for removal. We closed on this building on November 15th, 2006. We showed a formal interest in this property at the beginning of 2006 and put in an offer through our Realtor. From that point, until closing, not one person that we dealt with in the buying process told us anything about a proposed road widening project, or even that access maybe required to our property by people involved in the project to make surveys (as intimated in the letter dated 15th November 2005, sent to property owners). If we had known anything about this, we would never have bought the property which has meant that we have invested our lifesavings to further our future, business, and livelihood. We	FHWA and UDOT deeply regret that the commenter was unaware of the proposed project and its associated impacts prior to the purchase of this business property. As part of the community outreach for this project (explained in Chapter 6), UDOT has placed paid advertisements in local and statewide newspapers and mailings were sent to individuals on the project mailing list, which included property owners adjacent to US-191. Information about the limits of the project, the proposed widening, and that

Table E-1 - Detailed Responses to Comments Received on the Draft EA

No.	Comment	Response
	learnt about this through the owners of The Adventure Inn, whose property is also marked for displacement. We purchased this property to operate our business from. We run a Rock Climbing and Canyoneering Guide Service called Moab Desert Adventures, and we employ up to 8 people. We plan to have the shop open in February ready for the Spring season. We found ourselves in a situation where we are stuck with a building we could not sell, and any investments we make in the building will not be realized, and our hopes and dreams for our future and our business being destroyed. From the moment we found out, we have endeavored to find out as much as possible about the project, and try to get the decision reversed. We have had great support from City officials including the Mayor and David Olsen from the Planning and Development department, and the Chamber of Commerce, to save our building, and we have been told by UDOT and Michael Baker Inc. that our building will remain intact, and that there is no need to remove it. The only problem seems to be with the awning. We would like to make the following comments on the project as a whole: • We want to resolve this situation with the minimum amount of impact to everybody, especially us as our business, financial future and livelihood depend on our investment. From talking with Lorraine Richards and the engineers at Michael Baker Inc and Myron Lee at UDOT, it seems that we can come to a solution where our building will remain intact and not be removed. This is obviously the course we want to go. • In our discussions with Michael Baker Inc and UDOT, it has been stated that after closer inspection into our situation, the awning could possibly be encroaching on UDOT ROW. Michael Baker Inc has said that they will order a survey to clarify the property boundaries. Our awning would possibly need to be removed or altered so that it doesn't interfere with the sidewalk. We have been told that if the preferred build alternative plan is approved, then our awning would have to be taken care of, but our building would remain intact. The required measurements of road lanes, shoulder and sidewalk are within the ADA standards, and therefore it is not necessary to remove our building. • Aside from the human factor involved in this, which you cannot put a value on because of the destruction it will cause in the lives of those affected - loss of income, loss of business, ruination of future and livelihood, stress related issues etc, having to acquire a building is a costly exercise. You can save yourselves a lot of money, and keep our lives intact at the same time by keeping buildings intact. • We have been told quite categorically, that our building will remain intact. It does not need to be removed. This is obviously the solution which we want, and we are moving forward with our business on this premise, so it would be very unfair after telling us this, to decide otherwise. We have the support of the Mayor of Moab, and David Olsen from the Planning and Development Department for the City of Moab. • One of the main problems that has arisen in this process is the lack of communication, and the lack of knowledge that people in Moab had of this project. The road widening phase of the project has been hidden under the auspices of the Colorado Bridge replacement, and it seems that nobody knew exactly what was involved in the road widening phase of the project. We have spoken with members of the City, who are very concerned about our situation. They have stated that they were ill informed about the intention of removing properties. In future it would be more ethical to present all the information to avoid situations like the one we	there would be potential displacements involved, have been included in handouts sent with mailings to adjacent property owners. Information regarding property ownership was obtained from County Records. All project-related notices for this property since the beginning of the EA study efforts have been to the property address of 415 N Main. None of these notices were returned except the follow-up reminder postcard notice that was sent in December 4, 2006 for the Public Hearing. By this time, the new property owners had heard about the project from other individuals who had received the public hearing notice and project handout and had already initiated discussions with the project team. Since the new owners had just secured the property in November, earlier notice was not possible because they were not recorded as owners in the County Records. Once the project team was aware of the situation, the new owners were added to the project mailing list, a copy of the public hearing notice and project handout was provided, and discussions continued. The analysis typically conducted for an EA is a worse-case scenario based on preliminary data and is intended to cover the extent of what ***potential*** impacts could be. The impacts are generally presented from a broader perspective since ROW acquisition and final design are not part of the EA process and because individual property owners can change from time to time. The subsequent ROW and design processes then allow for the evaluation of each property in much greater detail, which often leads to incorporating design details that further minimize impacts in coordination with the property owner at that time. Better communication is necessary with property-owners potentially displaced by the project and UDOT is committed to finding more effective communication tools. In regards to the property at 415 N Main that was vacant during the time of the previous analysis, project team members have participated in additional discussions with the new property owners as part of the Chamber of Commerce luncheon and the Public Hearing on December 12, 2006. Baker representatives also met on-site with the new property owners on December 13, 2006. In these meetings, it was determined that the building itself could stay with modifications to the awning. As such, this building is not potentially displaced and the document has been modified accordingly. The employment information and service type for this

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	have had to face. I would not want anybody to have to go through this nightmare. Also, any letters sent out to property owners should be certified to ensure delivery, and proper research should be done to establish who owns a building. • In section 3.3.5 of the EA it states build alternatives were discussed with Stakeholders. No one has more at Stake than the owners of the buildings to be removed. We have yet to be officially notified! • Your alternatives for this plan are very cut and dried - build or no build, with no option in between. You are not offering up any other options, when it seems that there are some other options, which can have a less detrimental and devastating effect on those businesses marked for removal. • Moab is a small community, and the removal of businesses, and the affects that it will have on people's lives is very detrimental to the community as a whole. Moab is not like a large city where something like this can get swallowed up and easily disappear. This sort of action will have a serious rippling affect. • In the EA Chapter 3 page 7 - you state "secondary effects are not anticipated because land development is severely constrained by the limited amount of developable land." How in that case do you justify the removal of businesses from the inventory that will not be able to relocate because of restricted development opportunities? • In Chapter 3.3.8 in the EA it states "Relocation services and benefits will be administered through UDOT's Relocation Assistance Program". What do you propose to do when there is not a like for like building available, in a location that is as good as the current location? • In Chapter 3.4.1 of the EA it states that the largest employment sectors are leisure and hospitality. How then do you justify removing businesses which are in this sector? Ours being a rock climbing and canyoneering guide service? • In Chapter 3.4.2 it is stated that heavy traffic congestion limits accessibility to the businesses located on US 191 ... There is no traffic congestion. Traffic slows down as it should on entering a town, but rarely does it ever come to a stand still. The worse time is during Jeep Safari Week. • It is also stated in this chapter that temporary employment loss will be 25 people. We employ up to 8 people. How can it be a temporary loss of employment for business owners like us, who could get put out of business? What do you suggest that we do instead? • It also states that these businesses do not provide retail goods. We plan on doing retail. • Myron Lee stated that UDOT has to follow a process for such plans, which cause the least amount of impact to buildings and businesses as possible. That is why there is a public meeting so people can air their opinions. He said it could be decided to make the road lanes narrower, put the bike path somewhere else etc to avoid the loss of businesses and buildings. How is it then that it has got to the stage where a huge Draft EA has been produced costing an inordinate amount of money, (which is more like the size of an Environmental Impact Survey), that has involved detailed surveys of land, properties, easements, tax	business was not considered in the previous analysis because this information was not yet available. City representatives have been involved throughout the process. The Chamber of Commerce will continue to be coordinated with during the design process. In response to the comment pertaining to traffic congestion, traffic is currently operating at LOS D during peak hours, and in the future would operate at LOS E. As explained in the EA, LOS D and E are unacceptable LOS conditions for this type of facility and result in inconvenience and delay for motorists due to inadequate capacity. These motorists include potential business patrons. Some of the tools that have been used to present the information about this project include general public notices, individual mailings, a project website, and meetings with City staff and council. In addition to the Public Hearing, which is a formal stage of the environmental process to solicit input from the public on the proposed alternative, each property owner was sent a letter inviting them to participate in the March 2006 workshop to review information about the Preliminary Build Alternative. In response to comments received from property owners who participated in this workshop, additional features were incorporated into the Preferred Alternative to minimize impacts to their properties. These changes included modifications to the typical section width and use of design features such as retaining walls. City and County representatives also participated in this workshop. Following this workshop, the City participated in a field review that was held to help address issues identified from this workshop. Electronic files and maps showing the extent of impacts have been shared with City staff and the consultant for the bike path. Though only one build alternative is evaluated in the EA, the alternative development process reviewed possible shifts in the alignment and modifications to the elevation of the roadway have been incorporated as part of the Build Alternative to further minimize property impacts. Since it is UDOT's goal to cause the least disruption as possible, only the alternative with the least impact was presented in the document. Details such as the removal of the awning are typically handled as part of the ROW and design process, in coordination with the property owner.

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	income, possible relocation locations of which there are none, maps showing the removal of buildings, and only now are you asking for public comment? It has been suggested to us, by various officials including the Property Rights Ombudsman, that once a project has got this far, and proposed plans are included in an EA, it is highly unlikely that these will be changed. It seems like you are just going through the motions to appease the public, but their comments are going to be worthless. • If it is your policy to cause as little impact to buildings and businesses as possible, why are other alternatives, such as the removal of our awning, not discussed in the plan? Why are your plans so black and white? • If you are concerned, as you say, about the impact caused on properties, why don't you produce other alternatives in your plan that would cause less impact? Why leave it to this late stage to get opinions from the public, who have been blindsided by exactly what is happening, and really don't have much time to research • We are not against the vision of providing a better gateway for the North end of Moab, and for providing bike paths and pedestrian walkways, but we are against the removal of business and buildings to enable this project to happen. Your plan, as stated already, is very cut and dried with only 2 options. The Build Alternative is going to cause extensive disruption in people's lives when their businesses are ruined, and their futures and livelihoods devastated. If you understood how Moab operated more, you would know that it is not just a matter of moving to another location and starting over. In the build alternative, it would seem that there should be options: a. Do the road lanes and turning lanes have to be as wide as 12'? b. Does the shoulder need to be 8'? c. Does the walkway need to be 6'? d. Can the bike path and walkway go another route? A. With regards to the properties on the East Side of the road, The Adventure Inn and 550 N Main which houses 4 businesses, could other alternatives be looked at? What about raising the bike path and sidewalk on an elevated walkway/bikeway which would give extra space, and possibly allow for the road to be 5 lanes at that point without having to knock these buildings down. Surely, being able to keep these buildings, and the businesses, would be the best way to go, so that people's lives are not ruined. It could even be a cheaper alternative. B. We support Phase 1 of the project, the replacement of Colorado Bridge. C. Whilst we think Phase 2 of the project, the road widening from 400 North to Potash Road, has some good points, the human impact cost is too high to give full support. If alternatives can be made to avoid the impact to buildings, then it would get full support.	Comments from the public have been solicited from the beginning of the project and are an important part of the process. Comments have had a meaningful influence on this project. For example, the typical section was modified and the bike path does not extend through this section as a result of the comments received as part of the March 2006 workshop. Other comments expressed will require further consideration during the ROW and design process. In regard to the properties on the east side of the road, during the ROW acquisition and design processes, UDOT will communicate clearly with each of these affected property owners so that they may assist in developing fair, equitable, and workable solutions to the outstanding design and location challenges of this project. At that time, UDOT and the property owner will consider whether the use of design features, variations of the typical section width, and/or reconfiguration of the business structure can be used to avoid displacement of either business building and how best to minimize impacts to these properties. UDOT will continue to seek solutions that would avoid economic impacts to businesses in any sector, including leisure and hospitality. And, UDOT would only need to acquire the portion of the property that is required for construction of the project. However, to acquire property, UDOT must fairly compensate property owners, and in some cases, fair compensation may result in full acquisition of a property and/or relocation of an existing business. Because of this potential situation, the properties at 512 N Main and 550 N Main are shown as potentially displaced, but subject to further review during design. Property acquisition and relocation assistance, if necessary, would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the State of Utah Relocation Program. On a regional level, private land use development is constrained by the high percentage of public lands and environmental considerations, as explained in the EA. However, this does not mean that individual parcels or properties are not available for lease, sale, development, or redevelopment. The survey of real estate options completed in April 2006 provides a “snapshot” of

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		the real estate market at a single point in time. Specific relocation sites are not identified in the EA since options available in the future would likely be different. The EA acknowledges the challenges associated with the relocation of the Adventure Inn due to the limited hotel/motel real estate options in Moab. Additionally, the remaining lands associated with both properties that are identified as potential displacements could be redeveloped either by the existing property owner or a new owner; however, the property at 550 N Main is more constrained because of its limited size. Should relocation be determined necessary, a UDOT relocation counselor would work with each business to minimize economic harm to these businesses and increase the likelihood of them being able to relocate back into the affected community. As there is the potential that either of these businesses may chose to not re-establish within the community, Section 3.4.3 identifies the potential economic impact to the community. When considered in context of the overall economic sustainability of Moab, the economic impacts would likely be minimal.
#6	I have recently learned of the UDOT road widening project in Moab. I have lived in Moab for ten years, and have watched the community grow and expand. Moab depends on its small business owners, particularly the young, motivated people who work hard to earn their future here. I am writing for several reasons. First, I would like to express support for your decision to leave 415 North Main intact, but to suggest that it is very difficult for its owners to move forward with their business planning without a written guarantee of the verbal promise. [The property owners] are highly respected and well-known members of this community. It would be unfortunate to hinder them in their efforts to move forward with plans to further a business which is extremely beneficial to Moab's economy and tourism. The purchase of a building on Main Street is a big move for small business owners, and each day that they are halted in their planning represents a loss of money and progress which can hurt a small business in its growing phase. Second, I want to strongly advocate the No Build alternative, as I understand it. I feel that it would be terrible to destroy any buildings which are being run as small businesses in Moab, as this would be very damaging to the individuals who have worked so hard to build them. The Adventure Inn, in particular, is owned by a young couple who have devoted everything they have to their business. To me, it would be unthinkable to strip them of their years of work. I am less familiar with the personal situation of the owners of 550 N Main, but I assume that they too would be highly aggrieved to lose their property and their business investments. I strongly urge you to support the No Build alternative. The road lines could be made slightly narrower, and the bike path could be started north of [the] rock shop, to save space in the road widening. The bike path that snakes around the center of Moab, circuitously and not beside the road, is much more pleasant and safe than it would be if it were next to a 4-lane highway. If the No Build Alternative proves impossible, I urge you to remove only parts of the buildings, and take the	See response to Comment #5.

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	responsibility to rebuild the removed portions on the backs of the buildings. Not only would this be the most fair approach, but it would be the best for Moab's economy as well, as it would leave well-established small businesses intact. Above all, as a compassionate community member, as well as a fair-minded business person, I urge you to make a reasonable decision as soon as possible, so these people can go on with their lives and their business plans. This type of unforeseen situation can be an irreparable blow to a small business owner, or it can be an opportunity for the State of Utah to demonstrate fairness and responsibility to its taxpayers.	
#7	I am writing regarding my friends' business space, which may be in jeopardy, because of this "highway enlargement" plan proposed, or rather implemented. I am also writing because of my concern of the Moab community & its' future. This is a letter from the heart, so if your looking for statistics or anger, you will have to look at others'. I have been a resident of Moab, off & on for over 10 years. Inherently, from Chicago, & then to Durango, & Telluride. So, I have seen population impact...& am fully conscious of environmental impacts. (I once was going to major in Environmental Biology...but traded it ten years later for Environmental/Architectural Design & Building.) Moab....such an amazing place! The heart of the best "Parks" in the US. No wonder, it's compared to Rome & Paris! What better place for a walmart & a huge 4-lane highway! Does the community "need" it or does "Walmart" want it? I know there are many of us that are very tired of that trip to GJ. Especially the older we get & more children we have to make the necessity more convenient. Which, I totally can relate to w/my (2) year old! Am I willing to risk losing any character & class the community can w/hold from closing out a Walmart & more traffic...No! Just to get this straight...you are not widening the highway for the intense traffic that may occur here a few weeks a season..you have your own incentive reasons' I'm sure. Okay, I know this is not about Walmart...but I am certain that a road widening project is not for the "Moab Community." It is for those that will either profit from it. More than likely, it has nothing more to do w/Moab, other than those revenue dollars that pass through here every year. If you proceed as you are...you will ruin what Moab has to offer. My letter is to convince you to change w/etiquette. Maintain the home & businesses, as they are.. All over the country towns are developed relentlessly, fast & efficient...they are disappeared as towns we once knew. As the highway will prevail in its' planned arrangement..pay some respect to the community in which you are interrupting. We are here, & here's my voice. You build a bigger highway & people/traffic will come...inevitably. Just do it with class. Which Moab does not exactly have a reputation for...maybe we can change that, too! We have the opportunity to do this change w/class for the people who have lived here forever & for the people who lay down there souls to protect it...because they lived elsewhere & saw what happened. Please give these business owners a right to Moab. They were not planning on "your" plan. Their lives & your dignity depends on it now. I adhere to the prospects of Moab. I would love to have more businesses here offering more easily available goods. I would just rather see Moab benefit from this. I think your bike path is a great hit. but, I know the traffic that will follow your lead. So, Do Not ever say your doing it	UDOT is working with community leaders to develop a project that serves the travelers along US-191 and also benefits Moab. The purpose of and need for improvements to the Colorado River Bridge and US-191 are presented in Chapter 1 of the EA. Comment #5 responds to the remaining comments.

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	for the community. Take your traffic through Moab...just leave us alone as much as possible! I'm not sure what else I can say here to help you to consider taking responsive action to the communities addresses. I know I do not speak for the entire community, though I hope I can merely guide you w/a conscious concern. I hope there can come a balance that adheres to the proceeding development w/dignity & integrity for Moab & all of us who live here. That's all...proceed as you will. I'm not specific here because you know what you need to do..to pay the business owners' respect...just do it.	
#8	I wish to submit my comments on the proposed lane expansion at the north end of the main street of Moab Utah as a part of the Colorado River Bridge project. I have lived in Moab for over ten years, owned businesses, worked in both the tourist service, and the construction industries in and around Moab, and I am concerned about the impact which may occur to local businesses due to the proposed "build alternative" in the Colorado River Bridge project. I appreciate the need to accommodate the volume of traffic which is passing through Moab in ever increasing numbers. I am certain however, that this traffic can be accommodated with minimal expansion of the north end road width, and consequently a minimal impact on the hard working and vital businesses at that end of town. I am sure that the project can be achieved in such a way that the businesses impacted by the expansion can be left substantially intact in both property and frontage appeal. I would like to urge those who will consider the planning and execution of this plan to make every possible allowance for the needs of the businesses in the impact zone. If buildings are to be selected for removal, then it seems imperative that the owners should be paid FAIR market value in a timely manner and should not be left on the line waiting for the final plan approval to receive compensation. Those buildings which may be slightly encroaching on the proposed expansion, but whose total removal is not essential to the process should be given the opportunity to be amended not demolished. Progress for the town of Moab, its industry, aesthetics and efficiency should not come at the cost of the lively hoods of those who have strived hard to help build it in the first place. Thank you for considering my suggestions.	See response to Comment #5.
#9	1) It is a mystery to me why bicycles and pedestrians require a separate bridge to cross the Colorado River. For the cost, it would seem that adding pedestrian and bicycle lanes to the highway bridge would cost significantly less than constructing two separate bridges. I have heard that the revenue streams are separate for these projects, but WHAT A WASTE of taxpayer money, time, effort, and materials to construct two separate spans for one simple purpose. My suggestion is to revisit this "forgone conclusion" and consider combining these two projects into one shared span. 2) The typical roadway from 400 N to approximately 600 N is extremely wide given the fact that this proposal will decimate some businesses and the buildings they are housed in. If the proposed demolition properties were part of some national chain I might feel differently, but it is extremely hard to bear that this proposal will destroy livelihoods and lifeworks. My suggestion is to revisit this proposal to design a roadway that is as narrow as allowable to protect	1) Separating the bicycle and pedestrian facility from roadway traffic will benefit the trail system. The costs have been considered as part of each project. 2 & 3) See response to Comment #5.

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	business properties from being ruined. 3) If it does appear inevitable that some businesses on the east side of Main Street require removal, pay a FAIR PRICE--not just for bricks and mortar but for destroying the livelihood of the business owners. Do it swiftly and do it right...no bloodbath for these fine citizens. Thank you for your consideration of these suggestions.	
#10	I understand the need for the project and that there are times during such projects when a few property owners might have to make some sacrifices for the good of the whole community. I am aware of the potential conflict with [the] building [on the west side of US-191] and the Adventure Inn. As for [the building on the west side], as I understand it, the actual building could remain as is with the awning being the only part being in conflict with the highway expansion. If the decision is to go ahead with your project then I would hope that this in fact would be the case with [this] building and that only the awning would have to be removed. As for the Adventure Inn I have been told that they would lose part of their building. I hope that during the subsequent planning processes that all options are explored in regards to this situation so as to either avoid this altogether or to properly compensate [the owners of the Adventure Inn] in a timely manner. I am not to familiar with the rest of the project but would also hope that there are plans to include bike trails. Thanks for your time.	See responses to Comments #3, 4, and 5.
#11	Thank you for taking time to consider concerns voiced by Moab business owners who may be affected by proposals associated with the US-191 Colorado River Bridge Project. According to the Draft Environmental Assessment, the Build Alternative anticipates widening portions of the Highway 191 within Moab City limits, and mentions the displacement of several businesses. The City understands that design and engineering standards sometimes necessitate making decisions that have repercussions on landowners. That said, the City would like to strongly encourage UDOT to look at options that will allow the project to proceed while preserving access and use by these property owners. We also ask that every effort be made to communicate clearly with the affected property owners so that they may assist in developing fair, equitable and workable solutions to the design and location challenges of this project. Thank you again for your consideration.	See responses to Comments #5 and 7.
#12	On or around the 6th of December 2006, it came to my attention as I was readying for a two week holiday departing Monday the 11th of December, and it happened just as I am describing, that the Colorado River Bridge Project in Moab Utah directly involved my husband and myself. Our commercial building @ 550 N. Main Moab (described as the Moab Realty building) was slated for removal in the later phase of the project for which currently there was no funding. Since it is obvious that this is neither the right time or the right forum for the type of comments that need to be made concerning my property as well as my neighbors property, the adjoining property to the south known as The Adventure Inn, who's home, business and future have been anonymously slated for removal or disfigurement as the Engineers	Most of these concerns are addressed in the responses to Comments #4 and 5. In regards to the properties located on the west side of US-191, each business along US-191 is important to the community. As such, the alternative development process focused on reducing the number of business buildings potentially taken, regardless of their location in relation to the right of way. As stated in the response to Comment #5, UDOT will

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	pencils lightly danced over the pages of drawings reconfiguring the landscape to include all their desires without a consideration of the real human cost or the logistics of such designs, I will confine my comments to that which should be submitted to this site at this date although I have been erroneously directed to voice my concerns here by both Lorraine Richards and Karen Stein. I have no real concerns about the project of the Colorado River Bridge widening and rebuild, it is antiquated and needs to be repaired. Marrying the four lanes from the bridge through town again seems to be a viable consideration. Someone has suggested a light be placed at the 400 intersection to slow traffic before it continues its journey through the heart of town, while not necessary, and not offensive, it should be considered that such a stop would create greater pollution considerations for that intersection. Quite an extensive study has been made over the last couple years, several hundred pages of economic and environmental studies to be more specific. It interests me to note a few things at this point: with the 2 properties previously described so integral an aspect in the completion of the project and with the Public Forum that took place on Dec. 12th wherein there were full color blown up posters of the properties, how is it that the owners of these properties were never given a name or a face and more specifically never alerted to the inclusion of their properties as the cost of this project. The City was urged to consider the financial impact of their revenues when considering the demise of these to properties wherein it was described that in the case of the 550 building they would only lose the revenues of property taxes and in the case of The Adventure Inn, the 12.25% tax collected on the rent of each room of their 30 room establishment would quickly be replaced by another hotel to be built in the future and that the owners could simply relocate to Green River and replace their motel. It was further described that after the "TAKINGS", and after the project was complete, the remaining "Prime Real-estate" (which there would be plenty) would be sold by UDOT for commercial use and it follows that the City would then reclaim its tax revenues as well as the "Project" getting a little help offsetting the construction costs. This really concerns me, since when did UDOT get out of the road building business and into buying or should I say "TAKING" real-estate and reselling it? My biggest concern is the basic nuts and bolts of this project and it's considerations or lack there of. Simply speaking, there is a deficit of land required to achieve the continuum of four lane from the bridge through town. Of course there is the road-right-of-way already established that provides the necessary land to achieve this goal. However, it seems that the west side of main across from the aforementioned properties where the Century 21 building, the Poison Spider building and the Maverick Station are situated are all encroaching on that Right-of-Way. These sites are clearly in violation and encroaching as well as the little triangular building further south. I was told a decision was made to take the deficit from the east side of the road where larger parcels of land could be taken and condemned and later resold instead of from the encroaching, violating side of the road where the parcels are so small that they would be used entirely with nothing left to resell and offset the cost of the project. I am not going to debate the merits of the decision to displace the east side of the road nor what you can or cannot do as far as "Taking" for the "greater good", but speaking from the point of view of someone who has already had to sacrifice my land,hopes and dreams for the "greater good" in a previous taking here in Moab, I can safely say this wreaks of impropriety and unfairness. To take from the side that is not encroaching and allow the violators who knowingly built and encroached within the last 12 years,to not be held accountable, is not fair. Also, to attempt to slate our properties for removal without even bothering to notify us in any way in a timely fashion is shameful. As previously mentioned, this is not the time or forum for further comment but I urge you to consider what I have set forth and amend your design requirements for the completion of the property accordingly. Thank You For Your Consideration,	communicate clearly with this property owner so that they may assist in developing fair, equitable, and workable solutions to the remaining design and location challenges of this project. UDOT and the property owner will work together to consider whether the use of design features, variations of the typical section width, and/or reconfiguration of the business structure can be used to avoid displacement of this business building and how best to minimize impacts to this property.

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#13	I wish to comment briefly on just one aspect of this project. I have not had the chance to review the EA ad as I am traveling, will not have the opportunity before the comment period ends. I am a resident of Moab. I do not feel that any phase of bridge-widening or road-widening should be commenced unless funds and plans for restoration of disturbed roadsides are firmly in place. I also strongly believe that only plants native to the particular area impacted should be used in revegetation efforts. The highway 191 widening completed north of Moab a couple years ago created an ongoing nightmare of weed infestation of the disturbed roadsides. The weeds are spreading onto adjacent National Park Service and BLM lands. If the same restoration practices (or lack thereof) are implemented with Phase 1 of this project, weeds generated will also spread to private lands, the county's Lion's Park, and down the Colorado River. If there is not enough money to include native plant restoration in this project, I think there's just not enough money for the project – perhaps the money should be spent instead on cleaning up the weed problem from the last UDOT project. In the last six months the U.S. DOE has disturbed a substantial roadside area of US 191, near the proposed project area, in order to remove a top layer of contaminated soil. They replaced the removed soil with weed-free reject sand and generated a good list of native plants – to be re-seeded in the disturbed area. (I do not know if they have seeded the area yet.) I suggest their list as a good one for this immediate area. Whichever species list UDOT chooses, I suggest that they have a Moab-area botanist (not a plant grower or nursery) review the list before it is finalized. Botanists with the National Park Service or Bureau of Land Management could be utilized. Thank you for your consideration,	Plants native to the area will be incorporated into the design. Section 3.15.3 specifies mixes will be free of noxious weeds and other invasive plant species. The NPS and BLM will have the opportunity to review the re-vegetation plan during the design process.
#14	The Resource Development Coordinating Committee (RDCC) has reviewed this proposal. The Division of Air Quality comments: Based on the information provided, the proposed bridge and roadway construction project on US-191 from 400 North in Moab City to SR-279 in Grand County, will not require a permit. However, if any "non-permitted" rock crushing plants, asphalt plants, or concrete batch plants are located at the site, an Approval Order from the Executive Secretary of the Air Quality Board will be required for operation of the equipment, including all equipment not permitted in Utah. A permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 North, 1950 West, Salt Lake City, Utah, 84116 for review according to Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing and NOI are available on-line at: http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf In addition, the project is subject to R307-205-5, Fugitive Dust, since the project could have a short-term impact on air quality due to the fugitive dust that could be generated during the excavation and construction phases of the project. An Approval Order is not required solely for the control of fugitive dust, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at: www.rules.utah.gov/publicat/code/r307/r307.htm The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this correspondence to the Resource Development Coordinating Committee, Public Lands Section, at the	Section 3.6.3 has been changed to reflect the correct rule (R307-205-5). R307-309-4 does not apply to this area. If an asphalt or concrete batch plant is required, an Approval Order will be obtained from the Executive Secretary at the Division of Air Quality.

Table E-1 - Detailed Responses to Comments Received on the Draft EA

No.	Comment	Response
	above address or call the Director, Jonathan G. Jemming, at (801) 537-9023 or Carolyn Wright at (801) 537-9230.	
#15	I don't think you should remove 612 N. Main (Adventure Inn) buildings. They have been working hard to make their business successful in hope of retiring. UDOT could not reimburse them for their 5 years of hard work by compensating them for street value. Because you will be affecting this family's livelihood, I say – find another option. Put in a light at 400 North for traffic congestions. It is terrible there anyway. How can you write an EIS for such a large project and not notify the people, especially directly affected, of such a large scale project? How would you like it if someone did this to you? In your neighborhood? I think the 3 businesses directly affected are crucial to our community in Moab and I think you'll be "displacing" them elsewhere if you proceed in the same vein. What went well? You had good pictures – GIS maps that were informative of our intentions. How can we improve? I received a "Nov 2006 US-191, Colorado River Public Hearing" handout in the mail at work. After glancing over it, my eye caught "vacant commercial building…to be removed." I thought this would be a DISGRACEFUL way to find out that I'd be losing my business. Come to find out, it's one of my best friends (their business). No one NOTIFIED her! This flyer was the only way to find out the intention of UDOT.	See responses to Comments #5 and 7. In response to the need for a light at 400 North, major intersections will be evaluated further during design based on UDOT signal warrant criteria.
#16	[Verbal Comment] The property that I have is at 497 North Main Street. It's Poison Spider Bicycles. It's my understanding that the existing curb and gutter will be left in place and the construction will be toward the -- I believe what would be the west side of the road. If that is the case and it's not going to impact physical dimensions of our property, of our lot, what I would like to make sure is that the storm drainage from that area is dealt with in a more -- in a better manner because currently, there is absolutely no storm drainage there. In fact, most all the drainage from the road and from our, you know, roof on our building, but also from the hill side, it runs down into our lot. We only have a French drain in our parking area. So we are trying to deal with not only the water collection that we should be responsible for, but also the water collection coming off of the roadway. And occasionally -- I don't know the name of the canyon. It's the water that comes down and floods the Hacienda Restaurant. Occasionally, water from that hill side will come all the way into our property at 497. So I think the city has been quite remiss in providing storm drainage. And with this project, you know, this sounds like it's going to be a 30 or 40-year project. I think the storm drainage for that side of the road should be dealt with. That's pretty much our major concern from the property at 497 North Main. Thank you…. We are in a unique place on the road because it climbs to our property and then it lays dead flat right there. So you know, what they have all thought is whatever curb and gutter is going to be there is just deal with it. All it does is pools it like a lake. Anything coming down pushes that lake right up into our property…. We were hoping that was going to happen with the current or most recent road construction. And you know, the city engineer said, Well, we'll see what we are going to do. I had no idea it was going to be a temporary reconstruction. Really, what we are talking about here today is more of the permanent fix for that road. So I could see where at that	The existing curb and gutter would likely be replaced; however, no additional right of way is required from this property. A temporary construction easement would be necessary to restore the driveway access to this property. As recognized in the Draft EA, Moab, Grand County, and UDOT are working jointly to address existing drainage problems and flooding concerns independent of this project. The conceptual layout of the Preferred Alternative has identified potential detention basins and roadside ditches to handle the increased runoff associated with proposed improvements.

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	time it kind of was a little evasive….	
#17	[Verbal Comment] I have a concern on one of the displays. The 400 North to 600 North existing diagram is wrong. It's incorrect. It doesn't show the number of lanes that are there right now. It only shows two lanes. There are really two parking lanes, three driving lanes and a center turn lane existing right now in that area. It only shows two driving lanes and not much else. So I'd like to have that corrected. It makes it look really bad now. It's not that bad now. The other thing I want to comment on is I'm hoping that the parking in the 400 North to 600 North area doesn't disappear all together, the on-street parking. That is a pretty important parking area for the businesses that are there. And some of those businesses get pretty busy. They have some off-street parking, but not enough for the business they have at the Poison Spider bike shop. They need some Main Street parking. I hope it still is there. It looks like it probably is as part of the shoulder on the diagram along with a bike lane, which could be helpful as well. I'm hoping that is taken into consideration. The third thing is I hope that there is consideration being given to stop lights perhaps as far out as where Denny's is on the way into town. That would be a good place to slow traffic town with a stop light to begin with and to kind of delineate the edge of town. Then a traffic light at 400 North would definitely be another consideration to once again slow those trucks down as they are coming into town and slow them down even before as they know that the stop light is coming up. I don't know if there's a possibility of putting a stop light at the bridge itself where Highway 128 comes out. That's the river road. The river road is quite a busy road in the summer and lots of commercial river trip traffic, as well as just people sightseeing. On busy times, it's really hard to turn left from the river road coming into Moab. I don't know if we can put a stop light on a bridge where cars would be stopped on a bridge, but just one other thing in the comments. One more thing is I think the stop lights would also help slow down the truck -- the traffic going out of town from the last stop light, which is at the Poplar Place at 1st North. If there were another one or two stop lights, it would still feel like you are in town as you are driving north. A lot of people, trucks and cars, we are out of here. I think that's another real good reason to put -- considering putting stop lights in.	The diagram does not accurately reflect this section between 400 North and 600 North because it serves as a taper from the four-lane section in Moab, and the two-lane section to the north. The two southbound lanes start in this section, and the two northbound lanes coming out of town taper to one lane along the curved section. A note has been added to the Figure stating that it does not accurately reflect conditions through this taper section. The shoulders, lanes, median, and sidewalk are typically narrower than the proposed widths. On-street parking within the shoulder area will be reviewed as part of the design process, in coordination with property owners and tenants. Traffic-related comments are addressed in the response to Comment #4.
#18	[Verbal Comment] I think this procedure is very, very good. The procedure is good…. I really appreciate this opportunity to express and to give my input. I have lived in Moab almost 30 years now. In 1977 I moved to Moab, so I know Moab. From my view about this north corridor, in 2004 I wrote a letter to the mayor and Moab city manager. At that time, there was a north corridor transportation hearing. I wrote a detailed letter about the north corridor. Basically, after I read this, this project background, most of my ideas are already in here. I'm very happy…. Like I don't have to say it. It's already here. Basically, the four-way traffic with middle lane, the safe turn, all those	See response to Comment #16.

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	points, bicycle trail, all those ideas are already in here. One thing I think is missing compared with my recommendation and this project plan is the flood water, taking care of the flood water because without taking care of the flood water, the highway really is not done, not complete. In 2001, there's a big mud slide and a flood. It covered the highway. The city and the county worked very diligently for quite a few days to clean it up. Really, on the north -- on that side, on this north corridor, if you get a storm come down, the water really comes down quickly. This highway right now, the saturation is -- didn't take care of any problem. So this letter I wrote to the city at that time, I hope the city address to the UDOT that they need to take care of this in the future. So my recommendation is the most natural and economic way is build -- construct a very scientific lane and well-built drainage, the water, all the way going to the Colorado River on the hill side, which is the east side. Even more important design now even before the bridge and before that because at least with design because people are talking about it. As a matter of fact, already with this bicycle trail, if one day the bicycle trail done, then we need to dig big trenches. You know, we ruin the bicycle trail. I know somebody said -- we would like some holes under the highway drain to the other side. Okay, well, that's already happened in some place, but that created trouble because we look at the big picture. We take care of the water all the way to the Colorado River. We do not flood the neighboring business. That's better. One day you took the holes and drain the water into the other side and the flood -- the water need to be taken care of anyway. It's public money. We are in the design stage. We have the opportunity while we do not design now. For some reason, I think this project didn't even mention the flood and drain. So that's why I come here to give my input. In the future, I would like -- if I have a chance, I would work for the city and county and the DOT to continue to give my two cents, my little efforts. That's fine….	
#19	[Verbal Comment] I work for the City of Moab and we have been working with UDOT and Michael Baker since the beginning of this. I think the process has been fair and they have taken our input and made adjustments when we have asked them to. I feel it's a good project.	The City's involvement and input throughout the process is greatly appreciated.