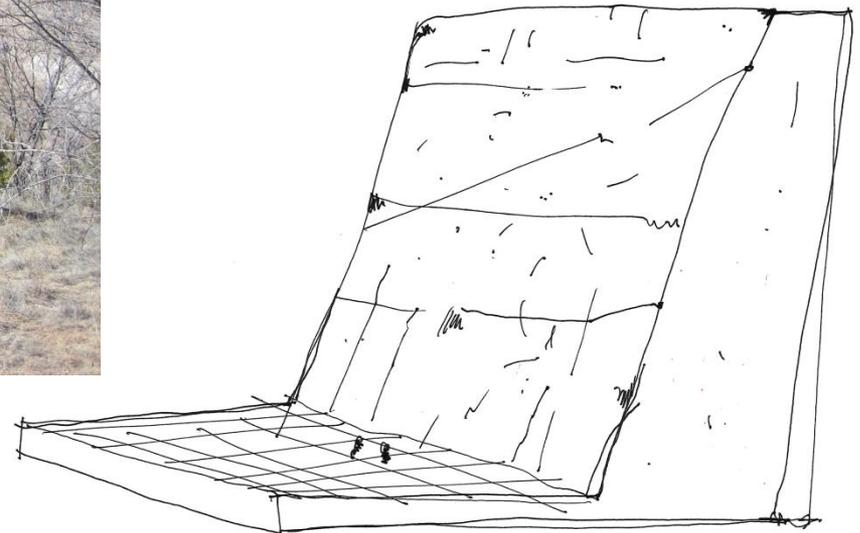


TOWN OF SILVER CITY PRESENTATION
NM ABANDONED MINE LAND PROGRAM
Plan and Design for the Safeguarding of Abandoned
Mines on Boston Hill in Silver City, New Mexico
Town Council Update 10/8/13
Presenter: Ken Romig, Dekker/Perich/Sabatini



Agenda

The New Mexico Abandoned Mine Land Program (AML) Program

- Purpose
- Priorities
- Project Status

Findings

- Mapping
- Environmental and Recreational Resources
- Stakeholder Concerns

Field Design Meeting #1

- Design Goals
- Possibilities and Opportunities
- Management Challenges
- Conceptual Designs

Next Steps

Questions



Who is AML?

The New Mexico Abandoned Mine Land (AML) Program

The New Mexico AML Program, part of the New Mexico Energy, Minerals, and Natural Resources Department, addresses the reclamation of abandoned mines throughout the state on both public and private property.

Priority 1: Protect public health, safety and property from immediate hazards resulting from historic mining practices.

Priority 2: Protect the public from hazards that do not constitute immediate hazards.

Priority 3: Restore lands and water degraded by historic mining practices. Restoration must facilitate the higher priority reclamation.



AML STAFF

John Kretzmann, PE, AML Program Manager

James Smith, P.E., Project Manager

Current Project Status

- **Assessment Phase- 90% complete**

- **Plan Phase**

- ***Public Meeting***

- ***April 23, 2013***

- ***Field Design Meetings***

- ***August 7- 10, 2013***

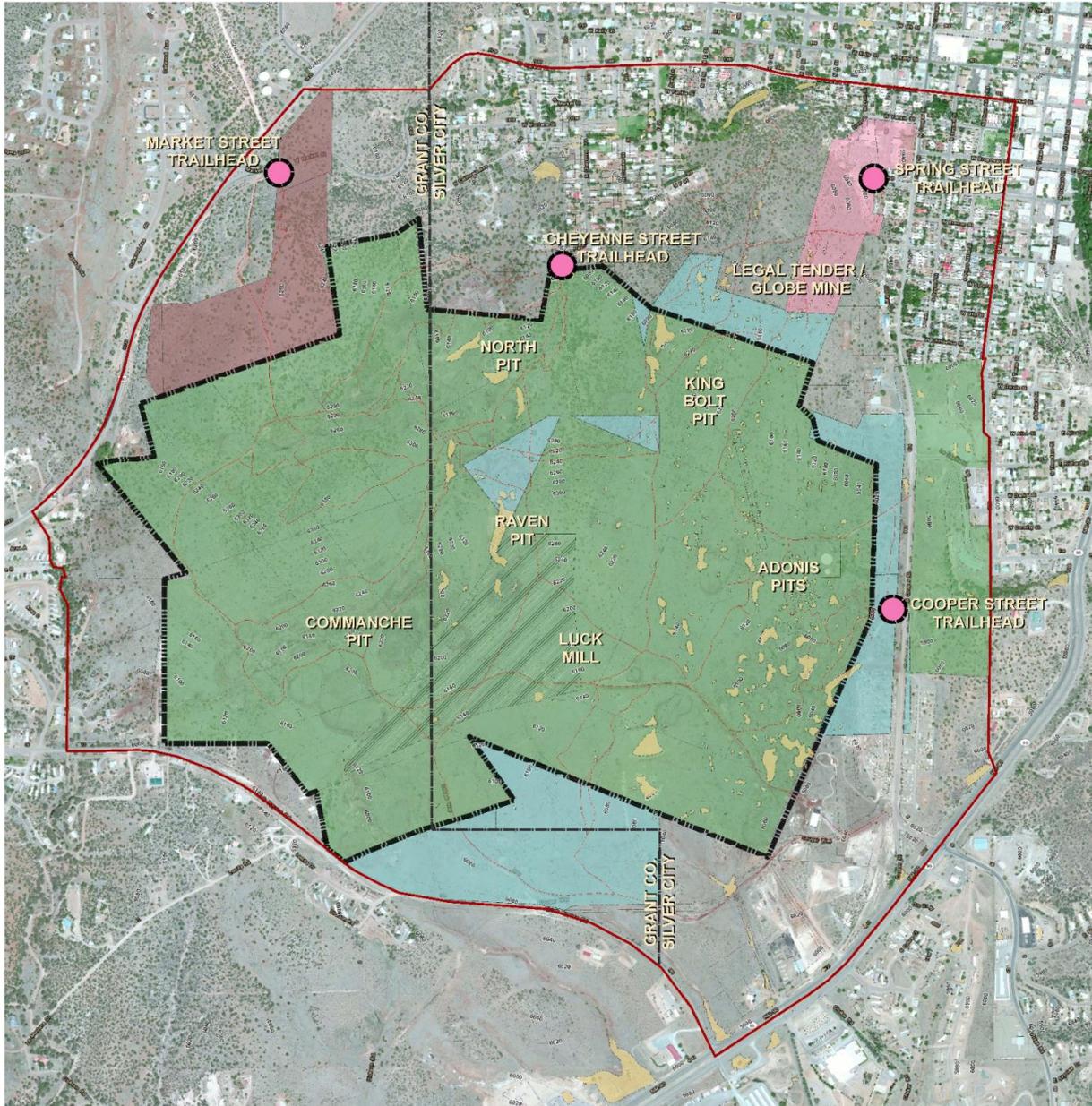
- ***October 5- 8, 2013***

- **Design Phase**

- **Construction Administration Phase**



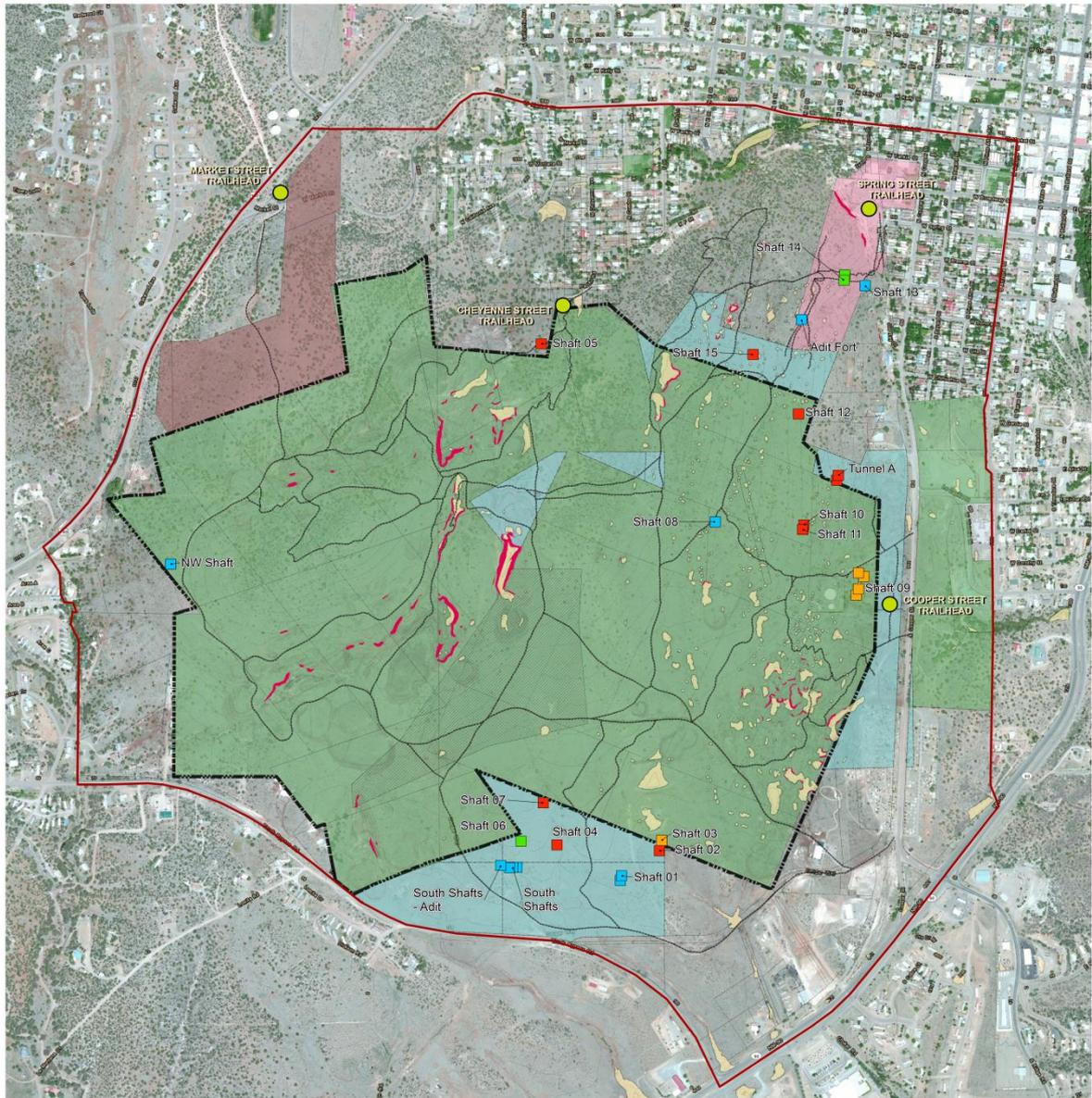
Land Ownership Map



LEGEND

-  STUDY AREA BOUNDARY
-  BOSTON HILL OPEN SPACE BOUNDARY
-  SURFACE DEPRESSION AREAS
-  POST-1977 MINING AREA
-  BLM LAND
-  EXISTING PRIVATE LAND
-  W. NEW MEXICO UNIVERSITY LAND
-  TOWN OF SILVER CITY LAND
-  GRANT COUNTY LAND
-  EXISTING BOSTON HILL TRAILS
-  EXISTING TRAILHEAD ACCESS
-  GRANT CO. / SILVER CITY BOUNDARY

Mine Hazards Map



LEGEND

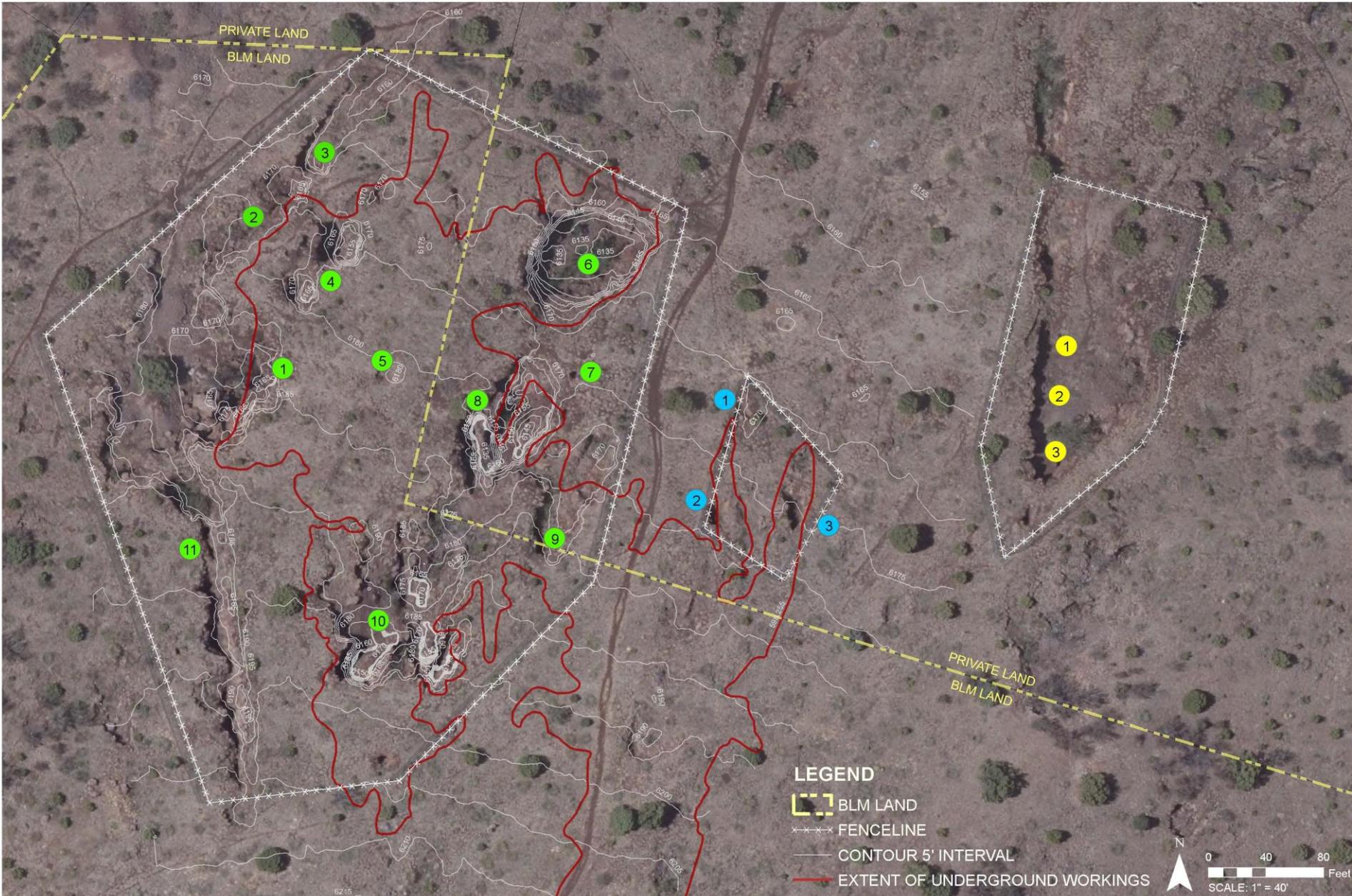
- STEEP AREAS
- TRAIL SYSTEM
- STUDY AREA BOUNDARY
- SURFACE DEPRESSION AREAS
- POST-1977 MINING AREA
- BOSTON HILL OPEN SPACE BOUNDARY
- BLM LAND
- EXISTING PRIVATE LAND
- TOWN OF SILVER CITY LAND
- GRANT COUNTY LAND
- W. NEW MEXICO UNIVERSITY LAND

EXISTING TRAILHEAD ACCESS

SHAFTS / TUNNELS

- NO FALL HAZARD
- FALL HAZARD, EASY EGRESS
- FALL HAZARD, DIFFICULT EGRESS
- FALL HAZARD, NO EGRESS

Legal Tender Mine Complex



Findings -Environmental and Recreation Resources



Findings- Stakeholder Concerns

- The AML program recognizes that Boston Hill is a community resource and that there are diverse opinions regarding the appropriate safeguarding measures that respect landowner prerogatives and reflect community sentiment.
- Protect the environment and heritage values.
- Both public and private landowners want safeguarding measures.
- Residents feel more comfortable on Boston Hill the more they visit.
- Indiscriminate trail development is diminishing the enjoyment of the Boston Hill Open Space.

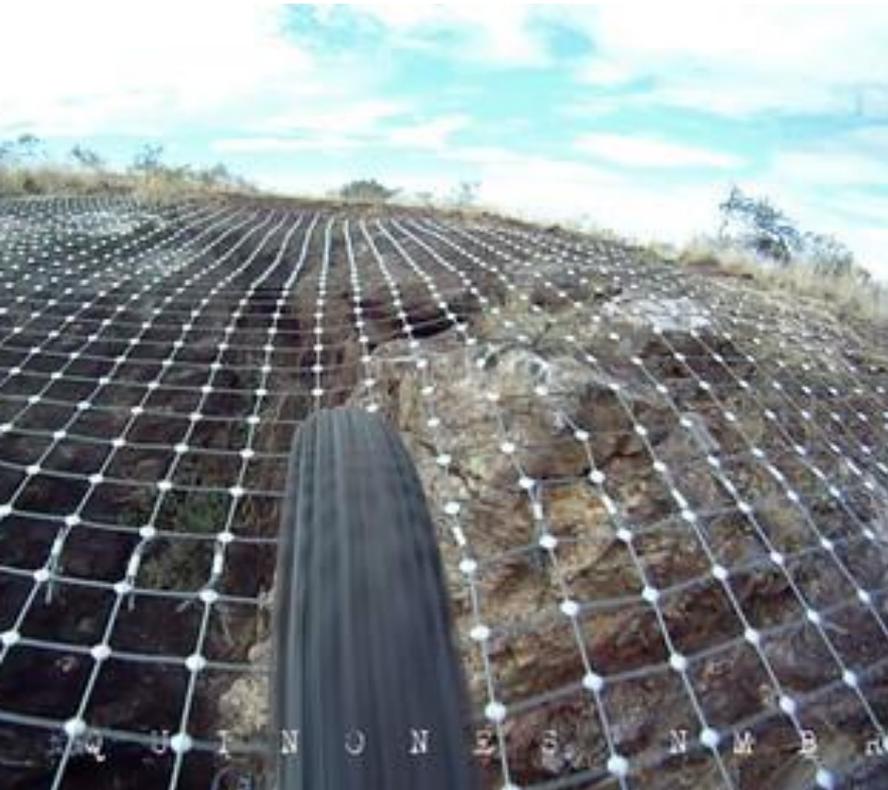


Field Design Meeting #1- August 2013



Management Challenges

- Open Spaces require civic and community resources including maintenance and operation budgets.
- Volunteer groups have managed to construct and maintain many trails, however, volunteers cannot address all the pressing issues nor maintain all the trails on Boston Hill.
- Boston Hill needs a more permanent solution to maintenance, management, and operations concerns



Goals for Safeguarding Measures

- Balanced the type of safeguarding improvement and stakeholder values.
- Preserve a visitors sense of risk-taking when visiting Boston Hill.
- Preserve the much-loved rugged landscape character of Boston Hill.
- Protect the native plant and animal habitats.
- Create improvements that consider all risk-taking behaviors.



Possibilities and Opportunities



Conceptual Design- Mine Entry



Before- rock fall hazard



After- rock bulkhead and bat compatible closure

Conceptual Design- Amphitheatre



Before- fall hazard



After- high tensile steel mesh

Conceptual Design- Mine Entry



Before- rock fall hazard



After- tire closure and bat compatible closure with amphitheater seating to view bats

Conceptual Design- Long Trench



Before- fall hazard



After- high tensile steel mesh and bridge

Phase 3- Design

Phase 4- Construction Assistance

- **Develop Schematic Design**

- *Prepare designs, elevations and sections*
- *Share design with stakeholders*
- *Cost estimates*
- *3-D model the design*
- *Coordinate design with experts in biology, engineers, archaeological resources*

- **Develop Construction Documents**

- *Bid and negotiate contract*

- **Monitor construction**

- **Review construction at substantial completion**





Thank you
Questions

