

**IMLS National Leadership Grant:
LG-05-10-0104-10
Built Works Registry (BWR)**

**Interim Narrative Report
October 1, 2012 – September 30, 2013**

Date: October 31, 2013
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Interim Report Summary

In this third year of IMLS National Leadership Grant funding, the collaborative efforts of the project's teams at the Columbia University Avery Architectural & Fine Arts Library, ARTstor, and the Getty Research Institute (GRI) have focused on data curation and enhancement, and continued development of the technological infrastructure with an emphasis on its progress toward preservation repository data standards. Institutional data contribution policies drafted during the first year have been finalized and the BWR administrative team and counsel continue to work with data-providing institutions to secure open, data-sharing agreements.

No-Cost Extension

Due to changes in staffing, the BWR project team requested a no-cost extension of the IMLS National Leadership Grant original three-year period. A one-year extension was granted and reporting schedules adjusted. The new grant term concludes October 31, 2014. Project timelines have been revised (see Addendum A: Project Timeline) and we do not anticipate any problem achieving our goals within this extended timeframe.

Staff

Two key project staff resigned to take positions in other organizations, resulting in loss of effort over a significant portion of year three and our request for a no-cost extension. Successful recruitment of replacement personnel (see Addendum B: brief CVs) took nearly six months but we are now once again fully staffed and back on track.

- **Vera Zlatarski** replaces Gretchen Wagner as ARTstor General Counsel. Her work is focusing on finalizing contracts and working with counsel offices at Founding Partners and contributor organizations to secure signed agreements.

- **Margaret Smithglass** replaces Thomas Freedman as BWR Project Librarian. Her work is focused on metadata development and establishing protocols for large-scale geo-location data enhancements. In addition, she is working on outreach and communications campaign (including presentations, blog/web presence, and other dissemination efforts).

Team Meetings

Staff from the three partner organizations participated in monthly BWR team meetings, which alternated between ARTstor and Avery Library in New York, with Getty members taking part via conference call or webinar. Additionally, each BWR project team (administration, metadata, technology, and communications) convened regular meetings and engaged in ongoing email/phone communications to ensure progress of work. The Built Works Registry metadata team also met with the ARTstor Shared Shelf and Getty Vocabularies teams to ensure that data development would interoperate across all systems.

Dissemination

Information about the Built Works Registry project is regularly communicated to relevant constituencies in a variety of presentations, print and electronic media. The Built Works Registry blog, <http://builtworksregistry.wordpress.com/>, continues to serve as the main dissemination venue for the project; postings throughout the year provide updates on project activities.

Avery Library and ARTstor staff presented updates on the BWR project at the following professional conferences:

- Coalition for Networked Information (Washington, D.C., December 10, 2012)
http://builtworksregistry.files.wordpress.com/2012/10/bwr_cni_10-dec-2012-1.pdf
- Visual Resources Association Annual Meeting (Providence, April 5, 2013)
- ARLIS/NA Conference (Pasadena, April 29, 2013)
http://builtworksregistry.files.wordpress.com/2011/04/bwr_arlis-2013.pdf
- IFLA Pre-conference, "The Fiesole Conference" (Singapore, August 10-12, 2013)
<http://builtworksregistry.files.wordpress.com/2013/10/bwr-fiesole-2013.pdf>

Content

BWR is now reset to launch in October 2014 with 100,000 records representing architectural and built works across the span of history and global regions. Creating a new reference resource at this scale continues to be both exciting and daunting. Our current seed collection compiles data from 49 individual collections from five sources: Harvard University's OLIVIA database, Cornell University Libraries' PICTOR database, Avery Library's AVIADOR database and its *Avery Index to Architectural Periodicals*, and selected architecturally-focused collections from the ARTstor Digital Library database.

From the outset of the grant period, BWR described a data aggregation methodology that took advantage of both automated systems and human intervention to collect and disambiguate records from our seed datasets. Through a process of extraction and analysis we have found that these seed records are not only very different from each other structurally, but also redundant as relates to

instances of built works, and conflicting as relates to the descriptive content. That is, the same building was often represented in each of the seed sets but described in different data schema and often with conflicting descriptive detail. What we originally conceived as an *aggregation* process, was clearly becoming a data *curation* process. As a result, we find more individualized record-by-record, element-by-element remediation is needed in the first instance, and that machine-processing methods will be more useful in aggregation routines down the road.

To date, we have reviewed records from 31 collections comprising approximately 900,000 records; through the curation process we have identified and normalized unique references to 30,000 built works. The following examples illustrate the curation/reduction process:

- *American Institute of Indian Studies* is a dataset of records describing images of Indian archeological sites, caves/temples, and associated architectural details. Each site/built work is pictured in numerous views resulting in 72,500 image records that we reduced to 4,500 BWR records of unique built works.
- *ART on FILE* is a dataset of records for images of famous buildings from around the world (e.g. Istanbul, Shanghai, Buenos Aires, etc.) The 17,800 image records reduce to 1,654 BWR records of unique built works.
- The *NYC Landmarks Preservation Commission* data set provides rich, well-structured MARC records. The 1,442 records were 86% unique within the set, and reduced to 1,248 built work records.
- The *Avery Index to Architectural Periodicals* is an abstracting and indexing dataset loosely based on MARC data structure. Its 650,000 records have been analyzed and extracted several times to refine an efficient methodology for working with such a large dataset. To date, we have identified 7,600 unique built work records and expect the *Avery Index* set ultimately to provide thousands more as we continue our data curation process.

Once all the collection datasets have been curated, we will use machine processing to aggregate and de-duplicate across collections. This final aggregate list will then be further refined by machine processes for data normalization and enhancements such as supplied BWR ID and geo-location data.

Geo-Location

One of the BWR project goals is to supply a geo-location for each built work. These geo-data record elements will serve multiple purposes: 1) locational data disambiguates built works with the same name (e.g. St. Mark's Church/Basilica/Cathedral in New York, Venice, and Seattle, respectively); 2) locational data enables plotting built works on mapping interfaces (e.g. web sites and mobile devices); 3) locational data will be downloadable via BWR open API and can then be leveraged in records produced by others for their own uses in databases, catalogs, scholarly research, etc.

Last year, an exploration of geo-location approaches in development and use at other institutions resulted in the following suggestions from participants in an all-day geo-location discussion session¹:

- Create an open-source, web-services interface for generating geo-locations;
- Allow for multiple and diverse geo-code 'statements' in each data record, i.e. create a 'geo-code data block' that will serve to cross-reference statements;
- Enforce precision levels (e.g. implied hierarchy: rooftop, trace/bounding box, XY latitude/longitude).

This year we continued to seek the expert advice of others involved in geo-coding and representation of spatial data, specifically: Columbia University Libraries Digital Social Science Center (DSSC)² and Columbia University Graduate School of Architecture, Planning and Preservation – Spatial Information Design Lab (GSAPP-SIDL).³ We asked both Columbia units to work with us to develop a methodology for generating uniform geo-codes, and we requested a recommendation for the online presentation of spatial data within the constraints of a wide spectrum of BWR geo-coding issues, specifically:

- Inconsistent and insufficient data across collections: the majority of BWR collections include city-state/province-country (represented in an unparsed string); some include archeological sites and sub-sites; a select few include street addresses.
- Absence of actual geo-coding data, e.g. rooftop, trace, or latitude/longitude coordinates.
- Protection of personal privacy: even when we know where a work is located, it may not always be appropriate to pinpoint the location, for example the exact address of private homes by significant architects.

Case study:

We provided two datasets for testing and asked each expert group to work with the data using currently available tools, both proprietary and open source.

Dataset A (*NYC Landmarks Preservation Commission*) = 1,248 sample records
BWR dataset with most geo-location detail, 1,149 with street addresses.

Dataset B (*Avery Index, pre-1978 records*) = 1,645 sample records
BWR dataset with typical detail; no street addresses, most with city-state/province-country.

¹ See: BWR Annual Report October 2012: pp. 8-10, <http://builtworksregistry.files.wordpress.com/2012/10/bwr-annual-report-october-20123.pdf> (accessed 18 October 2013).

² CUL Digital Social Sciences Center <http://library.columbia.edu/locations/dssc/data.html>

³ GSAPP Spatial Information Design Lab <http://www.spatialinformationdesignlab.org/>

Results:

Columbia Digital Social Sciences Center (DSSC):

GIS Librarians Jeremiah Christensen and Eric Glass

- Dataset A: Processed with ArcGIS and nyc.gov database
Placed ~80% without additional mediation
- Dataset B: Excel spreadsheet uploaded to Google Earth Pro
Placed 55-60% after parsing city-state-country

DSSC presented two options for GIS strategy given BWR's variable data quality and high volume:

1. Build GIS detail into each collection spreadsheet using GIS software and targeted databases.

Pros: accurate and precise;

Cons: time and labor intensive.

2. Minimal mediation to parse existing data and then process as a merged dataset with Google Earth Pro, Open Street Map, MapQuest, etc. Collections with precise geo-coding will be accurately placed; those without a street address or latitude/longitude will be placed in a generalized city location, but still represented in the registry.

Pros: time and labor efficient;

Cons: Compared to option 1, this was unreliable and imprecise, yet there was a surprisingly high percentage of built work placement without street addresses.

It is possible the scale of BWR will be problematic.

Columbia GSAAP Spatial Information Design Lab (SIDL)

Director/ Assoc. Prof. Laura Kurgan and Jen Lowe, Assoc. Research Scholar

- Dataset A: All data points plotted: those without street addresses (101 records) were individually checked.

SIDL chose this dataset for its high percentage of street addresses, but that was still insufficient for a seamless transition from spreadsheet to map. Geo-location work always requires research and human intervention, and no single approach will address every problem presented by the BWR seed collections. SIDL concurred with the DSSC conclusions regarding the best options for our data, but suggested a hybrid methodology of the two and/or a decision to accept some inaccuracies at the initial launch.

Geo-Location Conclusions/Protocol (*proposed as of this writing*)

Based on these samples and analysis by the BWR technology team, the project will implement the following methodology for enhancing all BWR records with geo-location data:

- All records will include a basic geo-location component.
- All city-state/province-country elements will be parsed.

- The BWR technical team will algorithmically cluster all BWR records based on the architect's name, then by location (using a fuzzy logic that employs the *Thesaurus of Geographical Names*⁴ hierarchical clusters to bring together records from the same city or state). This process will test whether the initial passes through geo-referencing software can significantly reduce the work of de-duplicating by adding geo-codes to some significant set of the records.
- As time allows, individual records/collections will be enhanced using DSSC resources (ArcGIS and subscription databases) in advance of the data merge.
- Aggregated data will be processed using Google Earth Pro.

Technology

Server/Network Infrastructure

BWR infrastructure was expanded to have both Disaster Recovery and preservation capability. The database infrastructure hosting the BWR records will follow NDSA Preservation guidelines and will be Level 1 compliant. Thanks to a grant that ARTstor received in 2007 from the *National Digital Information Infrastructure and Preservation Program* (NDIIPP) at the Library of Congress, ARTstor became a founding partner of the National Digital Stewardship Alliance (NDSA). Columbia University Libraries/Information Services, through the Avery Architectural & Fine Arts Library, is also a NDSA partner. NDSA has established tiers of preservation service that are extremely valuable in making clear that digital preservation is not an “all or nothing” proposition. The four levels of digital preservation consist of steps in particular areas (such as “Storage and Geographic Location” and “File Fixity and Data Integrity”). Progress on various elements can be discreet (i.e., we are currently at Level 1 on all areas except “File Fixity and Data Integrity,” and Level 2 on “Storage and Geographic Location”). Our strategy is represented in the following grid, which outlines the preservation services that we provide today and where we plan to be by the time BWR is launched.

⁴ *Getty Thesaurus of Geographic Names Online*, <http://www.getty.edu/vow/TGNSearchPage.jsp> (accessed 21 October 2013).

COLOR CODING KEY: X Early 2013; X Summer 2013; X Now; X Early 2014

	Level One (Protect Your Data)	Level Two (Know Your data)	Level Three (Monitor Your Data)	Level Four (Repair Your Data)
Storage and Geographic Location	<p>Two complete copies that are not collocated</p> <p>For data coming in on heterogeneous media (optical disks, hard drives, floppies), get the digital content off the medium and into your storage system</p>	<p>Three complete copies</p> <p>At least one copy in a different geographic location</p> <p>Document your storage system(s) and storage media and what you need to use them</p>	<p>At least one copy in a geographic location with a different disaster threat</p> <p>Start an obsolescence monitoring process for your storage system(s) and media</p>	<p>All copies in geographic locations with different disaster threats</p> <p>Have a comprehensive plan in place that will keep files and metadata on currently accessible media or systems</p>
File Fixity and Data Integrity	<p>Check fixity on ingest if it has been provided with the content</p> <p>Create fixity information if it was not provided</p>	<p>Check fixity on all ingests</p> <p>Use write-blockers when working with original media</p> <p>Virus-check high risk content</p>	<p>Check fixity on all transformative acts</p> <p>Check fixity of sample files/media at fixed intervals</p> <p>Maintain logs of fixity information; supply audit on demand</p> <p>Ability to detect corrupt data</p> <p>Virus-check all content</p>	<p>Check fixity of all content in response to specific events or activities</p> <p>Ability to replace corrupted data</p>
Information Security	<p>Identify who has authorization to read, write, move, and delete individual files</p> <p>Restrict who has those authorizations to individual files</p>		<p>Maintain logs of who has accessed individual files</p>	<p>Maintain logs of who performed what actions on files, including deletions and preservation actions</p> <p>Perform audit of logs</p>
Metadata	<p>Inventory of content and its storage location</p> <p>Ensure backup and non-collocation of inventory</p>	<p>Store administrative metadata</p> <p>Store transformative metadata and log events</p>	<p>Store standard technical and descriptive metadata</p>	<p>Store standard preservation metadata</p>
File Formats	<p>Encourage use of limited set of known and open file formats and codecs</p>	<p>Inventory of file formats in use</p>	<p>Validate files against their file formats</p> <p>Monitor file format obsolescence threats</p>	<p>Perform format migrations, emulation and similar activities</p>

Much of the file management work is already under way, but additional “health checks” on files will be needed. We also anticipate using the NDSA guidelines to steer the project toward ongoing best practices should we seek to attain Trustworthy Repositories Audit & Certification, TRAC, an extensive process that only a few organizations have undergone. But adhering to NDSA guidelines will assure BWR users that the project recognizes and incorporates the functions required by a preservation service.

Data Model and Data Warehouse

We have concluded the design and implementation of the data warehouse in which BWR records will be aggregated. This 1.0 release finalizes the “work record” process (i.e., the ability to create and utilize one record for a complex work such as a building) by creating a standards-driven and community-accommodating data model. Even though BWR records will not have demanding requirements in terms of the number of fields, we needed the data model to be able to accommodate detailed (and hierarchical) data records from some of the initial BWR contributing repositories (including Harvard and Cornell). This will allow users to draw upon more extensive records, even though the contribution and creation of future records will not require this degree of detail.

This data model and the infrastructure to create new records in the warehouse and draw upon other thesauri (such as the *Union List of Artists Names* (ULAN), the *Thesaurus of Geographic Names* (TGN), and the *Art & Architecture Thesaurus* (AAT)) are now in place. Records from all of the original BWR contributors can be mapped to, loaded into, and managed within the BWR data model and vocabulary warehouse infrastructure.

Record Building and Retrieval Tool

While working on finalizing the data model and populating it with seed data, we also have made significant progress building the tools for individual record additions. These software tools (built into the supporting Shared Shelf infrastructure), will be available to the BWR community for creating records on a one-by-one basis.

Addendum A: Project Timeline

Trajectory	Activity	Project team effort	2010				2011				2012				2013			2014		
			Q4	Q1	Q2	Q3														
Project Admin	Hire/appoint/commit staff positions	Administrative team	X																	
	Coordination, communications, documentation	Administrative team	X	X	X	X	X	X	X	X	X	X	X	X	X					
	Reporting	Administrative team	X		X			X		X					X					
	Dissemination	Administrative team	X		X		X		X				X	X	X					
Policies	Administrative Policies framework (governance, legal)	Administrative team	X	X	X	X	X							X	X					
	Content policies (scope, processes, workflow)	Administrative team			X	X	X	X	X	X					X					
	User policies (distributed curation & collaboration mod)	Administrative team	X																	
	Advisory group onsite meetings	Administrative team	X					X		X										
Metadata	Schema development	Metadata team	X	X	X	X														
	Data dictionary & guidelines	Metadata team			X	X	X	X												
	Processes / workflow	Metadata team			X	X	X	X	X	X				X	X					
Content	Identify/define	Metadata team	X	X	X	X	X	X	X	X				X	X					
	Extract & verify	Metadata team		X	X	X	X	X	X	X				X	X					
	Aggregate	Metadata team				X		X	X	X				X	X					
	Analyze	Metadata team			X				X	X				X	X					
	Normalize	Metadata team							X	X				X	X					
	Enhance	Metadata team							X	X				X	X					
	Migration prep to BWR data warehouse	Metadata team			X	X	X	X	X	X										
Technology	Policies design (processes, workflow)	Technology team	X	X	X															
	Technical design	Technology team	X	X	X															
	Backend infrastructure development	Technology team			X	X	X	X	X	X										
	Data warehouse development	Technology team			X	X	X	X	X	X										
	Export/ingest	Technology team																		
	Deduplication	Technology team							X	X										
	User Interface development:																			
	Data entry environment	Technology team					X	X					X	X	X					
	Administrative data management environment	Technology team																		
	User management	Technology team																		
	Shared infrastructure development:																			
Open interface	Technology team																			
Web services	Technology team																			
Integration	Technology team																			
Deployment	Technology team																			
Evaluation	Admin, metadata & tech		X	X	X	X	X	X	X	X	X	X	X	X						

Addendum B: New BWR Staff CVs

VERA V. ZLATARSKI

151 E. 61st Street, New York, New York 10065 · (212) 500-2425 · vera.zlatarski@artstor.org

EDUCATION **Columbia University School of Law** **New York, NY**

J.D. May 1999 · Harlan Fiske Stone Scholar · Andrew D. Fried Prize (article on IP and related law)

- Columbia-VLA Journal of Law and the Arts, Staff Editor, 1997-99
- Entertainment, Sports and Art Law Society (E.A.S.L.S.), 1996-99; Treasurer, 1997-98

Yale College **New Haven, CT**

B.A., *magna cum laude*, distinction in History of Art, May 1996 · Senior Essay Prize · Phi Beta Kappa

- *Yale Daily News Magazine*, Editor-in-Chief, 1994-95

LEGAL

EXPERIENCE **ARTSTOR**

New York, NY

General Counsel and Secretary, 2013 to present

Chief legal officer & secretary.

- Responsible for all legal affairs of the organization, including contracts, nonprofit tax and employment issues, and regulatory and compliance matters.
- Oversee the strategic framework for the legal affairs of the organization as well as for the services it provides to the communities it serves.
- Serve as corporate secretary.

Rainforest Alliance

New York, NY

General Counsel, 2004 to 2012; Secretary, 2009 to 2012

Chief legal officer & secretary of nonprofit conservation organization with activities in over 100 countries.

- Responsible for legal affairs of organization and its branches and affiliates across the globe.
- Served as corporate secretary to the parent organization.
- Established in-house legal function, with current team of five, and related policies, procedures and tools.
- Provided legal counsel to the board, senior management and other staff on a broad range of corporate, regulatory and compliance matters, including contract drafting and negotiation; development of strategies in connection with dispute resolution and regulatory proceedings; oversight on trademark and other intellectual property issues worldwide; employment issues; tax; and governance matters.
- Supported the establishment of, and advised, formalized senior management team.

Cleary, Gottlieb, Steen & Hamilton

New York, NY

Corporate Associate, 1999 to 2004; Summer Associate, 1998

General corporate practice, with emphasis on contractual drafting, review and negotiation and counseling on broad range of nonprofit, corporate governance, reporting & regulatory matters.

- Drafted, reviewed and negotiated wide range of agreements, disclosure and other documentation.
- Assisted American Museum of Natural History in revision of Museum and Planetarium bylaws.
- Advised Opelousas Museum of Art in connection with exhibition, licensing and marketing agreement.
- Advised Magnum Photos, music group and urban public artist regarding tax-exempt nonprofit entity formation and researched state and federal solicitation rules and nonprofit compliance requirements.
- Represented Republic of Ecuador in 2000 debt reduction, Republic of Nicaragua in issuance of global bonds for certificates for confiscated property, Republic of Argentina in its first e-exchange offer.
- Represented NYSE-listed Latin American telecom company América Móvil in connection with its spin-off from Telmex. Provided day-to-day general corporate counseling and advice on range of substantive areas, including reporting obligations, JV formation and reorganization, secondary offerings, acquisitions, financings, derivatives swaps and restructuring of holding structure.
- Advised Merrill Lynch and Deutsche Bank as underwriters of Latin American IPOs & bond issuances.

Museum of Modern Art

New York, NY

Joseph Solomon Intern, General Counsel's Office, summer 1997

- Researched and wrote memos on various legal issues, including antitrust, employment and IP law.

OTHER

EXPERIENCE **Christie's Auction House**

New York, NY

Intern with merit scholarship, Nineteenth-Century Paintings Department, summer 1996

Yale Center for British Art

New Haven, CT

Term-time Assistant, Business and Director's Offices, August 1995-May 1996

Yale University Art Gallery

New Haven, CT

Term-time Assistant, Director's Office, August 1992-May 1995

ADMISSION New York State

COMMITTEES Nonprofit Organizations Committee (incl. Subcommittee on Corporate Governance), New York City Bar Association, 2007-2010
Art Law Committee, New York City Bar Association, 2003-2006

PUBLICATION "Moral' Rights and Other Moral Interests: Public Art Law in France, Russia and the United States," 23 COLUM.-VLA J.L. & ARTS, 201, n.2 (1999). Winner of Andrew D. Fried Prize.

LANGUAGES Fluent in Bulgarian, Spanish, Russian and French.

MARGARET SMITHGLASS

1172 Amsterdam Avenue, New York, NY 10027

ms4762@columbia.edu

Professional Experience

May 2013 - **Built Works Registry Librarian: Avery Architectural & Fine Arts Library, Columbia University, NY**

Data curation and project management for Institute of Museum and Library Studies (IMLS) National Leadership Grant project establishing unique identifiers, names and geo-locations for international works of architecture and the built environment.

July 2012 - **Samuel H. Kress Fellow in Art Librarianship: Yale University, New Haven, CT**

Mar 2013 **Haas Arts Library and Special Collections; Yale Center for British Art Reference Library**

Public services fellowship: architecture/design, arts, and special collections. Reference, library orientation/ instruction; collection development/weeding for off-site storage; circulation desk and reading room coverage, special collections instruction and supervision.

Projects: Architecture LibGuide; Yale University Art Gallery exhibitions LibGuide; Special Collections training document; TMS collection management bibliography.

Feb 2010 - **Image Taxonomy Researcher: McGill University School of Information Studies, Montréal, QC**

June 2012 Research assistant to Professor Elaine Ménard. Research and development for bilingual image taxonomy/ search interface. Evaluation of existing digital image resources and vocabularies; literature review; image collection, creation of taxonomic hierarchy; participant recruitment; data collection, entry and analysis; online user surveys.

Sept - Dec **Lecturer: McGill University School of Information Studies, Montréal, QC**

2011 Graduate course: *Organization of Information*

Introduction to ISBD, MARC, LCSH, Dewey and RDA; theory and techniques of bibliographic control for information; cataloging and indexing principles and practices.

Jan - Apr **Cataloging Intern/ Photographer: Canadian Centre for Architecture, Montréal, QC**

2011 Original cataloging and photography for collection of souvenir building models; creation of bibliographic and authority records, updates to photography database.

Sept - Dec **Lab Supervisor: McGill School of Information Studies, Montréal, QC**

2010 Co-responsible for four lab sections of *Organization of Information* (course described above).

2001–2009 **Photographer / Architectural Designer (self-employed)**

Photography and editorial work for images of paintings, sculptures and buildings, primarily for presentation purposes. Residential design, consulting, and project management.

2005–2008 **Co-Director: Eclipse Mill Gallery, North Adams, MA**

Exhibition management, installation, scheduling, and advertising for artist-owned co-op gallery.

1999–2001 **Collaborative Printmaker: Vermont Studio Center Press, Johnson, VT**

1994–1998 **Architectural Designer (self-employed)**

1993 **Lecturer** *Housing* (graduate seminar); School of Architecture, NC State University
Japanese Temple Architecture; North Carolina Japan Center, Raleigh, NC

1991–1995 **Studio Critic: Architecture (visiting, occasional)**
Savannah College of Art & Design: Savannah, GA
College of Design, North Carolina State University, Raleigh, NC

1989–1994 **Intern Architect**
Steven E. Gaddis, & Associates: Durham, NC
NBBJ Associates: Research Triangle Park, NC
Dixon Weinstein: Chapel Hill, NC

Education
Master of Library and Information Studies (MLIS)
McGill University School of Information Studies, Montréal, QC
Master of Architecture (M. Arch)
North Carolina State University College of Design, Raleigh, NC
Architecture in Greece, Summer Studio: Tulane University, New Orleans, LA (sponsor)
Bachelor of Arts (B.A.), magna cum laude: Towson University, Towson, MD

Presentations

Nov 2013 Yale University Libraries, Standing Committee on Professional Activities (SCOPA)
Avery Library: Adventures in Digital Projects (with Carole Ann Fabian)
Nov 2013 DLF Forum 2013 (Digital Library Federation)
The Built Works Registry: Large-Scale Collaborative Data Curation

Publications

Ménard, E. & Smithglass, M. “Digital image access: an exploration of the best practices of online resources”. *The Electronic Library*. [approved for publication 2014]
Ménard, E. & Smithglass, M. “Digital image description: a review of best practices in cultural institutions”. *Library Hi Tech*, Vol. 30, Issue 2, pp. 291-309.
Ménard, E. & Smithglass, M. “Babel revisited: A taxonomy for ordinary images indexing in a bilingual retrieval context”. ISKO UK 2011; Conference proceedings, July 2011.

Honors/Fellowships

Samuel H. Kress Fellowship in Art Librarianship, Yale University
McGill University School of Information Studies Scholarships
Bernard Anderson Ower Award, Janet Agnew Scholarship, Miriam H. Tees Scholarship
Vermont Studio Center Fellowship and Residencies
Artist-in-Residence: Egon Schiele Art Centrum – Cesky Krumlov, Czech Republic
Creation Grant: US National Endowment for the Arts/ Vermont Arts Council
North Carolina Japan Center Fellowship; Hokkaido International Foundation for Japanese Language Fellowship
American Institute of Architects/ NCAIA Award for Design Excellence (graduation award)

Professional Memberships

American Institute of Architects
American Society of Architectural Historians
Art Libraries Society of North America
Association of Architecture School Librarians
Visual Resources Association