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UTAH ROCKFALL HAZARDS INVENTORY Phase I

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16. Abstract <p>The road network within the state of Utah is contained within a diverse suite of terrain, which in some areas presents substantial rockfall and slope stability hazards. With projected future increases to the traffic load on Utah's roads in mind, a project was initiated to implement a rockfall hazard investigation statewide. An existing model used by the Oregon Department of Transportation during the mid 1980s known as the Rockfall Hazard Rating System (RHRS) was adopted as a starting point for developing a program in Utah. During the summer of 2001, Phase I of the RHRS was conducted statewide in order to classify roadside rock slopes into three categories in order to prioritize them for future study. Over 1099 rock slopes were inspected in the field. A total of 479 slopes were given a rating of A (immediate potential for rockfall danger), 569 slopes were classified as B (moderate rockfall potential), and 51 slopes were ultimately rated as C (low potential for rockfall) based on RHRS criteria. Following the completion of these field ratings, a GIS database was constructed for all A & B-rated rock slopes statewide and includes basic descriptions, locations, and photographs of the slopes.</p>			
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Executive Summary

The road network within the state of Utah is contained within a diverse suite of terrain, which in some areas presents substantial rockfall and slope stability hazards. With projected future increases to the traffic load on Utah's roads in mind, a project was initiated to implement a rockfall hazard investigation statewide. An existing model used by the Oregon Department of Transportation during the mid 1980's known as the Rockfall Hazard Rating System (RHRS) was adopted as a starting point for developing a program in Utah. During the summer of 2001, Phase I of the RHRS was conducted statewide to classify rockfall sites into three categories in order to prioritize them for future study. Over 1099 rockfall sites were inspected in the field. A total of 479 sites were given a rating of A (immediate potential for rockfall danger), 569 sites were classified as B (moderate rockfall potential), and 51 sites were ultimately rated as C (low potential for rockfall) based on RHRS criteria. Following the completion of these field ratings, a GIS database was constructed for all A & B-rated sites and some C-rated sites statewide and includes basic descriptions, locations, and photographs of the sites. This rockfall database can be implemented immediately in some aspects of state transportation improvement planning.

Phase II should proceed by first completing an initial survey of between 90 and 100 A-rated slopes using three alternative detailed rockfall hazard rating methods. These include ones recently developed by New York DOT, Oregon DOT, along with the pre-existing Oregon DOT system. This comparative study will help determine which method results in a detailed database that can best be applied to prioritization of future mitigation efforts. Regardless of the system chosen, rating criteria will vary from purely subjective categories to ones that are numerically based. These rating categories will initially be based on the RHRS system but will be modified to better fit the rockfall conditions of Utah roads during the comparative study.

Introduction

With increased development, tourism and concomitant traffic, the potential for traffic incidents and road closures caused by rockfall in the State of Utah will dramatically increase in the future. Associated with these geologic hazards will be increased numbers of accident claims, service interruptions, as well as additional negative press.

Many states have implemented rockfall hazard rating systems and associated rockfall inventories with the purpose of prioritizing the mitigation of this hazard. This report is the first step in the implementation of such a system in the State of Utah. Once fully established, the system will facilitate the development of a maintenance management program, would prioritize the mitigation of problems associated with rockfall, and maximize the benefit of each dollar spent.

Objectives

There are five major objectives associated with the establishment of a rockfall hazard mitigation program. These objectives focus on first tailoring a rockfall hazard rating system to be specific to Utah, completing a full inventory across the state, then establishing a maintenance management program.

1 – A preliminary inventory of potential rockfall sites throughout the state of Utah must first be completed where the potential for rockfall may affect UDOT transportation facilities. This inventory should use a preexisting inventory method that has proven to be useful in other states. A GIS database should be created with a complete compilation of these locations throughout Utah.

2 – Using the preliminary inventory, a rockfall hazard rating system specifically tailored to Utah should be developed. This rating system will be used to evaluate each site of potential rockfall and prioritize those sites where mitigation efforts should be centered. Establishment of a maintenance management program based on this prioritization will ensure that prioritized rockfall locations receive treatment in an orderly fashion.

3 - By following a rockfall maintenance management program, Utah's transportation systems can be more cost-effectively protected from rockfall damage and interruption of service. Rockfall areas with the highest priority can be serviced first, thus providing mitigation for areas with the highest potential for damage and interruption of service.

4 - As priority areas receive mitigation efforts, the Utah Department of Transportation should see a long-term reduction in maintenance costs associated with rockfall damage. Efforts to secure high risk rockfall areas before problems occur will keep these maintenance costs down.

5 - With priority areas becoming less susceptible to rockfall damage and mitigation efforts taking place to minimize potential rockfall hazards, liability of the Utah Department of Transportation will become reduced for rockfall associated lawsuits.

Tasks

There are nine major tasks associated with the establishment of a rockfall hazard mitigation program. Tasks 1-3 have been completed and constitute Phase I. The results of this phase are summarized in this report. The other six tasks are also listed so as to put the results reported herein into the context of the overall program. Through these tasks, the overall objectives previously mentioned can be met.

1. The first task has been to identify existing sources of information on rockfall hazard rating systems, including states that currently have such rating systems. It was recognized at the beginning that the existing models would likely need to be modified to fit the needs of Utah's rockfall areas.
2. To begin establishing rockfall locations and places of potential rockfall problems in the state of Utah, the maintenance supervisors for the Utah Department of Transportation have been interviewed at the various rockfall sites where possible. Site verification and classification was then completed with the assistance of local maintenance foreman to establish details about rockfall sites in each of the maintenance stations affected by rockfall.
3. The information obtained from the interviews, site verification, and classification with the maintenance foreman has been used to create a preliminary rockfall hazard database. This database contains all existing information on particular rockfall areas throughout the state of Utah and serves as the basis for developing an appropriate detailed hazard rating system through more detailed inventories. This database is described in this report. Subsequent tasks are to be completed during Phase II.
4. A detailed inventory should be completed that tests several candidate hazard rating systems simultaneously on a subset of the sites identified in Task 3. Given the results of this analysis, a detailed hazard rating system should be developed that is appropriate for the State of Utah.
5. Using the rockfall hazard rating system, rockfall areas can be prioritized according to potential problems. Each rockfall area should receive a rating according to the rating system, and areas with more problematic potential should receive higher priority.
6. Rockfall areas with the highest priority should be the sites to first focus mitigation efforts. Additional field investigations of these special high priority sites will need to be conducted. These investigations will allow for further understanding of each rockfall area and a better idea of what kinds of mitigation efforts need to be involved.
7. Mitigation strategies need to be developed for high priority rockfall areas. Implementation of these mitigation strategies can then be carried forward to alleviate hazard associated with each high priority rockfall area.

8. Associated with these mitigation efforts is obtaining information on mitigation strategies currently being used to reduce rockfall hazard. Other state DOT's should be surveyed to gather information on their strategies and methods for reducing the hazards associated with rockfall.
9. The final task is to prepare a manual detailing the prioritization system and GIS database. Maintenance strategies for station personnel, comprised of the maintenance management program, may also be included. This manual will allow the user the proper knowledge to use the priority system and will be the key to implementing mitigation efforts to high priority rockfall areas. Areas of highest priority will receive proper attention first and thus reduce the hazards associated with rockfall throughout the state of Utah.

UDOT maintenance personnel will use the results of this study to prioritize funding for mitigation of hazards in problem areas. The manual will make maintenance personnel more cognizant of topographic and geologic features related to these hazards. By focusing on high priority rockfall areas the objectives of this study may be reached. Ultimately the Utah Department of Transportation will spend less money on maintenance associated with rockfall, and become less liable for the problems associated with rockfall damage.

Methodology

The various rockfall hazard rating systems in use by Departments of Transportation across the U.S. were reviewed at an early stage in this study. The Rockfall Hazard Rating System (RHRS) was chosen for use during Phase I and is essentially the same system developed in 1984 by the Oregon Department of Transportation (Pierson, 1990). The system has a proven track record in Oregon and portions of it have been embraced by other states.

ODOT RHRS System

The RHRS used in the Phase I reconnaissance study classifies rockfall sites into three broad, manageably sized categories labeled as A, B, or C. The purpose is to eliminate some sites from the overall inventory based on their inherent lack of danger and to target those sites that warrant future detailed investigation under Phase II. This rating is a subjective evaluation of rockfall potential that requires experienced, insightful personnel to make valid judgments.

The criteria associated with the rating are given in Table 1 and is based on estimated potential for rockfall on the roadway and historical rockfall activity. The RHRS is primarily aimed at assessing the rockfall potential at a site. The estimated *potential* for rockfall on a roadway is the controlling element of the preliminary rating. For example, if a rock slope contains a large block with evidence of active displacement and no ditch is present to catch it if it falls, it would receive an A-rating, regardless of past rockfall activity. The historical rockfall activity criterion supplements the primary rating where clarification is needed.

Table 1. Preliminary Rating System.

Class Criteria	A	B	C
Estimated Potential for Rockfall on the Highway	HIGH	MODERATE	LOW
Historical Rockfall Activity	HIGH	MODERATE	LOW

The following factors have been considered when estimating the estimated potential for rockfall on the highway:

1. Estimated size of material
2. Estimated quantity of material
3. Amount available
4. Ditch effectiveness

In addition, the following factors were considered with respect to the historical rockfall activity:

1. Frequency of rockfall on highway
2. Quantity of material
3. Size of material
4. Frequency of clean-out

A sample of the Phase I field-rating sheet is given as Figure 1 and includes fields for both location and estimates of rockfall magnitude and history. A detailed description of the definition for each blank in the form is given in the Section entitled “GIS Database”. The rockfall magnitude fields are based on somewhat subjective recollections of past events or on the physical characteristics of the site. For this reason it was important that a UDOT maintenance station foreman or a maintenance employee familiar with the site participate in the estimation. Estimates of historical rockfall frequency are also based on interviews with UDOT personnel.

Classification Criteria

The A-B-C rating system is based on the following criteria:

- C-Rating. This means that it is unlikely that a rock will fall at a given site, or that, if a fall should occur; it is unlikely to reach the roadway. In other words, the risk is nonexistent to low. The RHRS Participant’s Manual (Pierson and Van Vickie, 1993) suggests that “it is not worthwhile to clutter a database with information on slopes of this nature”.

Data Sheet for RHRS, Summer of 2001					
Section # _____	Highway _____	GRADE			
Waypoint Start _____	Shed (#) _____				
Waypoint End _____	Mileage _____				
Estimated Potential for Rockfall on Roadway:					
Avg. Size of Material	< 6 in.	6-12 in.	1-3 ft.	> 3 ft.	_____
Max. Size of Material	< 1 ft.	1-2 ft.	2-5 ft.	> 5 ft.	_____
Estimated Quantity of Material	_____				
Event	_____				
Amount Available	Limited	Limited +	Plentiful -	Plentiful	_____
Ditch Effectiveness	Poor	Fair	Good	V. Good	_____
Historical Rockfall Activity:					
Frequency of Rockfall on Highway	< 1/yr.	1-2/yr.	3-6/yr.	7-10/yr.	>10 _____
Frequency of Clean-out	< 1/yr.	1-2/yr.	3-6/yr.	7-10/yr.	>10 _____
Quantity of Material	_____				
COMMENTS:					

Figure 1. Rockfall Hazard Rating System, Phase I data entry form.

- **B-Rating.** This means that the risk ranges from low to moderate. Although rockfall from a slope is possible, the frequency is low enough or the roadside ditch is large enough to restrict nearly all of the rockfall from reaching the highway.
- **A-Rating.** This means that the risk ranges from moderate to high. In these cases the source of rockfall must be obvious. If this situation is combined with small roadside ditches and a history or frequent rock on the roadway, it is clearly an A-rating.

In this study, it was often difficult to decide whether a slope with a moderate risk should fall into the A-rating or B-rating. For this reason, it was found to be advantageous to adopt a finer scale where B-rated slopes that had a clearly moderate risk would be given a B+. Similarly, if an A-rated slope was more at the moderate end of the risk scale, it would be given a rating of A-.

Field Work

The Phase I field work was accomplished mainly in a three-month period from June through August of 2001. Most of the work (75%) was done by one worker (Jamie Farrell) with a second worker (Bob Pack) performing surveys of the remaining 25%.

Beginning in May 2001, all maintenance stations across the State of Utah were systematically contacted and key individuals interviewed by phone to determine the nature of the rockfall hazard (if any) in their jurisdiction. If no significant rockfall hazard was identified by these personnel, the maintenance station was erased from the inventory schedule and not considered further. If any hazards at all were identified, an estimate of the number of sites requiring visits was used to partition off a block of time in the inventory schedule. An appointment was then made with the Station Forman or his identified employee to meet at a time and place to visit the sites. Each site was then visited in the company of a UDOT employee so as to include an estimate of rockfall frequencies, rockfall quantities, and cleanout frequencies. Many of the sessions involved driving more than 100 miles in one day in a UDOT truck (with flashing lights for safety) to cover the territory. In virtually all cases the UDOT personnel were extremely helpful and provided valuable insight into the nature of their rockfall problems. Efforts were also made by the raters to search for *potential* rockfall problems that may have escaped UDOT's notice. Such new discoveries turned out to be relatively rare. Only slopes relatively close to the roadway such as rock cuts were included in the inventory. Potential sources of rockfall from natural slopes further upslope were not included.

The rating process itself progressed fairly quickly and only took a few minutes per site as UDOT personnel under the tutelage of the USU raters became "practiced" over the first hour or so of each session. At each site the site data sheet was filled out, GPS coordinates recorded, and one or more photographs taken. Once the data and associated classification was recorded, this information was entered into an ArcView v3.3 geographic information system (GIS) database at the end of the day or week. Because geographic coordinates of the beginning and end of each road section were taken with a GPS receiver, the two coordinates could be used to estimate the road section length and mark the site location in the GIS. At least one photograph was taken at each site for inclusion into the GIS database.

The A, B, C rating itself is mainly subjective but as stated before, raters become fairly adept at these judgments within a short period of time. The two raters spent considerable time together to harmonize class definitions and rating criteria. Examples of the three different categories of rock slopes are included as Figures 3 through 5. The ratings themselves are based on guidelines created for the Oregon DOT in (1984) and listed in Pierson (1990 & 1993.) The key factor in preliminary ratings is the concept of "risk," which refers to the likelihood of rockfall material reaching the roadway (Kliche, 1999). The emphasis must be on fall material actually reaching the highway. A vertical and imposing slope does not always warrant an A rating.

Phase I Results

A statistical summary of Phase I results is given in two tables found in Appendix A. Table A1 shows the number of rockfall sites per shed classified by the A, B, and C ratings. The number classified as A is 479, as B is 569, and as C is 51 for a total of 1099 rockfall sites. Table A2 shows the total length of road section falling into each classification summarized for each maintenance station. The number of kilometers of

roadside slopes classified as A is 134.8, as B is 155.3, and as C is 7.5 for a total of 297.7 kilometers (185 miles). It should be noted that sites classified as C are a very small subsample of sites in this category as they are essentially excluded from the inventory. As stated in the Section on methodology, C-rated slopes are considered low-risk and would add un-needed clutter to the database. However, a few have been included in order to get a feel for their nature and how they are distinguished for the A-rated and B-rated sites. Figure 2 shows the distribution of problem rockfall sites throughout Utah.

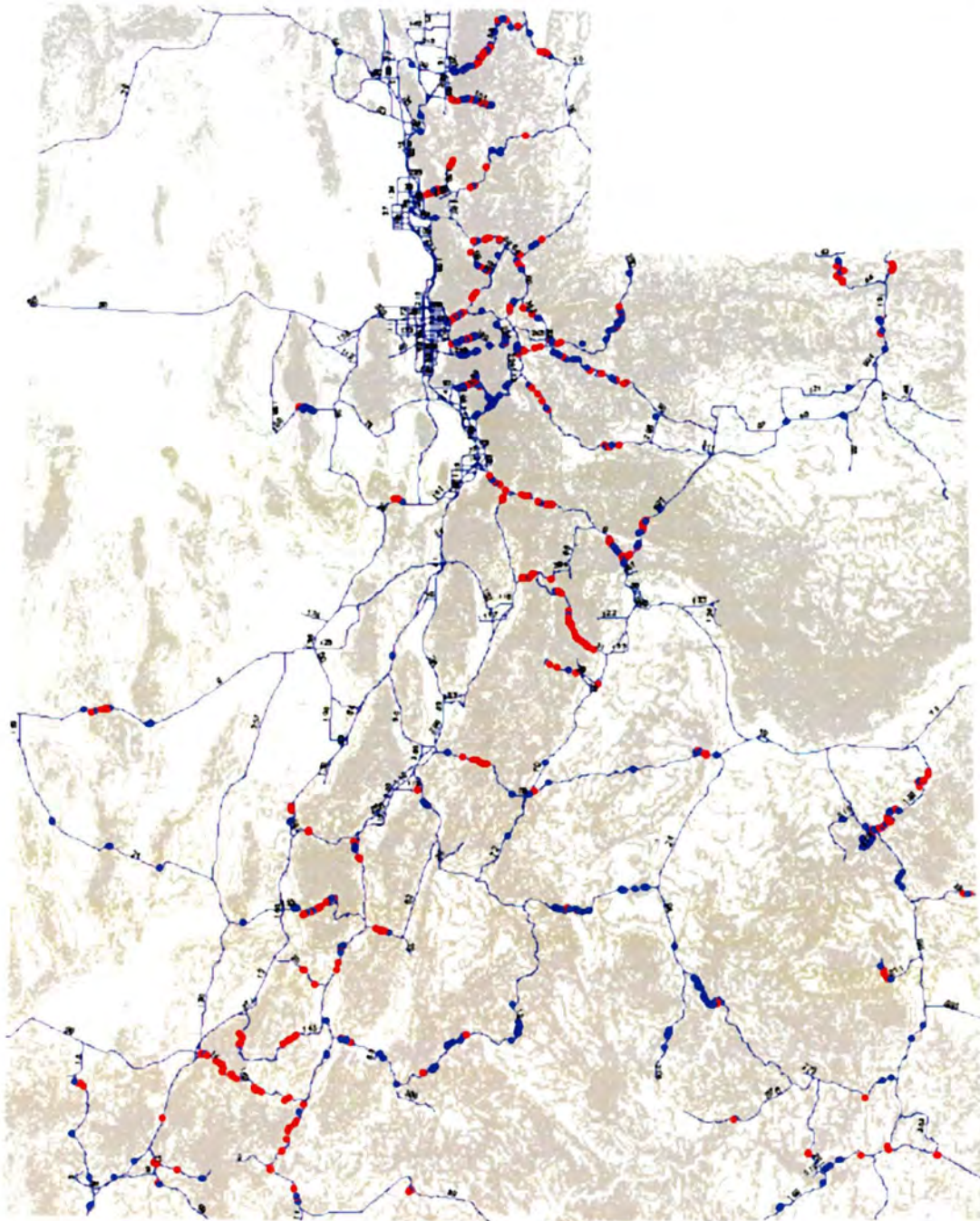


Figure 2. Distribution of rockfall sites classified as A (dots shown in red) and B (dots shown in blue).

Figures 3 through 6 are photographs of representative slopes in categories A through C. The C slope given in Figure 3 is located in the jurisdiction of the Emery Maintenance Station in central Utah. The slope angle for this site is relatively low and is cut through a sedimentary rock unit (shale or mudstone) that is subject to moderate weathering. The upslope portion of this rockfall site has evident rounded boulders likely from an upslope alluvial or conglomerate source. The lower portion of the slope poses no risk to the roadway, save for small soft sediment sloughs where the upslope material might represent a low risk. However, because of the large roadside ditch and the low slope angle, this slope was given a C rating.

Two B-rated slopes have been included as examples. Figure 4 is from the Huntington Maintenance Station located in the Uinta Mountains while Figure 5 is from the Colton Maintenance Station. These two photos were chosen because they illustrate two very different B-rated slopes. The site in Figure 4 is what might be envisioned as a typical B slope. This cut is surrounded by heavy forest and has abundant plant cover on the slope itself. The presence of rock slabs on the slope surface indicates some possibility for rock sliding despite the plant cover and relatively low slope angle. In the background, it is apparent that there is a relatively modest berm area. This slope was given a B rating because of the small ditch/ berm area combined with the presence of slabs that could potentially slide on the slope face and reach the roadway. Figure 5 also shows a B-rated slope. This slope has both vertical and laid-back rock faces cut through multiple sedimentary rock-types. Differential weathering is apparent in two of the three layers shown. On first glance, this slope might seem to warrant an A rating but on closer inspection, the width of the ditch area indicates very effective catchments for debris (both slough and boulders evident in the ditch). This is also borne out by the modest amount of rockfall reported on the road over the years. This slope demonstrates the effect of well sized catchments on this preliminary rating system. This slope may have significant cleaning requirements to maintain its B status.

Figure 6 is a typical A-rated slope. This cut located in the Beaver Maintenance Station jurisdiction is a representative A-rated slope for several reasons. The catchment ditch area is inadequate in both width and depth to catch the size material weathered from the rock face. While the face itself is not extremely high and has good cover on top, the sizes of the blocks that are weathering from the cliff face are large and easily capable of reaching the road surface. Final contributing factors to instability on this face evidenced by vegetation are (1) the potential effects of saturation due to relatively high rainfall and (2) the potential effects of seasonal freeze-thaw action during the spring thaw.



Figure 3. C-rated slope near Emery, Utah.



Figure 4. B-rated slope near Huntington, Utah.



Figure 5. B-rated slope near Colton, Utah.



Figure 6. Near-vertical A-rated rock cut in the Beaver Maintenance Station.

GIS Database

The culmination of the Phase I inventory was the creation of an interactive database that links the field data spatially to the Utah state road grid. The database has been built to be compatible with the ArcView GIS software package in use at Utah State University and at UDOT. The database created for this project was compiled in a dBASE (*.dbf) file format and contains 1100 lines corresponding to sites (one line per site) and 27 columns, which include specific site information. The sites themselves are grouped by the state DOT maintenance station jurisdiction in which they lie. The column format is as follows:

- Waypoint (GPS system notation) - these points were sequentially numbered in the order they were collected. They serve as a reference between the geographic coordinate and the inventory site.
- ID - A unique identification number was ascribed to each inventory site. It incorporates the maintenance station number to avoid number duplication in other maintenance stations.
- Easting - East geographic coordinate in the Universal Trans-Mercator (UTM, NAD 83) map projection.
- Northing - North geographic coordinate in the UTM, NAD 83 map projection.
- Elevation (feet) - Elevation above sea-level in NADV 84 coordinate system.
- Length (meters) - Horizontal distance of slope exposure along roadway.
- Slope rating - Rockfall hazard rating using the ODOT system. See the section on Methodology for an explanation of the A-B-C rating.
- Maintenance Station name - Name of the Maintenance Station.
- Maintenance Station ID # - Station ID assigned by UDOT.
- Highway Name - self explanatory.
- State route # - Highway route number.
- Mileage - the mileage marker for the site. This field created for UDOT use but this data was rarely input during our inventory.
- Largest maximum fall block size (inches) - This is the upper limit of the maximum size of boulders noted by UDOT to have hit the highway.
- Smallest maximum fall block size (inches) - This is the lower limit of the maximum size of boulders noted by UDOT to have hit the highway.
- High average fall block size (inches) - This is the upper limit of the average size of boulders noted by UDOT to have hit the highway.
- Low average fall block size (inches) - This is the lower limit of the average size of boulders noted by UDOT to have hit the highway.
- Availability of rockfall material - This is a subjective description where plentiful means that a plentiful supply of loose boulders can be seen on or above the slope adjacent to the roadway. Limited means that few loose blocks or boulders were noted.
- Fall frequency (# falls/yr) - This is an estimate of how often UDOT maintenance personnel need to clean the roadway of rockfall each year.
- Ditch cleanup frequency (#/yr) - This is an estimate of how often UDOT maintenance personnel need to clean the ditch of rockfall each year.

- Photo ID #s - Total of five columns listing ID numbers of site photo(s). Each photograph was labeled with an ID number so as to relate it to the proper site.
- Comments - Any miscellaneous comments about the site are entered here.

Appendix B lists a subset of these database fields for all sites inventoried. The GIS database delivered to UDOT is linked to a map of the State of Utah containing the state-wide road grid with each site entry displayed as a colored dot with the color determined by rating (A – C). The GIS user can double click on any given site symbol and display, in table form, the above listed table of information for that site as shown in Figure 7. A color photo for that site can also be automatically queried as shown in Figure 8 using a “hot-link” button in ArcGIS. The culmination of Phase I was the production of this interactive database.

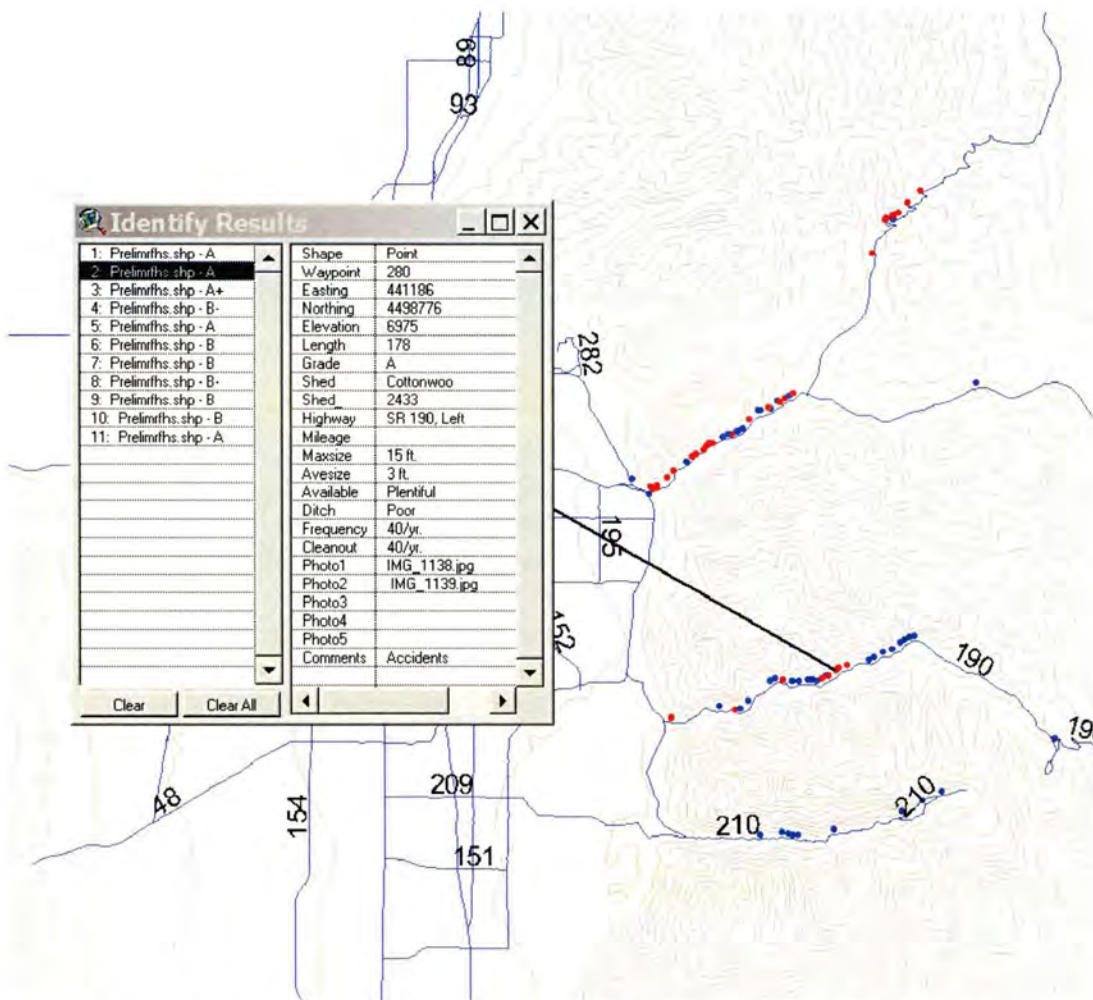


Figure 7. Example of how a rockfall point can be queried when the GIS display has been zoomed into a local area.



Figure 8. Photo IMG_1138 corresponding with the data point shown in Figure 7 can be automatically retrieved.

Implementation

A specific way that the GIS database can be utilized is by identifying which rockfall sections fall within the STIP (UDOT, 2003). UDOT maintains a five-year program of highway and transit programs known as the Statewide Transportation Improvement Program (STIP). The STIP is the official work plan for the development of highway projects through conceptual development, environmental studies, right of way acquisition, and plan development through advertisement of a construction project. A simple GIS query can identify which rockfall sections lie within road sections that have been identified in the STIP as future projects. Figure 9 shows the sections of road identified in the STIP as well as the rockfall sections that fall within those sections. The roadway sections contained in the STIP have already been identified as sections in need of work. By identifying these rockfall sections early enough, the potential then exists to plan and perform mitigation measures to rockfall sections during construction work that is already planned. This provides a means of lowering the hazard at rockfall sites by utilizing the current statewide project prioritization system.

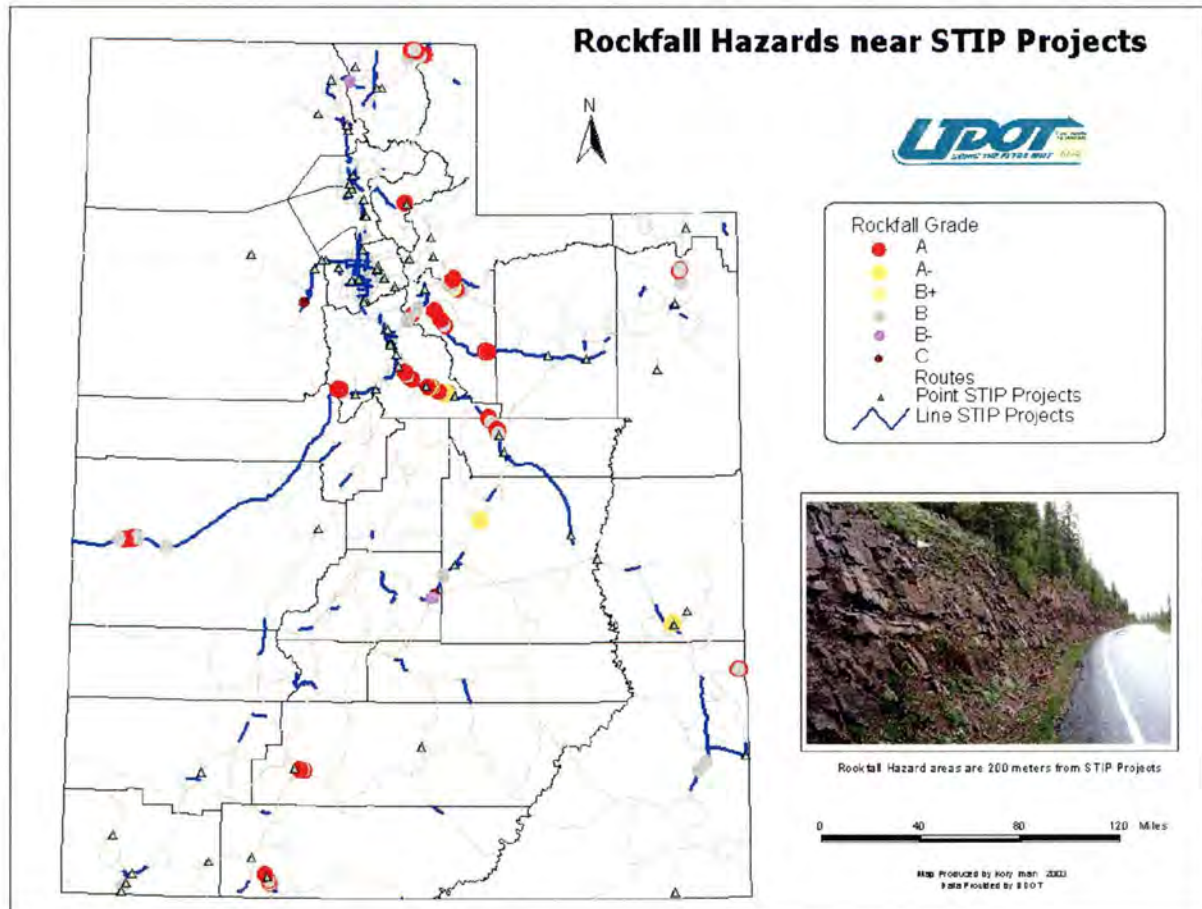


Figure 9. Rockfall hazards near STIP Projects.

The preliminary hazard ratings provided in this report are a critical step in the development of a complete rockfall hazard rating system. The A-sites are prime candidates for more detailed analysis during the next phase. The B+ sites might also be considered immediate candidates as time and budget permits. An inventory of the remainder of the B-sites would then follow. Given the geographic distribution of the sites, planning for the Phase II detailed inventory is now possible. It should be recognized that the A-B-C ratings are VERY preliminary and require an analysis that is more detailed than the 2 to 3 minutes spent on each site in order to be prioritized for remediation. Where sites are identified as being in a STIP, it would be prudent to complete the Phase II detailed ratings or even more detailed evaluations as soon as possible so that these projects can minimize rockfall risk while at the same time, minimizing cost.

Finally, this Phase I inventory provides a first glimpse into the magnitude of the rockfall problem across the state. Maintenance personnel can now better visualize the where and how-often they are removing boulders and cleaning ditches both within their own jurisdictions and relative to other jurisdictions.

Evaluation of Alternative Rating Systems

Over the past year of compiling the 2001 project data we investigated several rockfall hazard rating systems in use in other states. Since the formulation of the Oregon RHRS in the 1980s several states have adopted, and made modifications to this original RHRS. Other independently developed systems have also been implemented. After reviewing these options, we recommend that two systems be tested on a subset of sites as a part of Phase II. The first was developed by the State of New York DOT during the 1990s as an improvement on the original RHRS system that New York had adopted in the late 1980s. The New York system has some fundamental capabilities that have led to some increased utility in the State of New York. The second system was developed by the State of Oregon DOT as a refinement of the original RHRS with some improvements (ODOT, 2002). The new Oregon system has not been adopted state-wide but has been recently applied in one of their districts.

Following is a brief synopsis of the differences between these competing systems. The existing ODOT rating system computes detailed hazard ratings based on scoring road/traffic characteristics, geologic/hydrologic characteristics, and rockfall history. In addition, the system provides a method for estimating mitigation costs at a site. The total hazard score can be used alone for project identification and prioritization. Alternatively, the ODOT method recommends that both cost and hazard score be used together to rank a site using the ratio of cost/score. With this ratio, high costs mitigation coupled with high scores can rank equivalent to low mitigation costs and low scores.

In the New York DOT System (Hadjin, 2002), a “Total Relative Risk” (TRR) is computed based on geologic factor (GF), road section factor (SF), and human exposure factors (HEF). The factors used are similar to the ODOT system except they are formulated so as to be more directly related to the “probabilities” associated with consequences and hence risk. The GF, SF and HEF values are multiplied together as in a probabilistic risk assessment to determine TRR. This risk approach is quite deferent from the “addition” of scores in the ODOT method and therefore possibly lends itself particularly well to the concept of “risk reduction.” Risk reduction is defined as the benefit provided by one of several possible treatments applicable to a given rock slope. If the TRR after remediation is called the residual risk (RR), then Risk Reduction = TRR - RR. The concept in practice at the NYDOT where different remediation efforts are assigned RR values that are then subtracted from TRR to determine Risk Reduction, allows DOT officials to evaluate cost-benefits for given sites. Questions like, “How many dollars can be assigned to a site and at what benefit?” might be more readily answered with this approach. It is therefore recommended that NYDOT’s Risk Reduction score system also be tested in Utah during Phase II.

The modified ODOT system generalizes the hazard rating system to include landslides as well as rockfall. It is an adaptation of the Washington State DOT’s Unstable Slope Management System (USMS) and, like the original ODOT system, uses an additive scoring system for rockfall, but with five categories instead of three. The five categories

are (1) Failure Type/Hazard, (2) Roadway Impact, (3) Annual Maintenance Frequency, (4) Average Daily Traffic, and (5) Accident History. A score is calculated for each category, then added together to provide a total score. The system then multiplies the total score by two factors in order to provide a final ranking for the State Transportation Improvement Program (STIP). These factors are (1) the Maintenance Benefit Cost Factor (MBC) and the Highway Classification Factor (HCF). The first factor has to do with the 20-year maintenance cost and failure repair cost for the site. The second factor weights the final score depending on its district, regional, statewide, or interstate highway classification. Unlike the original ODOT system where the cost is divided by the hazard score, this system multiplies the hazard score by a "cost factor" that varies between 0.5 and 1.5. Unlike the NYDOT system, this system is not risk-based and therefore cannot take into account the effects of partial risk reduction on priorities. It is recommended that the modified ODOT system be tested in Utah during Phase II.

Summary and Recommendations

The application of an RHRS based system in Utah has been initiated and completed through Phase I, the preliminary evaluation process. The results have been encouraging and the ArcView-based GIS database delivered to UDOT has been well received and with continued maintenance, should be a useful tool. A total of 479 rockfall sites were given an "A" rating (high probability of rockfall on the roadway) and identified for further study under a future Phase II of the project. A total of 569 rockfall sites were classified as having a "B" rating.

It is recommended that the goal of Phase II be to calculate a detailed rockfall hazard rating for the 479 "A" sites that will likely require remediation in the near term. Those 569 sites given a "B" rating might be investigated later as the budget permits would not be reviewed in the near term. However, it is recommended that the B+ slopes be subjected to a detailed rating so that their true ranking relative to the A-ranked sites can be investigated.

It is recommended that a detailed investigation of 90 to 100 slopes using the ODOT, NYDOT and modified ODOT rating systems be completed in early summer 2002. The objective is to test all three systems in the field in order to determine the best system for use in Utah. This task would take place during May and June of 2002. All three systems would be applied to each rockfall site from a variety of geologic suites across the state. Following the gathering of field data, the data would be compiled, analyzed, and recommendations developed for such that a preferred system could be chosen by UDOT. Collection of detailed rockfall hazard ratings would then proceed using the preferred system throughout the rest of the summer 2002 and likely into the summer of 2003.

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Appendix A - Rockfall Inventory Summary

Table A1. Number of rockfall sections by maintenance station.

Maintenance station	Total Number of Road Sections Per RHRS Rockfall Classification								Total
	A+	A	A-	B+	B	B-	C+	C	
Beryl		4			5				9
Beaver		14		1	11				26
Blanding		3			3				6
Bluff		11			11				22
Bothwell					1			2	3
Brigham					1				1
Cedar		24			2				26
Colton		13			13				26
Cottonwood	1	7			21	10			39
Cove Fort		4			6			1	11
Duchesne		10			5				15
Echo		2			4			1	7
Emery		2			3			1	6
Escalante		2		1	17	21			41
Eureka		6			4	1			11
Garrison		12			16	1		1	30
Green River		4			4			2	10
Hanksville	1	4	2	4	25	12			48
Heber		7			5				12
Huntington		24	1		3				28
Huntsville		20			6				26
Hurricane		7			3				10
Junction		8		2		1			11
Kamas		11		5	24	3			43
Kanab		6			4				10
Kimballs Jct		3		2	9				14
Laketown		13			10			1	24
Lehi		15		2	27	6	1		51
Loa		2	1		12	7			22
Logan		22	4		26	8		1	61
Long Valley		19			1				20
Manilla		13			6				19
Milford					2				2
Moab	1	16	2	4	20	10		1	54
Monticello		6	3	1	6				16
Morgan		13			10				23
Mt. Pleasant		10			2				12
Orem		2			15	4			21
Panguitch		19			12				31
Parley's		25		2	12	1			40
Richfield		3		1	7				11
Roosevelt					2	2			4
Salina		9			3	2			14
Scipio						1		2	3
Spanish Fk		10	5	3	3				21
St. George		1			6			2	9
Strawberry		11	1		6				18
Tabonia		8			6				14
Thompson		3			2				5
Tooele		2			15			6	23
Vernal		7			6				13
Wanship		9			7			2	18
Wellsville		11			21			27	59
Grand Total	3	457	19	28	451	90	1	50	1099

Table A.2. Estimated length rockfall sections by maintenance station given in meters.

Maintenance station	Total Meters Of Road Within Preliminary RHRS Classifications								Total
	A+	A	A-	B+	B	B-	C+	C	
Beryl		521			1058				1579
Beaver		6959		138	3325				10422
Blanding		2009			635				2644
Bluff		6826			1563				8389
Bothwell					372			194	566
Brigham					184				184
Cedar		9297			805				10102
Colton		2778			2170				4948
Cottonwood	557	578			4007	4144			9286
Cove Fort		990			1138			132	2259
Duchesne		3228			988				4216
Echo		1188			944			311	2443
Emery		803			1371			136	2310
Escalante		293		247	2488	3829			6857
Eureka		2023			390	57			2470
Garrison		1725			2369	84		80	4258
Green River		1215			1559			872	3646
Hanksville	182	906	571	585	5170	2806			10220
Heber		2433			1122				3556
Huntington		13952	183		772				14907
Huntsville		8577			1942				10519
Hurricane		1155			500				1655
Junction		1869		392		405			2665
Kamas		3621		20591	24109	4097			52419
Kanab		1642			304				1946
Kimball's Jct		323		159	597				1079
Laketown		1190			1369			151	2711
Lehi		1681		161	3481	471	0		5795
Loa		213	307		2116	1300			3936
Logan		2807	738		2552	712		123	6931
Long Valley		3811			135				3946
Manilla		4187			930				5117
Milford					304				304
Moab	330	4688	697	2219	8538	3240		45	19756
Monticello		548	874	147	1853				3422
Morgan		2966			1316				4282
Mt. Pleasant		4902			235				5137
Orem		532			3552	1862			5945
Panguitch		2141			1379				3519
Parley's		5090		291	1748	55			7184
Richfield		916		95	861				1872
Roosevelt					319	208			527
Salina		4410			636	132			5178
Scipio						303		255	559
Spanish Fk		2152	1286	320	644				4402
St. George		150			1113			246	1509
Strawberry		1374	64		901				2339
Tabonia		2262			422				2684
Thompson		1418			248				1666
Tooele		371			4844			605	5820
Vernal		1663			814				2477
Wanship		2607			2022			1117	5746
Wellsville		2058			4075			3253	9387
Grand Total	1069	129047	4720	25345	106291	23705	0	7520	297696

Appendix B - Rockfall Inventory Database

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
High	Low	High	Low													
Maintenance Station: Beaver																
rf_4527_01	362423	4238086	6211	545	A	SR 153, Right	36	24	6	3	Plentiful	Poor	60 - 70/yr	2/yr	20-27.jpg	
rf_4527_02	363458	4237778	6264	136	B	SR 153, Right	24	18	6	3	Plentiful	Fair	10 - 15/yr	2/yr	20-26.jpg	Blind Curve
rf_4527_03	366959	4235622	6673	837	A	SR 153, Right	36	24	8	6	Plentiful	Poor	60 - 70/yr	3 - 4/yr	20-25.jpg	Blind Curves
rf_4527_04	370393	4236597	7181	287	A	SR 153, Right	36	24	8	6	Plentiful	Poor	60 - 70/yr	2/yr	20-23.jpg	Blind Curve
rf_4527_05	370264	4236714	7326	514	B	SR 153, Right	12	9	5	2	Plentiful	Poor	10 - 15/yr	2/yr	20-21.jpg	Blind Curves
rf_4527_06	376238	4240876	8658	384	B	SR 153, Right	12	9	5	2	Limited	Good	10 - 15/yr	2/yr	20-20.jpg	
rf_4527_07	380134	4242706	9955	543	B	SR 153, Left	24	20	6	3	Limited	Fair	10 - 15/yr	2/yr	20-19.jpg	
rf_4527_08	379881	4242780	9947	696	A	SR 153, Left	36	24	8	6	Plentiful	Poor	30 - 40/yr	2/yr	20-18.jpg	Blind Curve
rf_4527_09	379279	4242495	9853	218	B	SR 153, Left	24	12	6	3	Limited	Fair	10 - 15/yr	2/yr	20-17.jpg	
rf_4527_10	378451	4241873	9583	473	B	SR 153, Left	36	24	6	3	Limited +	Good	15 - 20/yr	2/yr	20-16.jpg	
rf_4527_11	377979	4241455	9400	289	B	SR 153, Left	24	18	6	3	Limited +	Good	15 - 20/yr	2/yr	20-15.jpg	Blind Curve
rf_4527_12	377113	4240961	9110	191	B	SR 153, Left	34	24	6	3	Limited +	Fair	15 - 20/yr	2/yr	20-14.jpg	Blind Curve
rf_4527_13	376555	4240983	8980	154	A	SR 153, Left	12	9	5	3	Plentiful	Poor	40 - 50/yr	2/yr	20-13.jpg	
rf_4527_14	373498	4238518	8349	698	A	SR 153, Left	62	44	8	6	Plentiful	Poor	100/yr	5/yr	20-12.jpg	Blind Curves. No ditch at all, rock cliffs come right to white line on road
rf_4527_15	372979	4238088	8248	560	A	SR 153, Left	74	54	8	6	Plentiful	Poor	100/yr	5/yr	20-09.jpg	Blind Curves
rf_4527_16	372492	4237778	8115	344	A	SR 153, Left	24	12	8	3	Plentiful	Poor	30 - 40/yr	2/yr	20-08.jpg	
rf_4527_17	372097	4237332	8052	424	A	SR 153, Left	48	36	6	3	Plentiful	Poor	40/yr	2/yr	20-07.jpg	Blind Curve

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4527_18	371759	4237193	8002	177	A	SR 153, Left	36	24	8	6	Pleñtful -	Fair	30 - 40/yr	2/yr	20-05.jpg	
rf_4527_19	370731	4236869	7760	1158	A	SR 153, Left	48	24	6	3	Pleñtful	Poor	80/yr	2/yr	20-04.jpg	Blind Curves
rf_4527_20	370447	4236657	7383	216	B	SR 153, Left	24	12	6	3	Pleñtful -	Fair	20/yr	2/yr	20-03.jpg	
rf_4527_21	369842	4236471	7319	163	B	SR 153, Left	12	9	6	3	Pleñtful -	Poor	15 - 20/yr	2/yr	20-02.jpg	Blind Curve
rf_4527_22	369070	4236080	7167	304	A	SR 153, Left	24	20	6	3	Pleñtful	Poor	40 - 50/yr	2/yr	20-01.jpg	Blind Curves
rf_4527_23	367850	4235884	7009	198	B	SR 153, Left	12	9	5	2	Limited	Fair	20/yr	2/yr	21-36.jpg	
rf_4527_24	366327	4235240	6724	354	A	SR 153, Left	36	24	8	6	Pleñtful -	Poor	40/yr	2/yr	21-35.jpg	Blind Curves
rf_4527_25	365617	4234926	6621	420	A	SR 153, Left	24	20	6	3	Pleñtful -	Poor	30 - 40/yr	2/yr	21-34.jpg	Blind Curves. Rocks roll from up high on slope above
rf_4527_26	362044	4238138	6194	138	B+	SR 153, Left	12	9	5	2	Limited	Poor	20 - 25/yr	2/yr	21-33.jpg	Blind Curve

Maintenance Station: Beryl

rf_4523_01	233025	4180162	5662	367	B	SR 56, Left	12	10	6	3	Limited +	Poor	12/yr	1/yr	10-19.jpg	
rf_4523_02	232976	4180121	5672	333	B	SR 56, Right	12	10	6	3	Limited +	Poor	12/yr	1/yr	10-18.jpg	
rf_4523_03	266078	4156739	6120	86	A	SR 18, Left	12	10	5	2	Limited +	Fair	12/yr	1/yr	10-17.jpg	
rf_4523_04	261389	4135231	4417	127	B	SR 18, Left	12	10	5	2	Pleñtful -	Fair	2 - 3/yr	1/yr	10-16.jpg	
rf_4523_05	261395	4135185	4421	116	B	SR 18, Right	12	10	5	2	Pleñtful -	Fair	2 - 3/yr	1/yr	10-15.jpg	
rf_4523_06	265140	4158104	5968	235	A	SR 18, Right	24	18	5	2	Limited +	Fair	25/yr	1/yr	10-14.jpg	
rf_4523_07	264892	4158197	5911	94	A	SR 18, Right	12	8	6	2	Pleñtful -	Poor	25/yr	1/yr	10-13.jpg	
rf_4523_08	263719	4158201	5777	106	A	SR 18, Right	12	8	5	2	Pleñtful -	Poor	25 - 30/yr	1/yr	10-12.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4523_09	262716	4159223	5617	115	B	SR 18, Right	12	8	4	2	Limited +	Poor	10/yr.	1/yr.	10-11.jpg	
<i>Maintenance Station: Blanding</i>																
rf_4422_01	631416	4160028	5643	179	B	SR 95, Left	24	20	6	3	Plentiful	Good	4 - 5/yr.	2/yr.	12-08.jpg	
rf_4422_02	619599	4151363	5156	1502	A	SR 95, Left	144	124	12	6	Plentiful	Good	8 - 10/yr.	2/yr.	12-07.jpg	Blind Curve, High Potential, Tons of rock
rf_4422_03	561093	4141764	5305	304	B	SR 276, Left	8	6	3	1	Plentiful	Good	4 - 5/yr.	2/yr.	12-05.jpg	
rf_4422_04	560453	4141522	5455	278	A	SR 276, Right	12	9	5	2	Plentiful	Fair	50/yr.	4/yr.	12-04.jpg	
rf_4422_05	619590	4150784	5297	230	A	SR 95, Right	144	124	12	6	Plentiful	Fair	8 - 10/yr.	2/yr.	12-02.jpg	Tons of rock
rf_4422_06	627407	4159218	5618	152	B	SR 95, Right	12	9	5	2	Plentiful	Fair	1 - 2/yr.	2/yr.	12-01.jpg	Blind Curve
<i>Maintenance Station: Bluff</i>																
rf_4421_01	617781	4124800	4527	706	A	SR 163, Left	256	124	12	6	Plentiful	Good	12 - 15/yr.	2/yr.	13-36.jpg	Blind Curve
rf_4421_02	608218	4122557	4803	261	B	SR 163, Left	24	12	6	3	Plentiful -	Good	2/yr.	2/yr.	13-35.jpg	
rf_4421_03	604169	4119836	4376	109	B	SR 163, Left	12	9	6	3	Plentiful -	Fair	4 - 5/yr.	2/yr.	13-34.jpg	
rf_4421_04	602114	4118838	4374	78	B	SR 163, Left	12	9	5	2	Plentiful -	Good	2/yr.	2/yr.	13-33.jpg	
rf_4421_05	593846	4125602	5536	346	A	SR 261, Right	120	96	12	6	Plentiful	Poor	> 50/yr.	2/yr.	13-32.jpg	Switchbacks
rf_4421_06	593939	4125774	5671	731	A	SR 261, Left	120	96	12	6	Plentiful	Poor	> 50/yr.	2/yr.	13-31.jpg	
rf_4421_07	594234	4125781	5833	323	A	SR 261, Right	120	88	12	6	Plentiful	Poor	> 50/yr.	2/yr.	13-29.jpg	
rf_4421_08	594242	4125873	6013	505	A	SR 261, Left	120	68	12	6	Plentiful	Poor	> 50/yr.	2/yr.	13-28.jpg	
rf_4421_09	594056	4126069	6248	567	A	SR 261, Right	120	68	12	6	Plentiful	Poor	> 50/yr.	2/yr.	13-27.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4421_10	600763	4112109	4136	438	B	SR 163, Left	24	20	5	2	Plentiful	Fair	5/yr.	2/yr.	13-26.jpg	
rf_4421_11	581315	4101567	5581	132	B	SR 163, Left	24	18	6	3	Plentiful	Good	6/yr.	2/yr.	13-25.jpg	
rf_4421_12	581081	4101238	5632	87	B	SR 163, Right	24	18	6	3	Plentiful	Good	6/yr.	2/yr.	13-24.jpg	
rf_4421_13	581207	4101427	5622	63	B	SR 163, Right	24	18	6	3	Plentiful	Good	6/yr.	2/yr.	13-23.jpg	
rf_4421_14	581323	4101570	5599	63	B	SR 163, Right	24	18	6	3	Plentiful	Good	5/yr.	2/yr.	13-22.jpg	
rf_4421_15	602109	4118828	4365	55	B	SR 163, Right	12	9	5	2	Plentiful -	Good	2/yr.	2/yr.	13-21.jpg	
rf_4421_16	608061	4122498	4781	97	B	SR 163, Right	24	18	6	3	Plentiful -	Good	4/yr.	2/yr.	13-20.jpg	
rf_4421_17	608334	4122586	4807	180	B	SR 163, Right	24	18	6	3	Plentiful -	Good	4/yr.	2/yr.	13-19.jpg	
rf_4421_18	617800	4124487	4506	239	A	SR 163, Right	60	44	12	6	Plentiful	Poor	7/yr.	2/yr.	13-18.jpg	
rf_4421_19	629578	4128515	4446	664	A	SR 191, Left	36	24	8	6	Plentiful	Fair	12/yr.	2/yr.	13-17.jpg	
rf_4421_20	652916	4124922	4451	461	A	SR 262, Left	12	9	5	1	Plentiful	Fair	8/yr.	2/yr.	13-16.jpg	
rf_4421_21	651859	4124815	4444	602	A	SR 262, Left	12	88	5	1	Plentiful	Fair	8/yr.	2/yr.	13-15.jpg	
rf_4421_22	630180	4127534	4350	1682	A	SR 163, Left	144	88	12	6	Plentiful	Good	8 - 10/yr.	2/yr.	13-14.jpg	

Maintenance Station: Bothwell

rf_1432_01	382934	4630352	4857	372	B	I - 84 West, Left	36	24	6	3	Plentiful -	Good	5 - 6/yr	1/yr.	23-23.jpg	Off ramp on exit 26, Barrier in place for half of cut
rf_1432_02	379567	4614134	4388	110	C	SR 83, Right	36	24	6	3	Plentiful	Good	3/yr.	1/yr.	23-22.jpg	
rf_1432_03	387569	4608760	4290	84	C	SR 102, Left	24	12	6	3	Limited +	Poor	3/yr.	1/yr.	23-21.jpg	

Maintenance Station: Brigham

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_1423_01	419672	4594263	5023	184	B	SR 89, Right	36	24	6	3	Plentiful	Poor	3 - 4/yr.	1/yr.	14-11.jpg	Retaining wall in place and barrier
Maintenance Station: Cedar																
rf_4524_01	319772	4171511	5943	140	A	SR 14, Left	60	48	8	6	Plentiful	Poor	> 50/yr.	1/yr.	9-12.jpg	
rf_4524_02	320129	4171359	5971	294	A	SR 14, Left	36	24	6	3	Plentiful	Poor	> 50/yr.	1/yr.	9-11.jpg	Blind Curve
rf_4524_03	321475	4171423	6085	97	B	SR 14, Left	12	9	5	2	Plentiful	Poor	10/yr.	1/yr.	9-10.jpg	
rf_4524_04	322557	4171016	6185	194	A	SR 14, Left	12	9	3	1	Plentiful	Poor	10/yr.	1/yr.	9-09.jpg	
rf_4524_05	326240	4168429	6614	225	A	SR 14, Left	36	24	6	3	Plentiful -	Fair	> 50/yr.	1/yr.	9-08.jpg	Blind Curve, Could launch from above
rf_4524_06	327617	4167770	6754	126	A	SR 14, Right	36	24	8	6	Plentiful	Fair	30/yr.	1/yr.	9-07.jpg	
rf_4524_07	327925	4167366	6887	392	A	SR 14, Right	12	9	6	3	Plentiful	Good	50/yr.	1/yr.	9-06.jpg	
rf_4524_08	328445	4166943	7057	631	A	SR 14, Right	12	9	6	3	Plentiful	Good	30 - 40/yr.	1/yr.	9-05.jpg	Barrier for part
rf_4524_09	328804	4166647	7157	302	A	SR 14, Right	36	20	6	3	Plentiful	Poor	50/yr.	1/yr.	9-04.jpg	Blind Curve
rf_4524_10	329145	4166183	7200	854	A	SR 14, Right	48	24	8	6	Plentiful	Poor	> 50/yr.	1/yr.	9-03.jpg	Blind Curve
rf_4524_11	329361	4165076	7452	1498	A	SR 14, Left	36	24	8	6	Plentiful	Poor	> 50/yr.	1/yr.	9-02.jpg	Blind Curve
rf_4524_12	329227	4163341	7779	540	A	SR 14, Right	36	24	6	3	Plentiful	Poor	30 - 40/yr.	1/yr.	9-01.jpg	
rf_4524_13	333025	4162374	8854	174	A	SR 14, Left	36	24	6	3	Plentiful -	Poor	50/yr.	1/yr.	10-35.jpg	Blind Curve
rf_4524_14	333277	4162388	8904	108	A	SR 14, Left	36	24	6	3	Plentiful	Poor	50/yr.	1/yr.	10-34.jpg	
rf_4524_15	333454	4162363	8956	84	A	SR 14, Left	24	12	5	2	Plentiful -	Poor	30 - 40/yr.	1/yr.	10-33.jpg	
rf_4524_16	333680	4162287	9007	114	A	SR 14, Left and Right	24	12	5	2	Plentiful	Poor	40 - 50/yr.	1/yr.	10-32.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northings</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4524_17	333814	4161875	9099	144	A	SR 14, Left	36	24	6	3	Plentiful	Fair	40/yr.	1/yr.	10-31.jpg	
rf_4524_18	333701	4161626	9235	111	A	SR 14, Left and Right	36	24	6	3	Plentiful	Fair	40/yr.	1/yr.	10-30.jpg	Blind Curve
rf_4524_19	335667	4160149	9630	1250	A	SR 14, Left	36	24	6	3	Plentiful -	Poor	50 - 60/yr.	1/yr.	10-28.jpg	Blind Curve
rf_4524_20	336951	4175677	9453	708	B	SR 143, Right	12	9	4	1	Plentiful -	Poor	10/yr.	1/yr.	10-26.jpg	Blind Curve
rf_4524_21	337131	4175858	9298	68	A	SR 143, Left	12	9	5	2	Plentiful	Poor	50/yr.	1/yr.	10-25.jpg	Blind Curve
rf_4524_22	337441	4176354	9119	1076	A	SR 143, Right	24	12	6	3	Plentiful	Poor	50/yr.	1/yr.	10-24.jpg	Blind Curve
rf_4524_23	337774	4177030	8835	127	A	SR 143, Right	24	12	6	3	Plentiful	Poor	40/yr.	1/yr.	10-23.jpg	Blind Curve
rf_4524_24	338028	4178459	8345	121	A	SR 143, Left	24	18	5	2	Plentiful -	Fair	40/yr.	1/yr.	10-22.jpg	Blind Curve
rf_4524_25	338071	4179537	8044	571	A	SR 143, Left	36	24	6	3	Plentiful	Poor	30 - 40/yr.	1/yr.	10-21.jpg	Blind Curve
rf_4524_26	337181	4180770	7614	153	A	SR 143, Left	36	24	8	6	Plentiful	Poor	40/yr.	1/yr.	10-20.jpg	Blind Curve

Maintenance Station: Colton

rf_4435_01	505203	4407164	7186	262	A	SR 6, Right	36	24	6	3	Plentiful	Good	20 - 30/yr.	2/yr.	16-08.jpg	
rf_4435_02	504884	4406437	7071	414	A	SR 6, Right	36	24	8	6	Plentiful	Fair	20 - 30/yr.	1/yr.	16-07.jpg	
rf_4435_03	504942	4406038	7021	85	B	SR 6, Right	36	24	8	6	Plentiful -	Good	10 - 15/yr.	1/yr.	16-06.jpg	
rf_4435_04	505264	4405806	6981	510	A	SR 6, Right	60	36	8	6	Plentiful	Fair	20 - 30/yr.	1/yr.	16-05.jpg	Blind Curve
rf_4435_05	505838	4405313	6880	69	A	SR 6, Right	36	24	6	3	Plentiful	Fair	20 - 30/yr.	1/yr.	16-04.jpg	overhang
rf_4435_06	505826	4404930	6819	157	A	SR 6, Right	60	36	8	6	Plentiful	Good	20 - 30/yr.	1/yr.	16-03.jpg	
rf_4435_07	506019	4404348	6741	155	A	SR 6, Right	60	36	6	3	Plentiful	Fair	20 - 30/yr.	1/yr.	16-02.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4435_08	506715	4403605	6648	158	B	SR 6, Right	60	36	8	6	Plentiful	Good	5 - 6/yr	1/yr	16-01.jpg	
rf_4435_09	507498	4402826	6558	81	B	SR 6, Right	24	12	6	3	Plentiful	Good	4 - 5/yr	1/yr	17-36.jpg	
rf_4435_10	508093	4401886	6488	470	B	SR 6, Right	48	36	8	6	Plentiful	Good	6 - 7/yr	1/yr	17-35.jpg	
rf_4435_11	509664	4400303	6311	87	B	SR 6, Right	48	36	6	3	Plentiful	Good	2 - 3/yr	1/yr	17-34.jpg	
rf_4435_12	510171	4399448	6277	202	B	SR 6, Right	36	24	6	3	Plentiful	Good	3 - 4/yr	1/yr	17-33.jpg	
rf_4435_13	510731	4398793	6215	203	A	SR 6, Right	36	24	6	3	Plentiful	Good	8 - 9/yr	1/yr	17-32.jpg	Wasn't a problem until the earthquake 2 years ago
rf_4435_14	511037	4398043	6172	86	A	SR 6, Right	72	48	8	6	Plentiful	Good	20 - 30/yr	1/yr	17-31.jpg	
rf_4435_15	511283	4397699	6162	193	B	SR 6, Right and Left	24	12	6	3	Plentiful	Good	4 - 5/yr	1/yr	17-30.jpg	
rf_4435_16	511532	4396774	6090	238	A	SR 6, Right	36	24	8	6	Plentiful	Poor	40/yr	1/yr	17-29.jpg	Blind Curve
rf_4435_17	511301	4395670	6047	64	B	SR 6, Right	24	12	6	3	Plentiful	Good	4 - 5/yr	1/yr	17-28.jpg	Guard rail catches some material
rf_4435_18	513154	4398503	6332	52	B	SR 191, Right	24	18	6	3	Limited +	Fair	6 - 7/yr	1/yr	17-27.jpg	
rf_4435_19	513631	4398848	6381	184	A	SR 191, Right	18	12	6	3	Limited +	Poor	10 - 20/yr	1/yr	17-26.jpg	
rf_4435_20	514239	4399588	6431	64	A	SR 191, Right	24	12	8	6	Limited +	Fair	10 - 15/yr	1/yr	17-25.jpg	Blind Curve
rf_4435_21	517694	4403052	6957	68	B	SR 191, Right	24	12	6	3	Limited +	Good	5 - 6/yr	1/yr	17-24.jpg	
rf_4435_22	517631	4403134	6965	241	A	SR 191, Left	36	20	8	6	Plentiful -	Fair	30 - 40/yr	1/yr	17-23.jpg	Blind Curve
rf_4435_23	517686	4403584	7043	86	B	SR 191, Left	12	9	6	3	Plentiful -	Fair	5 - 6/yr	1/yr	17-22.jpg	
rf_4435_24	518045	4404369	7088	569	B	SR 191, Left	36	24	6	3	Plentiful -	Fair	5 - 6/yr	1/yr	17-21.jpg	
rf_4435_25	518448	4404715	7105	195	A	SR 191, Left	36	24	6	3	Plentiful	Fair	20/yr	1/yr	17-20.jpg	Blind Curve

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4435_26	518502	4404706	7109	52	B	SR 191 Right	12	9	6	3	Limited +	Good	2/yr	1/yr	17-19.jpg	

Maintenance Station: Cottonwood

rf_2433_01	433710	4496710	4984	149	A	SR 190 Right	18	10	6	3	Limited +	Fair	15/yr	3/yr	IMG_1118.jpg	Few car accidents, not sure about injuries
rf_2433_02	436610	4497059	5491	191	A	SR 190 Right	48	36	24	12	Plentiful	Fair	24/yr	3 - 6/yr	IMG_1119.jpg	Accidents - bus went off road, hit rock
rf_2433_03	436817	4497106	5577	271	B	SR 190 Right	48	36	24	12	Limited	Poor	3 - 6/yr	3/yr	IMG_1120.jpg	No accidents
rf_2433_04	437176	4497443	5694	110	B	SR 190 Right	6	4	3	1	Limited	Fair	3/yr	3/yr	IMG_1122.jpg	
rf_2433_05	451004	4495759	8695	467	B-	SR 190 Right	24	12	18	10	Limited	Poor	1 - 2/yr	2/yr	IMG_1124.jpg	
rf_2433_06	444663	4500296	7397	223	B	SR 190 Left	12	9	6	4	Limited +	Fair	1 - 2/yr	3 - 6/yr	IMG_1125.jpg	
rf_2433_07	444462	4500251	7317	204	B	SR 190 Left	12	9	6	3	Limited	Fair	4/yr	3/yr	IMG_1126.jpg	
rf_2433_08	444231	4500141	7223	307	B	SR 190 Left	36	24	3	2	Limited +	Fair	20 - 30/yr	7 - 10/yr	IMG_1127.jpg	Mostly fine grained till
rf_2433_09	444033	4500011	7150	0	B	SR 190 Left	12	9	5	3	Limited +	Fair	3 - 6/yr	3 - 6/yr	IMG_1128.jpg	
rf_2433_10	443721	4499752	7131	557	B	SR 190 Left	8	6	5	3	Limited +	Poor	3 - 6/yr	3 - 6/yr	IMG_1129.jpg	
rf_2433_11	443260	4499624	7103	99	B	SR 190 Left	12	9	6	4	Limited	Fair	1 - 2/yr	2 - 3/yr	IMG_1130.jpg	
rf_2433_12	442894	4499381	7091	170	B-	SR 190 Left	24	12	6	4	Limited +	Fair	1/yr	2/yr	IMG_1131.jpg	
rf_2433_13	442628	4499279	7074	143	B-	SR 190 Left	12	9	6	4	Limited	Fair	1 - 2/yr	2/yr	IMG_1132.jpg	
rf_2433_14	441636	4499040	7022	8	B	SR 190 Left	12	9	12	6	Limited	Poor	3 - 6/yr	3 - 6/yr	IMG_1133.jpg	
rf_2433_15	441634	4499036	6994	0	A	SR 190 Left	36	24	18	10	Plentiful	Poor	7 - 10/yr	3 - 6/yr	IMG_1134.jpg	
rf_2433_16	441277	4498911	7032	60	A	SR 190 Left	36	24	12	6	Plentiful	Fair	20/yr	7 - 10/yr	IMG_1137.jpg	

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in) High Low	Average (in) High Low	Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_2433_17	441186	4498776	6975	178	A	SR 190 Left	180 96	36 24	Pleintful	Poor	40/yr	40/yr	IMG_1138.jpg	Accidents
rf_2433_18	440675	4498550	6728	266	B-	SR 190 Left	36 24	6 3	Pleintful	Fair	< 1/yr	< 1/yr	IMG_1140.jpg	Say very little ever on road
rf_2433_19	440801	4498590	6756	0	A	SR 190 Left	12 9	6 3	Pleintful	Fair	3 - 6/yr	3 - 6/yr	IMG_1141.jpg	Accidents, not sure about injuries
rf_2433_20	440518	4498415	6747	0	A	SR 190 Left	60 48	12 6	Pleintful	Poor	7 - 10/yr	3 - 6/yr	IMG_1142.jpg	Accidents
rf_2433_21	440304	4498309	6745	0	B	SR 190 Left	12 9	6 4	Limited	Poor	10/yr	3 - 6/yr	IMG_1143.jpg	
rf_2433_22	440121	4498378	6571	0	B	SR 190 Left	12 9	6 3	Pleintful	Poor	6/yr	3 - 6/yr	IMG_1144.jpg	
rf_2433_23	440036	4498388	6575	0	B	SR 190 Left	12 9	6 4	Pleintful	Poor	6/yr	3 - 6/yr	IMG_1145.jpg	
rf_2433_24	439875	4498390	6544	0	B-	SR 190 Left	48 36	6 4	Limited	—	< 1/yr	3 - 6/yr	IMG_1146.jpg	
rf_2433_25	439486	4498351	6505	335	B-	SR 190 Left	36 24	8 6	Pleintful	Poor	< 1/yr	< 1/yr	IMG_1147.jpg	
rf_2433_26	439154	4498302	6490	208	B	SR 190 Left	60 48	12 6	Limited *	Poor	3/yr	2/yr	IMG_1148.jpg	
rf_2433_27	438787	4498362	6481	557	A*	SR 190 Left	240 48	36 24	Pleintful	Poor	30/yr	7 - 10/yr	IMG_1149.jpg	Fatality 6 years ago of passenger, 10 ft rock fell on car going down canyon
rf_2433_28	438427	4498443	6471	189	B	SR 190 Left	12 9	6 4	Limited	Fair	1/yr	2 - 4/yr	IMG_1150.jpg	
rf_2433_29	438170	4498351	6470	117	B-	SR 190 Left	18 10	8 4	Limited	Poor	1 - 2/yr	< 1/yr	IMG_1151.jpg	Potential
rf_2433_30	435868	4497207	5720	574	B-	SR 190 Left			Limited	Poor	< 1/yr	< 1/yr	IMG_1152.jpg	Adverse jointing, has potential, this site has no history
rf_2433_31	445946	4493422	8663	199	B	SR 190 Left	24 12	12 6	Limited	Poor	2 - 3/yr	2 - 3/yr	IMG_1153.jpg	Start of Little Cottonwood Canyon
rf_2433_32	445044	4493006	8670	1796	B-	SR 190 Left	12 9	4 2	—	—	3 - 6/yr	3 - 6/yr	IMG_1154.jpg	
rf_2433_33	444116	4492545	8670	276	B-	SR 190 Left	12 9	4 2	Limited	Poor	2 - 3/yr	2 - 3/yr	IMG_1155.jpg	
rf_2433_34	441024	4491706	7547	450	B	SR 190 Left	36 24	12 6	Limited	Fair	3 - 6/yr	3 - 6/yr	IMG_1156.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_2433_35	439431	4491459	7050	189	B	SR 190 Left	24	18	12	6	Limited	Fair	3 - 6/yr	7 - 10/yr	IMG_1157.jpg	
rf_2433_36	439192	4491481	6956	292	B	SR 190 Left	24	18	12	6	Limited	Poor	3 - 6/yr	7 - 10/yr	IMG_1158.jpg	
rf_2433_37	438974	4491510	6832	149	B	SR 190 Left	24	18	6	4	Limited	Poor	1 - 2/yr	3 - 6/yr	IMG_1159.jpg	
rf_2433_38	438733	4491553	6706	341	B	SR 190 Left	18	12	10	6	Limited	Fair	1/yr	2/yr	IMG_1160.jpg	
rf_2433_39	437727	4491486	6435	209	B	SR 190 Left	30	24	6	4	Limited	Poor	1/yr	1 - 2/yr	IMG_1161.jpg	

Maintenance Station: Cove Fort

rf_4532_01	359935	4277489	6170	301	B	I - 15 North Right	24	12	6	3	Limited +	Good	6/yr	2/yr	19-16.jpg	
rf_4532_02	360331	4278407	6065	181	B	I - 15 North Right	24	12	6	3	Limited +	Good	12/yr	4 - 5/yr	19-15.jpg	
rf_4532_03	360757	4283031	5732	259	A	I - 15 North Right	24	12	6	3	Plentiful	Good	12/yr	4 - 5/yr	19-14.jpg	
rf_4532_04	360668	4284395	5588	188	B	I - 15 North Right	36	24	6	3	Plentiful	Good	1 - 2/yr	1/yr	19-13.jpg	Blind Curve Barrier in place Might change due to construction
rf_4532_05	360759	4285155	5472	114	B	I - 15 South Left	12	9	5	2	Plentiful	Fair	20/yr	6/yr	19-12.jpg	Mostly small rocks
rf_4532_06	360657	4284633	5520	213	B	I - 15 South Left	12	9	5	2	Plentiful	Poor	12/yr	4 - 5/yr	19-11.jpg	
rf_4532_07	360708	4284204	5559	188	A	I - 15 South Left	24	12	6	3	Plentiful	Fair	15/yr	6/yr	19-10.jpg	
rf_4532_08	368712	4272961	6993	141	B	I - 70 East Right	12	9	5	2	Limited +	Good	6/yr	3 - 4/yr	19-09.jpg	
rf_4532_09	369239	4272634	7119	132	C	I - 70 West Left	36	24	5	2	Limited +	Good	2/yr	1/yr	19-08.jpg	
rf_4532_10	368763	4272961	6999	295	A	I - 70 West Left	36	24	6	3	Plentiful	Fair	30/yr	5 - 6/yr	19-07.jpg	Blind Curve
rf_4532_11	368793	4273611	6893	248	A	I - 70 West Left	24	12	6	3	Plentiful	Good	15 - 20/yr	6/yr	19-05.jpg	

Maintenance Station: Duchesne

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_3434_01	521523	4415679	8979	78	A	SR 191 Right	24	12	6	3	Plentiful	Poor	2/week	4/yr	7-18.jpg	Blind Curve history of sliding
rt_3434_02	520959	4414281	8851	310	B	SR 191 Left	12	9	5	2	Plentiful	Good	2/yr	4/yr	7-17.jpg	Blind Curve
rt_3434_03	520393	4414059	8649	425	A	SR 191 Left	12	9	3	2	Plentiful	Poor	2/week	4/yr	7-16.jpg	
rt_3434_04	520170	4413371	8536	682	A	SR 191 Left	12	9	5	2	Plentiful	Fair	2/week	4/yr	7-15.jpg	Blind Curve
rt_3434_05	519988	4412669	8291	569	A	SR 191 Left	24	12	5	2	Plentiful	Fair	2/week	4/yr	7-13.jpg	Blind Curve: Picture with cut on left of road
rt_3434_06	520104	4411939	8082	306	A	SR 191 Left	36	24	6	3	Plentiful	Fair	2/week	4/yr	7-11.jpg	Blind Curve
rt_3434_07	520063	4411554	7982	287	A	SR 191 Left	36	24	6	3	Plentiful	Poor	2/week	4/yr	7-10.jpg	
rt_3434_08	519998	4411125	7907	478	A	SR 191 Left	36	24	6	3	Plentiful	Good	2/week	4/yr	7-09.jpg	Blind Curve: Launching possible
rt_3434_09	519859	4410749	7816	206	A	SR 191 Left	36	24	6	3	Plentiful	Poor	10 - 12/yr	2/yr	7-07.jpg	Blind Curve: Doesn't fall as much but when it does, a lot comes down
rt_3434_10	519332	4410490	7677	212	B	SR 191 Left	72	36	11	6	Plentiful	Good	1/yr	2/yr	7-05.jpg	
rt_3434_11	518464	4409586	7433	140	B	SR 191 Right	36	24	6	3	Plentiful	Poor	1/yr	2/yr	7-04.jpg	
rt_3434_12	528161	4420582	7589	124	B	SR 191 Left	12	9	3	1	Plentiful	Fair	6/yr	3/yr	7-03.jpg	a lot of little stuff (shale)
rt_3434_13	520078	4412564	8215	102	A	SR 191 Right	24	12	5	2	Plentiful	Fair	2/week	4/yr	7-12.jpg	Blind Curve: picture with cut on right of road
rt_3434_14	521444	4415571	8984	95	A	SR 191 Right	24	12	6	3	Plentiful	Poor	2/week	4/yr	—	just south of section 1
rt_3434_15	521554	4415013	9041	203	B	SR 191 Left & Right	24	12	3	2	Limited *	Good	2/yr	2/yr	—	

Maintenance Station: Echo

rt_2438_01	455668	4544293	5289	416	B	184 East Right	48	24	5	2	Plentiful	Good	1 - 2/yr	< 1/yr	—	Haven't cleaned Ditch out in 5 years Fence guards interstate
rt_2438_02	454752	4537174	5754	76	B	SR 65 Left	36	12	5	5	Limited	Fair	7 - 10/yr	1 - 2/yr	—	

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_2438_03	465115	4537071	5603	484	A	I 80 East Right	24	12	5	5	Plentiful	Fair	7 - 10/yr	1 - 2/yr	3-09.jpg	Loose Conglomerate
rf_2438_04	470005	4541335	5780	280	B	I 80 East Right	12	6	3	1	Plentiful	Good	< 1/yr	1/yr	3-08.jpg	Just got done doing work on it (bolted/blasted)
rf_2438_05	472273	4542934	5868	173	B	I 80 East Right	12	6	3	1	Plentiful	V Good	1 - 2/yr	1/yr	3-07.jpg	Barrier to stop rock
rf_2438_06	474928	4544454	5994	704	A	I 80 East Right	12	6	3	1	Plentiful	Fair	3 - 6/yr	1 - 2/yr	3-06.jpg	
rf_2438_07	488543	4556951	6520	311	C	I 80 West Left	36	24	6	3	Limited +	Good	< 1/yr	1/yr	3-05.jpg	

Maintenance Station: Emery

rf_4436_01	475673	4304811	6225	293	B	SR 10 Right	12	9	6	3	Plentiful	Fair	10/yr	1/yr	18-22.jpg	
rf_4436_02	469560	4292594	6372	136	C	SR 10 Right	36	24	6	3	Limited +	Fair	1 - 2/yr	1/yr	18-21.jpg	Basalt in a clay bed
rf_4436_03	470533	4291183	6628	402	A	I - 70 E Right	24	12	6	3	Plentiful	Fair	50/yr	1/yr	18-20.jpg	
rf_4436_04	515801	4301299	7256	297	B	I - 70 W Left	48	36	6	3	Plentiful	Fair	3 - 4/yr	1/yr	18-18.jpg	
rf_4436_05	477260	4295208	5945	780	B	I - 70 W Left	120	96	8	6	Plentiful	Fair	1 - 2/yr	1/yr	18-16.jpg	When they fall, they're huge, many tons
rf_4436_06	470553	4291259	6630	401	A	I - 70 W Left	24	12	6	3	Plentiful	Fair	50/yr	1/yr	18-14.jpg	

Maintenance Station: Escalante

rf_4324_01	437376	4177290	6321	83	B-	SR 12 Right	24	18	12	6	Limited	Good	2	2	IMG_1578.jpg	
rf_4324_02	433718	4176590	6557	156	B-	SR 12 Right	12	9	6	3	Limited	Good	3	2	IMG_1579.jpg	very sandy
rf_4324_03	432565	4175995	6668	152	B-	SR 12 Right	6	4	3	1	Limited	Good	1	2	IMG_1580.jpg	
rf_4324_04	431287	4175333	6810	54	B	SR 12 Right	6	4	4	2	Limited	Fair	6	2	IMG_1581.jpg	
rf_4324_05	430937	4174701	6935	82	B-	SR 12 Right	8	5	4	1	Limited	Fair	5	2	IMG_1582.jpg	

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4324_06	425684	4165913	7562	48	B	SR 12 Right	36	24	1	1	Limited +	Poor	1	2	IMG_1583.jpg	Covers large part of road
rf_4324_07	425672	4165815	7533	88	B	SR 12 Right	24	12	6	3	Limited +	Poor	0.5		IMG_1584.jpg	
rf_4324_08	425550	4165774	7492	23	B-	SR 12 Right	12	9	6	3	Limited	Poor	3	2	IMG_1585.jpg	
rf_4324_09	425438	4165545	7418	156	B	SR 12 Left	60	36	12	6	Limited	Poor	2	2	IMG_1586.jpg	
rf_4324_10	425438	4165545	7418	156	B	SR 12 Right	60	36	12	6	Limited	Poor	2	2	IMG_1586.jpg	
rf_4324_11	424952	4164764	7174	103	B-	SR 12 Left	12	9	6	3	Limited +	Fair	0.5	2	IMG_1587.jpg	
rf_4324_12	424952	4164764	7174	103	B-	SR 12 Right	12	9	6	3	Limited +	Fair	0.5	2	IMG_1588.jpg	
rf_4324_13	424705	4164423	7119	82	B	SR 12 Right	12	10	8	4	Limited +	Poor	3	2	IMG_1589.jpg	
rf_4324_14	424484	4164371	7079	139	B	SR 12 Left	36	24	18	10	Limited	Poor	2	2	IMG_1590.jpg	
rf_4324_15	424484	4164371	7079	139	B	SR 12 Right	36	24	18	10	Limited	Poor	2	2	IMG_1590.jpg	
rf_4324_16	423910	4164176	6987	61	B-	SR 12 Right	18	12	10	6	Limited	Poor	2	2	IMG_1591.jpg	
rf_4324_17	420340	4162810	6596	113	B	SR 12 Right	12	9	6	3	Limited +	Fair	2	1	IMG_1592.jpg	
rf_4324_18	420241	4162753	6594	115	A	SR 12 Right	12	9	6	3	Pleñtiful -	Good	2	1	IMG_1593.jpg	Large failure (500 cu yds) closed road for 10 hours in 1997. Some future potential for repeat
rf_4324_19	408288	4157945	5988	70	B-	SR 12 Left	8	5	2	1	Limited +	Fair	0.5	2	IMG_1594.jpg	
rf_4324_20	408288	4157945	5988	70	B-	SR 12 Right	8	5	2	1	Limited +	Fair	0.5	2	IMG_1594.jpg	
rf_4324_21	400867	4171267	7341	267	B	SR 12 Right	36	24	12	6	Pleñtiful -	Poor	5	2	IMG_1595.jpg	Rocks have been hit but not reported
rf_4324_22	400617	4171211	7430	247	B+	SR 12 Right	36	24	12	6	Pleñtiful	Poor	5	2	IMG_1596.jpg	heavy in the fall and spring
rf_4324_23	402109	4169497	6919	149	B-	SR 12 Right	8	6	4	1	Limited	Poor	0.5	1	IMG_1597.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4324_24	402135	4169226	6860	46	B-	SR 12 Right	8	6	4	1	Limited	Fair	2	2	IMG_1598.jpg	
rf_4324_25	438583	4179403	6204	150	B	SR 12 Left	18	12	8	4	Limited	Poor	2	2	IMG_1599.jpg	
rf_4324_26	439406	4179769	6168	88	B-	SR 12 Left	36	24	15	7	Limited	Fair	2	2	IMG_1600.jpg	
rf_4324_27	439604	4179858	6158	139	B	SR 12 Left	36	24	15	7	Limited	Fair	3	3	IMG_1601.jpg	
rf_4324_28	439752	4179915	6139	178	A	SR 12 Left	20	18	8	4	Limited +	Poor	5	3	IMG_1602.jpg	Two vehicles known to have damaged tie rods and transmissions
rf_4324_29	459921	4177713	6152	340	B	SR 12 Right	24	18	12	6	Limited	Poor	1	2	IMG_1603.jpg	
rf_4324_30	459921	4177713	6152	340	B	SR 12 Left	24	18	12	6	Limited	Poor	1	2	IMG_1603.jpg	
rf_4324_31	462938	4180661	5513	140	B-	SR 12 Right	10	9	6	3	Limited	Poor	2	1	IMG_1604.jpg	
rf_4324_32	463155	4180563	5444	44	B	SR 12 Right	36	24	8	3	Limited	Fair	0.25	unavail	IMG_1605.jpg	
rf_4324_33	463277	4182218	5274	209	B	SR 12 Right	96	36	18	10	Limited	Poor	2	2	IMG_1606.jpg	
rf_4324_34	463657	4183024	5397	285	B-	SR 12 Right	10	8	6	3	Plentiful	Poor	2	unavail	IMG_1607.jpg	
rf_4324_35	463769	4183311	5494	72	B-	SR 12 Right	36	24	12	6	Plentiful	Poor	0.5	unavail	IMG_1608.jpg	
rf_4324_36	463917	4183350	5576	22	B	SR 12 Right					-	-	unavail	unavail	IMG_1609.jpg	New stress crack developing w/ last 2 years that will eventually spill
rf_4324_37	464076	4183438	5607	179	B-	SR 12 Left	12	9	6	3	Plentiful	Fair	3	0.3	IMG_1610.jpg	
rf_4324_38	464076	4183438	5607	179	B-	SR 12 Right	12	9	6	3	Plentiful	Fair	3	0.3	IMG_1610.jpg	
rf_4324_39	463794	4185734	6041	453	B-	SR 12 Left	8	6	5	2	Plentiful	Poor	1	unavail	IMG_1611.jpg	Narrow road, therefore no ditch
rf_4324_40	460680	4194084	6541	658	B-	SR 12 Left	20	18	6	3	Limited	Poor	1	1	IMG_1612.jpg	Long section
rf_4324_41	463059	4181500	5352	677	B-	SR 12 Left	36	24	12	6	Limited +	Poor	2	0.25	IMG_1613.jpg	Long section

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
Maintenance Station: Eureka																
rf_3421_01	407419	4425223	6252	62	B	SR 6 Right	12	9	6	3	Limited *	Fair	10/yr	1/yr	7-02.jpg	
rf_3421_02	407665	4425435	6250	515	A	SR 6 Right	12	9	6	3	Plentiful	Poor	30/yr	1/yr	7-01.jpg	Blind Curve
rf_3421_03	408367	4425508	6138	882	A	SR 6 Right	24	12	6	3	Plentiful	Fair	30/yr	1/yr	8-36.jpg	Blind Curve
rf_3421_04	408977	4425213	6044	262	A	SR 6 Right	24	12	6	3	Plentiful	Fair	30/yr	1/yr	8-35.jpg	
rf_3421_05	409287	4425010	6031	120	A	SR 6 Right	36	24	8	3	Plentiful	Fair	50/yr	1/yr	8-34.jpg	
rf_3421_06	409814	4424847	5975	127	B	SR 6 Right	12	9	5	2	Limited	Poor	10/yr	1/yr	8-33.jpg	
rf_3421_07	411294	4423922	5641	81	B	SR 6 Left	12	9	5	3	Plentiful	Poor	10/yr	1/yr	8-32.jpg	
rf_3421_08	410068	4424707	5903	57	B-	SR 6 Left	12	9	5	2	Limited	Fair	5/yr	1/yr	8-31.jpg	
rf_3421_09	409825	4424839	5964	120	B	SR 6 Left	12	9	6	3	Limited *	Fair	10/yr	1/yr	8-30.jpg	
rf_3421_10	409342	4424999	6031	130	A	SR 6 Left	24	12	5	2	Plentiful	Poor	60 - 80/yr	1/yr	8-29.jpg	mostly all small rocks
rf_3421_11	408990	4425249	6044	113	A	SR 6 Left	24	12	6	3	Plentiful	Fair	30/yr	1/yr	8-28.jpg	Blind Curve
Maintenance Station: Garrison																
rf_4533_01	270157	4328060	6160	163	B	SR 6 Right	12	8	5	2	Limited *	Poor	20/yr	1/yr	18-12.jpg	
rf_4533_02	272044	4328390	6260	84	B-	SR 6 Right	12	8	5	2	Limited	Fair	5/yr	1/yr	18-11.jpg	
rf_4533_03	274911	4329190	5951	130	A	SR 6 Right	24	18	6	3	Plentiful	Poor	> 50 - 60/yr	1/yr	18-10.jpg	Blind Curve
rf_4533_04	275586	4329247	5904	128	A	SR 6 Right	72	60	8	6	Plentiful	Poor	> 50/yr	1/yr	18-09.jpg	Rocks roll down from up high
rf_4533_05	275868	4329173	5862	201	A	SR 6 Right	72	60	8	6	Plentiful	Poor	> 50/yr	1/yr	18-08.jpg	Blind Curve, rocks can launch from above

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_4533_06	276167	4329109	5817	299	A	SR 6 Right	60	48	6	3	Pleñtful	Poor	> 50/yr	1/yr	18-07.jpg	
rt_4533_07	276562	4329233	5792	220	A	SR 6 Right	48	24	6	3	Pleñtful	Poor	> 60/yr	1/yr	18-06.jpg	Rocks can launch from above
rt_4533_08	276921	4329439	5733	84	A	SR 6 Right	24	12	6	3	Pleñtful	Poor	> 60/yr	1/yr	18-05.jpg	Blind Curve
rt_4533_09	277119	4329397	5680	125	A	SR 6 Right	36	24	6	3	Pleñtful	Poor	> 50/yr	1/yr	18-04.jpg	Rocks can launch from above
rt_4533_10	277536	4329285	5596	91	A	SR 6 Right	12	9	5	2	Pleñtful	Poor	> 50/yr	1/yr	18-03.jpg	
rt_4533_11	277776	4329370	5567	116	A	SR 6 Right	36	24	6	3	Pleñtful	Fair	20/yr	1/yr	18-02.jpg	Rocks can launch from above
rt_4533_12	278929	4329543	5305	102	B	SR 6 Right	24	12	6	3	Limited +	Poor	20/yr	1/yr	18-01.jpg	Rocks roll down from up high
rt_4533_13	296034	4322163	4956	110	B	SR 6 Right	12	9	5	2	Limited +	Poor	15/yr	1/yr	19-36.jpg	
rt_4533_14	297197	4322722	5129	71	B	SR 6 Right	12	9	5	2	Limited	Poor	5/yr	1/yr	19-35.jpg	
rt_4533_15	297317	4322992	5200	383	B	SR 6 Right	12	8	5	2	Limited +	Fair	20/yr	1/yr	19-34.jpg	
rt_4533_16	297349	4323087	5232	142	B	SR 6 Left	12	8	5	2	Limited +	Fair	20/yr	1/yr	19-33.jpg	
rt_4533_17	277559	4329293	5515	50	A	SR 6 Left	12	8	5	2	Pleñtful	Poor	50/yr	1/yr	19-32.jpg	
rt_4533_18	276398	4329180	5708	80	A	SR 6 Left	36	24	6	3	Pleñtful	Poor	> 50/yr	1/yr	19-31.jpg	Blind Curve
rt_4533_19	270195	4328059	6182	201	A	SR 6 Left	36	24	6	3	Pleñtful	Poor	50/yr	1/yr	19-30.jpg	Rocks can launch from above
rt_4533_20	266767	4328978	5805	192	B	SR 6 Left	12	8	5	2	Limited +	Fair	20/yr	1/yr	19-29.jpg	
rt_4533_21	276982	4266142	6310	80	C	SR 21 Right	12	9	5	2	Limited	Fair	5 - 10/yr	1/yr	19-28.jpg	
rt_4533_22	278719	4266267	6358	125	B	SR 21 Left	24	12	6	3	Pleñtful	Fair	20/yr	1/yr	19-27.jpg	
rt_4533_23	278516	4266328	6398	76	B	SR 21 Left	24	12	6	3	Pleñtful	Good	20/yr	1/yr	19-26.jpg	

ID#	Eastings	Northings	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4533_24	278388	4266298	6419	68	B	SR 21 Left	24	12	6	3	Limited +	Good	20/yr	1/yr	19-25.jpg	
rf_4533_25	278216	4266272	6437	159	B	SR 21 Left	24	12	6	3	Limited +	Fair	20/yr	1/yr	19-24.jpg	
rf_4533_26	252772	4277736	6141	106	B	SR 21 Right	24	12	6	3	Plentiful -	Good	20/yr	1/yr	19-23.jpg	
rf_4533_27	252458	4278024	6236	57	B	SR 21 Both Sides	24	18	6	3	Limited +	Good	20/yr	1/yr	19-22.jpg (left)	
rf_4533_28	239673	4306800	5388	70	B	SR 21 Left	12	9	5	1	Limited +	Good	10 - 15/yr	1/yr	19-20.jpg	
rf_4533_29	239182	4308148	5371	283	B	SR 21 Left	12	9	5	1	Limited +	Good	10 - 15/yr	1/yr	19-19.jpg	
rf_4533_30	266721	4328972	5831	261	B	SR 6 Right	12	9	5	2	Limited	Poor	20/yr	1/yr	18-13.jpg	

Maintenance Station: Green River

rf_4432_01	555107	4309028	4296	330	C	I - 70 W Left and Right	12	8	6	3	Plentiful -	Good	< 1/yr	1/yr	11-04.jpg	
rf_4432_02	553116	4308287	4262	545	B	I - 70 W Left and Right	24	12	6	3	Plentiful	Good	1/yr	1/yr	11-03.jpg	
rf_4432_03	543874	4309020	5704	179	B	I - 70 E Right	36	24	6	3	Plentiful	Good	< 1/yr	1/yr	11-02.jpg	
rf_4432_04	544716	4309837	5449	677	B	I - 70 E Right	24	12	5	2	Plentiful -	Good	< 1/yr	1/yr	11-01.jpg	
rf_4432_05	545430	4309748	5395	354	A	I - 70 E Right	36	24	6	3	Plentiful	Fair	6/yr	1/yr	12-36.jpg	Rest Area
rf_4432_06	545702	4309485	5363	158	B	I - 70 E Right	24	12	5	2	Plentiful -	Good	1 - 2/yr	1/yr	12-35.jpg	Rest Area
rf_4432_07	547895	4308451	4799	289	A	I - 70 E Right	24	12	6	3	Plentiful	Fair	20/yr	1/yr	12-34.jpg	Barrier in Place
rf_4432_08	548255	4308358	4712	220	A	I - 70 E Right	36	24	6	3	Plentiful	Fair	15/yr	1/yr	12-33.jpg	
rf_4432_09	548626	4308191	4641	353	A	I - 70 E Right	24	12	6	3	Plentiful	Fair	15/yr	1/yr	12-32.jpg	Blind Curve
rf_4432_10	553143	4308220	4286	542	C	I - 70 E Right	12	8	5	2	Limited +	Good	< 1/yr	1/yr	12-31.jpg	

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
High	Low	High	Low													
Maintenance Station: Hanksville																
rf_4332_01	551436	4193213	4086	191	B	SR 95, Right	10	9	3	1	Limited	Good	52	2	IMG_1509.jpg	
rf_4332_02	551706	4193659	3986	546	B	SR 95, Right	36	24	8	4	Limited	Fair	52	2	IMG_1516.jpg	
rf_4332_03	552586	4193764	3764	101	A	SR 95, Right	92	60	12	6	Plentiful -	Poor	52	4	IMG_1518.jpg	Precarious pinnacle
rf_4332_04	552980	4194100	3719	114	B	SR 95, Right	92	72	6	3	Limited	Fair	52	1	IMG_1520.jpg	
rf_4332_05	554942	4194280	3844	239	B	SR 95, Right	24	12	3	1	Limited	V Good	2	1	IMG_1521.jpg	
rf_4332_06	552753	4195128	3717	170	B	SR 95, Left	24	12	6	3	Limited	Fair	52	1	IMG_1522.jpg	
rf_4332_07	552820	4194862	3724	158	B	SR 95, Left	10	8	8	5	Plentiful -	Poor	52	2	IMG_1523.jpg	
rf_4332_08	552893	4194606	3734	210	A	SR 95, Left	240	60	8	5	Plentiful	Fair	52	2	IMG_1524.jpg	
rf_4332_09	552930	4194349	3688	181	A-	SR 95, Left	240	60	12	6	Limited	Good	52	2	IMG_1525.jpg	
rf_4332_10	552984	4194143	3714	202	A	SR 95, Left	240	60	24	12	Plentiful	Poor	52	2	IMG_1526.jpg	20 foot plus diameter boulder impacted center of road and bounced over guard rail - one time
rf_4332_11	552657	4193785	3733	182	A+	SR 95, Left	72	12	12	6	Plentiful	Poor	52	6	IMG_1527.jpg	
rf_4332_12	551837	4193747	3885	393	A	SR 95, Left	720	60	24	12	Plentiful	Poor	104	6	IMG_1528.jpg	
rf_4332_13	551532	4193724	3932	220	B+	SR 95, Left	24	12	6	3	Plenitful -	Good	52	2	IMG_1529.jpg	Manganese prospecting in cut
rf_4332_14	551430	4193242	4075	209	B	SR 95, Left	18	10	4	2	Limited	Good	52	2	IMG_1530.jpg	
rf_4332_15	551181	4192966	4096	169	B	SR 95, Left	18	10	2	1	Limited	Good	3	2	IMG_1531.jpg	
rf_4332_16	550693	4192965	4031	435	B	SR 95, Left	24	12	4	1	Limited	Good	52	2	IMG_1532.jpg	
rf_4332_17	550337	4193253	3967	336	B-	SR 95, Left	24	12	2	1	Limited +	V Good	52	2	IMG_1534.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_4332_18	549870	4193771	3917	837	B	SR 95 Left	48	24	4	1	Limited	Good	52	2	IMG_1535.jpg	Long section
rt_4332_19	549253	4194153	3835	390	A-	SR 95 Left	96	36	4	1	Plentiful	Good	52	2	IMG_1537.jpg	
rt_4332_20	548887	4194214	3785	164	B-	SR 95 Left	72	24	2	1	Limited	Good	52	2	IMG_1538.jpg	Landslide deposit
rt_4332_21	547830	4195598	3790	168	B-	SR 95 Left	36	12	2	1	Limited	Good	52	2	IMG_1539.jpg	
rt_4332_22	547756	4195718	3802	101	B+	SR 95 Left	144	36	36	24	Plentiful	Fair	4	1	IMG_1540.jpg	Erosion gully has choke stone
rt_4332_23	547067	4197552	3870	207	B	SR 95 Left	96	24	12	6	Limited	Fair	52	4	IMG_1545.jpg	Mossback Fm
rt_4332_24	547050	4198167	3914	106	B+	SR 95 Left	180	48	8	2	Limited	Poor	52	4	IMG_1546.jpg	
rt_4332_25	545633	4201088	4010	295	B	SR 95 Left	36	12	2	1	Limited	Good	52	1	IMG_1547.jpg	
rt_4332_26	545322	4201542	4043	48	B	SR 95 Left	240	48	4	3	Limited	Poor	52	1	IMG_1548.jpg	Short section, has calmed down but has had big boulders in the past
rt_4332_27	544666	4201864	4083	113	B	SR 95 Left	24	12	2	1	Limited	Good	12	1	IMG_1549.jpg	
rt_4332_28	544677	4202992	4121	40	B-	SR 95 Left					—	—	—	—	IMG_1550.jpg	One event in 1982(3). 40 foot slab came out. No activity since contractor error
rt_4332_29	544579	4204046	4151	57	B-	SR 95 Left					—	—	—	—	IMG_1551.jpg	One event in early 80's, no activity since
rt_4332_30	543841	4205021	4205	158	B+	SR 95 Left	72	36	4	1	Plentiful	Good	30	1	IMG_1552.jpg	
rt_4332_31	542785	4205972	4279	84	B	SR 95 Left	120	48	4	1	Limited	Good	12	1	IMG_1553.jpg	Clay undercutting
rt_4332_32	531219	4182017	5319	261	B-	SR 95 Right	48	12	8	2	Limited	Poor	52	2	IMG_1554.jpg	Throughcut, both sides identical
rt_4332_33	531219	4182017	5319	261	B-	SR 95 Left	48	24	8	2	Limited	Poor	52	2	IMG_1555.jpg	Throughcut, both sides identical
rt_4332_34	531336	4180967	5369	272	B	SR 95 Left	24	12	2	1	Limited	Good	52	2	IMG_1556.jpg	In 1976 road was closed 2 days here due to rockslide, chronic problem area
rt_4332_35	530819	4179929	5403	0	B	SR 95 Right	48	12	8	4	Limited	Fair	52	2	IMG_1557.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4332_36	530819	4179929	5403	0	B	SR 95 Left	48	12	8	4	Limited +	Fair	52	2	IMG_1558.jpg	In Summerville Fm. Below Morrison Fm
rf_4332_37	530635	4179198	5443	374	B	SR 95 Right	72	36	24	12	Limited +	Poor	52	2	IMG_1559.jpg	Blocky
rf_4332_38	530635	4179198	5443	374	B	SR 95 Left	72	36	24	12	Limited +	Poor	52	2	IMG_1560.jpg	Blocky
rf_4332_39	529520	4174453	4804	326	B	SR 95 Right	72	24	12	6	Limited	Fair	52	1	IMG_1561.jpg	
rf_4332_40	529520	4174453	4804	326	B	SR 95 Left	72	24	12	6	Limited	Fair	52	1	IMG_1562.jpg	
rf_4332_41	531344	4180965	5383	281	B	SR 95 Left	24	12	2	1	Limited	V Good	52	2	IMG_1563.jpg	
rf_4332_42	521757	4247010	4340	84	B	SR 24 Left	24	12	8	4	Limited +	Fair	12	1	IMG_1564.jpg	3000 T rockfall in Summerville Fm closed road in 1999. scaling has reduced rating from A to B
rf_4332_43	519990	4247078	4404	89	B	SR 24	96	36	12	6	Limited +	Poor	12	1	IMG_1566.jpg	
rf_4332_44	516184	4246425	4401	179	B	SR 24	48	24	4	2	Limited +	Good	12	2	IMG_1567.jpg	
rf_4332_45	511640	4245956	4427	203	B	SR 24	96	36	20	12	Plentiful	Good	12	1	IMG_1568.jpg	
rf_4332_46	510160	4246324	4507	144	B	SR 24	96	36	18	6	Plentiful	Good	12	1	IMG_1569.jpg	
rf_4332_47	509976	4246375	4560	62	B	SR 24	480	60	12	4	Limited	V Good			IMG_1570.jpg	Only once in 30 years did big boulders hit road. happened in 1996
rf_4332_48	534103	4220630	4956	162	B	SR 95 Right	72	48	12	6	Limited	Good	6	2	IMG_1508.jpg	Large boulder fell on road once

Maintenance Station: Heber

rf_3431_01	464434	4491873	6114	458	A	SR 32 Right	48	36	18	6	Limited +	Fair	15/yr	2/yr	7-22.jpg	Blind Curve
rf_3431_02	464416	4492679	6275	296	B	SR 32 Right	12	9	5	2	Limited	Fair	5 - 6/yr	2/yr	7-23.jpg	Blind Curve
rf_3431_03	464415	4493208	6357	646	A	SR 32 Right	12	9	5	2	Plentiful	Poor	8 - 9/yr	2/yr	7-24.jpg	Blind Curve
rf_3431_04	464766	4493713	6423	230	A	SR 32 Right	24	12	6	3	Plentiful	Poor	8 - 10/yr	2/yr	7-25.jpg	Blind Curve

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_3431_05	465126	4493807	6434	133	B	SR 32 Right	18	12	6	3	Limited *	Good	4 - 5/yr	2/yr	7-26.jpg	
rf_3431_06	466432	4493671	6549	137	B	SR 32 Right	12	9	5	2	Limited	Fair	4 - 5/yr	2/yr	7-27.jpg	
rf_3431_07	466762	4493527	6592	452	A	SR 32 Right	36	24	6	3	Plentiful	Fair	20 - 30/yr	4 - 5/yr	7-28.jpg	
rf_3431_08	471173	4494323	6321	146	A	SR 32 Left	12	8	6	3	Plentiful	Fair	12 - 14/yr	2/yr	7-30.jpg	Blind Curve
rf_3431_09	471663	4494556	6252	143	A	SR 32 Right	12	8	6	3	Plentiful	Fair	12 - 14/yr	2/yr	7-31.jpg	Blind Curve
rf_3431_10	466852	4493506	6631	359	A	SR 32 Left	36	24	6	3	Plentiful	Fair	20 - 30/yr	4 - 5/yr	7-29.jpg	
rf_3431_11	463543	4495833	6326	0	B	SR 40 Left	24	12	6	3	Plentiful	Good	2 - 3/yr	1/yr	7-21.jpg	
rf_3431_12	463248	4494128	6264	557	B	SR 40 Right	12	8	6	3	Plentiful	Good	1/yr	1/yr	7-20.jpg	Fence to stop rocks

Maintenance Station: Huntington

rf_4433_01	497691	4356255	5986	183	A	SR 31 Left	12	8	5	2	Plentiful	Fair	50/yr	2/yr	17-18.jpg	
rf_4433_02	495723	4357457	6155	135	A	SR 31 Left	12	8	5	2	Plentiful	Good	50/yr	2/yr	17-17.jpg	
rf_4433_03	495289	4357647	6163	142	A	SR 31 Left	12	9	5	2	Plentiful	Good	50/yr	2/yr	17-16.jpg	
rf_4433_04	494931	4357741	6182	85	A	SR 31 Left	12	9	5	2	Plentiful	Good	50/yr	2/yr	17-15.jpg	
rf_4433_05	494698	4358045	6221	225	A	SR 31 Left	12	8	5	2	Plentiful	Good	50/yr	2/yr	17-14.jpg	
rf_4433_06	494247	4358495	6245	519	A	SR 31 Left	12	8	5	2	Plentiful	Good	50/yr	2/yr	17-13.jpg	
rf_4433_07	492167	4360148	6502	425	A	SR 31 Left	12	8	5	2	Plentiful	Fair	50/yr	2/yr	17-12.jpg	Photo 11 - new sections of guard rail that were replaced when boulders took the rail out
rf_4433_08	490587	4361320	6746	89	A	SR 31 Left	12	8	5	2	Plentiful	Good	50/yr	2/yr	17-10.jpg	
rf_4433_09	489999	4362146	6831	301	A	SR 31 Left	12	9	5	2	Plentiful	Fair	50/yr	2/yr	17-09.jpg	Blind Curve

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_4433_10	489065	4363907	7021	689	A	SR 31 Left	24	12	6	3	Pleintful	Fair	50/yr	2/yr	17-08.jpg	Blind Curve
rt_4433_11	487896	4366922	7219	369	A	SR 31 Left	36	24	6	3	Pleintful	Poor	50/yr	3 - 4/yr	17-07.jpg	Every time it rains, clay fills the ditch
rt_4433_12	487569	4367683	7242	643	A	SR 31 Left	24	12	6	3	Pleintful	Fair	50/yr	2/yr	17-06.jpg	Blind Curve
rt_4433_13	487522	4368198	7291	218	A	SR 31 Left	36	24	5	2	Pleintful	Fair	50/yr	2/yr	17-05.jpg	
rt_4433_14	487220	4368462	7327	184	A	SR 31 Left	36	24	6	3	Pleintful	Fair	50/yr	2/yr	17-04.jpg	Mostly in spring
rt_4433_15	486876	4368828	7357	214	A	SR 31 Left	24	18	5	2	Pleintful	Poor	40/yr	2/yr	17-03.jpg	
rt_4433_16	486513	4369520	7411	222	A	SR 31 Left	12	9	5	2	Pleintful	Fair	40/yr	2/yr	17-02.jpg	
rt_4433_17	486647	4374103	7738	95	A	SR 31 Left	12	8	3	1	Pleintful	Poor	40/yr	2/yr	17-01.jpg	
rt_4433_18	483439	4381898	8267	228	A	SR 31 Left	24	18	6	3	Pleintful	Poor	50/yr	2/yr	18-36.jpg	
rt_4433_19	480523	4382871	8794	89	B	SR 31 Right	24	12	6	3	Limited *	Fair	15/yr	2/yr	18-35.jpg	
rt_4433_20	481897	4383135	8601	1111	A	SR 31 Right	36	24	6	3	Pleintful	Fair	50/yr	2/yr	18-34.jpg	Blind Curve
rt_4433_21	486427	4372905	7744	851	A	SR 31 Right	24	12	5	2	Pleintful	Poor	50/yr	12/yr	18-33.jpg	Clay fills in ditch when it rains, barrier in place down lower
rt_4433_22	486485	4371888	7640	337	B	SR 31 Right	12	8	5	2	Limited *	Fair	15/yr	2/yr	18-31.jpg	
rt_4433_23	486380	4370364	7548	370	A	SR 31 Right	36	24	6	3	Pleintful	Fair	50/yr	2/yr	18-30.jpg	Blind Curve
rt_4433_24	499933	4340438	5653	183	A	SR 10 Left	12	9	5	2	Pleintful	Good	50/yr	2/yr	18-29.jpg	Built berm in mid August, not sure if it works yet, data is before berm
rt_4433_25	489734	4345734	6034	176	A	SR 29 Left	24	12	6	3	Pleintful	Poor	50/yr	1/yr	18-28.jpg	Blind Curve
rt_4433_26	486633	4346857	6235	347	B	SR 29 Left	24	12	5	2	Pleintful	Poor	15/yr	1/yr	18-27.jpg	
rt_4433_27	481196	4347885	6565	4191	A	SR 29 Left	48	36	8	6	Pleintful	Poor	50/yr	2/yr	18-26.jpg	Blind Curves, road closes 3 - 4/yr because of rocks

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rt_4433_28	477882	4349343	6848	2928	A	SR 29 Left	48	36	8	6	Plentiful	Poor	50/yr	2 - 3/yr	18-24.jpg	Blind Curves same as section 27

Maintenance Station: Huntsville

rt_1425_01	428323	4567350	4857	132	A	SR 39 Left	24	12	8	4	Plentiful	Poor	30/yr when it rains	1/yr	4-20.jpg	
rt_1425_02	427947	4567386	4826	162	A	SR 39 Left	24	12	8	4	Plentiful	Poor	30/yr	1/yr	4-05.jpg	
rt_1425_03	427497	4567422	4791	320	A	SR 39 Left	36	24	8	6	Plentiful	Poor	30/yr	1/yr	4-06.jpg	
rt_1425_04	427015	4567355	4767	147	A	SR 39 Left	12	9	5	3	Limited	Poor	30/yr	1/yr	4-07.jpg	Blind Curve
rt_1425_05	426563	4567252	4763	252	A	SR 39 Left	12	9	5	3	—	Poor	30/yr	1/yr	4-08.jpg	Blind Curve
rt_1425_06	422519	4565399	4548	198	A	SR 39 Left	36	24	9	6	Plentiful	Poor	30/yr	1/yr	4-12.jpg	
rt_1425_07	423197	4565495	4492	1183	A	SR 39 Right	72	24	11	6	Plentiful	Poor	30/yr	1/yr	4-15.jpg	2 ft rock fell on road while there
rt_1425_08	424014	4565733	4497	100	A	SR 39 Right	36	24	6	3	Plentiful	Poor	30/yr	1/yr	4-16.jpg	
rt_1425_09	424751	4566005	4499	828	A	SR 39 Right	36	24	6	3	Plentiful	Poor	30/yr	1/yr	4-17.jpg	
rt_1425_10	425450	4566527	4516	540	A	SR 39 Right	36	24	6	3	Plentiful	Poor	30/yr	1/yr	4-19.jpg	
rt_1425_11	426181	4566971	4517	215	B	SR 39 Right	36	24	6	3	Plentiful	Poor	7 - 10/yr	1/yr	4-09.jpg	
rt_1425_12	429064	4567251	4761	275	A	SR 39 Right	72	36	8	4	Plentiful	Poor	30/yr	1/yr	4-04.jpg	Blind Curve
rt_1425_13	429774	4567368	4890	582	A	SR 39 Right	36	12	8	4	Plentiful	Fair	30/yr	1/yr	4-03.jpg	barrier in place
rt_1425_14	430575	4567683	4938	954	A	SR 39 Right	36	12	6	3	Plentiful	Poor	30/yr	1/yr	—	Same as section 13 but no barrier
rt_1425_15	429587	4567503	4927	429	A	SR 158 Left	24	12	8	4	Plentiful	Poor	30/yr	1/yr	4-02.jpg	
rt_1425_16	430375	4568043	4944	1088	B	SR 158 Left	12	8	3	1	Plentiful	Poor	15/yr	1/yr	4-01.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_1425_17	434583	4580593	7903	443	A	SR 158 Left	12	8	4	3	Plentiful	Fair	10/yr	1/yr	5-36.jpg	
rt_1425_18	433813	4578886	7039	1351	A	SR 158 Left	24	12	6	3	Plentiful	Poor	10/yr	1/yr	5-35.jpg	
rt_1425_19	433152	4578343	6678	182	A	SR 158 Left	60	24	8	4	Plentiful	Poor	10/yr	1/yr	5-34.jpg	
rt_1425_20	455323	4584585	8231	148	B	SR 39 Right	24	12	5	3	Limited *	Poor	6/yr	1/yr	5-33.jpg	Seasonal Road
rt_1425_21	456160	4584123	8741	321	B	SR 39 Left	24	12	6	3	Plentiful	Poor	6/yr	1/yr	5-32.jpg	Seasonal Road
rt_1425_22	452042	4585279	7478	108	B	SR 39 Left	24	12	3	1	Limited *	Poor	9/yr	1/yr	5-31.jpg	
rt_1425_23	449901	4577411	6146	286	A	SR 39 Left	36	24	8	4	Limited *	Poor	12 - 13/yr	1/yr	5-30.jpg	Blind Curve
rt_1425_24	444155	4568980	5264	79	A	SR 39 Left	24	18	8	4	Plentiful	Poor	8/yr	1/yr	5-28.jpg	Blind Curve - Launching off of slope above possible
rt_1425_25	443740	4568844	5267	64	B	SR 39 Left	12	8	6	3	Limited	Poor	8/yr	1/yr	5-26.jpg	
rt_1425_26	442628	4568706	5170	134	A	SR 39 Left	60	24	8	4	Plentiful	Poor	8/yr	1/yr	5-23.jpg	Launch capability from up slope

Maintenance Station: Hurricane

rt_4522_01	300289	4112700	4176	257	A	SR 59 Left	24	18	6	3	Plentiful	Fair	20/yr	2/yr	8-17.jpg	Blind Curve
rt_4522_02	300585	4112433	4261	119	B	SR 59 Right	36	24	6	3	Plentiful	Good	3/yr	2/yr	8-16.jpg	
rt_4522_03	320372	4114817	3795	166	B	SR 9 Left	48	24	11	4	Plentiful	Fair	5 - 6/yr	2/yr	8-15.jpg	Can launch from above
rt_4522_04	320050	4114786	3771	215	B	SR 9 Left	48	24	11	6	Plentiful	Poor	1 - 2/yr	2/yr	8-14.jpg	
rt_4522_05	308235	4118889	3561	138	A	SR 9 Left	24	12	6	3	Plentiful	Poor	6/yr	2/yr	8-13.jpg	
rt_4522_06	299207	4121412	3471	182	A	SR 9 Left	36	24	6	3	Plentiful	Poor	20 - 30/yr	2/yr	8-12.jpg	
rt_4522_07	299125	4121282	3440	127	A	SR 9 Right	36	24	6	3	Plentiful	Poor	20 - 30/yr	2/yr	8-11.jpg	Blind Curve

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4522_08	297717	4122090	3139	86	A	SR 17, Left	48	24	11	4	Plentiful	Poor	> 50/yr	2/yr	8-10.jpg	
rf_4522_09	302099	4142625	4792	0	A	I - 15 North, Right	12	8	6	3	Plentiful	Poor	50/yr	2/yr	8-09.jpg	Across from #10
rf_4522_10	302055	4142577	4794	365	A	I - 15 South, Left	12	8	6	3	Plentiful	Poor	50/yr	2/yr	8-08.jpg	

Maintenance Station: Junction

rf_4326_01	398879	4228855	6131	147	A	SR 62, Right	36	24	8	6	Limited +	Poor	30/yr	2/yr	19-04.jpg	Blind Curve
rf_4326_02	404747	4227042	6324	405	B+	SR 62, Left	36	24	6	3	Plentiful	Fair	5 - 8/yr	2/yr	19-03.jpg	
rf_4326_03	403130	4227796	6294	266	A	SR 62, Left	60	48	8	6	Plentiful	Fair	20 - 25/yr	2/yr	19-01.jpg	
rf_4326_04	401179	4227895	6239	364	A	SR 62, Left	24	12	6	3	Plentiful	Poor	30/yr	4 - 5/yr	20-36.jpg	Blind Curve
rf_4326_05	400828	4227837	6228	363	A	SR 62, Left	60	36	8	6	Plentiful	Poor	30/yr	4 - 5/yr	20-35.jpg	Blind Curve
rf_4326_06	384605	4221243	6170	194	B+	SR 89, Left	24	12	6	3	Plentiful	Good	10 - 15/yr	5/yr	20-33.jpg	
rf_4326_07	382996	4220067	6250	198	B+	SR 89, Left	24	12	6	3	Plentiful	Good	10 - 15/yr	5/yr	20-32.jpg	
rf_4326_08	382832	4218526	6250	223	A	SR 89, Left	36	24	8	6	Plentiful	Fair	10 - 15/yr	5/yr	20-31.jpg	
rf_4326_09	391617	4260670	5801	117	A	SR 89, Left	24	12	6	3	Plentiful	Fair	10 - 15/yr	4 - 5/yr	20-30.jpg	
rf_4326_10	391569	4260935	5805	168	A	SR 89, Left	36	24	8	6	Plentiful	Fair	30/yr	4 - 5/yr	20-29.jpg	Blind Curve
rf_4326_11	390902	4261489	5812	221	A	SR 89, Left	24	12	6	3	Plentiful	Poor	30/yr	4 - 5/yr	20-28.jpg	Blind Curve

Maintenance Station: Kamas

rf_2437_01	472459	4508173	6374	114	B	SR 32	12	6	3	1	Limited	Fair	> 10/yr	< 1/yr	IMG_0867.jpg	Cobbles, hard rain triggered
rf_2437_02	472722	4508116	6385	136	B	SR 32	12	6	3	1	Limited	Poor	> 10/yr	< 1/yr	IMG_0868.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_2437_03	473200	4508148	6395	123	B	SR 32	12	6	3	1	Limited	Fair	3 - 6/yr	< 1/yr	IMG_0869.jpg	Cobbly road cut
rf_2437_04	474041	4495454	6509	50	A	SR 32	36	12	24	12	Plentiful	Fair	> 10/yr	1 - 2/yr	IMG_0870.jpg	Had to shoot boulder on road, car in ditch due to blown tire from rock
rf_2437_05	483733	4490627	6863	779	A	SR 35	36	24	12	6	Plentiful -	Poor	> 10/yr	1 - 2/yr	IMG_0871.jpg	Almost daily falls for 3 - 4 weeks
rf_2437_06	484372	4490158	6900	112	A	SR 35	36	18	12	6	Limited +	Fair	> 10/yr	1 - 2/yr	IMG_0872.jpg	1 - 2 wrecks from hitting rock on road and ending up in ditch. Not sure about injuries
rf_2437_07	484878	4489911	6929	430	B	SR 35	12	9	6	2	Limited	Fair	> 10/yr	1 - 2/yr	IMG_0873.jpg	
rf_2437_08	485525	4489744	6951	273	A	SR 35	12	9	6	2	Limited	Fair	> 10/yr	1 - 2/yr	IMG_0874.jpg	Accident from hitting rock, no injuries, just damage to car
rf_2437_09	488358	4489397	7059	5027	B	SR 35	18	12	6	3	Limited +	Poor	> 10/yr	< 1/yr	IMG_0876.jpg	
rf_2437_10	490997	4489021	7149	289	B	SR 35	12	9	6	2	Limited	Good	> 10/yr	< 1/yr	IMG_0877.jpg	sometimes daily clean
rf_2437_11	489328	4488970	7178	4207	B	SR 35	12	8	6	3	Plentiful	V Good	> 10/yr	< 1/yr	IMG_0878.jpg	Some mud slides from slope, high cut, no accidents
rf_2437_12	485938	4489534	7061	2495	B-	SR 35	18	12	6	3	Limited	Fair	3 - 6/yr	< 1/yr	IMG_0881.jpg	
rf_2437_13	483893	4490569	6909	583	A	SR 35	24	12	6	3	Plentiful -	Poor	> 10/yr	< 1/yr	IMG_0882.jpg	Long section, truck hit by rock of 3 - 4 ft
rf_2437_14	482875	4491087	6854	283	B+	SR 35	12	9	6	3	Plentiful	Fair	> 10/yr	< 1/yr	IMG_0884.jpg	
rf_2437_15	481881	4491800	6774	341	B	SR 35	12	9	6	3	Limited	Poor	> 10/yr	< 1/yr	IMG_0886.jpg	
rf_2437_16	479708	4492706	6661	260	B	SR 35	12	9	6	3	Limited +	Fair	> 10/yr	1 - 2/yr	IMG_0887.jpg	irrigation water wastes from above
rf_2437_17	478362	4498241	6620	0	B	SR 150	12	8	6	3	Limited	Poor	> 10/yr	1 - 2/yr	IMG_0888.jpg	
rf_2437_18	478617	4497992	6648	632	B	SR 150	12	8	6	3	Limited	Poor	> 10/yr	1 - 2/yr	IMG_0889.jpg	
rf_2437_19	478943	4497717	6684	61	A	SR 150	12	8	6	4	Limited	Poor	> 10/yr	< 1/yr	IMG_0890.jpg	Through cut, sharp fragments, chronic, weekly cleanup
rf_2437_20	479120	4497610	6692	306	B	SR 150	12	8	6	4	Limited	Poor	> 10/yr	< 1/yr	-	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_2437_21	479601	4497442	6729	1204	B-	SR 150	12	8	3	1	Limited	Poor	> 10/yr	< 1/yr	IMG_0891.jpg	very little overall, but frequent
rt_2437_22	481012	4496828	6795	1727	B	SR 150	12	8	6	3	Limited	Poor	> 10/yr	1 - 2/yr	IMG_0892.jpg	
rt_2437_23	481998	4496313	6843	291	A	SR 150	12	8	6	3	Limited *	Poor	> 10/yr	1 - 2/yr	IMG_0893.jpg	Chronic rock on road, long section
rt_2437_24	482957	4497133	6944	1043	A	SR 150	12	8	6	3	Plentiful	Fair	> 10/yr	1 - 2/yr	IMG_0895.jpg	Chronic rockfall, fills ditch
rt_2437_25	493255	4496725	7860	0	B+	SR 150	48	24	6	3	Limited	Poor	7 - 10/yr	1 - 2/yr	IMG_0896.jpg	Open 6 months/year, some large boulders on road
rt_2437_26	503809	4498709	9180	5620	B	SR 150	12	8	6	3	Limited	Poor	3 - 6/yr	2/yr	IMG_0897.jpg	paved ditch
rt_2437_27	505335	4502606	9886	2401	B	SR 150	12	8	6	3	Limited	Fair	3 - 6/yr	1 - 2/yr	IMG_0898.jpg	
rt_2437_28	506897	4503390	10288	1441	B	SR 150	24	12	6	3	Limited	Poor	> 10/yr	1/yr	IMG_0899.jpg	
rt_2437_29	508184	4503768	10594	91	B	SR 150	24	12	6	3	Limited *	Poor	> 10/yr	1/yr	IMG_0900.jpg	
rt_2437_30	508382	4504005	10665	280	B+	SR 150	18	10	6	3	Limited	Poor	> 10/yr	1/yr	IMG_0901.jpg	
rt_2437_31	508635	4504321	10624	119	A	SR 150	84	36	12	6	Plentiful	Poor	> 10/yr	1 - 2/yr	IMG_0902.jpg	Large blocks could come down, some launching
rt_2437_32	509142	4505323	10345	399	B-	SR 150	8	6	6	3	Limited	Fair	3 - 6/yr	1/yr	IMG_0903.jpg	in colluvium, some mud sliding
rt_2437_33	508952	4506298	10226	262	B	SR 150	36	24	12	6	Limited *	Poor	7 - 10/yr	1/yr	IMG_0904.jpg	
rt_2437_34	510250	4506820	10205	83	B	SR 150	36	24	6	3	Limited	Fair	> 10/yr	1/yr	IMG_0905.jpg	
rt_2437_35	510459	4506951	10199	102	B	SR 150	18	12	12	6	Limited	Poor	> 10/yr	1/yr	IMG_0906.jpg	
rt_2437_36	510963	4507618	10282	111	B+	SR 150	18	12	12	6	Limited *	Poor	> 10/yr	1/yr	IMG_0907.jpg	
rt_2437_37	511100	4509594	10048	205	B	SR 150	12	9	6	6	Limited	Poor	> 10/yr	1/yr	IMG_0908.jpg	Paved ditch
rt_2437_38	510715	4510525	9871	113	B	SR 150	24	12	12	6	Limited	Fair	3 - 6/yr	1/yr	IMG_0909.jpg	

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_2437_39	510572	4510760	9813	128	A	SR 150	72	60	6	3	Limited	Poor	> 10/yr	1 - 2/yr	IMG_0910.jpg	Large infrequent boulder potential
rf_2437_40	510129	4511741	9637	82	B	SR 150	24	12	8	6	Plentiful -	Good	3 - 6/yr	1/yr	IMG_0911.jpg	
rf_2437_41	509882	4512706	9468	101	B+	SR 150	36	24	12	6	Plentiful -	Poor	> 10/yr	1 - 2/yr	IMG_0912.jpg	Some colluvial sliding
rf_2437_42	509772	4513640	9357	184	A	SR 150	48	36	12	6	Plentiful -	Poor	> 10/yr	2/yr	IMG_0913.jpg	Colluvial cut, long section
rf_2437_43	514323	4528714	8354	116	B	SR 150	24	12	6	3	Limited	Poor	7 - 10/yr	1/yr	IMG_0914.jpg	

Maintenance Station: Kanab

rf_4321_01	363423	4104017	5010	277	A	SR 89 Right	24	12	6	3	Plentiful	Poor	4 - 5/yr	1/yr	8-07.jpg	Blind Curve
rf_4321_02	363409	4104306	5005	90	B	SR 89 Right	24	12	6	3	Plentiful	Fair	4 - 5/yr	1/yr	8-06.jpg	
rf_4321_03	362913	4106269	5040	162	A	SR 89 Right	36	24	6	3	Plentiful	Fair	12 - 14/yr	3 - 4/yr	8-05.jpg	Launch from above
rf_4321_04	362666	4106808	5046	41	B	SR 89 Right	24	12	5	2	-	-	2 - 3/yr	1/yr	8-04.jpg	
rf_4321_05	362498	4107074	5059	64	B	SR 89 Right	12	9	5	2	Plentiful	Good	2 - 3/yr	1/yr	8-03.jpg	
rf_4321_06	360999	4110205	5279	120	A	SR 89 Right	36	24	6	3	Plentiful	Good	3 - 4/yr	1/yr	8-02.jpg	
rf_4321_07	413455	4109066	4816	206	A	SR 89 Left	24	12	6	3	Plentiful	Fair	12/yr	1/yr	8-01.jpg	Blind Curve, Launch off edge a possibility
rf_4321_08	414489	4109457	4667	639	A	SR 89 Right	24	12	6	3	Plentiful	Fair	12/yr	1/yr	9-36.jpg	
rf_4321_09	413929	4109259	4771	109	B	SR 89 Right	24	12	6	3	Plentiful	Good	< 1/yr	1/yr	9-35.jpg	
rf_4321_10	413497	4109073	4813	239	A	SR 89 Right	36	24	8	3	Plentiful	Poor	12 - 14/yr	1/yr	9-34.jpg	Blind Curve, Launch off edge a possibility

Maintenance Station: Kimballs Jct

rf_2435_01	453984	4505544	6559	101	B	SR 224	12	6	3	1	Limited	Fair	3 - 6/yr	< 1/yr	IMG_0853.jpg	
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<i>ID#</i>	<i>Eastings</i>	<i>Northings</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_2435_02	454006	4505375	6569	84	B	SR 224	12	6	3	1	Limited	Fair	3 - 6/yr	< 1/yr	IMG_0854.jpg	
rf_2435_03	458082	4497729	7422	156	A	SR 224	36	12	6	3	Limited	Poor	> 10/yr	1 - 2/yr	IMG_0855.jpg	
rf_2435_04	458033	4497516	7676	63	A	SR 224	36	12	6	3	Limited	Poor	> 10/yr	1 - 2/yr	IMG_0856.jpg	
rf_2435_05	457132	4495916	8588	151	B+	SR 224	12	6	3	1	Limited	Poor	> 10/yr	< 1/yr	IMG_0857.jpg	Seasonal Road
rf_2435_06	458249	4496752	8223	62	B	SR 224	12	6	3	1	Limited	Poor	7 - 10/yr	< 1/yr	IMG_0858.jpg	Seasonal Road
rf_2435_07	458355	4496819	8160	23	B	SR 224	12	6	3	1	Limited	Fair	7 - 10/yr	< 1/yr	IMG_0859.jpg	
rf_2435_08	458401	4496722	8137	26	B	SR 224	12	6	3	1	Limited +	Poor	7 - 10/yr	< 1/yr	IMG_0860.jpg	
rf_2435_09	458199	4496831	8058	8	B+	SR 224	12	6	3	1	Limited	Poor	> 10/yr	3 - 6/yr	IMG_0861.jpg	
rf_2435_10	458200	4496837	8000	0	B	SR 224	12	6	3	1	Limited +	Poor	> 10/yr	3 - 6/yr	IMG_0862.jpg	
rf_2435_11	457979	4497408	7733	104	A	SR 224	36	12	6	3	Plentiful -	Fair	> 10/yr	3 - 6/yr	IMG_0863.jpg	Worst section in this shed, accidents - tire changes, oil pan, no injuries
rf_2435_12	458062	4497911	7718	69	B	SR 224	12	6	3	1	Limited	Fair	7 - 10/yr	1 - 2/yr	IMG_0864.jpg	
rf_2435_13	458289	4499152	7191	117	B	SR 224	48	36	8	6	Limited	Poor	3 - 6/yr	< 1/yr	IMG_0865.jpg	
rf_2435_14	447504	4511664	6855	115	B	1 - 80	18	10	3	3	Limited +	Good	1 - 2/yr	< 1/yr	IMG_0866.jpg	At Parley's Summit

Maintenance Station: Laketown

rf_1437_01	469141	4638795	5966	107	B	SR 30, Left	24	12	6	3	Limited +	Poor	6 - 8/yr	1/yr	5-23.jpg	Blind Curve. Construction planned to cut away part this summer
rf_1437_02	464093	4641855	6754	221	B	89, Right	12	9	3	3	Limited	Poor	3 - 6/yr	1/yr	5-19.jpg	
rf_1437_03	464157	4642393	6897	117	A	89, Right	36	24	6	3	Limited +	Poor	3 - 6/yr	1/yr	5-22.jpg	Blind Curve
rf_1437_04	461105	4641385	7688	192	B	89, Right	12	8	4	1	Limited +	Fair	3 - 5/yr	1/yr	5-20.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_1437_05	475632	4630380	6287	105	A	SR 30 Right	24	12	5	3	Pleñtiful	Fair	6 - 8/yr	1/yr	5-18.jpg	Blind Curve
rf_1437_06	475787	4630122	6419	162	B	SR 30 Right	24	12	5	4	Pleñtiful	Poor	4 - 6/yr	1/yr	5-17.jpg	
rf_1437_07	478318	4628648	6929	144	B	SR 30 Right	12	8	3	1	Limited	Good	6 - 8/yr	1/yr	5-16.jpg	
rf_1437_08	467552	4592171	7498	115	A	SR 39 Left	36	24	5	3	Pleñtiful	Poor	4 - 6/yr	1/yr	5-15.jpg	Seasonal. Closed in winter
rf_1437_09	467411	4592322	7487	58	B	SR 39 Left	12	9	5	3	Pleñtiful	Fair	4 - 6/yr	1/yr	5-14.jpg	Seasonal. Closed in winter
rf_1437_10	456495	4585836	8949	177	B	SR 39 Right	24	12	4	3	Limited	Fair	2 - 4/yr	1/yr	5-13.jpg	Blind Curve. Seasonal. Closed in winter
rf_1437_11	461663	4591882	8566	151	C	SR 39 Right	12	9	3	1	Limited *	Good	2/yr	1/yr	5-12.jpg	Blind Curve. Seasonal. Closed in winter
rf_1437_12	467454	4592259	7657	41	B	SR 39 Right	36	24	5	3	Pleñtiful	Fair	4 - 6/yr	1/yr	5-11.jpg	Seasonal. Closed in winter
rf_1437_13	467705	4592170	7550	114	A	SR 39 Right	36	24	8	6	Pleñtiful	Fair	4 - 6/yr	1/yr	5-10.jpg	Blind Curve. Seasonal. Closed in winter
rf_1437_14	478171	4628815	6975	218	B	SR 30 Right	12	8	3	2	Limited *	Fair	8 - 12/yr	1/yr	5-09.jpg	
rf_1437_15	477116	4629414	6765	61	A	SR 30 Right	24	12	6	3	Pleñtiful	Poor	8 - 12/yr	1/yr	5-08.jpg	Blind Curve
rf_1437_16	476118	4629868	6627	50	B	SR 30 Right	24	12	6	3	Limited	Fair	6 - 10/yr	1/yr	5-07.jpg	
rf_1437_17	475703	4630287	6502	118	A	SR 30 Right	36	24	8	6	Pleñtiful	Fair	8 - 12/yr	1/yr	5-06.jpg	Blind Curve
rf_1437_18	475574	4630367	6435	86	A	SR 30 Right	36	24	6	3	Pleñtiful	Poor	8 - 12/yr	1/yr	5-05.jpg	Blind Curve
rf_1437_19	475417	4630307	6419	106	A	SR 30 Right	36	12	6	3	Pleñtiful	Poor	12 - 16/yr	1/yr	5-04.jpg	Blind Curve
rf_1437_20	475223	4630295	6395	52	A	SR 30 Right	36	24	6	3	Pleñtiful	Poor	8 - 12/yr	1/yr	5-03.jpg	
rf_1437_21	475010	4630337	6327	61	A	SR 30 Right	36	24	6	3	Pleñtiful	Poor	12 - 16/yr	1/yr	5-02.jpg	
rf_1437_22	474766	4630234	6266	101	A	SR 30 Right	24	12	6	3	Pleñtiful	Fair	12 - 16/yr	1/yr	5-01.jpg	Blind Curve. Could launch from up-slope

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_1437_23	474609	4630290	6203	89	A	SR 30, Right	36	24	8	6	Plentiful	Poor	12 - 16/yr	1/yr	6-36.jpg	Launching from above possible
rt_1437_24	474341	4630365	6139	65	A	SR 30, Right	36	24	6	3	Plentiful	Poor	12 - 16/yr	1/yr	6-35.jpg	
<i>Maintenance Station: Lehi</i>																
rt_3423_01	436223	4475861	5132	210	B	SR 92, Right	10	9	8	4	Limited +	Fair	> 10/yr	2/yr	IMG_1029.jpg	
rt_3423_02	436273	4475992	5073	63	B-	SR 92, Right	10	9	5	2	Plentiful	Fair	3 - 6/yr	< 1/yr	IMG_1031.jpg	
rt_3423_03	436443	4476003	5070	91	B-	SR 92, Right	8	7	6	3	Plentiful	Poor	3 - 6/yr	1/yr	IMG_1032.jpg	
rt_3423_04	438330	4476451	5281	175	A	SR 92, Right	36	24	8	6	Plentiful	Poor	> 10/yr	2/yr	IMG_1033.jpg	
rt_3423_05	438507	4476524	5281	0	B	SR 92, Right	24	12	6	3	—	—	3 - 6/yr	2/yr	IMG_1034.jpg	
rt_3423_06	438539	4476535	5282	67	A	SR 92, Right	48	24	12	6	Plentiful	Poor	7 - 10/yr	2/yr	IMG_1035.jpg	
rt_3423_07	438570	4476546	5283	0	B	SR 92, Right	12	8	6	3	Plentiful	Poor	3 - 6/yr	2/yr	IMG_1036.jpg	
rt_3423_08	438794	4476546	5283	0	B	SR 92, Right	10	8	6	1	Limited	Poor	> 10/yr	2/yr	IMG_1037.jpg	
rt_3423_09	439476	4477019	5517	69	B	SR 92, Right	48	24	5	2	Plentiful	Poor	3 - 6/yr	2/yr	IMG_1038.jpg	At tmpanogos cave trailhead, rock wall holds colluvium
rt_3423_10	439553	4477080	5560	149	A	SR 92, Right	48	24	8	3	Plentiful	Poor	> 10/yr	2/yr	IMG_1039.jpg	
rt_3423_11	439867	4477234	5557	123	B+	SR 92, Right	36	24	5	1	Plentiful	Poor	2/yr	2/yr	IMG_1040.jpg	
rt_3423_12	440439	4477280	5559	185	B	SR 92, Right	12	9	4	2	Limited	Poor	7 - 10/yr	2/yr	IMG_1041.jpg	
rt_3423_13	440590	4477329	5559	132	A	SR 92, Right	36	24	12	6	Plentiful	Poor	> 20/yr	2/yr	IMG_1042.jpg	
rt_3423_14	445621	4477306	6078	343	B	SR 92, Right	36	24	10	6	Limited	Poor	1 - 2/yr	2/yr	IMG_1044.jpg	
rt_3423_15	445557	4477647	6614	45	A	SR 92, Right	60	24	6	3	Limited +	Poor	> 10/yr	2/yr	IMG_1045.jpg	One blasted

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_3423_16	446151	4476543	7228	175	B	SR 92 Left	36	24	6	3	Limited	Poor	3 - 6/yr	2/yr	IMG_1049.jpg	
rf_3423_17	446309	4476810	7168	123	B	SR 92 Left	24	12	6	3	Limited +	Poor	> 10/yr	2/yr	IMG_1050.jpg	
rf_3423_18	446248	4476932	7145	157	A	SR 92 Left	36	12	6	3	Plentiful	Poor	> 10/yr	2/yr	IMG_1051.jpg	
rf_3423_19	446104	4477109	7072	298	B	SR 92 Left	18	10	4	2	Plentiful	Poor	> 10/yr	2/yr	IMG_1052.jpg	
rf_3423_20	445818	4477544	6990	155	A	SR 92 Left	60	36	4	1	Plentiful	Poor	> 10/yr	2/yr	IMG_1053.jpg	
rf_3423_21	445761	4477646	6921	140	A	SR 92 Left	48	24	6	3	Limited +	Poor	> 10/yr	2/yr	IMG_1054.jpg	
rf_3423_22	445606	4477724	6872	38	B+	SR 92 Left	36	12	6	3	Limited	Fair	7 - 10/yr	2/yr	IMG_1055.jpg	
rf_3423_23	445377	4477968	6839	105	B	SR 92 Left	36	24	6	3	Limited +	Poor	> 25/yr	2/yr	IMG_1056.jpg	
rf_3423_24	445361	4477676	6712	19	B-	SR 92 Left	12	9	3	1	Limited	Poor	7 - 10/yr	2/yr	IMG_1057.jpg	
rf_3423_25	444827	4477793	6655	20	B-	SR 92 Left	12	9	4	2	Limited	Poor	3 - 6/yr	2/yr	IMG_1058.jpg	
rf_3423_26	444628	4477883	6607	98	B-	SR 92 Left	12	8	3	1	Limited	Poor	> 10/yr	3 - 6/yr	IMG_1059.jpg	
rf_3423_27	444034	4478258	6309	181	B-	SR 144 Left	12	8	6	2	Plentiful	Poor	7 - 10/yr	2/yr	IMG_1060.jpg	
rf_3423_28	445151	4481150	6274	113	B	SR 144 Left	12	8	2	1	Limited	Poor	> 10/yr	2/yr	IMG_1061.jpg	
rf_3423_29	444837	4480548	6269	340	A	SR 144 Left	60	36	4	3	Plentiful	Fair	> 20/yr	2/yr	IMG_1062.jpg	
rf_3423_30	444821	4480509	6256	255	B	SR 144 Left	24	12	3	1	Limited +	Poor	7 - 10/yr	2/yr	IMG_1063.jpg	
rf_3423_31	444715	4480257	6219	0	B	SR 144 Left	48	24	6	3	Limited	Poor	> 10/yr	2/yr	IMG_1064.jpg	
rf_3423_32	444609	4480005	6183	0	A	SR 144 Left	48	36	6	3	Limited	Poor	> 20/yr	2/yr	IMG_1065.jpg	Undercut talus slope
rf_3423_33	444504	4479753	6146	0	B	SR 144 Left	24	12	3	1	Plentiful	Poor	> 10/yr	2/yr	IMG_1066.jpg	Undercut talus slope

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_3423_34	444398	4479501	6110	0	B	SR 144 Left	12	9	6	3	Limited	Poor	> 10/yr	2/yr	IMG_1067.jpg	
rf_3423_35	444293	4479249	6074	221	B	SR 144 Left	36	24	4	2	Limited	Poor	> 10/yr	2/yr	IMG_1068.jpg	
rf_3423_36	444133	4478793	6120	0	A	SR 144 Left	12	9	6	1	Plentiful	Poor	> 25/yr	2/yr	IMG_1070.jpg	
rf_3423_37	443713	4478242	6096	0	B	SR 92 Left	24	12	12	6	Plentiful	Poor	> 20/yr	2/yr	IMG_1071.jpg	Colluvial chute - V short section
rf_3423_38	443428	4478068	6042	0	B	SR 92 Left	24	18	5	1	Limited	Poor	> 20/yr	2/yr	IMG_1072.jpg	
rf_3423_39	443239	4477983	6058	0	B	SR 92 Left	24	12	4	2	—	—	> 10/yr	2/yr	IMG_1073.jpg	
rf_3423_40	442961	4477881	6042	0	A	SR 92 Left	96	48	10	5	Plentiful	Poor	> 10/yr	2/yr	IMG_1074.jpg	8 ft boulder on road here
rf_3423_41	442472	4477753	6007	0	A	SR 92 Left	48	24	4	1	Plentiful	Poor	7 - 10/yr	2/yr	IMG_1075.jpg	Across from Little Mill Campground
rf_3423_42	442064	4477688	5927	0	C+	SR 92 Left					—	—	one time		IMG_1076.jpg	Rock Slide from pinnacle one-time failure
rf_3423_43	441978	4477651	5944	189	A	SR 92 Left	12	9	4	2	Plentiful	Poor	7 - 10/yr	2/yr	IMG_1078.jpg	
rf_3423_44	441827	4477593	5971	135	B	SR 92 Left	24	12	8	2	Plentiful	Poor	1 - 2/yr	1/yr	IMG_1079.jpg	More solid rock face than many
rf_3423_45	441531	4477584	5952	20	B	SR 92 Left	12	8	3	2	Limited +	Poor	7 - 10/yr	2/yr	IMG_1080.jpg	
rf_3423_46	441209	4477510	5932	134	A	SR 92 Left	48	24	8	4	Plentiful	Poor	> 15/yr	2/yr	IMG_1081.jpg	
rf_3423_47	439236	4476923	5737	214	B	SR 92 Left	36	12	4	2	Limited	Poor	> 20/yr	2/yr	IMG_1082.jpg	
rf_3423_48	438838	4476682	5541	175	B	SR 92 Left	36	12	8	5	Plentiful	Poor	> 20/yr	2/yr	IMG_1083.jpg	
rf_3423_49	437896	4476292	5506	712	B	SR 92 Left	36	24	4	1	Limited	Fair	> 20/yr	2/yr	IMG_1084.jpg	Long Section
rf_3423_50	437339	4476076	5428	0	B	SR 92 Left	36	12	2	1	Limited	Poor	7 - 10/yr	2/yr	IMG_1087.jpg	
rf_3423_51	436885	4476145	5125	130	B	SR 92 Left	18	10	2	1	Limited	Poor	7 - 10/yr	2/yr	IMG_1088.jpg	Waypoint 207 next to entry gate

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
							High	Low	High	Low						
Maintenance Station: Loa																
rf_4331_01	480328	4237812	5353	362	B	SR 24 Right	24	18	12	6	Limited *	Poor	30	0.5	IMG_1614.jpg	
rf_4331_02	482177	4237288	5246	105	B-	SR 24 Right					—	—	unavailable	unavailable	IMG_1615.jpg	Large topple June 1996(7) never a problem before 3-4000 cu yds. one time event
rf_4331_03	482733	4237401	5369	109	B	SR 24 Right	20	18	6	3	Plentiful	Poor	52	1	IMG_1617.jpg	
rf_4331_04	482940	4237416	5412	127	B	SR 24 Right	20	18	6	2	Plentiful	Poor	52	1	IMG_1618.jpg	
rf_4331_05	484291	4237028	5173	479	B-	SR 24 Right	12	10	10	2	Plentiful	Poor	8	unavail	IMG_1620.jpg	Black cobble launch over ditch
rf_4331_06	485153	4237215	5139	73	B-	SR 24 Right	18	12	12	6	Plentiful	Good	2	0.5	IMG_1621.jpg	
rf_4331_07	485747	4237746	5102	0	A	SR 24 Right	48	36	24	10	Plentiful	Poor	12	1	IMG_1623.jpg	Has shut close road down
rf_4331_08	486071	4237820	5066	213	A	SR 24 Right	96	48	24	10	Plentiful	Poor	52	1	IMG_1624.jpg	Previous rockfall blocked road. no known accidents. has been scaled but needs more
rf_4331_09	486259	4237729	5063	32	B	SR 24 Right	12	9	8	2	Plentiful	Poor	12	0.5	IMG_1625.jpg	
rf_4331_10	486410	4237720	5050	57	B	SR 24 Right	12	9	6	3	Plentiful	Poor	5	0.5	IMG_1626.jpg	
rf_4331_11	489237	4237465	4947	175	B	SR 24 Right	10	9	8	4	Plentiful	Good	2	0.3	IMG_1627.jpg	
rf_4331_12	489604	4237432	4937	42	B	SR 24 Right	12	9	8	4	Limited *	Fair	12	1	IMG_1628.jpg	
rf_4331_13	489876	4236981	4908	96	B	SR 24 Right	30	18	6	3	Limited	Poor	30	2	IMG_1629.jpg	
rf_4331_14	490045	4236666	4901	307	A-	SR 24 Right	48	18	8	4	Plentiful	Fair	52	1	IMG_1630.jpg	Vehicle hit rock. accident on curve
rf_4331_15	490356	4236659	4892	203	B-	SR 24 Right	36	24	18	8	Plentiful	Good	1	0.5	IMG_1632.jpg	
rf_4331_16	492542	4236145	4865	447	B	SR 24 Right	36	24	12	6	Limited *	Good	12	2	IMG_1633.jpg	Discontinuous section
rf_4331_17	492788	4235985	4888	164	B	SR 24 Right	24	18	10	5	Plentiful	Good	24	2	IMG_1634.jpg	

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4331_18	495287	4236550	4877	344	B-	SR 24, Right					Limited *	Good	10	0.5	IMG_1635.jpg	12-14 years ago, piece of cap rock broke off and shut down road here
rf_4331_19	495506	4236910	4898	68	B-	SR 24, Left	14	12	9	6	Plentiful	V Good	2	0.5	IMG_1636.jpg	Berm was built in 1963 to help prevent rocks from reaching the road
rf_4331_20	489615	4237431	4937	28	B-	SR 24, Left	12	9	6	3	Limited	Good	5	1	IMG_1637.jpg	
rf_4331_21	479936	4237879	5302	86	B	SR 24, Left	24	20	18	7	Plentiful	Poor	2	0.3	IMG_1638.jpg	
rf_4331_22	458656	4271170	8922	418	B	SR 24, Left	12	9	8	5	—	Good	100	1	IMG_1639.jpg	Ditch fills quickly but is large

Maintenance Station: Logan

rf_1436_01	434867	4621548	4716	96	B	SR 89, Right	12	9	7	2	Plentiful	Good	1/yr	1/yr	1-09.jpg	
rf_1436_02	435290	4621444	4730	76	B	SR 89, Right	12	9	5	2	Plentiful	Good	2 - 3/yr	1/yr	1-08.jpg	
rf_1436_03	446342	4626582	5223	109	A	SR 89, Right	12	9	5	2	Limited	Poor	8 - 10/yr	1/yr	1-06.jpg	Blind Curve
rf_1436_04	446397	4626876	5307	63	B	SR 89, Right	9	8	5	1	Limited	Fair	< 1/yr	1/yr	1-05.jpg	
rf_1436_05	446638	4627605	5338	0	B	SR 89, Right	24	12	6	3	Limited	Poor	1/yr	1/yr	—	Blind Curve
rf_1436_06	447068	4627743	5380	94	A	SR 89, Right	12	9	6	3	Limited *	Poor	4 - 5/yr	1/yr	1-04.jpg	Blind Curve
rf_1436_07	447485	4628008	5428	60	A	SR 89, Right	72	36	12	6	Limited	Poor	8/yr	1/yr	1-03.jpg	Rockfall shut down 1.5 lanes 5 yrs Ago (1996) Newspaper clippings
rf_1436_08	447622	4628202	5430	47	B	SR 89, Right	12	9	3	1	Limited	Good	1 - 2/yr	1/yr	1-01.jpg	Rock wall in place
rf_1436_09	448482	4629289	5535	0	B	SR 89, Right	30	12	6	3	Limited	Poor	2 - 3/yr	1/yr	2-24.jpg	
rf_1436_10	449990	4630483	5584	139	A	SR 89, Right	12	9	8	3	Plentiful	Fair	2 - 3/yr	1/yr	2-23.jpg	
rf_1436_11	450064	4630563	5615	85	A	SR 89, Right	12	9	8	3	Plentiful	Fair	15/yr	1/yr	2-22.jpg	
rf_1436_12	449964	4630802	5699	468	B	SR 89, Right	12	9	8	3	Plentiful	Fair	1 - 2/yr	1/yr	2-21.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_1436_13	449821	4631056	5769	115	A	SR 89 Right	12	9	8	3	Plentiful	Poor	10/yr	1/yr	2-20.jpg	Blind Curve
rt_1436_14	449904	4631231	5791	52	B	SR 89 Right	12	9	8	3	Limited	Fair	< 1/yr	1/yr	—	
rt_1436_15	453347	4639875	6389	160	B	SR 89 Right	30	18	10	8	Limited +	Poor	1 - 2/yr	1/yr	2-19.jpg	
rt_1436_16	454700	4643656	6646	115	B-	SR 89 Right	12	9	5	1	Limited	Fair	1/yr	1/yr	2-18.jpg	
rt_1436_17	454910	4644570	6745	103	B	SR 89 Right	12	9	8	3	Limited	Poor	2 - 3/yr	1/yr	—	
rt_1436_18	455107	4644992	6801	105	B	SR 89 Right	18	10	8	6	Limited	Fair	4 - 5/yr	1/yr	2-17.jpg	
rt_1436_19	455149	4645082	6845	93	A	SR 89 Right	12	8	8	3	Plentiful	Poor	4 - 5/yr	1/yr	2-16.jpg	Blind Curve
rt_1436_20	457821	4645352	7283	123	C	SR 89 Right	12	8	8	3	Limited	V Good	< 1/yr	1/yr	2-12.jpg	
rt_1436_21	458965	4644540	7589	123	B	SR 89 Right	12	8	8	3	Plentiful	Good	8 - 10/yr	1/yr	2-15.jpg	
rt_1436_22	458963	4644575	7585	172	A	SR 89 Left	36	12	8	6	Plentiful	Fair	18 - 20/yr	1/yr	2-14.jpg	Blind Curve
rt_1436_23	458208	4645348	7378	216	A	SR 89 Left	24	12	6	3	Limited +	Fair	8 - 10/yr	1/yr	2-13.jpg	
rt_1436_24	457799	4645373	7320	171	A	SR 89 Left	24	12	6	3	Plentiful	Poor	20 - 25/yr	1/yr	2-11.jpg	Pot marks on road from falling rocks
rt_1436_25	457564	4645365	7277	157	A	SR 89 Left	24	12	6	3	Limited +	Fair	8 - 10/yr	1/yr	2-10.jpg	
rt_1436_26	457404	4645364	7253	162	B	SR 89 Left	24	12	6	3	Limited	Fair	4 - 5/yr	1/yr	2-09.jpg	
rt_1436_27	457185	4645386	7216	114	A	SR 89 Left	24	12	6	3	Plentiful	Fair	4 - 5/yr	1/yr	2-08.jpg	
rt_1436_28	457085	4645433	7183	108	B	SR 89 Left	78	36	6	3	Limited	Fair	2 - 3/yr	1/yr	2-07.jpg	
rt_1436_29	451676	4633952	6009	54	B-	SR 89 Left	24	12	6	3	Limited	Poor	2 - 4/yr	1/yr	2-06.jpg	Blind Curve
rt_1436_30	451337	4632492	5926	13	A-	SR 89 Left	24	12	6	3	Plentiful	Poor	6 - 8/yr	1/yr	2-05.jpg	Blind Curve

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_1436_31	450769	4631556	5824	156	A-	SR 89 Left	240	48	8	6	Limited	Poor	8 - 10/yr	1/yr	2-04.jpg	Blind Curve
rf_1436_32	450221	4631303	5706	88	B	SR 89 Left	18	10	6	3	Limited	Fair	2 - 3/yr	1/yr	2-03.jpg	Will change due to construction
rf_1436_33	449802	4631066	5759	66	B	SR 89 Left	18	10	6	3	Plentiful	Fair	2 - 3/yr	1/yr	2-02.jpg	
rf_1436_34	449804	4630389	5626	77	B-	SR 89 Left	12	9	3	1	Limited +	Good	1 - 2/yr	1/yr	2-01.jpg	
rf_1436_35	449082	4630134	5556	98	A	SR 89 Left	12	9	3	1	Plentiful	Fair	4 - 5/yr	1/yr	3-36.jpg	Very high potential
rf_1436_36	449070	4629952	5543	33	B	SR 89 Left	12	9	8	3	Limited	Poor	2 - 3/yr	1/yr	3-35.jpg	
rf_1436_37	448606	4629370	5497	64	A	SR 89 Left	18	10	6	3	Limited	Poor	6 - 8/yr	1/yr	3-34.jpg	Blind Curve. Could launch from above
rf_1436_38	448248	4629314	5503	163	A	SR 89 Left	18	10	6	3	Plentiful	Poor	2 - 3/yr	1/yr	3-33.jpg	Up slope danger
rf_1436_39	448069	4629013	5493	36	A	SR 89 Left	12	9	6	3	Limited	Poor	3 - 5/yr	1/yr	3-32.jpg	Blind Curve
rf_1436_40	447761	4628597	5431	92	B	SR 89 Left	24	12	6	3	Plentiful	Poor	2 - 4/yr	1/yr	3-31.jpg	
rf_1436_41	447685	4628528	5416	112	B	SR 89 Left	18	10	6	3	Limited	Poor	2 - 4/yr	1/yr	3-30.jpg	
rf_1436_42	447625	4628448	5414	90	A	SR 89 Left	36	24	8	6	Plentiful	Poor	4 - 6/yr	1/yr	3-29.jpg	
rf_1436_43	446641	4625728	5232	113	B	SR 89 Left	24	12	6	3	Plentiful	Good	1 - 3/yr	1/yr	3-28.jpg	
rf_1436_44	446161	4625291	5213	348	A-	SR 89 Left	12	9	6	3	Plentiful	Good	4 - 5/yr	1/yr	3-27.jpg	
rf_1436_45	445929	4625132	5213	221	A-	SR 89 Left	18	12	6	3	Plentiful	Good	4 - 5/yr	1/yr	3-25.jpg	Spring in section
rf_1436_46	445300	4624646	5202	132	B	SR 89 Left	12	9	5	2	Plentiful	Good	2 - 3/yr	1/yr	3-24.jpg	
rf_1436_47	445114	4624430	5180	87	B-	SR 89 Left	24	12	6	3	Plentiful	Good	2/yr	1/yr	3-23.jpg	
rf_1436_48	444725	4624191	5158	191	A	SR 89 Left	36	24	8	6	Plentiful	Good	3 - 5/yr	1/yr	3-22.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_1436_49	444482	4623909	5131	86	B	SR 89 Left	18	10	6	3	Pleñtiful	Good	1 - 2/yr	1/yr	3-21.jpg	
rf_1436_50	444202	4623854	5139	162	A	SR 89 Left	12	9	6	3		Fair	4 - 6/yr	1/yr	3-20.jpg	Rocks could launch off of talus slope
rf_1436_51	443661	4623948	5141	163	A	SR 89 Left	18	10	6	3	Pleñtiful	Fair	3 - 5/yr	1/yr	3-19.jpg	Rocks could launch off of talus slope
rf_1436_52	443058	4624006	5141	148	B-	SR 89 Left	18	10	6	3	Pleñtiful	Good	1/yr	1/yr	3-18.jpg	
rf_1436_53	441882	4623698	5082	73	B-	SR 89 Left	12	9	3	1	Limited +	Good	1 - 2/yr	1/yr	3-17.jpg	Large historic rock fall
rf_1436_54	441770	4623683	5071	57	B	SR 89 Left	12	9	6	3	Limited	Good	3 - 4/yr	1/yr	3-16.jpg	
rf_1436_55	440461	4622725	5029	60	B-	SR 89 Left	18	10	6	3	Pleñtiful	Fair	2 - 4/yr	1/yr	3-15.jpg	
rf_1436_56	439906	4622653	5032	172	A	SR 89 Left	48	24	8	6	Pleñtiful	Fair	8 - 10/yr	1/yr	3-14.jpg	Rocks could launch from above
rf_1436_57	439666	4622593	5025	70	B	SR 89 Left	18	10	6	3	Pleñtiful	Good	1 - 2/yr	1/yr	3-13.jpg	
rf_1436_58	439200	4622100	4971	76	B	SR 89 Left	24	12	6	3	Pleñtiful	Fair	1 - 3/yr	1/yr	3-12.jpg	
rf_1436_59	435772	4621404	4908	65	B	SR 89 Left	24	12	6	3	Pleñtiful	Fair	2 - 3/yr	1/yr	3-11.jpg	Spring on cliff
rf_1436_60	415761	4624597	4806	97	B-	SR 30 Left	12	9	3	1	Limited	Poor	1 - 3/yr	1/yr	3-10.jpg	
rf_1436_61	435490	4621393	4766	142	A	SR 89 Right	24	12	6	3		Fair	6 - 8/yr	1/yr	1-07.jpg	

Maintenance Station: Long Valley

rf_4322_01	357890	4150873	7782	145	A	SR 14 Left	24	9	6	3	Pleñtiful	Poor	> 50/yr	1/yr	9-33.jpg	Blind Curve
rf_4322_02	357618	4150714	7858	249	A	SR 14 Left	24	12	6	3	Pleñtiful	Poor	> 50/yr	1/yr	9-32.jpg	Blind Curve
rf_4322_03	346796	4154173	8798	146	A	SR 14 Left	36	24	8	6	Limited +	Poor	> 50/yr	1/yr	9-31.jpg	Blind Curve
rf_4322_04	345588	4154748	9072	169	A	SR 14 Left	36	24	5	2	Limited +	Poor	> 50/yr	1/yr	9-30.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northings</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_4322_05	344356	4154827	9243	112	A	SR 14 Left	12	9	3	1	Pleintful	Poor	> 50/yr	1/yr	9-29.jpg	Blind Curve
rt_4322_06	343207	4156062	9443	119	A	SR 14 Right	18	12	6	3	Pleintful	Poor	30 - 40/yr	1/yr	9-28.jpg	
rt_4322_07	343308	4155810	9421	237	A	SR 14 Right	18	12	6	3	Pleintful	Poor	30 - 40/yr	1/yr	9-27.jpg	
rt_4322_08	346727	4154114	9137	114	A	SR 14 Right	36	24	6	3	Pleintful	Poor	30 - 40/yr	1/yr	9-26.jpg	
rt_4322_09	359070	4151663	7762	0	A	SR 14 Right	12	9	6	3	Pleintful	Poor	30 - 40/yr	1/yr	9-25.jpg	
rt_4322_10	366152	4148535	7293	292	A	SR 89 Left	12	9	6	3	Pleintful	Fair	50/yr	1/yr	9-24.jpg	
rt_4322_11	363965	4144973	7035	135	B	SR 89 Left	8	6	3	1	Pleintful	Good	30 - 40/yr	1/yr	9-23.jpg	
rt_4322_12	362500	4140933	6828	163	A	SR 89 Left	24	12	6	3	Pleintful	Poor	> 50/yr	1/yr	9-22.jpg	
rt_4322_13	361959	4139936	6757	335	A	SR 89 Left	24	12	6	3	Pleintful	Good	> 50/yr	1/yr	9-21.jpg	Will change due to construction
rt_4322_14	359288	4138039	6288	232	A	SR 89 Left	36	24	8	6	Pleintful	Good	20/yr	1/yr	9-20.jpg	
rt_4322_15	358956	4136751	6140	166	A	SR 89 Left	36	24	8	6	Pleintful	Fair	5 - 15/yr	1/yr	9-19.jpg	Blind Curve
rt_4322_16	350480	4118955	5348	240	A	SR 89 Right	12	10	5	2	Pleintful	Fair	15 - 20/yr	1/yr	9-18.jpg	Blind Curve
rt_4322_17	350544	4119396	5310	285	A	SR 89 Right	24	12	6	3	Pleintful	Fair	> 50/yr	1/yr	9-16.jpg	
rt_4322_18	355866	4127421	5514	102	A	SR 89 Right	9	6	3	1	Pleintful	Good	20/yr	1/yr	9-15.jpg	
rt_4322_19	358268	4132334	5835	100	A	SR 89 Right	12	9	5	2	Pleintful	Fair	30 - 40/yr	1/yr	9-14.jpg	
rt_4322_20	361839	4139734	6706	604	A	SR 89 Right	24	12	5	3	Pleintful	Poor	> 50/yr	1/yr	9-13.jpg	

Maintenance Station: Manilla

rt_3436_01	608316	4534590	6405	169	B	SR 44 Left	12	10	5	2	Pleintful	Poor	2 - 3/yr	1/yr	13-13.jpg	
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<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_3436_02	608511	4532729	6629	197	B	SR 44 Left	36	24	5	2	Limited	Good	2/yr	1/yr	13-12.jpg	
rt_3436_03	607921	4532185	6458	136	A	SR 44 Left	24	12	6	3	Plentiful	Poor	50/yr	1/yr	13-11.jpg	
rt_3436_04	610794	4530242	6429	142	B	SR 44 Left	36	24	6	3	Limited	Fair	3 - 4/yr	1/yr	13-09.jpg	
rt_3436_05	609612	4529407	7151	169	A	SR 44 Left	12	9	6	3	Plentiful	Fair	20 - 30/yr	1/yr	13-08.jpg	Blind Curve
rt_3436_06	609406	4528931	7347	509	A	SR 44 Left	12	9	6	3	Plentiful	Good	15 - 20/yr	1/yr	13-07.jpg	
rt_3436_07	607707	4527657	7560	144	A	SR 44 Left	12	9	2	1	Plentiful	Good	10/yr	1/yr	13-06.jpg	
rt_3436_08	610510	4524754	7386	1305	A	SR 44 Left	48	24	8	6	Plentiful	Poor	150/yr	1/yr	13-05.jpg	Blind Curve
rt_3436_08	631976	4530029	6097	103	B	SR 191 Right	36	12	6	3	Plentiful	Good	2 - 3/yr	1/yr	13-03.jpg	
rt_3436_09	633243	4531439	6382	152	A	SR 191 Right	36	12	6	3	Plentiful	Fair	8 - 10/yr	1/yr	13-02.jpg	
rt_3436_10	632642	4533461	6401	347	A	SR 191 Right	24	12	6	3	Plentiful	Poor	20 - 30/yr	1/yr	13-01.jpg	Blind Curve
rt_3436_11	633149	4530358	6111	256	A	SR 191 Left	60	24	8	6	Plentiful	Poor	50/yr	1/yr	14-36.jpg	Flaming Gorge Dam
rt_3436_12	610175	4525800	7510	472	A	SR 44 Right	48	36	8	6	Plentiful	Fair	100/yr	1/yr	14-35.jpg	
rt_3436_13	609674	4529452	7260	79	A	SR 44 Right	12	9	5	2	Plentiful	Fair	20 - 30/yr	1/yr	14-34.jpg	Blind Curve
rt_3436_14	609667	4529638	7095	191	A	SR 44 Right	12	9	5	2	Plentiful	Poor	20 - 30/yr	1/yr	14-33.jpg	
rt_3436_15	609846	4529459	6993	167	B	SR 44 Right	24	12	6	3	Plentiful	Fair	4 - 5/yr	1/yr	14-32.jpg	Blind Curve
rt_3436_16	611012	4529928	6620	175	A	SR 44 Right	24	12	6	3	Plentiful	Poor	50/yr	1/yr	14-31.jpg	Blind Curve
rt_3436_17	607747	4531979	6283	251	A	SR 44 Right	48	36	6	6	Plentiful	Fair	50/yr	1/yr	14-30.jpg	
rt_3436_18	608327	4534565	6454	153	B	SR 44 Right	24	12	6	3	Plentiful	Fair	2 - 3/yr	1/yr	14-29.jpg	

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
Maintenance Station: Milford																
rt_4531_01	301592	4256788	6021	113	B	SR 21 Right	12	8	5	2	Limited	Poor	20/yr	2/yr	19-18.jpg	
rt_4531_02	338822	4231658	5435	191	B	SR 21 Right	60	48	8	6	Plentiful	Good	1/yr	2/yr	19-17.jpg	Rocks can launch from above
Maintenance Station: Moab																
rt_4424_01	610195	4278358	4790	851	B-	SR 313 Right			6	3	Limited	Good	unavail	unavail	IMG_1641.jpg	Long section in competent sandstone
rt_4424_02	610029	4278483	4705	278	B-	SR 313 Left			6	3	Limited	Good	unavail	unavail	IMG_1644.jpg	Long section in competent sandstone
rt_4424_03	620069	4274898	4150	76	B	SR 191 West	24	12	4	2	Limited +	Poor	unavail	unavail	IMG_1646.jpg	
rt_4424_04	622114	4272767	4038	262	B	SR 279 Right	48	24	6	1	Limited +	Fair	unavail	unavail	IMG_1647.jpg	Talus cut
rt_4424_05	623684	4270168	3961	254	A	SR 279 Right	120	36	24	14	Plentiful	Poor	unavail	unavail	IMG_1648.jpg	Steeply undercut rockfall deposit
rt_4424_06	623475	4269475	3978	624	B-	SR 279 Right					-	Poor	unavail	2	IMG_1649.jpg	High exposure, natural grassed ditch
rt_4424_07	622235	4267584	3980	1026	B	SR 279 Right					-	Poor	unavail	unavail	IMG_1650.jpg	Long section of high natural cliffs above highway
rt_4424_08	619758	4266099	3969	867	B	SR 279 Right					Limited +	Good	unavail	unavail	IMG_1657.jpg	Long section
rt_4424_09	619251	4268793	3931	1548	B	SR 279 Right	36	24	24	14	Plentiful	Fair	unavail	unavail	IMG_1658.jpg	Very long section below natural cliff along river
rt_4424_10	619159	4269860	3933	279	B+	SR 279 Right	36	12	12	6	Plentiful	Poor	unavail	2	IMG_1659.jpg	
rt_4424_11	617287	4268380	3924	45	C	SR 279 Right							unavail	unavail	IMG_1660.jpg	Recent rockslide across railroad tracks and road
rt_4424_12	623665	4273978	3988	85	A-	SR 191 Left	72	36	10	5	Plentiful	Poor	unavail	unavail	IMG_1661.jpg	By bridge over Colorado River
rt_4424_13	637145	4254149	5486	425	B	SR 191 West	36	12	4	1	Limited +	Good	unavail	unavail	IMG_1662.jpg	
rt_4424_14	635517	4252005	5336	93	A	SR 191 West	36	24	12	6	Limited +	Poor	unavail	unavail	IMG_1663.jpg	Looks active

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4424_15	635518	4251683	5262	558	B	SR 191 West	36	24	12	6	Pleñtiful	Poor	unavail	unavail	IMG_1664.jpg	
rf_4424_16	636552	4247472	5325	65	B	SR 191 West	48	24	12	6	Limited	Poor	unavail	unavail	IMG_1663.jpg	Overblasted throughout
rf_4424_17	636707	4247188	5330	140	B	SR 191 West	48	24	12	6	Limited	Poor	unavail	unavail	IMG_1667.jpg	Throughcut
rf_4424_18	636707	4247188	5330	140	B	SR 191 East	48	24	12	6	Limited	Poor	unavail	unavail	IMG_1667.jpg	Throughcut
rf_4424_19	636564	4247473	5327	116	B	SR 191 East	36	18	12	6	Pleñtiful	Poor	unavail	unavail	IMG_1668.jpg	
rf_4424_20	634831	4249699	5152	97	B-	SR 191 East	24	12	6	3	Limited	Poor	unavail	unavail	IMG_1670.jpg	
rf_4424_21	635585	4252138	5369	133	B-	SR 191 East	24	12	4	2	Limited	Fair	unavail	unavail	IMG_1671.jpg	
rf_4424_22	637137	4254060	5522	327	B-	SR 191 East	24	12	8	4	Limited	Good	unavail	unavail	IMG_1672.jpg	
rf_4424_23	624158	4273663	3988	131	A	SR 128 East	36	30	24	12	Pleñtiful	Poor	unavail	unavail	IMG_1673.jpg	Loose rock, adjacent to turnoff
rf_4424_24	624614	4273611	3985	813	B	SR 128 East					Limited +	Poor	unavail	unavail	IMG_1674.jpg	High competent cliff, long section
rf_4424_25	625077	4273532	3990	129	A	SR 128 East	48	32	24	10			unavail	unavail	IMG_1676.jpg	Precarious talus
rf_4424_26	625290	4273633	4005	356	B	SR 128 East					Limited +	Poor	unavail	unavail	IMG_1677.jpg	
rf_4424_27	625591	4274018	4030	91	B-	SR 128 East	24	18	12	6	Limited +	Poor	unavail	unavail	IMG_1678.jpg	
rf_4424_28	626359	4274499	3983	800	B	SR 128 East	12	6			Limited	Poor	unavail	unavail	IMG_1679.jpg	competent natural sandston, long section
rf_4424_29	626732	4274224	3985	142	A	SR 128 East	36	24	12	8	Pleñtiful	Poor	unavail	unavail	IMG_1681.jpg	Undercut talus slope
rf_4424_30	627345	4274364	3986	350	A	SR 128 East	36	24	12	8	Pleñtiful	Poor	unavail	unavail	IMG_1682.jpg	
rf_4424_31	628328	4275271	3986	894	B+	SR 128 East	36	24	12	8	Pleñtiful	Poor	unavail	unavail	IMG_1683.jpg	Potential for rocks to launch onto road
rf_4424_32	628972	4275769	3970	735	A	SR 128 East	36	24	12	6	Pleñtiful	Poor	unavail	unavail	IMG_1685.jpg	Series of talus aprons undercut by road

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4424_33	629543	4276166	3961	657	B	SR 128 East	36	32	24	12	Plentiful	Poor	unavail	unavail	IMG_1688.jpg	Less active talus
rf_4424_34	630668	4276769	4002	377	A	SR 128 East	24	20	18	11	Plentiful	Poor	unavail	unavail	IMG_1689.jpg	
rf_4424_35	631360	4276977	4011	288	A	SR 128 East	24	20	18	10	Limited	Poor	unavail	unavail	IMG_1691.jpg	
rf_4424_36	630457	4278428	4018	54	B-	SR 128 East	24	20	12	6	Limited +	Good	unavail	unavail	IMG_1692.jpg	
rf_4424_37	630291	4278522	4022	330	A+	SR 128 East	24	20	12	6	Plentiful	Poor	unavail	unavail	IMG_1693.jpg	Really bad road section on curve
rf_4424_38	630110	4279476	4007	273	A	SR 128 East	24	20	12	8	Plentiful	Poor	unavail	unavail	IMG_1694.jpg	Undercut talus above rock cut
rf_4424_39	630621	4280932	4066	172	A	SR 128 East	24	20	12	8	Plentiful	Poor	unavail	unavail	IMG_1695.jpg	
rf_4424_40	630640	4281092	4103	98	A	SR 128 East	36	24	18	10	Limited	Poor	unavail	unavail	IMG_1696.jpg	Talus
rf_4424_41	630761	4281385	4084	308	B+	SR 128 East	12	9	6	3	Limited +	Poor	unavail	unavail	IMG_1697.jpg	
rf_4424_42	631335	4281788	4031	128	B	SR 128 East	12	9	6	3	Limited +	Poor	unavail	unavail	IMG_1698.jpg	
rf_4424_43	631636	4282065	4035	161	B-	SR 128 East	12	9	6	3	Limited	Poor	unavail	unavail	IMG_1699.jpg	
rf_4424_44	632208	4282530	4066	106	B	SR 128 East	12	9	6	2	Limited	Poor	unavail	unavail	IMG_1700.jpg	
rf_4424_45	633722	4282909	4059	195	B	SR 128 East	36	32	24	14	Limited +	Poor	unavail	unavail	IMG_1701.jpg	
rf_4424_46	634165	4282754	4056	348	A	SR 128 East	36	24	18	9	Plentiful	Poor	unavail	unavail	IMG_1702.jpg	
rf_4424_47	635729	4282501	4047	738	B+	SR 128 East	12	9	6	3	Limited	Poor	unavail	unavail	IMG_1703.jpg	
rf_4424_48	644958	4293688	4111	612	A-	SR 128 East	36	24	18	10	Plentiful	Poor	unavail	unavail	IMG_1704.jpg	
rf_4424_49	644371	4295176	4112	461	A	SR 128 East	36	24	18	10	Plentiful	Poor	unavail	unavail	IMG_1706.jpg	
rf_4424_50	644612	4296125	4110	65	B	SR 128 East	24	20	18	10	Limited	Poor	unavail	unavail	IMG_1707.jpg	

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4424_51	644882	4295676	4111	625	B-	SR 128 East	24	20	18	6			unavail	unavail	IMG_1708.jpg	Low rockout, long section
rf_4424_52	646199	4295619	4115	482	A	SR 128 East	24	20	18	12	Plentiful -	Poor	unavail	unavail	IMG_1709.jpg	talus
rf_4424_53	646500	4295757	4113	195	B	SR 128 East	24	20	18	10	Limited +	Poor	unavail	unavail	IMG_1711.jpg	cliff
rf_4424_54	646520	4296343	4105	355	A	SR 128 East	24	20	18	10	Plentiful -	Poor	unavail	unavail	IMG_1712.jpg	

Maintenance Station: Monticello

rf_4423_01	645761	4183739	6817	215	B	SR 191 Left	36	24	8	6	Plentiful -	Good	1/yr	1/yr	12-30.jpg	
rf_4423_02	640751	4178403	7120	522	B	SR 191 Left	24	12	5	2	Plentiful -	Fair	< 1/yr	1/yr	12-29.jpg	
rf_4423_03	640704	4178284	7096	678	B	SR 191 Right	24	12	5	2	Plentiful -	Fair	< 1/yr	1/yr	12-28.jpg	
rf_4423_04	645825	4183775	6871	210	B	SR 191 Right	36	24	8	6	Plentiful -	Good	1/yr	1/yr	12-27.jpg	
rf_4423_05	630186	4205314	6158	62	A	SR 211 Left	72	60	11	5	Plentiful	Poor	1 - 2/yr	1/yr	12-26.jpg	Lots of potential. When rocks fall they are large
rf_4423_06	629911	4205825	6112	253	A-	SR 211 Left	24	18	5	2	Plentiful	Poor	< 1/yr	1/yr	12-25.jpg	Over hanging above. Potential
rf_4423_07	628341	4208049	5911	367	A-	SR 211 Left	60	36	10	3	Plentiful	Poor	< 1/yr	1/yr	12-24.jpg	Lots of potential
rf_4423_08	628158	4209198	5810	254	A-	SR 211 Left	72	60	11	9	Plentiful	Poor	1/yr	1/yr	12-23.jpg	Blind Curve. Lots of potential
rf_4423_09	626988	4211203	5636	147	B+	SR 211 Left	36	24	11	5	Plentiful	Poor	< 1/yr	1/yr	12-22.jpg	Blind Curve. Potential launch from above
rf_4423_10	630299	4205237	6136	90	A	SR 211 Left					Plentiful	Poor	< 1/yr	1/yr	12-21.jpg	High potential. overhanging slickrock
rf_4423_11	631517	4205026	6285	123	B	SR 211 Right	24	12	5	2	Limited +	Fair	< 1/yr	1/yr	12-20.jpg	Blind Curve
rf_4423_12	664763	4244000	6979	73	A	SR 46 Right	24	12	6	3	Plentiful -	Poor	20 - 30/yr	2/yr	12-18.jpg	Blind Curve
rf_4423_13	665580	4243808	6874	136	A	SR 46 Right	24	12	8	6	Plentiful -	Poor	20/yr	2/yr	12-17.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4423_14	666487	4244202	6456	132	A	SR 46, Right	24	12	6	3	Limited *	Poor	20/yr	1/yr	12-16.jpg	Blind Curve
rf_4423_15	666980	4244146	6300	54	A	SR 46, Right	24	12	8	6	Plentiful -	Poor	10 - 20/yr	1/yr	12-15.jpg	Big Curve
rf_4423_16	666553	4244050	6501	105	B	SR 46, Left	12	10	5	2	Plentiful -	Fair	5/yr	1/yr	12-14.jpg	
<i>Maintenance Station: Morgan</i>																
rf_1426_01	449419	4544771	5183	121	B	I - 84 E, Right	24	12	6	3	Plentiful	Good	3 - 4/yr	1/yr	15-10.jpg	
rf_1426_02	455535	4544621	5281	1099	A	I - 84 E, Right	36	24	8	6	Plentiful	V Good	15 - 20/yr	1/yr	15-09.jpg	Fence in place, half in Morgan, half in Echo
rf_1426_03	450763	4545497	5236	105	A	I - 84 W, Left	24	12	6	3	Plentiful	Good	10 - 12/yr	1/yr	15-07.jpg	
rf_1426_04	450028	4544981	5208	441	A	I - 84 W, Left	36	24	6	3	Plentiful	Good	30 - 40/yr	1/yr	15-06.jpg	Blind Curve, Barrier in place
rf_1426_05	449081	4544434	5181	168	A	I - 84 W, Left	24	12	6	3	Plentiful	Good	20 - 30/yr	1/yr	15-05.jpg	Barrier in place
rf_1426_06	445950	4544265	5117	163	B	I - 84 W, Left	12	10	6	3	Plentiful -	Fair	6 - 7/yr	1/yr	15-04.jpg	
rf_1426_07	445722	4544203	5112	196	B	I - 84 W, Left	24	12	6	3	Plentiful -	Fair	6 - 7/yr	1/yr	15-03.jpg	
rf_1426_08	444720	4543727	5097	124	B	I - 84 W, Left	24	12	6	3	Plentiful -	Good	5 - 6/yr	1/yr	15-02.jpg	Blind Curve
rf_1426_09	444466	4543593	5099	142	B	I - 84 W, Left	60	36	8	6	Plentiful	Fair	5 - 6/yr	1/yr	15-01.jpg	Very large boulder (8 tons) fell about 3 yrs ago and blocked the interstate
rf_1426_10	426281	4554383	4661	191	B	I - 84 E, Right	36	24	6	3	Plentiful	Good	15 - 20/yr	1/yr	16-36.jpg	Barrier in place
rf_1426_12	444985	4520296	7234	105	A	SR 65, Left	24	12	6	3	Plentiful	Fair	25/yr	1/yr	16-35.jpg	Seasonal
rf_1426_13	451334	4530238	5726	47	B	SR 66, Right	12	10	5	2	Limited *	Poor	10-15/yr	1/yr	16-33.jpg	Blind Curve
rf_1426_14	450127	4530694	5774	147	A	SR 66, Right	12	9	5	2	Plentiful -	Poor	20/yr	1/yr	16-32.jpg	Blind Curve
rf_1426_15	449990	4530656	5732	77	A	SR 66, Right	12	9	5	2	Plentiful -	Poor	50/yr	1/yr	16-31.jpg	Blind Curve

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_1426_16	449927	4530569	5758	76	A	SR 66 Right	12	9	5	2	Pleñtiful	Poor	50/yr	1/yr	16-29.jpg	Blind Curve
rf_1426_17	449396	4530221	5731	249	A	SR 66 Right	24	12	5	3	Pleñtiful	Poor	20 - 30/yr	1/yr	16-28.jpg	
rf_1426_18	448993	4530550	5610	176	B	SR 66 Right	12	9	5	2	Pleñtiful	Fair	3 - 4/yr	1/yr	16-27.jpg	
rf_1426_19	448724	4530522	5548	92	B	SR 66 Right	12	9	5	2	Pleñtiful	Poor	5 - 10/yr	1/yr	16-26.jpg	Blind Curve
rf_1426_20	446759	4531801	5424	186	A	SR 66 Right	24	12	6	3	Pleñtiful	Poor	50/yr	1/yr	16-25.jpg	Blind Curve
rf_1426_21	446489	4531895	5413	64	A	SR 66 Right	24	12	6	3	Pleñtiful	Fair	50/yr	1/yr	16-24.jpg	
rf_1426_22	445572	4532660	5339	64	B	SR 66 Right	12	8	5	2	Limited	Fair	7 - 9/yr	1/yr	16-23.jpg	
rf_1426_23	442621	4538434	5147	120	A	SR 66 Right	12	8	3	1	Limited *	Fair	15 - 20/yr	1/yr	16-22.jpg	
rf_1426_24	443558	4544196	5114	129	A	SR 66 Left	12	8	6	3	Pleñtiful	Poor	20/yr	1/yr	16-21.jpg	

Maintenance Station: Mt. Pleasant

rf_4334_01	478539	4388634	8792	353	A	SR 264 Left	12	8	6	3	Pleñtiful	Fair	40/yr	1/yr	16-20.jpg	Spring in cut
rf_4334_02	470714	4391110	8383	341	A	SR 31 Left	12	8	6	3	Pleñtiful	Poor	> 40/yr	1/yr	16-19.jpg	
rf_4334_03	470385	4390734	8271	452	A	SR 31 Left	12	8	5	2	Pleñtiful	Fair	30/yr	1/yr	16-18.jpg	
rf_4334_04	470169	4390478	8189	150	A	SR 31 Left	12	8	5	2	Pleñtiful	Poor	40/yr	1/yr	16-17.jpg	
rf_4334_05	469598	4389447	7894	549	A	SR 31 Left	36	24	6	3	Pleñtiful	Poor	40/yr	1/yr	16-16.jpg	Blind Curve
rf_4334_06	468602	4388964	7567	1649	A	SR 31 Left	36	24	6	3	Pleñtiful	Fair	40/yr	1/yr	16-15.jpg	Blind Curves Could launch from above
rf_4334_07	467338	4388864	7195	882	A	SR 31 Left	36	24	6	3	Pleñtiful	Fair	40/yr	1/yr	16-14.jpg	Blind Curves
rf_4334_08	466739	4388914	7015	126	B	SR 31 Left	18	12	5	2	Pleñtiful	Fair	10 - 15/yr	1/yr	16-13.jpg	Blind Curve

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rt_4334_09	466431	4388879	6934	147	A	SR 31, Left	36	24	6	3	Plentiful	Poor	30/yr	1/yr	16-12.jpg	Blind Curve
rt_4334_10	466157	4388865	6863	109	B	SR 31, Left	36	24	6	3	Plentiful	Fair	10 - 15/yr	1/yr	16-11.jpg	
rt_4334_11	465795	4388869	6759	123	A	SR 31, Left	36	24	6	3	Plentiful	Fair	30/yr	1/yr	16-10.jpg	
rt_4334_12	465497	4388849	6689	257	A	SR 31, Left	24	12	6	3	Plentiful	Poor	30/yr	1/yr	16-09.jpg	

Maintenance Station: Orem

rt_3425_01	444456	4463061	5370	268	B	SR 52	24	12	5	4	Limited +	Good	> 10/yr	1 - 2/yr	IMG_1089.jpg	
rt_3425_02	444856	4463502	4842	175	B	SR 189	12	8	6	3	Limited +	Good	3 - 6/yr	< 1/yr	IMG_1092.jpg	
rt_3425_03	445953	4464410	4920	80	B	SR 189	36	12	6	4	Plentiful	Fair	1 - 2/yr	< 1/yr	IMG_1093.jpg	Better ditch than last section
rt_3425_04	455487	4472906	5438	219	A	SR 189, Right	12	8	4	2	Limited +	Poor	50/yr	2 - 3/yr	IMG_1094.jpg	Tires, transmission, etc. damaged here
rt_3425_05	455809	4473102	5480	552	B	SR 189	12	8	4	2	Limited	Fair	50/yr	2 - 3/yr	IMG_1095.jpg	Tires, undercarriage problems only
rt_3425_06	458510	4476630	5463	902	B	SR 189	24		6	3	Limited	Poor	> 10/yr	2 - 3/yr	IMG_1097.jpg	Long section
rt_3425_07	459813	4478326	5440	100	B-	SR 189, Right	12	10	4	1	Limited	Fair	> 10/yr	2/yr	IMG_1098.jpg	
rt_3425_08	459539	4478161	5439	168	B	SR 189, Right	12	10	4	1	Limited	Fair	7 - 10/yr	1 - 2/yr	IMG_1099.jpg	
rt_3425_09	453687	4471009	5275	13	B	SR 189	12	8	5	2	Limited +	Good	7 - 10/yr	2/yr	IMG_1101.jpg	Needs full ditch for 1 ft. not to get on road
rt_3425_10	453685	4471003	5274	0	B-	SR 189	8	6	4	2	-	-	3 - 6/yr	2/yr	IMG_1102.jpg	
rt_3425_11	453128	4470509	5269	136	B	SR 189	12	8	6	4	Limited +	Fair	> 10/yr	2/yr	IMG_1103.jpg	Old slump at waypoint 227
rt_3425_12	452919	4469886	5258	223	B	SR 189	12	9	6	3	Limited		> 10/yr	2/yr	IMG_1104.jpg	
rt_3425_13	452823	4469370	5244	84	B	SR 189	30	18	4	3	Limited +	Poor	> 10/yr	2/yr	IMG_1105.jpg	

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rt_3425_14	452190	4468989	5270	1323	B-	SR 189	12	6	4	2	Limited	Poor	7 - 10/yr	2/yr	IMG_1108.jpg	Photos 1106-1107 show failed rock support construction: not rock on road here
rt_3425_15	451719	4469537	5346	313	A	SR 189	18	10	6	3	Plentiful	Poor	> 10/yr	1 - 2/yr	IMG_1109.jpg	
rt_3425_16	451668	4469971	5379	613	B	SR 189	12	8	4	3	Plentiful	Poor	7 - 10/yr	1 - 2/yr	IMG_1110.jpg	
rt_3425_17	450542	4471803	6289	52	B	SR 189	18	12	6	3	Limited	Poor	7 - 10/yr	1 - 2/yr	IMG_1111.jpg	
rt_3425_18	451586	4470324	6025	0	B	SR 189	12	8	6	4	Plentiful	Poor	7 - 10/yr	1 - 2/yr	IMG_1112.jpg	
rt_3425_19	452102	4467974	5377	439	B-	SR 189	3	3	2	0.5	Limited	Good	> 10/yr	< 1/yr	IMG_1113.jpg	Good presheared rock cut
rt_3425_20	450543	4467131	5280	209	B	SR 189	16	12	6	4	Plentiful		> 10/yr	< 1/yr	IMG_1116.jpg	Screen protection ineffective upgrade needed
rt_3425_21	450111	4466856	5249	78	B	SR 189	18	10	6	4	Limited	Good	> 10/yr	1 - 2/yr	IMG_1117.jpg	

Maintenance Station: Panguitch

rt_4325_01	376400	4186488	6648	219	B	SR 89 Left	12	8	5	2	Plentiful	Good	10 - 12/yr	2/yr	11-36.jpg	
rt_4325_02	376635	4171534	6849	244	B	SR 89 Left	24	12	6	3	Plentiful	Good	5 - 6/yr	7/yr	11-35.jpg	
rt_4325_03	376342	4170767	6867	260	B	SR 89	36	24	6	3	Plentiful	Good	2 - 3/yr	2/yr	11-34.jpg	
rt_4325_04	376318	4170728	6867	227	B	SR 89 Right	36	24	6	3	Plentiful	Good	2 - 3/yr	2/yr	11-33.jpg	
rt_4325_05	387508	4176617	7519	122	B	SR 89 Left	12	8	5	2	Limited +	Fair	5 - 6/yr	2/yr	11-32.jpg	
rt_4325_06	387159	4176888	7559	33	B	SR 12 Left	6	4	3	1	Limited +	Poor	5 - 6/yr	2/yr	11-31.jpg	
rt_4325_07	387055	4176937	7565	31	A	SR 12 Left	8	5	3	1	Limited +	Poor	25 - 30/yr	2/yr	11-30.jpg	
rt_4325_08	386875	4177083	7535	61	A	SR 12 Left	6	4	3	1	Limited	Fair	25 - 30/yr	2/yr	11-29.jpg	Can roll from above
rt_4325_09	386642	4177278	7516	39	B	SR 12 Left	6	4	3	1	Limited	Poor	10/yr	2/yr	11-28.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northings</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_4325_10	386187	4177464	7468	65	A	SR 12, Left	24	12	6	3	Plentiful	Poor	25 - 30/yr	2/yr	11-27.jpg	Blind Curve
rf_4325_11	385918	4177634	7415	34	B	SR 12, Left	6	5	3	1	Limited +	Far	10/yr	2/yr	11-26.jpg	
rf_4325_12	385662	4177806	7419	42	A	SR 12, Left	6	5	3	1	Plentiful	Poor	25 - 30/yr	2/yr	11-25.jpg	Tunnel, rock over road
rf_4325_13	385510	4177868	7438	45	B	SR 12, Left	6	5	3	1	Plentiful	Poor	10/yr	2/yr	11-24.jpg	Tunnel, rock over road
rf_4325_14	384746	4178227	7314	32	B	SR 12, Left	6	5	3	1	Limited +	Good	5 - 6/yr	2/yr	11-23.jpg	
rf_4325_15	383242	4178550	7154	26	A	SR 12, Left	6	5	3	1	Plentiful	Poor	25 - 30/yr	2/yr	11-22.jpg	
rf_4325_16	382974	4178272	7116	26	B	SR 12, Left	6	5	3	1	Limited +	Poor	5/yr	2/yr	11-21.jpg	
rf_4325_17	382848	4217946	6252	215	A	SR 89, Left	24	12	6	3	Plentiful	Far	50 - 60/yr	2/yr	11-20.jpg	Blind Curve
rf_4325_18	382822	4217536	6227	97	B	SR 89, Left	24	12	6	3	Plentiful	Good	5 - 6/yr	2/yr	11-19.jpg	Lot's of Potential
rf_4325_19	381624	4212987	6302	262	A	SR 89, Left	36	12	6	3	Plentiful	Far	50 - 60/yr	2/yr	11-18.jpg	Blind Curve
rf_4325_20	380806	4209720	6332	80	A	SR 89, Left	36	24	6	3	Plentiful	Poor	3/yr	2/yr	11-17.jpg	More Potential
rf_4325_21	370939	4202953	6764	76	A	SR 89, Left	24	12	6	3	Plentiful	Poor	20 - 25/yr	2/yr	11-16.jpg	Blind Curve. Will be changed next year due to construction
rf_4325_22	366535	4209552	7463	87	A	SR 20, Left	24	12	6	3	Plentiful	Poor	30/yr	2/yr	11-15.jpg	Blind Curve. Might be changed due to construction next year
rf_4325_23	366020	4209757	7625	69	A	SR 20, Left	24	12	6	3	Plentiful	Poor	20 - 25/yr	2/yr	11-14.jpg	Blind Curve, construction next year
rf_4325_24	365620	4209446	7748	78	A	SR 20,	24	12	6	3	Plentiful	Poor	10 - 15/yr	2/yr	11-13.jpg	Blind Curve, construction next year
rf_4325_25	359797	4177954	8051	105	A	SR 143, Left	24	12	6	3	Plentiful	Poor	20 - 30/yr	2/yr	11-12.jpg	
rf_4325_26	359581	4177788	8044	407	A	SR 143, Left	24	12	6	3	Plentiful	Poor	50 - 60/yr	2/yr	11-11.jpg	
rf_4325_27	358458	4177527	8053	56	A	SR 143, Left	24	12	6	3	Limited +	Poor	10 - 15/yr	2/yr	11-10.jpg	Blind Curve

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4325_28	358464	4177275	8056	74	A	SR 143 Left	24	12	6	3	Plentiful	Poor	40 - 50/yr	2/yr	11-09.jpg	Blind Curve
rf_4325_29	356723	4176000	8245	255	A	SR 143 Right	36	24	6	3	Plentiful	Poor	50 - 60/yr	2/yr	11-08.jpg	Blind Curve
rf_4325_30	361733	4179266	7875	61	A	SR 143 Right	24	12	6	3	Plentiful	Poor	20/yr	2/yr	11-07.jpg	Blind Curve
rf_4325_31	362635	4180368	7751	90	A	SR 143 Right	36	24	6	3	Plentiful	Poor	50 - 60/yr	2/yr	11-06.jpg	Blind Curve

Maintenance Station: Parley's

rf_2434_01	432744	4506668	4881	94	B	I 80 East on ramp Right	24	12	10	8	Limited	Poor	1 - 2/month	2/yr	IMG_0915.jpg	On ramp from I-215 to I 80 east Blind Curve on Ramp
rf_2434_02	432912	4506865	4861	163	A	I 80 East on ramp Right	24	12	6	3	Plentiful	Poor	1 - 2/month	2/yr	IMG_0916.jpg	Blind Curve
rf_2434_03	432966	4506925	4862	3	A	I 80 East on ramp Right	60	48	8	2	Plentiful	Poor	12/yr	2/yr	IMG_0917.jpg	Semi hit by 3.5 x 5 ft. rock 9 months - 1 yr. ago (on news). Blind Curve Rocks hanging over up on slope
rf_2434_04	433088	4506951	4890	250	A	I 80 East on ramp Right	12	8	5	2	Plentiful	Fair	4 - 5/yr	2/yr	IMG_0920.jpg	known as "Rocky Road"
rf_2434_05	433840	4507714	4944	189	A	I 80 East Right	24	12	5	2	Plentiful	Good	6 - 7/yr	2/yr	IMG_0921.jpg	
rf_2434_06	434670	4508347	5057	0	B	I 80 East Right	24	12	5	4	Plentiful	Fair	1 - 2/yr	2/yr	IMG_0922.jpg	On Exit to quarry
rf_2434_07	434856	4508491	5073	209	A	I 80 East Right	48	36	7	4	Plentiful	Good	2/yr	2/yr	IMG_0924.jpg	high potential up slope
rf_2434_08	435162	4508677	5114	137	A	I 80 East Right	48	36	8	5	Plentiful	Fair	4 - 5/yr	2/yr	IMG_0925.jpg	
rf_2434_09	435289	4508814	5116	142	A	I 80 East Right	60	48	11	7	Plentiful	Good	6 - 7/yr	2 - 3/yr	IMG_0926.jpg	
rf_2434_10	435595	4508960	5152	172	A	I 80 East Right	12	8	5	3	Plentiful	Poor	everyday	6/yr	IMG_0927.jpg	On ramp on Right
rf_2434_11	436049	4509266	5181	66	B	I 80 East Right	12	8	5	3	Plentiful	Good	3 - 4/yr	2/yr	IMG_0928.jpg	
rf_2434_12	436488	4509372	5242	221	A	I 80 East Right	36	24	6	3	Plentiful	Good	6 - 8/yr	2/yr	IMG_0929.jpg	
rf_2434_13	436956	4509622	5319	201	B	I 80 East Right	24	12	8	4	Plentiful	Good	< 1/yr	2/yr	IMG_0931.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northings</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_2434_14	437762	4510395	5361	146	B+	I 80 East Right	24	12	5	4	Plentiful	Good	4 - 5/yr	2/yr	IMG_0932.jpg	
rf_2434_15	438249	4510486	5380	99	B	I 80 East Right	36	24	5	2	Limited *	Fair	4/yr	2/yr	IMG_0933.jpg	Off ramp for exit 133
rf_2434_16	438534	4510813	5392	643	B	I 80 East Left	12	8	3	2	Plentiful	Poor	4/yr	2/yr	IMG_0934.jpg	Off ramp for exit 133
rf_2434_17	438625	4510785	5393	195	A	I 80 East Right	24	12	5	1	Plentiful	Fair	4/yr	2/yr	IMG_0935.jpg	
rf_2434_18	438904	4510951	5414	210	A	I 80 East Right	24	12	6	3	Plentiful	Fair	12/yr	2/yr	IMG_0936.jpg	recent slide
rf_2434_19	439077	4511061	5432	199	B	I 80 East Right	12	8	4	3	Limited *	Good	3 - 4/yr	2/yr	IMG_0937.jpg	
rf_2434_20	439216	4511184	5464	176	A	I 80 East Right	12	8	3	1	Plentiful	Fair	10 - 12/yr	2/yr	IMG_0938.jpg	
rf_2434_21	438113	4510506	5361	290	A	I 80 West Left	12	8	3	1	Plentiful	Good	8/yr	2/yr	IMG_0939.jpg	
rf_2434_22	437644	4510409	5357	120	B	I 80 West Left	12	8	3	1	Plentiful	Good	5/yr	2/yr	IMG_0940.jpg	
rf_2434_23	437214	4509992	5343	76	A	I 80 West Left	10	8	2	1	Plentiful	Good	5/yr	2/yr	IMG_0941.jpg	mostly fail in winter
rf_2434_24	436728	4509448	5288	52	B	I 80 West Left	12	9	3	2	Plentiful	Good	4 - 5/yr	2/yr	IMG_0942.jpg	
rf_2434_25	436289	4509348	5198	134	B	I 80 West Left	18	10	6	3	Plentiful	Good	3/yr	2/yr	IMG_0943.jpg	
rf_2434_26	435436	4508959	5129	149	A	I 80 West Left	30	12	11	6	Plentiful	Poor	12/yr	2/yr	IMG_0944.jpg	Off ramp of exit 131
rf_2434_27	434627	4508373	5086	317	A	I 80 West Left	72	36	8	4	Plentiful	Poor	everyday	everyday	IMG_0945.jpg	Launching from above possible
rf_2434_28	434399	4508133	5019	103	B	I 80 West Left	12	9	5	3	Plentiful	Good	2 - 3/yr	2/yr	IMG_0948.jpg	
rf_2434_29	433556	4507412	4929	648	A	I 80 West Left	60	36	6	3	Plentiful	—	24/yr	2/yr	IMG_0949.jpg	barrier in place
rf_2434_30	433060	4507068	4901	268	A	I 80 West Left	36	12	6	3	Plentiful	Poor	12/yr	2/yr	IMG_0952.jpg	
rf_2434_31	432753	4507013	4905	176	A	I 80 West Left	24	12	6	3	Plentiful	Poor	12/yr	2/yr	IMG_0954.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_2434_32	431929	4507355	4826	145	B+	I 80 West Left	36	24	6	3	Plentiful	Poor	3 - 4/yr	2/yr	IMG_0955.jpg	Off ramp to Foothill & Parley's Way
rf_2434_33	442803	4517464	5942	93	A	SR 65 Right	12	9	6	3	Limited +	Fair	when rains	1/yr	IMG_0956.jpg	
rf_2434_34	443735	4518972	6570	55	B-	SR 65 Right	6	4	3	1	Limited +	Good	when rains	1/yr	IMG_0957.jpg	not a lot of rock mostly silt
rf_2434_35	443413	4518956	6706	157	A	SR 65 Right	36	24	6	3	Limited	Fair	when rains	1/yr	IMG_0958.jpg	Blind Curve
rf_2434_36	444407	4519725	7261	38	B	SR 65 Right	12	9	6	3	Limited	Fair	5 - 6/yr	1/yr	IMG_0959.jpg	
rf_2434_37	444381	4519761	7318	163	A	SR 65 Left	36	12	6	3	Plentiful	Fair	3 - 6/yr	1/yr	IMG_0960.jpg	
rf_2434_38	443976	4519254	6995	156	A	SR 65 Left	48	36	6	3	Limited +	Fair	3 - 6/yr	1/yr	IMG_0962.jpg	
rf_2434_39	443769	4519145	6899	154	A	SR 65 Left	24	12	6	3	Limited +	Fair	3 - 6/yr	1/yr	IMG_0963.jpg	
rf_2434_40	443482	4519058	6810	373	A	SR 65 Left	36	24	6	3	Limited +	Poor	3 - 6/yr	1/yr	IMG_0964.jpg	

Maintenance Station: Richfield

rf_4327_01	389157	4268591	5659	116	A	SR 89 Left	12	8	6	3	Plentiful	Fair	20/yr	2/yr	21-32.jpg	
rf_4327_02	389417	4267690	5719	235	A	SR 89 Left	24	12	5	2	Plentiful	Fair	25/yr	2/yr	21-31.jpg	
rf_4327_03	389598	4266324	5738	95	B+	SR 89 Left	24	12	6	3	Plentiful	Fair	6 - 8/yr	2/yr	21-29.jpg	Blind Curve
rf_4327_04	389640	4264812	5786	104	B	SR 89 Left	24	12	6	3	Plentiful	Fair	6 - 8/yr	2/yr	21-28.jpg	Blind Curve
rf_4327_05	418054	4292328	6074	565	A	SR 119 Right	24	12	6	3	Plentiful	Poor	20/yr	2/yr	21-27.jpg	Blind Curves
rf_4327_06	420745	4286854	6791	85	B	SR 24 Right	12	9	5	2	Plentiful	Good	6 - 8/yr	2/yr	21-25.jpg	
rf_4327_07	421145	4286215	6913	174	B	SR 24 Right	12	9	5	2	Plentiful	Fair	6 - 8/yr	2/yr	21-24.jpg	
rf_4327_08	421401	4285741	6978	186	B	SR 24 Right	24	12	6	3	Plentiful	Good	6 - 8/yr	2/yr	21-23.jpg	

ID#	Eastings	Northings	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rt_4327_09	422300	4285028	7090	133	B	SR 24 Left	12	9	6	3	Limited *	Good	4 - 5/yr	2/yr	21-22.jpg	
rt_4327_10	421094	4286351	6885	142	B	SR 24 Left	24	12	6	3	Plentiful	Good	6 - 8/yr	2/yr	21-21.jpg	
rt_4327_11	421019	4286528	6856	37	B	SR 24 Left	24	12	6	3	Limited *	Good	4 - 5/yr	2/yr	21-20.jpg	

Maintenance Station: Roosevelt

rt_3435_01	585090	4460387	5023	108	B	SR 40 Left	60	48	8	6	Plentiful	Poor	2 - 3/yr	1/yr	14-15.jpg	
rt_3435_02	610178	4463336	5110	211	B	SR 40 Left	60	36	8	6	Plentiful	Good	< 1/yr	1/yr	14-14.jpg	
rt_3435_03	611258	4462902	5101	138	B-	SR 88 Left	12	9	5	2	Limited	Poor	2/yr	1/yr	14-13.jpg	
rt_3435_04	611273	4462857	5104	70	B-	SR 88 Right	12	9	5	2	Limited	Poor	2/yr	1/yr	14-12.jpg	

Maintenance Station: Salina

rt_4333_01	468256	4290340	6671	132	B-	SR 72 Right	24	12	5	2	Limited *	Fair	4/yr	2/yr	21-16.jpg	
rt_4333_02	468509	4290449	6614	0	B-	SR 72 Right	24	12	5	2	Limited *	Fair	4/yr	2/yr	21-15.jpg	
rt_4333_03	460589	4290286	7456	314	B	I - 70 West Left	48	24	6	3	Plentiful	Good	3/yr	2/yr	21-14.jpg	
rt_4333_04	449362	4303877	6710	365	A	I - 70 West Left	72	24	8	6	Plentiful	Fair	20/yr	2/yr	21-13.jpg	
rt_4333_05	448635	4303991	6684	823	A	I - 70 West Left	72	36	8	6	Plentiful	Fair	20/yr	2/yr	21-12.jpg	Blind Curve
rt_4333_06	447816	4304157	6641	262	A	I - 70 West Left	72	36	8	6	Plentiful	Fair	20/yr	2/yr	21-11.jpg	Blind Curve
rt_4333_07	447315	4304405	6603	316	A	I - 70 West Left	72	36	8	6	Plentiful	Fair	20/yr	2/yr	21-09.jpg	
rt_4333_08	446471	4304914	6529	1655	A	I - 70 West Left	72	36	8	6	Plentiful	Fair	20/yr	2/yr	21-08.jpg	Rocks come from way up high
rt_4333_09	445586	4305459	6424	424	A	I - 70 West Left	72	36	8	6	Plentiful	Fair	20/yr	2/yr	21-06.jpg	Blind Curve

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rt_4333_10	445241	4305792	6369	255	A	I - 70 West Left	72	36	8	6	Pleñtful	Fair	20/yr	2/yr	21-04.jpg	Blind Curve
rt_4333_11	442962	4305735	6158	164	A	I - 70 West Left	36	24	6	3	Pleñtful	Fair	20/yr	2/yr	21-03.jpg	
rt_4333_12	438523	4307025	5827	147	A	I - 70 West Left	60	48	8	6	Pleñtful	Fair	20/yr	2/yr	21-02.jpg	
rt_4333_13	431872	4309335	5581	170	B	I - 70 West Left	36	24	6	3	Pleñtful	Good	5 - 6/yr	2/yr	21-01.jpg	Barrier in Place
rt_4333_14	431699	4309479	5556	152	B	I - 70 West Left	36	24	6	3	Pleñtful	Good	5 - 6/yr	2/yr	22-36.jpg	Barrier in Place

Maintenance Station: Scipio

rt_4536_01	406708	4353695	5326	303	B-	I - 15 North Right	48	36	6	3	Pleñtful	Good	2 - 3/yr	1/yr	21-19.jpg	Barrier in Place
rt_4536_02	400197	4341599	5678	105	C	I - 15 South Left	12	9	6	3	Limited	Good	1/yr	1/yr	21-18.jpg	
rt_4536_03	399315	4340262	5925	150	C	I - 15 South Left	24	12	6	3	Pleñtful -	Good	1 - 2/yr	1/yr	21-17.jpg	

Maintenance Station: Spanish Fk

rt_3426_01	456723	4424834	5149	304	A	SR 89 Right	24	12	6	3	Pleñtful	Good	50/yr	2/yr	22-35.jpg	
rt_3426_02	457197	4426213	5086	321	A-	SR 89 Right	36	24	6	3	Pleñtful -	Good	20/yr	2/yr	22-34.jpg	Blind Curve
rt_3426_03	479112	4422999	6076	129	A	SR 6 Left	36	24	5	2	Pleñtful	Poor	20/yr	2/yr	22-33.jpg	
rt_3426_04	478164	4422785	6026	87	A-	SR 6 Left	24	12	6	3	Pleñtful -	Fair	20/yr	2/yr	22-31.jpg	
rt_3426_05	477610	4422617	6012	120	A	SR 6 Left	36	24	6	3	Pleñtful	Poor	25 - 30/yr	2/yr	22-30.jpg	Blind Curve
rt_3426_06	476909	4422549	5980	48	A-	SR 6 Left	24	12	6	3	Pleñtful -	Fair	20/yr	2/yr	22-29.jpg	
rt_3426_07	474147	4423188	5857	220	B	SR 6 Left	12	8	5	2	Limited +	Fair	15/yr	2/yr	22-28.jpg	
rt_3426_08	473012	4423983	5791	266	A	SR 6 Left	24	12	6	3	Pleñtful	Fair	20/yr	2/yr	22-27.jpg	

<i>ID#</i>	<i>Eastings</i>	<i>Northings</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_3426_09	468780	4426361	5606	134	A	SR 6 Left	24	12	6	3	Plentiful	Fair	25 - 30/yr	2/yr	22-26.jpg	
rf_3426_10	468481	4426579	5590	124	B+	SR 6 Left	24	12	6	3	Plentiful	Good	20/yr	2/yr	22-25.jpg	
rf_3426_11	468069	4426685	5558	341	A	SR 6 Left	72	36	8	6	Plentiful	Fair	20/yr	2/yr	22-24.jpg	Blind Curve
rf_3426_12	466984	4426903	5485	132	B+	SR 6 Left	24	12	6	3	Limited +	Good	15/yr	2/yr	22-23.jpg	
rf_3426_13	466550	4426929	5459	334	A-	SR 6 Left	24	12	6	3	Plentiful	Good	20/yr	2/yr	22-22.jpg	Blind Curve
rf_3426_14	465729	4427229	5404	149	A	SR 6 Left	36	24	6	3	Plentiful	Fair	20/yr	2/yr	22-21.jpg	
rf_3426_15	458035	4428988	5385	496	A-	SR 6 Left	24	12	6	3	Plentiful	Good	15/yr	2/yr	22-20.jpg	
rf_3426_16	455465	4431744	4948	346	A	SR 6 Left	36	24	6	3	Plentiful	Fair	25 - 30/yr	2/yr	22-19.jpg	
rf_3426_17	453296	4432898	4908	64	B+	SR 6 Left	12	9	6	3	Limited +	Good	20/yr	2/yr	22-18.jpg	
rf_3426_18	453243	4433172	4902	118	A	SR 6 Left	36	24	8	6	Plentiful	Good	30 - 35/yr	2/yr	22-17.jpg	
rf_3426_19	452316	4434119	4891	180	B	SR 6 Left	36	24	6	3	Plentiful	Good	10/yr	2/yr	22-16.jpg	
rf_3426_19	451490	4434762	4873	244	B	SR 6 Left	24	12	6	3	Limited +	Good	10/yr	2/yr	22-15.jpg	
rf_3426_20	450820	4435830	4849	244	A	SR 6 Left	24	12	6	3	Plentiful	Fair	20 - 25/yr	2/yr	22-13.jpg	

Maintenance Station: St. George

rf_4521_01	268786	4115317	3273	99	B	SR 18 Right	24	12	6	3	Plentiful	Fair	30/yr	1/yr	8-26.jpg	
rf_4521_02	268152	4116181	3435	117	C	SR 18 Left	12	9	6	3	Limited +	Good	< 1/yr	1/yr	8-25.jpg	
rf_4521_03	268800	4115353	3283	103	B	SR 18 Left	24	12	8	6	Limited +	Good	1/yr	1/yr	8-24.jpg	
rf_4521_04	268934	4102239	2544	189	B	I - 15 North Right	10	8	5	2	Plentiful	Good	1/yr	1/yr	8-23.jpg	

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_4521_05	269640	4103105	2544	270	B	I - 15 North Right	10	8	5	2	Plentiful	Good	1/yr	1/yr	8-22.jpg	
rf_4521_06	280425	4115391	3185	150	A	I - 15 North Right	72	48	10	5	Plentiful	Poor	2 - 3/yr	1 - 2/yr	8-21.jpg	Blind Curve
rf_4521_06	289423	4123001	3320	263	B	I - 15 South Left	24	12	6	3	Plentiful	Good	< 1/yr	1/yr	8-20.jpg	
rf_4521_07	280483	4115440	3191	129	C	I - 15 South Left	18	12	6	3	Limited *	Good	1/yr	1/yr	8-19.jpg	
rf_4521_08	280104	4115215	3157	188	B	I - 15 South Left	24	12	6	3	Plentiful	Fair	1 - 2/yr	1/yr	8-18.jpg	

Maintenance Station: Strawberry

rf_3445_01	502728	4449785	7248	104	A	SR 40 Left	36	24	6	3	Plentiful	Fair	12 - 14/yr	2/yr	6-31.jpg	
rf_3445_02	502835	4449570	7231	138	A	SR 40 Left	36	24	6	3	Plentiful	Poor	12 - 14/yr	2/yr	6-30.jpg	Blind Curve
rf_3445_03	503926	4449114	7155	51	B	SR 40 Left	12	9	6	3	Plentiful	Good	< 1/yr	2/yr	6-29.jpg	Potential to fall from above
rf_3445_04	504220	4449158	7134	100	B	SR 40 Left	36	24	6	3	Plentiful	Good	< 1/yr	2/yr	6-28.jpg	potential
rf_3445_05	504976	4449341	7049	283	A	SR 40 Left	36	24	8	4	Plentiful	Good	2 - 3/yr	2/yr	6-27.jpg	could launch off top
rf_3445_06	505295	4449312	7005	99	A	SR 40 Right	24	12	8	4	Plentiful	Fair	3 - 4/yr	2/yr	6-25.jpg	running spring on hill
rf_3445_07	505420	4449300	6999	0	B	SR 40 Left	24	12	6	3	Plentiful	Good	2/yr	2/yr	6-24.jpg	
rf_3445_08	505439	4449282	7018	0	A	SR 40 Left	24	12	6	3	Plentiful	Fair	4 - 5/yr	2/yr	6-23.jpg	Rock face right after blind curve launch capability from above
rf_3445_09	506615	4449645	6872	327	B	SR 40 Left	12	8	5	3	Plentiful	Fair	1/yr	2/yr	6-21.jpg	launch capability from above
rf_3445_10	477455	4465996	7243	254	A	SR 40 Left	12	8	5	3	Plentiful	Fair	12 - 14/yr	2/yr	6-20.jpg	falls everytime it rains
rf_3445_11	476849	4466700	7095	144	A	SR 40 Left	12	8	6	3	Plentiful	Fair	30/yr	2/yr	6-19.jpg	falls everytime it rains
rf_3445_12	476423	4467114	7029	81	B	SR 40 Left	12	8	6	3	Plentiful	Good	2 - 3/yr	2/yr	6-18.jpg	

ID#	Eastings	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rf_3445_13	474447	4470324	6719	95	A	SR 40, Right	36	24	6	3	Plentiful	Fair	2 - 3/yr	2/yr	6-17.jpg	
rf_3445_14	472405	4473563	6376	64	A	SR 40 Left	12	8	6	3	Plentiful	Good	12/yr	2/yr	6-16.jpg	mostly in spring
rf_3445_15	469754	4476226	6134	87	A	SR 40 Left	18	12	6	3	Plentiful	Poor	12 - 14/yr	2/yr	6-15.jpg	
rf_3445_16	469056	4477277	6084	343	B	SR 40 Left	24	12	5	3	Limited *	Fair	6/yr	2/yr	6-13.jpg	
rf_3445_18	469964	4475914	6103	108	A	SR 40 Left	12	8	5	3	Plentiful	Poor	12 - 14/yr	2/yr	6-12.jpg	
rf_3445_19	474514	4470195	6677	60	A	SR 40 Left	18	12	6	3	Plentiful	Good	12 - 14/yr	2/yr	6-11.jpg	Blind Curve

Maintenance Station: Tabonia

rf_3433_01	513049	4478838	7071	227	A	SR 35 Left	36	24	8	4	Plentiful	Fair	12 - 14/yr	1/yr	6-10.jpg	Blind Curve. Will be paved
rf_3433_02	512815	4478671	7080	156	A	SR 35 Left	36	24	8	3	Plentiful	Fair	12 - 14/yr	1/yr	6-08.jpg	could launch from above
rf_3433_03	512197	4478348	7092	71	B	SR 35 Left	12	8	5	3	Limited *	Good	3 - 4/yr	1/yr	6-07.jpg	
rf_3433_04	511686	4478089	7124	506	A	SR 35 Left	36	24	6	3	Plentiful	Poor	12/yr	1/yr	6-06.jpg	Blind Curve. Could launch from above
rf_3433_05	508608	4479360	7461	77	B	SR 35 Left	12	8	6	3	Limited *	Poor	4 - 5/yr	1/yr	6-05.jpg	rock buttress in place
rf_3433_06	508077	4479963	7566	372	A	SR 35 Left	12	8	6	3	Plentiful	Poor	15 - 20/yr	1/yr	6-04.jpg	Seasonal. closed in winter
rf_3433_07	507468	4480307	7654	221	A	SR 35 Left	12	8	6	3	Plentiful	Poor	8 - 10/yr	1/yr	6-03.jpg	Seasonal. closed in winter
rf_3433_08	507204	4480181	7706	41	B	SR 35 Left	12	8	6	3	Plentiful	Fair	4 - 5/yr	1/yr	6-02.jpg	Seasonal. closed in winter
rf_3433_09	506073	4480467	7998	103	B	SR 35 Left	12	8	6	3	Plentiful	Fair	5 - 6/yr	1/yr	6-01.jpg	Seasonal. closed in winter
rf_3433_10	501827	4482784	8760	148	A	SR 35 Left	24	12	5	2	Plentiful	Fair	8 - 10/yr	1/yr	7-36.jpg	Blind Curve. Seasonal. closed in winter
rf_3433_11	496188	4483898	8750	464	A	SR 35 Left	12	8	6	3	Plentiful	Fair	12/yr	1/yr	7-35.jpg	Seasonal. closed in winter

ID#	Easting	Northing	Elev. (ft)	Length (m)	Hazard Rating	Highway	Maximum (in)		Average (in)		Rockfall Availability	Ditch	Frequency	Cleanout	Photo	Comments
rt_3433_12	495321	4485023	8259	110	B	SR 35 Left	18	12	6	3	Plentiful	Good	8 - 10/yr	1/yr	7-34.jpg	Seasonal closed in winter
rt_3433_13	525796	4463123	6616	21	B	SR 208 Right	8	6	3	1	Limited *	Good	1 - 2/yr	1/yr	7-33.jpg	
rt_3433_14	509349	4449808	6669	169	A	SR 40 Left	36	24	8	6	Plentiful	Good	4 - 5/yr	1/yr	7-32.jpg	

Maintenance Station: Thompson

rt_4431_01	648809	4300385	4105	169	B	SR 128 Left	24	12	6	3	Limited *	Poor	5 - 6/yr	2/yr	12-13.jpg	
rt_4431_02	648652	4299961	4114	304	A	SR 128 Left	36	24	6	3	Plentiful *	Poor	10 - 15/yr	2/yr	12-12.jpg	
rt_4431_03	648654	4299713	4124	79	B	SR 128 Left	24	12	6	3	Limited *	Poor	5 - 6/yr	2/yr	12-11.jpg	
rt_4431_04	648695	4299373	4127	255	A	SR 128 Left	36	24	6	3	Plentiful *	Poor	10 - 15/yr	2/yr	12-10.jpg	
rt_4431_05	648877	4298741	4138	859	A	SR 128 Left	36	24	6	3	Plentiful	Poor	20/yr	2/yr	12-09.jpg	Blind Curve

Maintenance Station: Tooele

rt_2423_01	389769	4486178	4923	114	C	SR 36 Right	12	8	5	2	Limited	Good	2/yr	2/yr	22-12.jpg	
rt_2423_02	385474	4480885	5220	54	C	SR 36 Right	24	12	5	2	Plentiful	Good	4/yr	2/yr	22-11.jpg	
rt_2423_03	385359	4480573	5216	65	C	SR 36 Both	24	12	5	2	Limited *	Good	4/yr	2/yr	22-10.jpg (right)	
rt_2423_04	371061	4465779	5574	144	B	SR 199 Left	24	12	6	3	Limited	Good	24/yr	2/yr	22-08.jpg	
rt_2423_05	370893	4465799	5589	42	B	SR 199 Left	24	12	6	3	Limited	Good	24/yr	2/yr	22-07.jpg	
rt_2423_06	370526	4465953	5626	670	B	SR 199 Left	24	12	6	3	Limited	Good	24/yr	2/yr	22-06.jpg	
rt_2423_07	370061	4466198	5688	292	B	SR 199 Left	24	12	6	3	Limited	Good	24/yr	2/yr	22-05.jpg	
rt_2423_08	369783	4466364	5734	305	B	SR 199 Left	24	12	5	2	Limited *	Fair	24/yr	2/yr	22-04.jpg	Blind Curve

<i>ID#</i>	<i>Eastings</i>	<i>Northings</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_2423_09	369532	4466598	5783	183	B	SR 199, Left	12	8	5	2	Limited	Fair	24/yr	2/yr	22-03.jpg	
rf_2423_10	368858	4467175	5925	1438	B	SR 199, Left	12	8	5	2	Limited	Fair	24/yr	2/yr	22-02.jpg	
rf_2423_11	367778	4467644	6130	138	B	SR 199, Left	12	8	5	2	Limited	Poor	24/yr	2/yr	22-01.jpg	
rf_2423_12	367653	4467629	6149	51	B	SR 199, Left	24	12	6	3	Limited	Fair	24/yr	2/yr	23-36.jpg	
rf_2423_13	367207	4467452	6218	19	B	SR 199, Left	12	8	5	2	Limited	Poor	24/yr	2/yr	23-35.jpg	
rf_2423_14	366489	4466346	6492	215	B	SR 199, Left	12	8	5	2	Limited *	Poor	24/yr	2/yr	23-34.jpg	Blind Curve
rf_2423_15	365369	4467206	6224	757	B	SR 199, Left	12	8	5	2	Limited	Fair	24/yr	2/yr	23-33.jpg	
rf_2423_16	364953	4467408	6143	164	A	SR 199, Left	24	10	6	3	Plentiful	Poor	50/yr	2/yr	23-32.jpg	
rf_2423_17	364743	4467385	6095	28	B	SR 199, Left	12	8	5	2	Limited	Poor	24/yr	2/yr	23-31.jpg	
rf_2423_18	364445	4467253	6006	35	B	SR 199, Left	12	8	5	2	Limited	Fair	24/yr	2/yr	23-30.jpg	
rf_2423_19	363018	4466432	5574	151	C	SR 199, Left	12	8	5	2	Limited *	Good	12/yr	2/yr	23-29.jpg	
rf_2423_20	364897	4467401	6067	206	A	SR 199, Right	24	12	6	3	Plentiful	Fair	50/yr	2/yr	23-28.jpg	
rf_2423_21	365939	4466808	6332	528	B	SR 199, Right	12	8	5	2	Limited *	Fair	24/yr	2/yr	23-27.jpg	
rf_2423_22	383050	4436654	5792	113	C	SR 36, Both	12	9	6	3	Plentiful	Good	5 - 6/yr	2/yr	23-26.jpg (left)	
rf_2423_23	384014	4436796	5668	109	C	SR 36, Left	12	9	5	2	Limited *	Good	5 - 6/yr	2/yr	23-24.jpg	

Maintenance Station: Vernal

rf_3437_01	629571	4493982	5727	98	B	SR 191, Right	36	24	6	3	Plentiful	Fair	2/yr	1/yr	14-28.jpg	
rf_3437_02	627629	4501437	7616	212	A	SR 191, Right	12	8	5	2	Limited *	Poor	20 - 25/yr	2/yr	14-27.jpg	Blind Curve

<i>ID#</i>	<i>Eastings</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_3437_03	627691	4501698	7681	175	A	SR 191 Right	24	12	6	3	Plentiful	Poor	20 - 25/yr	2/yr	14-26.jpg	
rt_3437_04	627915	4501975	7726	509	A	SR 191 Right	36	24	6	3	Plentiful	Poor	20 - 25/yr	2/yr	14-25.jpg	Blind Curve
rt_3437_05	628290	4502217	7787	211	A	SR 191 Right	24	12	6	3	Plentiful	Poor	20 - 25/yr	2/yr	14-24.jpg	
rt_3437_06	628481	4502331	7843	128	A	SR 191 Right	36	24	6	3	Plentiful	Poor	30/yr	2/yr	14-23.jpg	Worst section
rt_3437_07	628450	4502639	7915	153	B	SR 191 Right	24	12	6	3	Plentiful	Poor	5 - 8/yr	1/yr	14-22.jpg	Blind Curve
rt_3437_08	627311	4507896	8220	118	A	SR 191 Right	48	24	8	6	Plentiful	Poor	10 - 15/yr	2/yr	14-21.jpg	Large rocks fall
rt_3437_09	627213	4507705	8208	308	B	SR 191 Left	24	12	5	2	Plentiful	Fair	5 - 10/yr	1/yr	14-20.jpg	
rt_3437_10	627308	4506939	8179	112	B	SR 191 Left	24	12	6	3	Limited *	Fair	3 - 4/yr	1/yr	14-19.jpg	
rt_3437_11	627394	4506524	8261	145	B	SR 191 Left	24	12	5	2	Limited	Fair	3 - 4/yr	1/yr	14-18.jpg	
rt_3437_12	613333	4476250	5873	309	A	SR 121 Left	24	12	6	3	Plentiful	Fair	15 - 20/yr	1/yr	14-17.jpg	
rt_3437_13	613210	4476205	5849	0	B	SR 121 Right	24	12	6	3	Plentiful	Good	15 - 20/yr	1/yr	14-16.jpg	

Maintenance Station: Wanship

rt_2436_01	466272	4512913	6083	88	A	SR 32 Left	36	12	6	3	Plentiful	Fair	3 - 6/yr	2/yr	3-04.jpg	
rt_2436_02	469900	4510233	6136	51	A	SR 32 Left	36	12	6	3	Limited *	Poor	1 - 2/yr	1/yr	3-03.jpg	
rt_2436_03	469900	4510235	6137	52	A	SR 32 Right	36	12	6	3	Plentiful	Poor	1 - 2/yr	1/yr	3-02.jpg	Right across from section 2
rt_2436_04	463416	4534831	5576	314	B	I 80 West Left	36	12	6	3	Plentiful	Good	< 1/yr	1/yr	4-36.jpg	Barrier to stop rock
rt_2436_05	463913	4534382	5642	800	C	I 80 West Left	36	12	6	3	Plentiful	Good	< 1/yr	1/yr	4-35.jpg	Ditch catches most rocks
rt_2436_06	464367	4533712	5751	409	A	I 80 West Left	48	24	6	3	Plentiful	Good	1 - 2/yr	1/yr	4-34.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rf_2436_07	465280	4532305	5657	372	A	I 80 West Left	12	6	3	1	Plentiful	Good	1 - 2/yr	1/yr	4-33.jpg	
rf_2436_08	465355	4530612	5674	251	B	I 80 West Left	36	12	6	3	Plentiful	Good	< 1/yr	1/yr	4-32.jpg	
rf_2436_09	461299	4514796	6221	474	B	I 80 West Left	12	6	3	1	Limited *	Fair	3 - 6/yr	1/yr	4-31.jpg	
rf_2436_10	460660	4514244	6261	221	B	I 80 West Left	12	6	3	1	Limited *	Fair	1 - 2/yr	1/yr	4-30.jpg	
rf_2436_11	460365	4513714	6292	233	A	I 80 West Left	36	12	6	3	Plentiful	Fair	3 - 6/yr	1/yr	4-29.jpg	
rf_2436_12	460312	4513325	6325	81	B	I 80 West Left	48	24	6	3	Plentiful	Good	1 - 2/yr	1/yr	4-28.jpg	
rf_2436_13	460161	4512169	6401	143	A	I 80 West Left	48	24	6	3	Plentiful	Fair	7 - 10/yr	1/yr	4-27.jpg	
rf_2436_14	460230	4511929	6443	264	A	I 80 East Right	48	24	6	3	Plentiful	Fair	7 - 10/yr	1/yr	4-25.jpg	
rf_2436_15	460277	4512596	6391	90	B	I 80 East Right	36	12	6	3	—	Good	3 - 6/yr	1/yr	4-24.jpg	
rf_2436_16	460439	4512705	6351	995	A	I 80 East Right	48	12	6	3	Plentiful	Poor	3 - 6/yr	1/yr	4-23.jpg	
rf_2436_17	462216	4516106	6131	591	B	I 80 East Right	48	12	6	3	Plentiful	Good	1 - 2/yr	1/yr	4-22.jpg	Barrier stops most rocks
rf_2436_18	462931	4517002	6036	317	C	I 80 East Right	36	12	6	3	Limited *	Good	< 1/yr	1/yr	—	

Maintenance Station: Wellsville

rf_1435_01	420013	4601111	5790	196	B	SR 89 Left	12	8	5	2	Plentiful	Good	1/yr	1/yr	14-10.jpg	
rf_1435_02	419986	4601196	5781	440	B	SR 89 Right	36	12	6	3	Plentiful	Good	3 - 4/yr	1/yr	14-09.jpg	Barrier in place
rf_1435_03	436024	4607935	4901	73	C	SR 101 Right	24	12	5	2	Limited *	Good	2/yr	1/yr	14-08.jpg	
rf_1435_04	436213	4607885	4927	127	B	SR 101 Right	24	12	5	2	Limited *	Good	6/yr	1/yr	14-07.jpg	
rf_1435_05	436546	4607954	4942	36	C	SR 101 Right	24	12	5	2	Limited *	Good	1 - 2/yr	1/yr	14-06.jpg	

<i>ID#</i>	<i>Easting</i>	<i>Northing</i>	<i>Elev. (ft)</i>	<i>Length (m)</i>	<i>Hazard Rating</i>	<i>Highway</i>	<i>Maximum (in)</i>		<i>Average (in)</i>		<i>Rockfall Availability</i>	<i>Ditch</i>	<i>Frequency</i>	<i>Cleanout</i>	<i>Photo</i>	<i>Comments</i>
rt_1435_06	452102	4605852	5534	436	B	SR 101 Left	36	24	5	2	Plentiful	Poor	4/yr	1/yr	14-05.jpg	
rt_1435_07	450928	4606146	5506	71	C	SR 101 Left	12	8	3	1	Limited	Fair	1 - 2/yr	1/yr	14-04.jpg	
rt_1435_08	450739	4606222	5486	120	B	SR 101 Left	24	12	5	2	Plentiful	Poor	3 - 4/yr	1/yr	14-03.jpg	
rt_1435_09	450126	4606240	5454	682	B	SR 101 Left	24	12	5	2	Plentiful	Poor	6/yr	1/yr	14-02.jpg	Blind Curve
rt_1435_10	449689	4606291	5427	102	B	SR 101 Left	24	12	5	2	Plentiful	Poor	4/yr	1/yr	14-01.jpg	
rt_1435_11	449547	4606328	5433	167	B	SR 101 Left	12	8	5	2	Plentiful	Poor	3/yr	1/yr	15-36.jpg	
rt_1435_12	449287	4606323	5414	87	A	SR 101 Left	24	12	5	2	Plentiful	Poor	20/yr	1/yr	15-25.jpg	Blind Curve
rt_1435_13	449055	4606447	5391	84	C	SR 101 Left	12	8	5	2	Plentiful	Poor	2/yr	1/yr	—	
rt_1435_14	448351	4606443	5351	110	A	SR 101 Left	24	12	5	2	Plentiful	Poor	20/yr	1/yr	15-34.jpg	Blind Curve
rt_1435_15	448096	4606578	5342	42	C	SR 101 Left	12	8	3	1	Limited	Fair	2/yr	1/yr	—	
rt_1435_16	447949	4606590	5339	59	C	SR 101 Left	12	8	3	1	Limited	Fair	4/yr	1/yr	—	
rt_1435_17	447673	4606756	5329	41	C	SR 101 Left	12	8	5	2	Limited	Fair	2/yr	1/yr	—	
rt_1435_18	447344	4606924	5315	200	B	SR 101 Left	24	14	6	3	Plentiful	Poor	8/yr	1/yr	15-33.jpg	Blind Curve
rt_1435_19	446986	4607188	5310	115	A	SR 101 Left	24	12	6	3	Plentiful	Poor	20/yr	1/yr	15-32.jpg	
rt_1435_20	446078	4607550	5292	200	C	SR 101 Left	12	8	3	1	Limited	Fair	2/yr	1/yr	—	
rt_1435_21	445545	4607803	5282	370	B	SR 101 Left	24	12	6	3	Plentiful	Poor	6/yr	1/yr	15-31.jpg	
rt_1435_22	445269	4607877	5281	120	B	SR 101 Left	24	12	6	3	Plentiful	Fair	4/yr	1/yr	15-30.jpg	
rt_1435_23	444815	4607927	5274	146	A	SR 101 Left	24	12	6	3	Plentiful	Fair	15/yr	1/yr	15-29.jpg	Blind Curve

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rt_1435_24	444365	4608142	5257	98	B	SR 101 Left	12	8	3	1	Limited *	Fair	4/yr	1/yr	15-28.jpg	Blind Curve
rt_1435_25	444087	4608487	5255	141	B	SR 101 Left	24	12	5	2	Plentiful	Fair	3/yr	1/yr	15-27.jpg	
rt_1435_26	443646	4608593	5251	304	C	SR 101 Left	12	8	3	1	Limited	Fair	2/yr	1/yr	—	
rt_1435_27	443120	4608665	5217	126	C	SR 101 Left	12	8	3	1	Limited	Good	6/yr	1/yr	—	
rt_1435_28	442937	4608678	5198	112	B	SR 101 Left	24	12	5	2	Plentiful	Poor	2/yr	1/yr	15-26.jpg	
rt_1435_29	442411	4608736	5168	276	A	SR 101 Left	24	12	6	3	Plentiful	Poor	30/yr	1/yr	15-25.jpg	Blind Curve
rt_1435_30	442244	4608820	5157	76	C	SR 101 Left	12	8	6	3	Plentiful	Fair	2/yr	1/yr	—	
rt_1435_31	442121	4608816	5157	114	C	SR 101 Left	12	8	3	1	Limited *	Poor	3/yr	1/yr	—	Blind Curve
rt_1435_32	441815	4608868	5138	94	C	SR 101 Left	12	8	3	1	Limited	Fair	1/yr	1/yr	—	
rt_1435_33	441409	4608954	5119	211	A	SR 101 Left	24	12	6	3	Limited *	Poor	20/yr	1/yr	15-24.jpg	Blind Curve
rt_1435_34	441193	4609011	5114	83	B	SR 101 Left	24	12	6	3	Limited *	Fair	6/yr	1/yr	15-23.jpg	
rt_1435_35	440349	4608873	5093	62	B	SR 101 Left	24	12	6	3	Plentiful	Fair	6/yr	1/yr	15-22.jpg	Blind Curve
rt_1435_36	439722	4608816	5086	240	C	SR 101 Left	12	8	3	1	Limited	Good	3/yr	1/yr	—	
rt_1435_37	439371	4608573	5063	168	C	SR 101 Left	12	8	3	1	Limited *	Good	2/yr	1/yr	—	Blind Curve
rt_1435_38	439053	4608313	5047	70	B	SR 101 Left	24	12	5	2	Plentiful	Poor	2/yr	1/yr	15-21.jpg	
rt_1435_39	438921	4608240	5050	138	C	SR 101 Left	12	8	5	2	Limited	Good	5/yr	1/yr	—	Blind Curve
rt_1435_40	438580	4608272	5041	129	B	SR 101 Left	24	12	6	3	Limited *	Fair	12/yr	1/yr	15-20.jpg	
rt_1435_41	438433	4608208	5030	51	C	SR 101 Left	24	12	5	2	Limited *	Good	2/yr	1/yr	—	

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rf_1435_42	438131	4608096	5026	176	C	SR 101 Left	12	8	3	1	Limited	Good	2/yr	1/yr	—	
rf_1435_43	437741	4608013	5034	205	C	SR 101 Left	12	8	3	1	Limited	Good	4/yr	1/yr	—	Blind Curve
rf_1435_44	437424	4608013	5034	335	A	SR 101 Left	36	24	6	3	Plentiful	Fair	24/yr	1/yr	15-19.jpg	Blind Curve
rf_1435_45	437114	4608021	5037	48	B	SR 101 Left	36	24	6	3	Plentiful	Fair	4/yr	1/yr	15-18.jpg	
rf_1435_46	436935	4608054	5041	110	C	SR 101 Left	12	8	3	1	Limited	Good	1/yr	1/yr	—	
rf_1435_47	436690	4607959	4999	120	A	SR 101 Left	36	24	6	3	Plentiful	Fair	14/yr	1/yr	15-17.jpg	Blind Curve
rf_1435_48	435710	4607960	4922	122	A	SR 101 Left	36	24	6	3	Plentiful	Poor	12/yr	1/yr	15-16.jpg	Blind Curve
rf_1435_49	435352	4608003	4906	127	C	SR 101 Left	12	8	3	1	Limited	Good	2/yr	1/yr	—	
rf_1435_50	434992	4608053	4875	359	A	SR 101 Left	36	12	6	3	Plentiful	Fair	20/yr	1/yr	15-14.jpg	Blind Curve
rf_1435_51	434781	4608149	4860	70	C	SR 101 Left	12	8	3	1	Limited *	Fair	2/yr	1/yr	—	
rf_1435_52	434591	4608305	4860	161	C	SR 101 Left	12	8	3	1	Limited	Fair	4/yr	1/yr	—	
rf_1435_53	434371	4608386	4838	232	B	SR 101 Left	24	12	5	2	Plentiful	Fair	5/yr	1/yr	15-13.jpg	
rf_1435_54	434147	4608471	4797	139	B	SR 101 Left	24	12	5	2	Plentiful -	Poor	8/yr	1/yr	15-12.jpg	
rf_1435_55	434004	4608474	4793	48	C	SR 101 Left	12	8	5	1	Limited	Good	1/yr	1/yr	—	
rf_1435_56	433778	4608486	4791	178	A	SR 101 Left	24	8	5	2	Plentiful	Poor	24/yr	1/yr	15-11.jpg	Blind Curve
rf_1435_57	433571	4608592	4779	131	C	SR 101 Left	12	8	3	1	Limited	Good	2/yr	1/yr	—	
rf_1435_58	432476	4609143	4753	185	C	SR 101 Right	12	8	3	1	Plentiful -	Fair	4/yr	1/yr	—	
rf_1435_59	432265	4609360	4815	124	C	SR 101 Right	12	8	3	1	Limited	Good	1/yr	1/yr	—	