NCHRP 20-75A

Directory of Transportation Libraries and Information Centers

Final Report

for

National Cooperative Highway Research Program

by

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with

University of Minnesota

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Table of Contents

1. Introduction

1.1 Background

In early 2006 TRB released Special Report 284: Transportation Knowledge Networks: A Management Strategy for the 21st Century, which concerns "how to improve the identification, collection, accessibility, and preservation of information so…. resources can be better circulated and shared among users." The report notes that "Users of transportation information represent a diverse and decentralized community, including the states and federal agencies involved in transportation; more than 600 transit agencies; nearly 400 metropolitan planning organizations (MPOs); countless public works officials in thousands of cities, towns, and counties, supported by private contractors and consultants; universities; and private transportation companies and professional associations. Not only do these groups need transportation information, but they also are frequently the primary sources of reports, research, and technical information that are not always widely shared." A follow-on study under NCHRP Project 20-75 has developed a business plan for implementing the administrative structure recommended in the special report, and has provided outreach materials and engagement with key personnel in supporting the study recommendations.

The project documented in this report continues efforts to move forward with Transportation Knowledge Networks (TKNs) by identifying potential TKN participants and describing the collections of the libraries and information centers associated with the decentralized community described above. Although many librarians and other information professionals—mainly from state DOTs, federal agencies, professional organizations, and a few university transportation centers—already collaborate, others are not part of the discussions. This lack of involvement may be because participation in professional activities is not a personal or organizational priority, because information management related to transportation is only one aspect of a multi-faceted job, or because there is a lack of awareness about opportunities for collaboration.

1.2 Research Objectives

The objective of this project was to develop a directory of U.S. transportation librarians, libraries and information centers that could participate in any of a number of ways in TKNs and take responsibility for collecting and providing access to the reports, research, and technical information of their own organizations. The directory builds upon the existing Directory of Transportation Libraries and Information Centers that has been maintained by the Special Libraries Association – Transportation Division (SLA-TD) and hosted by the National Transportation Library (hereafter referred to as the SLA/NTL Directory). The directory includes libraries and information centers at agencies of the U.S. DOT; state transportation agencies; MPOs; transit agencies; local and regional planning and public works agencies; professional associations related to transportation; and universities that

house university transportation centers or significant collections of transportation engineering publications, data, or other transportation-related materials. While the directory focuses on domestic information centers, it includes references to major international transportation information sources, including those with relationships with U.S. providers such as TRB or through service providers such as Transport or Dialog. The directory includes names of individuals who provided information for their organizations in order to facilitate future follow up information requests. The directory is provided in an electronic format to enable Web publishing by TRB and/or the National Transportation Library (NTL), and to support queries and reporting.

1.3 Overview of Research Approach

This research involved the following tasks:

Task 1 – Design. Produce a memorandum that documents the data elements to be included in the directory, end user requirements for querying and sorting directory information, and the strategy for acquiring data.

Task 2 – Initial Database Development and Population. Develop a database for the directory and convert and load the existing SLA/NTL directory information into this database.

Task 3 – Identify Other Transportation Information Centers. Identify other information centers for inclusion in the directory and gather directory information for them.

Task 4 – Compile Data on Other Transportation Information Centers. Compile and load information on other transportation information centers into the directory.

Task 5 – Final Report. Prepare a final report that summarizes the effort and recommends next steps for continuing to keep the directory updated and further expand its content.

1.4 Contents of this Report

This report is the deliverable for Task 5; it documents the effort to build the directory, describes the directory contents and recommends next steps.

- Chapter 2.0 provides a summary of the process used to develop the directory.

- Chapter 3.0 summarizes the structure and content of the directory.

- Chapter 4.0 presents recommendations for future maintenance and updating of the directory.

2. Directory Development Process

2.1 Collaboration Approach

Prior to initiation of this project, multiple discussions were underway within the transportation library community about the need for an updated directory with more in-depth information. Given that multiple parties were interested in working to improve the directory, we undertook a collaborative approach, in which:

- The NCHRP Project 20-75A team would design the new directory with input from transportation library community members, coordinated through the NTL;

- The NCHRP Project 20-75A team would convert the existing directory information;

- The NTL would create a SharePoint site for the new directory and load the converted directory information;

- The transportation library community (Regional TKNs and the SLA-TD) would undertake outreach to encourage libraries with existing directory entries to update their entries and provide additional information, and encourage additional libraries to contribute entries;

- The NCHRP Project 20-75A team would identify additional information centers, compile information for these centers, and provide this information to the NTL for loading into the master directory.

2.2 Directory Design

The first step in directory design was to obtain input from the NTL, members of the regional TKNs and the SLA-TD. Input on the directory was coordinated by the NTL director. She first obtained a draft set of data elements that was created by the Eastern TKN (ETKN), and circulated these for comment. The ETKN data elements incorporated most of the existing SLA/NTL directory elements and included additional items for a more in-depth understanding of library collections and resources. She provided the ETKN template and the comments to the research team. The research team developed a draft design memorandum incorporating this input. The memorandum was provided both to the NCHRP 20-75A panel and to the NTL for review and comment. Based on comments received, the team prepared a revised version of the directory design memorandum, including a summary of how each comment was addressed. Note that minor adjustments to data elements were made during the course of the directory implementation process. The final list of data elements is provided in Chapter 3.

The directory content was more extensive than what would typically be included in a directory, covering not only contact information but information on collections, catalogs, staff, services, facilities and resources. During the review and comment cycle, the research team considered the tradeoff between developing a simpler directory that would be easier to maintain versus having a more extensive directory that addressed the information needs expressed by TKN, SLA-TD and representatives of the Library Connectivity Pooled Fund Study. Given the importance of achieving a successful collaborative effort, we opted for the latter. However, the data collection forms were designed so that information centers were not required to complete all of the items and so that the non-library entries (technical assistance and data providers) would see an abbreviated form.

In addition to specifying the individual data elements, the design memo defined the types of organizations to be included in the directory:

- **Transportation Library** – a self-described library whose primary purpose is to collect, organize and provide access to transportation-related information resources and to instruct users on how to find and access information resources. May be part of a public or private organization or a stand-alone library.

- **Transportation Technical Assistance Provider** – an organization or organizational unit whose mission is to provide training and technical assistance to transportation practitioners on substantive topics. This category includes, but is not limited to, LTAP and TTAP centers.

- **Other Transportation Information Provider** – an entity (other than a library or a technical assistance provider) that maintains a collection of transportation-related information (e.g. reports, studies, plans, data sets, news clippings, links, maps, best practices) that would be of interest to transportation practitioners outside of their organization. Examples might include a transportation data clearinghouse, a University transportation research center that maintains copies of its research products, an MPO Web master that maintains links to plans and studies, a state DOT public affairs office, or a TRB committee that maintains a resource Web page or wiki.

Different forms were developed for each of these three types of directory entries. These forms shared a common base of data items but included other items that were specific to the type of information center.

2.3 Creation of Data Collection Forms

The research team worked closely with the NTL to develop a data collection strategy that would allow libraries and information centers with current directory entries to update their existing information directly in SharePoint and allow the research team to separately collect information on a broader set of information centers and load this information into the central directory.

The research team provided the design memorandum to the NTL staff, who developed an XML format and implemented an associated data form utilizing Microsoft InfoPath. They

set up a Transportation Libraries and Information Centers Directory site within the National TKN (NTKN) area of NTL's Microsoft SharePoint site. The research team worked with the NTL to iteratively test and modify this form over a period of several weeks. While the NTL's original intent was to restrict updates to the site to those with a user name and password, the research team worked with the NTL to develop an approach in which users without credentials could make updates to forms and then submit them for review and incorporation into the master directory by an administrator.

The research team also created a Web-based survey (using a commercial service) to be used for creation of new directory entries. We collaborated with the NTL staff to ensure that completed surveys could be exported and converted to the standard directory XML format. The NTL staff created and tested the XML conversion script.

2.4 Conversion of the Existing SLA/NTL Directory

At the start of this project, the existing SLA/NTL Directory contained 158 records, maintained in Hypertext Markup Language (HTML) format. The directory records were not uniform – i.e. each record did not contain an identical set of fields. Of the existing directory entries, less than half had been updated since 2004 and only a dozen had been updated in the last two years; many did not have information regarding when they were last updated.

The research team obtained the 158 HTML files that made up the existing directory and manually re-entered data into a spreadsheet with columns containing all of the columns in the individual directory entries. The spreadsheet included the following columns:

- ID
- Name
- AddressLine1
- AddressLine2
- City
- State
- Zip
- Country
- Phone
- Fax
- Email
- Website
- Library Website
- DateEstablished
- Books
- Manuals
- SerialsPeriodicals
- Videos

- Microform
- Other
- CollectionExplanation
- Description
- SubjectStrengths
- SpecialCollections1
- SpecialCollections2
- SpecialCollections3
- SpecialCollections4
- SpecialCollections5
- Hours
- OpenToPublic
- AnyConditions
- ILLPolicies
- LoanFees
- PhotocopyFees
- ServiceFees
- CatalogSystem
- OCLC_RLIN_Code
- OnlineCatURL
- OnlineDB/CDROM
- AdditionalInfo
- NumProfStaff
- NumSupportStaff
- StaffName
- StaffTitle
- StaffPhone
- StaffEmail
- LibraryPublications
- LibraryNetworkAffiliations
- LastUpdate

Non-uniformity in data structures for existing directory entries precluded an automated data conversion approach. Most textual information was "cut and pasted" rather than re-typed to avoid keying errors. Quality assurance consisted of reviewing each column to ensure that the entries were appropriate to the field (i.e. that information was not entered into the wrong column), and spot checking entries against the original HTML files.

The spreadsheet with the existing directory entries was provided to NTL staff, who converted it into the standard directory XML format and made it available via the SharePoint directory site. The following libraries were deleted from the site because they

have been closed, were duplicates within the download, or (in one case) because the library has highly restricted access due to security issues:

- BART Technical Resources Library (security)
- California Department of Transportation Library (duplicate)
- Canadian National Railway Business Research Centre (closed)
- Canadian Urban Transit Association (closed)
- Boeing Air Traffic Management Library (closed)
- Delaware Department of Transportation Library (contact reported no library)
- Mn/DOT Library (duplicate within download)
- PennDOT Library and Research Center (duplicate within download)
- Ryder/ATE – (closed)
- South Coast Area Transit (closed)
- Transport Canada Regional Library (closed)
- Transportation development Centre Library (closed)
- TriMet Center Street Library (closed)
- San Francisco Airport Commission Aviation Library (duplicate within download)
- Transportation Research Library (Texas) (duplicate)
- Technical Resource Center, Metropolitan Transit Authority of Harris County (closed)
- US Department of Transportation, National Highway Traffic Safety Administration (closed)

2.5 Directory Updating and Expansion

Once the directory was up and running on the NTL SharePoint site and survey forms had been developed, effort turned to updating the existing directory entries and expanding the number of entries to include broader coverage of technical assistance providers, university transportation centers and associated libraries, state DOTs, Transit Agencies, MPOs, professional associations, and academic libraries.

Updates to Existing Directory Entries

The research team developed a standard request (see Appendix A) which was emailed to contacts for each of the existing directory entries. This email provided instructions for going to the NTL SharePoint site, locating the correct form, updating/completing the form, and clicking the "Submit" button. Of the 158 emails sent, about one-third bounced (i.e. the email addresses in the directory were no longer valid.) The research team used a combination of Web searches and telephone inquiries to identify valid emails and were able to locate addresses for about half of those that had bounced. The SLA Transportation Division Chair assisted with outreach to encourage transportation libraries to update their entries (including a posting on the TRANLIB listserve). The research team also followed up

via telephone for libraries affiliated with state DOTs, transit agencies, MPOs, and professional associations. The end result of these efforts was that 88 of the 158 (56%) of the existing directory entries were updated (including cases where we were notified that the library had closed.) Remaining entries were left in the directory under the assumption that continued outreach by the SLA-TD and the TKNs would be ongoing with respect to updating of existing entries.

Technical Assistance Programs

The research team compiled spreadsheets with contact information for 59 Local and Tribal Technical Assistance Programs (LTAP/TTAPs) This information was derived from the National LTAP Web site (ltap2.org), supplemented with information from individual center Web sites. The LTAP and TTAP spreadsheets were subsequently provided to the NTL staff for conversion and loading to the NTL's Directory site.

The research team contacted each LTAP/TTAP via email with a request to review and complete their directory information on the NTL Directory site. Those who did not update their information in response to the initial email were contacted a second time by email and by phone.

University Transportation Centers and Associated Libraries

The research team compiled spreadsheets with contact information for 26 University Transportation Centers (UTCs). In addition, the research team identified libraries that support university transportation centers through a survey of the Council on University Transportation Centers (CUTC) members taken in 2007, supplemented by the membership lists of the current regional TKNs and the list of members of the SLA Transportation Division.

The UTC spreadsheets were subsequently provided to the NTL staff for conversion and loading to the NTL's Directory site.

Each UTC was contacted via email with a request to review and complete their directory information. Each associated library that was not already in the directory was contacted via email with a request to complete a survey form (see Appendix A). Telephone follow-ups were conducted to encourage each UTC and associated library to respond to the information request.

Eleven UTCs reviewed and updated their directory entries. Sixteen associated libraries were also contacted, and eleven of those updated their entries, while five did not respond to the e-mail or telephone requests.

Other University Libraries with Significant Transportation Collections

In addition to university libraries that supported UTCs, the research team looked for other university libraries with significant transportation collections in the Online Computer Library

Center (OCLC) database. These collections were identified by searching OCLC for specific titles in the following transportation-related disciplines: planning, environment, traffic safety, data and simulation, and intelligent transportation systems. We identified top libraries holding these titles in these topic areas and combined the lists. Duplicates, current transportation libraries, state and public libraries, and university transportation centers were eliminated before any contacts were made.

The contact list comprised 57 organizations; all of these organizations were sent an email explaining the project and providing survey links for libraries and data or other information providers. Whenever possible, the email was sent to a science or engineering librarian or reference manager. If the organization had no one listed in those capacities, we directed our communication to an appropriate dean or public information representative. We had no response from any of these organizations and followed up with a second email. Our efforts resulted in no response from these organizations.

State Departments of Transportation

This project targeted obtaining a directory entry from each of the 50 state DOTs. Contact information for state DOTs was identified using TKN member lists and the Wisconsin DOT Web page listing transportation libraries by state. If no library contact was available, the research team searched the state DOT Web site for a contact in communications, public affairs, or research.

Each DOT was contacted a minimum of three times via email. Several telephone follow-ups were made to all of the state DOTs who did not respond to the email request.

These efforts resulted in updated entries for 46 states plus the District of Columbia. Six states reported not having a library (Hawaii, Indiana, Maryland, New Hampshire, Vermont, and West Virginia). States that reported not having a library or information center were asked to provide a contact for information sharing. Hawaii, Maryland and New Hampshire were the only states to do so.

Transit Agencies

The research team contacted the American Public Transportation Association (APTA) for current contact information for transit agencies. APTA provided a listing of the 50 largest U.S. transit agencies (based on 2007 unlinked passenger trips). Transit agencies with viable email addresses received the standard email request with a link to the survey. Each agency not responding to the original email received two additional follow-up emails; each agency without a valid email address received a phone call. In many instances, no one answered the phone and a message was left requesting a reply via telephone or email. A reply was requested even if no library existed so that the agency could be removed from the follow-up list. Of the 50 largest transit agencies, 13 provided updated information; 18 reported that they do not maintain a library or information center (or that it had been closed), and the remainder did not respond. A total of 16 U.S. transit agencies are represented in the final directory.

Metropolitan Planning Organizations

A list of the 50 largest (based on population) metropolitan planning organizations (MPOs) was selected from MPO directories on the Association of Metropolitan Planning Organization (http://www.ampo.org/) and USDOT/FHWA Federal Transit Administration Transportation Planning Commission Web sites (http://www.planning.dot.gov/Overview.asp).

The 50 identified MPOs were contacted initially via email. The email explained the project and provided a link for organizations with a formal library and a separate link for MPOs that maintained a collection of data or other information resources but did not have a formal library. Organizations that did not respond received a minimum of two follow-up emails and a phone call.

After three or more contacts to the largest 50 MPOs, we contacted additional smaller MPOs for a total of 91 MPOs contacted. These organizations were contacted only once, via email. Finally the largest MPO in any state that did not yet have an MPO listed on the site was re-contacted via email with a final request that they participate in the project.

Two MPOs were already included in the directory – the Metropolitan Transportation Commission Association of Bay Area Governments (MTC-ABAG) and Northeast Ohio Areawide Coordinating Agency (NOACA); both updated their forms.

Total efforts, including updating, resulted in 44 MPOs on the site, with 33 states represented. The Rhode Island State Planning Council informed us that the Rhode Island's DOT library also serves as their MPO library.

Associations

The research team used the list of associations on the NTL Web site, a list of associations developed by the Texas Transportation Institute, the membership list of the SLA Transportation Division, and the member and friends lists of the current regional TKNs to develop a list of transportation-related associations to consider including in the directory.

Associations already listed in the directory were sent an email asking them to review and update their entry. Associations without a directory listing were sent the introductory email with links to the survey. Any associations that did not respond to the initial e-mails were contacted by phone and e-mail again. Associations located outside of the U.S. received the email with survey links but not the telephone follow-up.

Our efforts include an attempt to contact 129 associations. Thirty four responded by completing a survey; 95 did not respond at all.

Other

Other activities to update and expand the directory included:

Updates to USDOT Libraries – the NTL director updated contact information for current USDOT libraries. Each library was contacted via email and telephone and asked to update its entry. Updates were received from seven of the eight libraries that were still in existence.

TKN Members – all of the current regional TKN members who were not already in the directory were added, and contacted with a request to update their information.

Rail Entries – selected Web searches were performed to add breadth to the directory in the rail area, which was underrepresented. Information for seven railroad libraries/museums was added based on Web pages.

Private Firms – an initial effort was made to identify large transportation consulting and engineering firms with information resource collections. Upon review of the Web sites and on-line libraries for the identified firms, the research team felt that it was difficult in many cases to draw the line between providing an information resource base and providing marketing information. Therefore, the only private engineering/consulting firms currently included in the directory are those which were either in the pre-existing directory, or those which are members of regional TKNs. See chapter 4 for a recommendation regarding establishment of policies for which organizations are to be listed in the directory.

Quality Assurance – the research team checked each entry and ensured that key fields that would be used to sort and filter entries were complete and accurate (organization category, state, country, TKN). TKN membership was checked against the TKN member lists on each regional TKN Web site. The directory was checked for duplicates, and duplicate entries were combined/deleted. Selected data elements were checked and edited for consistency where pick lists did not exist. Parent organizations were entered for all entries where the organization name was generic and had the potential to be confused with another entry – e.g. "Center for Transportation Research." Research team members reviewed the final list to identify and complete missing data based on personal knowledge. Note that while there was some discussion about creating a more consistent naming convention, the research team decided to leave the names entered by the information centers as-is. All URLs included on the form were checked as part of the QA process, and only a handful were nonfunctioning. However, well over 100 organizations did not include their Web sites on their forms.

Summary

The research team contacted over 530 organizations, and about 230 updates and additions were made as a result of these contacts. Table 1 summarizes contacts and updates made for the major target categories of organizations.

Table 1 Summary of Response to Directory Updating/Expansion Activities

Organization Type	Number of Agencies Contacted (email and/or phone)	Number of Entries Updated or Added
Technical Assistance Provider	59	31
University Transportation Center	26	26
Academic Library	127	38
State DOT	50	47
MPO	91	44
Transit Agency	50	13
Professional Association	129	34

3. Directory Structure and Content

3.1 Directory Database

The directory is available on the National Transportation Library's SharePoint site, at the following URL:
.
http://www.transportationresearch.gov/NTL/NTKN/LibraryDirectory2/Forms/Default.aspx

Each directory entry is maintained as an XML file, which can be edited using a Microsoft InfoPath form. The directory can be sorted or queried/filtered based on the following items:

- Information Center Name

- Information Center Parent Organization Name

- Organization Category

- Information Center Type

- City

- Country

- State

- TKN Member

The entire directory can be downloaded to a spreadsheet. Directory entries can be edited directly by individuals who have been issued a username and password by the NTL SharePoint Administrator. Anyone can view the directory entries and submit proposed changes to existing entries; these entries can be reviewed and incorporated into the master directory by an administrator. New directory entries can also be submitted for review and incorporation into the directory.

3.2 Data Elements

Table 2 presents the definitions of the data elements in the final directory.

Table 2 Directory of Transportation Libraries and Information Centers – Data Elements

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
Section: Main			
Category	Classification of the information center. Technical Assistance Providers are LTAP/TTAP centers	Text - Pick List: Library Technical Assistance Provider Data or other Information Provider	A
Date of last Update	Date directory entry was last updated. Manually entered by person updating the record	Date	A
Organization Type	Classification of the type of organization within which the information center is housed.	Text – Pick List: State DOT Academic/Research Institution MPO/Planning Agency Municipal or County Government Public Transit Agency Private Transit Provider Airline Railroad Trucking Company Federal or National Agency Port Professional Association Engineering/Planning/ Consulting Firm Other Private Firm Other	A

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
Name of library or information center	Name of the information center	Text	A
Name of parent organization	Name of the organization within which the information center operates	Text	A
Title of person to which information center director reports	Job title of the person to which the information center reports – used to understand where information centers are located in the organization chart.	Text	A
TKN Member?	Indicates if the center is a member of an existing TKN, and if so, which one.	Text - Pick List: Not a TKN Member ETKN WTKN MTKN	A
Is collection accessible to the public?	Does the center provide access to its information collection to the general public (i.e. not just its own organization's membership) either on-site or on-line, with or without a fee?	Yes/No	A
Special conditions for accessing information resources	Description of any special conditions for accessing the center's information collections - e.g. by appointment, affiliations required, payment required	Text	A

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
Description of information collection	General overview of the types of information resources included in the center's collection. Provide a description of your information collection.	Text	A
Subject strengths	Highlights of the particular subject strengths of the collection	Text	A
Number of Professional Staff	# of FTE's classified as "professional"	Numeric	A
Number of Support Staff	# of FTE's classified as "support"	Numeric	A
Special notes	Special notes or comments about the library or information center that don't fit into any of the other standard fields	Text	A
Section: Contact Information			
Contact Name	Name of Primary Contact – this is the person who will be contacted to update the directory entry	Text	A
Address Line 1	Address	Text	A
Address Line 2	Address	Text	
City	City	Text	A
State	State	Text	
Zip	Zip	99999-9999	A
Country	Country	Text	A
Mailing Address	Mailing Address if different from contact address	Text	A
Main Phone	Main phone number for the center	999-999-9999	A

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
Fax	Fax Number for the center	999-999-9999	A
EMail	Main email address for the center	Text	A
Web Site	Website URL for the center	URL	A
Section: Training Services			
Online Training Courses	Does center provide online training courses?	Yes/No	T
In-Person Training Courses	Does center provide in-person training courses?	Yes/No	T
Knowledge Base	Does center maintain a knowledge base of lessons learned or best practices?	Yes/No	T
Expert Directory	Does center maintain a directory of experts or provide referrals to experts as part of its services?	Yes/No	T
Training Materials in OCLC	Are center's training materials catalogued into OCLC?	Yes/No	T
Section: Data Offerings			
Data Sets	What types of data sets does the center provide?	Text	L,O
Data Formats	What export formats are offered?	Text	L,O
Metadata	What types of metadata are provided to help users locate or interpret data sets?	Text	L,O
Section: Services and Affiliations			
Year Established	In what year was the library first established?	YYYY	L
Hours Open	What days and hours are library services provided?	Text	L

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
Newsletter/ Outreach Publication	Name or link to library's online newsletter or outreach publication	Text	L
OCLC Code	Library's OCLC Code (if applicable)	Text	L
Pct OCLC	What percentage of the library collection is cataloged in OCLC?	Percent	L
OCLC Affiliations	With which OCLC Groups is the library affiliated?	Text	L
Networks	Names of other library consortia or networks to which the library belongs	Text	L
Interlibrary Loans	Does library offer interlibrary loans?	Yes/No	L
OCLC Lender	Does library lend through OCLC?	Yes/No	L
Lending Policy	Description of lending policy or link to Web page describing the lending policy	Text	L
Loan Fees	Fees charged for lending	Text	L
Photocopy Fees	Fees charged for supplying photocopies	Text	L
Other Fees	Fees charged for research or other services	Text	L
Section: Detailed Collection Information			
Books/ Monographs	Approximate number of monographs	9999999	L
Periodicals	Approximate number of journals, magazine and newspaper titles (print or digital, current or discontinued)	9999999	L
Reports and Manuals	Approximate number of printed reports, manuals, plans and other printed resources	9999999	L

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
Digital Documents	Approximate number of digital reports, manuals, plans, or other e-documents (e.g. pdf's)	9999999	L
Microfiche	Approximate number of microfiche/microfilm items	9999999	L
Images	Approximate number of photographs or image files	9999999	L
Videos and CDs	Approximate number of videotapes and CDs	9999999	L
Other Items	Approximate number of other items (e.g. schedules, maps, drawings, etc.)	9999999	L
Staff Database Access	Does staff have access to commercial (for fee) information databases – either directly or through the library's parent organization?	Y/N	L
Patron Database Access	Does the library offer patrons access to commercial (for fee) information databases – either remotely or within the library?	Yes/No	L
Database Subscriptions	List of the major commercial information databases to which the library subscribes	Text	L
Section: Library Resources and Facilities			
Budget	Approximate annual budget – excluding staffing and facilities costs	Text – Pick List: Under $100,000 $100,000 or above	L
Funding Source	Primary funding source for the library	Text	L
Meeting Space	Does the library have access to conference/meeting space for staff use?	Yes/No	L
Internet Access	Does the library offer use of computers with internet access to patrons?	Yes/No	L

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
OCR	Does the library have access to digitization and OCR hardware/software?	Yes/No	L
Software	What specialized software is available for library staff use (e.g. Web publishing, desktop publishing, multimedia)?	Text	L
Section: Catalogs (0-many catalogs per organization)			
Catalog Name	Catalog Name	Text	L
Catalog Type	Catalog Type	Text – Pick List: General Integrated Library System (ILS) Bibliographic index Data Catalog Image Catalog Training Resource or Course Catalog	L
Catalog Software	Name of software used for catalog (enter "none", "home grown", or name of commercial package)	Text	L
Catalog Access	Is catalog accessible outside of the organization?	Yes/No	L
CatalogURL	Please provide a link to your catalog	URL	L
Table: Staff (0-many staff members per organization)			
Name	Staff person name	Text	L
Title	Staff person title	Text	L
Phone	Staff person phone	999-999-9999	L
Email	Staff person email	Text	L

Data Element	Description/Rationale for Inclusion	Format	Included for: L-Library T-Tech Assistance O-Other A-All
Status	Full or Part Time	Text - Pick List: Full time Part time	L
Expertise	Staff areas of expertise – use set of tags from controlled vocabulary	Selected List of Expertise Tags	L
Languages	Staff language skills – use set of tags from controlled vocabulary	Selected List of Language Tags	L
Section: Special Collections (0 to many)			
Special Collection	Description of special collections	Text	L

3.2 Directory Content

There are (as of February 24, 2010) a total of 352 information centers in the directory; 306 of which are located in the US, with remaining centers located in 16 different countries. Table 3 summarizes the breakdown of organization types and information center types in the directory.

Table 3 Directory of Transportation Libraries and Information Centers – Breakdown of Entries by Type

Organization Type:	Information Center Type:			
	Library	Technical Assistance Provider	Other Information Provider	Total
Academic/Research Institution	35	47	49	131
Engineering/Planning/Consulting Firm	9		2	11
Federal or National Agency	19		7	26
MPO/Planning Agency	25		19	44
Municipal or County Government	4			4
Other	7		1	8
Other Private Firm	11	1	2	14
Professional Association	13		21	34
Public Transit Agency	14		2	16
Railroad	7			7
State DOT	43	10	4	57
Total	**187**	**58**	**107**	**352**

In interpreting these figures, the following should be noted:

- A given organization (e.g. state DOT) might have multiple entries – for example, a state DOT might have an entry for its library and for an LTAP center that it houses.

- Many organizations share libraries – for example, in Massachusetts the State Transportation Library serves the MBTA, the state DOT and the Boston MPO. Similar library sharing arrangements exist in Kentucky, Texas and Rhode Island.

- For consistency, all LTAP/TTAP centers were classified as Technical Assistance Providers, even if they maintained a library.

Note also that many of the entries do not have complete information. Since the primary goal of project 20-75A was to expand the breadth of the directory, the majority of the items were made optional. The transportation library community can continue over time to expand the completeness of information.

4. Recommendations

Continued expansion and updating of the directory will be essential to maintaining its value as a resource to the transportation community. The following recommendations lay out steps that can be taken to ensure that the directory is kept current and adapted over time to meet user needs.

4.1 Formalize Roles and Responsibilities

Much of the information in the directory was derived from the SLA-TD's online "Directory of Transportation Libraries and Information Centers in North America" that was hosted by the NTL. Updates to the information were made collaboratively through NCHRP Project 20-75A, and members of the transportation library community (TKNs, SLA-TD, Transportation Library Pooled Fund Study). A set of policies and procedures for updating and sharing the information should be established so that it can continue to be maintained and used in a collaborative manner. These should include:

- Criteria for adding resources to the directory, including specific policies about including private, for-profit entities. The focus of the current directory was on organizations that have "significant" collections that others outside their organization would be interested in and that could potentially be interested in participating in a TKN. The definition of the three information center categories listed in section 2.2 above can serve as a starting point for establishing criteria as to adding new directory entries. This will likely need refinement over time.

- Procedures for individuals to recommend information centers for addition to the directory.

- Criteria and procedures for granting rights to update directory entries;

- Criteria and procedures for granting rights to review and approve new and modified directory entries submitted by individuals without updating privileges;

- Criteria and procedures for granting rights to provide bulk or subscription access to directory information, including downloading data to a spreadsheet, or inclusion of the directory information on a different Web site;

- Procedures, roles and responsibilities for adding new fields to the directory or modifying pick lists or formats for existing fields;

- Procedures, roles and responsibilities for modifying the list view and data entry form formats; and

- Procedures for reporting and responding to problems encountered on the directory Web site.

4.2 Use the Directory to Maintain TKN Member Information

TKNs should consider using the directory to maintain information about their membership, rather than keeping separate lists. Each TKN should request its membership to provide updated information on an annual basis; and as new members join, their information should be added to the directory.

In addition, TKNs should consider using the directory to maintain a "friends list" of potential future members including each state DOT, transit agency, and MPO within its region with a library or information center – regardless of whether they are formal member of the TKN. The TKNs should work with the NTL site administrator to obtain the necessary login credentials to allow for direct updates to member information.

4.3 Annual Updating Cycle

Each year, starting in January 2011, the directory host (currently the NTL) should send out emails to each contact in the directory with a request for updated information. A policy should be established for when directory entries are to be deleted – for example, if an information center's information has not been updated for 3 years and/or there is no response to an email update request. Current lists of University Transportation Centers and LTAP/TTAPs should be obtained and checked against existing directory entries to ensure that the information is current.

In order to minimize the burden of data upkeep on any single organization, specific roles can be established for updating different elements of the directory – for example:

- TKNs can take responsibility for updates to their member information;

- The SLA-TD can provide outreach to its members to encourage them to update or add entries. The SLA-TD could also request selected member representatives to review the current directory listing, identify organizations to be added and identify libraries that have closed which should be removed.

In order to maximize directory coverage and currency, the directory host (working with other groups such as SLA-TD, the AASHTO TKN Task Force and the regional TKNs) should identify individuals with established communication channels to the target transportation information centers who are willing to send requests for updated information on the directory host's behalf (or as a follow up to reinforce the original request.) For example:

- The FHWA Office of Technical Services could be requested to contact the LTAP/TTAP centers;

- The FHWA Office of Planning, Environment and Realty could be requested to contact the MPOs (possibly working through the Association of Metropolitan Planning Organizations);

- The RITA Office of Research, Development and Technology could be requested to contact the University Transportation Centers;

- State DOTs could be contacted through FHWA or the AASHTO Standing Committee on Research

- FTA or APTA could be requested to contact transit agencies.

4.4 Directory Expansion

The current directory focuses on transportation information centers at the following types of organizations: academic institutions, state DOTs, transit agencies, metropolitan planning organizations and associations – mostly within the continental U.S. Expansion of the directory could be considered in the future to provide more complete coverage of these core agency types, as well as additional coverage of:

- private non-profit organizations with significant transportation information collections,

- non-U.S. organizations with transportation information collections of international interest,

- information centers that focus on rail, marine and air transportation – modes currently underrepresented in the directory; and

- data providers of interest to transportation practitioners (e.g. GIS data clearinghouses that include but that are not limited to transportation information).

Efforts to expand the directory in these areas can be undertaken incrementally as special projects by TKN members, the SLA-TD or other groups.

Based on the research team's experience, communication with MPOs and other organizations that make available data and reports but do not have a library, needs to include (1) assurance that this directory is not a commercial endeavor or an attempt to obtain contact information for marketing purposes and (2) clear articulation of the potential value of being included in the directory with respect to collaboration opportunities for information sharing.

4.5 Directory Enhancements

Several enhancements to the directory structure, information and features can be considered for the future. The following list provides a starting point for consideration of such enhancements. Feedback from both users of the directory and individuals who have been requested to provide and update information in the directory should be obtained in order to design and prioritize future enhancements.

- Provide a hierarchical structure that allows for multiple information centers to be listed within a single organization without the need to repeat parent organization information for each entry.

- Create a pick list for special collection types that allows for searches based on information categories.

- Expand search/query capabilities to include directory items beyond those currently included in the list view.

- Hyperlink web addresses within the directory form to allow for direct linking to the referenced sites.

- Add "social networking" features that allow for comments/reviews on individual entries, free-form tagging of entries, and RSS feeds or notifications when information is changed.

- Improve the full text search feature.

Appendix A – Sample Emails

Email to Identify New Listings:

As part of the National Cooperative Highway Research Program (NCHRP) Project 20-75A, Spy Pond Partners is developing a directory of U.S. transportation libraries, technical assistance providers and other data and information centers. This directory builds on the existing Directory of Libraries and Information Centers maintained by the Special Libraries Association-Transportation Division (SLA-TD) and hosted by the National Transportation Library. The goal is to expand the current directory to add coverage of offices within state DOTs, MPOs, Transit Agencies and Universities that make data sets, reports, studies, or training materials available to the public or peer agencies.

We are seeking to include a directory entry for every state DOT, every LTAP Center, associations, and for the larger Metropolitan Planning Organizations (MPOs) and Transit Agencies. The new directory will continue to be hosted on the National Transportation Library Web site. It will provide a valuable resource for information sharing among transportation information professionals and practitioners.

If your organization has a library, please forward this email to the staff member responsible for the library and request that they complete the survey form for libraries at the following link:

http://www.surveymonkey.com/s.aspx?sm=NWCI010fl2ap9C2m6adXdw_3d_3d

If your organization does NOT have a library, we would still like to include an entry for you in the directory if you maintain any collection of data sets, internal reports, training materials that might be of interest to peer organizations.

The following information is being requested for organizations that do not have a formal library:

- Contact information within the unit that is responsible for handling requests for reports, data or training materials – this might be a Web master, public information office, data office, or planning office.
- Brief description of the nature of your information collection
- Brief description of any data sets you provide and their formats
- List of any special information collections that would be of interest to others (e.g. complete set of long range plans, archived traffic data, training videos, etc.)

If you are not the right person to provide this information, please forward this email to the appropriate person and request that they complete the survey form for data/information providers at the following link:

http://www.surveymonkey.com/s.aspx?sm=80Kbku8_2b5AG_2f5Wy5N2_2fCmQ_3d_3d

This form should take 15 minutes or less to complete.

If you have suggestions for other information centers outside of your organization that you feel should be included in this directory, please pass them along.

If you are unsure who is the right person in your organization to provide this information, or have questions about this effort, please reply to this email and provide a phone number where we can reach you.

Thanks very much for your assistance.

Email to Centers with Existing Entries:

As part of the National Cooperative Highway Research Program (NCHRP) Project 20-75A, Spy Pond Partners is developing a directory of U.S. transportation libraries, technical assistance providers and other data and information centers. This directory builds on the existing Directory of Libraries and Information Centers maintained by the Special Libraries Association-Transportation Division (SLA-TD) and hosted by the National Transportation Library. The goal is to expand the current directory to add coverage of offices within state DOTs, MPOs, transit agencies and universities that make transportation-related data sets, reports, studies, or training materials available to the public or peer agencies.

The new directory will continue to be hosted on the National Transportation Library Web site and will provide a valuable resource for information sharing among transportation information professionals and practitioners.

Your organization has been included in the directory with limited information. Your review and completion of this information is being requested so that the directory can be as accurate and informative as possible.

INSTRUCTIONS:

1. Click on the following link: Directory of Transportation Libraries and Information Centers

2. Correct any information that is incorrect.

3. Provide additional descriptive information about your information resources.

4. Click the Submit button.

5. That's it! Note that for security reasons, your changes will not be visible right away - they will be processed by our staff at a later date.

If you have any questions please do not hesitate to contact me. If you have suggestions for other organizations that you feel should be included in the directory, please pass them along.

Thanks very much for your assistance.