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DATE: March 24, 1995
TO: MTA BOARD MEMBERS AND ALTERNATES
THROUGH: FRANKLIN E. WHITE
CHIEF EXECUTIVE OFFICER
FROM: JOHN ADAMS *John Adams*
ACTING EXECUTIVE OFFICER, CONSTRUCTION
SUBJECT: CONTRACT R81-B251, SUMMARY OF RECENT SETTLEMENT
EXPERIENCE ALONG HOLLYWOOD BLVD. TUNNELS

SUMMARY:

After the August 18, 1994 tunneling shut down, an "Implementation Plan For Tunnel Resumption At B251 Hollywood Tunnel" was adopted which set forth a future settlements criteria that established a "stop mining" incremental settlement of 3/4 inch measured in front of the machine and 1 1/2 inches measured behind the machine. With the exception of one area on the south tunnel mid block between Hudson Avenue south and Cherokee Avenue south, new settlements have not exceeded this criteria. The original point of maximum settlement near Hudson Avenue, which had settled almost 10 inches by late September 1994, now appears to have stabilized at 10 1/2 inches.

Mining in the north tunnel was restarted on January 6, 1995 and advanced 828 feet to Station 608 + 22 (approximately one half block west of Orange Drive) before being shut down in late January to allow other tasks to be performed in the tunnel. Most of this reach was through grouted soils. In the newly mined ungrouted area east of Mann's Chinese Theater, maximum surface settlements were 0.29 inches. In the 500 foot long zone in front of Mann's Chinese Theater which received chemical grouting, the maximum settlements (effect of one tunnel only) were 0.21 inches. West of the 500 foot chemical grout zone, a 100 foot long test of compaction grouting from the surface was conducted. In this area maximum settlements were 0.21 inches. The settlements described in this paragraph were located in the street above the center line of the north tunnel and are the result of only the first tunnel being excavated. Settlements on the sidewalk and adjoining buildings are substantially less than settlements above center line of tunnel. As a rule of thumb, based on experience elsewhere on Hollywood Boulevard, the total maximum settlement in the street roughly doubles with the passage of the second tunnel.

Mining in the south tunnel was restarted on February 3, 1995 and advanced 324 feet until being shut down on February 8, 1995 because survey measurements indicated two points behind the machine had slightly exceeded the maximum incremental settlement criteria of 1 1/2 inches in spite of compaction grouting being performed from the surface as the machine passed by underground. This problem area was located in young alluvium soil in the one block area between Hudson Avenue south (area of maximum settlement in August 1994) and Cherokee Avenue south (area where the tunnel starts entering denser, more stable, old alluvium soil). In keeping with the commitments made in the Implementation Plan, tunneling was shut down to implement additional protective measures. These measures consisted of additional chemical and compaction grouting in front of the machine as well as additional compaction grouting behind the machine in areas where the settlement criteria was exceeded. Maximum incremental settlements above center line of the south tunnel in this area were 2.1 inches.

After the grouting was performed, mining in the south tunnel was restarted on February 23, 1995 and as of March 13, 1995 had advanced 1,180 feet to Station 593+00 (approximately 120 feet west of McCadden Place). Most of the tunneling performed since February 23, 1995 was in ungrouted soils with maximum settlements in this zone of slightly less than 1 inch which, when combined with preexisting settlements caused by passage of the north tunnel prior to the August 1994 shut down, result in total maximum settlements of 2 inches in the street.