

CANYON RIM TRAIL



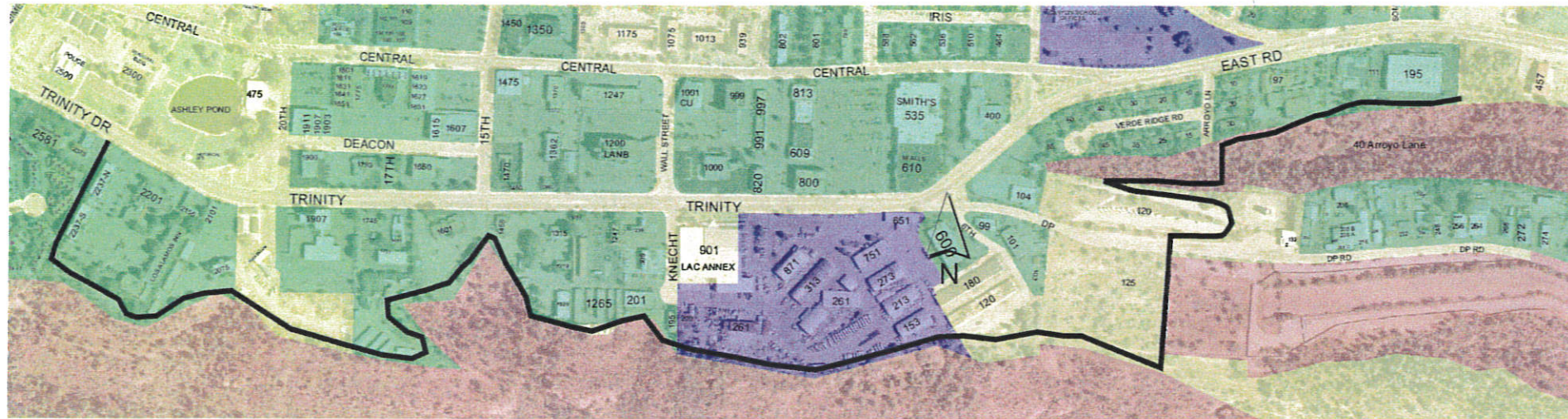
*Los Alamos
Parks*

**MASTER PLAN
MARCH 2011**

Background: A trail along the rim of Los Alamos Canyon was first proposed by a citizen group in the early 1990s and a conceptual plan for a trail extending from near the eastern County boundary through the downtown area was presented by the Parks Division to Council in 2006. In 2009, the County Council approved \$1.2 million in Capital Improvement Project (CIP) funding for an initial phase of trail construction on County-owned land extending from Fire Station #6 near East Park to the vicinity of the Pajarito Cliffs Site. A 7,600-foot section of the Canyon Rim Trail was opened for public use on August 21, 2010 and the trail quickly became a popular, year-round recreation destination. The success of the trail has led to broad-based citizen support for extending the trail to the west.

Master Plan: Construction along the proposed trail corridor west of the initial segment presents a number of challenges: private land, canyon crossings, Solid Waste Management Units (SWMUs), and stormwater management issues. Sixteen parcels of land lie along the proposed trail corridor with 12 different owners. The Department of Energy transfer of parcel A-10 to the County, slated for 2012, would reduce the number of parcel owners eight. Because of the multiplicity of ownership, trail construction will proceed more rapidly if the Parks Division is prepared to build the trail separately on each parcel as parcels and funding become available.

To increase preparedness for trail construction, the Parks Division developed a Canyon Rim Trail Master Plan. The plan consists of a parcel-by-parcel breakdown of the proposed route, the pre-construction requirements, issues, and costs of construction. The plan makes recommendations for trail construction on each parcel ranging from possible acquisitions of trail easements to waiting until the transfer of parcel A-10 to construction as soon as possible. The plan is meant to be a guidance document. Approval of the plan would permit staff to pursue laying the groundwork for trail construction but would not be considered as site plan approval or approval of CIP funding.



Proposed Route, Canyon Rim Trail

total trail length = 10,400 feet



Land Ownership

- Los Alamos Public Schools
- Department of Energy
- Private
- County of Los Alamos

Proposed Trail Corridor

Summary of Land Ownership, Construction Issues, and Costs

| Street No | Street | Owner | Current Use | Length in ft | Construction Rating | Cost Estimate | SWMU? | Comments, Concerns |
|-----------|---------|----------------------------|-------------------------|--------------|---------------------|---------------|-------|---|
| 111 | EAST | RD TRK MANAGEMENT | Office space | 305 | Difficult | \$200,000.00 | No | Requires bridge, large culvert, easement |
| 97 | EAST | RD EAST PARK POOL ASSO | Private swim club | 280 | Easy | \$12,000.00 | No | Board willing to discuss easement |
| 95 | EAST | RD CROSSROADS BIBLE CHURCH | Religious meeting place | 350 | Moderate | \$15,000.00 | No | Better to go below after transfer slated for 2012 |
| 90 | EAST | RD DEPARTMENT OF ENERGY | Open | 1800 | Difficult | \$360,000.00 | Yes | Transfer slated for 2012; requires bridge |
| 125 | DP | RD COUNTY OF LOS ALAMOS | Open | 1600 | Easy | \$52,000.00 | Yes | Location dependant on TA-21 cleanup |
| 120 | 6th | ST COUNTY OF LOS ALAMOS | Open | 350 | Easy | \$12,000.00 | Yes | |
| 751 | TRINITY | DR LOS ALAMOS SCHOOL BOARD | Trinity Site | 1800 | Easy | \$137,000.00 | Yes | Requires coordination with schools and developer |
| 201 | KNECHT | ST CEM ENTERPRISES | Auto body shop | 275 | Difficult | \$25,000.00 | No | Requires trail as stormwater control |
| 1275 | TRINITY | DR LOS ALAMOS COUNTY | Storage trailers | 250 | Easy | \$7,000.00 | No | |
| 1325 | TRINITY | DR AMERICAN LEGION | American Legion | 225 | Easy | \$7,000.00 | No | Requires easement or land exchange |
| 1459 | TRINITY | DR LOS ALAMOS SHRINE CLUB | Shrine Club | 400 | Easy | \$15,000.00 | No | Requires easement or land exchange |
| 1600 | TRINITY | DR ELKS LODGE NO 2083 | Elks Lodge | 350 | Easy | \$11,000.00 | No | Requires easement or land exchange |
| 1847 | TRINITY | DR COURTWRIGHT REVOC TRUST | Storage trailers | 700 | Easy | \$23,000.00 | No | Requires easement or land exchange |
| 1925 | TRINITY | DR COUNTY OF LOS ALAMOS | Storage yard | 550 | Easy | \$18,000.00 | No | |
| 2075 | TRINITY | DR SHANNON CORPORATION INC | Commercial | 450 | Difficult | \$15,000.00 | Yes | Heavy commercial development on parcel |
| 2201 | TRINITY | DR LOS ALAMOS PLAZA LLC | Future development | 700 | Difficult | | Yes | Owner may construct trail |
| | | | Total length | 10,385 | Total Cost Estimate | \$909,000.00 | | |

Canyon Rim Trail: East Park Pool Parcel

Ownership: Private, area to south slated for transfer to County from DOE in 2012

Length of Trail Segment: 280 feet

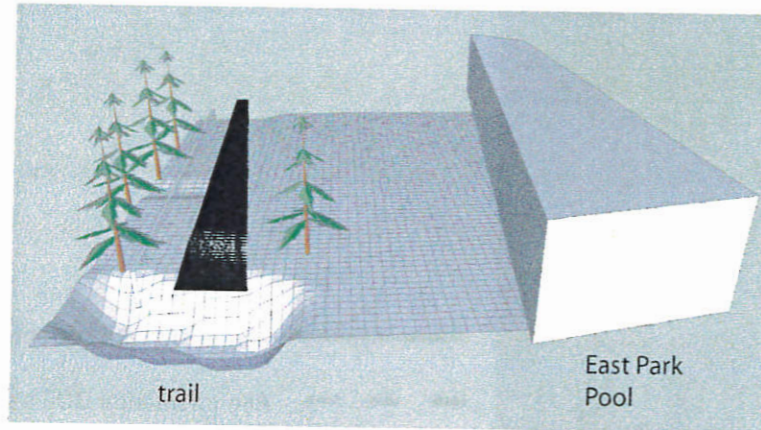
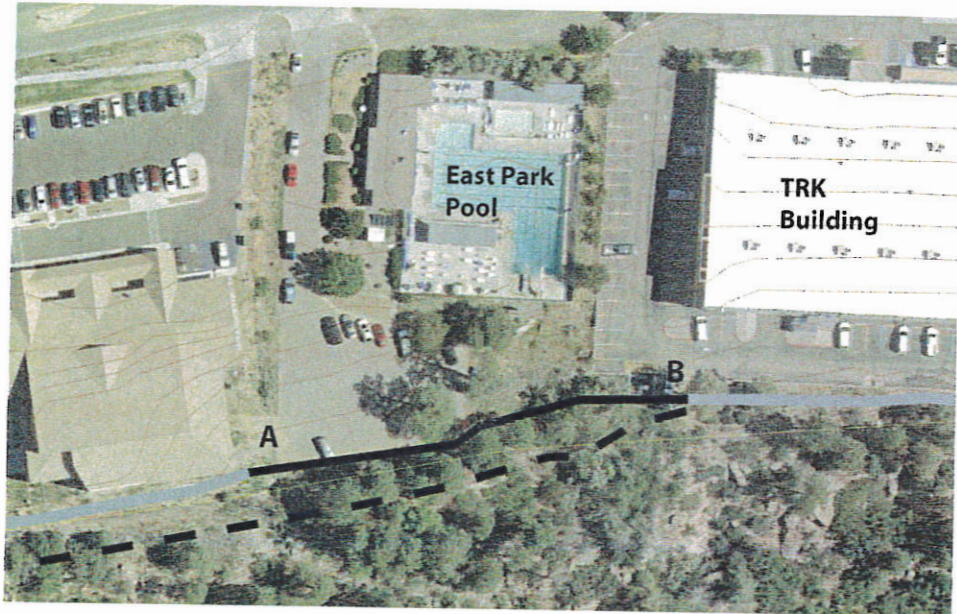
Terrain Difficulty: Easy

SWMU Issues: None

Narrative: The East Park Pool parcel is a relatively flat segment of the Canyon Rim Trail corridor. Although the land is privately owned, the owners are cooperative and support the effort to build the trail. The acquisition of an easement will be required before construction. An alternative is to wait until the Department of Energy transfer of parcels A-9 and A-10, then the trail could be built on flat land that will be owned by the county.

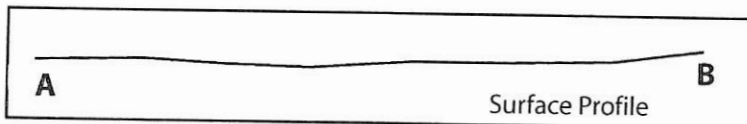
Construction would require one large culvert.

Cost estimate: \$12,000



Canyon Rim Trail: East Park Pool Parcel

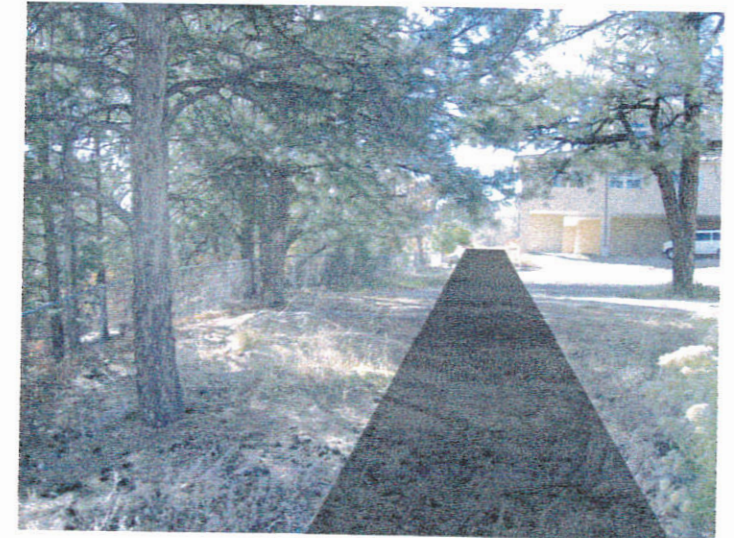
- Alignment with current boundary
- - - Alignment after DOE transfer
- Canyon Trail on other parcels



Needs: easement or transfer from DOE
drainage assessment



Trail will require a large culvert to accommodate parking lot drainage.



The entire parcel is relatively flat.

Canyon Rim Trail: TRK Building Parcel or A-10 Transfer Parcel

Ownership: Private/DOE slated for transfer to County in October 2012

Length of Trail Segment: 305 feet

Terrain Difficulty: Complex on TRK parcel: existing retaining wall, sloping ground; complex on DOE transfer parcel: drainage, sloping ground

SWMU Issues: None

Narrative: The area behind the TRK Building presents two options for trail construction. Option 1: If the parcel owners agree to a trail easement on their property, the trail could be constructed as funding becomes available. The challenges of the property are a narrow trail corridor immediately adjacent to a large retaining wall. The trail corridor would require a 100-foot bridge.

Option 2: Wait until the land transfers to the County from the DOE in 2012 or later. The trail would move to the south and traverse more challenging terrain that would increase construction costs due to an increase in bridge length.

Cost estimate: TRK parcel: \$155,000; DOE transfer parcel: \$200,000



Trail could be placed between property boundary and retaining wall.



A 100-foot bridge may be required to span a location of steep drainage.

Needs:

Option 1: acquire easement, engineering contract for retaining walls, bridge contract

Option 2: transfer from DOE, bridge contract



The west half of the parcel is relatively flat.

Canyon Rim Trail: Crossroads Bible Church Parcel

Ownership: Private, area south slated for transfer to County from DOE in 2012

Length of Trail Segment: 350 feet

Terrain Difficulty: Easy, but very little space for the trail




SWMU Issues: None

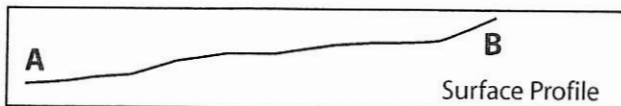
Narrative: Property lines create problems for a current placement of this segment of trail. The distance between the DOE fence and the church building is less than 15 feet for about half the length of this stretch. However, the terrain is flat and presents no serious obstacles to construction. The DOE parcel south of the property line is slated to transfer to Los Alamos County in 2012. After transfer, this segment of trail could be constructed at minimal cost.

Cost estimate: \$15,000



Canyon Rim Trail: Crossroads Bible Church Parcel

-  Alignment with current boundary
-  Alignment after DOE transfer
-  Canyon Rim Trail on other parcels



Needs: acquire easement or wait for DOE transfer



With current land ownership, the trail would need to be on an easement granted by the church and would be only a few feet off the rear wall of the church.



The terrain on the A-10 parcel is more attractive for trail construction and use.

Canyon Rim Trail: A-9 and A-10 Transfer Parcels

Ownership: DOE, slated for transfer to County in 2012; Los Alamos County

Length of Trail Segment: 1,800 feet

Terrain Difficulty: Trail crosses DP Canyon

SWMU Issues: Small fuel seep in canyon bottom out of construction corridor

Narrative: The proposed trail corridor connects the edge of DP Canyon with the edge of Los Alamos Canyon via a route through the A-9 and A-10 transfer parcels. DP canyon narrows near its head, and the property boundaries of the Verde Ridge subdivision pinch off any possibility of a trail skirting the head of the canyon. This problem can be solved with a 120-foot bridge across DP Canyon. The proposed route takes the trail away from the housing area at Verde Ridge to the south side of DP canyon and connects with an old road to switchback to the level of DP Road. The exact route from the south side of the bridge to DP Road and the rim of Los Alamos Canyon is dependant on cleanup activities, development proposals, and the final route on the Trinity Site.

Cost estimate: \$360,000



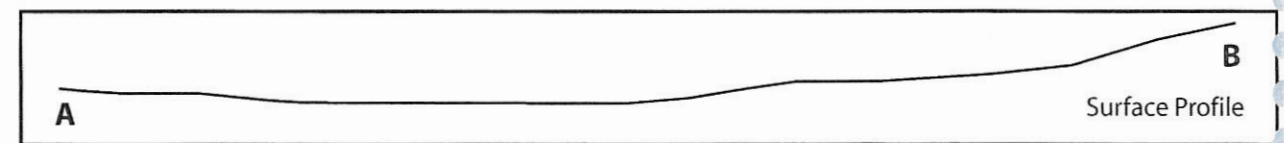
Canyon Rim Trail: A-9 and A-10 Transfer Parcels

- Proposed alignment
- Canyon Rim Trail on other parcels

- Needs:**
- transfer from DOE
 - bridge contract
 - route coordination with LAFD
 - SWMU coordination with LANL



The trail requires a 120-foot bridge to cross DP Canyon.



Canyon Rim Trail: A-8 Transfer Parcel

Ownership: Los Alamos County

Length of Trail Segment: 1,200 to 1,600 feet

Terrain Difficulty: Easy

SWMU Issues: None

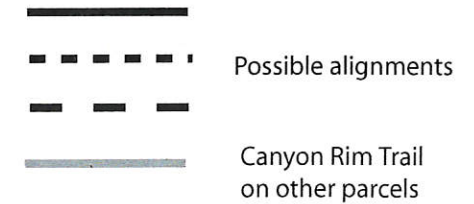
Narrative: The proposed trail corridor cannot be established on the A-8 parcel until the completion of the cleanup project for Technical Area 21. The trail could head due south along either boundary to meet the canyon edge where it would turn to the west along the southern parcel boundary. An alternative for immediate use is a corridor along 6th Street that would bypass the A-8 parcel.

Cost estimate: \$40,000 to \$52,000

Needs: final cleanup of TA-21



Canyon Rim Trail: A-8 Transfer Parcel

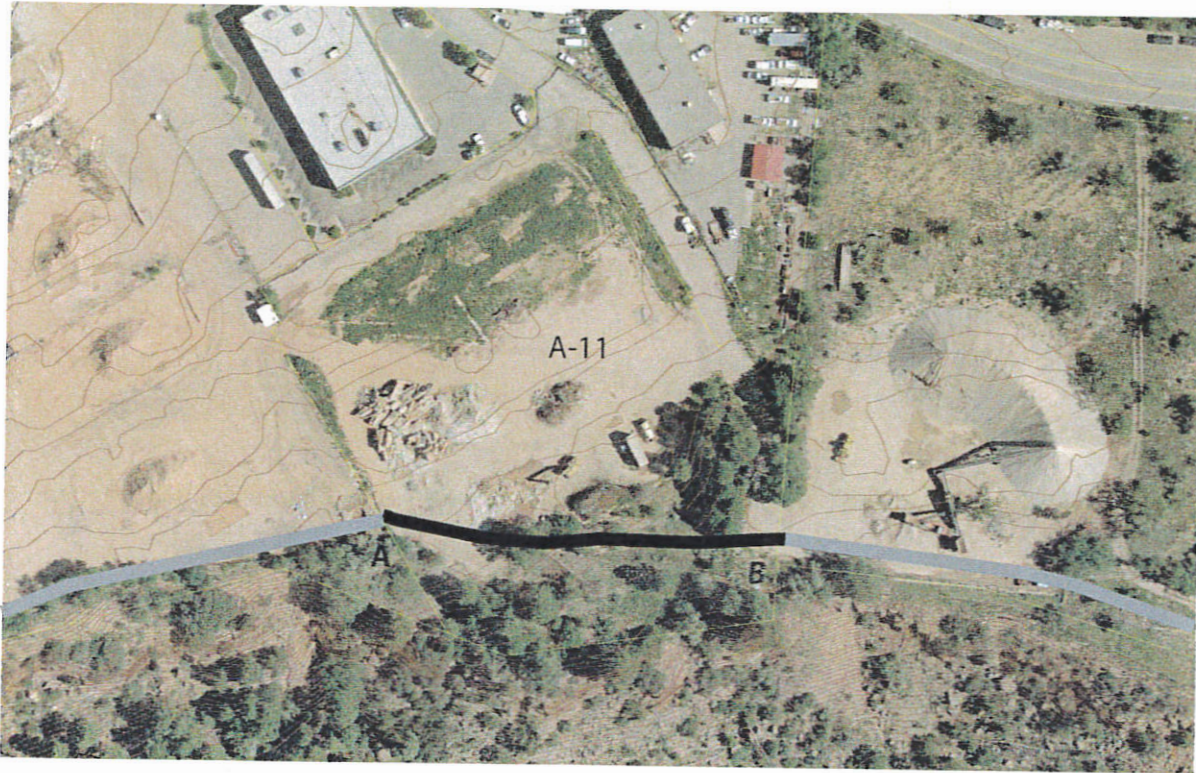


Canyon Rim Trail: A-11 Transfer Parcel

Ownership: Los Alamos County
Length of Trail Segment: 350 feet
Terrain Difficulty: Easy
SWMU Issues: None

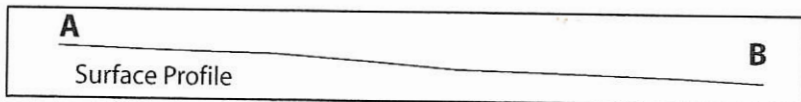
Narrative: This short segment of trail presents an easy stretch of trail construction with minimal expense.

Cost estimate: \$12,000



Canyon Rim Trail: A-11 Transfer Parcel

- Proposed alignment
- Canyon Rim Trail on other parcels



The A-11 parcel is flat and open.

Canyon Rim Trail: Trinity Site

Ownership: Los Alamos Public Schools

Length of Trail Segment: 1,800 feet

Terrain Difficulty: Trail crosses DP Canyon

SWMU Issues: SWMU locations on the west half of parcel

Needs: reach agreement with LA Public Schools for trail corridor
coordinate with Trinity Site developer
design permanent stormwater controls
coordinate with LANL and NMED on SWMU management

Narrative: The proposed trail corridor on the Trinity Site is 1,800 feet long. This segment is located on flat terrain, but the surface to the north slopes toward the trail. Runoff from the Trinity Site needs strict control to mitigate impacts in Los Alamos Canyon related to contaminant migration, historic resources, and SWMUs. By carefully contouring the trail and selecting culvert locations, the trail can function as a stormwater management control for the site. The trail surface could be elevated slightly to direct water into three to four stormwater retention ponds or into linear storage along the trail.

Cost estimate: \$137,000



Canyon Rim Trail: Trinity Site

— Proposed alignment

— Canyon Rim Trail on other parcels



The Trinity Site is open and flat.



The trail could replace existing stormwater controls and serve to channel and detain surface runoff.

CANYON RIM TRAIL TRINITY SITE BUDGET WORKSHEET DETAILS
DESIGN AND CONSTRUCTION COSTS

Total cost materials \$108,715.00
Total cost labor \$27,640.00
Total cost \$136,355.00

| Structure | Material | Size | Quantity | Unit Price | Total | |
|--------------------------------------|----------------------|-----------|----------|-----------------|-------------|-------------|
| Stormwater | culvert | 24 inch | 10 | 535 | \$5,350.00 | |
| | culvert | 36 inch | 1 | 725 | \$725.00 | |
| | outfall rock | 6 inch | 3 | 150 | \$450.00 | |
| | geotextile | 200 feet | 1 | 150 | \$150.00 | |
| | earth moving | 1800 feet | 1800 | 10 | \$18,000.00 | |
| | stormwater controls | each | 1 | 15000 | \$15,000.00 | |
| | | | | Subtotal | | \$39,675.00 |
| Trail corridor 1,800 feet | roadbase | yards | 700 | 10 | \$7,000.00 | |
| | asphalt | tons | 500 | 85 | \$42,500.00 | |
| | reclamation seeding | pounds | 200 | 10 | \$2,000.00 | |
| | | | | Subtotal | | \$51,500.00 |
| Parking area | roadbase | yard | 100 | 10 | \$1,000.00 | |
| | asphalt | tons | 30 | 85 | \$2,550.00 | |
| | | | | Subtotal | | \$3,550.00 |
| Amenities | benches | each | 4 | 540 | \$2,160.00 | |
| | turnarounds | tons | 6 | 130 | \$780.00 | |
| | trail signs | each | 12 | 25 | \$300.00 | |
| | rules and regulation | each | 2 | 50 | \$100.00 | |
| | distance markers | each | 6 | 25 | \$150.00 | |
| | trailhead kiosk | each | 1 | 500 | \$500.00 | |
| | | | | Subtotal | | \$3,990.00 |
| Other | Contingency | | | | \$10,000.00 | |
| | | | | Subtotal | | \$10,000.00 |

Canyon Rim Trail: Knecht Street Parcel

Ownership: Private

Length of Trail Segment: 275 feet

Terrain Difficulty: Pinch point between DOE boundary and Los Alamos Canyon

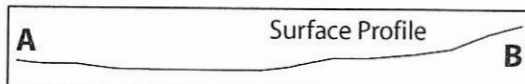
SWMU Issues: Stormwater issues would require coordination with LANL

Narrative: This short segment of trail presents considerable problems. It is located at a constriction point between the DOE boundary and existing development and has a history of stormwater discharge problems. On the Knecht Street parcel, the trail corridor is entirely blocked by existing uses and it is unlikely that the landowner could find alternative locations for the current uses. The terrain on the DOE side of the boundary would permit trail construction. However, the first segment of the potential trail corridor currently serves as a stormwater conduit. Utilizing this space for the trail corridor would require talks with the DOE and careful coordination of stormwater designs in the trail planning process.

Cost estimate: \$25,000

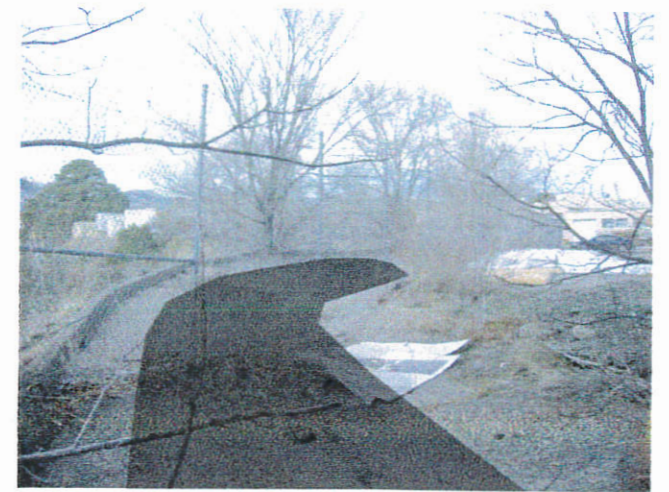


Canyon Rim Trail: Knecht Street Parcel



- Proposed alignment
- Canyon Rim Trail on other parcels

Needs: possible easement or transfer from DOE
stormwater engineering design



The DOE boundary crosses an old stormwater drainage channel.



Trail construction will likely require an easement or transfer from the DOE.

Canyon Rim Trail: A-2 Transfer Parcel

Ownership: Los Alamos County
Length of Trail Segment: 250 feet
Terrain Difficulty: Easy
SWMU Issues: None

Narrative: The short segment of trail on the A-2 parcel presents no problems to construction or use.

Cost estimate: \$7,000

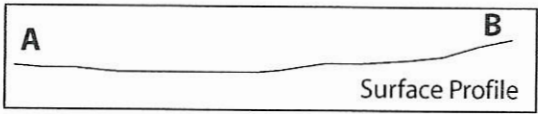


Once existing storage trailers are relocated, construction of the short A-2 segment will be easy.



Canyon Rim Trail: A-2 Transfer Parcel

- Proposed alignment
- Canyon Rim Trail on other parcels



Canyon Rim Trail: American Legion Parcel

Ownership: Private

Length of Trail Segment: 225 feet

Terrain Difficulty: Easy

SWMU Issues: None

Narrative: This short stretch of the trail corridor is currently blocked by existing development. The current owners may be willing to provide an easement for the corridor. An alternative is to include a 20-foot wide easement in this area in any talks with the DOE on easements or transfers for the trail corridor.

Cost estimate: \$7,000

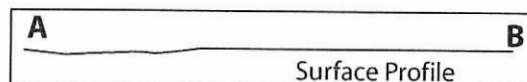
Needs: possible easement or transfer from DOE
easement from current landowner





The trail corridor is constricted by the DOE boundary and existing development.



Canyon Rim Trail: American Legion Parcel



-  Proposed alignment
-  Canyon Rim Trail on other parcels

Canyon Rim Trail: Shrine Club Parcel

Needs: easement from current landowner

Ownership: Private

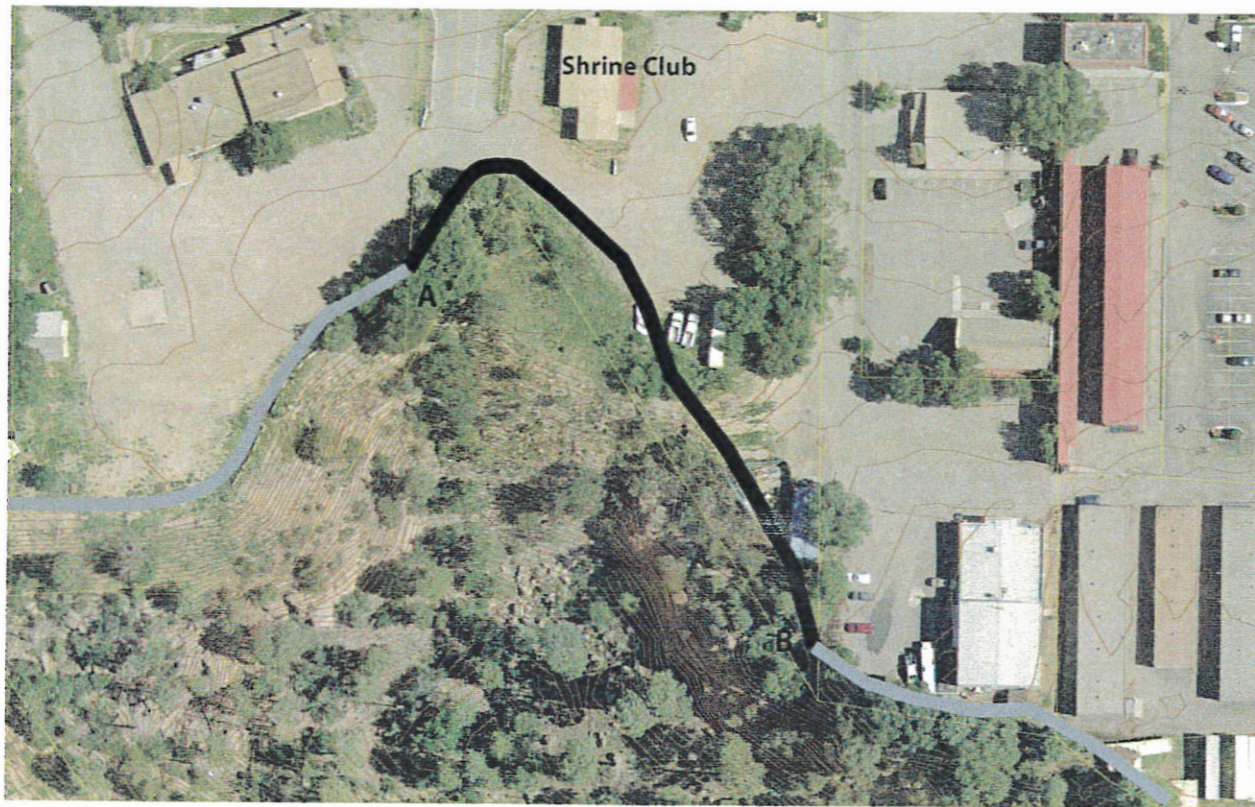
Length of Trail Segment: 400 feet

Terrain Difficulty: Easy

SWMU Issues: None

Narrative: On this parcel, the trail corridor must swing north to avoid a drainage and the DOE boundary. The terrain is flat and presents no problems to construction or trail use.

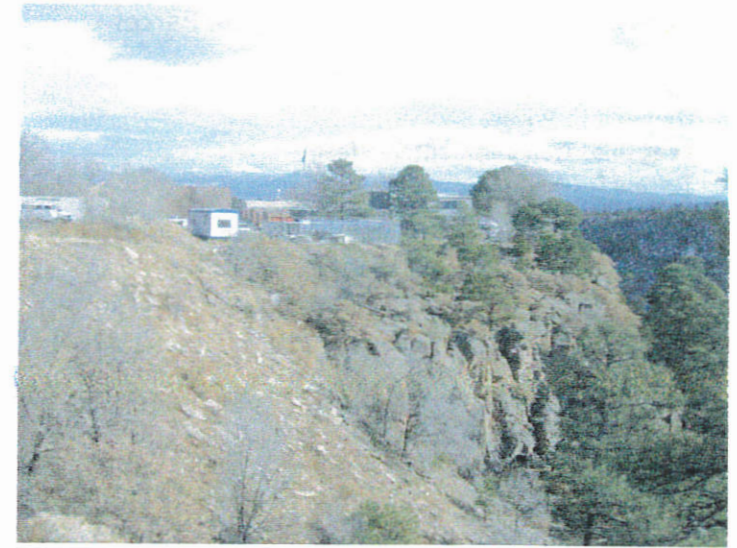
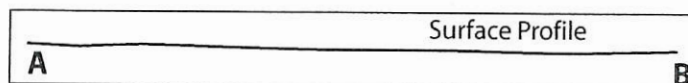
Cost estimate: \$15,000



Canyon Rim Trail: Shrine Club Parcel

— Proposed alignment

— Canyon Rim Trail on other parcels



The Shrine Club parcel offers the opportunity to place the trail corridor at the canyon edge.

Canyon Rim Trail: Elks Club

Needs: easement from current landowner

Ownership: Private

Length of Trail Segment: 350 feet

Terrain Difficulty: Easy

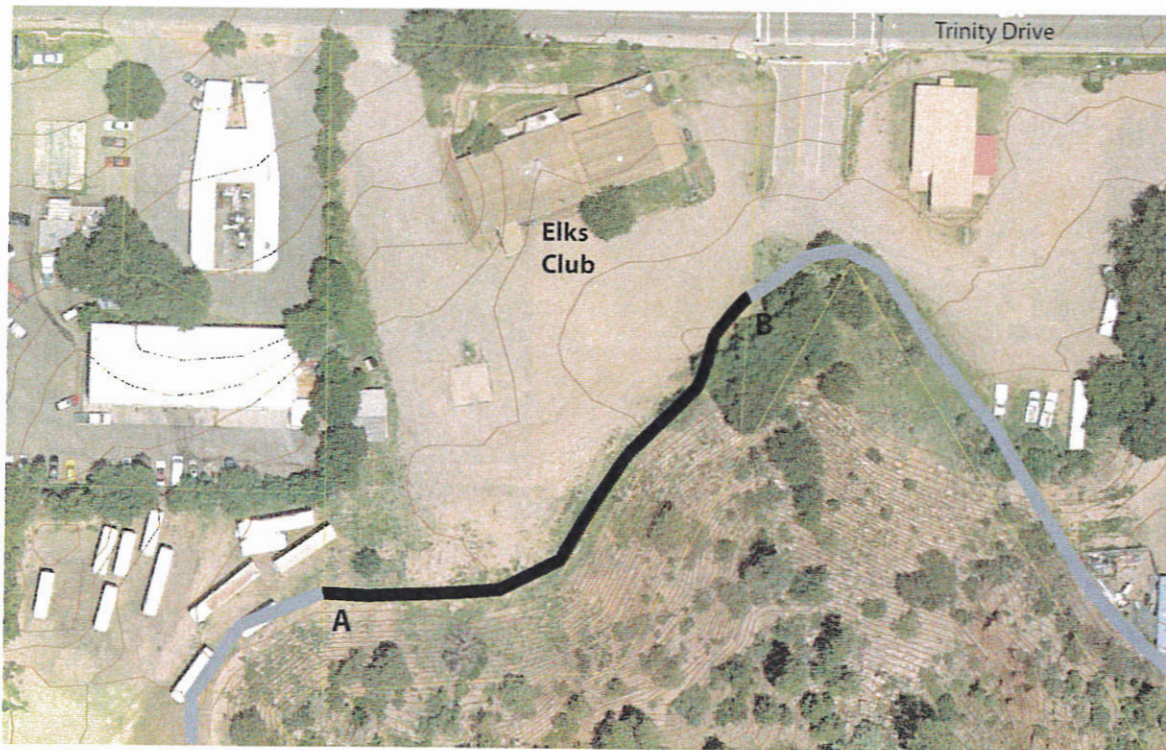
SWMU Issues: None

Narrative: This private parcel is open and flat, and presents little difficulty to trail construction or use.

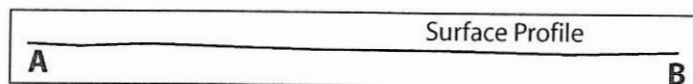
Cost estimate: \$11,000



The trail corridor is open and flat, and offers outstanding views.



Canyon Rim Trail: Elks Club



— Proposed alignment

— Canyon Rim Trail on other parcels

Canyon Rim Trail: Courtwright Parcel

Needs: easement or land exchange with current owner

Ownership: Private

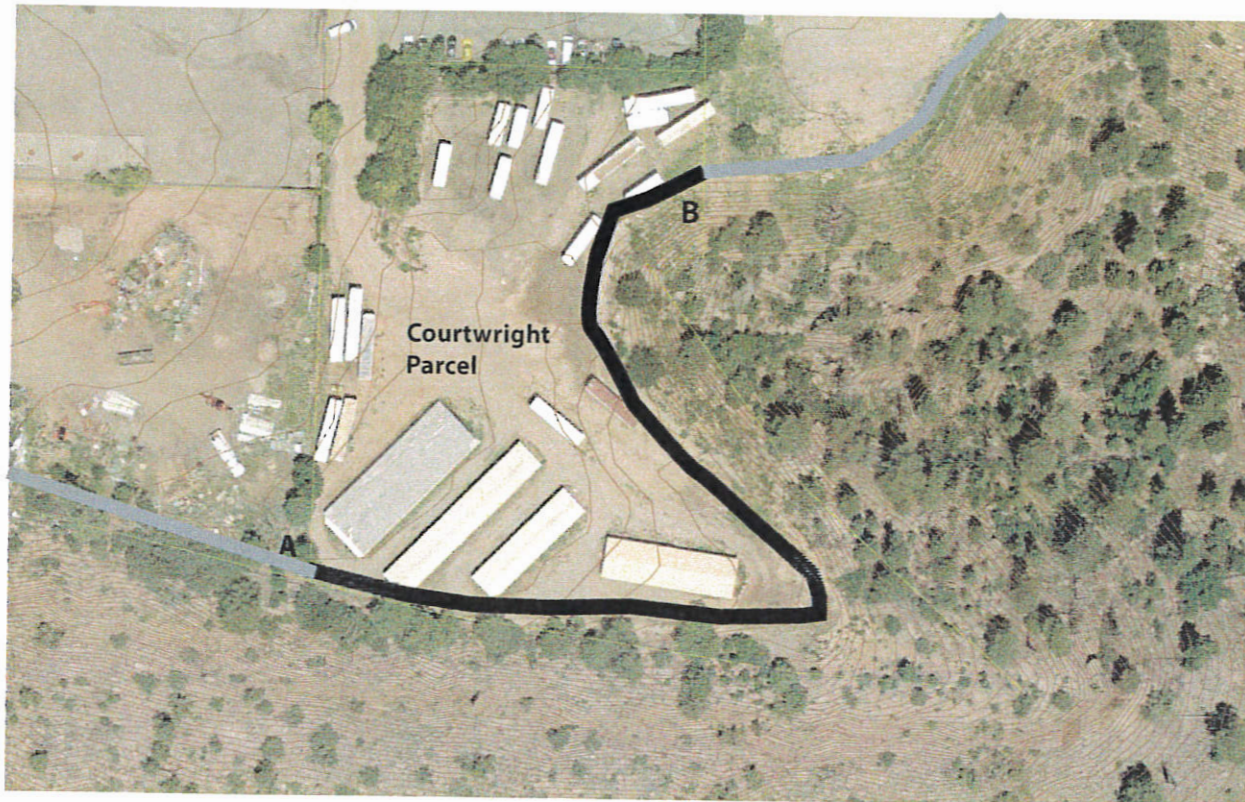
Length of Trail Segment: 700 feet

Terrain Difficulty: Easy

SWMU Issues: None

Narrative: This parcel is key to the success of the Canyon Rim Trail. It offers easy construction as well as outstanding views of Los Alamos Canyon and the surrounding area. The completion of the trail corridor here would require an easement or land exchange between the County and the land owner.

Cost estimate: \$23,000



Canyon Rim Trail: Courtwright Parcel



- Proposed alignment
- Canyon Rim Trail on other parcels



This parcel is flat and offers outstanding views of Los Alamos Canyon and the mountains beyond.



The viewshed from the point of the Courtwright parcel.

Canyon Rim Trail: County Lavy Lane Parcel

Ownership: Los Alamos County

Length of Trail Segment: 550 feet

Terrain Difficulty: Easy

SWMU Issues: None

Narrative: The proposed trail corridor is flat and open. The area is used as a storage yard, but will likely be part of new downtown development. The trail corridor would not conflict with development plans.

Cost estimate: \$18,000

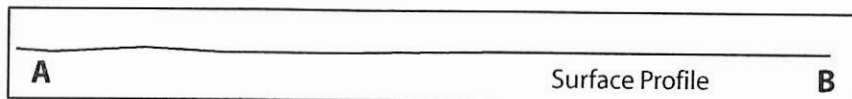


Canyon Rim Trail: County Lavy Lane Parcel



The County-owned Lavy Lane parcel is currently used as a storage yard. It is flat and open and presents an easy construction scenario.

- Proposed alignment
- Canyon Rim Trail on other parcels



Canyon Rim Trail: Shannon Corporation Parcel

Ownership: Private

Length of Trail Segment: 450 feet

Terrain Difficulty: Easy

SWMU Issues: None

Narrative: The proposed trail corridor is highly developed and presents few opportunities for trail construction. Developing a trail in this area will require cooperation between the County and the land owner.

Cost estimate: \$15,000



Needs: cooperation from the land owner
stormwater engineering design



The Shannon Parcel is highly developed and presents difficulties for trail construction.



Canyon Rim Trail: Shannon Corporation Parcel

-  Proposed alignment
-  Canyon Rim Trail on other parcels



Canyon Rim Trail: Los Alamos Plaza Parcel

Ownership: Private

Length of Trail Segment: 500 feet

Terrain Difficulty: Moderate

SWMU Issues: Considerable

Narrative: The proposed trail corridor has long been a part of the site plan for the development of this parcel. Construction is currently the responsibility of the owner. However, the SWMU issues on this site and in the canyon below have long delayed work on the site. Resolution of stormwater and SWMU issues between the land owner, the County, NMED, and LANL are required before any extension of the trail can be constructed on the property.

Cost estimate: N/A



Canyon Rim Trail: Los Alamos Plaza Parcel

— Proposed alignment

— Canyon Rim Trail on other parcels

