

• **Board of Directors**
Engineering and Operations Committee

November 16, 1999 Board Meeting

10-2

Subject

Inland Feeder Project Status Report for September 1999

Description

As previously reported, excavation utilizing the tunnel boring machine (TBM) at the Arrowhead East Tunnel has been discontinued while an aggressive grouting program to reduce groundwater outflows is being completed. The contractor continues to grout on a daily basis and has reduced outflows to less than 300 gallons per minute. Given that Metropolitan continues to incur costs during grouting operations, staff is urgently reviewing a variety of options to proceed with this work and will present its findings to the Board in November 1999. The projected completion date for the tunnel is early 2003 if a dual heading is adopted, which supports the Inland Feeder on-line date of 2004. A total of 8,008 feet has been mined on the Arrowhead East Tunnel to date (see [Attachment 1](#) for mining progress). The Strawberry Creek Pipeline is 100 percent complete.

Construction on the Riverside Pipeline South has been completed, with all 6.8 miles of pipe installed and mortar lined. Demobilization and final site work was completed and Metropolitan accepted the project as substantially complete on August 18, seven months ahead of schedule.

Progress on the 8.4-mile Riverside Pipeline North also continues ahead of schedule with all pipe installed and 100 percent of the mortar lining completed. Construction is expected to be complete in late 1999.

Work continues on the Arrowhead West Tunnel at the Devil Canyon and Waterman Canyon Pipeline and Portal sites. Assembly of the cutterhead on the TBM body, and fabrication of the tunnel liner at the Waterman Canyon Portal has been placed on hold until decisions are made on the Arrowhead East Tunnel. The Waterman Canyon Pipeline is complete. The Devil Canyon Pipeline is complete and backfilling operations should be completed by the end of October.

The Riverside Badlands Tunnel contractor has installed the cutterhead on the TBM at the Gilman Springs Portal. Extensive efforts continue to prepare the TBM, trailing gear and portal site for mining, scheduled to begin in October 1999. The roll-over/muck-handling facility has been installed. Fabrication of the concrete support segments and 60-foot sections of welded steel pipe continues on schedule.

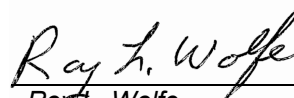
Mentone Pipeline construction bids were opened on September 2, 1999. Staff anticipates recommendation for contract award at the December board meeting.

The Highland Pipeline design is approximately 90 percent complete and requests for construction bids will be advertised in early 2000.

The Inland Feeder Project is scheduled for completion in 2004. The overall project budget remains at \$1.188 billion. Total expenditures to date are \$379.3 million (see [Attachment 2](#) for a financial summary and [Attachment 3](#) for a schedule summary).


Policy

Board Request



Roy L. Wolfe
Acting Manager, Corporate Resources

10/28/1999
Date



Ronald R. Jester
General Manager

11/3/99
Date

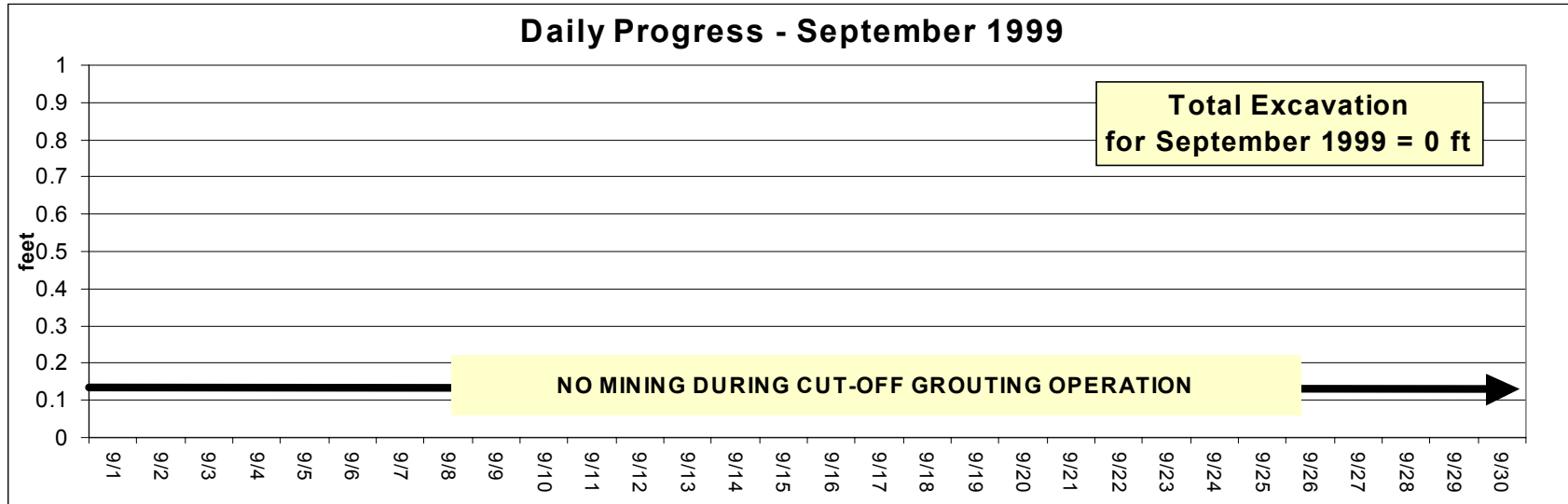
Attachment 1 – Arrowhead East Tunnel mining progress

Attachment 2 – Financial summary

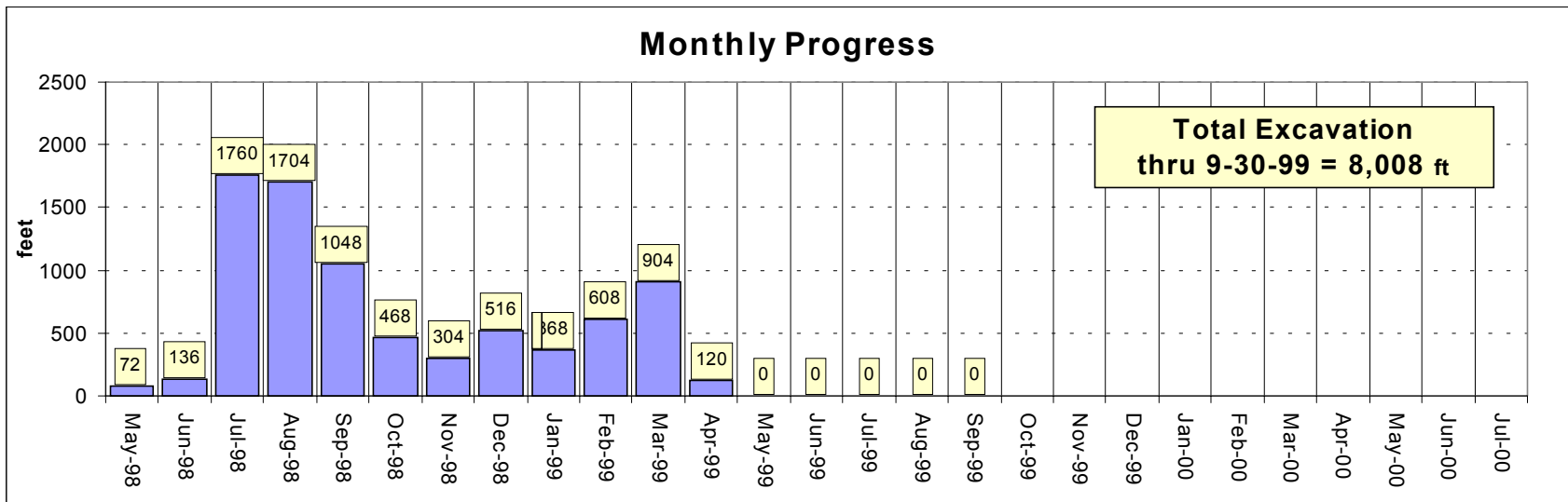
Attachment 3 – Schedule summary

ARROWHEAD EAST TUNNEL

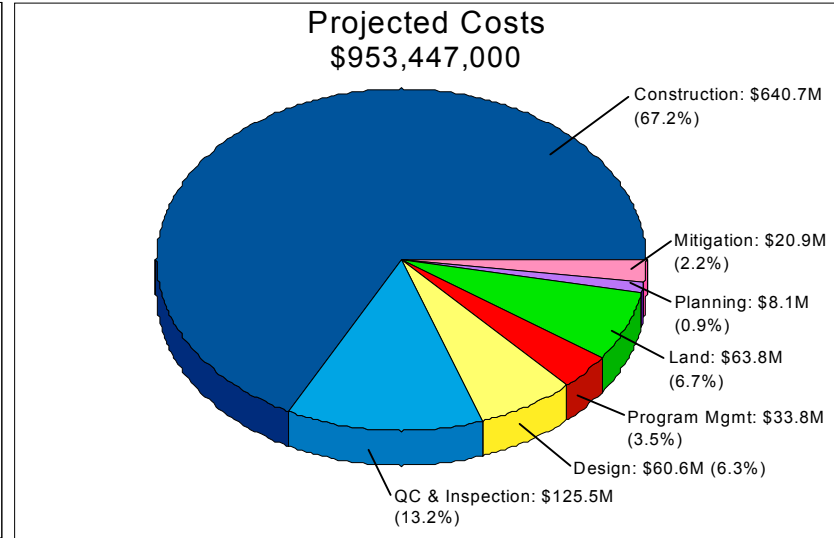
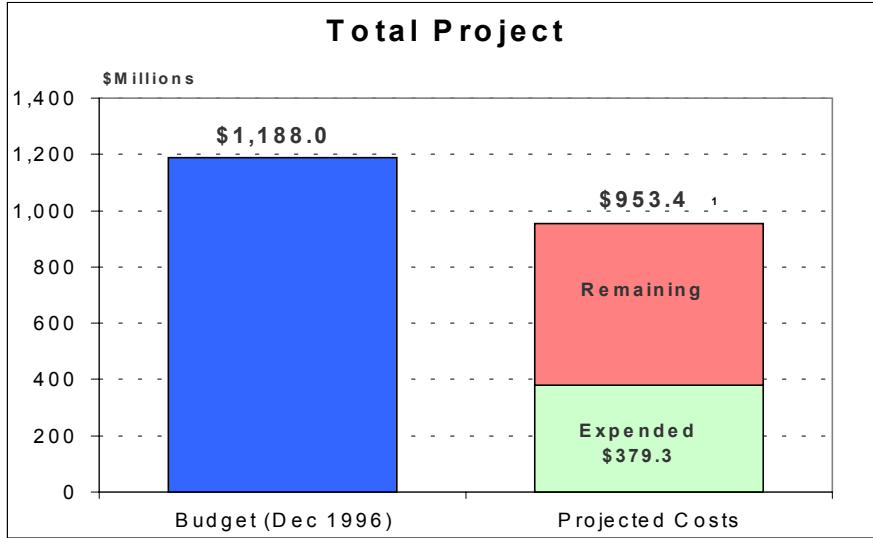
Daily Progress - September 1999



Monthly Progress

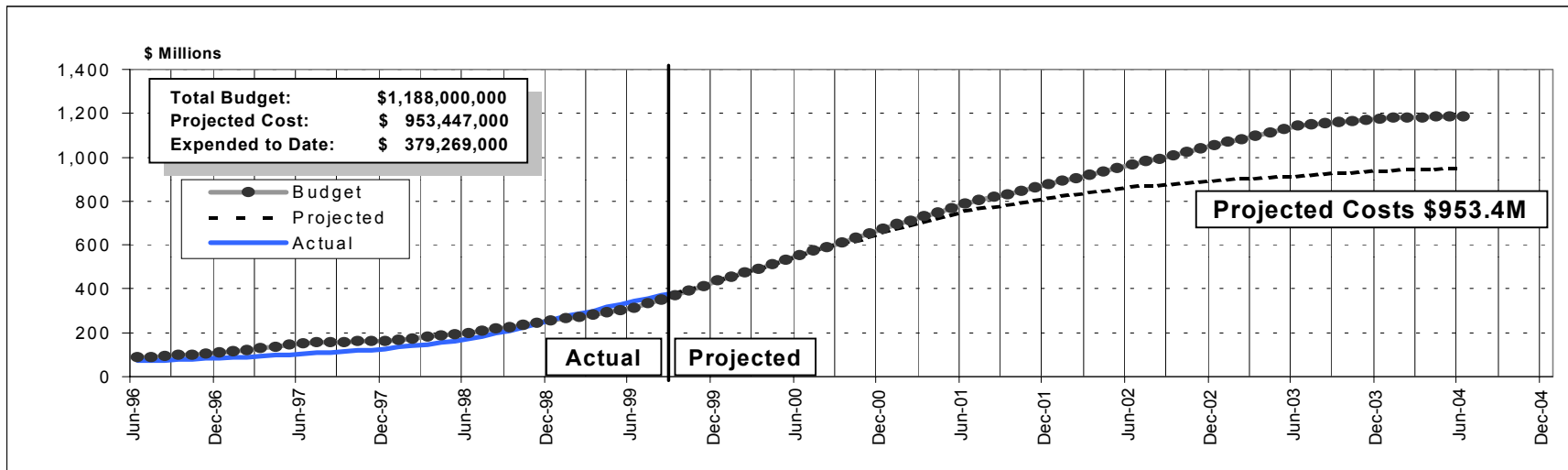


Financial Summary



1. Based on knowledge of current field conditions.

Project Cash Flow



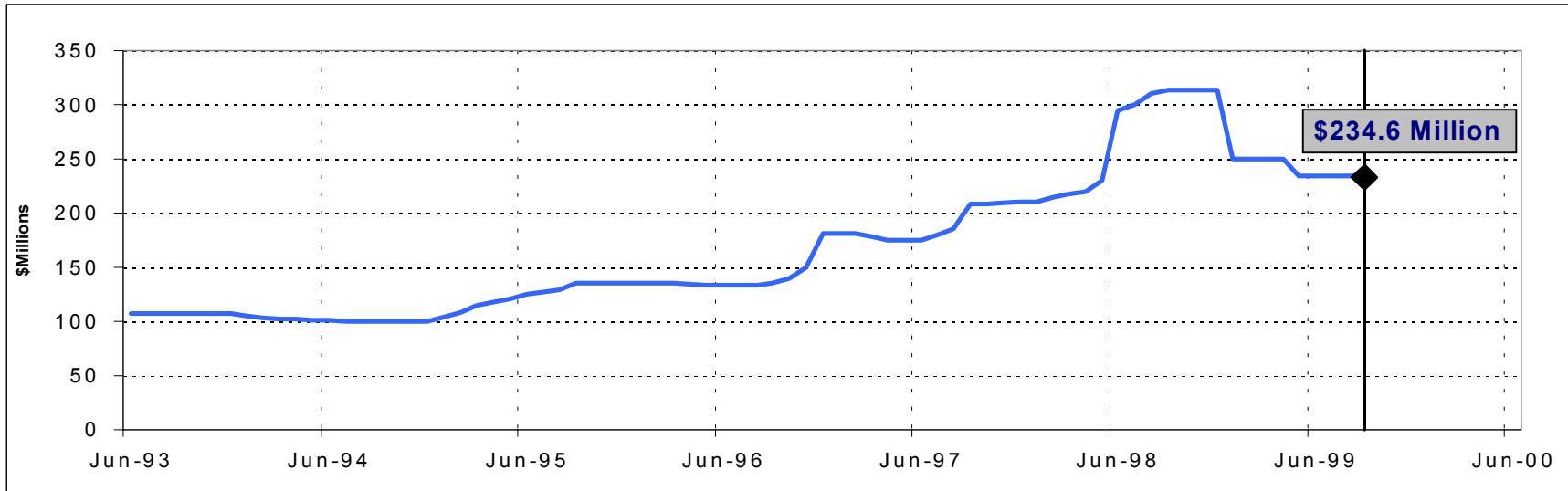
Schedule Summary

DESCRIPTION	PROGRESS		COMPLETION DATE		COMMENTS
	PLANNED ¹	ACTUAL	CONTRACT ²	FORECAST	
<i>Design</i>					
Highland Pipeline	98%	90%	Nov-98	Nov-99	Bids opened September 2, 1999.
Mentone Pipeline	100%	100%	Complete	Complete	
<i>Construction</i>					
Arrowhead West Tunnel	27%	25%	Jun-02	Jun-02	Assembly of TBM and pipe fabrication placed on hold at Waterman Canyon Portal. Waterman Canyon Pipeline is complete. Devil Canyon Pipeline is complete. Mining has progressed to 8,008 feet. TBM maintenance and cutoff grouting program continues.
Arrowhead East Tunnel	57%	38%	Sep-02	Apr-03	
Mentone-RUSD Pipeline	100%	100%	Complete	Complete	Construction completed on schedule in February 1998.
Riverside Badlands Tunnel	22%	21%	Jul-03	Jul-03	Installed cutterhead on TBM at Gilman Springs Portal. Completed installation of roll-over muck facility.
Riverside Pipeline North	68%	99%	May-00	Dec-99	Pipe installation complete. Completed 100% of mortar lining operations.
Riverside Pipeline South	80%	100%	Feb-00	Jul-99	Pipeline completed August 1999.

1. Based on Approved Schedule

2. Original Contract Duration + Approved Extensions

Remaining Budget ¹



1. Project budget minus projected costs.