Upper Sandusky Community Library: Final Redesign Proposal with User Testing Results

INFORMATION ARCHITECTURE II: IAKM-60112-001

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Executive Summary

This document is the final contracted report by MK Designs for the redesign project of the Upper Sandusky Community Library and contains a brief history of the work that has been performed to date for the library. Much of the work has already been presented to the Library, and where important, the work has been included into this document as well.

MK Designs used the following user testing tools by Optimal Workshop for purposes of completing user testing in a remote, non-moderated setting, and believes the Library may find them useful for further usability studies:

- Treejack a tree/information architecture testing tool to confirm information is where users expect to find it in a website's hierarchy
- and **Chalkmark** a first-click testing tool to confirm the information is where users expect to find it on a website's page.

The exact results from each of the usability studies are available at the following private links:

- Treejack: https://www.optimalworkshop.com/treejack/je7l6ykq/g7b07305/shared-results/41usg1hevaj07utqj4vz1cs330cz7los
- Chalkmark: https://www.optimalworkshop.com/chalkmark/je7l6ykq/1ey73206/shared-results/rr8ev7x5oi84z2i11b06njc45h6owci3

MK Designs believes it has developed good organization and navigation schemes that the Upper Sandusky Community Library can continue to use for many years to come. As long as the Library continues to use a **focused hybrid organization scheme of topical and task-based organization + navigation**, it will be successful in helping its patrons fulfill their primary purpose for using the website:

- find when the library is open,
- place a hold for a book,
- renew an already checked out resource that is approaching its due date,
- download an e-book,
- register for events,
- and search the catalog.

Overview of the Project

MK Designs was contacted by the librarians at the Upper Sandusky Community Library to help assess how the library's website (http://www.upper-sandusky.lib.oh.us/) could be improved and where the library content could be repurposed and reorganized for the benefit of its patrons. They noted in their initial email:

Our current website look is quite dated from a technological perspective, and while there is an abundance of information, it can be daunting for our users to FIND that information (i.e. it could be organized much better).

In addition to the redesign making information easier to find, the librarians have requested that any future website updates be uncomplicated so that the existing library staff can maintain the website without any extra strain on the library's limited budget or technical resources.

At the beginning of the project, MK Designs created an aggressive 7-week project plan to establish a schedule for the redesign and user testing work to be completed for the Upper Sandusky Community Library website redesign project. Appendix I contains the original project plan, which allows for:

- librarian interviews to determine patron personas and behaviors/preferences with supporting literature searches as needed to support personal development,
- current website content analysis to evaluate which of the current pages of the Upper Sandusky Community Library website could be reused/repurposed,
- a first draft at an updated information architecture and wireframe set,
- usability research to validate choices for the proposed information architecture,
- and this final report.

Initial Website Organization

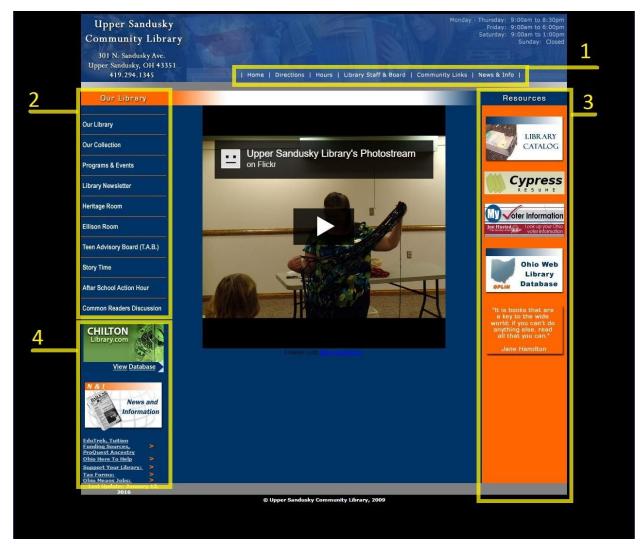
The original information architecture/organization of the Upper Sandusky Community Library was a mix of topical and task-based organization schemes in the global navigation bar (Figure 1.1) and primary "Our Library" navigation on the left side of the page (Figure 1.2). In addition to the global and primary navigation options, the website offered 2 additional navigation options: the offsite "Resources" which include the library catalog (Figure 1.2) and another offsite database plus links back to the "News & Info" page (Figure 1.4).

Areas for Improvement

It was initially suggested that the lack of clearly defined style guide caused the organic growth of the website's organization (or lack thereof) and potential confusion of its users. MK Designs noticed during a full content analysis that there were several pages with recursive and broken links:

- the "Common Readers Discussion" page linked to itself from "Programs & Events;" however, never linked to the content page
- and the "Programs & Events" page provided a link to the library catalog's best seller list; however, that link takes the user to a page that cannot be found.

During the content analysis, MK Designs also observed that several pages (mostly the pages for special groups/purposes, such as the "Heritage Room," the "Ellison Room," and the "Teen Advisory Board") lacked a cohesive feel with the rest of the Upper Sandusky Community Library website. The lack of a style guide not only causes organization and navigation confusion to its users, but also causes the website experience to feel disjointed as a user navigates among all the pages, such as navigation among the pages listed above.



User Research

It was important for MK Designs to understand who the users of the Upper Sandusky Community Library are before any changes to the library's website organization and content were suggested. To accomplish the goal of understanding users, the following steps were completed:

- **interview librarians** at the Upper Sandusky Community Library (in this case, it was a surrogate library as the original librarians were unavailable for interviews),
- **develop personas** to represent the website's users and their primary tasks/purposes for using the library's website,
- **propose + test** a new website information architecture/organization,
- and **further refine + test** the updated website organization against wireframes designed to aid in completing the primary user tasks.

Librarian Interviews

MK Designs designed a set of interview questions to learn about the library, its website, its users, the actions its users take, where website users interact with the website, and other resources the library currently provides. In addition to the current state of the library, questions were added to the script to help determine where the library and its website might be in 3-5 years to help predict and evaluate future needs.

A representative from MK Designs interviewed 2 librarians from representative libraries and conducted supplemental research into library website users and tasks to round out the information learned during the librarian interviews. The primary and secondary personas are available, starting on page 8, and the exact research protocol with librarian answers is available in the April 9, 2017 report titled "Upper Sandusky Community Library: Users and Context Research."

Once user personas were developed, and their primary tasks understood, the first version of a new website organization was created for round 1 of user testing.

Tree Testing (Information Architecture/Organization)

The first version of the new website organization was loaded into Treejack from Optimal Workshop, a tree testing tool – **used to understand where users believe information should be found based on the primary and secondary navigation headings of a website**, to perform the first round of user testing against the proposed new website organization/information architecture of the Upper Sandusky Community Library website. And, as a result of the testing, changes were made for the second version of the proposed site map. Following is a summary of the Treejack results, the initial and revised site maps are available in Appendix III: History of Proposed Site Maps, and the full results are available in the April 23, 2017 report, "Label Assessment and Taxonomy."

User Testing Methodology

MK Designs ran a usability study the week of April 17, 2017 to determine the if the proposed updates to the Upper Sandusky Community Library website met user expectations.

The proposed sitemap was loaded into Treejack and 9 tasks were created to exercise the new website organization. Each of the 7 participants were presented the same tasks, in a randomized fashion to minimize participants from learning the website organization in the same order.

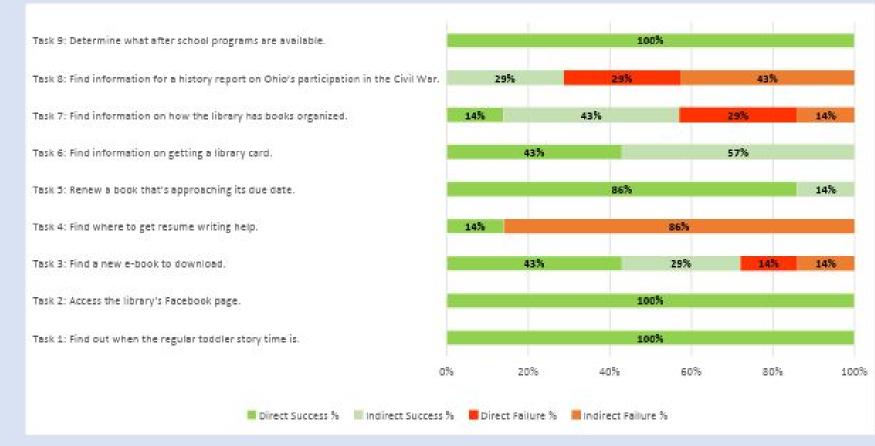
Proposed Site Map Updates

The results show that additional updates to the site map do need to be made. Updates will need to be made to:

- Move "Offsite Resources" up a level to "Library Resources"
- Entry points into the Catalog with pre-selected search results for different types of library resources
- Create a "Special Collections" heading and move "Heritage Room" and "Crafting Room" to the new section

Results

The following chart displays the success rate of each task.



Definitions of Success

- Direct Success: the correct answer was chosen with no site exploration
- Indirect Success: the correct answer was chosen after some site exploration
- Direct Failure: an incorrect answer was chosen with no site exploration
- Indirect Failure: an incorrect answer was chosen after some site exploration

First-Click Testing (Wireframe/Page Layout)

After the first round of user testing was complete, the site map was refined and wireframes were built so that MK Designs could start the task of repurposing existing website content. Once the wireframes were developed, another round of user testing took place, using Chalkmark (from Optimal Workshop) to evaluate if the library navigation makes sense on a screen. During the setup of Chalkmark, it was determined that only one correct area would be set up in the software so that MK Designs could evaluate if additional entry points to a piece of information were needed. The following table notes successful navigation, possible successful navigation, and incorrect navigation.

Task	ask Task 1: Save your toddler's space for the special Saturday interactive reading group.		Task 2: Find the library's hours for the upcoming holiday weekend.		Task 3: Check out the public pictures from the recent Lego night.		Task 4: Get help writing your first resume.		Task 5: Find information for a report on Ohio's participation in the Civil War.		Task 6: Find out if you have any books that are due.	
Participant	Result	Time (s)	Result	Time (s)	Result	Time (s)	Result	Time (s)	Result	Time (s)	Result	Time (s)
1	Success	5.99	Failure	13.62	Failure	8.1	Success	2.66	Success	6.75	Success	3.77
2	Failure	3.65	Success	10.35	Failure	5.23	Success	1.78	Success	5.92	Success	2.74
3	Success	14.71	Success	23.61	Success	35.22	Success	7.87	Failure	24.67	Success	1.72
5	Success	10.05	Success	9.14	Failure	7.23	Failure	20	Success	11.61	Success	3.21
6	Success	4.56	Failure	2.22	Failure	6.51	Success	2.48	Failure	3.57	Failure	4.23
7	Success	3.42	Failure	4.86	Failure	2.61	Success	3.83	Failure	29.95	Success	2.74
8	Success	8.56	Failure	27.65	Failure	7.87	Success	3.66	Success	8.96	Success	3.27
9	Success	6.69	Failure	3.67	Failure	1.89	Success	2.01	Success	25.42	Failure	3.21
10	Failure	34.92	Failure	21.16	Failure	12.08	Failure	35.26	Failure	31.6	Failure	37.12
15	Failure	3.02	Failure	6.35	Failure	1.4	Skip	0	Failure	11.42	Failure	2.83
16	Success	10.25	Failure	32.18	Failure	11.02	Success	3.51	Failure	23.28	Success	4.33
17	Success	2.53	Failure	12.22	Failure	2.7	Success	4.61	Failure	4.51	Success	3.65

Correct navigation option selected Possible correct navigation selected Incorrect navigation selected

Personas **Primary Personas**



Katie - mom with kids

"I'd love to be able to spend more time with my kids and less time trying to figure out when story time is."

Background • 34 years old

- Married with 3 children
- Left work as an accountant to be a stay at home mom
- Hopes to return to work in a few years

Location

• Lives in Rocky River, OH

Goals

- Needs to know library hours
- Wants to register for onsite programs
- Wants to check out e-books and search the catalog for new books
- Thinks it would be good to interact with other parents on social media

Frustrations and Pain Points

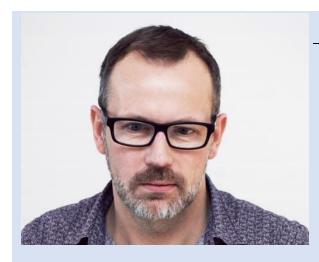
- Hates having to figure out if she can renew a book
- Isn't sure what resources other than books and kid's programs are available at the library
- Doesn't like trying to figure out her place in the hold queue

Katie is a 34-year-old married woman with 3 young children aged 4 months, 2 years, and 3.5 years who now lives in Rocky River, Ohio. She is a stay at home mom who is dedicated to the enrichment of her children.

Katie has a college education and hopes to return to work as an accountant when her children are older, though she is happy to be able to spend so much time at home while her children are young.

The last couple of years have seen Katie and her husband move from Sandusky to Rocky River to be more involved in her hometown and to be closer to their parents who live in nearby Bay Village.

Since Katie has a library card from the Upper Sandusky Community Library and is fairly technologically savvy, she prefers to be able to check out e-books when she is doing her personal reading, though she is willing to go to the library with her children for their educational programming.



Justin - single, no kids

"I'm always on the road and sometimes forget to renew my books before I leave for business trips. I would love to be able to easily renew my books online."

Goals

- Needs to know library hours
- Wants to download the newest e-book and leave a review
- Needs to easily renew books online

Frustrations and Pain Points

- Sometimes finds technology confusing
- Hates trying to figure out his username and password for the library website to place a hold on a book or e-book
- Occasionally has issues downloading the newest e-book to his older Kindle

Background

- 52 years old
- Single, no children
- Works as a pharmaceutical sales representative
- Enjoys digital photography

Location

• Lives in Huron Township, OH

Justin is a 52-year-old single man with no children who lives in Huron Township, Ohio. Justin has had an active library card with the Upper Sandusky Community Library since he was a young child.

Justin is a successful pharmaceutical sales representative with a community college degree who has just started to get into digital photography in his spare time.

While away from home for prolonged periods of time, Justin often forgets that he has checked out a library book and forgotten to return it before he leaves for his sales trips. Justin needs to be able to renew the books he has checked out and forgotten to return so he doesn't incur a fine by returning a book after it is due.

Because Justin doesn't have a lot of experience with technology outside of his sales software, he feels more comfortable going into the library when he has a question or wants to learn about the new books the library has acquired. If the library were to have computer classes, Justin would be interested in attending so he could more easily edit his digital photos.

Secondary Persona

Goals

Needs to get a library card

programs



Wants to register for after school programs

to offer other than books and after school

• Wants to know what else the library has

Chris - teen

"I got a phone so I could tell my mom and dad if I had to work late or practice ran longer than expected, but I think it's really cool that I can access library info from it too."

Frustrations and Pain Points

- Doesn't like to not know the answers to questions
- Sometimes gets frustrated because he hasn't used databases or the library catalog before

Background

- 15 years old
- Currently a high school student
- Likes learning about electronics

Location

• Lives in Sandusky, OH

Chris is 15 years old and is a sophomore at Sandusky High School. Chris doesn't have a library card at Upper Sandusky Community Library because his school library generally meets most of his research needs.

As summer approaches, Chris realizes that he won't have access to his school library and he is excited to learn more about the electronics he learned about in an after-school program at the library.

Chris generally feels comfortable with technology itself, but is still learning how to formulate search questions and filter the results.

Chris wants to be able to access resources online during the summer, but will first need to apply for a library card so he can fully take advantage of the resources from the library. Chris is also excited about the summer school programs he's been told about and will likely need to register to attend the individual sessions.

Task by Persona

As noted in the April 9, 2017 report, "Upper Sandusky Community Library: Users and Context Research," each of the developed personas has their own motivation for using the Upper Sandusky Community Library's website and each persona has a part of the website that is most important to them. The following table, copied from that report, lists all the high, medium, and low priority tasks by persona.

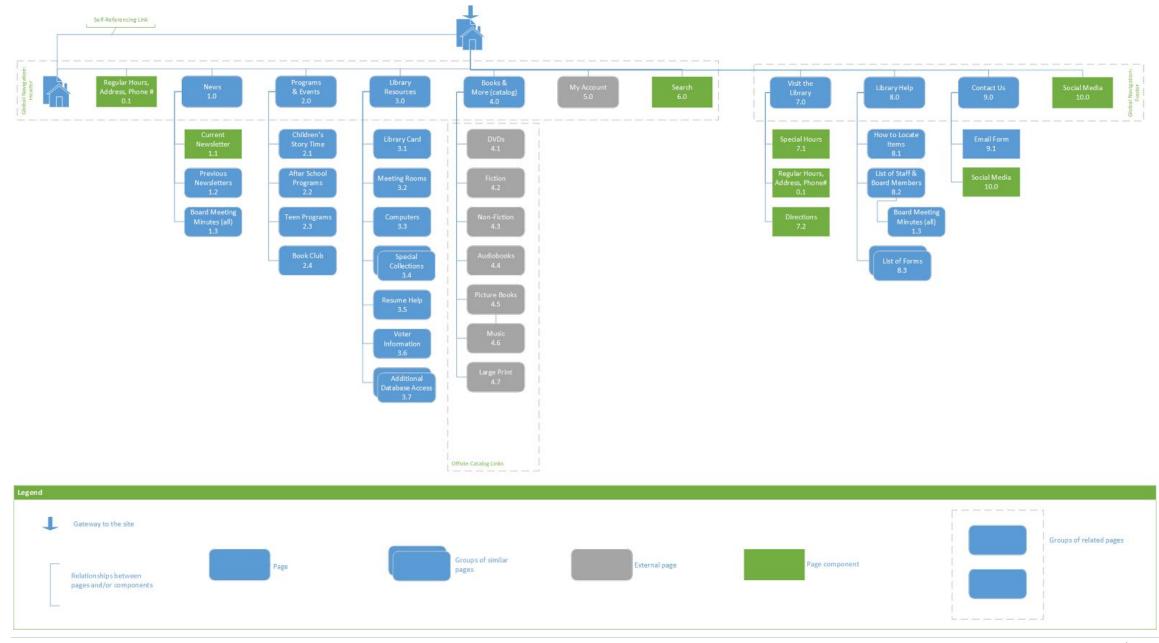
Persona Task	Katie (mom with kids)	Justin (single, no kids)	Chris (teen)
High Priority Tasks			
Library Hours	√	√	\checkmark
Register for a Program	✓	✓	✓
Search the Catalog	✓	?	✓
Access and Download an E-Book	✓	✓	✓
Medium Priority Tasks			
Renew a Book	?	\checkmark	?
Place a Hold	√	√	?
Check Out Social Media	✓	?	✓
Low Priority Tasks			
Technical Support	√	?	?
Discover Other Library Resources	✓	?	✓
Leave a Book Review	?	✓	?

Proposed Style Guide

The following content is the result of user research and testing to validate the work of MK Designs on the best organization scheme and content location for the Upper Sandusky Community Library website. The documentation that follows should be referenced when new content is added to the website, so that the organization and navigation schemes are maintained.

Site Map

The first proposed site map and content inventory of the original Upper Sandusky Community Library website are available in the April 16, 2017 report "Upper Sandusky Community Library: Site Content Analysis and Proposed Site Map," and the sitemap has been copied into Appendix II: Proposed Sitemap/Blueprint V1 for ease of reference. The following site map/blueprint is the result of research and user testing to validate the organization and location of content.



Navigation Structure

MK Designs initially proposed in the "Upper Sandusky Community Library: Site Content Analysis and Proposed Site Map" report, that a **hybrid topical and task-based organization scheme** (with some audience-specific content) would work best for the Upper Sandusky Community Library's redesigned website. According to user research, since most library patrons want to:

- find when the library is open,
- place a hold for a book,
- renew an already checked out resource that is approaching its due date,
- download an e-book,
- register for events,
- and search the catalog,

The proposed hybrid organizational scheme remains the best option for the library's website.

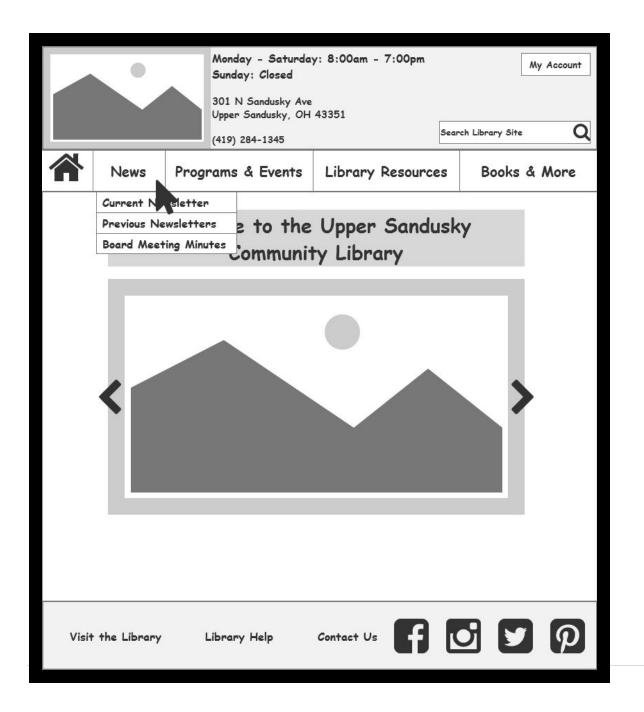
The challenge with a hybrid organization scheme is to keep each topic or task large enough to contain more than one page, but small enough to not require the user to have to search through multiple pages to find what information they seek. This challenge can be met with multiple entry points to the same page; however, the duplicated entry points must make sense, and should not be so superfluous as to be difficult to maintain all the references.

When new content is needed, first determine if existing content should be repurposed to include the new content and if a new page is needed, reference the above user tasks and the site map/blueprint to determine the best fit for the new content

Wireframes

The following wireframes show the organization of the proposed new Upper Sandusky Community Library website. The vertical fly-out menu bars load on hover of the main global navigation option and load the first selection if the main global navigation is clicked itself, such as when "News" is clicked.







Monday - Saturday: 8:00am - 7:00pm

Sunday: Closed

My Account

301 N Sandusky Ave Upper Sandusky, OH 43351

(419) 284-1345

Search Library Site





News Programs & Events

Library Resources

Books & More

Current Newslefter

Previous Newsletters

Board Meeting Minutes

Current Newsletter, May 2017

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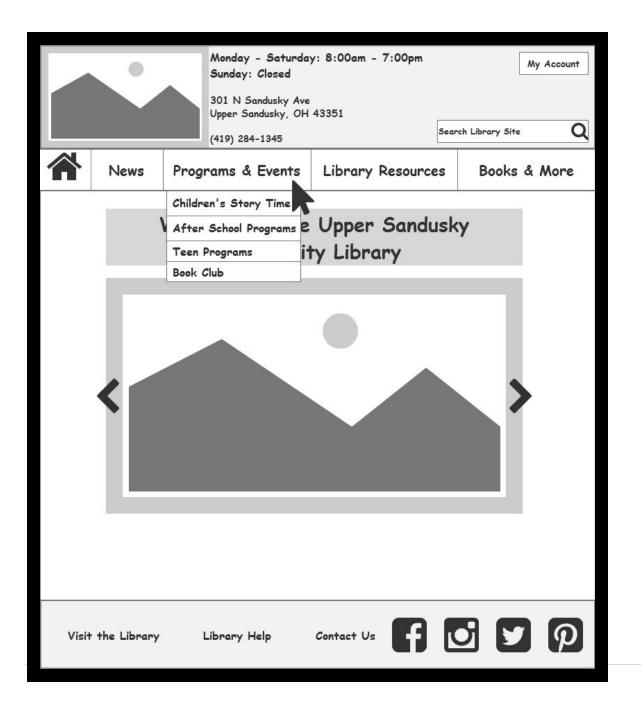
Visit the Library

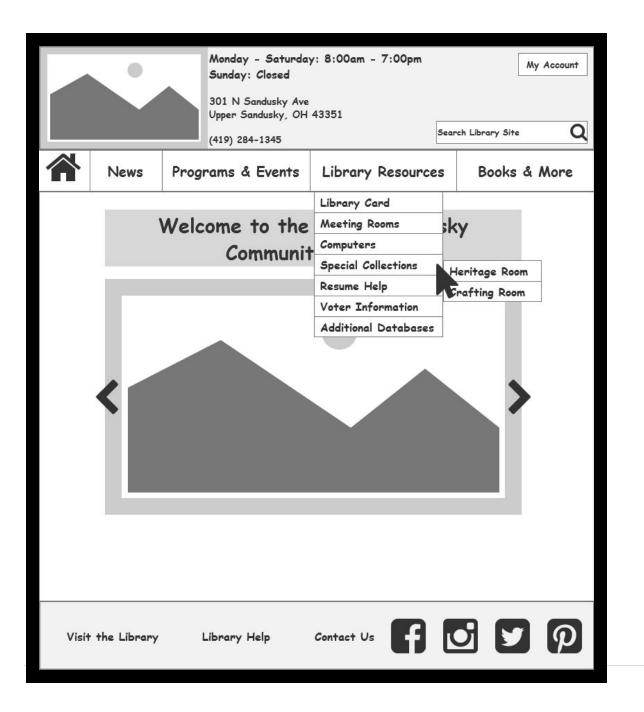
Library Help











Future Steps

While not in the original scope of work, the final steps to complete the Upper Sandusky Community Library website redesign project are

- a **final usability study** with a usable/click through prototype
- and to finalize the font and color choices for the website so that it matches the style branding of the library itself.

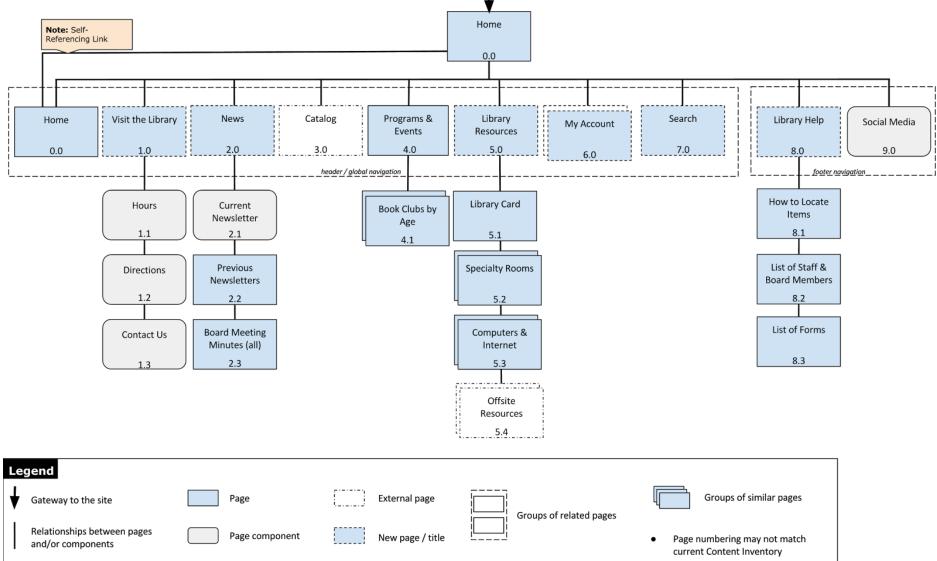
The additional work can be completed as MK Designs has time available, should the Upper Sandusky Community Library require such work.

Appendix I: Project Plan

The below is the project plan proposed on March 19, 2017 to the Upper Sandusky Community Library for purposes of updating the library website's organization and content.

Week	Wee	Document Title								
Activity	k 1	k 2	k 3	k 4	k 5	k 6	k 7			
Initial Review of Site	Х							Upper Sandusky Community Library: Project Brief		
Project Brief Submission	Х									
User / Librarian Interviews		Χ						Upper Sandusky Community Library: Users and Context		
Literature Search		Χ						Research		
Persona Development		Χ								
User Research Report Draft		Χ								
User Research Report Submission			Χ							
Site Content Analysis				Х				Upper Sandusky Community Library: Site Content Analy		
Classification / Organization Scheme				Х				and Proposed Site Map		
Development				^						
Site Map Generation				Χ						
Usability Testing Preparation				Х				Label Assessment and Taxonomy		
Usability Testing of Proposed Site Map					Χ					
Wireframe and Site Sketch Generation					Χ	Χ				
Usability Testing of New Workflow						Х				
Usability Testing Analysis						Х	Х	This report: Upper Sandusky Community Library: Final		
Final Report Submission							Х	Redesign Proposal with User Testing Results		
Stakeholder Approval							V			
for Work Completed to Date							Х			

Appendix II: Proposed Sitemap/Blueprint V1 Note: Self-Referencing Link



Appendix III: History of Proposed Site Maps/Tree Organization

The following 2 sitemaps detail the proposed website organization before and after the Treejack study.

V1 (as of 04/17/2017 – before the usability test)

Library Home Visit the Library Hours Directions Contact Us News **Current Newsletter Previous Newsletters Board Meeting Minutes** Catalog **Programs & Events** Children's Story Time After School Programs Teen Programs **Book Club** Library Resources Library Card Heritage Room **Crafting Room Meeting Rooms Computer & Internet Workstations** Offsite Resource ChiltonLibrary.com Cypress Resume **Voter Information** Ohio Web Library Database My Account Search Library Help How to Locate Items List of Staff & Board Members List of Forms Contact Us Social Media

V2 (as of 04/23/2017 – as a result of the usability test)

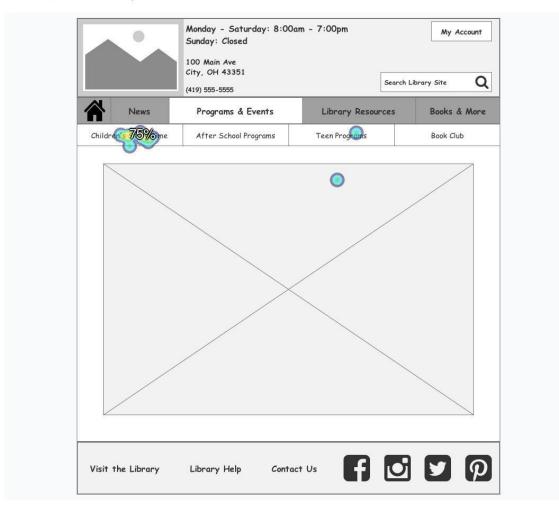
Lik	orary Home	
	Visit the Lik	brary
		Hours
		Directions
		Contact Us
	News	
		Current Newsletter
		Previous Newsletters
		Board Meeting Minutes
	Catalog	
	Programs &	& Events
		Children's Story Time
		After School Programs
		Teen Programs
		Book Club
	Library Res	cources
		Library Card
		Meeting Rooms
		Computer & Internet Workstations
		ChiltonLibrary.com (offsite resource)
		Resume Help (offsite resource)
		Voter Information (offsite resource)
		Ohio Web Library Database (offsite resource)
	Special Col	
		Heritage Room
		Crafting Room
	My Accoun	it
	Search	
	Library Hel	
		How to Locate Items
		List of Staff & Board Members
		List of Forms
		Contact Us
	Social Med	lia

Appendix IV: First Click (Wireframe) User Testing Results

The following images are the heatmaps from Chalkmark noting where the user testing participants clicked to accomplish each task. As noted previously, only one correct menu item was input into the system to test so that MK Designs could evaluate where cross-references were needed.

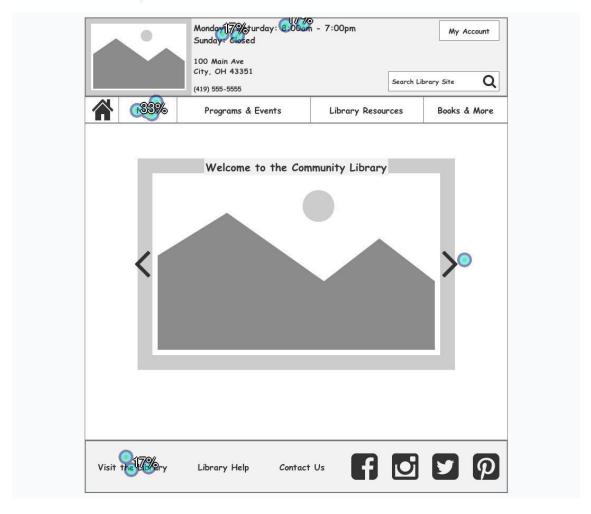
Save your toddler's space for the special Saturday interactive reading group.

12 clicks 19 successful 0 skips 9.0 secs



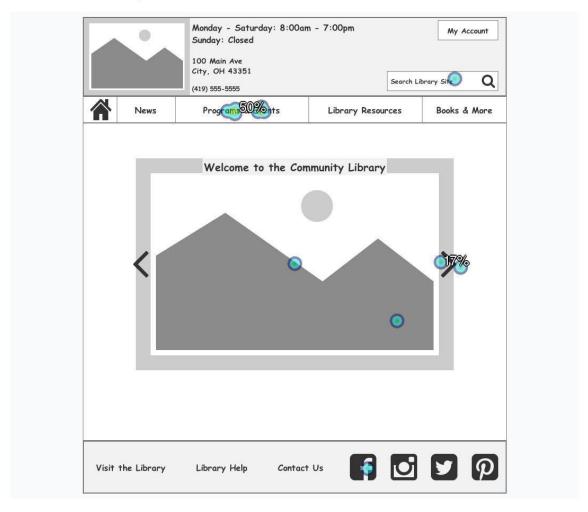
Find the library's hours for the upcoming holiday weekend.

12 clicks 3 successful O skips 13.9 secs



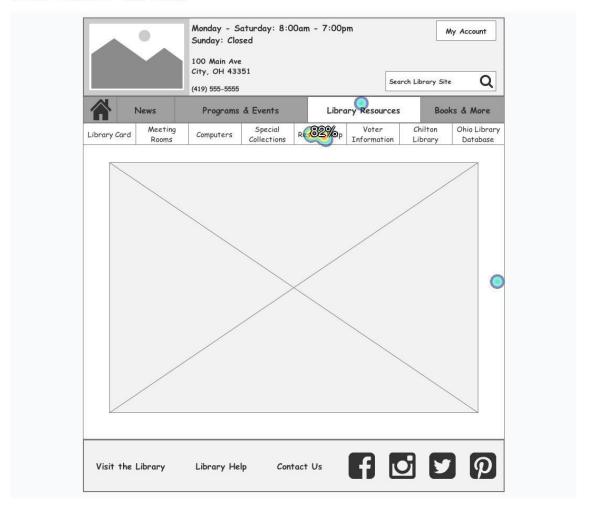
Check out the public pictures from the recent Lego night.

12 clicks 1 successful 0 skips 8.5 secs



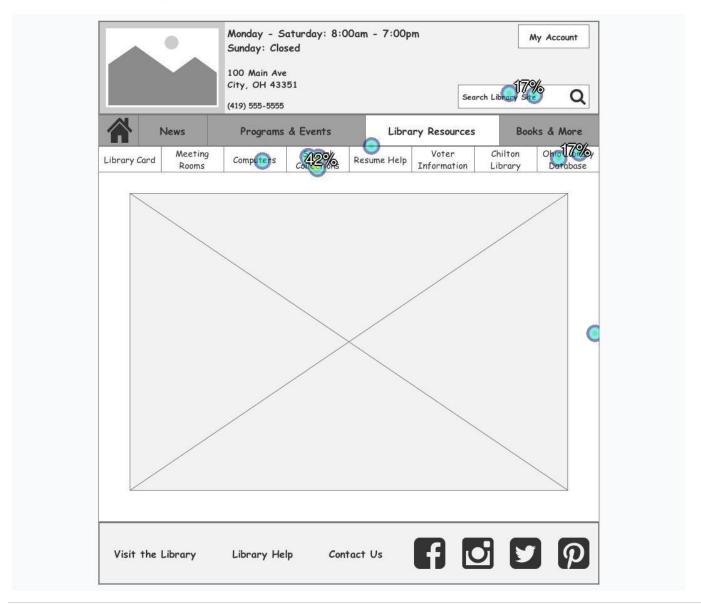
Get help writing your first resume.

11 clicks 1 9 successful 1 skips 7.3 secs



Find information for a report on Ohio's participation in the Civil War.

12 clicks 5 successful 0 skips 15.6 secs



Find out if you have any books that are due.

12 clicks 8 successful 0 skips 0 6.1 secs

