

APPENDIX A: SUMMARY OF LITERATURE REVIEW

Publication	Source	Year	POE	Issue Category	Problem / Issue Description	Problem / Issue Cause	Recommendations / Opportunities
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Border Crossing Facilities	Congestion and delays through port of entry	Lack of bypass lane: Vehicles not chosen for intensive inspection must pass through compound	Redesign the commercial cargo facility entrance. Build bypass lane for trucks not selected for intensive inspection.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Border Crossing Facilities	Limited queuing area and poor access to X-ray equipment	Insufficient space	Continue land acquisition initiatives. Acquire land adjacent to facility for queuing area, X-ray inspection access, or other initiatives such as bypass lanes or hazardous materials area.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Border Crossing Facilities	Traffic flow inefficiencies	Space constraints	Construct larger staging area between exit gate and ADOT facility. Additional space is needed within compound to accommodate all state and federal agencies.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Border Crossing Facilities	Sub-optimal management and control of truck traffic within commercial compound		Design and deploy a formalized traffic management system at POE. Implement traffic management by type of cargo or entry (example: laden, empty, pre-filed).
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Customer Service	Lack of customer service POE management practices, resulting in communication and coordination problems	Lack of customer service culture, mentality in POE agencies	Integrate customer service focus into POE resource allocation and staffing practices. Make POE operations more responsive to user requirements.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Customer Service	Real time information on POE operations not communicated to drivers		Add bilingual static and variable message signs to redirect traffic as conditions dictate.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Preclearance Programs	Low participation in gate-to-gate preclearance programs (20 percent or less)	Poor promotion	Expand and better promote gate-to-gate preclearance program (for brokers). Provide incentives for profiling and multi-trip ADOT permitting.

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Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Staffing/ Scheduling	Insufficient primary booths open	Lack of funding; rigid, pre-established staffing schedules	Allow supervisors to open additional primary inspection gates or secondary inspection resources in response to fluctuating traffic demands.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Stakeholder Coordination	Multiple stops	Booths not normally staffed by more than one agency; lack of overlapping agency jurisdiction	Replace current booths with larger, elevated "superbooths" that accommodate more than one inspector and more than one agency function. Cross-train inspectors to perform other border agency requirements.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Stakeholder Coordination	Lack of consensus regarding facility design and operation		Establish formal communication and coordination between U.S. Federal and State agencies working at the border.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Stakeholder Coordination	Lack of objective POE management leadership	No single agency with the responsibility or resources to oversee the efficiency of overall port of entry operations	Establish and fund organization to provide analytic and staff support to enforcement and regulatory port agencies in the flow efficiency aspects of port performance.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Stakeholder Coordination	Lack of consensus regarding facility design and operation		Establish formal communication and coordination between U.S. and Mexican agencies working at the border.
Arizona Port Efficiency Study: Final Report	SAIC, Transcore	1997	Nogales	Technology			Add video cameras and driver signing at critical locations to monitor traffic and improve security for inspectors. Use hand-held, pen-based computers to record inspection results.
Binational Border Transportation Planning and Programming Study – Task 13	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Preclearance Programs	Lack of pre-cleared loads	Unnecessary delays for repetitive, compliant, high-volume shipments at U.S. inspection facilities	Preclear more loads.

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Binational Border Transportation Planning and Programming Study – Task 13	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Technology		Delays due to manual paperwork processing	Employ new technology to reduce processing delays.
Binational Border Transportation Planning and Programming Study – Task 3: Trade Flow Process	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Private Sector Practice	Demand peaks	Brokers "rushing" customs (perceived reduction in length or number of inspections)	Create earlier start times for the Mexican brokers or later hours for U.S. Customs. Encourage shippers to move loads at off-peak times.
Binational Border Transportation Planning and Programming Study – Task 3: Trade Flow Process	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Private Sector Practice	Northbound trucks arrive at Mexican border early and must park until the pedimentos arrive in mid afternoon.	Function of current private sector practices and documentation requirements	Offer additional options for reducing vehicle queing such as greater electronic automation, shorter lunch hours, and or clearing paperwork and receipts in the afternoon instead of morning
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Border Crossing Facilities	POE layout	At some facilities with X-ray machines, the X-ray queue blocked circulation within the compound, primarily due to improper location of the X-ray unit and truck queuing.	Provide additional X-ray equipment and extended hours for tanker trucks.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Border Crossing Facilities		Primary booth entry/exit geometry, turning radius difficult to negotiate.	Study potential for improving road geometry, turning radius.

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Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Border Crossing Facilities	Northbound delays at U.S. POEs	Major system constraint is primary inspection area (not border crossing road or bridge). U.S. POEs are too small to accommodate enough inspection capacity (primary booths, secondary spaces, and other inspection areas) for trucks. Road/truck path geometry is often inadequate.	Sufficient lanes/booths should exist and be staffed to accommodate peak hour traffic levels. Sufficient queue capacity should be provided on site in advance of the initial inspection or toll booth. The queue road should have at least two lanes throughout its entire length, and truck paths throughout compounds should meet minimum standards. Sufficient maneuvering space should be provided in front of all docks.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Border Crossing Facilities	POE infrastructure deficiencies	There were not always enough primary inspection booths at some locations, even if staffing was available.	Explore possibility of adding booths. Encourage use of alternate crossings. Implement differential pricing for certain types/time segments of traffic to reduce unnecessary peak period traffic.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Border Crossing Facilities		Small number of docks are available for agricultural and informal entries at some POEs.	
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Border Crossing Facilities		Truck merging and weaving between primary and exit booths creates traffic conflicts and congestion within compound.	Internal truck circulation should be counter clockwise (inside turns on driver's side - most efficient). All secondary inspections should be off line.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Customer Service	Lack of customer service (avoidable time delays)	Lack of customer service culture in border agencies and service providers. Minimizing travel delays does not appear to be a priority for either U.S. inspection agencies or toll collectors.	Encourage inspection agencies and service providers to reduce avoidable time delays.

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Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	General Planning	Inefficient POE ingress and egress routes	Access roads to Mexican POEs are overloaded or carry truck volumes for which the streets or adjacent development were not intended. Most truck entrances to the crossings are simple driveways without traffic signals (or synchronized signals) or any other provisions for traffic flow facilitation or separation.	Ingress routes should be major streets or highways. Crossings should be considered part of the regional transportation system. Where high volumes of large trucks are expected, dedicated corridors serving separate truck crossings away from incompatible land uses would be beneficial. More exit lanes are required at some Mexican inspection facilities.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	General Planning		POE access routes do not link directly to maquiladora areas.	
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	General Planning		Traffic mixing - passenger traffic and commercial traffic. Pedestrians cross truck lanes at some POEs.	Separate commercial and passenger vehicle flows and vehicle and pedestrian flows.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	NAFTA Trucking		Bobtails consume primary inspection capacity.	
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Private Sector Practice	Dangerous/impeded traffic flow on POE access roads	Document completion / exchange with customs broker on shoulder of access road. Some drivers of empties pull over to close doors.	Provide remote area away from access road for trucks to complete/wait for documentation and make adjustments to truck.

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Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Staffing / Scheduling	POE Demand - Capacity mismatch	Components in POE system with significant capacity constraints limit the effectiveness of the rest of the components that have excess capacity. Booths opened according to pre-defined schedules, not truck arrival rates.	Staff additional booths during peak periods. Install closed-circuit television cameras in advance of U.S. primary inspection to monitor and adjust to queue length.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Stakeholder Coordination	Canine inspection delays	At some POEs, exit inspection queues were created purposely, then used to conduct block canine inspections - closes, blocks, slows traffic.	Relocate or change canine inspections. Use smaller, more frequent off-line canine block inspections within compound.
Binational Border Transportation Planning and Programming Study – Task 9: Port of Entry Case Studies	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Technology	Manual toll both operation	There were no coin baskets or electronic toll collection. Where available, prepayment via corporate accounts took as long or longer than collecting cash toll. Fee collection was slow.	Electronic toll collection and prepaid accounts should be utilized to speed toll collection process.
Binational Border Transportation Planning and Programming Study – Task 14	Barton-Aschman Associates, La Empresa	1998	Southwest Border	Stakeholder Coordination	Delays for northbound truck traffic	Duplication of import authentication, pre-inspections, cargo transfers, and other required processes is inefficient.	
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Customer Service			Provide mandatory customer service training for POE staff.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	General Planning			Build bypasses around cities for truck traffic. Focus freight movement toward specific corridors and POEs.

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Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	General Planning	Duplication of border activities and infrastructure		Prioritize and focus investments. Identify key freight corridors. Channel international freight movements to specific corridors/POEs. Explore concept of unified ports.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	General Planning	Mexican customs broker monopoly and practices contribute to congestion and delays (create demand peaks)		Work with Mexican government and private sector to revise brokerage system and level demand.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	General Planning	Commercial and passenger vehicles utilize same crossing at some POEs. Commuter traffic is not segregated.		Separate commercial and passenger traffic (different POEs).
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	NAFTA Trucking	Non-compliant Mexican vehicles (weights, dimensions, registration)		
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	NAFTA Trucking	Excessive paperwork related to International Fuel Tax Agreement (IFTA)		
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Preclearance Programs			Use expedited processing and dedicated commuter lanes for commuter traffic. Implement transportation demand management on Mexican side.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Preclearance Programs	Preclearance procedures need to be enhanced on both sides of border.		

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Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Staffing/ Scheduling	Inadequate agency staffing levels		Increase staffing levels at border.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Stakeholder Coordination	Lack of stakeholder coordination and cooperation that goes beyond the local level	No single lead agency, committee or working group to formally coordinate border efforts on a broad scale	Create a contact agency responsible for taking a leadership role in facilitating coordination and cooperation among agencies operating at the border (including collection and dissemination of performance measures, data, analysis, and information on successful efforts to increase efficiencies, etc).
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Stakeholder Coordination	Lack of data on cause of delay		Improve ability to assess causation of delay. Identify key freight corridors and focus investment there.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Stakeholder Coordination	Institutional coordination and cooperation barriers remain		Enhance agency coordination and cooperation through cooperative agreements between agencies, unified operations and management at ports of entry.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Stakeholder Coordination	Coordination and cooperation among federal and state agencies does not always occur.		"Unify" operations at each POE. Create joint working groups and cooperative agreements among agencies. Require centralized administration or unified port management.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Stakeholder Coordination	Insufficient data/understanding regarding magnitude of border delays and impacts		Improve and enhance data gathering, understanding of causation of delay, and the economic costs associated with it.

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Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Stakeholder Coordination	Multiple stops	Inefficient and time-consuming stop required for permit purchase or verification at ADOT facility.	EPIC would eliminate the need for commercial vehicle operators to stop at the Arizona DOT office within the compound to verify trip permits by offering service at "superbooths." Average time saved could be expected to be between 8.8 and 12.9 minutes/truck.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Technology	Operational improvements at POEs not fully utilized		Use of broadcast announcements, reader boards, Internet to announce lane closures, waiting times, updates of laws in English/Spanish.
Border Efficiency Initiative Assessment	Dye Management Group	1999	Southwest Border	Technology	New technology has been deployed only at a limited number of POEs		Improved marketing of new technologies. Implement identified and available operational improvements. Improve ITS applications at border.
Expedited Processing at International Crossings (EPIC) Field Operational Test (FOT) – Evaluation Final Report	The Western Highway Institute, SAIC	1998	Nogales	General Planning	There was a lack of hazardous materials containment area at POEs in Arizona		
Expedited Processing at International Crossings (EPIC) Field Operational Test (FOT) – Evaluation Final Report	The Western Highway Institute, SAIC	1998	Nogales	Preclearance Programs	Sub-optimal participation in pre-clearance and "superbooth" program		The preclearance of vehicles to use the superbooth reduced the average approximate travel time through the compound by over 80% (25 minutes).
FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	Border Crossing Facilities	Unfit/overloaded vehicles creating congestion in customs compound	Vehicle weight and inspection modules are located within or after POE.	Reconfigure roadway geometry so that trucks will pass through both a weigh station and inspection facility before entering the U.S.

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FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	Border Crossing Facilities	Inadequate POE facilities	Space constraints (limiting or precluding POE facility improvements and repairs).	Encourage possible development of joint compounds.
FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	NAFTA Trucking	Continuation of complex trailer transfer process at southern border		
FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	NAFTA Trucking	Safety concerns regarding Mexican trucks	Disparate laws, limits, regulations and enforcement in the Mexican and U.S. trucking industries	Leverage ITS technologies, improve inspector training and a focus on the development and employment of efficient, effective inspection selection practices that ensure that safe, legal trucks entering the U.S. are not delayed.
FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	Preclearance Programs	Long waiting times for compliant vehicles	Peak-hour congestion	Greater participation in preclearance programs, dedicated lanes for precleared vehicles
FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	Stakeholder Coordination	Lack of cofunding for binational technology initiatives	Non-traditional relationships among border stakeholders (different roles, agendas, schedules, areas of focus)	
FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	Stakeholder Coordination	Institutional barriers impeding border efficiency	Inconsistent policies, rules, regulations, funding regimes affecting border efficiency	Strengthen local and international alliances in order to improve commercial vehicle movement at border.
FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	Technology	Slow progress toward interoperability of technologies	Competing, incompatible border-crossing technologies under development	

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FHWA ITS - Intelligent Transportation Systems at International Borders: A Cross-cutting Study	FHWA	2001	Southwest Border	Technology	Inadequate technology / equipment	Resource constraints limit or preclude POE facility improvements and repairs.	ITS technologies must continue to be explored to ensure that there is connectivity and interoperability among local, state and federal stakeholders.
Overview of the Texas-Mexico Border: Background	Center for Transportation Research	1994	Texas Border	Border Crossing Facilities	Congestion, traffic crossing at primary inspection booths	Lack of signage, advisories indicating which booths are open.	Use a system of red-green lights on top of the toll and primary inspection booths to indicate to vehicles which both are staffed.
Overview of the Texas-Mexico Border: The Assessment of Traffic Flow Patterns	Center for Transportation Research	1994	Texas Border	General Planning	Border agency resources spread too thinly	Too many crossings for commercial traffic, limited border agency funding.	Concentrate agency services at fewer locations that are equipped with state-of-the-art inspection technology. These "super-crossings" would expedite existing traffic and encourage pre-cleared traffic on dedicated lanes.
Reorganization Proposals for U.S. Border Management Agencies	Congressional Research Service	1999	Southwest Border	Stakeholder Coordination	Duplication of effort; fragmentation of authority and responsibility; rivalries among agencies and inconsistent, conflicting, or overburdening agency missions	A lack of coordination and cooperation among the numerous agencies involved in border management	Reorganize border management structure to better coordinate and carry out objectives (5 possible reorganizations outlined).
State Functions at the Texas-Mexico Border and Cross-Border Transportation	Texas Comptroller of Public Accounts	2001	Texas Border	Border Crossing Facilities	Constraints on expanding, reconfiguring, retrofitting of POE facility	Several of the urban international bridges are land-constrained, and expansion of the border station facilities would be difficult.	Identify infrastructure needs of existing border stations.

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State Functions at the Texas-Mexico Border and Cross-Border Transportation	Texas Comptroller of Public Accounts	2001	Texas Border	NAFTA Trucking	Complex, time-consuming drayage and trailer transfer process	Border crossing process involves changes of equipment; separate freight forwarders and customs brokers, and drayage between separate warehouses and terminals. Significant volume of empties crossing contributes to delays.	Implement NAFTA trucking provisions.
State Functions at the Texas-Mexico Border and Cross-Border Transportation	Texas Comptroller of Public Accounts	2001	Texas Border	Private Sector Practice	Mexican Customs Broker practices	Mexican customs brokers contribute to congestion by releasing vehicles in batches rather than as documentation is completed.	
State Functions at the Texas-Mexico Border and Cross-Border Transportation	Texas Comptroller of Public Accounts	2001	Texas Border	Private Sector Practice	Documentation deficiencies causing delays	The majority of referrals to the secondary inspection stop are for deficiencies in entry documentation.	
State Functions at the Texas-Mexico Border and Cross-Border Transportation	Texas Comptroller of Public Accounts	2001	Texas Border	Staffing/ Scheduling		Personnel shortages at U.S. primary result in an additional delay before reaching the U.S. POE.	
State Functions at the Texas-Mexico Border and Cross-Border Transportation	Texas Comptroller of Public Accounts	2001	Texas Border	Staffing/ Scheduling	Insufficient U.S. Customs and INS inspectors	All inspection booths are not staffed - line ups form at peak periods.	Increase staffing levels at border.
State Functions at the Texas-Mexico Border and Cross-Border Transportation	Texas Comptroller of Public Accounts	2001	Texas Border	Technology	Multiple stops	During pre-border crossing activities in Mexico, commercial vehicles stop to prepare entry documentation. All trucks stop to manually pay tolls before they are allowed on the bridge.	Automate information about the cargo, commercial carrier, commercial vehicle, and the driver in the pre-crossing stages, and thus be able to charge and clear the commercial vehicle for release before it arrives at the border. Assess border agency staffing allocation and needs. Automate toll collection.

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Traffic Simulation at the International Ports of Entry: El Paso-Mexico Case Study	Center for Highway Materials Research	2000	El Paso	Technology	Congestion and spillback prior to U.S. primary inspection booth	Tollbooth closes for personnel changes.	
Understanding the U.S./Mexico Border Crossing Process	USDA Foreign Agricultural Service	1999	Southwest Border	NAFTA Trucking		There are a number of truck/trailer and bobtail movements associated with each shipment.	
Understanding the U.S./Mexico Border Crossing Process	USDA Foreign Agricultural Service	1999	Southwest Border	Private Sector Practice	Freight not palletized	Stevedoring delays for inspected shipments	Shipper should palletize loads.
Understanding the U.S./Mexico Border Crossing Process	USDA Foreign Agricultural Service	1999	Southwest Border	Private Sector Practice	Lack of communication between shippers and customs brokers	Customs brokers do not always give advance notice of all information required from shipper including when carrier should have shipment at border.	Improve communication between Customs broker and shipper (detail and accuracy of information).
Understanding the U.S./Mexico Border Crossing Process	USDA Foreign Agricultural Service	1999	Southwest Border	Private Sector Practice	Peak demand schedules and inefficient crossing process	Forwarding and banking practices result in peak hours for commercial border crossings.	
U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Border Crossing Facilities	Inadequate POE access	Lack of land to expand port of entry access. Lack of inspection space.	
U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	General Planning	Inefficient distribution of traffic among POEs	Inefficient distribution of traffic among POEs.	
U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	General Planning	Duplication of effort	Differences exist in U.S. and Mexican customs classification	

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U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	NAFTA Trucking	Large volume of empty trucks crossing the border	Large volume of empty drayage trucks crossing border. Complex and inefficient drayage system utilized to move most freight between the U.S. and Mexico.	
U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Staffing/ Scheduling	Insufficient primary booths open	Inspection agency staffing shortages at some border crossings. Staffing levels often too low to keep all primary inspection lanes open.	
U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Stakeholder Coordination	Documentation deficiencies causing delays	Customs brokers should provide more advance notice/clarification of information required from shipper.	
U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Stakeholder Coordination	Peak demand schedules	Hours of operation at POEs and Mexican banks influence cross-border traffic patterns, congestion levels, and POE asset utilization.	
U.S.- Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Stakeholder Coordination	Congestion created by multiple inspections requires several stops for trucks	Multiple checks exist at the border by various federal and state agencies.	
U.S.-Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Stakeholder Coordination	Lack of binational coordination regarding POE operations and planning		Promote an inter-agency effort to establish facility, resource and equipment requirements, goals for queue waiting times, commercial vehicle processing times, hours of operation, and technology and infrastructure improvements that facilitate commercial crossings.

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US-Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Stakeholder Coordination	POE congestion	"Batch" release customs clearance protocol in Mexico for shipments spread over many trucks	
US-Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic	General Accounting Office	2000	Southwest Border	Technology	Inadequate technology / equipment		
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Staffing/ Scheduling	Unnecessary delay approaching border station primary inspection booths	Insufficient staffing to meet demand patterns; insufficient monitoring to establish staffing needs	Monitor and staff inspection lanes to meet demand.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Border Crossing Facilities	Bottleneck at U.S. primary inspection	Too few primary inspection lanes at some POEs	Provide additional commercial vehicle inspection lanes.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Border Crossing Facilities	Pre-cleared vehicles delayed in primary inspection queue	Rapid enforcement lanes (REL) not available for trucks at most POEs	Add at least one Rapid Enforcement Lane (REL - formerly North American Trade Automation Prototype lane) at major commercial crossings and encourage preclearance.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Border Crossing Facilities	Insufficient physical capacity results in excessive congestion and delays.	Insufficient land to accommodate crossing, queuing, and/or border station needs	Provide a new commercial vehicle border crossing.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Customer Service	Lack of customer service objectives exist among agencies at POEs.	No official goal for total time to process vehicles through primary inspection, including wait time.	Establish hourly average maximum time (e.g., 20 minutes) as official goal for commercial vehicle crossings.

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Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Customer Service	Inefficient inspections and processing result in congestion.	Inspection regulations too difficult to understand	Simplify regulations and better disseminate information on requirements and changes.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	General Planning		Some vehicles cross border without having to	Establish international trade centers straddling border; integrate inspection facilities into trade center.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	General Planning	Border crossing demands peak and exceed crossing capacity; results in increased congestion.	Free border crossings near tolled crossings attract traffic and result in congestion	Use similar tolls at nearby adjacent crossings.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	General Planning	Congestion and delays are due to inefficient and/or circuitous access.	All inspections are concentrated at border	Move inspections away from immediate border crossing zone. Complete or improve direct access roads.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	General Planning	Inspection and transportation agencies lack sufficient funding for many of the desired operational and infrastructure improvements.	Federal and state agency headquarters do not fully understand local problems and needs and/or lack sufficient funding.	Develop strategy to implement border operational and infrastructure improvements and increase funding among inspection agencies; federal facilities, agencies, and transportation agencies.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	NAFTA Trucking	Dead heading trucks produce congestion and unnecessary emissions.	NAFTA provision to permit return load from alternate location not yet implemented	Implement NAFTA provision.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Private Sector Practice		Commercial vehicle crossings peak due to dispatch platooning and shipping schedules.	Dispatch more trucks to reach crossings at off-peak times. Vary tolls to encourage crossings during off-peak periods.

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Western Governors' Association - Border Congestion Study	Parsons TransportationGroup, Suma Sinergia	1999	Southwest Border	Staffing/ Scheduling	Some commercial border stations operating schedules result in delays.	Operating hours do not fit shipping schedules.	Extend operating schedules by two hours.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Stakeholder Coordination	Inconsistent operating schedules exist among stakeholders.	Bank hours are inconsistent with trade schedules.	Improve inter-stakeholder coordination and cooperation.
Western Governors' Association - Border Congestion Study	Parsons TransportationGroup, Suma Sinergia	1999	Southwest Border	Stakeholder Coordination	No one agency is responsible for coordinating inspection process		
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Stakeholder Coordination	Unnecessary delays occur approaching primary inspection booths.	Some supplemental inspections temporarily block primary inspection lanes.	Conduct all inspections "off-line" in secondary inspection.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Stakeholder Coordination	Some commercial border stations operating schedules result in delays.	Different operating exist hours for adjacent U.S. and Mexican border stations.	Coordinate U.S. and Mexican border station operating hours.
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Stakeholder Coordination	Lack of standardization and consolidation of documents causes excess delay	Significant variation in documents extend preparation, inspection times.	
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Technology	Inadequate technology exists for information dissemination.		Encourage use of underutilized crossings through improved information dissemination (broadcast wait times, queue lengths).
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Technology	Inefficient inspections and processing result in congestion.	Automated Customs Entry system lacks funding.	Actual inspection processes are not included in this study.

Publication	Source	Year	POE	Issue Category	Problem / Issue Description	Problem / Issue Cause	Recommendations / Opportunities
Western Governors' Association - Border Congestion Study	Parsons Transportation Group, Suma Sinergia	1999	Southwest Border	Technology	Antiquated technologies are employed at POEs.	Inspection agencies lack sufficient funds to keep current with technology.	Increase funding to permit installation of current technologies, such as Automated Customs Entry (ACE) implementation X-ray machines, laser visas, palm-print readers, license plate readers, and technology connectivity between agencies, brokers, shippers.