Surface transportation agencies are recognizing that they are uniquely positioned among civilian government agencies to swiftly take direct action to protect lives and property due to their broad policy responsibility, public accountability, large and distributed workforces, heavy equipment, and robust communications infrastructure. Their institutional heft also provides a stable base for campaigns to mitigate or systematically reduce risk exposure over time through all-hazards capital investments.

The National Cooperative Highway Research Program (NCHRP) is supported on a continuing basis by funds from participating member departments of the American Association of State Highway and Transportation Officials (AASHTO), with the cooperation and support of the Federal Highway Administration, U.S. Department of Transportation. The NCHRP is administered by the National Research Council’s Transportation Research Board (TRB). The NCHRP is an applied contract research program totally committed to providing timely solutions to operational problems facing highway and transportation engineers and administrators.

Each year, AASHTO refers a research program to the TRB consisting of high-priority problems for which solutions are urgently required by the states. In August 2007, through a joint 3-day meeting with what is now the AASHTO Special Committee on Transportation Security and Emergency Management (SCOTSEM) and with interested federal agencies, the NCHRP 20-59 project panel identified $2 million in research needs to be addressed over 3 program years. In August 2010, the NCHRP 20-59 project panel selected projects for the Fiscal Year 2011 program.

Interested in being a panel member?
This announcement contains problem statements that are preliminary descriptions of the selected projects. Panels are being formed to develop detailed project statements and oversee these projects. Recommendations for panel members may be made by completing the Cooperative Research Programs’ Nomination Form and sending it and a resume to Ms. Adrienne Blackwell (ablackwell@nas.edu) by January 28, 2011.

Interested in proposing on these NCHRP Projects?
Detailed project statements, formally soliciting proposals for these projects, are expected to be released starting in April 2011. NCHRP project statements will be available only at the program website. Each project statement will be announced by email, and information on registering for this service and other details on the NCHRP are available at that site.

Proposals should evidence strong capabilities gained through extensive, successful experiences. Any research agency interested in submitting a proposal should first make a frank and thorough self-appraisal to determine whether or not it possesses the capability and experience necessary to ensure successful completion of the project. The specifications for preparing proposals are set forth in a brochure entitled Information and Instructions for Preparing Proposals, available on the website referenced above. Proposals will be rejected if they are not prepared in strict conformance with the section entitled “Instructions for Preparing and Submitting Proposals.”

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TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES
Consider the roles of the multiple modes of transportation in a regional disaster and how they could be better integrated to facilitate all forms of emergency response. Investigate existing regional transportation disaster response plans in hurricane-prone areas. Study the Bay Area Super-UASI (Urban Area Security Initiative) regional disaster response plan development for best practices and key planning elements. Determine who is involved, what assets are being employed, and what stakeholders have active roles. Investigate other UASIs and other regions that may be developing plans, and look for similarities. Review after-action reports from regional transportation disaster response to real events such as Hurricane Rita in Houston, Texas. Have the lessons from real events been incorporated into the regional transportation response plans? Have employee preparedness and response plans been adequately developed and integrated into the planning process?

Products: Regional Transportation Disaster Response Plan Template, and Plan Development Guidebook, including milestones and tabletop exercises.
Project 20-59(43)

Integration of Security Training into Routine Operations Training

FUNDS: $100,000
NCHRP STAFF: Stephan A. Parker, 202-334-2554

BACKGROUND

Transportation agencies have expressed the need for increased funding for transportation security training, especially since security training has not yet been mainstreamed into their budgeting and planning processes. At the same time, routine training for operations has already been mainstreamed and accepted by management as one of the essential components of providing transportation services and managing transportation systems. By incorporating security training into routine operations training, synergies may be capitalized upon and cost savings may be generated. More importantly, security training that may not have been implemented can now be realized.

OBJECTIVE

The objective of this research is the development of a strategy for the integration of security training into routine operations training. The research product will include an identification of synergies that exist among security training and operations training and effective ways in which these synergies can be used to fulfill security training needs in the context of a traditional planning and budgeting process.

RESEARCH PROPOSED

Phase I includes tasks necessary to understand the budgeting process used by transportation agencies for securing training resources for routine operations; the planning process used to determine the training courses, content, and delivery mechanism; and identification of synergies or commonalities between security training and routine operations training that can be harvested.

Phase II will build upon the synergies and background information identified in Phase I and recommend strategies to integrate security training into routine operations training. Draft course outlines will be developed and feedback from transportation agencies will be solicited on the course outlines and recommended integration techniques.
Project 20-59(44)

Public Transportation Response Plan for a Pandemic

FUNDS: $ 200,000
NCHRP STAFF: Stephan A. Parker, 202-334-2554

BACKGROUND

Pandemic infectious disease, whether it is the result of a mutation of the H5N1 virus or some other emergent contagion, has become recognized by international and U.S. authorities, including the Centers for Disease Control, as a certain event with only an uncertain date of occurrence. The U.S. Department of Homeland Security and FEMA are in the process of updating the National Response Framework to include pandemic considerations and have directed states to develop their own response plans in recognition that due to the characteristics of a pandemic, federal aid will be minimally helpful.

Affected communities will largely be on their own to fend for themselves. States, some of which are otherwise savvy to emergencies like hurricanes, are slowly developing drafts of pandemic emergency plans and Continuity of Operations plans for government agencies. However, this work is currently in its infancy and data collection phase. Unlike most other catastrophic events that cause destruction of infrastructure and require mass evacuation, a pandemic will strike not infrastructure but the personnel running it. It will require not an evacuation but a response that enables people to limit or halt travel while continuing their normal business and personal routines for up to two months per "wave" without spreading illness. Because the world's people are so mobile, experts estimate that a pandemic starting anywhere in the world will likely reach North America no later than four weeks from onset. It may spread so fast that neighboring communities within a state will not be able to help each other. Up to now, most transportation considerations in response to pandemic have centered upon border control at airports and cargo processing at seaports. However, the SARS event a few years ago illustrates how fast a disease can spread across the world before anyone is aware enough to enact precautions. Even if authorities are aware of a problem and attempt to react, the recent incident of the American who conducted international travel despite having a strain of TB resistant to drugs illustrates the current limited abilities of border security. It also illustrates the possible lack of cooperation of patients and their families to abide by travel restrictions imposed by health authorities.

How does public transit relate to this issue? Most responses regarding transit are to suspend transit operations in the event of a pandemic. However, transit service provides transportation to work for nurses, sanitation workers and many other personnel who will be relied upon to provide emergency response during a pandemic. Additionally, public transit provides a lifeline to families for transportation to work. Lower income families living from paycheck to paycheck cannot survive in isolation for eight weeks. One of the most important recognized principles of community response during a crisis is to enable the population to maintain its normal routine as much as possible. In the absence of that, the next best is for a population under crisis to have productive things to do. An idle population forced to stay home for weeks while household cash, food, and medicine run low is a recipe for civil strife, especially in the event that a limited supply of flu vaccines will be initially distributed to priority populations only. Suspending public transit...
operations is a simplistic solution but may be ineffective in slowing the spread of disease. While transit-dependent people are disproportionately burdened by immobilization, people with cars may continue to travel and spread disease. In all but the worst cases, suspending transit operations might be an overly blunt and drastic step with many adverse consequences.

Many official emergency management plans in force at the state level are old versions that do not address pandemic. Newer versions may be drafts that have not been released. At both national and state levels, there is a current flux and transition of authority and responsibility, both at the departmental and personnel levels. The Continuity of Operations Plan (COOP) for some state DOTs may be confidential due to security concerns and exempt from public records laws. There is a lack of information and idea exchange. There are many unanswered questions about preserving essential functions, including establishing the authority of agencies to act, the determination of critical thresholds of employee absenteeism at which a suspension of operations is called, and the identification of core functions and placement of infrastructure to enable essential personnel to work from home.

**OBJECTIVE**

The objective of this research would be to thoroughly think through and describe in as much detail as possible, the range and potential courses of events during a pandemic, the impacts of these upon public transit and the possible responses of public transit agencies to safeguard personnel and patrons, agency operations, and agency financial management. Most importantly, the research would explore how public transit personnel and capital assets can serve to support emergency responders as well as the community during the crisis. The products would be the creation of scenarios upon which to craft coordinated actions that flex in response to rapidly changing conditions, maintaining altered public transit service to preserve normalcy and minimize socioeconomic disruption, while slowing the spread of illness so hospitals are not overwhelmed.

**PROPOSED RESEARCH**

1. Disseminate the facts on the risks to government policymakers and transit agencies. There continues to be a wide range of opinion among government policymakers on the importance of pandemic planning. Lack of agreement wastes time and effort. Identify and explore the various arguments about pandemic and develop a consensus to take action.
2. Establish interdisciplinary dialogue and cooperation. Conduct brainstorming sessions to identify technologies that can be combined and brought to bear on pandemic planning. Specialists should include epidemiologists; geographic information systems experts; industrial and management systems engineers with expertise in transportation logistics; computer scientists with expertise in the application of unmanned systems (robotics) and cell phone technology to explore use of social distancing strategies; and, hazardous materials experts whose processes might have some carryover to pandemic procedures.
3. Model the spread of infectious disease through a transit service area.
4. Apply statistical and optimization tools for defining alternative service configurations and the level of risk associated with their use.
5. Develop decision trees for evaluation and alteration of transit operations on a daily basis during a pandemic.
6. Develop table top exercises, conduct drills and debriefings using volunteer local areas, including transit agency management; local government emergency operations centers, first responders, and emergency planning committees; and, public and private sector major employers.
7. Explore the potential role of public transit to deliver food, medicine, equipment, and patients to support community isolation and quarantine orders.
8. Develop criteria for public transit agencies to use to set thresholds at what percentage of absent transit employees public transit might suspend service.
9. Document the findings of the tabletop exercises.
10. Develop a public transit procedural handbook and planning templates, containing appendices with example detailed interlocal agreements, decision trees and checklists that can be tailored to a specific transit agency.