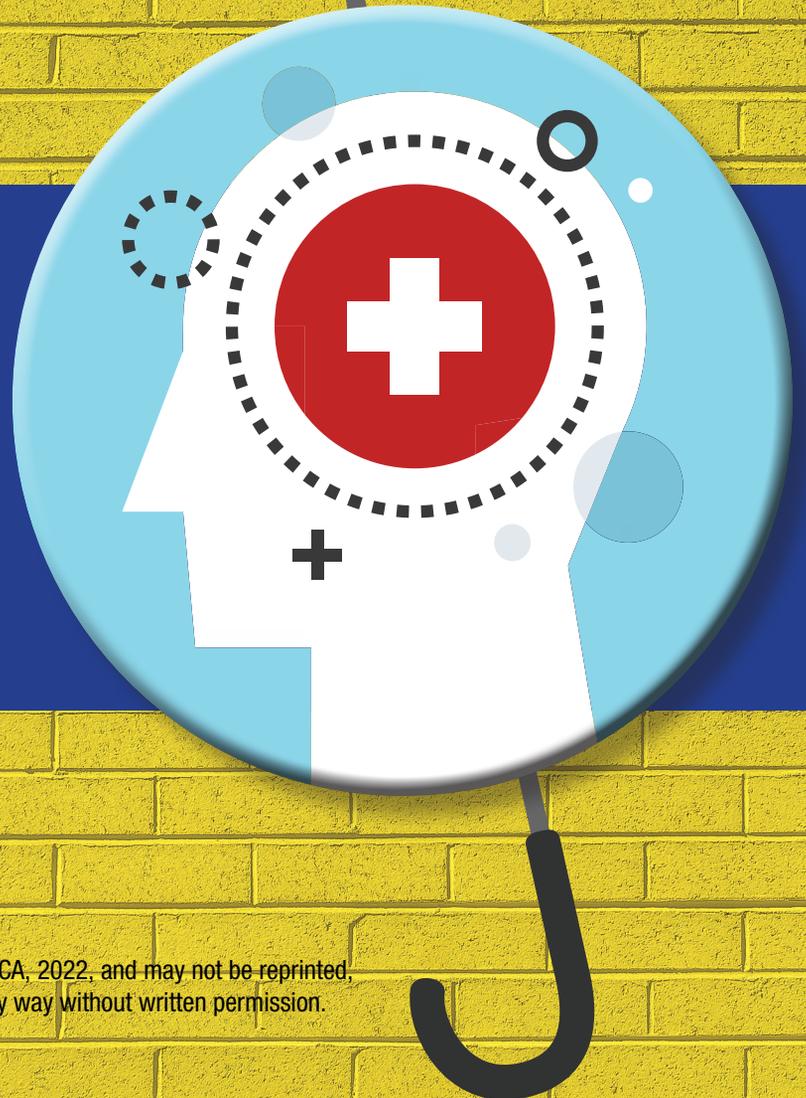


# WELL BUILT

## Facility Design to Benefit the Mental Health of Incarcerated Individuals and Staff

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**T**oday's buildings are healthier than ever — and not just for the environment. While the number of environmentally sustainable, LEED-certified buildings in the U.S. has grown exponentially in recent years, a different rating system is also gaining popularity. The WELL Building Standard grades buildings based on their impact on the health of occupants, measuring factors such as interior air quality and access to daylight. These measurements are critically important within the justice system where incarcerated individuals and staff spend long periods of time exposed to their indoor environments.

When Annette M. Chambers-Smith was appointed director of the Ohio Department of

Rehabilitation and Correction (ODRC) in 2019, she quickly established core values, including instilling hope for individuals who reside in the department's facilities. The ODRC's new Residential Treatment Unit and Outpatient Treatment Mall at the Ohio Reformatory for Women (ORW) seamlessly supports the institution's mission. It is designed to become one of the first WELL-certified corrections facility in the nation. The building's focus on human health will improve the well-being of its core occupants: women with mental illness. Design strategies discussed in this article could be used to improve environments at other corrections centers regardless of whether those institutions pursue official WELL certification. →



Image courtesy K2M/HOK

*Courtyards built into the Residential Treatment Unit and Outpatient Treatment Mall offer women space to enjoy the outdoors and practice meditative movement.*

Illustration: Umbrella in rain: istock/oxinoxi; brick wall: istock/marchello74; mental health icon: istock/vasabii

## Mental health and Ohio Reformatory for Women

Mental illness is a challenge across the justice system, affecting 37% of individuals in state and federal prisons and 44% of individuals in locally run jails, according to a Bureau of Justice Statistics (BJS) survey.

Among incarcerated women, mental health issues can be even more common. The BJS found that 66% of women incarcerated in state and federal prisons had been diagnosed at one time with a mental health disorder (compared to 35% of incarcerated men) and 20% of women met the threshold for serious psychological distress. (Serious psychological distress is a mental health problem severe enough to cause moderate-to-serious impairment and to require treatment.)

Individuals at the Ohio Reformatory for Women are not immune to the challenges of mental illness. Located a short drive from Columbus, ORW dates to 1916 and currently houses 2,300 women. Fifty-one percent of the women at ORW receive some form of mental health treatment, mostly by way of outpatient care and counseling. An onsite inpatient program provides residential treatment for around 50 women dealing with severe mental health disorders.

Mental health care has long been a priority at ORW and speaks to the holistic approach to care implemented within Ohio Department of Rehabilitation and Correction

(ODRC). In 2015 the ODRC commissioned a strategic master plan to identify ways it could better care for and rehabilitate incarcerated individuals in the coming decade. The plan for ORW included new housing for mothers and their babies, a new life lab for teaching independent-living skills, a new dormitory and the new mental health treatment unit and mall.

The new dormitory, completed in 2019, earned LEED-Silver certification for its environmental design and praise for its approach to wellness and inclusivity. The 288-bed facility includes secure, yet operable, windows that provide building occupants access to fresh air. Acoustic panels and soft, resilient furnishings limit noise and lend the dormitory a more residential feel. Most noticeably, an outdoor sensory garden — designed, installed and maintained by ORW women — offers residents access to nature and the opportunity to participate in landscape design and gardening.

The new mental health treatment unit and mall, now under construction and scheduled to open in 2022, will further ORW's focus on sustainability and wellness. The 53,000 sq.-ft. building is designed to achieve both LEED Gold and WELL v2 certification. Currently, ORW provides mental health treatment in two aging and non-adjacent buildings — one for inpatient care and another for outpatient. The new building will consolidate mental health treatment under one roof, providing for greater efficiencies and quality of care.

The inpatient treatment wing will house up to 148 women in a modern and inviting healing environment. Designed to help women manage their mental illness and return to general population, the light-filled inpatient wing offers four levels of treatment — from a watch unit for the most vulnerable patients to a residential-like step-down unit for those who've shown a readiness for more independence. The connected outpatient treatment mall can treat hundreds of patients a day for individual or group sessions and features a library, multiple group and interview rooms, staff offices and additional support facilities.



Image courtesy ORW Media Crew

Women housed in ORW's new Wheeler dormitory help plant the building's sensory garden in 2019.

“Take care of our staff; they will transform our offenders,” is another core value of the ODRC. The mental health treatment building at ORW also considers the health and wellness of employees with design details intended to improve their overall comfort, performance and job satisfaction.

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**Now in its second iteration, WELL v2 encompasses the following 10 concepts as they relate to wellness: air, water, nourishment, light, movement, thermal comfort, sound, material, mind and community.**

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## WELL Building Standard and Biophilia

Before discussing specific design strategies for ORW’s new mental health treatment center, it’s important to have a general understanding of the WELL Building Standard (a.k.a. WELL) and the concept of biophilia. Launched in 2014, WELL established the first industry-wide design guidelines for improving the health and well-being of building occupants. Now in its second iteration, WELL v2 encompasses the following 10 concepts as they relate to wellness: air, water, nourishment, light, movement, thermal comfort, sound, material, mind and community.

Many of the evidence-based guidelines of WELL complement and reinforce the concept of biophilia, which is defined as people’s desire to interact with or be closely associated with nature. One of the

first studies of biophilic design observed patients recovering from gallbladder surgery. One set of patients was given a room with a window that looked out onto nature. Another group of patients had a room that looked onto a brick wall. Patients in the room with the views onto nature not only recovered faster, they also required less pain medication.

Today, biophilic design uses buildings to connect people to nature in a variety of ways, including nature-inspired art and graphics, natural materials (such as wood and natural stone), daylighting and window views, indoor plantings and access to fresh air and the outdoors.

## How ORW’s treatment facility aids mental well-being

ORW’s treatment center draws on biophilic design and WELL to nourish and improve the mental health of both incarcerated women and their caretakers through the built environment. The building focuses on the following five principles rooted in the WELL Building Standard and biophilia:

- 1) Light and views
- 2) Noise and nature sounds
- 3) Access to the outdoors
- 4) Mind and movement
- 5) Healthy air and materials.

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Image courtesy K2M/HOK

*The Outpatient Treatment Mall (left) features a library, multiple group counseling rooms and 35 staff offices that can facilitate the needs of hundreds of patients. The Inpatient Treatment Unit (right and rear) houses up to 148 women in a light-filled space designed to complement their medical care.*

## Light and Views

Light, particularly natural light, promotes health and wellness in numerous ways. Light helps regulate people's circadian rhythms, i.e. the physical, mental and behavioral cues that regulate the 24-hour biological clock. Circadian rhythms influence sleep and wakefulness cycles and other important health factors, including hormone release, body temperature, hunger and digestion. Natural light and views of nature are also known to alleviate stress and help the body recover. ORW's Residential Treatment Unit and Outpatient Treatment Mall addresses light and views of nature in several ways.

**Expansive windows and views:** Both the outpatient and inpatient wings provide occupants with window views onto the ORW campus and its surrounding fields and woodlands. The design balances prioritizing natural light with secure, tamper-proof windows. Unusual for corrections buildings, the facility also makes use of clerestories. Incorporated into the roofline, these above-eye-level windows allow natural light to reach far into the interior of the building. Ample windows in staff offices provide staff and patients with access to natural light.

**Circadian lighting technology:** While all rooms in the building have access to natural light, factors such as cloud cover and seasonal changes can impact the

quality and amount of light provided. To counteract this, the building uses BIOS SkyBlue lighting, an advanced LED lighting system that mimics the way natural light complements and assists people's circadian rhythm. The lighting system meets and exceeds requirements under WELL v2.

**Nature imagery:** Research has shown that images of nature can have the same stress-reducing impact on people as actual views of nature. Where window views are not possible, ORW's treatment facility features art and wall graphics representative of Ohio landscapes and nature.

**Green wall and plantings:** The interior is designed to incorporate plantings and a green wall to provide occupants with interior elements of nature.

## Noise and Sound

Exposure to prolonged or excessive noise has been shown to cause many health problems, including stress, changes in social behavior, lack of sleep and fatigue and psychophysiological effects, such as cardiovascular disease. At the same time, studies have found that nature sounds improve health, lower stress and improve attitudes. The design of ORW's mental health center addresses noise and sound through acoustics and technology.

**Acoustics:** Acoustics in corrections facilities can be difficult to achieve. Carpet and other sound-absorbing materials come with maintenance and safety concerns that often make them impractical to use. At ORW, the design mitigates noise through acoustic panels built into the wall. The same acoustical panels can be printed on to create the nature scenes mentioned above.

**Nature sounds:** Intercoms in sleeping rooms and elsewhere allow the women to select from multiple channels, including nature sounds and music.



Image courtesy K2M/HOK

*In support of biophilia and WELL, this dayroom in the mental health treatment building features natural light via clerestory windows, wall graphics of nature, acoustical panels and exposed wood beams.*

## Access to the Outdoors

Numerous studies have shown that time spent in nature and the outdoors improves cognition, mental health and emotional well-being. ORW's mental health center uses the outdoors in multiple ways to improve the health and well-being of the women it serves.

**Courtyards:** Each housing unit in the inpatient wing has its own courtyard where women can access sunlight and daylight. Covered sections in the courtyards specifically address the needs of patients who, due to medication, cannot have direct exposure to sunlight.

**Sensory Garden:** Like the garden outside of ORW's new dormitory, the mental health center will also feature a large walking garden programmed for activities. Women in ORW's horticulture class are designing the garden and will maintain it. The space will feature walking paths, seating and planting beds.

## Mind and Movement

Exercise and movement are critical to mental health and well-being. Aerobic exercise releases dopamine and serotonin that boost people's moods and overall sense of well-being. Exercise also helps stimulate appetite and improve sleep cycles, both of which are important for people experiencing depression and other mental illness. Meditative movement, like yoga and tai chi, also have been found to alleviate anxiety and post-traumatic stress. The same is true with quiet meditation and focused breathing that help people reduce stress and restore a sense of calm. ORW's mental health center offers several novel approaches to encouraging mindfulness and movement.

**Indoor/outdoor activity spaces:** Interior day rooms and life-skills areas, such as a training kitchen and laundry, allow women to move and stay active within the building. Courtyards connect to each housing unit, providing areas for exercise, aerobics and yoga while the building's walking garden offers space for meditative movement or quiet contemplation.

**Resiliency rooms:** Separate resiliency rooms for patients and staff offer quiet space to spend time alone and de-stress. Multi-channel intercoms within the rooms allow them to listen to sounds of nature or music.

**Sit-stand desks:** Another requirement of WELL is the use of stand-up desks to counteract the harmful side

effects (obesity, increased risks of heart disease and high blood pressure) of sitting for long periods of time. Staff offices will feature sit-stand desks as well as windows and natural light.

## Healthy Air and Materials

Indoor air quality (IAQ) is a key aspect of designing for well-being. Poor IAQ caused by smoke, toxic building materials and cleaning products, and poor ventilation can lead to irritation of the eyes, nose and throat, headaches, dizziness and more. In the long-term, indoor air pollutants can cause respiratory disease and cancer. WELL design seeks to eliminate indoor air pollutants by prioritizing building materials and thermal systems that eliminate harmful pollutants. In the age of COVID, indoor air quality also means air that is as free of germs and other contagions as possible. ORW's mental health center bolsters IAQ in the following ways:

**Ionization and UV light:** The building's HVAC features ionization and ultraviolet light (UV) technology designed to neutralize and remove airborne pathogens.

**Non-toxic materials:** WELL requires that buildings be constructed with materials that do not off-gas toxic fumes or elevate illness through contact or exposure. ORW's mental health center abides by these guidelines with WELL-certified building materials and furnishings. When possible, the building also makes use of natural materials, such as wood ceiling beams and stone pavers, that support biophilia and lend the building a warm, residential feel.

## Final thoughts

While mental health awareness has made tremendous strides in recent decades, mental illness has yet to become as normalized in the U.S. as physical illness. Corrections centers — home to large percentages of people experiencing mental health challenges — can help change that.

Facilities like ORW already have proven successful in reaching out and providing people access to mental health care. The next step is to provide people spaces that fully support their health and well-being.

The built environment is one of five social determinants of health that impact people's quality of life

and morbidity. ORW's new Residential Treatment Unit and Outpatient Treatment Mall builds on the understanding that health and environment are interrelated. By following the evidence-based design principles of biophilia and the WELL Building Standard, it offers an example of how corrections facilities can incorporate daylight, nature, fresh air and spaces for movement and respite to benefit the well-being of incarcerated individuals and the people who ensure their safety and care.



Jenny Hildebrand is a Warden at London Correctional Institution. Jenny began her career in the field of Corrections in 1987 by graduating from Eastern Kentucky University with a Bachelor of Science degree in Corrections and Administration of Justice. She has over 32 years of experience within DRC from holding positions in the realm of security, unit management, ACA coordinator, deputy warden and warden roles. She is currently the warden at London Correctional Institution, which houses 1,975 level 1 and 2 incarcerated male adults. Jenny is on the ACA committee of Sustainability Oriented & Environmentally Responsible Practices in Corrections and committee chairperson for Facility Planning & Design.



Bob Schwartz, FAIA, has dedicated his career to the programming, planning and design of justice facilities. A senior justice planner at HOK, his experience includes the synergistic design of award-winning courthouses, detention, correctional, law enforcement and juvenile facilities. Through careful listening and thorough knowledge of planning, accessibility, security, sustainability and technology concepts and standards, he has developed justice facilities across the country that meet his clients' needs.



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