Rehabilitation Research
Design & Disability
University of Wisconsin–Milwaukee

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Universal Access Projects
Community Design Solutions (CDS)

Annual Report
May 2008-May 2009

Community Design Solutions (CDS) aims to improve the quality of life in Wisconsin by designing or changing environments toward increased accessibility and refining decision making processes effecting the environment. CDS is involved in numerous projects including working with UWM's R_2D_2 Center on the Milwaukee Idea Home, the ACCESS-ed Project, Design and Disability Instruction, and the Senior Home Assessment and Repair Project.

CDS Website: www.uwm.edu/MilwaukeeIdea/CDS/

R_2D_2 Center Website: http://www.r2d2.uwm.edu/

I. Table of Contents

II. Executive Summary

The Universal Design Team, based in UWM's R_2D_2 Center and a component of CDS, successfully continued work on all projects. Following is a list of this years highlights:

- This past year the Senior Home Assessment and Repair Program (SHARP) completed assessments with seventeen homes with another ten homes in progress and ten on the waiting list.
- The ACCESS-ed Project successfully completed its 3rd year and moved into an extension year.
- ACCESS-ed produced a 2-day conference in September, 2008 on Universal Design in Higher Education and Beyond attended by over 70 participants.
- ACCESS-ed produced three presentations on accessibility measurement and universal design at the International Association of Higher Education and Disability (AHEAD) Conference, 2008 (one of which was a full day Capacity Building Institute (by invitation)). Two new proposals were accepted for the AHEAD 2009 conference. A report was written to Congress (invited) regarding project accomplishments and recommendations.
- SHARP team members presented the SHARP project at the International Conferences on Aging, Disability and Independence (ICADI) on February 22nd, 2008.
- The SHARP team updated protocols and procedures providing PantherFile as a key communication hub.
- R_2D_2 Staff provided ongoing training sessions and developed partnerships within the UW-System and with the State of Wisconsin Pathways to Independence group.
- Two of our graduate students completed research M.S. theses related to Universal Design.

- Three of our graduate students proposed new M.S. research theses related to Universal Design.
- A team of three of R_2D_2 staff and students taught a highly inter-disciplinary Design and Disability course in the Fall of 2008.
- The ACCESS-ed team developed 5 AUDIT's (Accessibility and Universal Design Information Tools) to evaluate the accessibility of classroom instruction, services, media, and the physical environment.
- R_2D_2 updated our Accessible Design and ACCESS-ed websites and continued on the development of a ACCESS Mainstreet website.
- Our teams successfully wrote and received three grants for over one million: UD ITEACH (1,000,000) and Pathways I and II ($80,000).
- We also wrote a $46,000 proposal to the Retirement Research Foundation (still pending).
- R_2D_2 staff and students attend and present at the June 2008 Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) conference in Washington, D.C.
- We presented our UD projects at the April 2009 American Occupational Therapy Association (AOTA) Conference in Houston, Texas.

This year's activities continued to follow the theme of incorporating universal design (UD) into physical, instructional, and informational environments to promote cutting edge campuses and communities that shift from accommodating and adapting for individuals to infusing universal design and accessibility from the beginning. Overall, the past year's activities have generated increased interest in the topics of universal design and accessibility in the community. We look forward to the upcoming year of activity.

III. The Universal Access Team

Roger O. Smith, Ph.D.
Professor, Occupational Therapy
Director, Rehabilitation Research Design & Disability (R_2D_2) Center

Staff Contributing to CDS Related Projects:
- Aura Hirschman, MS, CRC
- Melissa Lemke, MS, biomedical engineering
- Kathy Longnecker Rust, MS, OT
- Tereza Snyder, BFA, programming
- Randy Will, BS, engineering

Graduate and undergraduate students:
- Thomas Dembski
- Keith Edyburn
- Amy Erfurth
- Margaret Kastner
- Jungeun Kim
- Carrie Jennerjohn
- Kati Liegl
- Emily Lucht
- Rochelle Mendonca
- Crystal Schaaf
- Kristi Vandenbush

IV. 2008-2009 Project Achievements

- **ACCESS-ed Project**

ACCESS-ed (Accessible Campus Climate Environment Support Systems for Education) is a project designed to develop and test processes that deliver low-cost universal design of instructional, information media, and physical environments to higher education campuses nation-wide. The project is supported in part by the U.S. Department of Education's Office of Post-secondary Education and maintains a collaborative partnership with CDS. Over this past year, several ACCESS-ed workshops, presentations, and conferences have been conducted on topics such as measurement of accessibility on post-secondary campuses, how to infuse Universal Design knowledge and use, in post-secondary education (UDE), and replication of the Departmental Accessibility Resource Coordinators (DARC) system. In addition to providing information and workshops, ACCESS-ed has developed numerous resource tools, strategies, and products for universal design in post-secondary education. Posterettes have been created for educational purposes on many different topics including: *Universal Design in Education, Accessible Logos, Bulletin Board Installation Guidelines, and Remodeling Guidelines* (Refer to Appendix C for example). Audits continue to be created as a part of this project are available on the ACCESS-ed website (Refer to Appendix B for a sample audit). There has been continued research on the impact of universal design strategies in post-secondary education. The ACCESS-ed team started work on a second tier three-year grant proposal from the Department of Education called "Universal Design Infusion of Technology and Evaluation for Accessible Campuses of Higher Education (UD ITEACH)". This project began in the spring of 2009.

- **Design and Disability Instruction:**

The Design and Disability (OCCTHPY 625) course brings together current and future professionals from different backgrounds and disciplines to teach the concepts and application of universal design. This course was taught as an elective in the fall of 2007 to students in the occupational therapy and architectural graduate programs among others. This course is a requirement for the Assistive Technology and Accessible Design Certificate and with its greater advertisement, more students have enrolled to take it as an elective. The course offers a new way of thinking creatively to apply the techniques of universal design in various settings and professions. The Assistive Technology and Accessible Design Certificate, mentioned above is a fifteen credit program focusing on the knowledge and application of assistive technology and universal design principles to prepare students for work in different areas of clinical practice. Support and collaboration for interdisciplinary students as well as involvement in student research has been provided throughout the past year of both SARUP and CHS graduate students. Thesis and dissertation instruction and advising continues to be provided for students within the R_2D_2 Center (Refer to Appendix A for Bibliography).

- **Milwaukee Idea Home:**

The MIH is a project of CDS that was designed and built for accessibility which is currently being used by Independence*First* as a transitional housing facility. The project is also being utilized for instructional purposes such as class demonstrations and field trips. It provides students an incredible opportunity to experience and learn about accessibiliy and universal design first hand.

MIH Website: www.uwm.edu/MilwaukeeIdea/CDS/

- **Senior Home Assessment and Repair Program:**

SHARP is a community-based project in which occupational therapy students from UWM collaborate with Layton Boulevard West Neighbors (LBWN) and Rebuilding Together Greater Milwaukee (RTGM). The team provides home assessments, recommends environmental modifications and adaptive equipment, and implements repairs to improve safety, function, and independence and promote aging in place for senior homeowners living in the Layton Boulevard community. SHARP is a multi-component program involving several sequencial steps. First, the LBWN coordinator recruits and interviews the homeowner and an occupational therapy assessment is scheduled. Next, after intoduction by the LBWN coordinator, a thorough occupational therapy assessment is conducted; the focus is safety and functionality of the older adult in their home. The subsequent step entails a home assessment by the RTGM team; the emphasis on repairing and remodeling the home to better fit the needs of the older adult. After all team members conduct and document their assessments UWM, LBWN, and RTGM meet to discuss recommendations and changes that need to be made to the home. The results of the meeting are shared with the homeowner for final review. The last step of the process is purchase/installation of adaptive equipment and implementation of the repairs/modifications of the home environment

Many changes have been made to SHARP including additions to the team and revisions in the process. In November of 2008, two new occupational therapy students were hired and trained to facilitate home assessements for SHARP. Another addition to the OT team is a community-based occupational therapist advisor who provides support to the UWM students and expert consultation for the home assessment process. A new coordinator for LBWN was also appointed. These new team members bring fresh ideas and perspectives to the SHARP process. Adjustments have been made to the program as a whole; in just a few months the assessment tool and protocol has been updated, the process has been evaluated in order to be more efficient, as well as recreating a

comprehensive Excel document including UWM occupational therapy recommendations, RTGM scope of work, and LBWN follow up with homeowner that can be viewed/edited by all team members on the PantherFile account.

Due to limited funding and increased length of time between the occupational therapy assessment and completion of repairs/modifications, the team also re-assessed eight homes from last year. Following a proposal to the Faye McBeath Foundation, LBWN has just recently received funding for SHARP for another year in addition to exisiting funds from US Cellular and the Retirement Research Foundation. The participant list for 2009 includes two re-assessments as well as ten initial assessments. All houses on the participant waiting list are scheduled for completion by the end of the year. The team is looking forward to working with the new and improved program.

- **UWM Campus Implementation of Physical Facility Design**

With the input of numerous colleagues, audit have been created to assess the design, usability, and accessibility of the campus. These audits have been used by professionals and students to evaluate different areas throughout the university and have been submitted to the campus implementation teams.

- **Websites:**

R_2D_2 Center staff members continue to collaborate to provide technical assistance and support for the creation, edits, and launching of various, accessible R_2D_2 websites. The ACCESS-ed website continues to grow with newly created resources, e.g.

V. 2009-2010 Planned Activities

Community Design Solutions allows us to continue working in a range of ways in the area of universal design and accessibility. As always, a set of new and continuing activities, including both community-based, and campus-based projects are anticipated for the current and coming year. Although we know the long list of activities that are desired can not all be accomplished in a short time, it is our hopes to continue with our current projects and expand our support for future projects. Planned activities include:

1. **ACCESS-ed/ UD ITEACH**
    - ACCESS-ed will be wrapped up in 2009, following major research, resources, and the website which will continue availability.
    - Accessible products and resources as example for other websites, developers, etc.
    - Continued work on a three year grant and research titled “UD ITEACH, a Demonstration Project to Ensure that Students with Disabilities Receive a Quality Higher Education” beginning in October of 2008.

2. **Milwaukee Idea Home**
    - Continuation of home tours as part of instructional courses.

3. **Instruction**
    - Fall Design and Disability course to graduate students across schools and colleges (CEAS, CHS, and SARUP).
    - Offering the new Assistive Technology and Accessible Design Certificate to both undergraduate and graduate students for continued education

- Ongoing interdisciplinary support and collaboration to graduate students across colleges related to universal design.

4. **Senior Home Assessment and Repair Program (SHARP)**
    - Completion of 10 home assessments by end of 2009.
    - Recruitment and training of new occupational therapy students as home assessors.
    - A thesis in the area of functional outcomes of home modifications to be conducted by occupational therapy graduate student, Crystal Ammann.
    - Incorporating the knowledge and skill of the architectural students from CDS.

5. **UWM Campus Implementation of Physical Facility Design**
    - Coordination with Physical Plant about accessible design.
    - Support to the UWM library for remodeling.
    - Involvement in 20 year UWM Campus Master Plan
    - Audits of the campus environment for accessibility
    - Establishing campus committee for remodeling and new campus projects
    - Coordination on web kiosk implementation.

6. **Website Design**
    - Updating and editing of the websites and improving the accessibility as an example to the public within the R_2D_2 Center website.

7. **Proposals and Projects**
    - Proposal sent to the Retirement Research Foundation in May 2009 for a study “Matching Home Remodeling Services to Older

Homeowner Needs: A Study of Effective Resource Utilization and a New Tool Promoting Aging in Place".

- Proposed project in 2009 "Pathways ACCESS Main Street"
- Proposed project in 2009 Street AUDIT: Personal Information Resource on Accessibility".

8. **Theses**
    - Manuscript preparation of thesis work to be published by graduate students in the R_2D_2 Center
    - Five graduate students in the R_2D_2 Center beginning thesis work

9. **Collaboration and Community Outreach**
    - One of our R_2D_2 staff members, Aura Hirschman, has recently become actively involved in the UWM Chancellor's ADA Advisory Center (ADAAC)

Appendix A

R_2D_2 Center Bibliograph

Presentations 2008

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Maggard, K. R. & Smith, R. O. (2008, February 22). Measuring the quality of text equivalents to multimedia information. Presented at the International Conference on Aging, Disability and Independence, St. Petersburg, FL.

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Appendix B

P3 Audit Example

AUDIT Target:
AUDIT Date:
Auditor:

P3 AUDIT

Accessibility and Universal Design Information Tool (Version 1.1)

Part 1: Accessibility

Part 1 contains questions that are most critical in evaluating the accessibility of a syllabus. At minimum these questions should be completed in order to identify any serious problems that limit accessibility for persons with a disability.

Answer the following questions by marking an X in the appropriate box.

	Scale: **Y** = The feature is present **and** effective in the item being audited. **Partial** (P) = The features is present in some, but not all cases, or is only partially effective in meeting the accessibility goal. **N** = The feature is not present, or cannot be easily discovered in the item being audited. If you are not sure if the feature is present, mark "No." **NA** = The feature is neither present nor required for accessibility in the item being audited.	Yes	Partial	No	NA
	Accessibility Section 1 - Speaker's Location and Appearance	Y	P	N	NA
1	The speaker selects presentation position with clear line of sight to seating adequate for the expected audience.				
2	The speaker faces the audience when speaking (e.g. Avoids facing slides, screens or charts during extended explanations).				
3	The speaker gestures and grooming do not interfere with view of face for listeners (e. g. mustache does not extend beyond upper lip, hair worn back from face, speaker does not cover mouth with hands when speaking).				
	Accessibility Section 2 - Speaker-Audience Interaction	Y	P	N	NA
1	In setting where audience questions are not clearly audible to all audience members, the speaker repeats or paraphrases the questions.				

Appendix C

SHARP Home Assessment Evaluation Tool

Rehabilitation Research
Design & Disability

University of Wisconsin–Milwaukee

Home Safety and Accessibility Assessment: The Senior Home Repair Project

Created by the R_2D_2 Center at UW-Milwaukee
(First Version by Rochelle Mendonca, Carleen Paprocki and Stephanie Siegler
Updated by Crystal Ammann and Kristi Vandenbush)

Based on the assessment created by Linda Balfanz at Rebuilding Together Greater Milwaukee

Introduction

1. Introduce yourself and other assessors present

2. Ask the homeowners if they understand why you are there and what you are going to do.

3. Explain the following:
   - Here to make recommendations that will make their day to day lives easier
   - Reduce obstacles in their home to make their home as safe as possible
   - Goal is to keep them safe in their own home for as long as possible (may want to ask how long they have lived in their home for perspective)

5. Explain the following:
   - To maximally help you, we need you to be open and honest with us.
   - Don't worry; everything will be kept confidential within the Layton Boulevard West Neighbors Project

7. "After a short interview, we will ask you to show us around your home and in each room we will make observations and ask you specific questions."

8. Is there anything you want to ask us before we begin?

General Information:

Homeowner(s) Name(s): _____

Homeowner(s) age(s): _____
Date of Home Assessment: _____
Homeowner Address: _____
Homeowner Phone: _____

Occupational Therapist (Primary Assessor): _____

Other Attendees: _____

Assessor Phone: _____

Health Inventory:

1. Homeowner known disabilities, impairments or health conditions:

☐ Diabetes ☐Arthritis ☐ Surgeries (specify) _____ ☐ Fractures
☐ Vision Impairments (specify) _____ ☐Cardiovascular Disease
☐ Hearing Impairment (one or both ears/how severe) _____
☐ Injuries (specify when it happened and where) _____
☐ Other: (please specify) _____

2. Joint pain (note location)?

☐ Shoulder L/R ☐ Elbow L/R ☐ Wrist L/R ☐ Hands L/R
☐ Back ☐ Neck Upper/Lower ☐ Hip L/R ☐ Knee L/R
☐ Ankle L/R ☐ Foot L/R

Prompt for assessor: For example, do you ever have difficulty turning on and off faucets or opening door handles?

3. Do you ever experience muscle pain and where (note location)?

☐ Arm Upper L/R ☐ Arm Lower L/R ☐ Leg Upper L/R ☐ Leg Lower L/R
☐ Hand L/R ☐ Back ☐ Other: _____

Prompt for assessor: For example, do you ever feel tired or in pain after carrying a load of laundry up/down the stairs or after making a meal for yourself?

4. Do you use any type of ambulatory device/equipment? ☐Yes ☐ No

If so, what type of device(s): ☐ Wheelchair ☐ Walker ☐Cane

☐ Other: (please specify)

_____

Where do you use this ambulatory device? ☐ Outside ☐ Inside

☐ Everywhere ☐ Other: (specify what type) _____ When or how often do you use this ambulatory device? ☐ Always ☐ Never ☐ Sometimes

☐ Other: (specify what type) _____

5. Do use any type of auditory device or hearing aide? ☐Yes ☐ No

If so, what type of device: ☐ Hearing Aide (one ear L/R) ☐ Hearing Aide (both ears)

☐ Other: (specify what type) _____

When do you wear/use them and/or how often do you use them?

☐ Always ☐ During Day ☐ Only at Home ☐ Only Outside (of home)

☐Other (specify): _____

6. Do you use any type of visual aide/corrective device? ☐Yes ☐ No

If so, what type? ☐ Bifocals ☐ Single lens ☐ Trifocals

☐ Contacts ☐ Other: (specify type) _____

How long have you worn/used them? _____

When do you wear/use the visual aids and/or how often do you use them?

☐ Always (when awake) ☐ During Day ☐ When reading ☐ When Driving

☐ Other: (please specify) _____

Prompt for assessor: For example, do you have problems walking up and down stairs?

7. Do you have/use any other types of assistive equipment such as:

☐ Tub Chair ☐ Hand Held Shower ☐ Raised Toilet Seat

☐ Tub Bench ☐ Grab Bars_____ ☐ Bedside Commode
☐ Reacher ☐ Long Handle Sponge ☐ Long Handle Shoehorn
☐ Sock aide ☐ Other_____

Are there any other areas that you think an assistive device would help you? _____
_____

8. How do you spend your time?

_____

Prompt for assessor: For example, are you currently working full or part-time? What type of activities do you take part in during your free time such as volunteering or caring for others?

9. Do you (the homeowners) have any other questions???

Outside The House

Observations:

1. Type of residence: ☐ one-story ☐ two-story ☐ other: (please specify) _____

2. Steps at front entrance: ☐Yes ☐ No
   Steps at back entrance: ☐Yes ☐ No
   Steps at side/other entrance: ☐Yes ☐ No

3. Number of handrails: front____ back____ side___
   Type/Location of handrails: ☐ Single (one side) ☐ Double (both sides)
   Secure: ☐Yes ☐ No
   Good Condition: ☐Yes ☐ No
   Measure height of handrails: _____

4. Number of steps: front____ back____ side____ step height: _____
   Are the steps and walkway in good condition: ☐Yes ☐ No
   Number of steps: front____ back____ side____ step height: _____
   Are the steps and walkway in good condition: ☐Yes ☐ No

5. Is there an Outside Light at front entrance? ☐Yes ☐ No
   Working: ☐Yes ☐ No Adequate: ☐Yes ☐ No Describe: _____

   Is there an Outside Light at back entrance? ☐Yes ☐ No

Working: ☐Yes ☐ No Adequate: ☐Yes ☐ No Describe: _____

Is there an Outside Light at other/side entrance? ☐Yes ☐ No ☐ NA
Working: ☐Yes ☐ No Adequate: ☐Yes ☐ No Describe: _____

6. Measure hallway width (from kickboard to kickboard): _____

7. Measure Doorway width: front____ back____ side_____
   Is the door way wheelchair accessible? ☐Yes ☐ No
   If no, describe why? _____

8. Is there a clear walkway (path) to enter house from the front: ☐Yes ☐ No
   Is there a clear walkway (path) to enter house from the back: ☐Yes ☐ No
   Is there a clear walkway (path) to enter house from the side: ☐Yes ☐ No ☐ NA

9. Is there a threshold at front entrance: ☐Yes ☐ No Height: _____
   Is there a threshold at back entrance: ☐Yes ☐ No Height: _____
   Is there a threshold at side entrance: ☐Yes ☐ No Height: _____

10. Type of door handles: ☐ Lever ☐ Round ☐ Thumb-push
    ☐ Other (specify) _____

11. Number of locks at front entrance:____
    Location of locks at front entrance: _____
    Type of locks (front entrance): ☐ Single Cylinder ☐ Double Cylinder
    ☐ Other (specify) _____

12. Number of locks at back entrance: ____
    Location of locks at back entrance: _____
    Type of locks (back entrance): ☐ Single Cylinder ☐ Double Cylinder
    ☐ Other (specify) _____

13. Number of locks at other entrance: ____
    Location of locks at other entrance: _____
    Type of locks (other entrance): ☐ Single Cylinder ☐ Double Cylinder
    ☐ Other (specify) _____

14. Location of mailbox:

_____

Ask the homeowner(s) if they are able to get their mail safely? ☐Yes ☐ No

Specific Questions:

Prompt for assessor: "Let's talk about your front (back or side) door."

1. Is it easy for you to walk/enter into the house through the front entrance? ☐Yes ☐ No
   Describe: _____

2. Is it easy for you to walk/enter into the house through the front entrance? ☐Yes ☐ No
   Describe: _____

3. Is it easy for you to walk/enter into the house through the front entrance? ☐Yes ☐ No
   Describe: _____

4. Do you have a porch light? ☐Yes ☐ No Is the light working? ☐Yes ☐ No

5. Do you ever have difficulty identifying visitors? ☐Yes ☐ No
   Describe (when, where, why): _____

   Is there a door peephole viewer: ☐Yes ☐ No Height of peephole: _____

6. Can you always hear the doorbell or knocks on the door? ☐Yes ☐ No

   If not, are there specific areas in your home where you cannot hear the doorbell or knocks? Describe: _____

   Is the doorbell in working order? If not, please circle appropriate response.

   (Doorbell not working/ doorbell not loud enough/ insufficient speakers/
   Other: (be specific) _____)

7. Do you ever have difficulty opening and closing your windows? ☐Yes ☐ No
   Do your windows lock? ☐Yes ☐ No Describe how/type of locks: _____

8. Do you ever have difficulty managing the door locks and knobs/handles? ☐Yes ☐ No
   Describe:

_____

9. Are you able to easily get trash to the carts and to the curb for pick up? ☐Yes ☐ No ☐ NA
   Describe: _____

10. Are you able to easily get trash carts to the curb? ☐Yes ☐ No
    Describe: _____

11. Do you have garage (or storage shed)? ☐Yes ☐ No
    Is it easy or hard to access? Describe _____

Inside The House-General

Observations:

1. Are pathways free of obstacles/clutter? ☐Yes ☐ No

2. Is there loose/frayed carpet? ☐Yes ☐ No Where is it located?
   _____

3. Number of lights in the house:
   Adequate: ☐Yes ☐ No Describe:
   _____

4. Measure the width of hallways: _____
   Are the hallways wheelchair-accessible? ☐Yes ☐ No

5. How many stairs are inside the home? Number upstairs: ___ Number downstairs: ___
   Measure height of stairs: Stair Height Up: _____ Stair Height Down: _____

6. Type/Location of handrails: ☐ Single (one side) ☐ Double (both sides)
   Secure: ☐Yes ☐ No
   Good Condition: ☐Yes ☐ No
   Measure height of handrails: _____

7. Is there non-slip material on the stairs? ☐Yes ☐ No Type:
   _____
   Condition of non-slip material: ☐ Good ☐ Moderate ☐ Bad ☐ Other (specify) _____

8. Is there a light switch at the top of the staircase? ☐Yes ☐ No
   Is the light adequate? ☐Yes ☐ No

Is there a light switch at the bottom of the staircase? ☐Yes ☐ No
Is the light adequate? ☐Yes ☐ No

9. Measure door knob height: _____

10. Type of door knob: ☐ Lever ☐ Round ☐ Thumb-push ☐ Other (specify) _____

11. Measure height of light switches: _____ Type of light switches: _____

Specific Questions:

1. Do you use throw rugs? ☐Yes ☐ No
   Placement/Condition: _____
   _____

2. Can you easily read your emergency phone numbers? ☐Yes ☐ No
   If not, describe why:

_____

   Location of emergency numbers:

_____

3. Can you read and dial your telephone easily? ☐Yes ☐ No
   If not, describe why:

_____

   Number of Portable Phones: _____
   Location of phones

_____

4. Do you have difficulty turning light switches on or off? ☐Yes ☐ No
   If so, describe why:

_____

5. Do you have difficulty opening or closing doors in the house? ☐Yes ☐ No
   If so, describe why:

_____
   Which way do the doors open: _____

6. Do you keep any lights on at night? ☐Yes ☐ No
   Location: _____

7. Do you have nightlights? ☐Yes ☐ No

Location of nightlights: _____

Is the light adequate? ☐Yes ☐ No

8. Do you ever hold onto furniture or the walls while you walk around your home? Yes/No

If so, describe:

_____

7. Do you ever trip inside your home? ☐Yes ☐ No

If so, what causes you to trip/fall?

_____

How often do you trip or fall inside or outside or home?

_____

Location of tripping/falls:

_____

In what rooms are you most concerned about falling?

_____

Living Room/Dining Room

Observations:

1. Height of window sills: _____
2. Observe any walking path obstructions:

   _____
3. Observe general lighting/adequacy:

   _____
4. Height of light switches:

   _____

Specific Questions:

1. Do you have any difficulty getting into and out of a sofa, or chair? ☐Yes ☐ No
2. Do you have a favorite chair? ☐Yes ☐ No

   How often do you have trouble sitting down in it or standing up out of it?

   _____
3. Do you have a remote control for your T.V.? ☐Yes ☐ No Type of remote: _____

Can you read the buttons on the remote control? _____

4. Can you easily reach window blinds/shades/draw cord? ☐Yes ☐ No

5. Can you change/open shades: ☐Yes ☐ No Describe: _____

Kitchen

Observations:

1. Type of cabinets:
   _____
2. Height of cabinets:
   _____
3. Type of drawer/cabinet pulls:
   _____
   Prompt for assessors: observe homeowner(s) opening/closing cabinets and using faucets
4. Type of faucet handles:
   _____
5. Height of controls on the stove and microwave:
   _____
6. Location of controls on the stove and microwave:
   _____
7. Height of freezer:
   _____
8. Is there a seating area in the kitchen: ☐Yes ☐ No Table in kitchen: ☐Yes ☐ No
9. Observe general lighting locations/adequacy:
   _____

Specific Questions:

1. Can you easily reach/use cupboards or storage space? ☐Yes ☐ No
   Describe:_____
2. Do you use a step stool: ☐Yes ☐ No

3. Do you feel safe using the stepstool: ☐Yes ☐ No If no, describe why: _____
   Prompt for assessors: observe homeowner(s) using the stepstool

4. Do you have difficulty lifting/transporting items during meal preparation? ☐Yes ☐ No
   If yes, describe why: _____

5. Can you easily open/close drawers/cabinets? ☐Yes ☐ No
   If no, describe why: _____
6. Do you have any difficulty working at the sink/counter or using the faucets? ☐Yes ☐ No
   If yes, describe why: _____

7. Do you have any difficulty using the stove/microwave? ☐Yes ☐ No
   If yes, describe why:
_____

8. Are you able to easily read the microwave buttons? ☐Yes ☐ No

9. Can you easily open/close, and get items in the refrigerator? ☐Yes ☐ No

10. Can you easily reach into the freezer to get out items? ☐Yes ☐ No

11. Do you get tired easily while making meals? ☐Yes ☐ No
    If yes, describe why: _____

12. Do you have a fire extinguisher/baking soda in case of a stove fire? ☐Yes ☐ No

Bedroom #1

Observations:

1. Door entrance width: _____

2. Light switch location:
   _____
   Can they reach the light switch from bed? ☐Yes ☐ No

3. Telephone location:
   _____
   Can they reach the light switch from bed? ☐Yes ☐ No

4. Type of drawer pulls?
   _____

Specific Questions:

1. Can you easily get into and out of the bed? ☐Yes ☐ No
   If no, describe why:
   _____

2. Can you easily move around the bedroom? ☐Yes ☐ No
   If no, describe why:
   _____

3. Can you easily open closet doors, reach clothing, coats, shoes/other closet items?
   ☐Yes ☐ No
   If not, describe why:
   _____

4. Can you easily reach, open and close all dresser drawers? ☐Yes ☐ No
   If no, describe why:
   _____

Bedroom #2 (if used)

Observations:

1. Door entrance width: _____

2. Light switch location:
   _____
   Can they reach the light switch from bed? ☐Yes ☐ No

3. Telephone location:
   _____
   Can they reach the light switch from bed? ☐Yes ☐ No

4. Type of drawer pulls?
   _____

Specific Questions:

1. Can you easily get into and out of the bed? ☐Yes ☐ No
   If no, describe why:
   _____

2. Can you easily move around the bedroom? ☐Yes ☐ No

If no, describe why:

_____

3. Can you easily open closet doors, reach clothing, coats, shoes/other closet items?
   ☐Yes ☐ No
   If not, describe why:

_____

4. Can you easily reach, open and close all dresser drawers? ☐Yes ☐ No
   If no, describe why:

_____

Bathroom

Observations:

1. Type of faucet handles:
   _____
2. Type of shower handles:
   _____
3. Measure Height of sink: _____
4. Measure Height of faucet: _____
5. Measure Height of medicine cabinet: _____
6. Measure Height of toilet seat: _____
7. Is toilet seat raised? ☐Yes ☐ No
8. Are there Grab bars? ☐Yes ☐ No Location of grab bars:
   _____
9. Measure tub edge height: _____
10. Is there a non-slip tub floor or mat? ☐Yes ☐ No
11. General Lighting/Locations/Adequacy:
    _____
12. Measure Door width: _____

Specific Questions:

1. Do you have any difficulty using the sink or the faucets? ☐Yes ☐ No

If yes, describe why:

_____

2. Do you have any difficulty using or storing personal care items near the sink/tub/shower? ☐Yes ☐ No
   If yes, describe why:

_____

3. Do you have any difficulty storing or removing items from the closet shelves: ☐Yes ☐ No
   If yes, describe why:

_____

4. Do you have difficulty stepping into/out of the bath/shower? ☐Yes ☐ No
   If yes, describe why:

_____

5. Do you have any difficulty using the tub faucets, shower control, or drain plug? ☐Yes ☐ No
   If yes, describe why:

_____

   Do they work? _____

6. Do you have any difficulty taking a bath or a shower? ☐Yes ☐ No
   If yes, describe why:

_____

7. Do you have any difficulty getting on/off the toilet? ☐Yes ☐ No
   If yes, describe:

_____

8. Do you have any difficulty reaching the toilet paper? ☐Yes ☐ No
   If yes, describe:

_____

9. Do you ever get tired standing at the sink? ☐Yes ☐ No
   If yes, describe:

_____

   If yes, do you ever use a stool or seat? ☐Yes ☐ No

Basement/Laundry Room

Observations:

1. Location of washer and dryer:
   _____
2. Height of washer/dryer controls:
   _____
3. Location of washer/dryer controls:
   _____
4. Adequate contrast, size, and readability of washer/dryer controls: ☐Yes ☐ No
5. Type of washer/dryer: ☐ Front Load ☐ Top Load ☐ Other (specify)
   _____
6. Number of hand rails: _____
7. Location of hand rails:
   _____
8. Measure Stair Height: _____
9. Number of stairs: _____
10. Non-slip material on stairs: ☐Yes ☐ No Contrast on stair treads: ☐Yes ☐ No
11. Is the area free of clutter? ☐Yes ☐ No

    If not, describe what:

_____

12. Measure Height of storage cabinets: _____
13. Type of Lighting: _____
    Is there a light at top of stairs? ☐Yes ☐ No
    Is there a light at the base of the stairs? ☐Yes ☐ No

Specific Questions:

1. How do you transport your laundry to and from the washer?
   _____
2. How do you transport your laundry to and from the dryer?
   _____

3. Do you have any difficulty using or seeing the dials on the washer/dryer? ☐Yes ☐ No
   If yes, describe:
   _____

4. Do you use basement for storage? ☐Yes ☐ No
   If so, what do you store there?
   _____

Garage/Storage Shed

Observations:

1. Is there an entrance on the side of the building? ☐Yes ☐ No
   If yes, what type of lock: ☐ Single Cylinder ☐ Double Cylinder ☐ Other (specify) _____

2. Type of garage door: ☐ Automatic ☐ Manual ☐ Other (specify) _____

3. Location of lights: _____ Is the lighting adequate? ☐Yes ☐ No

4. Type of lights: ☐ Motion detected ☐ Manual/Switch ☐ Other (specify) _____

5. Is there a clear pathway to the building? ☐Yes ☐ No

   If no, describe:
   _____

Specific Questions:

1. Do you have an automatic door opener? ☐Yes ☐ No

2. What do you use this unit for?
   _____

3. Do you have any difficulty using accessing the garage or storage unit? ☐Yes ☐ No
   If yes, describe:
   _____

Appendix D

SHARP Process Flow Chart

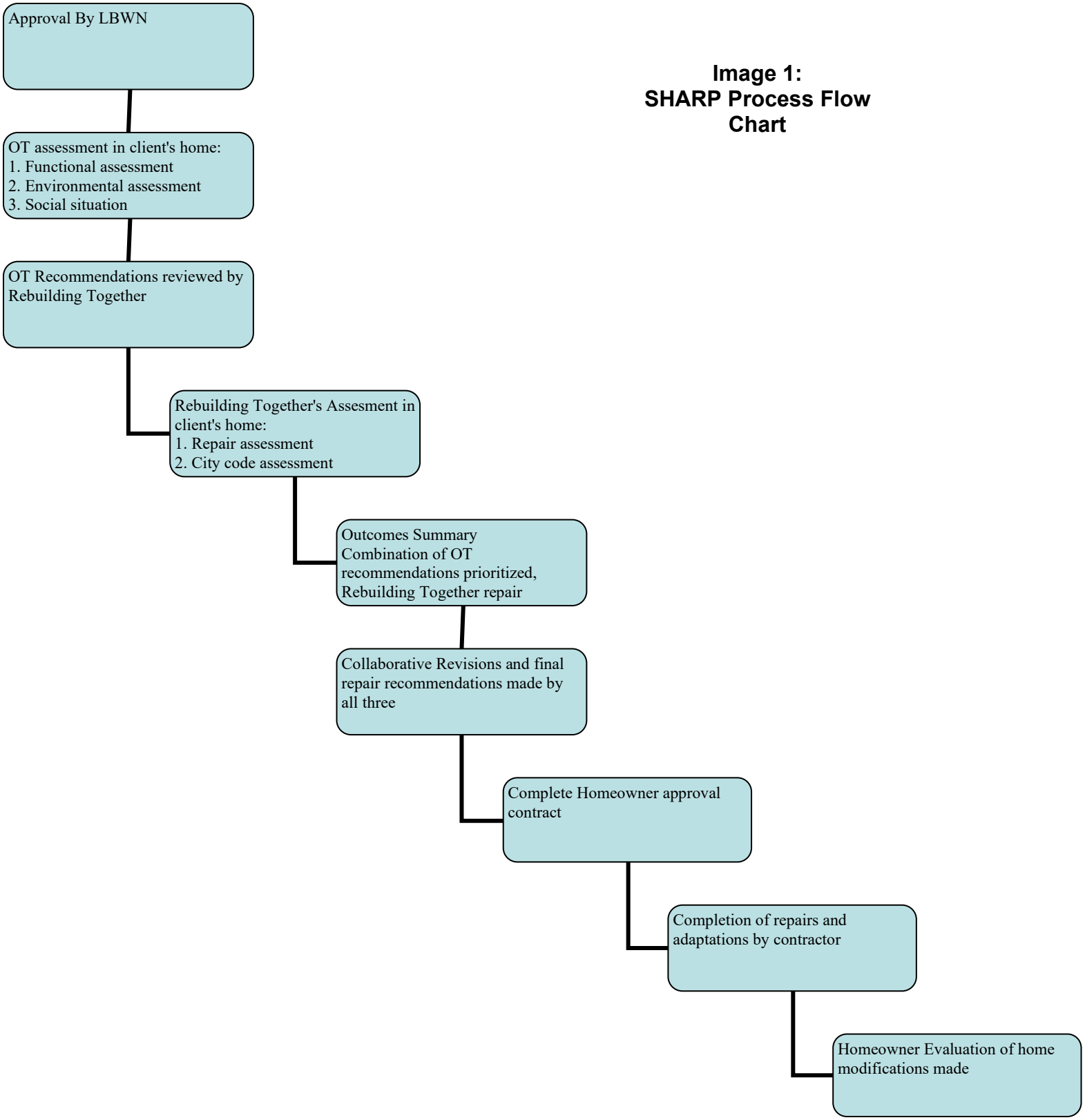

Image 1:
SHARP Process Flow Chart

Appendix E

SHARP Before and After Photos

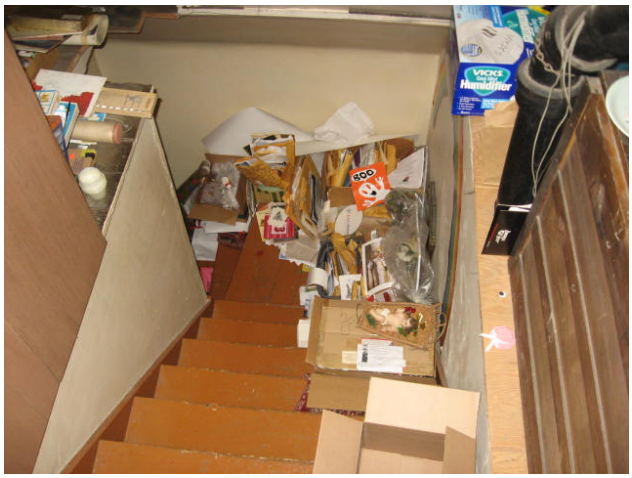

Image 2
Before: Cluttered stairs

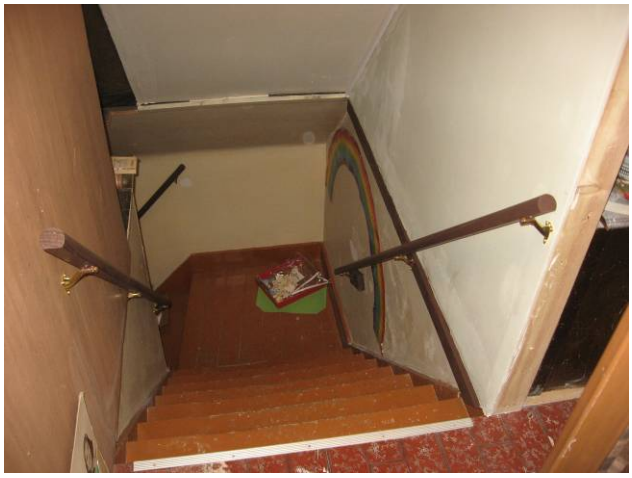

Image 3
After: Stairs clear of boxes and clutter

Image 4
Before: Shower with no grab bar to assist with transfers

Image 5
After: Shower with grab bar for easier and safer transfers

Image 6
Before: Toilet without raised seat and grab bars.

Image 7
After: Toilet with raised seat and grab bars to assist with transfers

Image 8
Before: Awning taped together with duct tape

Image 9
After: Awning repaired with bolts

Appendix F

Equivalent Text Descriptions

Image 1: SHARP Process Flow Chart

Brief Description: Flow chart of SHARP process

Essential Description: This flow chart depicts the step-by-step process of the Senior Home Assessment and Repair Program. Nine rectangles connected by one line follow a downward diagonal path to the bottom of the page. The primary steps are: the UWM occupational therapy assessment, the Rebuilding Together remodeler assessment, and the homeowner approval to start repairs/adaptations. These steps are broken down and explained in each rectangle.

Image 2: Before Photo of Cluttered Stairs

Brief Description: Photograph of cluttered stairs

Essential Description: This photograph depicts a staircase full of clutter. The picture was taken from a downward angle from the top of the staircase to the bottom. The right side of the staircase is lined with boxes and other objects.

Detailed Description: The stairs in this photograph are light brown and the adjacent walls are white on the bottom and a darker brown on the top. There are no railings on the walls on either side. This photograph of a cluttered staircase was taken to show how unsafe it could be to walk up and down the stairs.

Image 3: After Photo of Stairs without Clutter and with Railing

Brief Description: Photograph of clutter-free stairs

Essential Description: This photograph depicts the same staircase as the previous photo taken at a downward angle from the top of the stairs to the bottom.

Detailed Description: This photograph was taken after the clutter was removed by the SHARP team. Clutter-free stairs are safer and easier to walk up and down. Also, railings were added on both sides of the railing by the SHARP team to increase safety while walking up and down the stairs.

Image 4: Before Photo of Shower without Grab Bar

Brief Description: Photograph of a shower without grab bars

Essential Description: This photograph depicts the head of the shower without a grab bar.

Detailed Description: In this photograph the head of the shower includes: the faucet, four on/off knobs, a handheld showerhead attachment, scrub brushes and a loofah. There is a white shower curtain on the left side of the photo. A clipboard is also visible in the top left corner of the picture. The photo shows that there is no grab bar on the wall to assist with transferring in and out of the tub.

Image 5: After Photo of Shower with Grab Bar

Brief Description: Photograph of a shower with grab bars

Essential Description: This photograph depicts the head of the shower with a grab bar installed vertically on the left side of the faucet.

Detailed Description: This is a photograph of the same shower as the previous photo; however, there is now a grab bar on the left side which will assist the homeowner in transferring in and out of the shower. Also, the white shower curtain is not visible in the picture.

Image 6: Before Photo of a Toilet without Raised Seat and Grab Bars

Brief Description: Photograph of toilet without raised seat and grab bars

Essential Description: This photograph depicts a toilet that does not have a raised seat or grab bars on each side.

Detailed Description: This photograph was taken before a raised seat and grab bars were added to the toilet. In the photo, the toilet seat is up, a kleenex box sits on the back of the toilet, the corner of the sink is visible on the right side, there is a cup attached to the wall above the sink containing toothpaste and a toothbrush, and a toilet paper roll on the wall on the right side of the toilet.

Image 7: After Photo of a Toilet with Raised Seat and Grab Bars

Brief Description: Photograph of toilet with raised seat and grab bars

Essential Description: This photograph depicts a toilet that has a raised seat and grab bars on each side.

Detailed Description: This photograph portrays the same bathroom as in the previous photo. The picture was taken after a raised toilet seat with grab bars was installed for safety. The wall below the toilet paper roll on the left side was repaired by SHARP.

Image 8: Before Photo of Awning with Duct Tape

Brief Description: Photograph of awning with duct tape

Essential Description: This photograph depicts an awning that is held together by pieces of duct tape.

Detailed Description: In this photo, the side of a house with an awning is shown; the awning is held together by pieces of duct tape. The house is white with brown trim and the awning is green with metal poles. Three windows can be seen on the side of the house. A brown fence is also visible in the background.

Image 9: After Photo of Awning Repaired with Bolts

Brief Description: Photograph of awning repaired with bolts.

Essential Description: This photograph depicts the same awning as the previous photo after it was repaired by SHARP; the duct tape was replaced with bolts.

Detailed Description: This photo shows the same angle of the awning as the previous photo. The awning was repaired by SHARP to improve durability and stability of the awning and also to increase safety.