

**INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO**

**Ciudad Juárez, Chih.
August 27, 1999**

**JOINT REPORT OF THE PRINCIPAL ENGINEERS
RECOMMENDING AN OPERATION AND MAINTENANCE WORK PLAN
FOR THE REPLACEMENT INTERNATIONAL CORDOVA-BRIDGE OF THE
AMERICAS**

**To the Honorable Commissioners
International Boundary and Water Commission
United States and Mexico
El Paso, Texas and Ciudad Juárez, Chihuahua**

Sirs:

In accordance with your instructions, we respectfully submit for your consideration this joint report proposing an operation and maintenance work plan in accordance with Minute No. 290, "Replacement of the International Cordova-Bridge of the Americas at El Paso, Texas - Ciudad Juárez, Chihuahua," dated September 21, 1993.

I. BACKGROUND

We observed that the construction of the replacement bridge was completed in June 1998. We took into account discussions over the last few years regarding the estimated costs for operating and maintaining the bridge under Minute No. 290 and in furtherance of the "Joint Report of the Principal Engineers for the Construction of the Replacement International Cordova-Bridge of the Americas" in Accordance with Commission Minute No. 290, dated February 16, 1996, approved by the Commissioners in their letters, Numbers US 060/96 of March 1, 1996 and LAE 0339/96 of March 5, 1996.

Resolution No. 2 of Minute No. 290 provides that the United States and Mexico will share in the operation and maintenance costs in a manner that each country covers the part of the replacement located in its territory and that the two countries equally share the cost of the portion of the structure located between the channelized Rio Grande levees. Resolution No. 3 considers that each country will cover the design, construction and operation of the part of the bridge in its territory. Resolution No. 4 authorizes commercial users in El Paso, Texas and Ciudad Juárez, Chihuahua to collect contributions to cover the cost of operating and maintaining the commercial structures and approaches in the United States and Mexico and the part of the light vehicle structures and approaches in Mexico in an amount not to exceed the cost determined by the Commission for such items. Finally, we observe that Resolution No. 8 of Minute No. 290 provides responsibility to the Commission to oversee the management of the funds collected from the commercial users.

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II. PROPOSED WORK PLAN

The new bridge consists of two light vehicle structures and two commercial vehicle structures, each having nine spans, with span number six being intersected by the international boundary. The replacement bridge also includes approaches to the light and commercial vehicle structures in the United States and Mexico. The construction followed the design approved by the Commission in the U.S. Commissioner's letter No. US 161/94 of June 13, 1994 and the Mexican Commissioner's letter No. LAE 00861/94 of May 26, 1994. We observe that the commercial and light vehicle structures and approaches located in Mexico along with the commercial structures and approaches located in the United States constitute 64 per cent of the total project approved by the Commission.

We considered that the maintenance of the replacement bridge should ensure the operation of the structures in a safe and reliable manner. We further consider that an initial period for such operation and maintenance should be for 25 years beginning the year in which the total bridge entered into operation. We also consider it appropriate to review funding considerations before the end of the 10th, 20th and 25th years.

1. Routine Maintenance

This consists of periodic cleaning of the roadways and sidewalks, removal of graffiti, fence repairs, sand placement during ice conditions, cleaning of bird droppings and debris from bent caps, sealed armor joint maintenance, painting of traffic stripes, preservation of the international boundary demarcation and electrical lamp maintenance.

The effort will require personnel, equipment maintenance, fuel and lubrication, electrical energy, paint, sand mix, and other materials and supplies.

2. Extraordinary Maintenance

This consists of unscheduled repairs of a minor nature as may be required as a result of international bridge safety inspections as the Commission may adopt with the advice, as necessary, of the competent technical agencies in the respective countries. This also consist of repairs that are more costly, but of a less frequent nature than routine maintenance repairs.

Additional measures that each Section or the competent authorities of its respective country may take to provide security to pedestrians and vehicle occupants in their respective country and those equipment and other activities related to enforcement by the competent authorities of each country of weight limits on the bridge and roads leading to the bridge are beyond the scope of the above described routine and extraordinary maintenance.

We consider that the Principal Engineers, before the end of each calendar year and covering the next year, with the advice of the competent authorities of each country as each Section may consider, should establish a work plan for the entire bridge. Under the work plan, one Section may perform maintenance in the country of the other Section in the manner determined by the Commission.

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Such work plan should provide a budget for the bridge commercial vehicle structures and approaches in both countries and the light vehicle structures in Mexico which covers both routine maintenance required along with extraordinary maintenance, as the Commission may approve, and should take into consideration the proportions and amounts for the first year's operation and maintenance estimates, along with an annual 10 per cent contingency allocation adjusted with an average two per cent annual escalation factor over 25 years. The budget should include a statement of the previous year's expenditures. The annual budget should consider, in addition to routine maintenance, a reserve amount to cover the extraordinary expenses .

III. DISTRIBUTION OF COSTS

We reviewed the ordinary and extraordinary maintenance criteria stated above, and estimate that the first year's cost for maintenance of the four structures and their approaches in both countries is \$47,000, United States currency, and includes routine and extraordinary maintenance.

The United States Section's Principal Engineer reported that the United States Section will cover the maintenance cost of the light vehicle structures in the United States and the federal agency charged with the maintenance of approaches in the United States will cover the cost of the United States light vehicle structure approaches. This effort is equivalent to a first year cost of \$17,000, United States currency. Further, the Commission would ensure maintenance of the commercial vehicle structures and approaches in the United States beginning with span number five, utilizing commercial user's contributions. The Mexican Section's Principal Engineer reported that in accordance with Minute No. 290, Mexico will cover the cost of maintaining the light and commercial vehicle structures and approaches in Mexico under Minute No. 290 utilizing commercial user's contributions. These efforts attributable to commercial users' contributions are equivalent to a first year cost of \$30,000 United States currency.

IV. COMMERCIAL USERS CONTRIBUTION

We reviewed the financial information provided to the Mexican Section by the technical committee duly constituted in Mexico to administer the trust fund with commercial user contributions totally collected in Mexico. We observed that collection of these fees, for both north and south bound traffic in Mexico, began in January 1994. We observed that the financial statement provided by the technical committee to the Mexican Section estimates a balance at the end of April 1999 of approximately \$481,000, United States currency, after obligations incurred or expected to be incurred for construction. We considered the distribution in III above, such that, the first year's estimated operation and maintenance costs chargeable to the commercial users is \$30,000, United States currency. In addition, we considered an annual cost of \$4,500, United States currency, for administrative costs necessary to manage an escrow account in the manner described further below.

We took these annual costs into account along with a two per cent annual escalation, periodic operations and maintenance disbursements and four per cent compounded annual interest yields on principal, and arrived at an estimate of \$680,000, United States currency, as the amount in escrow that should be made available to the Commission from such users' contributions to cover the annual operations and maintenance costs attributable to the commercial users contribution for the next 25 years. We estimate that net amount was achieved on August 15, 1999. Accordingly, collection of commercial users contributions was suspended on that day.

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We consider it appropriate that the Mexican Section ensure the deposit of these funds in United States currency bank account in interest bearing accounts, partly in short-term secured instruments and partly in longer term secured instruments. We also consider it appropriate that the Mexican Section complete arrangements in Mexico to ensure the timely withdrawals, upon request in writing, by or for the Mexican Section, on behalf of the Commission, from this escrow fund for requirements of either the Mexican or the United States Section. Such requests for payments would be made in accordance with a schedule indicated in the annual work plan, recommended by the Principal Engineers and approved by the Commission, and would include consideration of the first year's estimated operation and maintenance costs for the structures and approaches in Mexico and the commercial vehicle structures and approaches located in the United States. Disbursements for extraordinary maintenance will be made based on the items and schedules and their costs approved by the Commission in each case that arises.


The Mexican Section, each month, will provide to the United States Section, a copy of the statement from the financial institute in which the funds are held in trust. Both the United States and Mexican Sections would make available to the other Section information in support of expenditures covered with the funds held in trust.

We consider that, at the end of the 10th and 20th years of the start of the operation and maintenance of the replacement bridge, the Principal Engineers will review the financial condition of the amount held in escrow and actual disbursements, and should it be necessary, recommend adjustments for approval of the Commission, the Secretariat of Communications and Transportation and the State of Chihuahua. We also consider that before the 25th year of the start of such operations and maintenance, the Principal Engineers will recommend a means of funding the continuing operation and maintenance under policies and practices as the Commission may in turn recommend to the two Governments for approval.

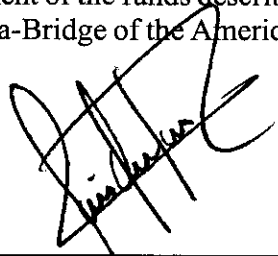
RECOMMENDATIONS

That you approve the work plan, distribution of costs, and management of the funds described herein above for the operation and maintenance of the International Cordova-Bridge of the Americas.

Respectfully submitted,



Carlos Marín
Principal Engineer
United States Section



Luis Antonio Rascon Mendoza
Principal Engineer
Mexican Section