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BRIEFING NOTES FOR THE
MEXICAN/TEXAS TRANSPORTATION
AGENCY INTERACTION PROGRAM

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Background

1.1 The accelerated development generated by the oil boom in the late 1970s resulted in unprecedented growth in transport demand and revealed serious deficiencies in transport operations and infrastructure affecting international trade between 1978 and 1985. Prior to that period, transport had declined as a percentage of public sector investment from 21% in 1972 to under 10% less than a decade later. The government responded to the new demand by increasing real investment in the railways by 173%, ports by ten-fold and highways by 86% between 1978 and 1981. The budgetary restrictions which accompanied the economic crisis in 1982 and 1983, however, resulted in reducing transport investment to 1979 levels, postponing major investments which were not near completion and focusing upon maintenance and rehabilitation. The lull in transport demand caused by the economic situation has given the government some leeway, in terms of timing, to reorder its transport priorities, but critical investment decisions will have to be made within the next few years in order to serve any economic recovery effectively.

Transport and the Economy

1.2 Mexico has developed an extensive transport network which comprises over 200,000 km of roads (including 67,000 km of paved and over 80,000 km of rural roads with the rest being state and local unpaved roads); about 20,000 km of railways (all except 500 km being standard gauge); some 30 ports, of which 13 serve international traffic; about 50 airports capable of handling medium or larger size aircraft; and over 20,000 km of crude oil, refined products and gas pipelines. From 1972 to 1982, traffic on the nation's roads grew by about 10% annually, with road traffic representing an estimated 48% of total traffic in ton-km and over 90% in passenger-km. Railway freight traffic, representing about 14% of total ton-km, experienced a growth of 7% annually. Even more significant growth rates were registered by coastal shipping and pipelines, with annual growth rates of between 13% and 15% in ton-km because of increased oil production, resulting in an estimated 15% and 21% share, respectively, of all ton-km in 1982. After only limited growth prior to 1977, the ports registered average annual increases of almost 17% in cargo tons handled from 1977 to 1982. In passenger transport, domestic aviation traffic increased by over 17% annually, with total passenger-km generally equal to that of the railways.

1.3 During the 1960s and early 1970s, substantial amounts were invested in transport, particularly roads, railways and aviation. The transport sector was receiving about 20% of all public investment. The network was generally in place at that time and was considered sufficient to meet expected demand. The sector, therefore, did not pose a

constraint to economic growth. Emphasis was placed on operational improvements and pricing and on using transport investment to foster decentralization and the development of outlying areas. As a consequence, the sector's share of public investment declined from 21% in 1972 to 9% in the early 1980s. In 1977 and 1978, transport experienced real reductions in investment levels as other sectorial priorities prevailed.

1.4 This investment policy, however, proved to be untenable with the surge in economic activity in the late 1970s. Between 1978 and 1981, serious bottlenecks emerged, clearly affecting the operation of basic industries and the conduct of international trade. Transport problems were evident with respect to the importation of basic grain and the movement of iron ore and pellets to the steel industry. The problem centered on the railways and the ports. In addition to the increase in general economic activity in 1980 and 1981, the poor local grain harvest led to the importation of 7 million tons in each of those years, double the average of the previous five years. The bottlenecks at the ports and on the railways were costly.

1.5 It was evident that the transport network was unable to cope with the accelerated growth and that, even with operational improvements, capacity restrictions would continue to be severe. The industrial ports program was one of the proposed investment solutions. Although conceived mainly as a means to decentralize industrial activity, it would also be expected to resolve port capacity problems for containerized and general cargo and many bulk commodities. It was initiated in 1979, and investments grew quickly thereafter. The railways were also targeted for improvements, and real investments, primarily related to track improvements where capacity bottlenecks were occurring, increased by 62% in 1979 37% in 1980 and another 23% in 1981. Except for a one-year increase in 1981 covering various types of projects, the roads' budget was maintained at a relatively constant level. By 1981, roads' share of transport investment declined from 68% in 1972 to 51%, compared with rails' share rising from 15% to 30% during the same period, and ports' share increasing from 8% to 15%. Major airport construction and reconstruction outside of Mexico City were also carried out between 1979 and 1981. Although there were instances of premature investment and some works suffered from poor programming, the overall response of the government to the situation in those years was appropriate.

1.6 The budgetary restrictions which accompanied the economic recessions in 1982 and 1983 again shifted the emphasis in the transport investment program. Transport investment was reduced in real terms to about US\$1 billion, roughly equivalent to 1979 levels. This reduction, however, was not as great as the reduction in the overall public investment program, leaving transport with an increase from a 9% to an 11% share

(excluding urban transport), the apparent rationale being the ability of the sector to quickly generate short-term productive employment during this critical period of economic contraction. The approved investment budget thus focuses on maintenance and reconstruction of existing infrastructure and on the completion of ongoing construction at minimum cost, deferring the initiation or continuation of major investments such as the full-scale industrial ports program, railway electrification and new rail line construction.

Institutional Framework

1.7 The first major positive action affecting transport taken by the current administration was the incorporation of all transport modal agencies under the Secretariat of Communications and Transport (SCT). Prior to this incorporation, port and railway investments, as well as all transport tariff and regulatory policy, were handled by SCT, while highway and airport development was under the jurisdiction of the Secretariat for Human Settlement and Public Works (SAHOP). This dispersed institutional arrangement hampered efforts at coordinated planning and investment and limited dialogue on cross-modal issues. Under the new organization, there is a Sub-secretary for Infrastructure with responsibility for road, rail, port and airport infrastructure development and a Sub-secretary for Operations with responsibility for operational, regulatory and tariff matters for all modes. There is a Directorate General for Planning which reports directly to the Secretary.

1.8 SCT is presently reorganizing with the Directorate General for Planning and the other modal planning offices within the Sub-secretariats for Infrastructure and Operations. Once fully implemented, it is expected that planning units in the various modal directorates will be responsible for identifying and proposing capital investments and will provide the technical details required for the analysis of such investments.

1.9 A road user charges study in 1975 found that refined petroleum products were being priced at the pump well below world market prices. This situation worsened as domestic inflation surged and gasoline and diesel prices remained no higher than US\$0.42 and US\$0.18 per gallon, respectively, during 1981. Since December 1981, however, the government has followed a policy of gradually raising domestic fuel prices toward international levels. Between December 1981 and April 1984, gasoline prices rose by 84% for premium and 240% for regular grades, respectively. As of December 1990, regular gasoline was priced at \$.88 per gallon, compared to \$.82 in 1984. In other words, gasoline prices for the most popular grades have not risen significantly in recent years and in real terms have fallen. Diesel prices have been raised even more significantly from Mex \$1.17/liter to Mex \$26/liter (US \$0.63/gallon) for a real increase of over 430%. In dollar terms, however, diesel prices are still below international levels (estimated at \$US

\$0.80/gallon). Generally, gasoline prices are 10% higher bordering with USA and in the metropolitan areas of Mexico City, Guadalajara, and Monterrey

1.10 The government has shown that it is taking serious action to resolve the fuel pricing issue and is trying to reduce the price differential between diesel and gasoline while approaching international levels. Understandably, political concerns have determined the timing of the price increases. With the present level of prices, no major distortions are evident; rail tariffs as well as costs are still well below road tariffs and costs for the main railway commodities so that no significant competitive distortion is apparent. One concern has been the effect of low diesel prices on the selection of construction techniques, i.e., labor-intensive versus equipment-intensive, for rural roads. Recent analyses, however, show that the impact is not significant.

1.11 Related to the issue of fuel prices is the question of whether the various road-related tolls and taxes imposed on road users sufficiently cover the cost of providing road infrastructure. The general principle to be applied in determining a minimum equitable distribution of user charges should be that users pay the full costs of owning and operating the vehicle and the attributable costs of operating, maintaining and reconstructing the roadway, which vary in accordance with the number and weight of the various types of vehicles. The charges which enter into this calculation in Mexico include road and bridge tolls, fees for licensing, permits and public transport concessions, producer taxes for tires and vehicles (over and above normal taxation level), special import duties on vehicles and special taxes on fuel. None of these charges are directly assigned to roads or identified as road user charges, and all enter the federal treasury to be distributed in accordance with general budgetary practices. Even road and bridge tolls collected by the Toll Road and Bridge Authority, Caminos y Puentes Federales (CyPF), are defined as being a tax and are turned over to the federal treasury.

1.12 With the surge in inflation, the subsequent devaluations and price changes, an updated analysis of road user charges is required. Fuel tax revenues represent the major contribution in these analyses, based on the fact that special taxes on fuel represent about 45% of the total pump price. Since pump prices are generally at or below international levels or their opportunity costs, fuel tax revenues, in economic terms, cannot be considered as a contribution to road infrastructure. Without this element, economic road user charges cover little more than maintenance and administration.

1.13 Over the past decade, the Mexican government has moved to expand and tighten its regulatory authority over road freight haulage, in contrast to the general international tendency toward deregulation. Prior to 1971, the government had substantial regulatory authority, but had not exercised that authority nor enforced the existing

regulations. It believed that the trucking industry had become chaotic, with a growing number of individuals providing substandard service and below-cost tariffs, which caused an unstable environment for vehicle operators in financial terms, as well as for shippers in terms of service. In response to this problem, the government, through SCT and its Directorates for Motor Transport (DGAF) and for Tariff (DGT), established and enforced a series of regulations covering entry, capacity, commodity restrictions, geographical operating rights, tariffs and corporate structure. The regulations apply to all trucks operating on Federal Highways with a load capacity of over three tons, and they distinguish between four types of services:

- (a) general freight service for which a permit is issued to carry any freight within a specified corridor;
- (b) specialized freight service for which a permit is issued to carry a specific commodity, usually one which requires special handling or equipment, e.g., tank or dump truck. This permit has no geographic limitation;
- (c) non-processed farm and animal products service, which is treated as specialized freight service and which is flexibly defined to permit the transport of agricultural inputs to the farm; and
- (d) private own-account service for which a permit is provided to a non-transport company to carry its own goods.

1.14 One of the major objectives was to improve the organization of the truckers. All operators had to organize themselves into companies or cooperatives, and no new permits are to be issued to an individual unless he joins one of the existing firms. To avoid monopolistic practices, no individual could receive more than five permits (one for each vehicle) in his name. From 1976 to 1982, the number of vehicles with general or specialized freight permits rose from 85,000 to 128,000, which represents over 90% of interurban road freight traffic.

Toll Road Program

1.15 The Mexican government, under President Salinas's new economic directives, is attempting to reduce federal deficits and induce sectorial growth and productivity through a comprehensive program of privatization. Already the national telephone system is in the process of privatization (the selected consortium includes Southwestern Bell) and the program incorporated the neglected highway sector.

1.16 It is proposed that the focus of private capital should be the main arterial highway system and to this end, the Government plans to construct over 4000 kms (360 km in Nuevo Leon) in about 5 years. This compares with 400 km in over 10 years under former government investment policies. This objective is recognized as being ambitious but is said to be currently on target.

1.17 The thrust of the privatization program is to put key routes into service as quickly as possible, to allow the investment agencies to recoup their costs together with cost of capital (profit) and then to hand over the highways, when all costs are fully recovered, to the government. The bidding process awards the contract to the consortium which plans to give the highway back to the nation in the shortest period. Problems abound in this process and the risks are great. Typically, U.S. toll highways take between 35 to 50 years to recoup costs. Some simply never make it.

1.18 A number of Mexican bids indicate pay back periods well under 20 years which suggest high toll fees which may not be socially desirable, nor tolerated by Mexican road users. Also, in attempts to cut design costs, pavements may be too weak to carry the heavy truck axle loads in Mexico and thus may suffer premature failure and require additional funding. The toll road program also extends to bridges and is thus a key feature of the infrastructural policies of the states that border Texas.

Texas/Mexico Border

1.18 Texas is bordered by the four Mexican states of Tamaulipas (2.2 million pop.), Nuevo Leon (3 million pop.), Coahuila (2 million pop.), and Chihuahua (2.5 million pop.). The region therefore contains around 10 million inhabitants, compared to about 17 million in Texas. The border has about 18 major crossings but currently Nuevo Leon, though an important industrial state, has no direct link with Texas. A crossing facility is planned for construction in the near future. The Mexican government policy of inducing industrial investment in assembly facilities (where labor costs are the major determinants) close to the U.S. border and developing new bi-lateral free trade agreements with the United States should stimulate large increases in highway freight movements across the Mexican/Texas border. This has important consequences for Texas SDHPT highway planning over the next decade.