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Design for All

Guest Editor: Colleen Kelly Starkloff,

Founder Starkloff Disability Institute

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GUEST EDITOR:

Colleen Kelly Starkloff, Founder

Starkloff Disability Institute

Colleen Kelly Starkloff is co-founder, with her husband Max, of the Starkloff Disability Institute. During the 1970's, she co-founded Paraquad, Inc. in St. Louis in conjunction with Max.

Ms. Starkloff has worked in the field of disability rights since 1973. She has extensive experience educating and training the disabled and non-disabled communities on issues related to employment of people with disabilities, independent living; developing new program initiatives; and coordinating activities that promoted the successful implementation of the Americans with Disabilities Act (ADA). She served two terms as the United States Organizer of the Japan/USA Conference of Persons with Disabilities. In 1999, she joined a citizens' advocacy group responsible for the establishment of the Affordable Housing Commission in the City of St. Louis, which oversees a $5M Affordable Housing Trust Fund. She ensured that housing created by the Trust Fund must include Universal Design features. She served as Founding Chair of the Commission. She is the creator and Organizer of 6 national Universal Design Summits which train

architects, designers and builders on uses and benefits of Universal Design in home and community design.

In 2005 she introduced Disability Studies into the curriculum at Maryville University and also taught a course on Universal Design in 2010. From 2005-2010 she collaborated with the Missouri History Museum to create a 1,000 square foot exhibit focused on Disability History. Titled "The Americans with Disabilities Act: Twenty Years Later", this exhibit remained open and free to the public for 19 months. An estimated 163,000 visitors saw this exhibit. In 2011 she established the Max Starkloff Speaker Series, to educate the public on the need to create a world that welcomes all people with disabilities. In 2011 she was presented a Doctor of Humane Letters by Fontbonne University. In 2013 she began consulting and training on issues related to employment of people with disabilities in mainstream, competitive jobs. In 2014 she was responsible for organizing advocacy efforts in Missouri to encourage Senate ratification of the Convention on the Rights of Persons with Disabilities.

In 2016 she began a new venture, "Colleen Starkloff Talks Disability", as a public speaker on disability issues. A university Commencement Speaker, and general speaker, Ms. Starkloff is sought after to speak nationwide on a variety of subjects related to employment of people with disabilities, disability history, the Disability Rights Movement, Independent Living and the emancipation of all people with disability. A 1993 graduate of Coro's Women in Leadership Program, she has won numerous awards for her work in the Field of Disability. She is also a St. Louis "Woman of Achievement" for 2017. (Watch the award ceremony here.) She was awarded an Inspire Award by the BiState Development Agency in 2018. In 2019, she received the Saint Louis University Alumni Merit Award for the Doisy College of Health Sciences.

Her life story is captured in Max Starkloff and the Fight for Disability Rights, a biography about her late husband. The book is available in print, at the Missouri History Museum and as an ebook through Amazon.com; An audible book can be downloaded at Audible.com.

EDITORIAL:

Welcome to the February 2022 Vol-17 No-2 issue of Design for All. I am grateful and honored to be asked to serve as Guest Editor for this edition of the online journal.

I have been working to promote the use and benefits of Universal Design for 40 years, since I met Ron Mace in Washington D.D. in 1982 and we became friends. As an architect who grew up as a person with polio, Ron was thoughtful and intentional about how design affected his life and the life of other people with disabilities. He talked about the "built environment" as being hostile to people with disabilities. He informed me that design comes about absent the lived experience of people with disabilities who have to try to navigate homes, public buildings, public spaces, public transportation systems and airplanes, personal vehicles, schools, museums, stores, etc. He pointed out that we could, and should, educate designers, builders and developers how to create buildings and spaces in ways that include people with disabilities, rather than exclude us. Ron Mace also said that the ideas for what would constitute a more universal way of designing needed to be initiated by people with disabilities and promoted by people with disabilities to the design/build community. And he called it "Universal Design".

Those of us who were immersing ourselves into the promotion of Independent Living and the rights of disabled persons to live independently, were advocating that people with disabilities should have the right to live independent productive lives in our communities, rather than being relegated to nursing homes. However, to do that would require massive changes to how public transportation systems, public spaces, housing, airplanes, public

rights of way and more were created, because without better access to all these places our goal of integrating people with disabilities into mainstream society would simply not work. We needed access!

People who are not disabled don't think about access—until something changes in their lives that makes them wish our society was more open and welcoming to people with disability. A broken leg, broken hip, stroke, loss of hearing, loss of vision, giving birth to a child with a disability, changes that occur as a result of cancer or other serious illness or injury, can happen to anyone at any time. Any one of us can become disabled at any time. Any one of us can have a family member or friend who becomes disabled at any time. So, all of us have a vested interest in caring about how Universal Design can benefit ALL people.

For this month's issue of Design for All, I am including presentations from key presenters and practitioners of Universal Design for your information, curiosity, enjoyment, interest and help so that we can work together, share our ideas, and all promote the use and benefits of Universal Design for all people. These presentations are from Universal Design Summit 7, which convened virtually via Zoom, September 29-October 1, 2021, and was organized by the Starkloff Disability Institute in St. Louis, Missouri, USA. I hope I have chosen a good variety of presentations that cover different topics and leave the reader with new thoughts, and the possibility of connecting with any of the presenters to continue to share ideas and best practices to help the field of Universal Design grow even stronger.

Universal Design can impact the built environment, technology, manufacturers of furniture, appliances, faucets and fixtures,

kitchen and bathroom products, buildings, single and multifamily residences, resorts, transportation systems, air travel, cruise ships, museums, communication, the internet, computers, cell phones, televisions and so much of what we use and need in our daily lives. And Universal Design – done well – can be very attractive to those who need it now and those who may need it at some point in their lives. Universal Design – done well – benefits all of us!

If you are interested in being on the email list of notifications about future Universal Design Summits, please let me know. We always welcome new attendees and new perspectives on the use and benefits of Universal Design.

Be well and please check out these articles!

Warm regards,

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Universal Design Kitchen – A Dream Come True!

Colleen Kelly Starkloff, Founder

Starkloff Disability Institute

I grew up in St. Louis, Missouri, the oldest of 12 children in a home that had to keep expanding as the babies kept arriving. I went to the local grade school, usually with siblings in tow, to a local private high school and local private university. While I was in grade school the Principal would ask me to sometimes help one of the students, who had Muscular Dystrophy, to walk up and down a steep flight of steps so we could all go play on the playground. I was happy to help.

That was one of my first experiences with someone with a disability.

There was also a boy who lived up the street from me. Every day the big yellow school bus would come up the street to pick him up. The bus driver would carry him into the bus and then walk up the steps to his house, fold his wheelchair up and carry that into the bus. He didn't go to our school. He was sent off to a "special school", because he had Cerebral Palsy. When we went to his house to play we had to sit on the front porch and just talk to him. There were steps from that porch and he couldn't get down to come play with us.

That was my other early experience with someone with a disability.

In my Physical Therapy classes at St. Louis University,we learned a lot about rehabilitating someone with a disability, but we knew nothing of what the environment would be like for that person once they went home. When I graduated I had a job waiting for me as the Chief Physical Therapist in a nursing home. The second day on the job was the first day of the rest of my life. On that day, October 2, 1973, I met Max Starkloff!

Max was living in the nursing home because he was quadriplegic, due to a spinal cord injury, and needed Personal Assistance to get bathed, dressed and out of bed every day. In those days, the idea of having someone to do that, other than family, was only for those who could afford private duty nurses. I fell in love with Max right then. Yes! Love at first sight! I was fascinated by this handsome man who was living in a nursing home, wanting to find a way out, to be married, have a job and live in his own home with a wife and kids. What a dream for him, and one that became my own! We dated for 2 years and were married in 1975.

What happened while we were dating was that I was beginning to see disability through Max's lens. It was not a view of hospitals and nursing homes, and people incapable of working and living in the community. His was a view of a very different world, where one could wheel down streets and cross them with curb cuts; ride buses, fly in planes, have accessible homes, have access to Personal Assistants to help with daily living tasks and really live like everyone else, but with the right changes to allow that to happen. None of that existed back in 1973. It was all a pipedream, just waiting for us to get involved and make it a reality. There was some action among disabled people around the nation, who were all thinking in much the same way and we

got connected with these like-minded people and began to all work together to create the national Disability Rights Movement.

You meet a lot of interesting people when you engage in a Movement and one of the earlier ones we had the privilege to meet was an architect by the name of Ron Mace. He had contracted polio as a child and grew up to be an architect to try to eliminate a lot of the physical barriers that existed, preventing him from moving about freely in what he referred to as "the built environment". As a person with a disability, Ron created the first really comprehensive building code for the state of North Carolina that included accessibility features and requirements for people with disabilities. This became a model building code and was adopted by many other states as well. However, because Ron was disabled and part of the Disability Rights Movement in the U.S., and because the major focus of the Disability Rights Movement has always been full integration of all people with disabilities into our society, Ron began thinking of how to better integrate people with disabilities through design.

Ron started talking about a new concept which he called Universal Design (UD). Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability.The concept has begun to take off since those early 80's and designers, product manufacturers, technology advances, public rights of way, transportation systems, computers and so much more have become available to make UD an important part of how we live today.

Since meeting Ron Mace, I have been devoted to advancing UD. So much so that I gutted my outdated kitchen and created a universally designed kitchen in my turn-of-the-century home in St. Louis. 20 years ago my late husband, Max Starkloff, and I added a 900 square foot family room to the back of our house. It adjoined our kitchen. So with a gut rehab of this kitchen I was able to extend my small, older kitchen a bit into the family room and create an island work space, which I have never had and didn't know what I was missing!

So,following are pictures, features and considerations that were part of my thinking as I worked with my architect, Greg Zipfel and then a contractor/interior design team in St. Louis, Missouri who operate as Compass/Design Build. Peter and Jennifer Uetrecht,proprietors,helped create and build this kitchen for me.

I wanted a truly Universal Design approach. I did not want a straight accessibility approach, (for persons with disabilities), because that caters only to people with disabilities. I set out to prove that Ron's idea of a universal kitchen, i.e., one that would work for a seated cook,someone who has vision loss, someone with a temporary disability, children and people with no disability was actually possible. You be the judge as you check out my photos!

I installed:

Front mounted controls on an induction cooktop, and for the 2 garbage disposals;

Two pop up electrical receptacles embedded into the counter top in the kitchen and island areas;

Single lever faucets located near the front of the countertops for easy reach and use;

- ***The faucets for each sink have pull down sprayer hoses easily reached by a seated cook***

Kitchen sinks (3):

- ***one is installed in the main kitchen area; (5 inches deep and 30 inches wide);***
- ***one is installed in the island;***
- ***a deeper sink with a garbage disposal is located adjacent to the kitchen sink;***

Garbage disposals:

- ***one in the island sink, located to the far-right rear corner of that sink allowing for a seated userto pull underneath and not hit the garbage disposal with their knees;***
- ***one in the deeper sink adjacent to the kitchen sink, that does not have a garbage disposal in it;***

Touch controls and remote controls are part of the appliances;

- ***Both wall ovens and the exhaust hood over the induction cooktop are able to be remote controlled;***
- ***Under cabinet lighting is remote controlled;***

Counter depth refrigerator and separate counter depth freezer;

Pot filler is installed in the counter at the side of the induction cooktop;

Dishwasher (2)s:

- ***one is installed 10 inches above the finished floor next to the kitchen sink (raised dishwasher);***

The other is a standard installation, located next to the island sink.

Ovens (2):

- ***one is installed so that the door drops open to 30 inches above the finished floor;***
- ***underneath this oven is a drawer microwave that opens to a height that is comfortable for a***

seated cook in this kitchen to easily remove food cooked in this **lowered microwave drawer.**

- ***The other oven is installed under the buffet counter top, but is located right next to a pull under work surface which is electrically adjustable in height.***

Ceiling height base cabinets; (36" above the finished floor)

Standard height wall cabinets;

- ***The doors to the base cabinets underneath both sinks and the induction cooktop are easily removed.***
- ***The cabinet floor and toe kick are also easily removed.***
  - ***Therefore, a seated user of this kitchen could pull under either sink, the induction cooktop or the flexible workspace and prepare food, cook food and clean up from a wheelchair;***
  - ***The adaptations from a universal kitchen to an accessible kitchen do not require a carpenter to come in to make these changes. It can be adapted in minutes quickly by the homeowner for a guest in a wheelchair who wants to come over and help cook dinner, or for a home owner who suddenly sustains a temporary or permanent mobility disability and needs to be able to sit while using this kitchen.***

It is important to note that this kitchen was developed specifically to take advantage of the fact that power wheelchairs can now be purchased with an elevator on them so the seated

cook can pull under the workspaces, sink, or cooktop and raise their wheelchair to a comfortable level to work on food preparation. For the homeowner who doesn't need the access accommodations, the 36 counter height is attractive and functional for them. Best of both worlds!

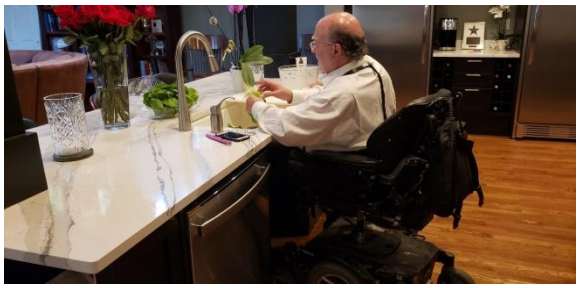
View of Buffet center: The buffet center is designed for easy entertaining, dinner parties, and additional work space when many cooks join in making dinner. Its UD features include: flexible work space. An office desk type mount was obtained that moves up and down at the push of a button, and can be preset for certain heights. My grandchildren love this because we can lower the surface to their height and they get to pour waffle batter into the waffle iron "all by themselves" because it is within their reach range! The oven was located here so that a seated user can sit next to it and bring a hot item up onto the work surface for serving. There is a beverage center under the other side of the flexible work space, also within a comfortable reach range for a seated user.

View of flexible work space in higher position.

View of Island sink: this is a 5” deep x 30 wide Kohler porcelain sink with right rear corner drain. Installed under the countertop, the total depth of this sink is 7” deep. A wider sink with a corner

drain was specifically sought to keep the garbage disposal out of the way of knee space of a seated user of this sink. The base cabinet doors, floor and toe kick are easily removed from underneath this sink. The garbage disposal button is located near the front of the counter, along with the single lever water mixing valve. The faucet has an easily pulled down water/sprayer combo that reaches fully around this sink for food prep and cleaning the sink. To the right is a pop up electrical socket that was embedded into the counter top and located near the front of the counter for easy reach by a seated cook.

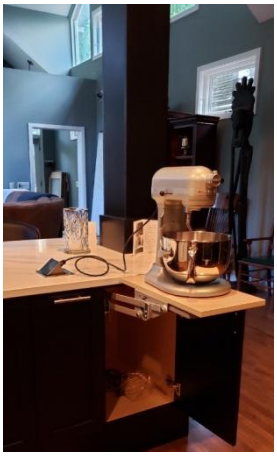
My friend, David, who uses a power wheelchair with an elevator on it and is a great cook!



View of induction cook top: Pot fillers havebecome very popular in homes these days, but they are all embedded in the rear wall above a stove or cooktop, and a standing or seated cook has to reach to a back wall, sometimes over a hot surface. This unique pot filler was sought specifically so that it could be free standing and embedded into the counter near the front of the induction cook top and moved over the top of pots that need water. Not only is it functional, it's also very attractive! Visitors are captivated by it! The doors, floor and toe kick underneath the induction cooktop are easily removed in minutes for pull-under access by a seated cook. The exhaust hood has a remote control for ease of use by either standing, or seated, cooks.

Counter depth Frigidaire refrigerator and freezer installed with a space in between to place items removed from either. Counter

depth makes it easier for a seated cook to reach whatever they wish from either appliance, without having to reach into a deeper fridge/freezer. The space in the middle allows for a coffee center and has wine racks built into both sides of the 3-drawer base cabinet, within the reach range of a seated user.



View of KitchenAid mixer in the raised position. A KitchenAid mixer is embedded in a base cabinet that stores and raises this heavy mixer to a height that a seated baker can work with it and also easily store it below when finished. The mechanism that raises it handles all of its very heavy weight. The electrical socket to the left is embedded into the counter top and is a pop-up type.

View of Island sink: book cases are embedded at either end of the island within easy reach of a seated or standing cook. The doors, floor, and toe kick underneath this island sink are easily

removable for a seated cook. The dishwasher to the left is a standard install, at floor level, which is easily used by a seated or standing cook. There is a small charging station for cell phones, tablets embedded into the top shelf of the bookcase.

View of wall oven in the open position. This oven was installed such that when the oven door is opened it will open to 30" above the finished floor. This is a good height for a cook using a power wheelchair to pull under, slide the lower oven rack, which is on easy pull rollers, out over the door, place the hot item onto the door and then move it to their lap on some heat proof surface. Seated cooks also have the option to use the other, lower oven at the buffet center. The oven controls are in the reach range of a cook using a power chair with an elevator on it. The oven controls are also remote controlled via an app on a cell phone.

View of microwave drawer installed below in-wall oven. This microwave drawer has touch controls that are easily reached by a

standing or seated cook. The drawer rolls out automatically into the reach space.

View of wall oven and microwave drawer in closed position.
View of kitchen: The wall cabinets are ceiling height. The lower shelves of each can be reached by a seated cook who uses a power wheelchair with an elevator on it.

There is also a pantry near the island that will accommodate items that need to be stored in the reach range of a seated cook, as an adaptation for lower storage space. The pantry has adjustable shelving installed for this use, should it become necessary.

View of pop up electrical socket embedded into a counter top near the front of the counter within easy reach range of a seated cook.

View of pop up electrical socket, ready for use.

View of easy release base cabinet hardware that allows for quick removal of base cabinet doors underneath both sinks and induction cooktop.

View of main kitchen sink, raised dishwasher and induction cooktop in line with each other for practical

View of main kitchen sink. Items underneath this sink are neatly stored in baskets so that if this space needs to be opened up for a seated cook they are easily removed. Raised dishwasher is to the left. A raised dishwasher is easily used by a seated cook, but incredibly convenient for a standing cook! It was designed to be

installed below a wall cabinet and removing dishes to store them in the cabinet above after washing is a dream come true!

View of raised dishwasher in open position.

Hidden pot rack that stores in a base cabinet near the induction cooktop. Works well for standing or seated cook but is located within easy reach of seated cook.

View of kitchen sink adjacent to deeper work sink. Work sink has a garbage disposal.

Matt May

Matt May is Adobe's head of inclusive design. His work includes integrating more equitable design practices across every aspect of the Adobe user experience, training and mentoring the Adobe Design team, and advocating principles of accessibility and inclusive design to the public at large. He lives in Seattle. Along with co-author Wendy Chisholm, Matt wrote Universal Design for Web Applications (O'Reilly, 2008), one of the first treatments of UD in the context of the web.

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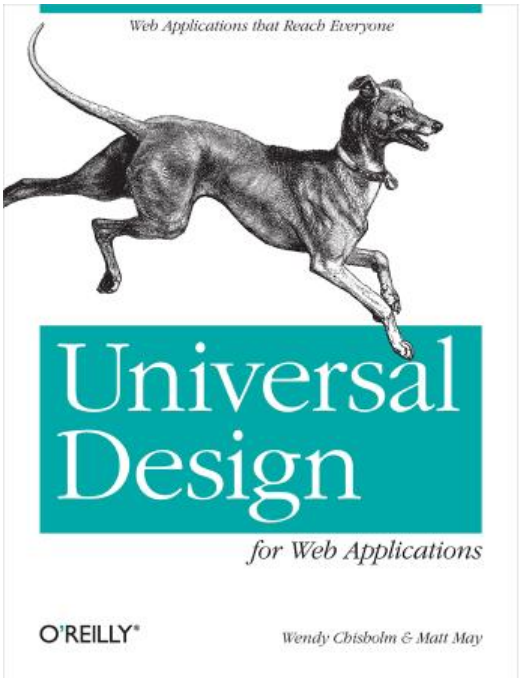
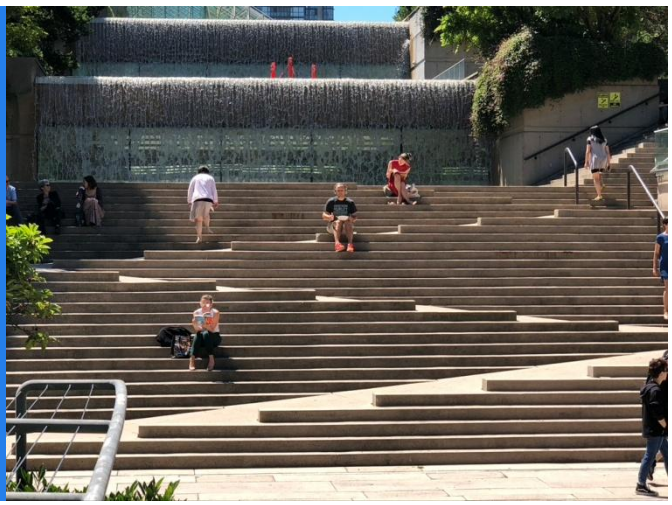
Building and Rebuilding

Matt May



I worked on authoring tool accessibility guidelines and user agent accessibility guidelines. I was on the web content accessibility guidelines working group. This culminated in a book that I wrote with Wendy Chisholm in 2008 called Universal Design for Web Applications. This was one of the early attempts on the tech side to take this idea of universal design, as expounded by Ron Mace in the 80s, and apply it to a non-physical object because we have some advantages to work with. We can change things around on the fly. We can offer people different experiences in the same space provided that we' re not marginalizing or ghettoizing one population versus others. We have a great deal of opportunity to build the world that we want when we're doing it in the digital space and we're not limited by pouring concrete.



Nothing tells me you haven't done your homework on inclusive design like highlighting the Robson Square stramp as a best practice.

It looks neat! Very #design. But as my friend and colleague Nicolas Steenhout has detailed, it's actively dangerous to people with mobility disabilities in a number of ways. https://lnkd.in/gw2U9cU highlighting something like this as "good design" does not constitute an inclusive design mindset.

Pushing back on efforts to retrofit public spaces like this because of their "architectural significance" is not consistent with inclusive design.

Responding to problematic designs like this with more equitable ones, and making sure this design isn't replicated reflexively, is a part of what an inclusive designer does.

(Side note: this was designed and built before built environment accessibility policies were popularized. We know better now. That's why we should be doing better.) #accessibility#Inclusive Design up.

PART OF A WHOLE

About Archives Contact

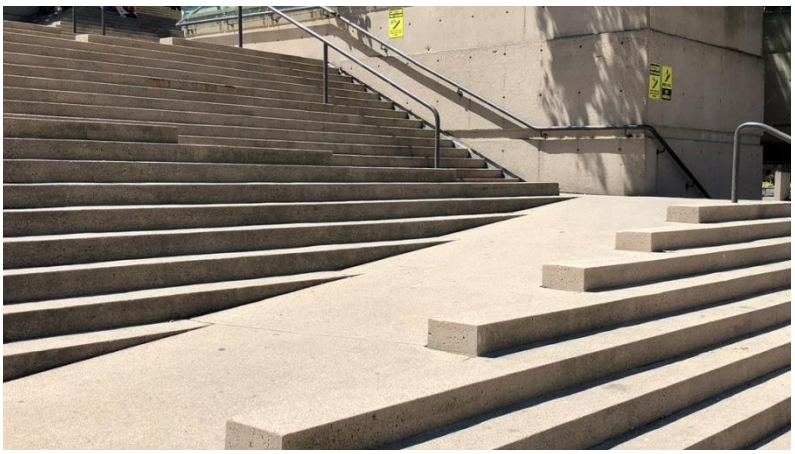
My name is Nicolas Steenhout. I speak, train, and consult about inclusion, accessibility and disability Listen to the ALLY Rules podcast.And become a patron on Patreon

THE PROBLEMS WITH RAMPS BLENDED INTO STAIRS

The idea of blending ramps and stairs together appears, on the surface, to be a great approach to universal design. It provides for visually appealing stairs while including a ramp. But the

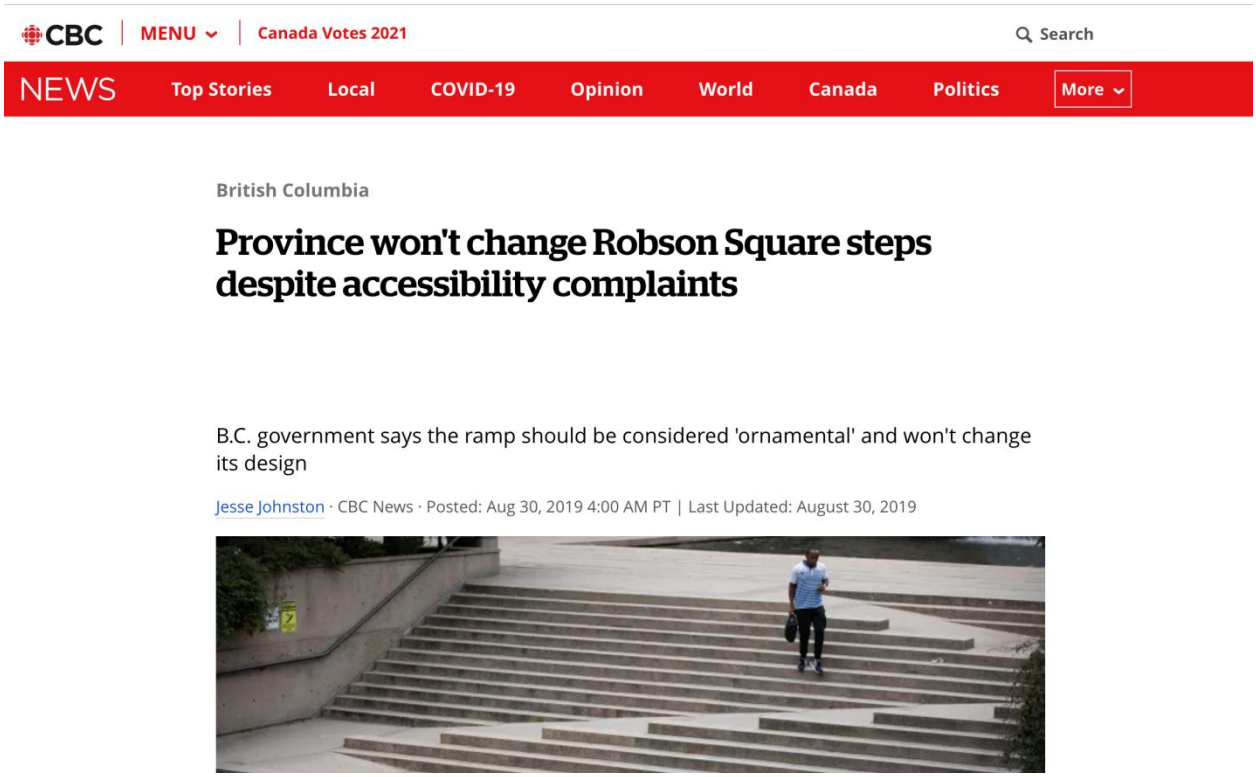
implementation of that idea leaves a lot to be desired from an accessibility and safety point of view.

A recent discussion on Twitter brought back the idea of beautiful inclusive design. Eric Wright suggested ramps blended into stairs and gave a link to a page listing 8 such designs. "@robert sinclair I'm a sucker for ramps blended into stairs: http://t.co/mvuz51N4Vp I especially like Robson Square in Vancouver -- Eric Wright (@ewaccess) March 6. 2014



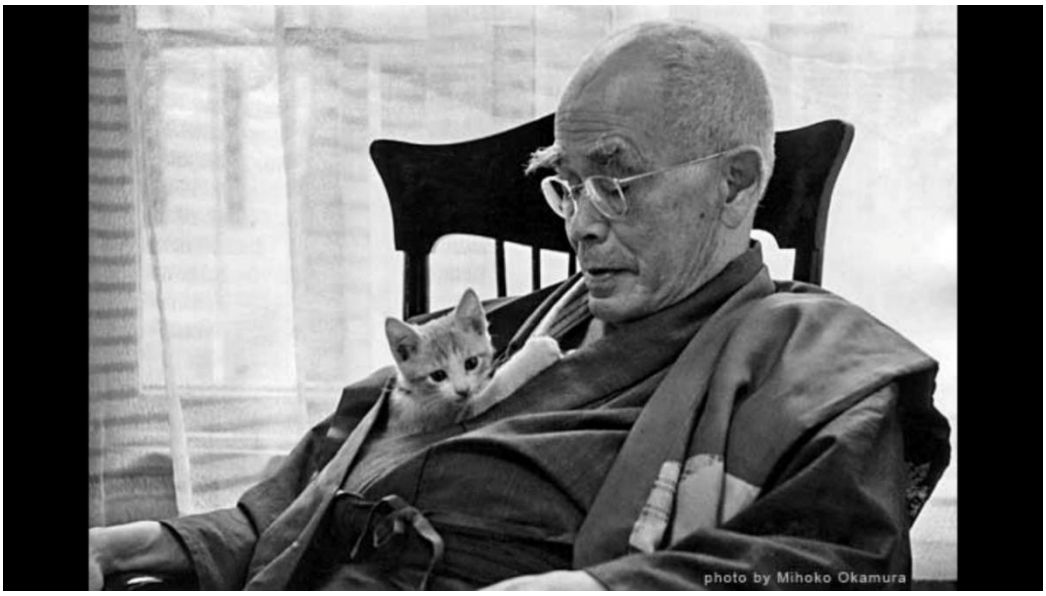
There are warning signs talking about the tripping hazard that exists in the design of this "Stramp". Lack of handrails along the slopes can be hazardous for people wheeling or walking with canes, walkers, or who have vestibular issues that could cause them to lose their balance while going up or down these steep slopes. This is not safe for blind or low vision people going up or down these slopes. No handrails, no color contrast, and no tactile information exists that would provide them warnings and safety.

Disability advocates found this design unsafe and were not included in the design phase of planning so they could share their ideas.



The Americans with Disabilities Act was signed into law in 1990.

Long before the ADA was passed, in 1977 people with disabilities 'sat in" the Federal Building in San Francisco for 21 days, protesting for the right to have access to public buildings, spaces, transportation, education, and anything that was created or built with federal funding. They were calling for implementation of regulations for the Rehabilitation Act of 1973, which was the first piece of antidiscrimination law that offered protection for people with disabilities in federally funded programs and projects. They put their lives on the line for the right to be integrated in our full society, which meant that design of spaces, places, products (and later, digital access) had to change to become universal so they could be included.



To point at the moon, a finger is needed; but woe to those who take the finger for the moon.
D.T. Suzuki, Essay in Zen Buddhism

W3 WCAG 2.1
Web Content Accessibility Guidlines

The ability to change font size on computers, phones, televisions, etc. makes it so much easier for people to read and be included. It was an early accommodation for deaf and hard of hearing people as well as people with low vision, but is useful to all of us!

Complaince:

" design that considers the full range of human deiversity with respect to ability, language, culture, gender, age and other forms of human differences."

Inclusive Design Research Centre , OCAD University.

We can't boil Good design down to a Single set of rules

We as designers cannot solve collective problems on our own.
We need to know more about everyone.
What makes us feel good is not necessarily good design
We have to follow lived experience wherever it leads us

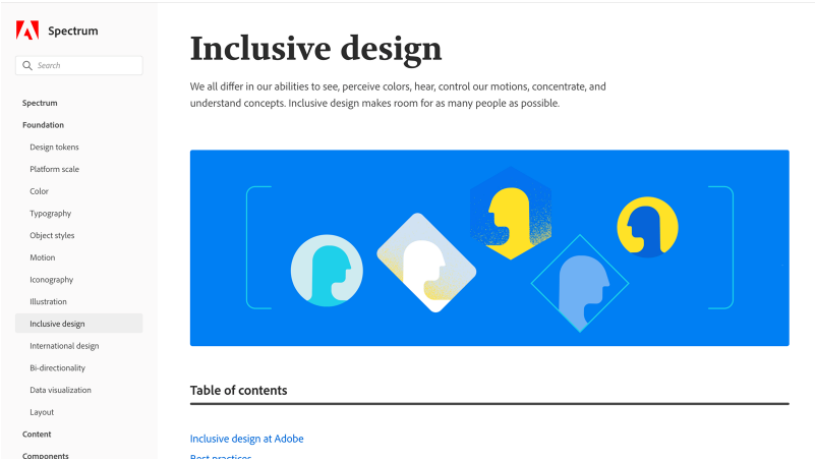
There isn't a process by which a good design will always come out.It's always fundamentally subjective and the only way that we get to where that's understandable, is by actually talking to a broad set of users and taking all of their concerns into account.

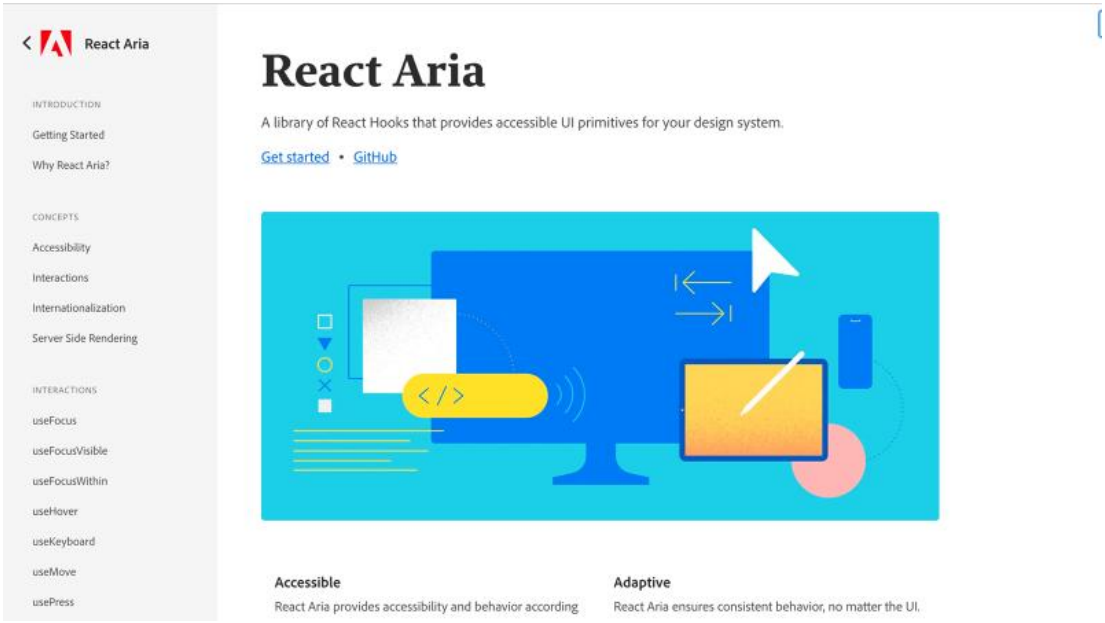
The people that have the most to give, in terms of information, are the people who have the greatest obstacles to the status quo. Inclusive design looks to the most marginalized people as having that information and by listening to them very closely you can get an idea. We as designers can't solve these collective problems on our own. We need to be able to say that we don't know. We have to stop thinking thatshowing that we don't know anything makes us vulnerable, or makes us not a good designer.

The research aspect of this has become one of the greatest priorities in the work that we are doing at Adobe. And it's because

we have to break a lot of the conventional wisdom and stereotyping of what constitutes disability and who it is that wants to be using our products. By reaching out to people -- that's how we get to that destination, because we need to know more about everyone.

Adobe Products for Inclusive Design




React Aria
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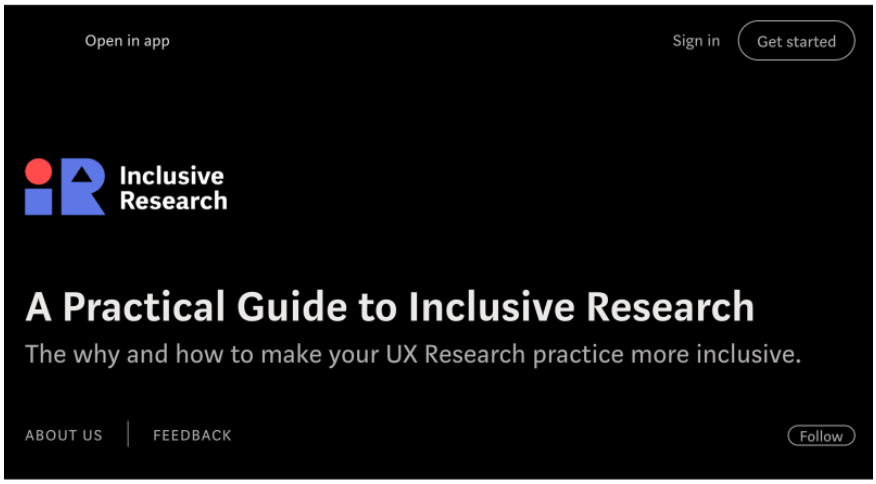
Interactions
Internationalization
Server Side Rendering
INTERACTIONS
useFocus
useFocusVisible
useFocusWithin
useHover
useKeyboard
useMove
usePress
React Aria
A library of React Hooks that provides accessible UI primitives for your design system.
Get started • GitHub
Accessible
React Aria provides accessibility and behavior according
Adaptive
React Aria ensures consistent behavior, no matter the UI.


Open in app
Sign in
Get started
Inclusive Research
A Practical Guide to Inclusive Research
The why and how to make your UX Research practice more inclusive.
ABOUT US
FEEDBACK
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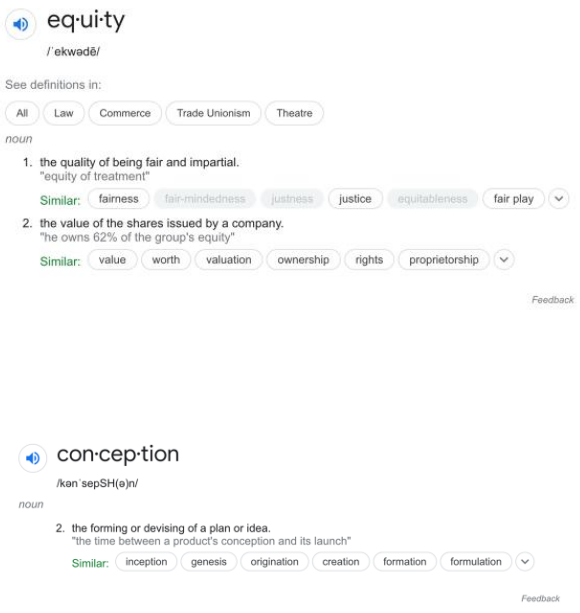
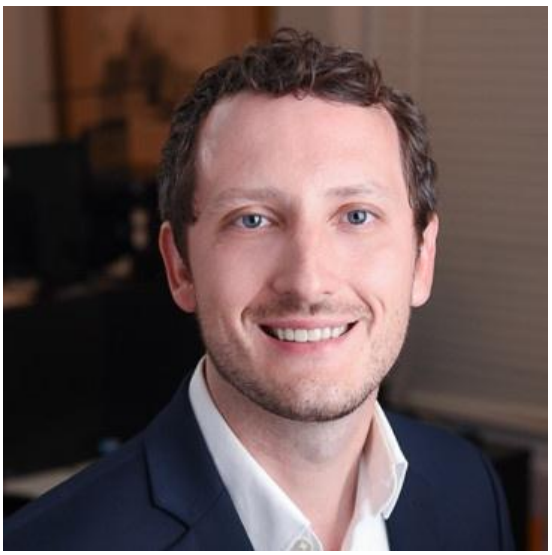

eq·ui·ty
/ˈekwədē/
See definitions in:
All
Law
Commerce
Trade Unionism
Theatre
noun
1. the quality of being fair and impartial.
"equity of treatment"
Similar: fairness fair-mindedness justness justice equitableness fair play
2. the value of the shares issued by a company.
"he owns 62% of the group's equity"
Similar: value worth valuation ownership rights proprietorship
Feedback

con·cep·tion
/kənˈsepSH(ə)n/
noun
2. the forming or devising of a plan or idea.
"the time between a product's conception and its launch"
Similar: inception genesis origination creation formation formulation
Feedback



Clarence D. Olsen, AA, NCARB

Cohen Hilberry Architects - St. Louis, MO

Olsen is a licensed architect with an extensive background in accessible and inclusive design. As Senior Project Architect, Mr. Olsen facilitates a client-focused approach, tailoring architectural solutions to each client's unique needs. His residential portfolio includes design for new construction homes and multi-family projects, as well as historic restoration, single-family renovation, and custom interiors. He has completed numerous projects for owners, developers, municipalities, and government agencies related to improving the built environment and removing barriers to access. FHA, ADA, and ABA consulting and design services include survey work, transition planning, architectural design, construction administration, and remediation assessment.

ISSN: **2582-8304**

LESSONS IN UNIVERSAL DESIGN AND THE Al-IC

Clarence D. Olsen, AA, NCARB

Cohen Hilberry Architects - St. Louis, MO

Objectives

What is the AHC? Importance of Universal Design in housing.

Context - Siting, Architectural Features,

Concepts-Working with UD Consultant: Schematic Design

Construction Phase: Issues in the Field

Completed Projects

Conclusions

Why Universal Design

At its very core, universal design in a residential setting is about multigenerational design. We are designing homes for a range of family stages. Universal design considers then needs of current and future inhabitants including; safety, durrability, movement capabilities, age, strength, and cognitive ability.

Goals of Affordable Housing Commission

Providing better housing that meets the minimum Universal

Design Guidelines Remove barriers to home ownership. Provide quality building construction with less waste, more efficiency. Revitalize decaying urban communities. Maintain historic fabric.

Universal Design Guidelines

Overview

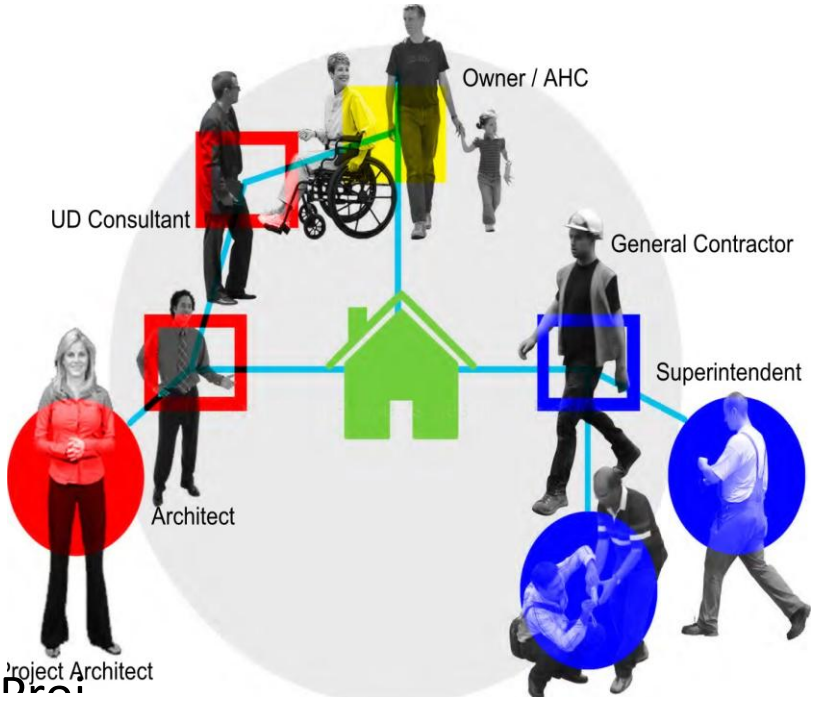
Chl : Application and Administration

Ch2: Scoping & Technical Requirements Site and Building

Ch3: Scoping & Technical Requirements

Specific Elements and Spaces

"A universal house begins with three essential components: a step-less entry, wider doors and halls, and a usable bathroom. Without them, no dwelling can be considered universal. Conversely, a home with only those three features isn't universal either. In addition to the Basic 3, a universal home includes a variety of otherfeatures that provide convenience, safety, and ease of use. The combination produces a universal home." (Center for Universal Design, 2000). Sphere of Influence



Sub-Contractors

City Staging and Urban Infill

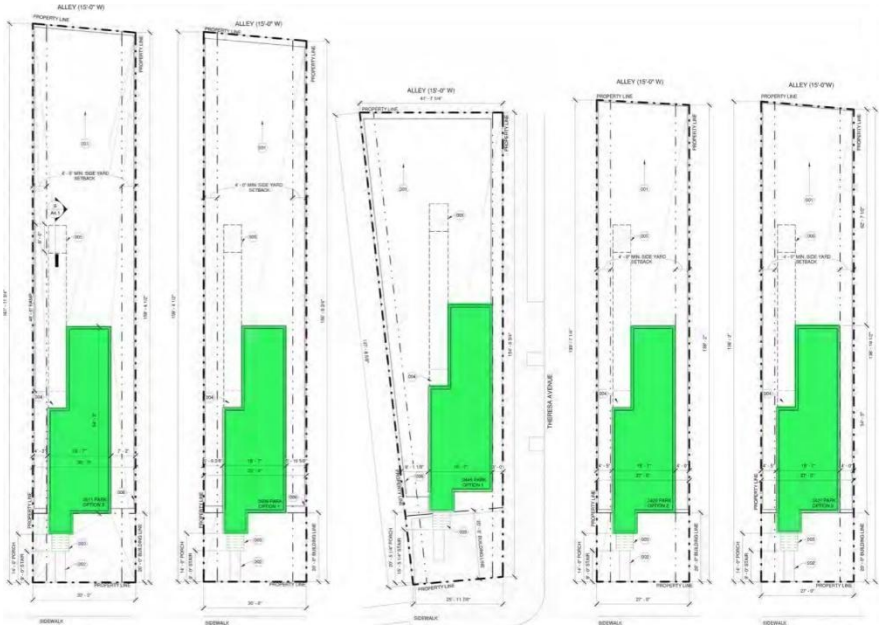
Important Characteristics Include: -Numerous open lots within close proximity.

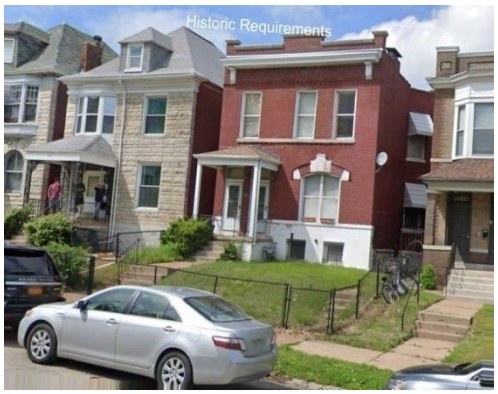
-Access to safe and walkable neighborhood.

- Public transportation

Nearby. -Cohesive Project Identity.

Restrictive Property Dimensions





Historic Character Challenges

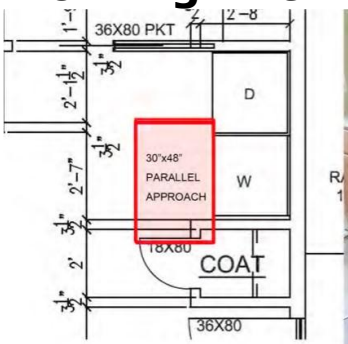
-Raised / Covered Porch

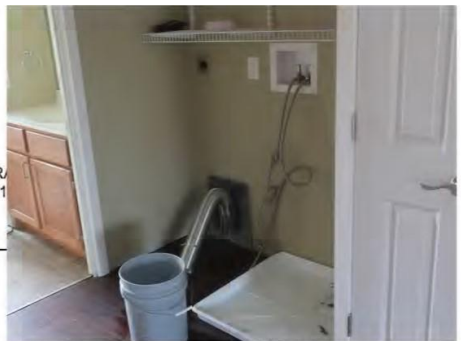
-Window Proportions

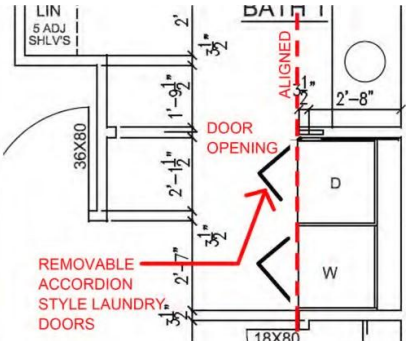
-Facade Materials

-Roof Shape

Working With UD Consultant







Timeliness, coordinated effort, and willing to listen are imperative to a successful outcome.

-Schematic Design Review

-Construction Documentation Review

-Project Administration Through Construction

-Final Punch List Approval

COHEN ARCHITECTS 3701 UNOELtnvo ST LOUtSM06310S TEL 314-367-83«» OFFICE@COHENHILBERRY.COM

Universal Design Check List

PROJECT ADDRESS●

_____

DESIGN ARCHITECT●-Design Phase Checklist

_____

REVIEW DATE●

_____

REVIEWER●

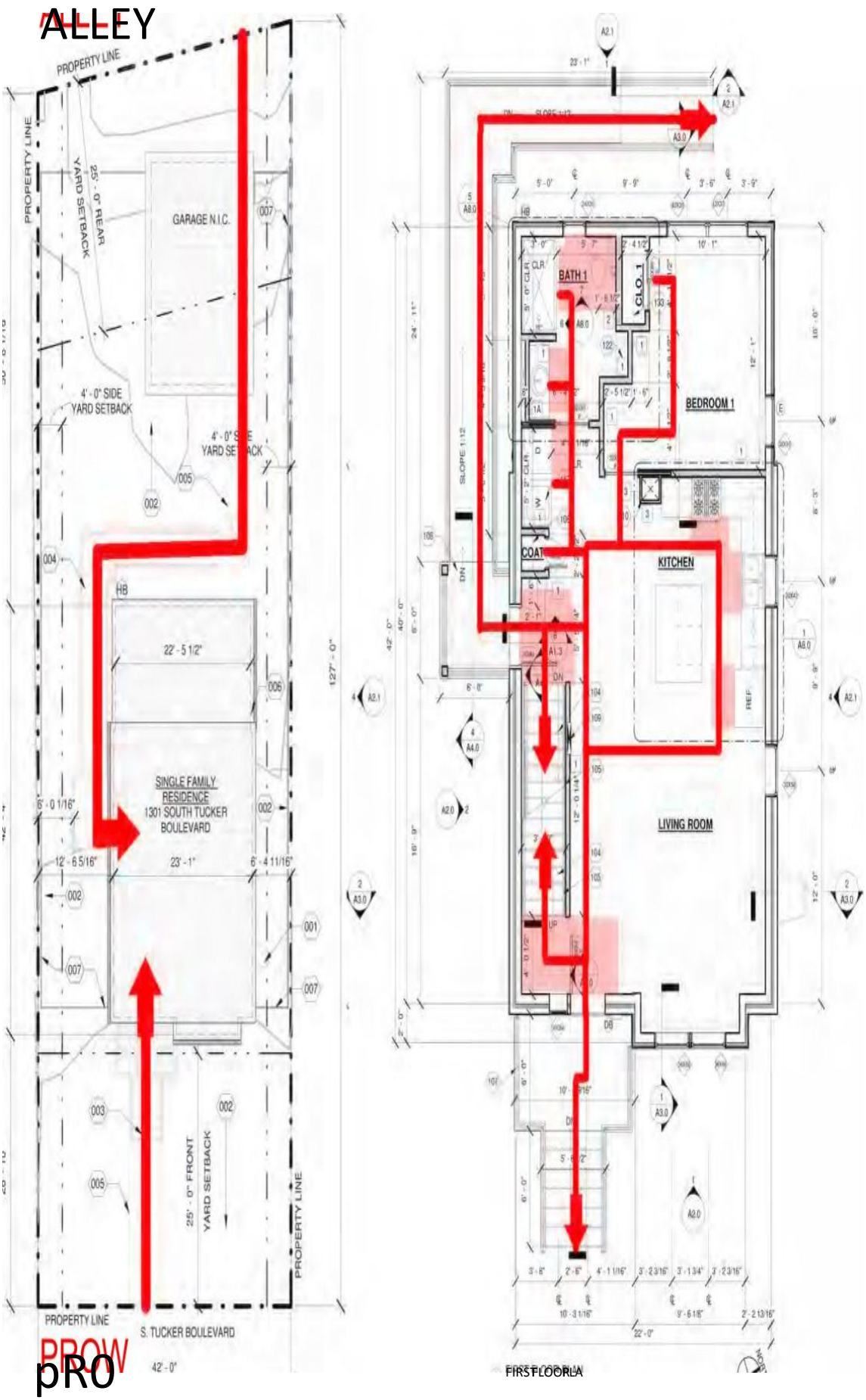
_____

The following checklist is designed to verify universal design requirements during the design phase of a project.

DESIGN PHASE

DESCRIPTION	***YES***	***NO***
Route:		
Provide at least one accessible route from vehicle drop-off (street) to entry door complying with accessible pathways requirement. The accessible route must extend to the public sidewalk (if any). Sec 202.1		
Provide at least one accessible route from parking area(s) to entry door complying with accessible pathways requirement. Sec 202.1		
Pathway:		
All sidewalks and accessible routes must have maximum 1:20 running slopes and maximum 1:50 cross slopes. Surface to be firm, slip-resistant and smooth.		

Provide minimum pathway width of 42". Sec 202.2		
Parking:		
Provide space for at least one accessible parking space serving this site and connected to the accessible route. The accessible space may be on the street. Signs and striping are not required. The intent of this requirement is to make sure that the space can be provided in the future without requiring additional grading, paving, or curbing. If the project is large enough to trigger accessible parking requirements, provide spaces, signage and striping per City of St. Louis Building Code and ANSI All 7.1 requirements. Sec 202.3		
Parking Location - Parking designated for the dwelling should be as close as possible to the house/unit entry and at the same basic level. The intent is to reduce or eliminate any need for residents to negotiate unassisted vertical transitions (ramps etc.) between parking and entry. Multi-level buildings with elevator service to the parking and entry level(s) are acceptable. Sec 202.3.1		
Parking Space Dimensions (Exterior Covered and Garage) - Provide a 9' x 19' minimum area for the vehicle with a minimum 5' access aisle on one side (14'x19' total). Space and aisle to have a maximum 2% cross slope in all directions. Surface must be paved, firm, slip-resistant and smooth. Striping is not required for aisle at single rking spaces. Sec 2023.2		



-Egress

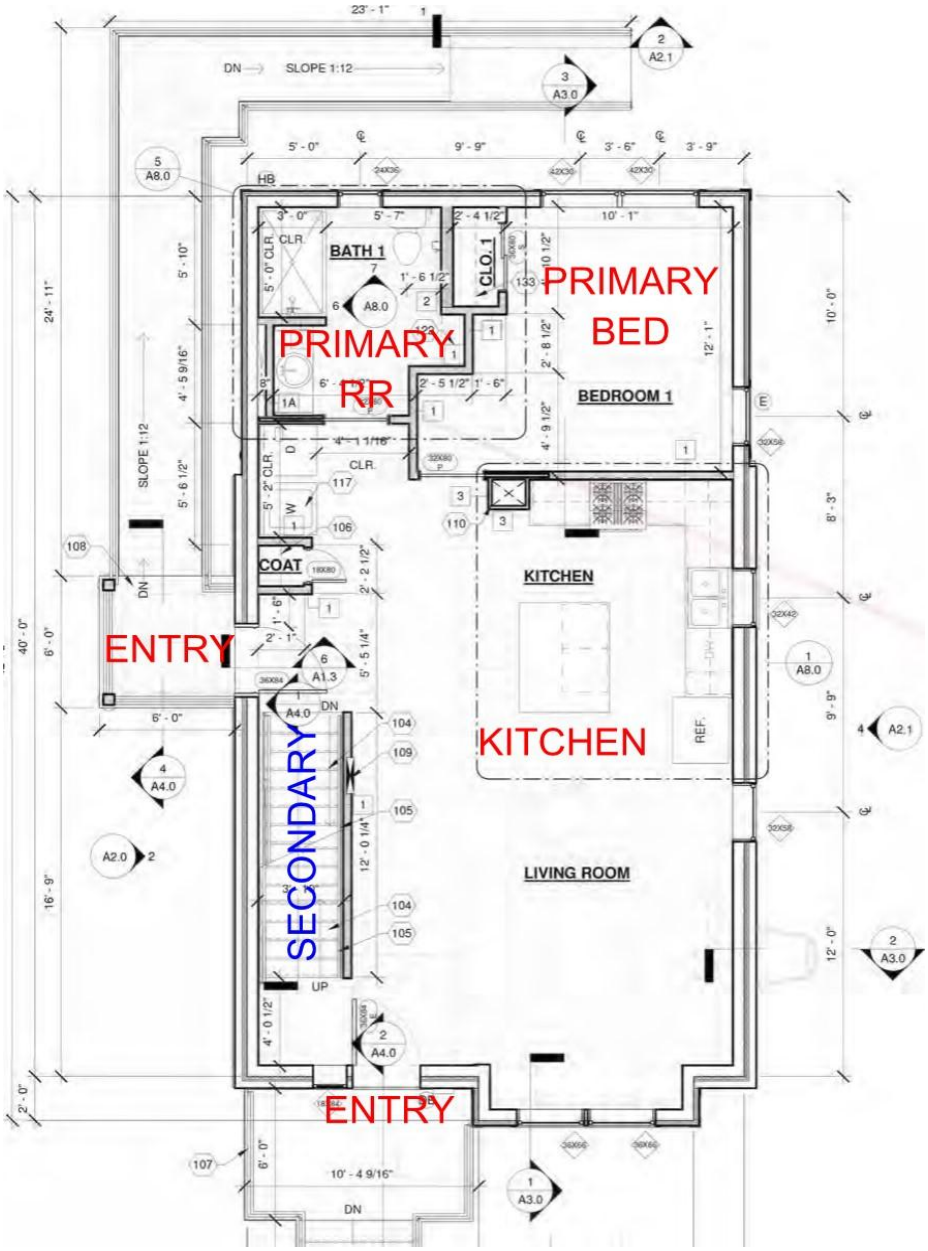
-

-CleaApproach

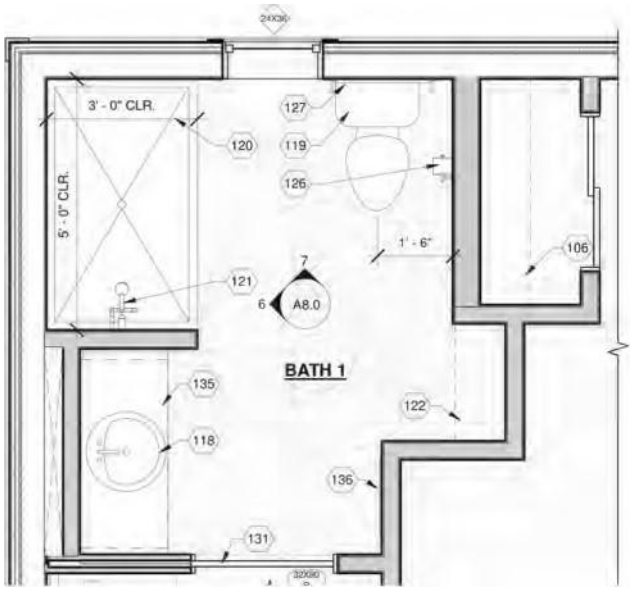
-

Unique UD Features

-Additional space requirements. -Minimum clearances. -Closet Depths and Door Widths. -Appliance and Island



Spacing. -Sinks with approach.



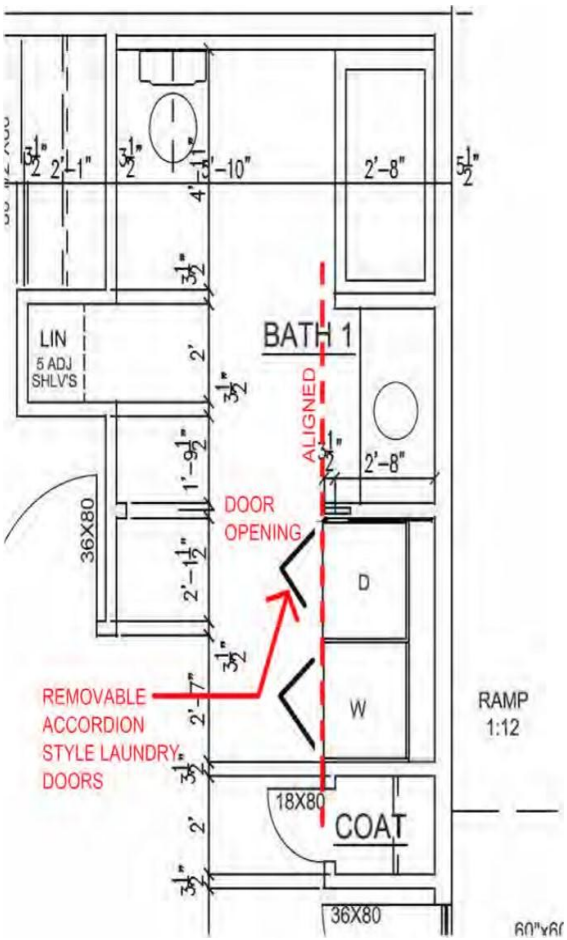
PRIMARY RR

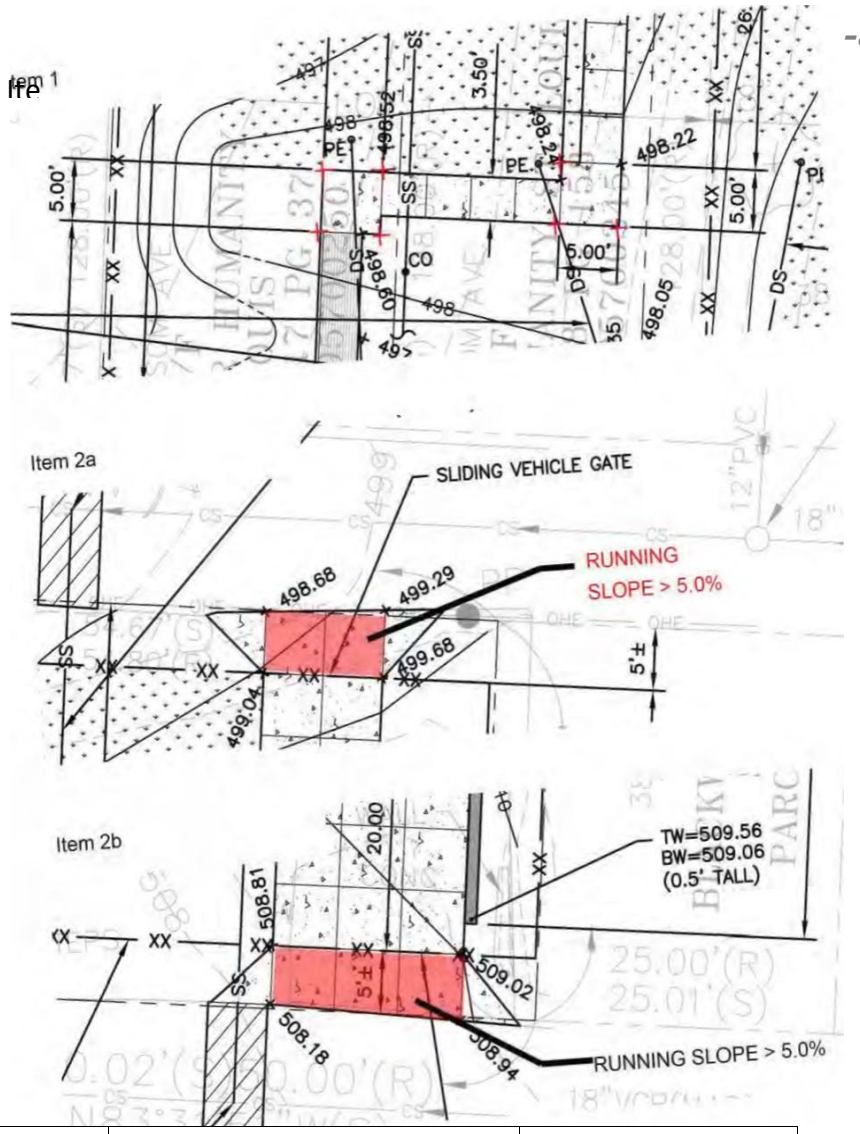
Feedback Commentary

- Highlight Design issue

Provide Solution

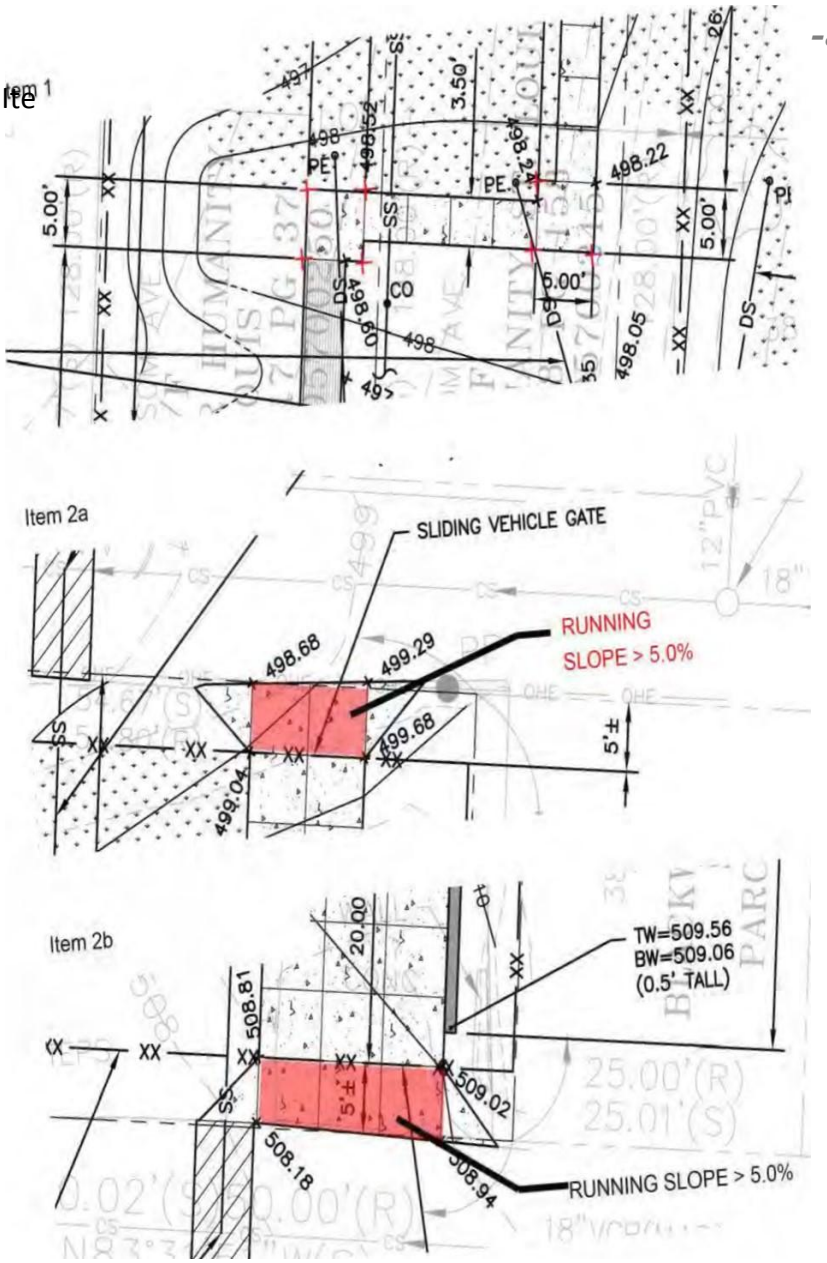
- Graphic and Written Response





Tiffany II Residence Habitat For Humanity Date Issued: 4/3/2018	***Sheet A-I PLANS Enclosing Laundry Area***	***Cohen Hilberry Architects (314) 367-8300 4941 McPherson Ave. st Louis. MO 63108***

-Specific Site Issues



-Slopes
Continous Routes

Comments:

I. The concrete pathways leading to the parking and the parking pad are all compliant, but there are a few missing grade points at the maneuvering landings. You may want to consider adding points at each corner of the concrete slabs to ensure you meet the 2.0% cross slope in both directions when it is poured. See attached.

2.	***There is an issue with the running slope of the concrete pads between the parking area and the alley. The running slope is greater than 5.0% on the 3846 and 3861 Folsom properties. This is an issue for residents to take their trash to the alley dumpster. This may require regrading the site to reduce the running slope to an acceptable tolerance. See attached. 203.4 Trash. Provide an accessible route to trash containers or trash drop-off area.***	***-Project tracking for future reference.***
3.	***The accessible ramps serving the home should state that the cross slope cannot exceed 2.0%. The ramp top landing should state that cross slope 2.0% both directions. I do not think this is an issue with the design but the information would be helpful to see.***	
4.	***House numbers are not indicated on the elevations. Please verify that they will be provided at front and back of home, 4.0" minimum height letters with 70% color contrast to background,***	
5.	***I see a keyed note on the elevations #20 for the ramp describing the decking. Please confirm that decking with have gaps no larger than k".***	
6.	***Please confirm the location of the mailbox.***	
7.	***Primary entry door does not provide a sidelight. I am considering the main door to***	

the front porch the primary door in this situation.

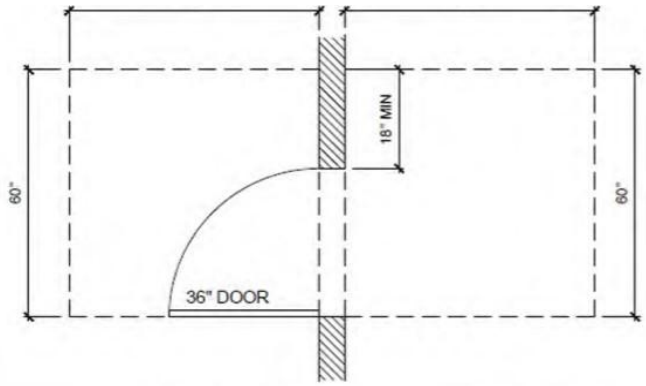
8. ***Please confirm that the metal threshold on each exterior door is maximum 1/2" high with bevel or W' high with squared edge.***
9. ***Please confirm internally illuminated doorbell provided that is wired to allow retrofit of visible interior signal. I am considering the main door to the front porch the primary door in this situation.***
10. ***The inside of the side entrance door does not***
11. ***provide 60"x60" clear floor space. See attached.***

Please confirm that lighting is provided at each exterior entrance door.

302.1.9.1 Lighting. Provide outdoor lighting either in porch roof/ceiling or with a sconce mounted on the latch Side of the door. Minimum 100 watt capacity fixture.

12. ***Verify adjustable shelf supports extending from floor to ceiling provided in accessible bedroom closet(1 st floor), Verify blocking provided for shelving and rod supports in other bedroom closets.***
13. ***Please confirm window sill heights.***
14. ***Please confirm cabinetry pull style / door hardware style.***
15. ***Linen closet on second floor is too deep for the size of door. Please reduce this closet to 24.0" interior depth maximum. See attached.***

302.1.7 Clear floor space. Provide 5' x 5' maneuvering space inside and outside of entry door. At the exterior side of the door, provide a full turning circle (60" radius) of level space clear of the door swing. See illustration 302a.



302a Approach areas for primary no-step entry

Entrance door and critical Approch

303.6 Interior and exterior stairs (if provided). Comply with the following:Staircase

303.9.1Maximum riser height: 7". minimum tread depth 11".

303.92 Provide handrails on both sides. Extend rails 12" beyond top and bottom risers and parallel to floor. Return rails to wall or newel.-Riser Heights

303.9.3 Minimum width: 42"

303.94Minimum landings: 48" deep-Power

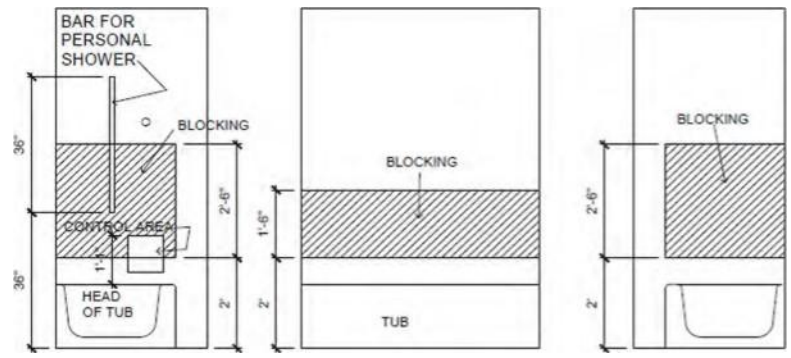
3039.5 Rough-in power for future lift.

305.1.7 Shower. Provide personal shower unit on 30" minimum slide bar. Include shower head with cut off thumb control at head. Provide minimum 60" long hose.

Primary Restroom

-Fixtures

-Controls



305b Tub blocking and controls

Construction Observation

Important milestones for field observations:

-Foundation Pour (15%)

-Rough Framing (45%)

-Drywall (80%)

-Final Walkthrough (95%

Observation phase

1. **Foundation**

2. Rough Framing

DESCRIPTION	YES	NO
Primary Entry:		
Door— Minimum 36" wide. (Pivot). Sec 302.11		
Threshold — 1/2" beveled threshold or 1/4" squared edged. Sec 302.1.3		
Doorbell — Internally illuminated doorbell, Wired to allow retro fit of Visible internal Signal. Mount doorbell 36" above level landing outside door. Sec302.1.4		
Clear Floor Space — 5' x 5' maneuverable space inside and outside of entry door. Sec 302.1.7		
Covered Entryway — Shelter entry from weather with an overhang. sec 302.1.10		
Secondary Exterior Doors:		
Door - Minimum 36" wide. Sec 302.2.1		
Clear Floor Space — 5' x 5' maneuvering space on the pull side(s) of the door and a minimum of 36" x 48" approach on the push side. 302.2.2		
Interior Doors:		
Door - Minimum 32" wide clear opening. Sec 303.11		
Threshold — 1/2" maximum threshold. Sec 302.1.3		
Interior and Exterior Stairs (If Provided):		
Max. riser height 7", minimum tread depth 11", minimum width 42". Sec 303.9.1		
Handrails both sides. Extend rails 12" beyond top and bottom risers and parallel to floor. Return rails to wail or newel. Sec 303-9.2		
Minimum landing depth 48". Sec 303.9.4		
Rough-in power for future lift. Sec 303.9.S		
Hallways:		
Minimum 42" wide hallways. (finished). Sec 303.2		
Windows:		
Sill Height 32" max. above finish floor (except over casework). Sec 3036.1		
Window locks within reach range. Sec 303.6.3		
Kitchen:		

Sink:		
Piping — Insulate sink pipes. Sec 304.22		
Counter:		
Workspace — Include a section of adjustable counter surface with knee space below; or space for a free —standing 24" x 36" table while maintaining required clearances. Sec 304.3.2		
Kitchen Storage —50% of the storage space within reach range. Sec 304.5		
Primary Bathroom:		
Clearance— Clear turning circle or T-turn. Sec 305.1		
Phone — Provide phone jack. Sec 305.1.1		
Toilet — Locate 18" to center off a sidewall in a clear space minimum 48" wide, 60" deep. sec 3051.2		
Tub — (If provided). Provide a clear 30" x 48" approach space aligned with side of tub. sec 305.1.4		

CONSTRUCTION PHASE (PRE-DRYWALL)

-Pre-Drywall Checklist

Observation Phase 3+: Drywall and Final Punch List

The following checklists are designed to aid in verifying universal design construction tolerances and other requirements in Substantial Completion phase of a project.

END OF CONSTRUCTION PHASE (SUBSTANTIAL COMPLETION)

DESCRIPTION	YES	NO
Ramp Inspection. Slopes and Handrails		
Accessible Route Inspection. Slopes		
Parking Inspection, Slopes		
Hand Rail — Interior		
Hand Rail - Exterior		
Doors 32" Clear		
Window Hardware		
Door Hardware		
Mail Box		
Peep Holes / Sidelight		
House Numbers Front and Back		
DESCRIPTION	**YES**	**NO**
Ramp Inspection. Slopes and Handrails		
Accessible Route Inspection. Slopes		
Parking Inspection, Slopes		
Hand Rail — Interior		
Hand Rail - Exterior		
Doors 32" Clear		
Window Hardware		
Door Hardware		
Mail Box		
Peep Holes / Sidelight		
House Numbers Front and Back		

DESCRIPTION	YES	NO
Primary Entry:		
Closer— (If provided): Closer must comply with current ANSI standards for closing speed and force (see ANSI Al 17.1 1989, 404.2.8-9). Sec 302.1.5		
Doorbell — Internally illuminated doorbell. Sec 302.1.4		
Front Door— Sidelight or double peepholes. Sec 302.1.2		
Exterior Lighting:		
Entry Door Lighting — Provide a fixture with a minimum of 100 watt capacity. Sec 302.1.9		
Hardware, Fixtures and Fittings:		
Hardware, Fixtures and Fittings — All door hardware, cabinet hardware, faucets, bath and shower valves, diverts and similar items are to be lever and/or Wire handle or D-pull (loop) type. All such items must operate easily using a single closed fist. Exception●. Panel box and HVAC filter access panel, sec 301.9		
Floor Surfaces;		
Use non-slip and dense surface materials. Do not use pads under carpeting. Sec 303.3		
1/2" max. beveled threshold condition between flooring material changes. Sec 303,1.3		
Full Length Mirror:		
ProVide at least one full length mirror in the bedroom and/or bathroom(s) that connect to the accessible route. Sec 303.5		

Anatomy of a UD Kitchen

PANTRY WITH

REACH RANGE -re SWITCH FOB... MOVABLE SHELVING

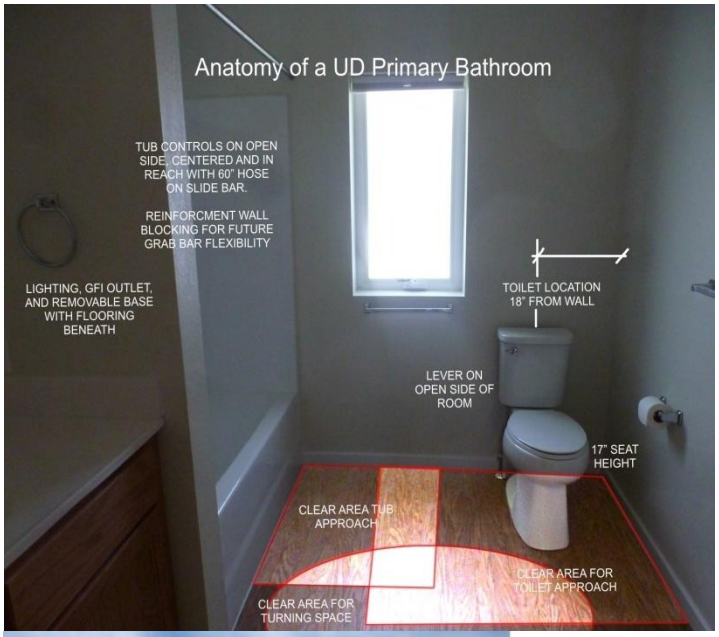
CFI OUTLETS EXHAUST OR MORE

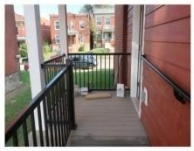
STORAGE IN REACH RANGE

SHALLOW BOWL AND LEVER FAUCET

REMOVABLE SINK BASE WITH FINISHEDFLOOR BENEATH

SPACE FOR DININGAND MEAL PREP





REFRIGERATOR WITHWATER LINE

DISH WASHERCLEARANCE

William Leddy, FAIA

William Leddy, FAIA, is a Founding Principal of San Francisco-based LEDDY MAYTUM STACY Architects (LMS^{A}), the 2017 recipient of the national American Institute of Architects Firm Award. For over 20 years, Leddy and his firm have focused on Mission Driven Design, working with non-profit environmental, educational, affordable housing and social justice organizations to serve their unique missions through innovative design thinking. Their practice is founded upon the belief that architecture is for everyone - that every work of architecture has a profound responsibility to reach beyond its property lines to address the larger challenges our communities face: climate change and resilience; equity and inclusion; housing the underhoused and celebrating the rich diversity of the human condition. Leddy has lectured nationally and internationally on the topics of Universal Design and equity in architecture. He has served as visiting professor at the Southern California Institute of Architecture and the California College of the Arts,as the Howard A. Friedman Visiting Professor at the University of California, Berkeley, and the Pietro Belluschi Distinguished Visiting Professor at the University

of Oregon. A past Chair of the national AIA Committee on the Environment (2013), he currently serves as the AIA California Vice President for Climate Action and Chair of the AIA CA Committee on the Environment.

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Equity and Grace in Architecture

William Leddy, FAIA

Everyone deserves Good design

So our firm serves the underserved: unhoused individuals seeking a new start; seniors suffering from AIDS and at risk of homelessness; veterans struggling to find shelter and peace; adults living on the autism spectrum who want independent lives; students preparing themselves for a challenging future; and people with disabilities who all deserve dignified, inspiring spaces in their communities.

Who we serve

- ***Permanent homes for the formerly homeless***

But everyone also deserves dignified, safe, and healthy homes…..

- ***Schools as a model for a low –carbon future***

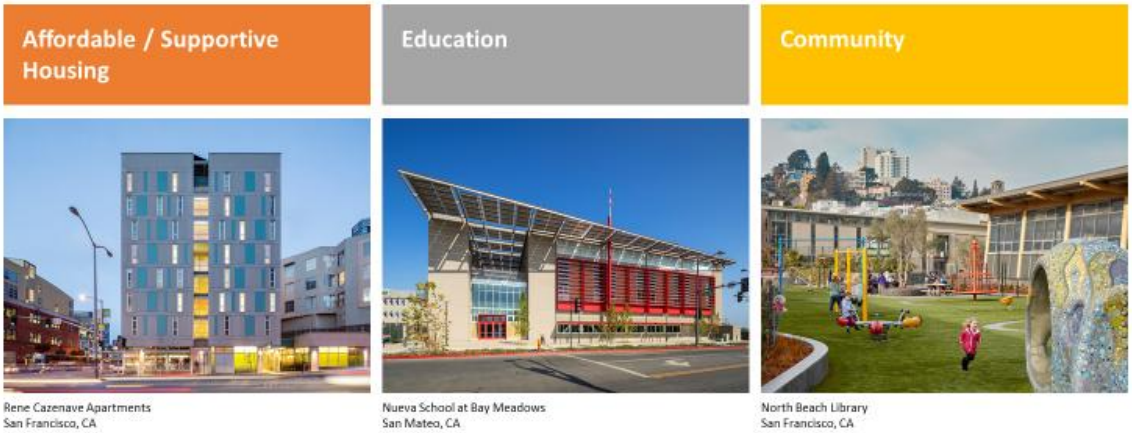
Schools as a model for a low –carbon future

And an education in learning environments that prepare students for a rapidly changing world.

- **Design with purpose**

This is "design with purpose" – we work to design every building beyond it's property lines to address some of our society's biggest challenges

Mission- Driven Design



As a result, we focus on what we call "mission driven design" – working exclusively with non-profit organizations in three areas: affordable/supportive housing, innovative zero-carbon educational environments, and community centers, primarily for low-income communities. We create high performance, healthy, resilient and Universally Designed environments – all on tight budgets.

Our Broader Context

Let's talk about the context within which we all reside: It will come as no surprise to any of you that we live in a time of unprecedented change and challenge…..

Climate Emergency

…..a rapidly advancing climate emergency – one of the greatest existential threats to our species (and to all living things) in a thousand years….

…. a global pandemic that has sickened over 277M and killed 4.8M individuals worldwide so far….

Black Lives Matter

….. festering racial and ethnic injustice that we witness and experience every day…

….chronic homelessness - with over 580K American citizens living on the streets of our nation….

THEN: Ed Roberts, 1960's

NOW: Still protesting….

…. **and persistent inequity for people with disabilities**

- ***These should not be seen as discrete phenomena – they're all inextricably linked – a combined ecological/societal emergency that cries out for as many creative, integrated solutions as we can collectively produce.***
- ***Successfully addressing these challenges together will allow current and future generations to continue to dwell and prosper on this planet.***
- ***In this pivotal time, architects have an important role to play.***

- ***We must become creative agents of change, providing the vision and skill to lead our communities toward an equitable, climate-positive future for all.***

Equity in Architecture

- ***Equity is a foundational element in constructing that preferred future***
- ***But, despite the robust national discussion around equity, diversity and inclusion, a wide gulf of understanding still remains between prevailing architectural design values and the making of environments that truly welcome everyone.***
- ***Bridging this gulf requires more than a broader familiarity with the principles and details of Universal Design. It requires that we evolve our shared design ethos to creatively embrace equity and grace as essential elements of best practice in architectural design.***
- ***Much like sustainable design, embedding the values of equity, diversity and inclusion in our built environment requires that we take an integrated design approach.***
- ***Incorporating a few isolated Universal Design strategies in our buildings isn't enough – although that would certainly be a good start. Instead, architecture in our pluralistic society should fully integrate the spirit of access for everyone, regardless of ability, race, ethnicity, age, or gender identity.***

Design dialogue: Seeking Diverse voices

- ***It starts by actively engaging diverse voices throughout the design process, and proceeds with an abiding curiosity, empathy, and respect.***

- ***It ends with the creation of flexible, inspiring environments that warmly welcome all, and celebrate the rich diversity of the human condition.***
- ***We organize extensive community outreach – facilitate design workshops – report back – engage key stakeholders throughout construction***

Continuous Feedback Loop+ post Occupancy Evaluation

Early design
Student & stakeholder surveys, programming and spatial feedback

Design documents
Material selection, chemical sensitivity feedback, VR & daylight simulations

Construction phase
Mock-ups for texture testing

Post Occupancy
Comfort and satisfaction surveys for fine tuning solutions

Empathic Design : working to understand diverse experinces

- ***In the end, universal ideals become personal. When designing for any community, it's important to find an***

empathetic path to the heart of their values, needs and aspirations.

- ***While working on the Ed Roberts Campus, we were inspired by many of the folks we worked with, but none more so than Jan Garrett. She was then the President of the ERC – an attorney and charismatic disabled rights activist who happened to have been born without arms or legs.***
- ***As we were designing the building – the largest, most public application of Universal Design thinking at the time – we would often ask ourselves: what would Jan think? How could we design a building that would allow Jan to arrive after hours, let herself in, go to her office, complete her work, and go home, all without any assistance from others?***
- ***We would always engage her and many others in the final solutions, but for us, this initial question formed the foundation of our approach to Universal Design. It should really form the foundation of ALL design.***
- ***What would Jan think?***

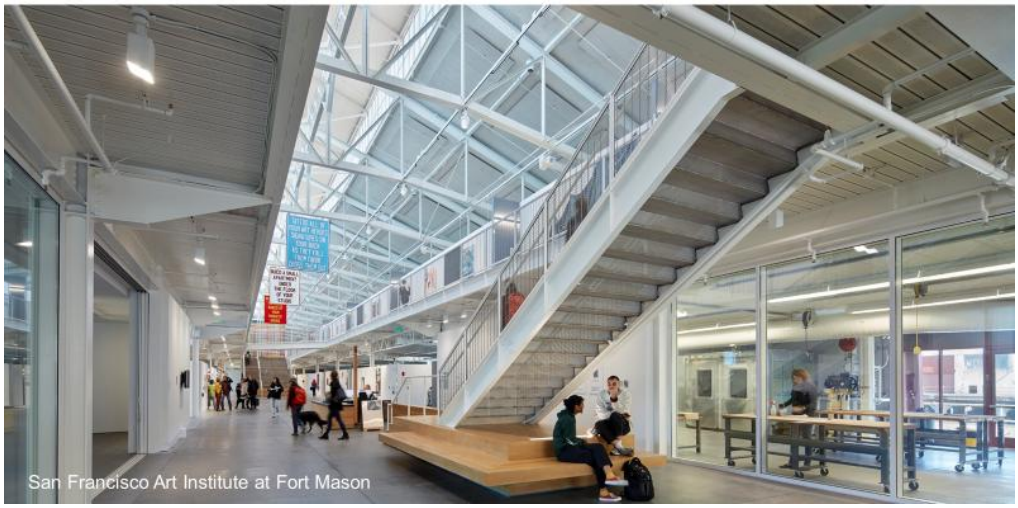
Dueling Disabilities: mitigating conflict needs

Support dogs present challenges for those sensitive to dander or pest treatments

Floor textures for people with low vision can be disruptive for wheelchair riders

- ***We've discovered that Universal Design isn't exactly universal. What might work for one community might not work so well for another.***
- ***Heavy floor textures designed to provide wayfinding for people with low vision can also become uncomfortable obstacles to wheelchair riders.***
- ***Support dogs present challenges for those allergic to dogs or their chemical pest treatments.***
- ***Navigating through these conflicting needs is part of the challenge of access for everyone.***

Adaptability: Design for Long life, loose fit



- ***"Long life, loose fit is a key sustainable design strategy, but it also makes sense when designing for all.***
- ***No one can fully anticipate the future - a good building adapts easily to changing needs of both program and people.***
- ***It offers flexibility of use: rooms that can be easily reconfigured and flexibility of space: spaces that can be readily expanded or reduced***
- ***The pandemic is a prime example of unforeseen conditions that demand spatial responses***

Post Occupancy Evaluation: Documenting lessons learned

- ***Post-occupancy Evaluations for Permanent Supportive Housing***
- ***Community Housing partnership POE***
- ***Community Housing Partnership POE***

Universal Design and Health Well –being
Arrival: Communicating inclusivity

Arrival: communicating inclusivity

This is another model…..

Acoustics: a welcoming acoustical environments

The acoustical environment is particularly important for people with hearing and sight loss. Here….

Serenity: moments of quiet are good for everyonet

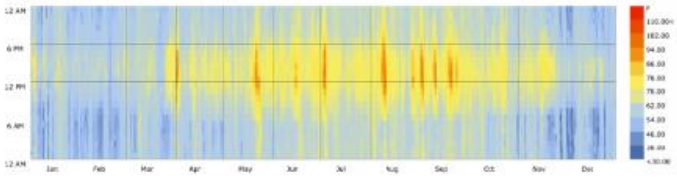
The renowned Mexican architect Luis Barragan famously said "Any work of architecture that does not express serenity is a mistake." While that might be as slight over statement, it's not by much People on the autism spectrum require environments that offer low sensory stimulation – but I think we could all use more of that!

Health: Super clean indoor air quality

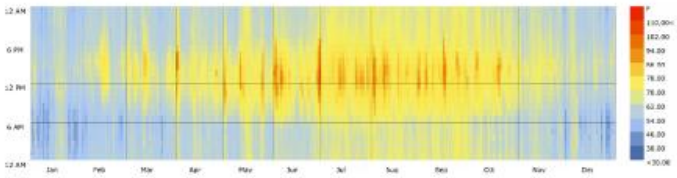
- ***Non-toxic materials/IAQ program***
- ***Filtered fresh air***
- ***Green cleaning program***
- ***Smoke and fragrance free environment***
- ***HEPA filtered mechanical system***
- ***Air Quality test: 50-100% better than LEED IAQ standard***

Climate Change: Greater impacts on people with Disabilities

Annual Bay Area temperature: 2020



Projected Bay Area temperature: 2050

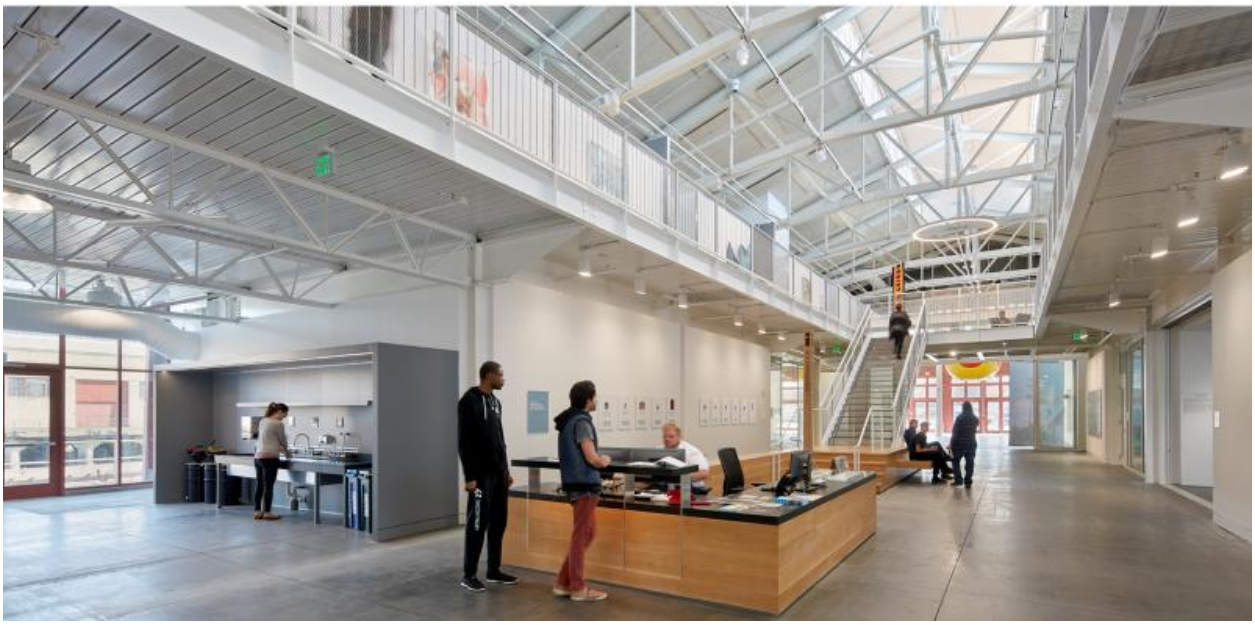


Extreme Weather Threatens People With Disabilities

"Those with disabilities can experience more physical impacts and can be more socially isolated than the able-bodied"

Scientific American, 9/18/2019

- ***Day lighting: Balanced, glare-free daylight***



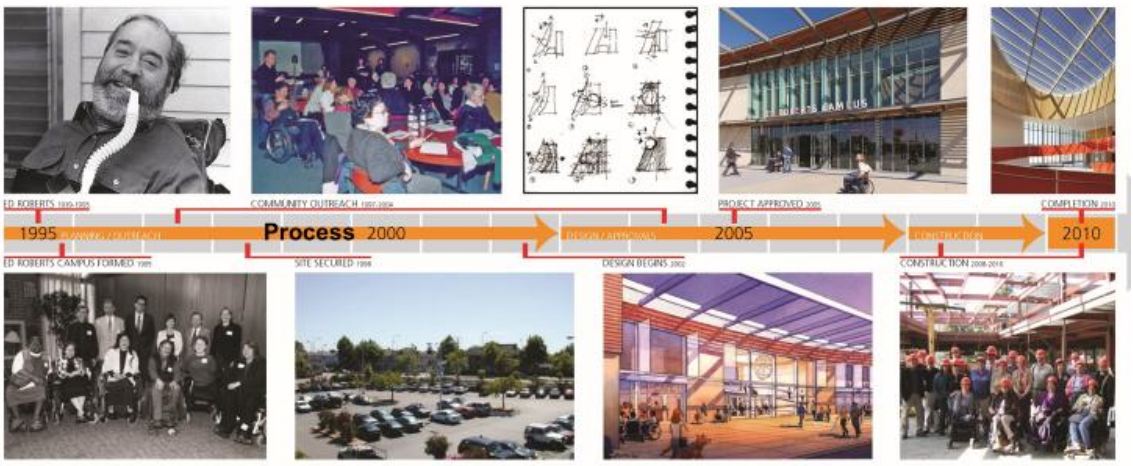
- ***Biophilia: connecting with nature supports health and well - being***

- ***Resilience: preparing for an uncertain future***

Three Case studies

1. **Case study: Ed Roberts Campus : An international center for the disability rights movement**

An international model of Universal Design applied at a civic scale 2011



A long process – story of approvals

Universal Design

Creating environments that welcome everyone regardless of their abilities

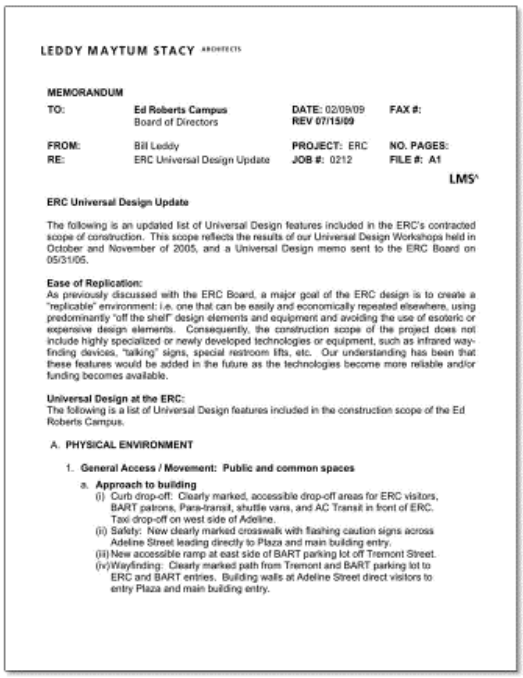
A working structure:

1. Physical Environment
2. Visual Environment
3. Acoustical Environment
4. Thermal Environment
5. Chemical Environment
6. Electronic Environment

UD Workshops

Tactile models

UD working groups – wide participation and representation – discussed in terms of these categories



LEDDY MAYTUM STACY ARCHITECTS

MEMORANDUM

TO:	**Ed Roberts Campus** Board of Directors	**DATE:** 02/09/09 **REV 07/15/09**	**FAX #:**
FROM:	Bill Leddy	**PROJECT:** ERC	**NO. PAGES:**
RE:	ERC Universal Design Update	**JOB #:** 0212	**FILE #:** A1

LMS^

ERC Universal Design Update

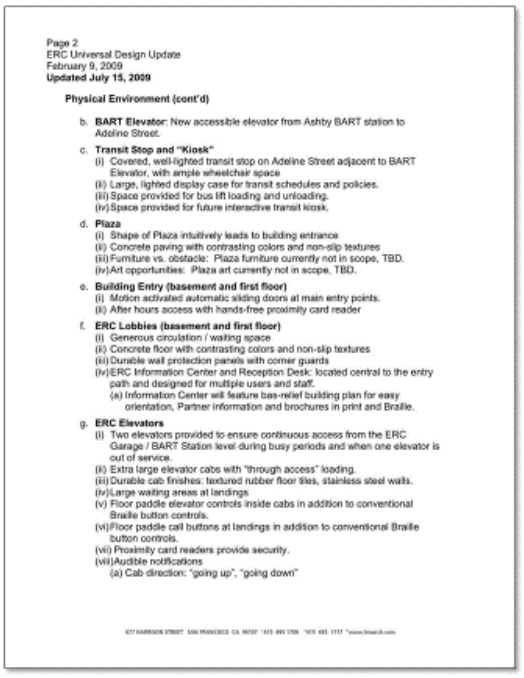
The following is an updated list of Universal Design features included in the ERC's contracted scope of construction. This scope reflects the results of our Universal Design Workshops held in October and November of 2005, and a Universal Design memo sent to the ERC Board on 05/31/06.

Ease of Replication:
As previously discussed with the ERC Board, a major goal of the ERC design is to create a "replicable" environment: i.e. one that can be easily and economically repeated elsewhere, using predominantly "off the shelf" design elements and equipment and avoiding the use of esoteric or expensive design elements. Consequently, the construction scope of the project does not include highly specialized or newly developed technologies or equipment, such as infrared way-finding devices, "talking" signs, special restroom lifts, etc. Our understanding has been that these features would be added in the future as the technologies become more reliable and/or funding becomes available.

Universal Design at the ERC:
The following is a list of Universal Design features included in the construction scope of the Ed Roberts Campus.

A. **PHYSICAL ENVIRONMENT**

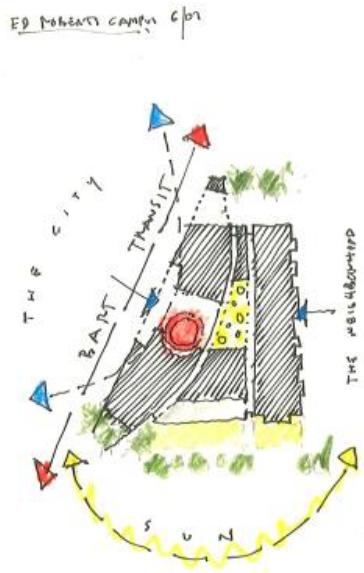
1. **General Access / Movement: Public and common spaces**
   a. **Approach to building**
      (i) Curb drop-off: Clearly marked, accessible drop-off areas for ERC visitors, BART patrons, Para-transit, shuttle vans, and AC Transit in front of ERC. Taxi drop-off on west side of Adeline.
      (ii) Safety: New clearly marked crosswalk with flashing caution signs across Adeline Street leading directly to Plaza and main building entry.
      (iii) New accessible ramp at east side of BART parking lot off Tremont Street.
      (iv) Wayfinding: Clearly marked path from Tremont and BART parking lot to ERC and BART entries. Building walls at Adeline Street direct visitors to entry Plaza and main building entry.

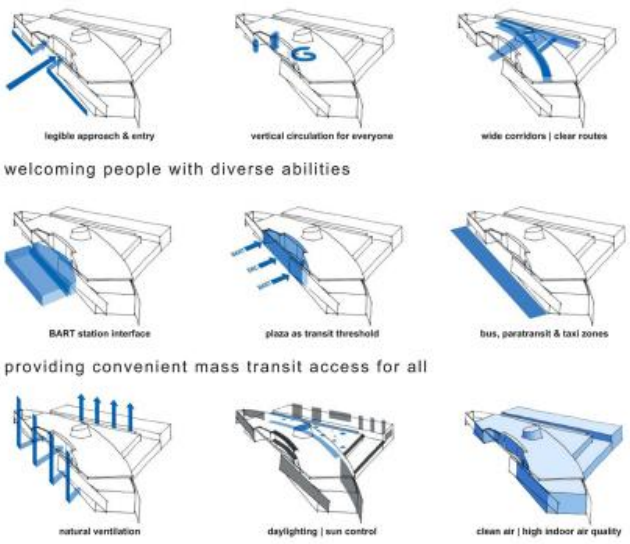


Page 2
ERC Universal Design Update
February 9, 2009
Updated July 15, 2009

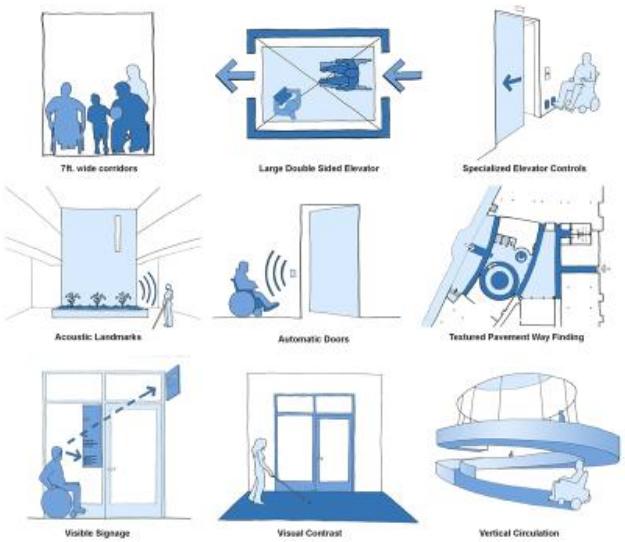
Physical Environment (cont'd)

b. **BART Elevator:** New accessible elevator from Ashby BART station to Adeline Street.
c. **Transit Stop and "Kiosk"**
   (i) Covered, well-lighted transit stop on Adeline Street adjacent to BART Elevator, with ample wheelchair space
   (ii) Large, lighted display case for transit schedules and policies.
   (iii) Space provided for bus lift loading and unloading.
   (iv) Space provided for future interactive transit kiosk.
d. **Plaza**
   (i) Shape of Plaza intuitively leads to building entrance
   (ii) Concrete paving with contrasting colors and non-slip textures
   (iii) Furniture vs. obstacle: Plaza furniture currently not in scope, TBD.
   (iv) Art opportunities: Plaza art currently not in scope, TBD.
e. **Building Entry (basement and first floor)**
   (i) Motion activated automatic sliding doors at main entry points.
   (ii) After hours access with hands-free proximity card reader
f. **ERC Lobbies (basement and first floor)**
   (i) Generous circulation / waiting space
   (ii) Concrete floor with contrasting colors and non-slip textures
   (iii) Durable wall protection panels with corner guards
   (iv) ERC Information Center and Reception Desk: located central to the entry path and designed for multiple users and staff.
      (a) Information Center will feature bas-relief building plan for easy orientation, Partner information and brochures in print and Braille.
g. **ERC Elevators**
   (i) Two elevators provided to ensure continuous access from the ERC Garage / BART Station level during busy periods and when one elevator is out of service.
   (ii) Extra large elevator cabs with "through access" loading.
   (iii) Durable cab finishes: textured rubber floor tiles, stainless steel walls.
   (iv) Large waiting areas at landings
   (v) Floor paddle elevator controls inside cabs in addition to conventional Braille button controls.
   (vi) Floor paddle call buttons at landings in addition to conventional Braille button controls.
   (vii) Proximity card readers provide security.
   (viii) Audible notifications
      (a) Cab direction: "going up", "going down"


THE CITY
TRANSIT
BART
SUN

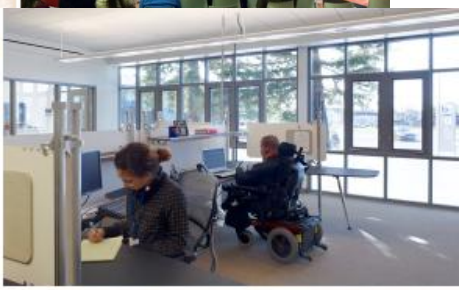

legible approach & entry
vertical circulation for everyone
wide corridors | clear routes
welcoming people with diverse abilities
BART station interface
plaza as transit threshold
bus, paratransit & taxi zones
providing convenient mass transit access for all
natural ventilation
daylighting | sun control
clean air | high indoor air quality
creating healthy, inviting, resource-efficient spaces


ED ROBERTS CAMPUS


7ft. wide corridors
Large Double Sided Elevator
Specialized Elevator Controls
Acoustic Landmarks
Automatic Doors
Textured Pavement Way Finding
Visible Signage
Visual Contrast
Vertical Circulation


ED ROBERTS CAMPUS

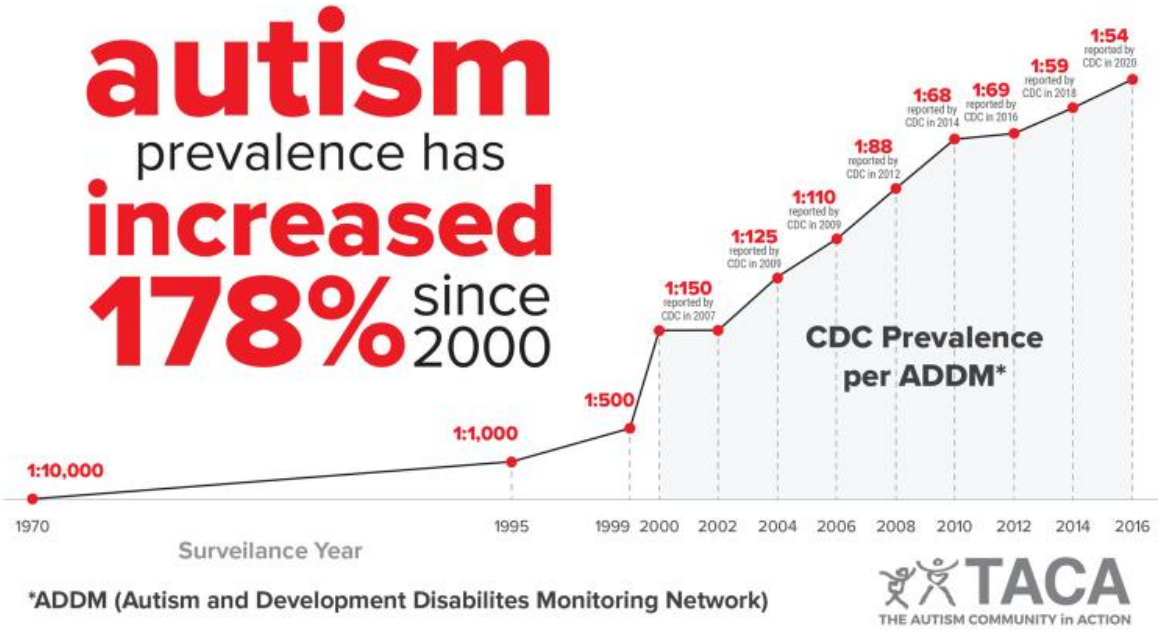

POE / Lessons Learned




EXIT


Specialized Elevator Controls

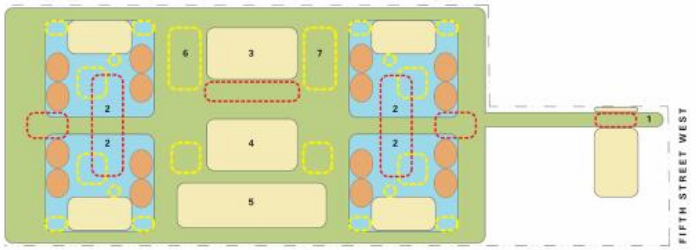
2. Case study: Sweetwater Spectrum: A new model for Housing on the autism spectrum



Design for Adults on the Autism Spectrum

CONCEPT DIAGRAM

DESIGN GUIDELINES



PLAN DIAGRAM
1 ENTRY 2 HOUSE 3 COMMUNITY CENTER 4 THE COMMONS: PLAZA & LAWN 5 THERAPY POOL & SPAS 6 ACTIVITY GARDEN 7 HAMMOCK GARDEN

SITE PLAN
1 WELCOME BUILDING 2 PARKING 3 HOUSE 4 STORMWATER TREATMENT BIO-SWALE 5 COMMUNITY CENTER 6 THE COMMONS: PLAZA & LAWN
7 THERAPY POOL & SPAS 8 ORCHARD 9 TRASH 10 STORAGE BUILDING 11 IRRIGATION WELL 12 GREENHOUSE 13 ORGANIC FARM 14 FIRE ACCESS ROAD

SUSTAINABILITY DIAGRAM
1 ORGANIC FARM 2 IRRIGATION WELL 3 COOL ROOF 4 NATURAL VENTILATION 5 DAYLIGHTING 6 DROUGHT TOLERANT PLANTS
7 SOLAR HOT WATER PANELS 8 SOLAR PV PANELS 9 STORMWATER FILTRATION BIO-SWALE 10 SUN CONTROL 11 RADIANT FLOOR SYSTEM
12 POOL SOLAR PANELS 13 HIGH PERFORMANCE WINDOWS 14 SOLAR TUBE SKYLIGHTS 15 HIGH R-VALUE EXTERIOR WALLS & ROOF 16 PERMEABLE PAVING

TYPICAL RESIDENCE

1. ENTRY COURT
2. PORCH
3. ENTRY
4. STAFF OFFICE
5. BEDROOM
6. BATHROOM
7. LAUNDRY ROOM
8. STAFF BATHROOM
9. DINING TERRACE
10. KITCHEN / DINING ROOM
11. LIVING ROOM
12. TERRACE

COMMUNITY BUILDING

1. TEACHING KITCHEN
2. COMMON AREA
3. FITNESS CENTER
4. RESTROOM
5. LIBRARY & QUIET ALCOVE
6. STAFF OFFICE
7. ART PREP & STORAGE
8. PANTRY
9. HAMMOCK GARDEN
10. PLAZA
11. ACTIVITY GARDEN
12. BIO-SWALE


3 Case Edwin M.Lee Apartments: Veterans and Low – Income families joined in resilince

- ***A model for healthy living and resilience, the Edwin M. Lee Apartments is the first building in San Francisco to combine supportive housing for both unhoused veterans and low-income families.***
- ***provides 62 apartments for formerly homeless veterans and 57 apartments for low-income families with ground-floor services for families, veterans, neighbors, and the greater community.***

Credit: Wounded Warrior Home

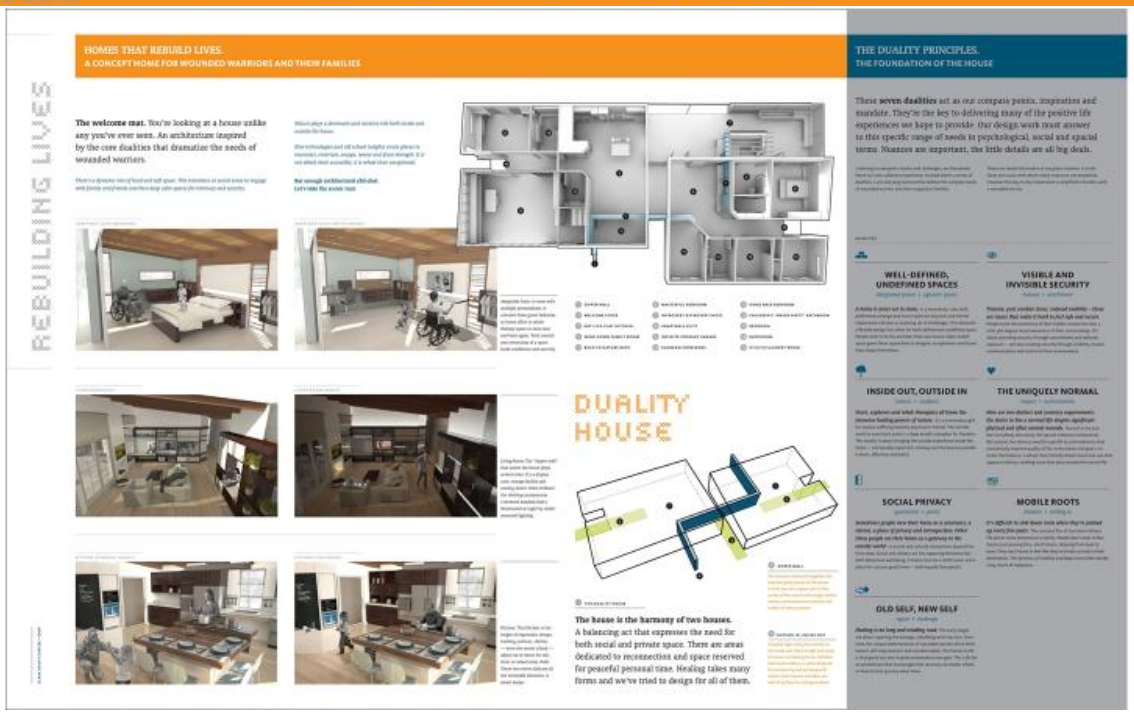
"about one third of the 103,788 returning veterans seen at V.A. facilities between Sept. 30, 2001 and Sept. 30, 2005 were diagnosed with mental illness or a psycho-social disorder."

"There have been over 1100 major or partial amputations during the Global War on Terror."

"Current estimates of PTSD in military personnel who served in Iraq range from 12% to 20%"

"Two percent (5.3 million) of the US population currently live with disabilities from a TBI"

"Last month [June 2010] set a tragic record for suicides - more than one per day. Multiple combat tours, bad economy, and family troubles all create incredible stress on today's soldiers."



POSTTRAUMATIC UNDERSTANDING

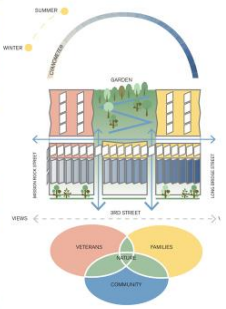
THE CONNECTIONS BETWEEN POSTTRAUMATIC STRESS AND ENVIRONMENTAL DESIGN

Credit: Perkins + Will

Design attributes:

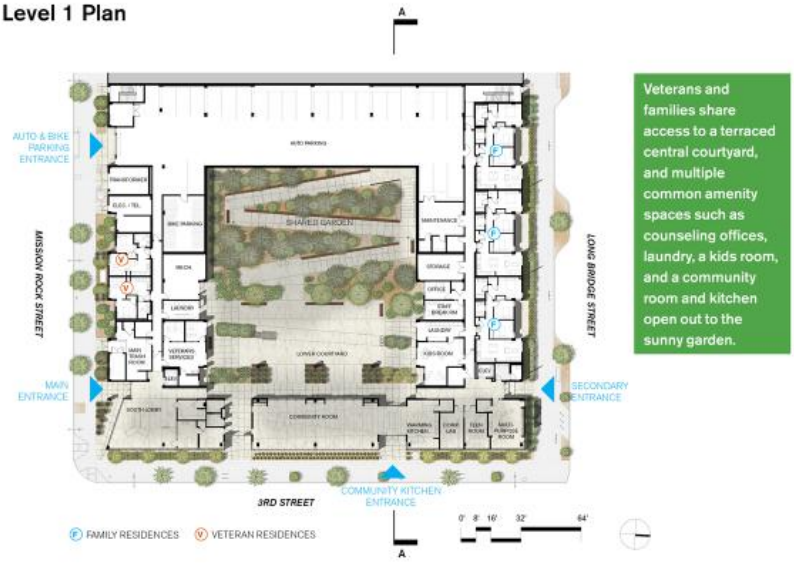
- Visual transparency
- Calming transitions
- Visible spatial order
- Garden access
- Views to nature
- Social privacy

Design Concept
Veterans and Familes Joined Through Nature



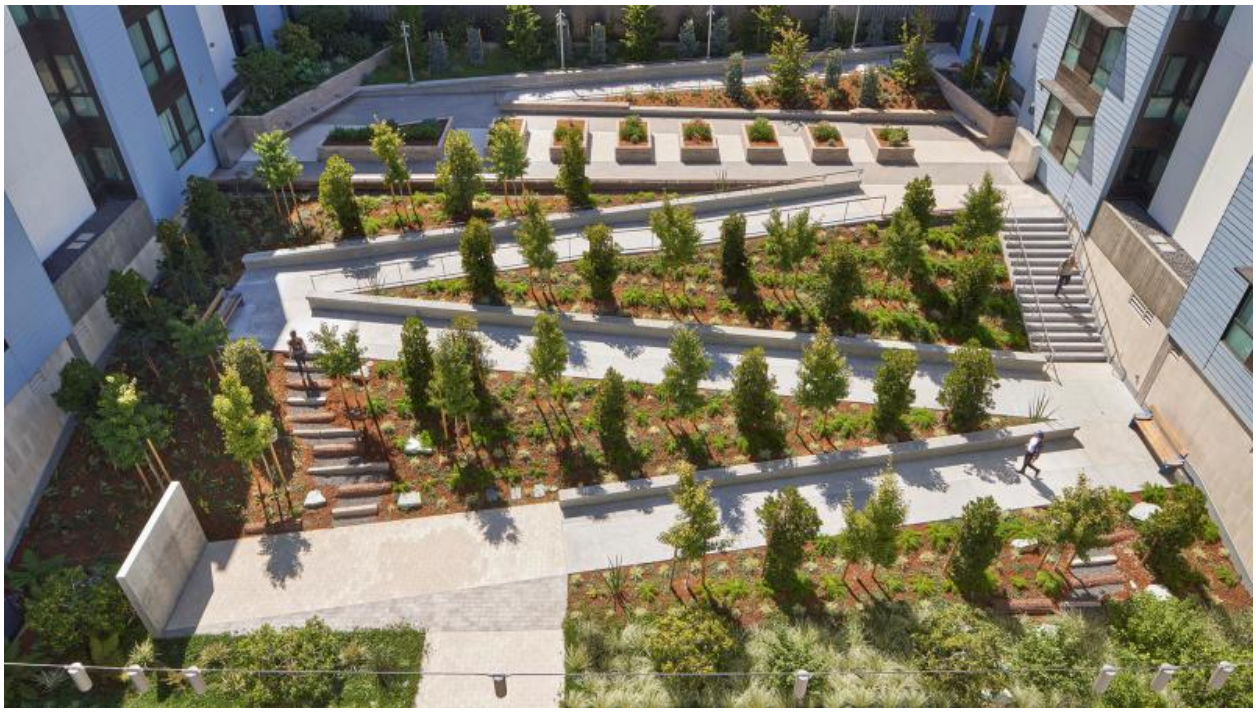
The Edwin M. Lee Apartments is San Francisco's first integrated veteran and low-income family housing development.

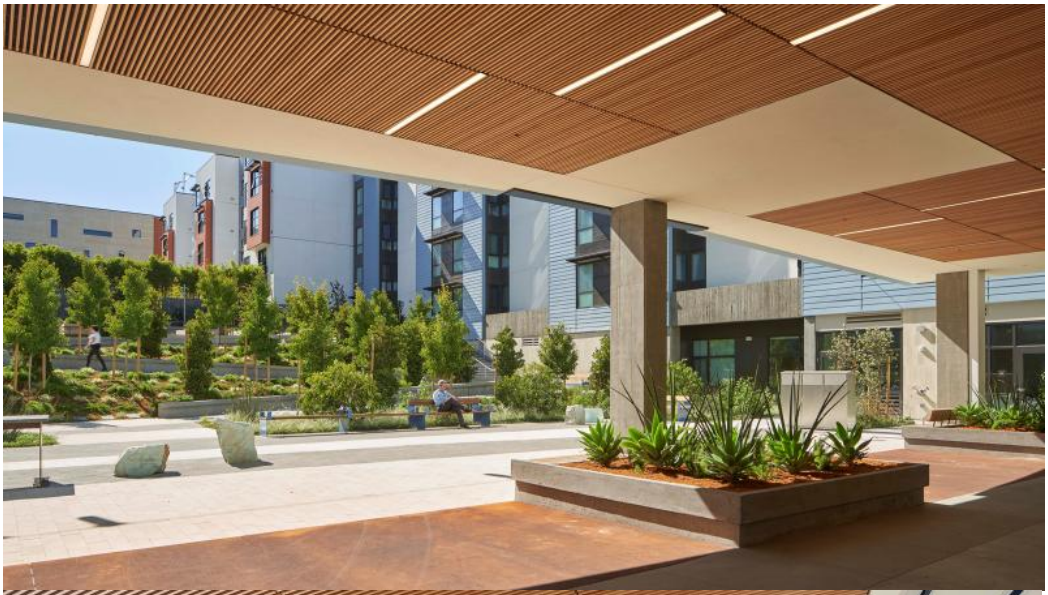
Level 1 Plan

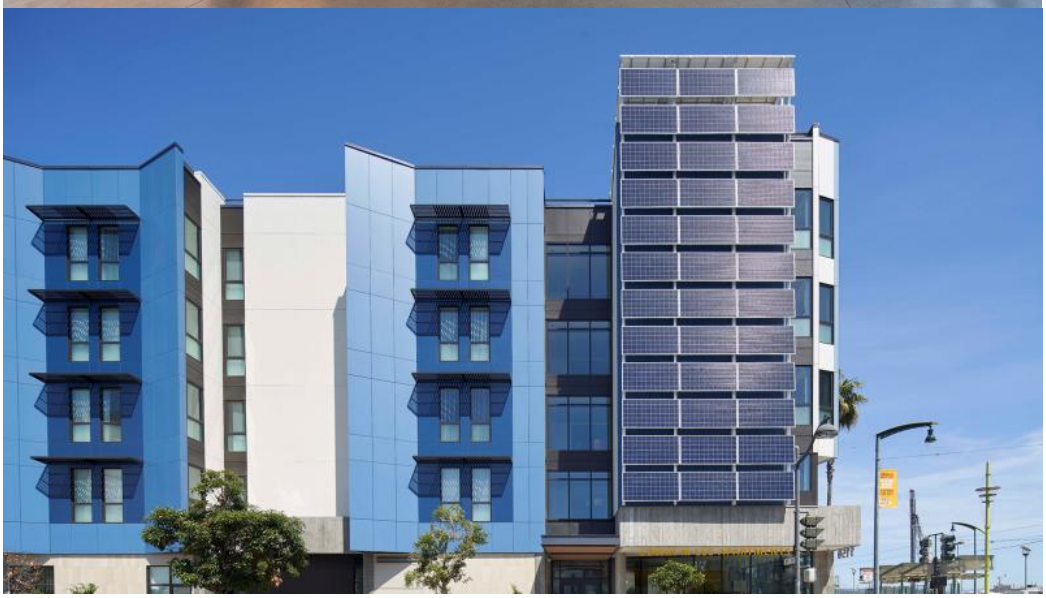


Level 2-5 Plan

- ***The project frames a generous internal garden courtyard that balances a range of areas for retrospection, interaction and play.***

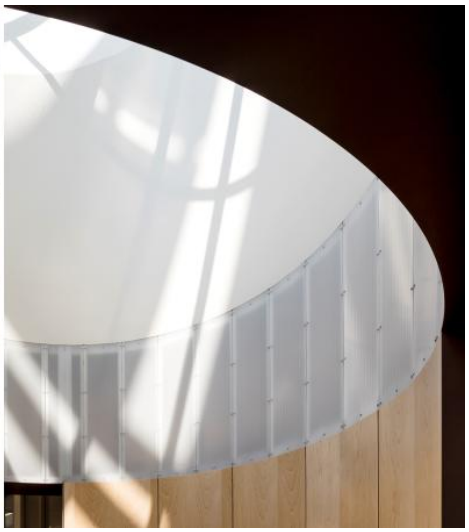






Gracr in Architecture

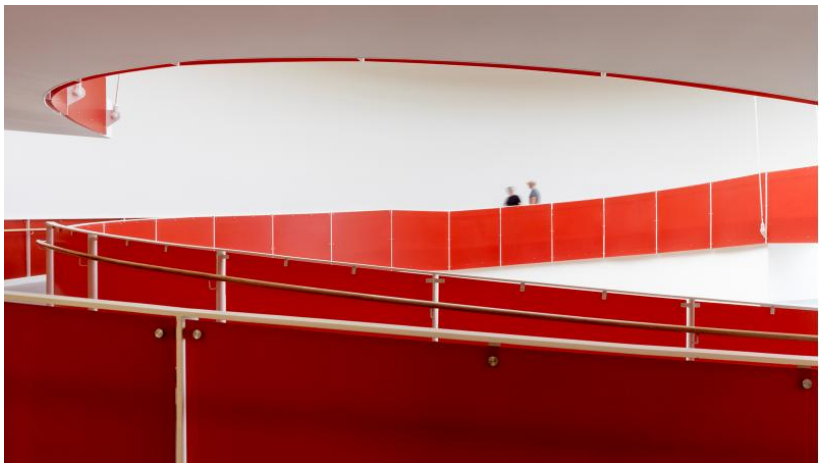
"The society of rooms is knit tighter with the elements of connection which have their own charcterstics ….It is good to consider the stair landing as a place to sit near a window with possibily a shelf for a few books. The old man ascending with the young boy can stop here, showing his interest in a certain book, and avoid the explanations of infirmity." Louis Kahn 1971.



Kahn might not have understood the principles of Universal Design twenty-five years before the term was invented, but he clearly understood the fundamental value of circumstantial grace embedded within them - that is, the special characteristic of

environments that welcome everyone with a timeless generosity of spirit.

These are spaces that don't discriminate between the abled and disabled among us, but rather celebrate the rich diversity of the human condition at many scales. It's an approach that transcends rote compliance with disabled access regulations and seeks a broader, more gracious and integrated definition of "accommodation".



At the Ed Roberts Campus, the helical ramp was our version of Kahn's staircase. We asked ourselves how we could invite everyone to the second floor, making the experience a joy rather than a chore. We also wanted to make a very public expression of Universal Design, displayed to the city as a symbol of the important mission of the ERC. Thus, the ramp was conceived as a

public sculpture, hovering in space, daylit from above, inviting to all.

The responses to design decisions such as this one are often unexpected and add to its value and meaning. Soon after the ERC was occupied, a woman approached me in her wheelchair to tell me how grateful she was to be working in the building. "*I've never felt so safe in a building before, knowing that I can evacuate myself in an emergency*." Months later, I found the space at the center of the ramp filled with white chairs. A young couple - with no connection to the ERC other than they had passed through it on the way to the BART station - had decided that this space would be ideal for their wedding. The bridal procession descended the ramp and entered the center where the ceremony was held – a delightful expression of grace that we had never imagined

I'd like to close with this statement from the AIA Climate Action Plan. Intended to address the climate emergency, I believe it is equally meaningful when directed toward the broader ecological / societal emergency we're now experiencing. Architects and designers have a moral responsibility to take leadership in this moment of peril and focus the transformative power of design thinking to build a better world for everyone.

ISSN: **2582-8304**

Letter from the Chairman's Desk By Sunil Bhatia PhD

I was watching a program in Television and a scene was quite horrifying for me where a child was drowning in the river and crying to save his life. No one was close and could hear his appeal for help. I was feeling pity and was wishing I would close to help him out and palpitation was high fearing he would die because of drowning and pray to the divine to save his life. I saw a log was floating close to the child and I thought my prayer was heard and it gave me some hope. But still the log was not that close to where the child can access and hold it . I was desperate for the child that log is close to you 'why do not you hold for saving life?'. My wish was fulfilled and I could not figure out the reason and what made the child hold it and after a great struggle of holding the log he reached the bank of the river in an unconscious state. I was relieved and thought of designing a life jacket that should be remote controlled for making it accessible for drowning people. A nearby villager reached and saved his life.

I was relieved and immediately realized log was responsible for saving the life of the child and what thought made the child to hold is a mystery to me. Is accessibility an inbuilt feature in our biological character? Is it our survival instinct for looking for any possibility for crossing the difficult times and anything that is accessible works for saving our lives? Is accessibility the foundation of survival instinct? Is our progress as humans

possible because of the accessibility of available resources for survival?

I imagined that our ancestors who found crossing rivers from one bank to another in high currents could sweep their life and invent an idea of overcoming drowning problems by physical strength by learning the art of swimming . Our body is lighter than water and floats but the density of the human head is heavier than water that can submerge into water and makes breathing impossible. Swimmer's only efforts are to use physical motion and strength for managing the head above the water surface and to give direction to the body to move in the desired direction. Sometimes the challenge of strong current overcomes the physical strength and the swimmer drowns and dies. Ancient people looked for a better solution where anyone who couldn't swim or no matching of physical strength with the current of the river and alternative solution was designed by application of the strong but long enough log for crossing the river by walking over by placing from one bank to another. When they failed in getting that length of log they tied it with rope and made it possible for placing at both ends of banks for crossing from one end to another. Later the design of the rope bridge surfaced. Design of some kind of bridge made the concept of accessibility possible.

It might be possible that hunger has played a role in the accessibility of foods. Desire of eat a fruit as food that was on a tree at enough height and jumping won't help and still out of reach of man. That made him thinks of making it accessible. It is the art of climbing that made it possible to access the fruit to satisfy their hunger. His mind was looking for something in the tree that should be strong enough for bearing body weight and carefully select a branch or dried over surfaced on the stem and

his mind again looks for placing his leg for strong support for climbing. Later they designed the art of hitting the target for plucking by different means. Even in hunting wherever the possibility of missing the prey because of outsmarting in physical strength man used cunning ways and observed the weakens of prey and designed the tools for striking in such a way that should die at once with one strike and had no time to strike back for killing the hunters. They used sound or noise or physical disturbance in reaching out for locating the hiding prey and these tools turned out to be first accessibility tools.

In modern times accessibility means designing ramps for reaching out the destinations is in fashion. Accessibility has phases and ancestors start first by using body parts and later designed tools like ladders for accessibility. Ramp was the next level where steps of the ladder were eliminated and climb was designed by slope plank. It gained popularity when high rise or storey of house was not in practice. As cost of living rises and the idea of vertical growth of buildings is forced for the design of elevators and lifts. It is the ultimate design of accessibility and expresses the human sensitivity of caring for others. Real progress surfaced in accessibility when some kind of control was applied for making it workable with ease and avoiding possible eventualities in it. After considering various angles involved in designing the ramp they realized the slope should by keeping the physical strength of the users and comfortably rotate the wheel of the wheel chair for moving upward. Our ancestors had better wisdom than modern designers. They designed the stove for making the fire accessible for heating the vessel for cooking with proper controls for avoiding possible eventualities of fire. Accessibility with introduction of features of control revolutionized the thoughts of humans.

We have a mindset that the accessibility of buildings means a ramp and wide doorways. I believe when the person started living in a cluster and preferred to stay in a place for making life better they thought of easy access to water and stayed close to a water reservoir that is the reason most of the civilization is developed around the water source. Wherever water was not close but fetching of water was possible they preferred for settlement in small groups . Real progress was visible when they thought of accessing water for the daily requirement by digging wells and imitating the natural pond by designing a manmade pond for water storage. Ultimate design of accessibility surfaced with the idea of designing a drain system for making water available to the desired destination. Initially it was open drain but as knowledge improved thought of the pipe system surfaced. What we see as a water and sewage system in modern times was laid on the foundation of accessibility. Earlier scavengers were manually lifting human excretion for carrying on their heads with the help of a basket from one place to another and design of sewage eliminated the manual lifting of human solid waste.

Lifting of water from the well with the help of fixing the wheel and using rope and bucket is an example of thinking in terms of accessibility. The design of the tap with opening and closing is not part of accessibility, it is the control device for not to waste water. When I look at the drain around water that made me realize that our ancient people realized wastage cannot be controlled in prevailing technology but using waste or spilled water thought of a drain for agriculture field for irrigation was the best example of thinking in sustainability.

Accessibility is also applicable for the intellectual level when someone warns ' Do not make a castle in the air'. This statement

is a clear indication that it is not practical and it cannot translate into reality with available resources. An idea should have inner strength of accessibility and should have inner strength for translation into physical level. Inaccessible ideas are called fantasy. A man has limited resources and wish for translating into reality is a fantasy for him but on the other side people with huge resources will have the same idea will not be treated as fantasy.

In a football or hockey match, players struggle for control over the ball for make it accessible for teammates to make the desired move to win the match. Opponents work to make it inaccessible and make attempts to win matches. The tug of war of accessibility and inaccessibility makes the matter entertaining.

Lack of knowledge or not having proper understanding about accessibility or our mind is trained for judging things in terms of balance sheets makes us not to think in terms of the proper application of accessibility in every place. Most tourist spots are thinking of accessibility for attracting a number of tourists and simple mathematics is more the tourist more the profits . That profits attraction is forced not to ignore the aged or differently abled people who are financially sound but because of restrictions or hurdles not visit tourist sites. Hospital is the building where priorities are set and wherever the utmost requirement and time is pressurizing we design for better accessibility of not wasting time for saving lives. Emergency department is placed close to the side of the entrance with a proper ramp and elevators for transferring patients as an ambulance vehicle arrives. I have noticed in some places accessibility of buildings is cared for but patients are not comfortable .I have noticed a patient has a fracture of bone and transporting is painful in spite of a proper accessibility designed department for X-rays. I question the

doctors why not bring an X-ray machine to photograph a broken bone in this room. He informed me that I have not seen such a machine and it is not in my knowledge or we don't have such a facility. Designers should think wherever patients can be transported with tax or should think for making machines should reach wherever it is required to make it accessible.

I am thankful to Ms Colleen Kay Starkloff for accepting our invitation of Guest Editor. At the time of acceptance she was not diagnosed for cancer .She is in hospital for bone marrow transplant .

I feel like to stand and salute her for her sincerity and dedication for her commitment. She is in hospital for her treatment and I pray for her helth and fast recovery.

Lambert Academic publication for celebration of 150th special issue by publishing a book by compiling editorials "Design For All, Drivers of Design" translated in eight different languages from ENGLISH into French, German, Italian, Russian, Dutch and Portuguese. Kindly click the following link for book. "Morebooks", one of the largest online bookstores. Here's the link to it:

https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

With Regards

Enjoy reading, be happy, and work for the betterment of society.

Dr. Sunil Bhatia
Design For All Institute of India
www.designforall.in
dr_subha@yahoo.com
Tel 91-11-27853470®

ISSN: **2582-8304**

Forthcoming Issues

March 2021 Vol-17 No-3

Sugandh Malhotra, Ph.D. ***Associate Professor,***
Coordinator: Mobility and Vehicle Design program,
IDC School of Design, IIT Bombay, India

Dr. Sugandh Malhotra has over seventeen years of professional experience in industrial design and automotive design industry. He has worked on design projects for marquees in the industry that include Honda R&D, Hero Global Design, Hi-Tech Robotic Systemz Ltd., SETI Labs Berkley, Aprilia Motors Italy, Bombardier Canada and most of the leading automotive and consumer brands of India. He has worked on over 75 projects and has been instrumental in design of over 23 techno-commercially successful launched products at a pan India level. He has won many International and National level design awards. Dr. Malhotra takes keen interest in teaching design and had been mentoring students

from many leading institutions such as IIT Delhi, IIT Roorkee, SPA Delhi, Lady Irving College, IILM, Pearl Academy among others.

Since 2016, Dr. Sugandh Malhotra is working as an Assistant Professor and the Coordinator of MVD program in IDC School of Design at IIT Bombay.

His research interest areas include design research methods, future design possibilities, trend research and design forecasting and intelligent mobility systems.

April 20-22 Vol-17 No-4

Dr. Shatarupa Thakurta Roy

Designation: Assistant Professor, Department of Humanities and Social Sciences & Design Programme, Indian Institute of Technology Kanpur, India

BFA Kala Bhavana, Visva Bharati University 1997 MFA Kala Bhavana, Visva Bharati University 1999 PhD Department of Design, IIT Guwahati 2014

Research Areas: Graphic Art, Art History, Art Criticism, Design Theory, Design History, Methodology of Visual Research, Visual Culture, Visual Communication, New Materialism in Visual Art, User Interface Design, Graphic Novel and Graphic Medicines.

May 2022 Vol-17 No-5

Dr. Christopher Lee

I have a Ph.D. in Education with a specialization in Instructional Design, a Masters of Fine Arts in Writing and Poetics (MFA) and a Masters in Education (M.Ed). My research interests center on Universal Design for Learning. I love to write and teach. Whenever teaching I learn a little more about what Universal Design for Learning means and how much students enthusiastically embrace its principles. My philosophy of education centers around the learner. As an instructor, I am much like a coach and so, strive to listen to what students are saying and then facilitate their learning as much as possible. As an administrator, I listen to students, staff and everyone I work with to learn more about Universal Design and how I can be a part of helping to make life better for all. I love technology and the doors it opens for everyone. I love hiking, reading, writing, weight lifting, and most of all, being with my family.

Mark Watson MDIA – ***M Des. (Industrial – By Research) RMIT – Design Providence / DesignThinkers Group***

Founded in 1990, Design Providence is a multi disciplinary practice in the field of Interior Architecture and Product Design. Working in Service Design and Design Thinking since 2010 becoming a Partner with Amsterdam based DesignThinkers Group & Academy in 2013 facilitating rapid prototyping workshops, including the Global Goals Jam with Amsterdam University of Applied Sciences and the UNDP.

Mark held office as Vice President with the Victorian Chapter of the Design Institute of Australia, also as Director with Arts & Recreation Training Victoria, and Artists & Industry.

Mark has presented on Design in India since 2003 at Design Sutra Conference Mumbai, participated in the International Council of Societies of Industrial (ICSID) [now World Design Organisation] Interdesign Workshop "Humanising the Metropolis" Mumbai, also presented at IIT Delhi, IIT IDC, Mumbai, NID Ahmedabad and DYPDC Center for Automotive Research & Studies, Pune as well as the NatCon InDesia in Kolhapur in 2014 for the IIID.

He is advisor to the India Design Festival, the Delhi Design Festival and Odisha Design Council as well as judge of the India's Best Design Studio / Project Awards 2017, Guest Editor of the 'Design for All of India' Journal July 2017 Vol-12 No-7 and

keynote speaker at the 17th CII NID Design Summit 2017 in Hyderabad.

In 2017 participated with the Australia India Institute as Incoming Leaders Fellow researching Air Quality in Delhi incorporating World University of Design and CSIR – NEERI.

Mr. Mark Watson

Unit 1 / 52 Fenwick Street,

Portarlington 3223, Victoria, Australia

July 2022 Vol-17 No-7

Lourdes Arreola Prado

Built Enviorment Program Manager

International Association of Accessibility Professionals (IAAP)

G3ict : The global Initiative for Inclusive ICT's , USA

María de Lourdes Arreola Prado is an international consultant in accessibility, inclusion and diversity and is CPACC and CPABE (Level 1) certified. She is also a member of the International Association of Accessibility Professionals (IAAP). Lourdes is the creator and founder of Linkenium, a consulting firm through which she accompanies institutions and companies in the construction of inclusive environments. She is also a member of the Latin America Advisory Group for CBM.

Lourdes has participated as speaker, consultant and lecturer of accessibility, inclusion and diversity topics in various national and international forums. She was part of the Mexican committee to develop the accessible ICTs Standard. She has led the efforts to develop the first accessible tourist guide for Mexico City and, to enhance accessibility around all the nine buildings of ASUR's airports based in Mexico, among other projects.

In 2013 she was a finalist at Cartier Women's Initiative Awards. In 2015, she received the State Award against Discrimination, granted by the CODHEM, for promoting equality and non-discrimination in the workplace. She is an Engineer in electronics from the Universidad Iberoamericana and received a diploma as "Expert in Information Technology and Disability" by Creática Fundación FREE (Spain) and CETYS University (Ensenada, B.C.). She is multilingual in English, French and Portuguese, with solid knowledge of Italian.

August 2022 Vol-17 No-8

Prof. Dr. Jurgen Faust, PhD

Professional Experience

2021 – current Professor SRH Mobile University, Germany

2013 – 2020 President Macromedia University Munich, Germany

2010 – 2013 VP for Academic Affairs and Research, MHMK Munich, Germany

2008 – 2013 Dean, MHMK, Munich, Germany

2007 – 2021 Full Professor Media Design and Communication, Macromedia University Munich, Germany

2009 - 2012 International Strategic Advisor, Istituto Europeo di Design (IED) Group, Milan, Italy

2007 - 2009 Chief Academic Officer, IED group, Milan, Italy

2007 – 2009 Professor Monterrey Tecnologico, Monterrey, Design and Theory, Mexico

PhD, University of Plymouth, Planetary Collegium, England

Thesis title: Discursive Designing Theory, Towards a Comprehensive Theory of Design

Supervisors: Prof. Dr. Derrick De Kerkhoeve, Prof. Roy Ascott, Prof. Antonio Caronia, Prof. Mike Phillips

1982 - 1984

Postgraduate Studies, Free Academy in Nuertingen, Germany (painting/graphic and sculpture), Fine Arts degree

1979 - 1982

Undergraduate Studies, University of Applied Sciences, Reutlingen in Cooperation with

University of Bremen, Germany, Diploma in Chemistry (Dipl. Ing.)

Jurgen Faust (born 1955 in Germany) is a design professor, researcher who has worked in four different countries, US, Mexico, Italy and Germany as a Professor for Design, Theory and Media as well as an administrative Dean in four countries. He is a co-founder of a private university in Germany, as well as a developer of many undergraduate and graduate programs in a variety of fields in design. His PhD research was about designing design through discourse within the design community. His research work let him to create a comprehensive theory describing design processes and models.

Over the past decades he has specialized in managing through designing and published about the idea of transferring design methods and processes into the management field.

He was as well teaching design and design theory. He contributed to a variety of books and publications. In addition, he is a practicing researcher, designer, and artist, who showed in many places, including museums and galleries in Europe, Germany, France, England, Italy, Poland and Slovakia as well as the United States.

Jurgen Faust was the President Macromedia University of Applied Sciences in Munich for 8 years and since March 2021 he is a professor at SRH Mobile University Germany where he currently develops a new Design School Design focused on distance education with the master programs in Design Management and UX & Service Design.

New Books

it is available on **www.morebooks.de** one of the largest online bookstores. Here's the link to it:
https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

ISSN: **2582-8304**

The Ultimate Resource for Aging in Place With Dignity and Grace!

Are you looking for housing options that are safer and more accommodating for independently aging in place? Do you want to enjoy comfort, accessibility, safety and peace of mind – despite your disabilities, limitations and health challenges? The help you need is available in the Universal Design Toolkit: Time-saving ideas, resources, solutions, and guidance for making homes accessible.

This is the ultimate resource for individuals and professionals who want to save time, money and energy when designing, building, remodeling or downsizing a home. The Universal Design Toolkit will help you take the steps to design homes for your clients or yourself while eliminating the costly trial and error challenges you'd inevitably encounter if faced with this learning curve on your own.

Rosemarie Rossetti, Ph.D., teamed with her husband Mark Leder in creating this unique Toolkit. They bring ten years of research, design and building expertise by serving as the general contractors for their home, the Universal Design Living Laboratory– which is the highest rated universal design home in North America.

Within the Toolkit's 200 richly illustrated pages, you'll find: Insights that distinguish *essential* products, services and resources from the *unnecessary*.

Proven, realistic tips for finding the right home.

Home features you need to look for. Nothing is assumed or left out.

Handy home checklists and assessments.

Interview questions to help you hire industry professionals with knowledge and experience.

Photographs that provide a frame of reference to inspire, clarify and illuminate features andbenefits.

Valuable resources to save you time, money and energy.

Helpful sources of funding.

Space planning dimensions for access using assistive devices such as wheelchairs andwalkers.

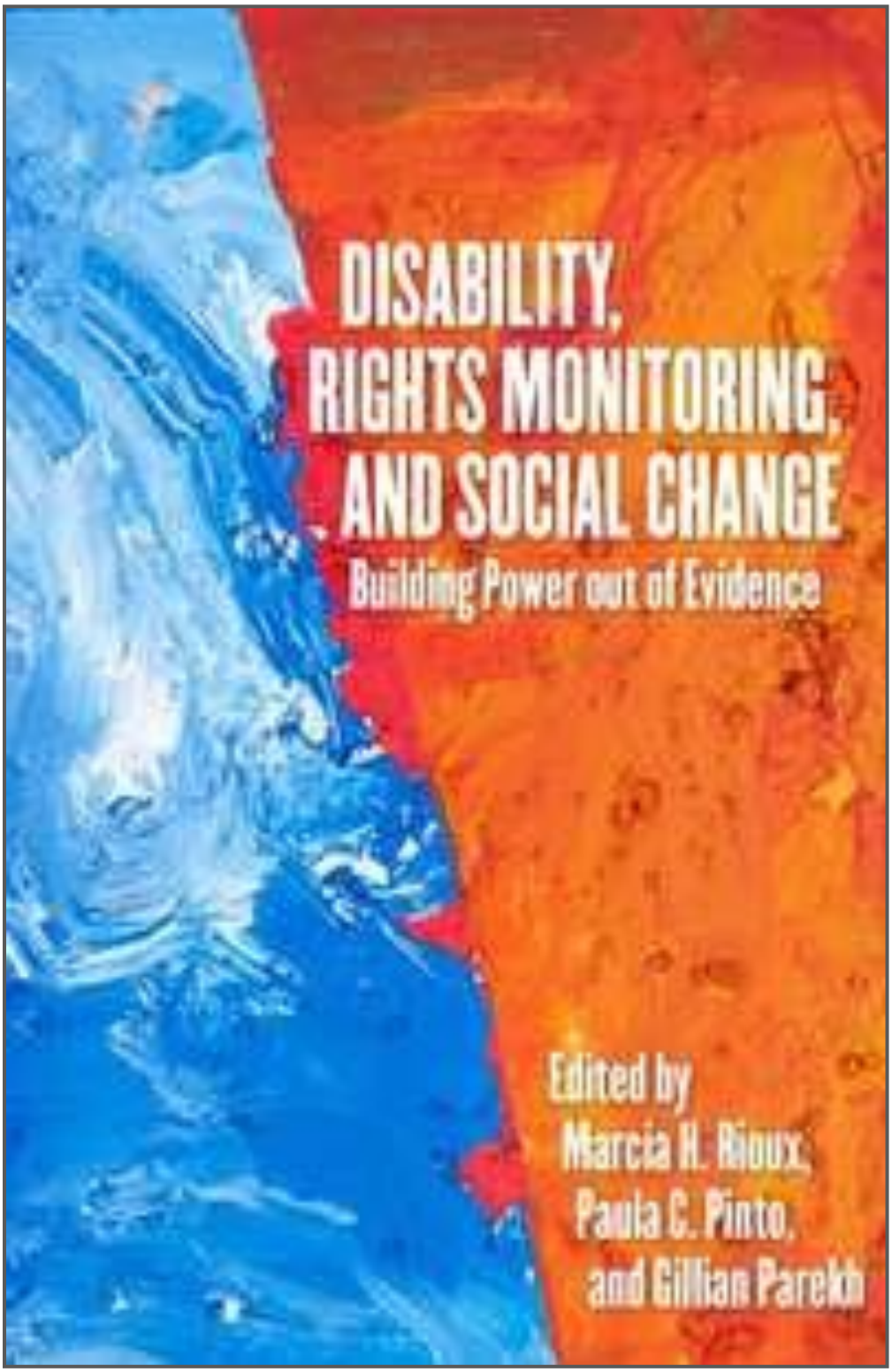
And so much more!

If you want useful, dependable advice and easy to implement ideas from respected experts who know the ropes, you'll love Rossetti and Leder's perspective. As a speaker, author and consultant who uses a wheelchair, Rossetti has helped hundreds of people design their ideal homes. Now her comprehensive Toolkit is available to help and support you!

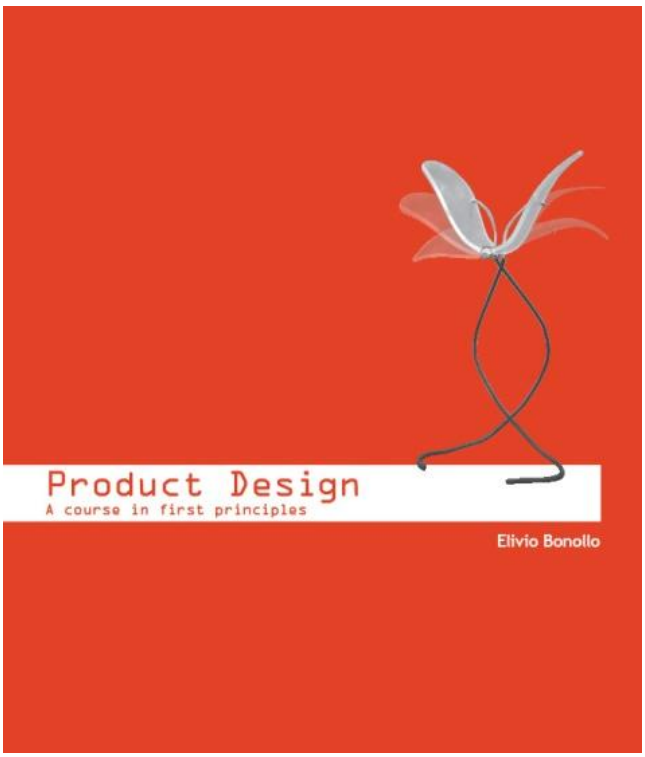
Get the Universal Design Toolkit now to start your project!

Disability, Rights Monitoring and Social Change:

ISSN: **2582-8304**



New Update: ELIVIO BONOLLO (2015/16) PRODUCT DESIGN: A COURSE IN FIRST PRINCIPLES



Available as a paperback (320 pages), in black and white and full colour versions (book reviewed in Design and Technology Education: An International Journal 17.3, and on amazon.com).
The 2018, eBook edition is available in mobi (Kindle) and ePub (iBook) file versions on the amazonand other worldwide networks; includingon the following websites:
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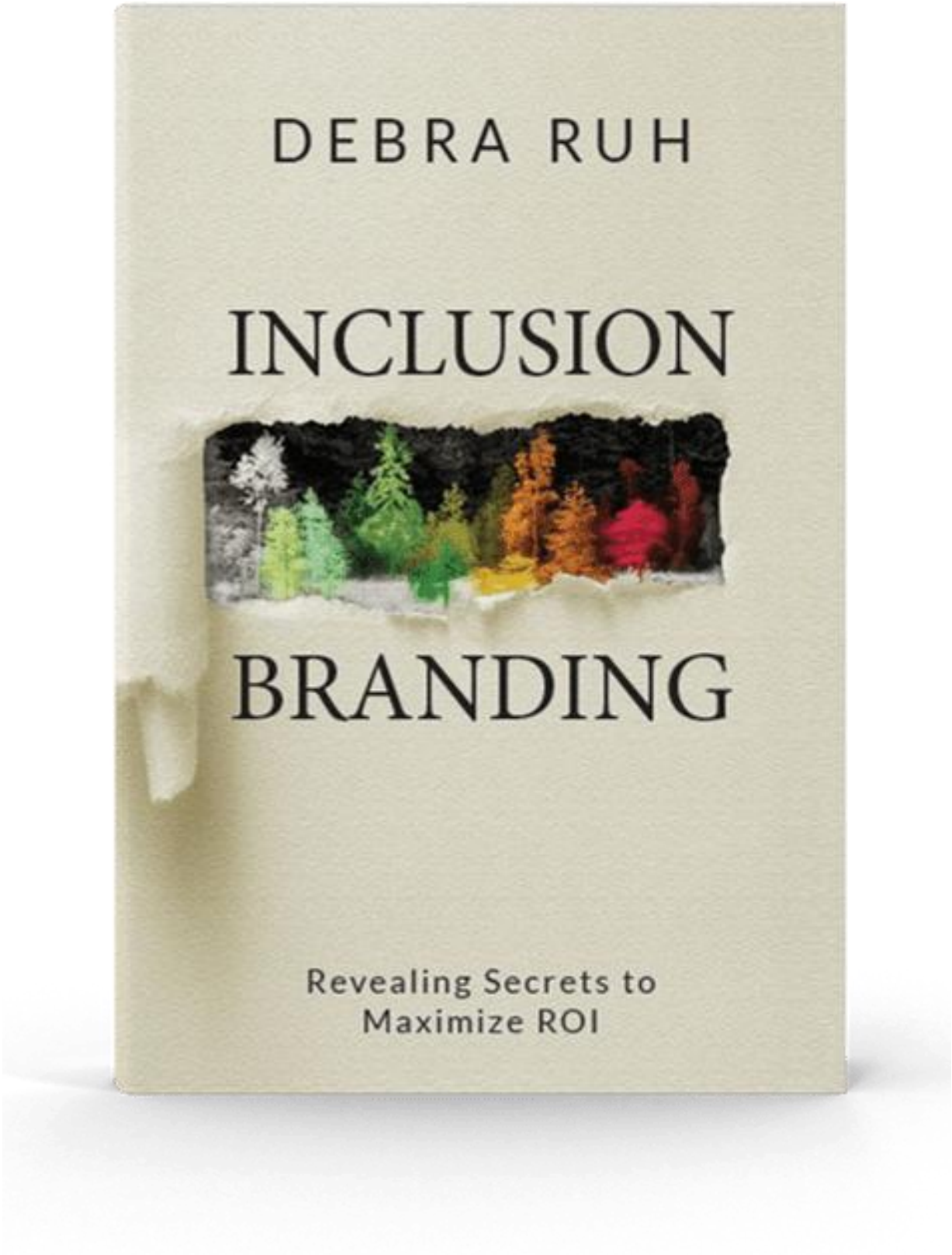
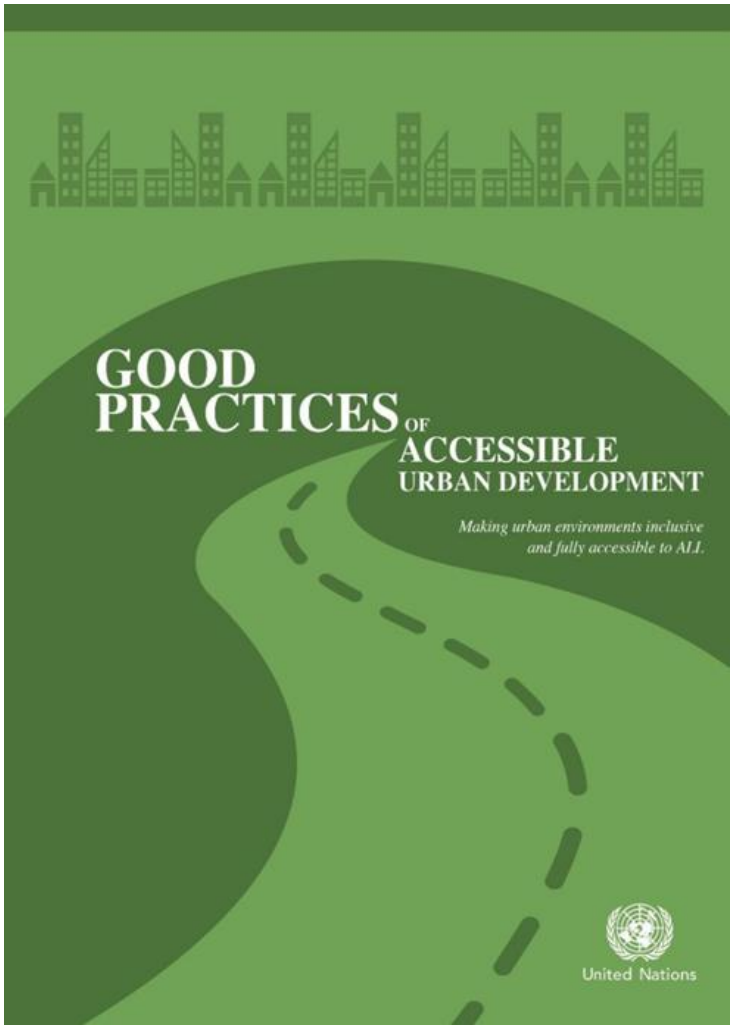
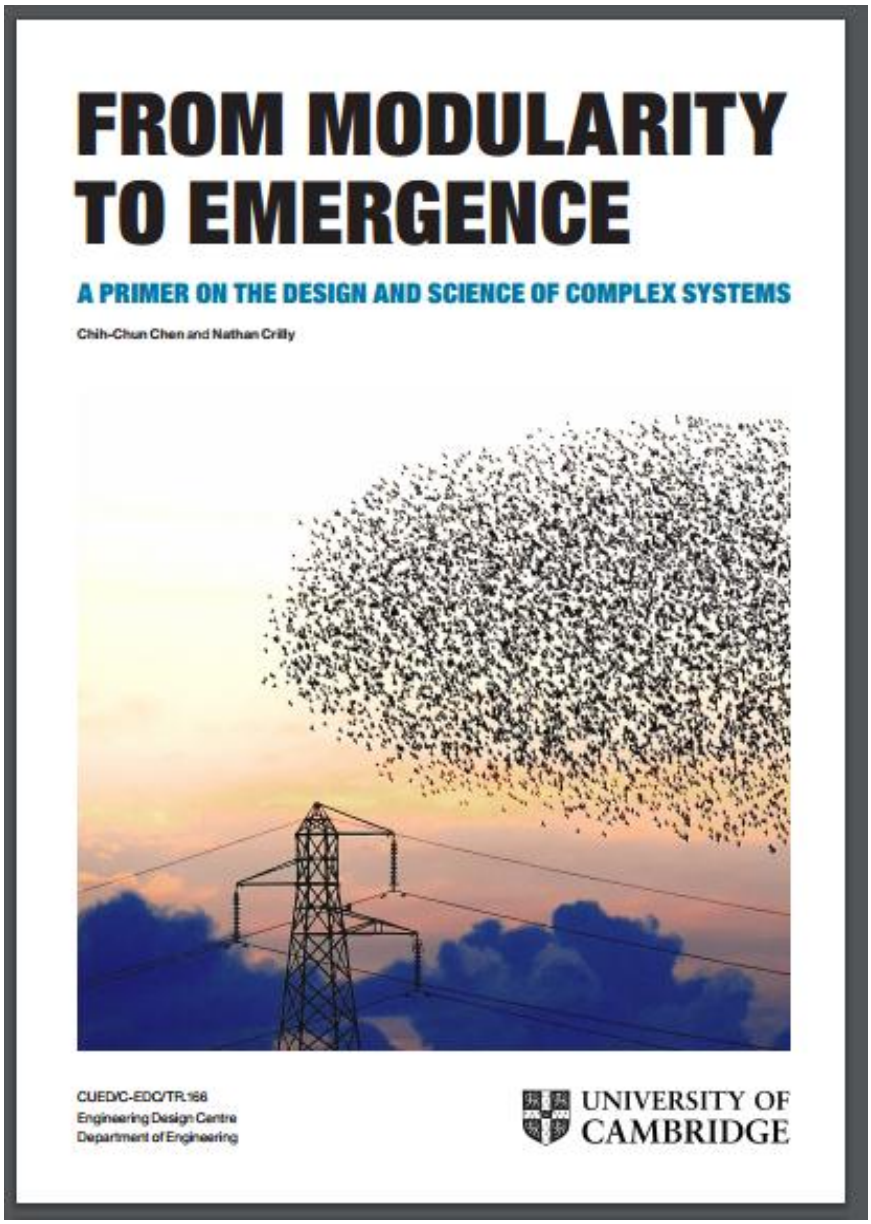
READING HINTS: ePub files can be read with the iBook app on Apple MacBook/iPad devices; ePub files can also be read on Desktops PCs, Laptops and Surface devices using readers such as the Microsoft *freda*ePub reader. The Kindle (mobi file) reader isflexible and suitable for reading the eBook on PCs; Kobo readers can also be used to read ePub files on MacBook and iPad. All formats are very interactive with very good navigation.

ISSN: **2582-8304**





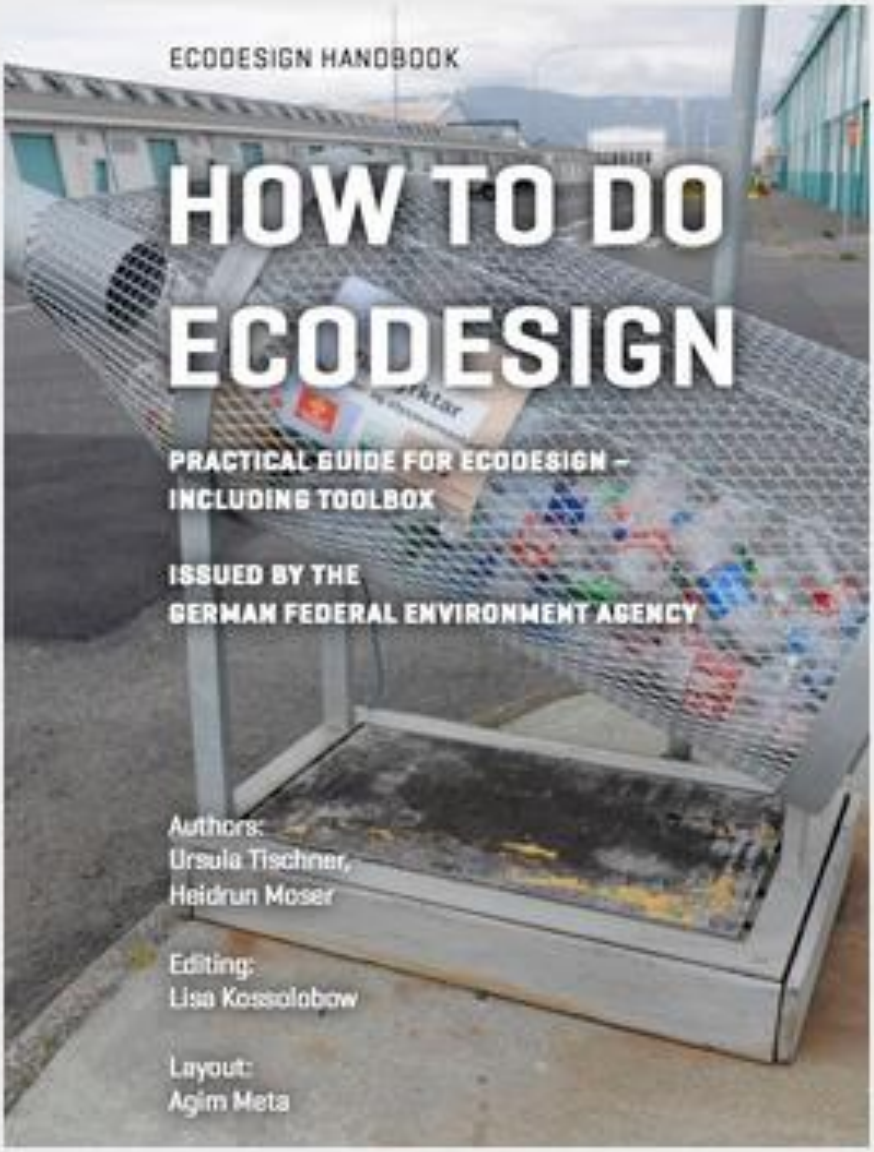
In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible urban development".
The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services. The publication concludes with strategies and innovations for promoting accessible urban development.
The advance unedited text is available at:http://www.un.org/disabilities/documents/desa/good_practices_urban_dev.pdf



Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.
This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).
The book is available at URL: http://complexityprimer.eng.cam.ac.uk

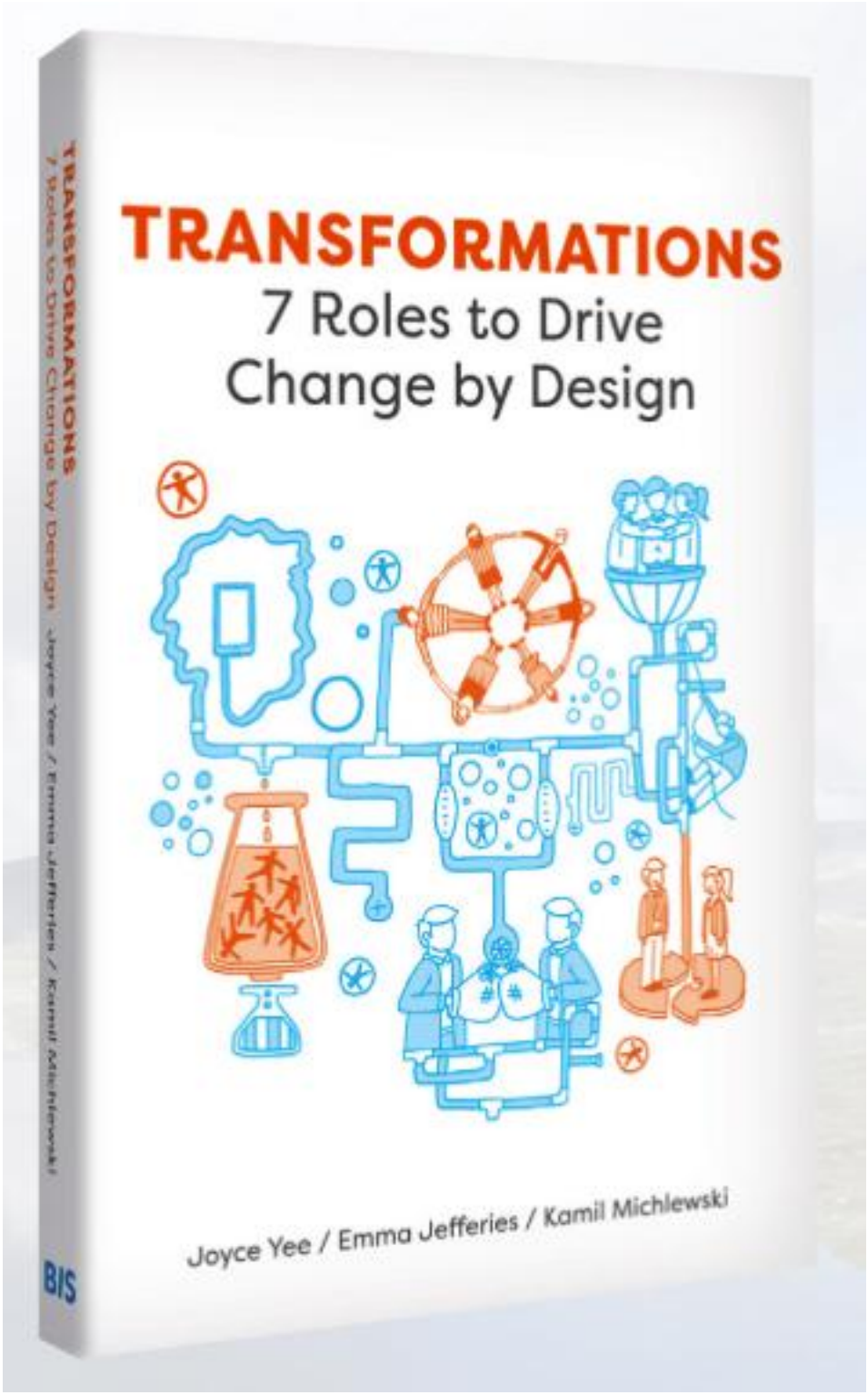
Changing Paradigms: Designing for a Sustainable Future

New iBook / ebook:
HOW TO DO ECODESIGN

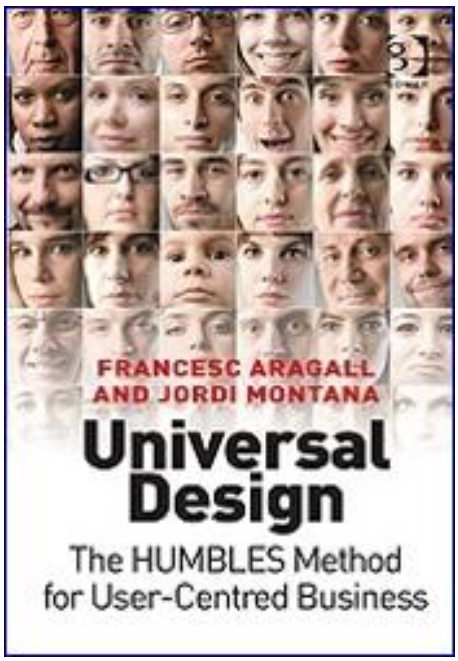


Practical Guide for Ecodesign – Including a Toolbox
Author: Ursula Tischner

ISSN: **2582-8304**



Universal Design: The HUMBLES Method for User-Centred Business



"Universal Design: The HUMBLES Method for User-Centred Business", writtenbyFrancescAragall and JordiMontañaandpublishedbyGower, providesaninnovativemethod to supportbusinesseswishing to increase the number of satisfiedusersand clients andenhancetheirreputationbyadaptingtheirproductsandservices to the diversity of their actual andpotentialcustomers, takingintoaccounttheirneeds, wishesandexpectations.

The HUMBLES method (© Aragall) consists of a progressive, seven-phaseapproach for implementing Design for All within a business. Byincorporating the user'spoint of view, itenablescompanies to evaluatetheirbusinessstrategies in order to improveprovideanimproved, morecustomer-orientedexperience, andtherebygain a competitiveadvantage in the marketplace. As well as a comprehensiveguide to the method, the bookprovidescasestudies of multinationalbusinesswhichhavesuccessfullyincorporated Design for All intotheirworkingpractices.

According to SandroRossell, President of FC Barcelona, who in company withotherleadingbusiness professionals endorsed the publication, it is "requiredreading for thosewhowish to understandhow universal design is the onlyway to connect a brand to the widest possible public, increasing client loyaltyandenhancing company prestige". To purchase the book, visiteither the **Design for All Foundation website**

ISSN: **2582-8304**

Appeal

ISSN: **2582-8304**

News

1.

Stewart Award 2022: Lauren Lanahan

The Lundquist College of Business has awarded Associate Professor of Management Lauren Lanahan the 2022 Stewart Distinguished Faculty Award.

"Lauren is an exceptional instructor and a thought leader in the fields of economic policy and innovation," said Dean Sarah E. Nutter. "Lauren's research in these areas is nothing short of exceptional."

In 2021 alone, she has had five academic papers accepted at highly respectable outlets in the fields of management and organizations.

Lanahan joins a prestigious list of honorees who have earned the award, which recognizes accomplishments that lead to distinction at a world-class level and further the strategic objectives of the Lundquist College of Business and the University of Oregon. Accomplishments may be in research, teaching, leadership, or a combination.

She is among the most prolific grant awardees in Lundquist College history. Her work about the relationship between institutions, entrepreneurship, and the production of scientific knowledge formed the basis of congressional testimony on innovation and entrepreneurship examining support for small ventures engaged in early-stage high-tech innovative activity.

She also serves as affiliate faculty for the University of Oregon's Knight Campus.

Lanahan is consistently praised by students. She won the Undergraduate Teaching Award in 2017, and developed a completely new PhD course in methodology that has been so popular that all five departments had students enroll in it—with PhD students describing her course as "the most important course" they have taken.

Tom Stewart, an alumnus of the college and past member of the college's Board of Advisors as well as the UO Foundation's trustees, created and supports the award. The Stewart Distinguished Faculty Award is the college's top academic honor and is awarded annually to a faculty member in December.

(Courtsey: undquist College Communications)

2.

How do they engage in complex behaviour with only 100.000 to a million neurons?

DENYSE O'LEARY

If we had a skeleton that was outside, not inside, our body — and six legs — we might find it easier to understand how insects think. But only a bit easier. Despite complex behavior, insects are working with 100,000 to maybe a million neurons, compared to our, maybe, 86 billion — but insects make the most of what they have.

Consider, for example, the dragonfly. How does it manage to deal with all the issues that a fighter pilot must address, while catching prey? One adaptation is specialized neurons:

Dragonflies (order Odonata) and hoverflies (order Diptera) are among insect flyers equipped with special neurons for targeting with optic flow.

"The ability of insects to successfully pursue targets in clutter is thus remarkable and suggests a high level of optimization, making the underlying neural mechanisms interesting to study. Indeed, insects that pursue targets, including predatory dragonflies and robberflies, as well as territorial hoverflies, have higher-order neurons in the optic lobes and the descending nerve cord that are sharply tuned to the motion of small, dark targets. Target-tuned neurons often have receptive fields in the part of the compound eye that has the best optics. Target selective descending neurons (TSDNs) project to the thoracic ganglia where wing and head movements are controlled, and electrically stimulating dragonfly TSDNs leads to wing movements. Taken together, this suggests that TSDNs subserve target pursuit. However, how TSDNs respond to targets moving against translational and rotational optic flow is unknown." – Facilitation of neural responses to targets moving against optic flow." – Sarah Nicholas, Karin Nordström Proceedings of the National Academy of Sciences Sep 2021, 118 (38) The paper is open access.

EVOLUTION NEWS, "DRAGONFLIES MAKE THE MOST OF A TINY BRAIN" AT *EVOLUTION NEWS AND SCIENCE TODAY* (OCTOBER 29, 2021)

Flies are pesky? Well, researchers say, fly brains may be organized so as to make predictions based on universal design aspects of animal nervous system, to avoid the swat:

"For a fly, everything is trying to eat you, and you want to avoid being eaten. However, the fly's environment is rapidly changing,

and the neurons they have are laggy. We wanted to study how flies were able to execute quick evasive behaviors to avoid being eaten by predators when ongoing feedback from their sensory systems hasn't been processed."

UNIVERSITY OF CHICAGO, "FLY BRAINS MAKE PREDICTIONS, POSSIBLY USING UNIVERSAL DESIGN PRINCIPLES" AT *NEUROSCIENCE NEWS* (MAY 22, 2021) THE PAPER IS OPEN ACCESS.

If you ever thought it was spooky how easily the fly evades the swat, that's what the researchers were trying to figure out:

The authors identified structures called axonal gap junctions, which are physical channels connecting the neurons, that mediate an optimal form of this information bottleneck and are critical for both filtering out the unnecessary information and preserving the necessary information to make predictions.

The investigators further found that a subpopulation of these vertical motion sensory neurons that are involved in making predictions is unique in that it is also directly connected to the fly's flight steering neurons. This suggests that there is direct input from the neurons responsible for making predictions about the fly's environment to neurons that control the fly's behavior. This direct connection might explain how predictions that the fly is making are able to quickly influence its behavior.

UNIVERSITY OF CHICAGO, "FLY BRAINS MAKE PREDICTIONS, POSSIBLY USING UNIVERSAL DESIGN PRINCIPLES" AT *NEUROSCIENCE NEWS* (MAY 22, 2021) THE PAPER IS OPEN ACCESS.

In short, what the fly mainly needs to know is how to evade the swat. Its neuron organization is specially adapted to ignore all other information in the meantime.

Another strategy, one that enables social insects to engage in complex behaviors, is an established but little understood

concept: The colony can have a memory that individual insects don't have. Stanford biology prof Deborah M. Gordon, author of *Ant Encounters: Interaction Networks and Colony Behavior* (2010), recounts an experiment she did, to create an obstacle for ants and see if they remembered it.

Surprisingly,
I put out toothpicks that the workers had to move away, or blocked the trails so that foragers had to work harder, or created a disturbance that the patrollers tried to repel. Each experiment affected only one group of workers directly, but the activity of other groups of workers changed, because workers of one task decide whether to be active depending on their rate of brief encounters with workers of other tasks. After just a few days repeating the experiment, the colonies continued to behave as they did while they were disturbed, even after the perturbations stopped. Ants had switched tasks and positions in the nest, and so the patterns of encounter took a while to shift back to the undisturbed state. No individual ant remembered anything but, in some sense, the colony did.
Colonies live for 20-30 years, the lifetime of the single queen who produces all the ants, but individual ants live at most a year. In response to perturbations, the behaviour of older, larger colonies is more stable than that of younger ones. It is also more homeostatic: the larger the magnitude of the disturbance, the more likely older colonies were to focus on foraging than on responding to the hassles I had created; while, the worse it got, the more the younger colonies reacted. In short, older, larger colonies grow up to act more wisely than younger smaller ones, even though the older colony does not have older, wiser ants.

DEBORAH M. GORDON, "AN ANT COLONY HAS MEMORIES THAT ITS INDIVIDUAL MEMBERS DON'T HAVE" AT *AEON* (DECEMBER 11, 2018)

So some of the ways insects make the most of a few neurons are: specialized neurons, neurons focused on specific critical functions, and outsourcing memory issues to the colony as a whole.

But sometimes insect behavior is a bit surprising anyway. For example, while ants have a reputation for dedicated hard work, apparently 400 species of parasitic ants freeload:

These freeloading hangers-on are known as social parasites, and they've essentially forged an evolutionary shortcut through the comforts of cooperative communities.

Instead of building a communal network themselves, social parasites merely exploit ones that already exist, either in their own species or a closely related one.

CARLY CASSELLA, "SCIENTISTS TRACE THE MYSTERIOUS ORIGINS OF SOCIAL PARASITISM IN ANTS" AT *SCIENCEALERT* (OCTOBER 4, 2021)

So how *do* some ants realize that they don't have to work? We're still trying to figure that one out.

***Next:* Can insects be conscious? Let's look at bees first**

***You may also wish to read:* In what ways are spiders intelligent? The ability to perform simple cognitive functions does not appear to depend on the vertebrate brain as such.**

(Courtsey: Mind matter News)

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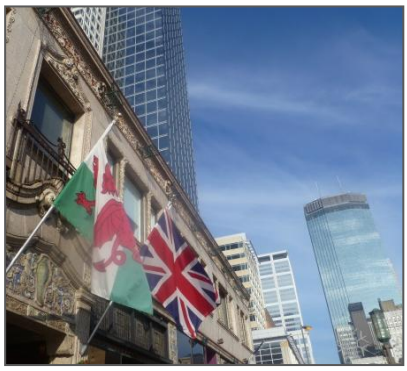
Programme and Events



berkeley prize

BERKELEY PRIZE 2022 LAUNCHES IN ONE MONTH

This year's topic:

DESIGN GUIDED BY CLIENTS' NEEDS:

Applying Social Factors Research to Architecture

A NEW QUESTION ON THE SOCIAL ART OF ARCHITECTURE AND A NEW OPPORTUNITY TO CONSIDER THE WHY OF DESIGN

AS ALWAYS, THE POTENTIAL FOR UNDERGRADUATE STUDENTS TO WIN CASH PRIZES IN THE ANNUAL ESSAY COMPETITION

AND, FOR THE SECOND YEAR, A CHANCE FOR PRIZE SEMIFINALISTS TO RAISE MONEY AND RECEIVE A STIPEND TO PARTICIPATE IN A LOCAL COMMUNITY SERVICE PROJECT RELATED TO THE TOPIC

IT ALL STARTS ON SEPTEMBER 15

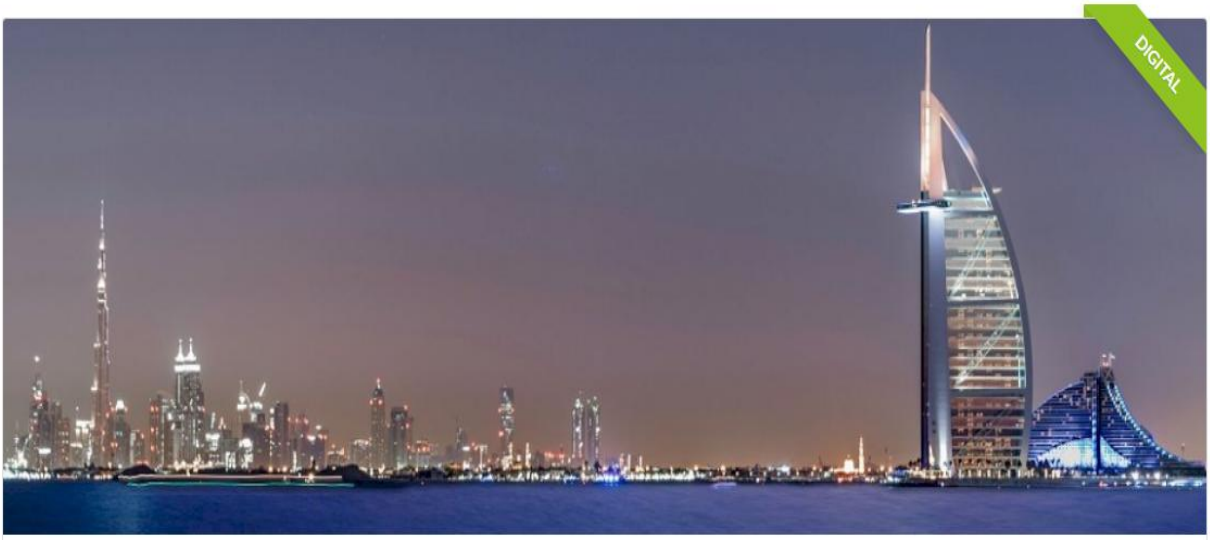
TELL FRIENDS, STUDENTS AND FACULTY - FORWARD WIDELY

ICPDPD 2022: 16. International Conference on Product Development and Product Design

March 03-04, 2022 in Rio de Janeiro, Brazil

ICPID 2022: 16. International Conference on Product and Industrial Design

April 07-08, 2022 in Dubai, United Arab Emirates



INTERNATIONAL UNION OF ARCHITECTS

UIA COMPETITIONS
18 JANUARY 2022

INTERNATIONAL ACCESSIBILITY SYMBOL DESIGN COMPETITION

The International Union of Architects (UIA) and Rehabilitation International (RI) are jointly inviting submissions for a **twenty-first century symbol of accessibility** to represent their core values of rights and inclusion, independence, physical and virtual accessibility for all, including people with disabilities.

The challenge is therefore to develop a new symbol of accessibility that better represents the variety of people who use buildings and other types of built environments. The competition invites **professional architects** and **graphic designers** as well as **architectural and graphic design students** to design a new graphic symbol of accessibility, to be proposed to the **International Organization for Standardization (ISO)** for adoption as the new international symbol of accessibility.

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Job Openings

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Feedback@designforall.in

Forthcoming Events and Programs:
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Lodhi Road, New Delhi-110 003India.

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