

# OHIOHEALTH NEUROSCIENCE CENTER

B28.01

SUBMISSION TYPE:  
**BUILT AWARD**

PROJECT LOCATION:  
**COLUMBUS, OHIO**

PROJECT COMPLETION DATE:  
**JULY 2015**

PROJECT TYPE:  
**NEW CONSTRUCTION**

USE TYPE:  
**HEALTHCARE**

The Neuroscience Center represents a approach to care unlike any other, by fostering collaboration between disciplines, providing greater convenience, and better patient outcomes overall.

A key project priority was to design an environment that redefined the patient experience, promoted advanced methods of care, and positioned the hospital as a new regional landmark.







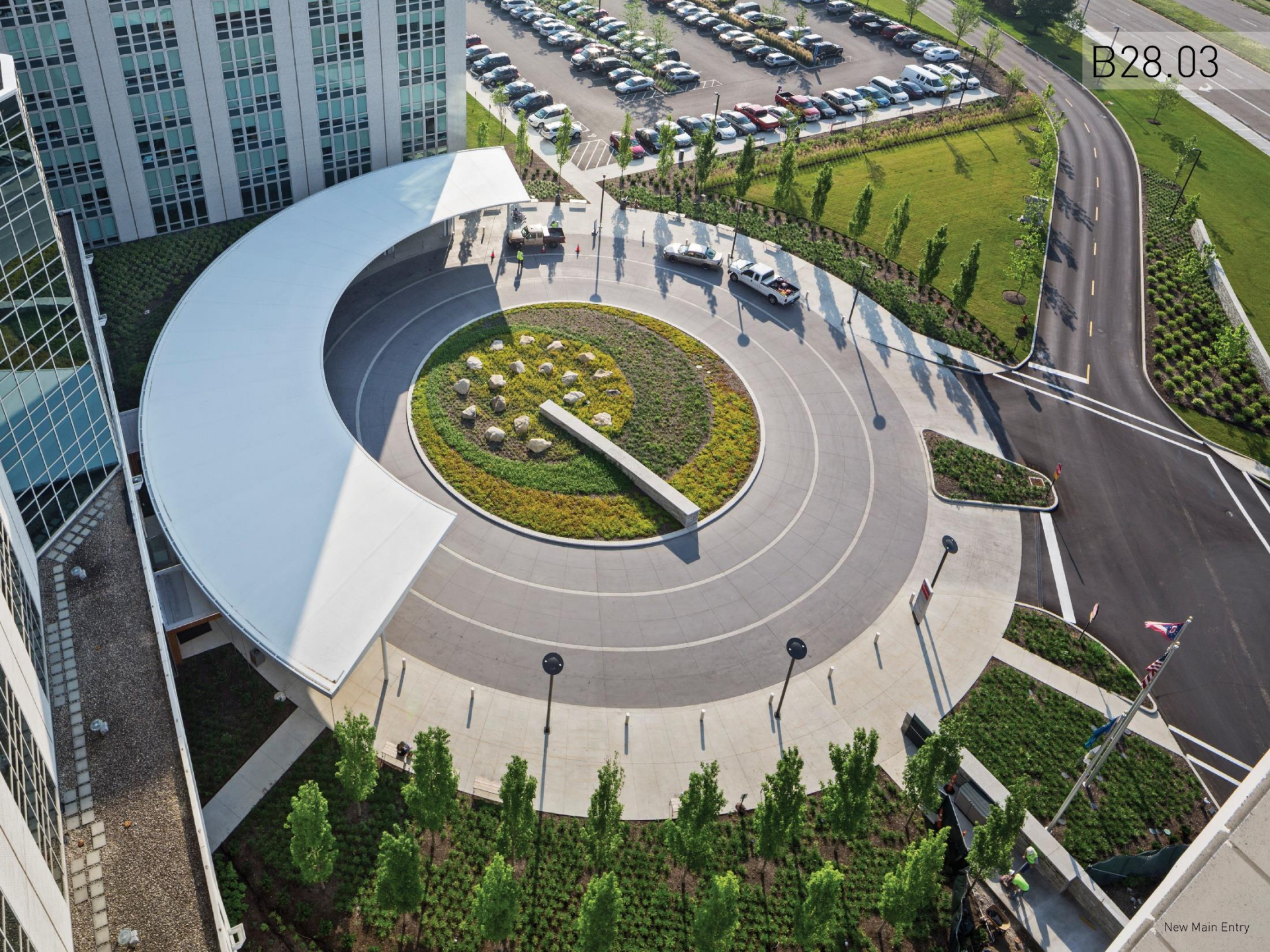
New Main Entry

## DESIGNING AN ICONIC TOWER THAT INTEGRATES SEAMLESSLY WITH AN EXISTING CAMPUS

At the OhioHealth Neuroscience Center a major challenge was to create a bold new look for the flagship hospital of the OhioHealth System, but to do so in a way that was complementary to the existing campus rather than overshadowing. By working closely with hospital leadership, the team designed a prominent addition with a visual character which departs from the existing brick box campus motif and created a striking counterpoint that harmonized, rather than opposed, the existing aesthetics of the site. The CEO of the health system has indicated proudly that it is a progressive departure from the norm on campus, but at the same time looks like it was always meant to be there.



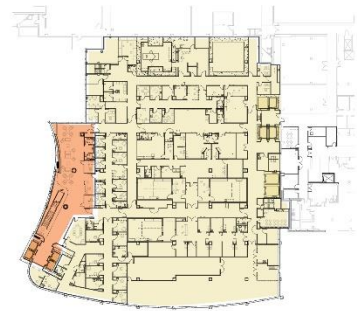
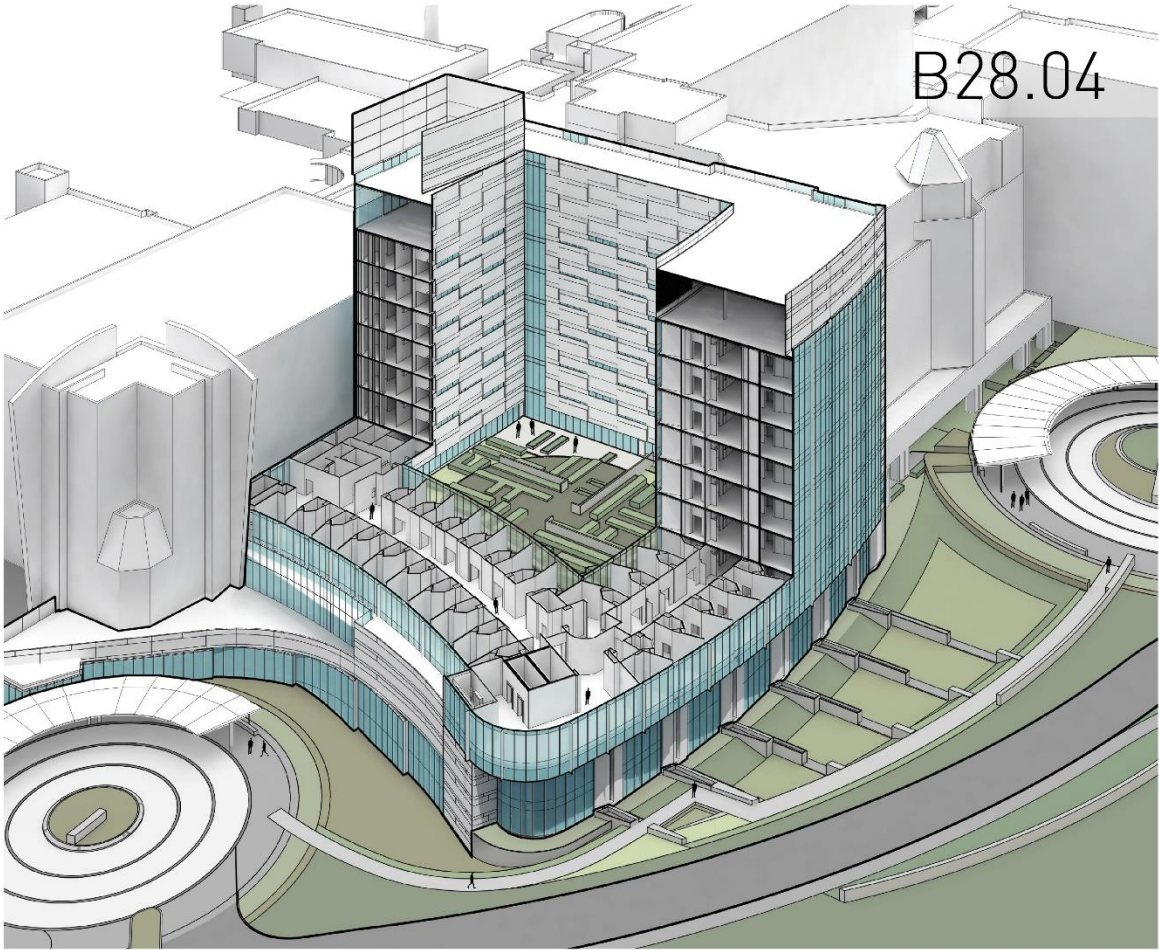
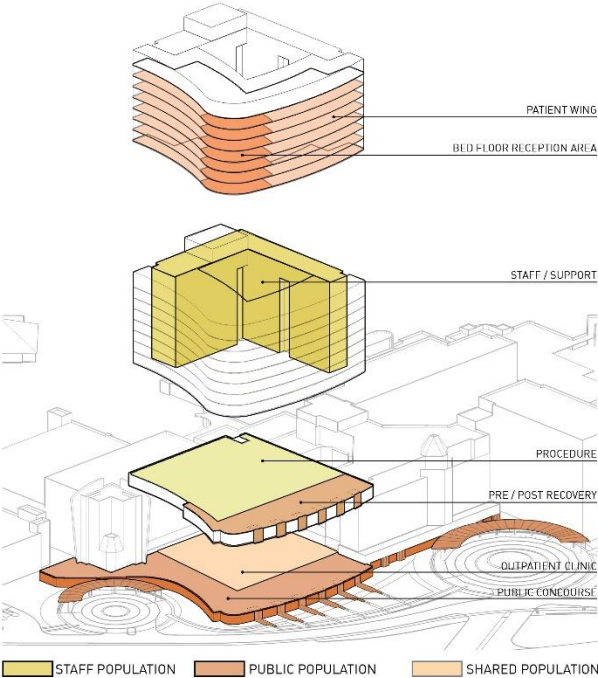
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# SITE INTEGRATION AND FUNCTIONAL RELATIONSHIPS

Program Components:  
224 single bed patient rooms, diagnostic and treatment facilities, 8 Neuro OR's, two stereotactic radiosurgery vaults, three interventional radiology labs, and renovation for three new open heart OR's



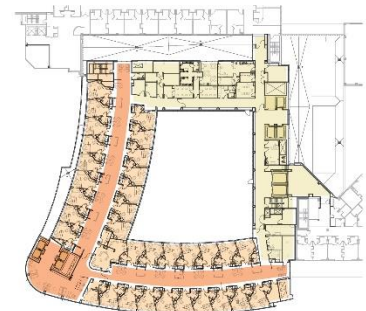
LOWER LEVEL      DIAGNOSTICS AND TREATMENT



GROUND LEVEL      LOBBY AND CLINIC



LEVEL 2      PROCEDURE LEVEL



LEVEL 3-9      INPATIENT BEDS



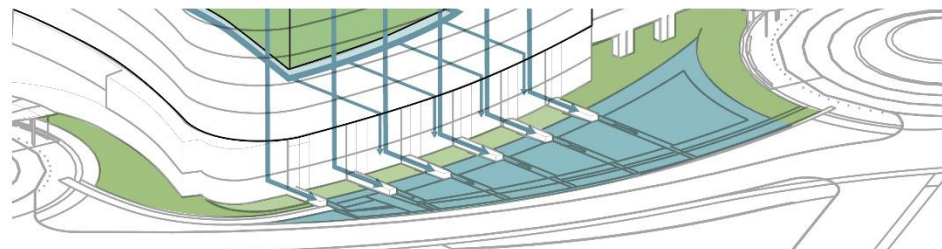
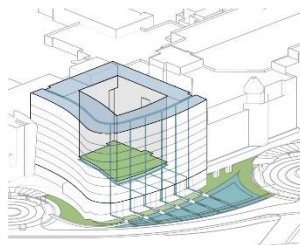




Rain Garden with Views into Surgery Waiting Beyond

## A RAIN GARDEN AT THE FRONT DOOR

The Rain Garden is situated between the arrival plaza, concourse waiting area, and the loop road. Working hand-in-hand with the building's courtyard green roof, the Rain Garden performs as a highly visual environmental amenity while slowing the erosive forces of storm water and enhancing water quality.





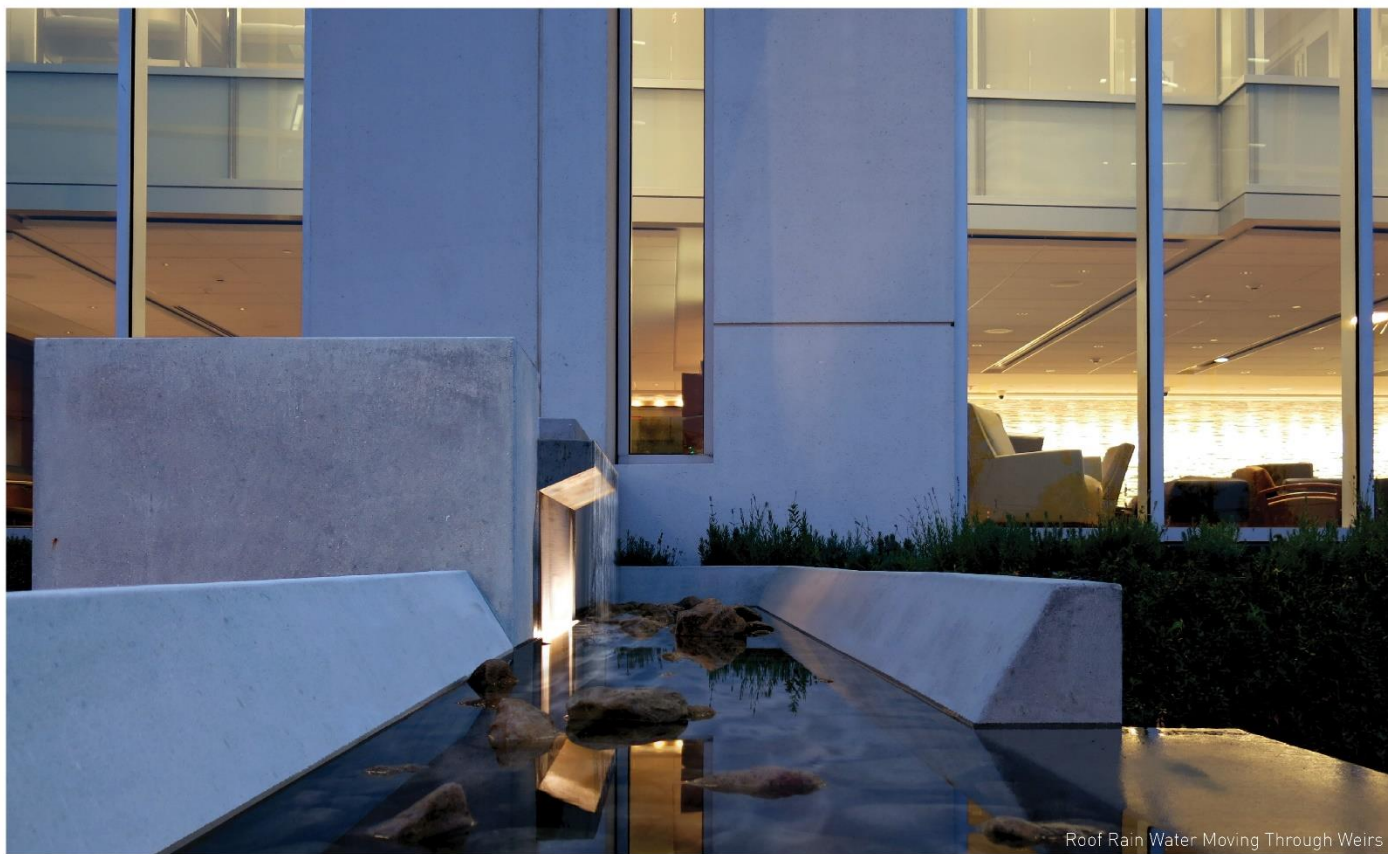
## RAIN GARDEN DESIGN

Water is conveyed from roof scuppers through architectural concrete runnels leading to the Rain Garden. A series of notched weirs constructed of architectural concrete controls water flow into the basin. A variety of wetland plants was selected for their scale, texture, seasonal color, and maintenance qualities to make this a garden that is beautiful as well as functional.

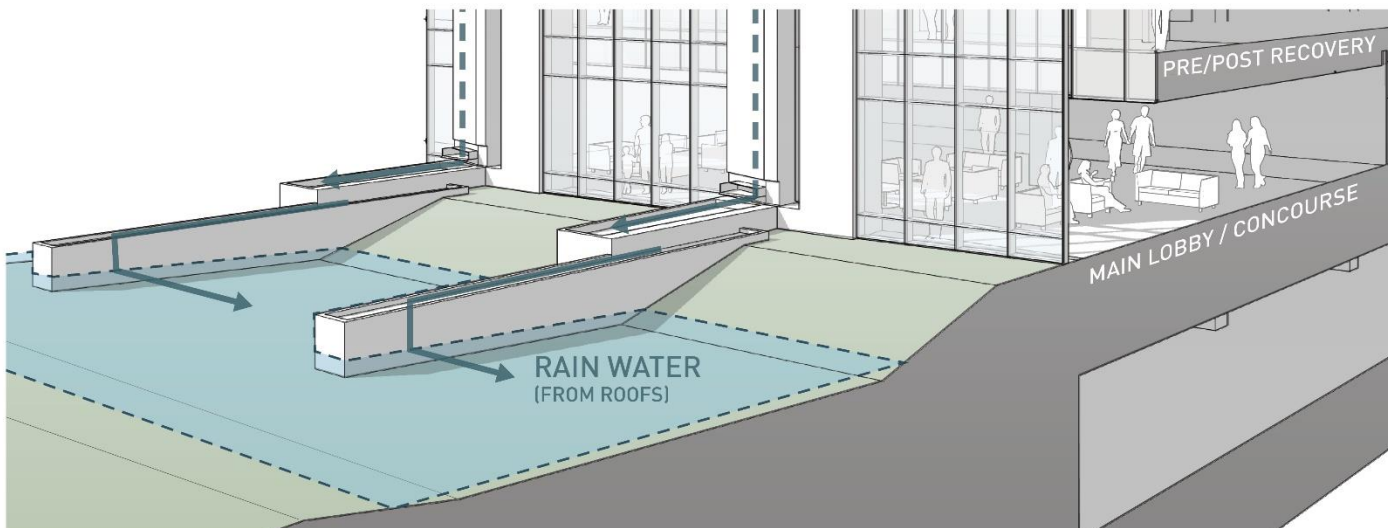
A garden path made of architectural concrete connects patients/visitors and staff to the main Arrival Plaza and ED Arrival Plaza. Canopy trees, benches, and lighting are provided for added comfort and interest.

### Key Elements/ Features

- Collects from building roof
- Collects from courtyard green roof
- Water is conveyed from scuppers through architectural concrete runnels
- A series of notched weirs collect and controls water flow into basin
- Water allowed to pool and then percolate into detention pipes below which then connects to campus storm water system



Roof Rain Water Moving Through Weirs

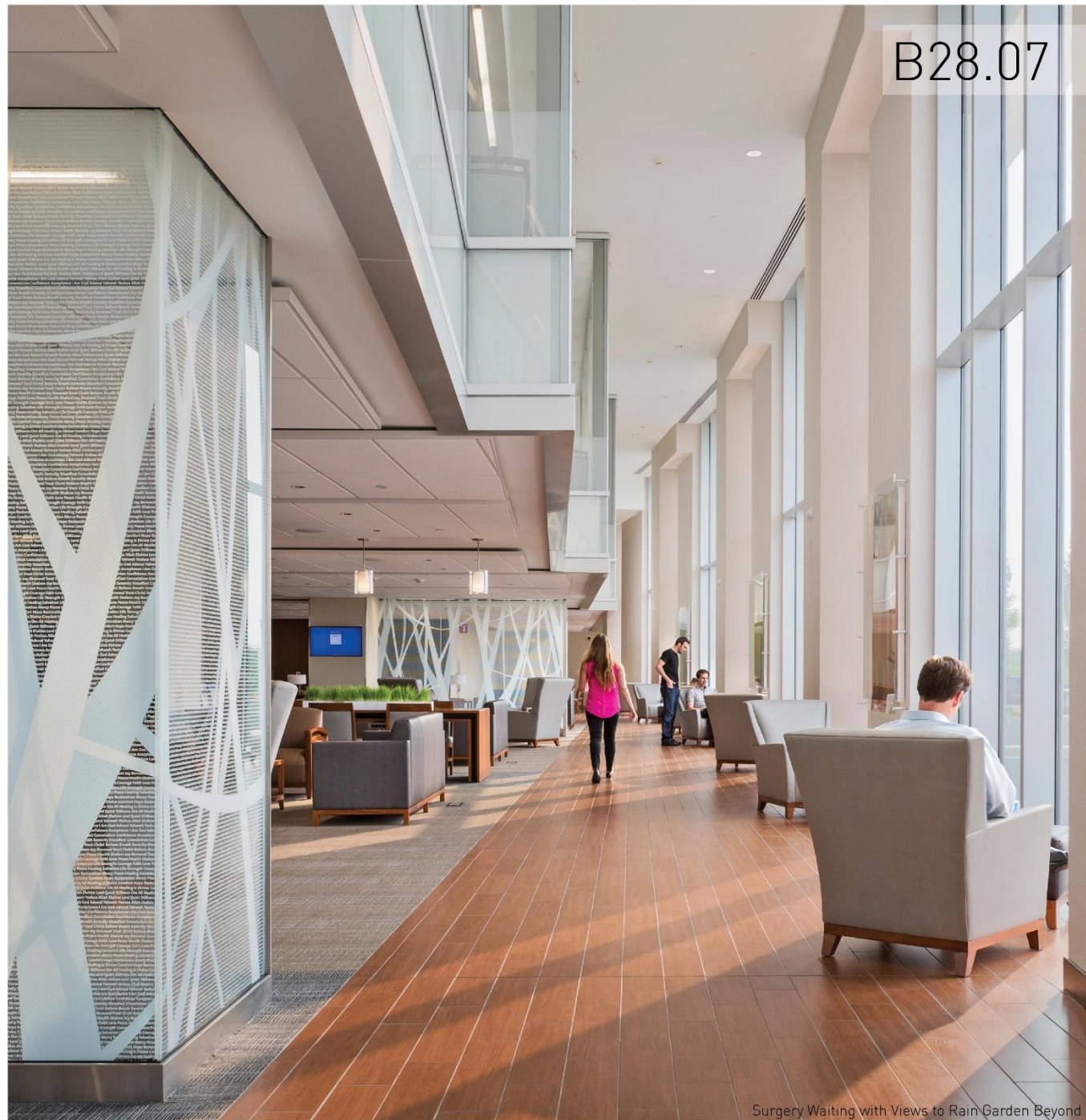




## ADDING BEAUTY AND NATURE TO THE SURGERY WAITING EXPERIENCE

Double height opportunities connect the volume of the lobby and Pre/Post corridor above to the amenities of the Rain Garden. All waiting lounges have been located along the primary circulation route and are designed to provide access to daylight and outdoor views. Their interior design has been developed to address different modes of waiting and their inherent set of needs. These spaces provide a variety of seating arrangements and cater to the diverse needs for privacy, comfort and ergonomics required by the specific user demographic

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Surgery Waiting with Views to Rain Garden Beyond

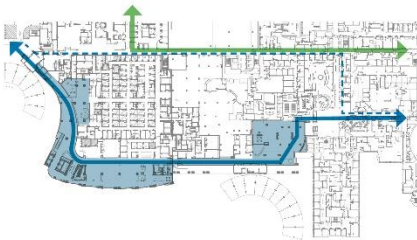


## IMPROVING CIRCULATION FOR THE ENTIRE CAMPUS

The design team used the new bed tower and public concourse as an opportunity to create a clear separation between front and back-of-house traffic, segregating these two flows for the first time in the history of the 120 year old campus. We accomplished this by challenging earlier Master Planning assumptions and discovering that through the creative relocation of the new tower, the public traffic could be completely decanted from the facility's clinical core. This exceeded the hospital's own aspirations for the project because they had not anticipated that what was originally planned to be a distal tower addition could have such a positive effect on the circulation of the campus at large.



Original Circulation: Problematic Mixing of  
Circulation Types



New Circulation: Public and Staff Circulation are  
Untangled

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## DESIGNING SPECIFICALLY FOR THE NEEDS OF THE NEUROSCIENCE PATIENT

Neuro patients have unique needs that differ from other patients. Cognitive boundaries, sensory limitations and physical and emotional issues provide a framework for crafting the interior spaces. With a focus on comfort and a proximity to nature the Center uses natural light and a careful material pallet to create spaces that are tuned for the unique needs of this patient population.



Opportunities for starting and stopping along a wide, sunlit, concourse allow patients and families a chance to take a break. A variety of surface treatments provide clear wayfinding, as well as denoting important entries. Select destinations are marked with increased lighting and visual interest.



Navigating between waiting spaces is made easier with a communicating stair that runs beside an exterior garden.



The Pre-Post Recovery unit accommodates private spaces for both patients and families. The corridor is lined with overlooks into the main lobby and rain gardens beyond.



The bed floor reception area provides an abundance of natural light. Views to the surroundings create a positive atmosphere for contemplation.



Patient rooms create a calm sensory atmosphere that promotes a safe and secure environment. A variety of comfortable seating choices address a variety of needs.



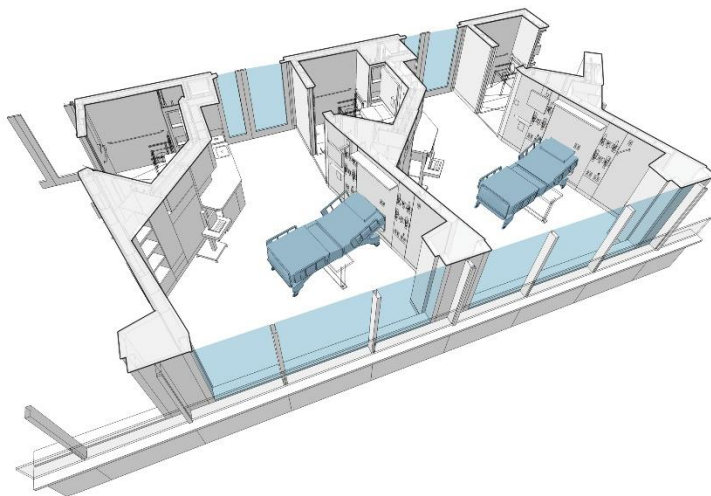
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Patient room geometry provides direct visual connections between patients and caregivers, and between patients and the outdoors

## CLINICAL EXCELLENCE

The new 411,000 SF tower allows OhioHealth to achieve 100% private beds by adding 224 acuity adaptable same-handed rooms. This gives patients and their loved ones the privacy they need, improves patient safety and hospital experience, and positively influences physician and staff productivity.





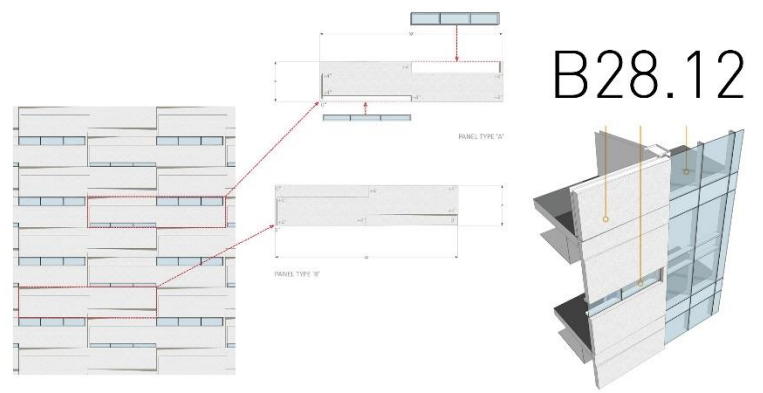


View of Courtyard Elevations and Green Roof from Patient Room





Articulated Precast Wall at Courtyard

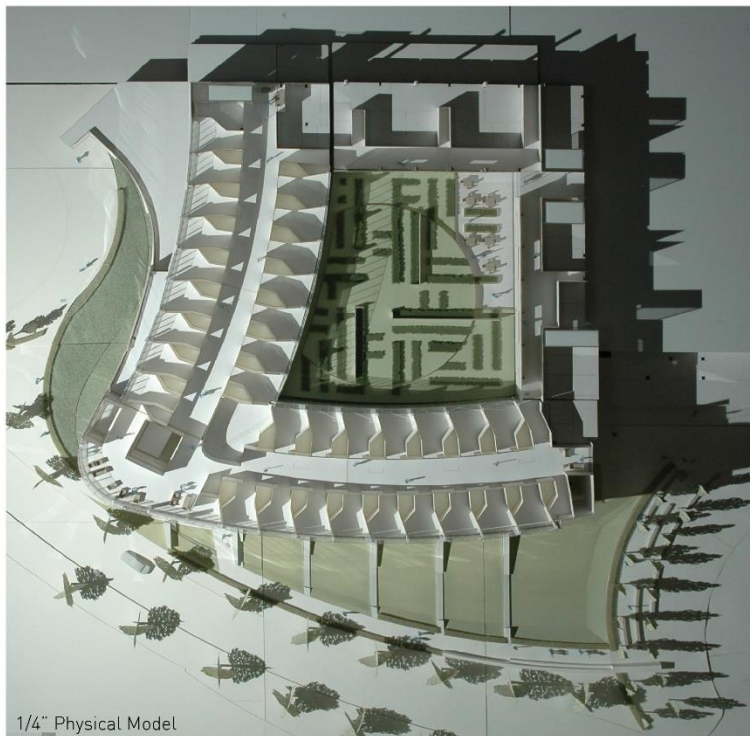


View of Courtyard Elevations and Green Roof from Patient Room



Courtyard Elevations and Green Roof





1/4" Physical Model



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Model Array

## A MULTI-DISCIPLINARY COMMITMENT TO PHYSICAL MODEL MAKING

The design team employed physical modeling throughout the project as an internal tool for discussion and critique, as well as an important instrument of communication with the client. The greatest benefit of the physical modeling effort, and its variety of scales, was the clarity it afforded the client and the rapid feedback it generated from the engineers, builder and sub-contractors.



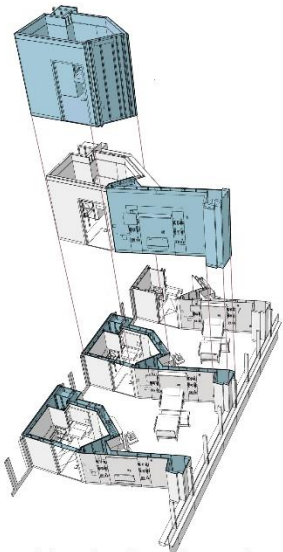


Prefabricated MEP Rack, Installation



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Prefabricated MEP Rack, Installed



Prefabricated Inpatient Room Approach



Prefabricated Toilet Room and Headwall, Installed

## IMPROVED CONSTRUCTION PRECISION THROUGH MULTI-TRADE PREFABRICATION

Over 40% of the new tower's construction incorporated modular prefabricated systems. This innovative process was intensely focused on improved quality of craft and construction, savings in cost and reduction in schedule for OhioHealth. The client has currently recognized a 4% savings in construction costs and a schedule reduction of 6 months.



A low-angle, upward-looking photograph of the OhioHealth Neuroscience Center. The building is a modern, multi-story structure with a light-colored, textured facade and numerous windows. The perspective creates a sense of height and scale, with the building's lines converging towards the top of the frame against a clear blue sky.

# OHIOHEALTH NEUROSCIENCE CENTER

COLUMBUS, OH

B28.15

"The excitement of patients and families makes it all worth it."

*Gina Terrell, Director of Neuroscience*

"Do you realize what this means for us and our patients?! It is an incredible, energizing space."

*~Neuro ICU Nurse*