

**TIGER BY THE TAIL:  
THE INTERSTATE-15 BRIDGE NO. 6 ENVIRONMENTAL ASSESSMENT**

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## ABSTRACT

This paper presents a case study in streamlining the National Environmental Policy Act (NEPA) process for a project with multiple environmental resource issues and four primary agency partners. By exploring a complex infrastructure project committed to an extremely compressed schedule, this paper illustrates a project in the general topic area of Regulatory Coordination and Compliance that embodies the special interest topic of Shifting to High Gear. Through streamlined coordination and delivery processes, the four agencies executed an Environmental Assessment (EA) for a complex project in less than 8 months (typical timeframe 18 months to 2 years).

In June 2012, the Arizona Department of Transportation (ADOT) received a federal Transportation Investment Generating Economic Recovery (TIGER) IV grant award to rehabilitate Virgin River Bridge No. 6 (Bridge No. 6) on Interstate 15 (I-15) in a remote corner of northwest Arizona. Bridge No. 6 is located in the Virgin River Gorge, a scenic wonder designated as a “Nationally and Exceptionally Significant Feature of the Federal Interstate Highway System”. The bridge is also located within an easement from the Bureau of Land Management (BLM), flanked by congressionally designated wilderness, surrounded by designated critical habitat for three federally protected species, and crosses the Virgin River-listed on the Nationwide Rivers Inventory and one of the few perennial rivers in Arizona.

As part of the requirements to obtain the TIGER funding, ADOT must complete the environmental document by May 31, 2013. The project, as was originally conceived, was anticipated to have minimal impacts in the Virgin River and its associated floodplain, and a Categorical Exclusion was suggested as the appropriate level of environmental documentation. However, additional evaluation of the structural condition of the bridge revealed the need to widen and strengthen the pier foundations. During early coordination with U.S. Fish and Wildlife Service (USFWS), BLM, and National Park Service (NPS) in summer 2012, it was determined that potential impacts to biological resources and the Virgin River would be considered adverse, even with appropriate mitigation measures. Therefore, in October 2012, the Federal Highway Administration and ADOT decided to move forward with an EA for this project, triggering the need for an extremely compressed schedule to determine by May 31, 2013 if a Finding of No Significant Impact is warranted for this project.

## REGIONAL IMPORTANCE AND GEOGRAPHIC ISOLATION

Interstate 15 (I-15) spans nearly 1,500 miles (2,414 kilometers [km]) between San Diego, California, and the United States (U.S.)/Canadian border (Figure 1). Across these miles, I-15 provides substantial benefits as a vital trade corridor, a North American Free Trade Agreement (NAFTA) and CANAMEX corridor, and a crucial link between the Port of Long Beach, California, with the western states and Canada. Ensuring that this route is maintained and in a state of good repair for all traffic is critical to the nation's economic competitiveness and the movement of people, goods, and services through the region.

However, only 29.4 miles (47.3 km) of I-15—2 percent—is located within Arizona; this segment traverses the northwest corner of the state between Nevada and Utah. This part of the state—known as the Arizona Strip—is separated from the rest of Arizona by the Grand Canyon and several mountain chains devoid of paved roads. Within Arizona, approximately 9 miles (14 km) of I-15 passes between the walls of the Virgin River Gorge, a rugged and spectacular landscape nearly 500 million years old and carved by the Virgin River and other erosional forces. The highway crosses over the Virgin River via eight bridges at seven locations that were built between 1964 and 1973. All of the bridges are nearing the end of their 50-year design life and the Arizona Department of Transportation (ADOT) regularly inspects and maintains the Virgin River bridges to keep this crucial segment of interstate open to all vehicles, especially trucks.

In May 2011, ADOT requested that the Federal Highway Administration (FHWA) perform an independent review of the existing inspection reports for the eight I-15 structures located in the Virgin River Gorge. FHWA documented their findings in *Arizona Bridge Inspection Review, Interstate 15 Virgin River Bridges* and classified several bridges as structurally deficient according to the National Bridge Inspection Standards (FHWA 2011). At issue with the condition of the bridges is the ability for truck traffic to continue to use I-15; approximately 23 percent of vehicles on I-15 are trucks (ADOT 2012), a relatively high percentage (>20 percent). Weight restrictions could be placed on the bridges as they age and deteriorate, limiting access to heavier truck traffic and adversely affecting trade along the corridor. Indeed, Virgin River Bridge No. 6 (Bridge No. 6) at milepost (MP) 15.58 could see weight restrictions as soon as 2016, resulting in the diversion of up to 20 percent of truck traffic to other routes.

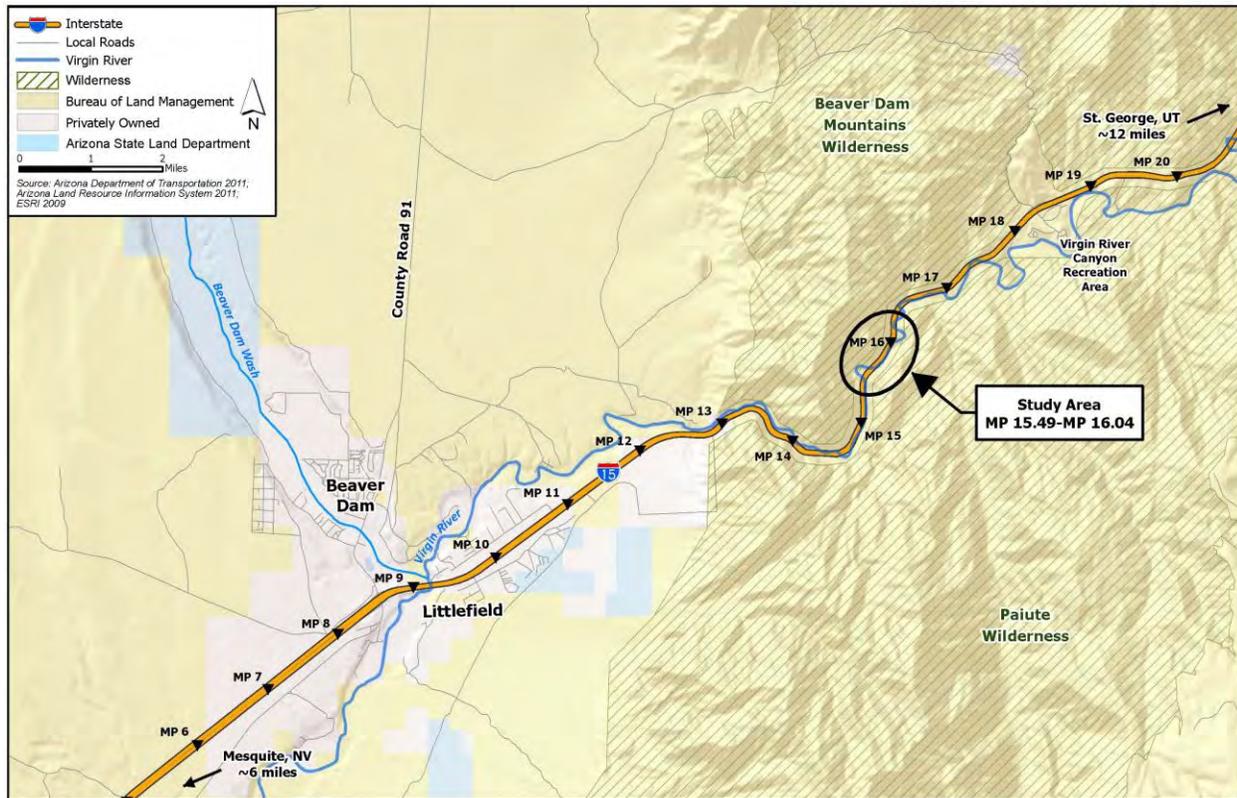
## FEDERAL AID MEANS FEDERAL SCHEDULES

The U.S. Congress began authorizing Transportation Investment Generating Economic Recovery (TIGER) funds in 2009 to help the U.S. Department of Transportation (USDOT) invest in “high-impact” projects that could, among other criteria, enhance economic competitiveness and repair the nation's infrastructure (FHWA 2013). In June 2012, ADOT was awarded a \$21.6 million TIGER grant to reconstruct Bridge No. 6 based on the regional economic importance of I-15, as well as the local importance to the residents of Mesquite, Nevada; Scenic, Beaver Dam, and Littlefield, Arizona; and St. George, Utah. TIGER grants come with a strict timeline: to officially obligate the funds, USDOT must see evidence that each grant recipient progresses in a timely manner and is committed to expedited delivery of the project.



FIGURE 1 Regional and international importance of Interstate 15.

ADOT kicked off the Bridge No. 6 rehabilitation project in July 2012. For completion of the National Environmental Policy Act (NEPA) process, one of the funding pre-requisites, ADOT chose May 31, 2013 as the deadline. When ADOT prepared the TIGER grant application, it was assumed that the bridge rehabilitation could be accomplished inside a small footprint, would result in minimal environmental impacts, and could proceed under a Categorical Exclusion. Ten months is typically sufficient for a Categorical Exclusion and once the study area was established (Figure 2) the project team started the NEPA process by beginning to identify environmental resources and scoping potentially affected agencies in August and September 2012.



**FIGURE 2 Bridge No. 6 study area and vicinity.**

One of the primary agency stakeholders was the Bureau of Land Management (BLM) Arizona Strip Field Office because BLM is the underlying land-managing agency in the study area: ADOT holds an easement along I-15 to maintain and operate the interstate, but does not own the right-of-way. This ownership structure gives BLM additional control over activities within the easement. BLM responded to the scoping letter with a list of management decisions from their recent resource management plan (RMP) that would apply to the project (BLM 2008). These management decisions ranged from management and mitigation of invasive species to the use of a specific visual analysis tool for projects in visually sensitive areas.

During the environmental scoping process, preliminary design of the bridge rehabilitation was evolving in response to a second bridge assessment that was completed in October 2011 and more recent reports of erosion around the base of the piers. The design had changed from a small footprint that stayed out of the Virgin River to a project requiring construction within

environmentally sensitive areas, within the Virgin River, and with the potential for adverse impacts to species and habitat protected under the Endangered Species Act. The study area is home to three threatened and endangered species and designated critical habitat for those species: the Virgin River chub (*Gila seminuda*), the woundfin (*Plagopterus argentissimus*), and the Southwestern willow flycatcher (*Empidonax traillii extimus*). Extensive coordination with the U.S. Fish & Wildlife Service (USFWS) and BLM regarding potential impacts to listed species resulted in the determination of “may affect, likely to adversely affect” the Virgin River chub and woundfin, as well as impacts to designated critical habitat. ADOT developed a comprehensive mitigation plan to minimize impacts to the protected fish; however, direct impacts to protected fish and critical habitat guaranteed the “may affect, likely to adversely affect” determination.

Thus, the biological determination was contrary to BLM’s requirement that “adverse impacts to wildlife and wildlife resources will be avoided or mitigated” (BLM 2008) because all the adverse impacts could not be avoided or completely mitigated. ADOT met with FHWA and BLM on October 1, 2012 to present the environmental findings to date. FHWA decided to escalate the project to an Environmental Assessment (EA) and became the lead agency for the study. An EA can typically take 18 months to 2 years; as of October 1, 2012, ADOT and FHWA had 8 months until the NEPA deadline of May 31, 2013.

## **SHIFTING INTO HIGH GEAR**

### **Agency Coordination**

As the federal land manager, BLM’s maintains an interest in the ADOT easement and seeks to preserve the long-term health and diversity of the land, as well as the natural, cultural, and historical values associated with the project area. An efficient transportation system is ADOT’s primary goal, along with FHWA’s intent of improving the quality of Arizona’s highway system in cooperation with their partners, without sacrificing natural and cultural values. Together the three entities seek to promote transportation efficiency and minimize impacts to the environment.

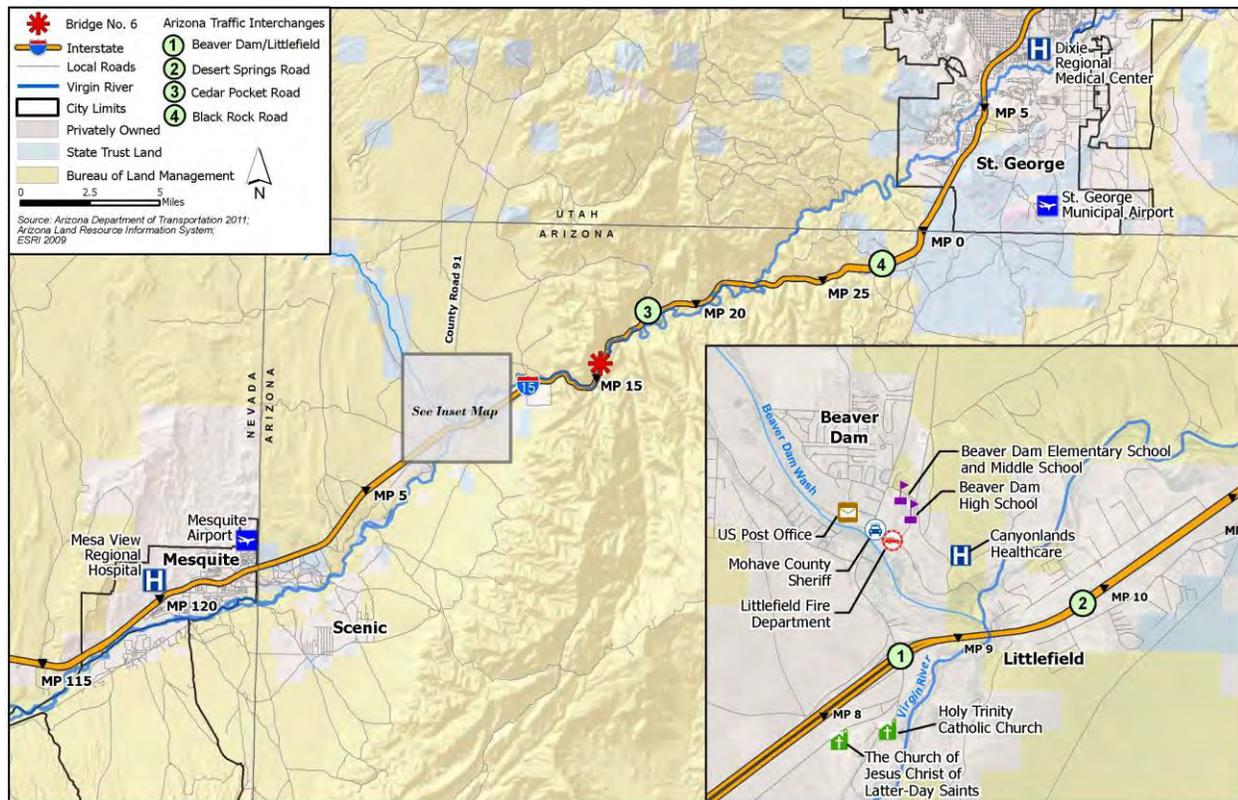
The crucial steps to meeting the May 2013 deadline were agency cooperation and minimizing agency review timeframes. Following the decision to proceed with an EA, cooperating agency letters were sent to BLM and National Park Service (NPS) on October 3 inviting them to become cooperating agencies for the EA. NPS was invited because the Virgin River is on the Nationwide Rivers Inventory (NRI) and consultation with NPS is required in the event of potentially adverse impacts to a river listed on the NRI. Both agencies accepted, and then ADOT and FHWA undertook two important tasks to lay the groundwork for transparency during the development of the EA document: (1) verifying the components and level of effort to be included in the EA and (2) developing a coordination plan. In mid-October, ADOT and FHWA provided BLM with chart comparing elements from typical BLM and FHWA EAs and proposing solutions or compromises where needed to ensure that the EA format would satisfy both agencies.

Formal coordination plans are not typically required for EAs; however, the circumstances surrounding this study indicated that such a plan would assist in expediting the EA process as required. The coordination plan was distributed to BLM and NPS on November 6, 2012; both agencies concurred within one week. The coordination plan listed all pertinent agency contacts

and set out a schedule for each of the technical analyses: Biological Evaluation, cultural resources report, visual impact analysis, Section 4(f) evaluation, hazardous materials assessments, and Clean Water Act permitting materials. Also included were technical memoranda that BLM would review and approve prior to development of the EA document; these technical memoranda addressed all the remaining resources that did not require stand-alone reports (purpose and need, alternatives, issues eliminated from detailed study, land use, wilderness, socioeconomics, floodplains, wild and scenic rivers, air quality, noise, soils and geology, and materials sources/waste materials). Agency reviews were set at one week for all reports and memoranda, except for the visual impact analysis and the Draft EA which were allowed a three-week turnaround.

### Public Involvement

ADOT and FHWA conducted a tiered scoping process by conducting public scoping after agency scoping was complete. As discussed above, the Arizona Strip communities of Scenic, Beaver Dam, and Littlefield are isolated from the rest of the state. Residents of these communities use I-15 nearly daily to access shopping, doctors, work, and public and community services in Mesquite and St. George (Figure 3). Mesquite and St. George residents also make frequent local trips for the same reasons, especially shopping, medical appointments, and work.



**FIGURE 3 Community and public services near the Arizona Strip.**

Because of how integral I-15 is to local transportation and access to goods and services, ADOT and FHWA rolled out a multimedia public scoping campaign in November 2012 that included mailers with self-addressed, stamped comment forms to approximately 44,000 Nevada, Arizona, and Utah residents and businesses; press releases to agency partners that reached another 16,000 to 20,000 recipients through e-mail and social media (Facebook and Twitter); and a project website with an on-line form.

Comments were accepted through December 28, 2012. ADOT received 495 comment letters, e-mails, and faxes, the vast majority of which were handwritten and mailed back via U.S. mail. Because almost all of the comments addressed more than one issue, approximately 1,075 issues were raised. Many issues were similar in nature and were combined into common topics and concerns. Purpose and need was the most frequent topic with 281 responses received, with “condition of the roadway/bridges” (172) the most frequent sub-topic, followed by “I-15 is a vital transportation/commercial corridor” (78). The most frequent environmental topic was the “impact of delays on frequent, local trips” (140), followed by “visual quality” (34). “Traffic control and minimizing delays” (108) was the most frequent construction sub-topic, followed by “schedule concerns” (17). These 6 sub-topics account for 50 percent of the total issues raised. ADOT and FHWA addressed these scoping comments in the EA as appropriate and responded to the comments via a public scoping report that was posted on the project website and included as an appendix to the EA.

### **Technical Analyses and the Draft EA**

Between November 2012 and early February 2013, ADOT and FHWA submitted 7 stand-alone reports and 12 technical memoranda to BLM, and NPS as appropriate, for review and comment. Frequent coordination and follow-up ensured adherence to schedule and previously agreed-upon review deadlines. Primary environmental resource issues focused on protected species and habitat, water quality and the free-flowing character of the Virgin River, floodplains, visual and scenic resources, historic resources, socioeconomics, and recreation.

By the time the preliminary Draft EA was submitted to ADOT, FHWA, BLM, and NPS for concurrent agency review on February 14, 2013, ADOT, FHWA, and BLM had previously reviewed and approved over 90 percent of the document. Over 340 comments were received by March 7, 2013; many comments were duplicates between and within agencies. Within less than two weeks, all comments were addressed and resolved in a comment resolution matrix, with a second round of comment review by BLM. The Draft EA was signed by FHWA on March 20, 2013 and distributed for public review and comment on March 26, 2013.

The public hearing for the Draft EA was held on April 10, 2013 in Littlefield, Arizona. The formal comment period began March 26, 2013, and ran through April 26, 2013. Newspaper advertisements were published in the March 25, 2013 Mesquite and St. George newspapers. Prior to publication of the newspaper ads, an electronic copy of the Draft EA was uploaded to ADOT’s project website, and printed copies were delivered to three repositories in Mesquite, Beaver Dam, and St. George.

Agencies, stakeholders, and the potentially affected public were notified of the hearing and opportunities to comment via a multimedia communications campaign that mirrored ADOT and

FHWA's scoping efforts. In addition to the newspaper ads, over 44,000 mailers that contained hearing details; directions for commenting; and a postage-paid, self-addressed comment form were mailed to residents and businesses in Mesquite, Nevada; Scenic, Beaver Dam, and Littlefield, Arizona; and St. George, Santa Clara, and Hurricane, Utah. A press release was shared with the Utah Department of Transportation, the Nevada Department of Transportation, and local municipalities to e-mail to their distribution lists of interested parties, post on their Facebook pages, and tweet. Again, an estimated 16,000 to 20,000 additional parties were reached via the e-mail and social media campaigns. Posters with hearing details and instructions on how to comment were posted in the 14 locations.

ADOT and FHWA's diligence in addressing comments during scoping and on the preliminary Draft EA paid off. In comparison to the 495 comments received during scoping, only 5 questions were raised during the public hearing and 54 comments raising 89 issues were received from the public during the comment period. Comments from the public echoed concerns expressed during public scoping in fall 2012. The most frequent issues raised were: how to minimize travel delays (especially for residents who make frequent trips using I-15) and the condition of I-15 and the bridges that require maintenance and/or rehabilitation. None of the comments resulted in textual changes to the Draft EA.

### **What's Next?**

The preliminary Final EA was submitted to ADOT, FHWA, BLM, and NPS on May 8, 2013. Comments are due on May 15, 2013. Once the Final EA is revised and accepted, ADOT will ask FHWA to make a determination of a Finding of No Significant Impact (FONSI) so that the project may move forward toward construction in winter 2013.

### **BY THE NUMBERS**

Recapping this project can best be explained by the numbers.

- Value of TIGER grant for ADOT's bridge rehabilitation project: \$21.6 million.
- Time from EA decision to publication of Draft EA: six months.
- Time from EA decision to preliminary Final EA submittal: seven months and one week.
- Number of stand-alone reports and technical memoranda to verify analyses and conclusions prior to submitting the Draft EA: 19.
- Number of stakeholders reached to increase the defensibility of scoping and public hearing processes: over 60,000.
- Number of mitigation measures to minimize impacts and protect environmentally sensitive resources: 106.
- Number of agency staff involved with the EA: over 30.
- Number of consultant staff involved with the EA: approximately 25.

What brought the Bridge No. 6 EA this far is extremely hard work by the project team. The NEPA process was made more efficient by setting ground rules for the project team and limits on the scope of construction, by “early and often” coordination, and by asking for commitments from agency partners to review submittals quickly, to stay engaged, and to bring up issues early in the process. The prognosis is good to finish the Final EA and obtain a FONSI by May 31, 2013. Stay tuned on the project website (<http://www.azdot.gov/I15bridge6/>).

## **ACKNOWLEDGMENTS**

We would like to acknowledge the tireless participation of Laurie Ford, Lorraine Christian and all of the contributors at the Bureau of Land Management; Brian Wooldridge at the U.S. Fish & Wildlife Service; Gary Weiner at the National Park Service; the Arizona Department of Transportation, especially the Environmental Planning Group; and the Federal Highway Administration Arizona Division. Thank you for your dedication and good humor.

## **BIOGRAPHICAL SKETCHES**

### **Betsi Phoebus**

Ms. Phoebus has completed or contributed to over 100 National Environmental Policy Act (NEPA) evaluations of transportation projects, including highway, rail, and transit. Her specialties include agency coordination, Clean Water Act investigation and permitting, and Section 4(f) evaluations. Ms. Phoebus believes one of the most important – and challenging – aspects of NEPA is to substantively involve potentially affected stakeholders to identify, and then resolve, potential issues and concerns. Her goal for each project is to use the NEPA process to promote the disclosure of relevant information and as a tool for informed decision-making.

### **Rebecca Yedlin**

Ms. Yedlin manages and coordinates the evaluation of social, economic and environmental consequences of the design and construction of projects within the federal highway program for the Arizona Division of the Federal Highway Administration. She consults with and advises local, state and federal agencies, and field staff, on environmental matters to ensure maximum use of advanced and effective practices in solving environmental problems. Ms. Yedlin is responsible for consensus building, partnering and coordinating complex environmental program and project related issues. She has proven abilities in developing networks and building alliances, confidently engaging across boundaries and finding common ground with a wide range of stakeholders.

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