



Little Cottonwood Canyon Transportation Study *National Rural ITS Conference*

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Little Cottonwood Canyon
Transportation Study



Town of
ALTA







SCOTT G. WINTERTON, DESERT MORNING NEWS
Michael Thomas, with son Adam, 10, explains how his family and two Alta employees were blindsided by an avalanche.

Avalanche sweeps 9 in SUV off canyon road; no one hurt

By Pat Reavy and Wendy Leonard
Deseret Morning News

LITTLE COTTONWOOD CANYON — An avalanche swept a SUV with nine people, including five children, off the main canyon road and over the edge here Thursday and carried it 100 feet before the vehicle came to rest on its hood.
"Just driving down the road and ...," said Michael Thomas, the driver, while smacking his hands together. "It was surreal."
Without warning, the avalanche

hit the vehicle about 6:30 p.m. near the White Pine Chutes about half-way up the canyon, pushed it on its side and carried it over the edge as the passengers, including children ages 3 to 10, held on for the bumpy ride.
Everyone in the SUV was wearing a seat belt. Adam Thomas, 10, said he helped unbuckle his brothers who were left strapped in their seats upside down, once the vehicle came to rest.
"It was the worst nightmare I ever had," he said.
Michael Thomas said everyone

in the SUV was a "little shaken up" and some of the children were crying, but otherwise everyone was OK.
The Thomases are from St. Louis and had been in Utah all week learning to ski for the first time. On their way down the mountain they picked up two teenage employees from Alta Ski Resort. The teens were able to kick out a window of the vehicle and help everyone get out, Michael Thomas said.

Please see WEATHER on B8

St. Louis family unhurt in avalanche adventure

Swept from the road:
An SUV with nine people inside, hit by a slide, drops 100 feet

BY KIRSTEN STEWART AND JASON BERGREEN
The Salt Lake Tribune

An avalanche in Little Cottonwood Canyon swept a SUV with nine people off road Thursday evening. While a nearly 100-foot slide into the canyon, the passengers suffered only injuries.

How the snow stacked up

Brighton	-	20 inches
Snowbasin	-	22 inches
Tony Grove	-	12 inches
Pleasant Grove Bench	-	(Logan Canyon)
Taylorville	-	6 inches
East Layton	-	1 inch
Chalk Creek	-	7 inches
	-	8 inches
Salt Lake City International Airport	-	(Uinta Mountains)
	-	0.5 inches

resort employees who had just hitched a ride with the family.
It was the Thomases' first trip to Utah.
"Life Elevated, right?" quipped Michael Thomas. He waited for a mouth-

the Pacific storm system that moved into Utah earlier this week and built up steam on its way Thursday





Little Cottonwood Canyon Slide Frequency – 1995 to 2005



Factors in the AHI

Numerical expression of damage potential from avalanches to vehicles.

Factors:

- Width and depth of avalanches at the road
- Frequency of avalanche occurrence
- Number of avalanche paths
- Spacing between paths
- Winter traffic volume
- Traffic Speed



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Risk Reduction



Road

Active

- Gazex
- Artillery
- Infrasound
- Forecasting Team

Passive

- Sheds
- Berms
- Snow Nets
- Realignment



Traffic

- Demand Reduction
- Parking Management
- Information System

- Traffic Flow
- Parking Lot Metering
- Incident Management



One Part the Overall Solution: “Smart Canyon”

- **Elements include:**
 - Optimize the parking
 - Better traffic management
 - More road conditions to users
 - Better transit information
 - Improved communications among agencies



**Meanwhile, back at the TOC, UDOT
applying for a Rural ITS grant to help
this very area...**



By sheer luck (or great planning) the grant was awarded while the study team was finalizing alternatives...

GRANT APPLICATION FOR PARTICIPATION IN THE
FY05 ITS INTEGRATION COMPONENT
of the
ITS DEPLOYMENT PROGRAM

Project Identification Number: VII.L.1.a.
Project Name: ITS - Rural Recreation and Tourism
Project Location: Statewide
FY05 Total to be Allocated: \$ 681,629
Submitted by: Utah Department of Transportation
July 15, 2005
Project Contact: Richard Manser
Utah Department of Transportation
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E-mail address: rmanser@utah.gov

Attachment 2: Guidelines - ITS Deployment Program
January, 2005

I-1

Elements of the Rural ITS Earmark

- Provide congestion relief for the canyon
 - Parking Management
 - Traveler Information
 - Communication
 - Improve Safety





Maximize Park & Ride Opportunities



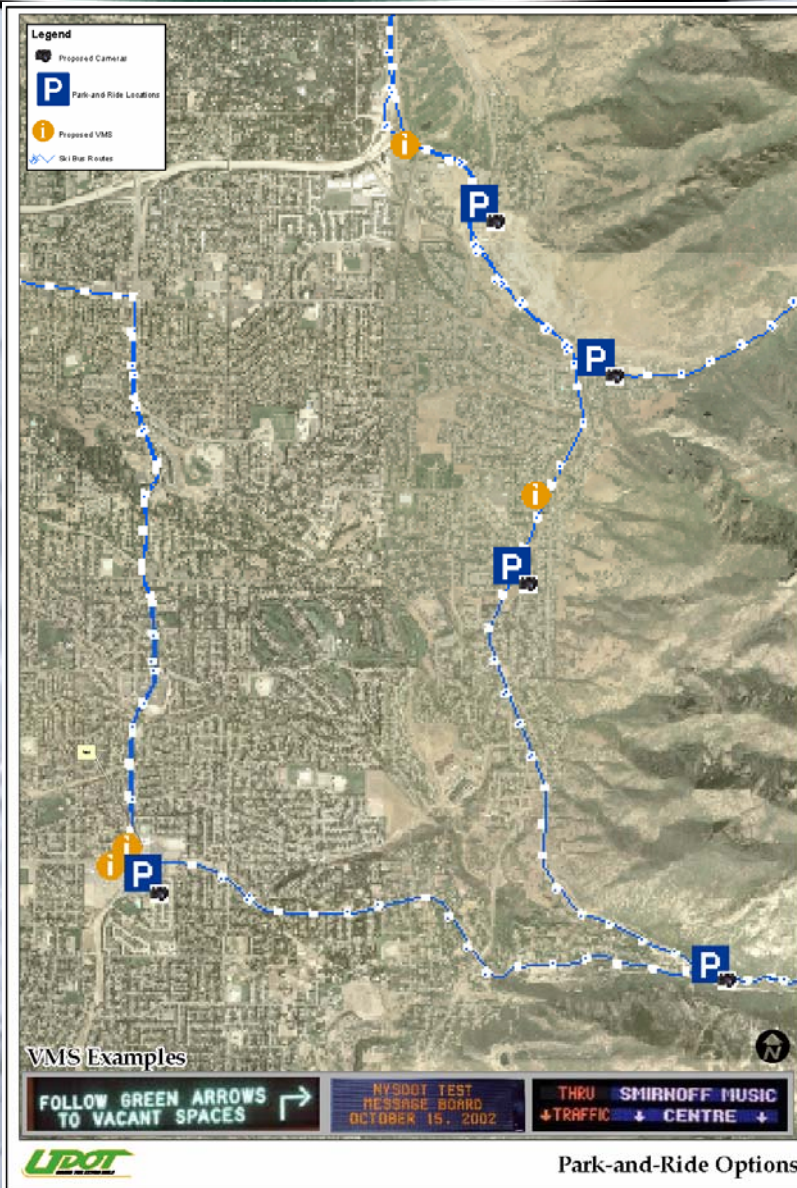


Optimize Parking Lot Egress



Parking Management

- Publicize park and rides
- Operational process for managing park and rides
- Technology to support the parking management



Publicize the Park and Rides

- New Signs & Name the Lots
- Publicize availability of parking spaces and use of public transportation



Operational Process

- Identify Available Spaces
 - Agency Interaction
 - Infrastructure
- Inform Public of Status
 - Agency Interaction
 - Infrastructure



Communication

- Identify the communication needs
 - Interagency process
 - infrastructure
- Identify possible solutions
- Determine the best solution



Canyon Conditions

- Obtain Data
 - RWIS
 - Traffic Loops
 - Maintenance observations
- Communication



Inform Public

- Electronic Signs
- HAR
- VMS Signs
 - Ski Lifts
 - Lots
 - Surface Streets
 - Transit Stops



Safety

- New methods of Avalanche Monitoring
- Protect Travelers
 - Keep the Skiers in the canyon
 - Prevent them from driving up the canyon



Status

- Obtained funding
- Working on contract for design of parking management

