

4. Recommendation and Next Steps

A challenge for any planning study is to keep momentum going in order to carry the recommendations forward to implementation. While this study highlights the risks on SR-210 and provides numerous options, it will be up to the stakeholders to follow through with all the steps necessary for project implementation. Before the steps can be taken, there needs to be the desire to get projects done. One of the most important steps is to keep the key group of stakeholders together with the objective of implementing the recommendations. Members of the group already have the various strengths necessary, such as knowledge of the various funding opportunities and established relationships with other agencies. While SR-210 is an important state facility and this study has clearly demonstrated the risks associated with it, there are always competing projects statewide for increasingly rare infrastructure funding. This key group should continue to meet on a regular basis to ensure the momentum built by this study continues.

The issues the group should address will include the details of the short term recommendations such as the infrasound or traffic signals. This group should also strategize about the long term projects and decide on a course of action to get additional support for the larger possible projects.

In addition, it is important to keep support going for project implementation by offering field tours to any interested stakeholder. This has proven to be very successful during the course of this study. Seeing the issues and the possible solutions in person in the canyon is crucial to build support. Stakeholders and policymakers should be aware of the state-of-the-practice for risk reduction for similar high risk roads in North America. Field visits to these other areas should be considered. It is quite valuable to learn from those who have already gone through the process of building and maintaining risk reduction facilities.

The future of Little Cottonwood Canyon depends heavily on the snow safety personnel associated with canyon operations. Research and analysis as part of this study clearly indicates that the canyon's success is directly tied to the hard work, knowledge, and dedication of the UDOT Team and all of their partners. These attributes must be fostered and encouraged in the next generation of canyon managers, and the great institutional support provided by UDOT, other agencies, and the resorts should continue. A collaborative team effort makes the entire operation work, and new technologies and infrastructure while changing aspects of canyon operations, will never replace this crucial human element.

Related Projects around Little Cottonwood Canyon

Prior to this study, there were on-going efforts to provide improvements to the general area of Little Cottonwood Canyon.

Rural Intelligent Transportation Systems (ITS) Grant

In 2005, UDOT applied for and was granted funding for an ITS deployment program. The program is intended to improve communications in the canyon; a long-time problem hindering canyon communications involves “dead zones” which lack any communication signals. This affects both UDOT staff and regional safety and emergency staff. Connecting these zones to communication networks will allow emergency responders to have real-time information regarding incidents in the canyon, allowing for a more timely response. The ITS program is also intended to improve communication for travelers and transit providers who use the park and ride

lots. Transit information could be provided to travelers, and could facilitate an improved parking management system. In addition, signage posted at key locations can alert travelers to safety conditions and direct them to nearby transit facilities.

Scenic Byway Corridor Management Plan

In March 2006, the Federal Highway Administration approved \$240,000 in funding for the Cottonwood Canyons Corridor Management and Interpretive Plan. The funds came from the National Scenic Byways Program, which recognizes certain roads based on their natural and recreational qualities (among other attributes). The vision for Big and Little Cottonwood Canyons as outlined in the Cottonwood Canyons Corridor Management Plan and Interpretive Plan includes the following elements:

- Improved communication to visitors, such as a Scenic Byways website for the canyons, information kiosks at canyon entrances, appropriate signage and wayfinding for transit and trailheads, a radio station frequency with canyon information, and interpretive and educational programs
- More transportation alternatives, such as year-round bus service, bus stops at popular trailheads, sheltered transit centers, a designated bike lane, and designated trail access to climbing routes
- Minimize environmental impacts, by reducing avalanche hazards and enhancing erosion control measures

Several of the strategies discussed in this report may be funded or developed further through the Cottonwood Canyons Corridor Management Plan and Interpretive Plan.

Recommendations

Short Term:

One of the objectives of the study is to develop, analyze, and recommend some short term, relatively inexpensive, improvements that can be implemented by one or more of the stakeholders in the canyon. Table 4-1 below is a recommendation of projects that will help reduce the avalanche risk and/or help with the transportation issues.

Table 4-1: Recommended Projects

<i>Project</i>	<i>Approximate Cost</i>
New gun @ Tanner's Flat	\$50,000
Infrasound detectors	\$150k (\$50k to come from NSF)
Improve berms	\$500k to \$4.5k, depending on scope
Gaz-ex @ Hilton's	\$400k for initial install
Rural ITS Grant for Park and Ride management, and improvements to Canyon communications	\$1.2m, possible expansion with UTA & Alta
Explore driveway metering	Up to \$750,000 if deemed feasible

These projects generally will require minimal environmental clearance efforts and will not impact any land associated with the wilderness areas nor streambeds.

Long Term:

The long term options to reduce risk in Little Cottonwood Canyon can take many paths. The previous sections of this report have laid out many options. They all have tradeoffs in terms of cost, time, risk reduction, and level of effort for permits and clearances. In order to help make the best choices, a short background on environmental policy is in order.

As its most basic objective, the National Environmental Policy Act (NEPA) process is intended to provide sufficient information for the public to clearly understand a proposed action, the implications of that action and others that are reasonable, and mitigation of those actions. The process can be very short and simple or very long and complex.

The NEPA process must be followed whenever an organization (generally a Federal, State, or local government agency, but sometimes another public or private organization) proposes a project that will require a significant Federal action such as the utilization of Federal land, one or more Federal permits, or use of Federal funds. This would apply to many, if not most, projects in Little Cottonwood Canyon. The organization, known as the proponent, must demonstrate an appropriate purpose and need for the project or justification of its necessity.

The process involves varying levels of scoping, or gathering available information from the public and other sources, for the purpose of developing a range of possible alternative actions that will meet the purpose and need of the project. For the public, scoping focuses on various public meetings and other forms of outreach to attempt to understand general and special interest issues and concerns relative to the proposed action and its alternatives. This public involvement effort is also structured to provide information about the project back to the public throughout the process.

Additional steps include provision of an appropriate description of the human and natural environment associated with the project in order to facilitate public understanding, a complete disclosure of the effects or impacts of implementing the various actions, and a summary of how those impacts would be mitigated.

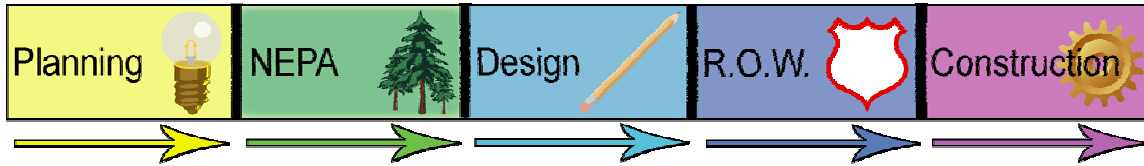
All this information is summarized in an Environmental Assessment or an Environmental Impact Statement, dependent upon the significance of the potential impacts and the level of public controversy, and made available for public review and comment. Comments provided are considered in conjunction with the technical information presented as the basis for project-related decisions by the appropriate agencies.

The first major step for the long term solution is to secure funding for and initiate a NEPA study. It would likely be an Environmental Impact Statement (EIS) due to the complexity and potential impacts of the alternatives. The EIS would take several years to complete and although that may seem like a long time, the process will provide decision-makers with a clear and formal understanding of the alternatives. Going through this process will also help “make the case” for possible funding. It is always easier to secure funding for improvements if environmental clearance is secured or at least significant steps taken to do so.

This planning study, while not nearly to the level of a full EIS, can provide much of the necessary background information, and will set the course for the purpose and need, alternatives development and analysis.

The project development process can be an arduous one. However, after so many years of implementing projects, UDOT has been able to make the process go as well as possible. The traveling public generally does not understand all the necessary steps needed in order for a project to go from an idea to something on the ground. Figure 4-1 below represents the steps necessary for a typical project.

Figure 4-1: Steps Necessary for Typical Project



It is safe to say that the Planning step is complete. NEPA for significant improvements could take up to three years or more. Design and right-of-way can also take up to a couple of years, but some design occurs during the EIS. Last, the time required for construction can obviously vary based on the type of improvement. The construction season in Little Cottonwood Canyon is much shorter than along the Wasatch Front due to weather and resort activity.

Potential Funding Sources

Many options exist for securing funding for the strategies discussed in this report. Federal, state, and local sources may be tapped, although dispersion of funds will be at the discretion of decision-makers at those levels. Table 4-2 identifies the transportation programs which could potentially be used to fund the strategies discussed in this report.

Table 4-2: Potential Funding Sources

<i>Transportation Program</i>	<i>Funding Agency</i>	<i>Description</i>
Surface Transportation Program (STP)	FHWA (WFRC)	Improvements can range from rehabilitation of existing facilities to new construction. May also be used to transit capital improvements and rideshare programs.
Surface Transportation Program – Highway Safety	FHWA	Safety improvements to roads, including hazard elimination activities
Congestion Mitigation/Air Quality	FHWA (WFRC)	For projects that reduce emissions in non-attainment areas
Highway Safety Improvement Program	FHWA	For construction or operational improvements on high-risk roads (new SAFETEA-LU legislation)
Federal Lands Highway Program	FHWA	For transportation planning, research, engineering, and construction of roads, parkways, or transit facilities within public lands (new SAFETEA-LU legislation)
Highways for LIFE	FHWA	Incentive funding for new technologies, business practices, or elevated performance standards that improve safety, reduce congestion, and improve user satisfaction (new SAFETEA-LU legislation)
General Obligation	Counties,	For capital improvements to transportation

<i>Transportation Program</i>	<i>Funding Agency</i>	<i>Description</i>
Bonds	Cities, and Towns	facilities (or other public facilities)
Section 5309	FTA	For bus or rail capital improvements
Section 5307	FTA	For transit capital improvements, preventive maintenance, or planning assistance
State vehicle-related taxes	State	For construction, improvement, or maintenance of state highway system.
State General Fund	State	For construction, improvement, or maintenance of state highway system.
Transit Sales Tax	UTA	Supports public transit service
General Fund	Counties, Cities, and Towns	For transportation facility improvements ranging from maintenance to new construction
Tolls	State	Users pay a fee to utilize a limited-access facility
Congressional Earmark	U.S. Congress	Funds appropriated for specific projects, based on applications filed by local lawmakers and through Congressional subcommittees

These programs may or may not be used for projects in Little Cottonwood Canyon. However, it will likely take a combination of funding types for projects of any significance.