

# Post-Occupancy Evaluation of the Wayman Tisdale Specialty Clinic

*April 7, 2013*

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## Executive Summary

The University of Oklahoma Wayman Tisdale Specialty Clinic opened its doors in June 2012 and began seeing patients. Shortly after that, the College of Architecture established the Community Health and Environmental Design (CHED) studio at the clinic to deliver educational outreach projects, undertake community design projects, and conduct research related to health and design. Six months after opening the clinic in November of 2012, four interior design graduate students under the tutelage of Professors Hilary Fulton and Mia Kile completed a post-occupancy evaluation of several aspects of the new clinic for the CHED. The students visited the clinic on two occasions to identify issues and collect data. The students met with clinic staff, CHED faculty, Clinic Director, Thomas Boxley, and Clinic Architect, Connie McFarland FAIA. This summary briefly describes the focus of their studies, the methodologies they used, their findings and recommendations for improvements on the design of the clinic.

## Acoustics and Speech Privacy

*Researcher: Lacey Howard*

### Issue Description

Clinic staff reported they could hear conversations between patient examination rooms. The Health Information Portability and Accountability Act (HIPPA) requires identifiable information, including oral communications, to remain private to protect patients' rights. Patients may not share important information if their privacy is compromised, even if it might benefit their health. Noisy environments can also be stressful for staff leading to more mistakes.

### Methodology

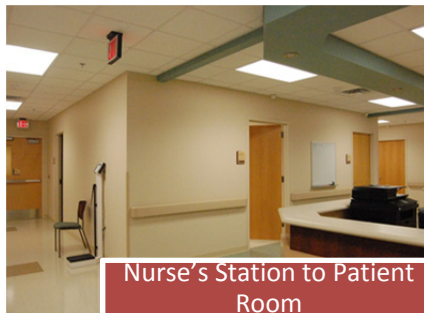
Four possible scenarios that might lead to an oral privacy violation were considered by researchers: 1.) reception desk conversations that might be overheard in the waiting area, 2.) examination room conversations that might be overheard in another examination room, 3.) examination room conversations that might be overheard in the corridor, and 4.) discussions at the nurses' station that might be overheard in the examination rooms. Two female subjects and one male subject simulated conversations in each scenario during a normal business day at the clinic while acoustic data was collected. Maximum sound levels and sound dampening were analyzed and qualitative data related to the overheard conversation was rated using the Privacy Index Rating System.

### Findings

Conversations at the reception desk overheard in the waiting area and conversations in examination rooms overheard in the corridor had a confidential privacy index meaning no action is needed. Conversations at the nurses' stations overheard in examination rooms had a normal privacy index. Some modifications may be needed to reduce distracting noise for the staff.

Conversations in examination rooms overheard in another examination room had a poor privacy index. These conversations can clearly be heard and modifications are required to increase privacy.

Maximum Decibel Readings and Decibels Dampened			
Scenario	Source Max	Receiver Max	Decibels Dampened
Check-in Desk to Waiting	74.2	70.5	3.7
Patient Room to Patient Room	81.0	69.2	11.8
Patient Room to Hallway	81.5	68.0	13.5
Nurse's Station to Patient Room	74.8	63.3	11.5



### Recommendations

Add acoustic wall panels, additional drop down ceiling area or softer floor materials at the nurses' stations to dampen reverberation.

Reroute supply and return air ducts so adjacent examination rooms are not connected to the same line and modify examination room wall height so walls reach to the bottom of the floor above creating a tight seal or alternatively, introduce masking noise or background music to mask sounds from adjacent spaces.

After improvements are complete, repeat acoustic tests to ensure noise levels are reduced and privacy indices improved.

## Lobby Lighting Levels

Researcher: Emily Reed

### Issue Description

The lobby of the Tisdale Clinic faces south and has a glass curtain wall façade that allows daylight into the building. The designers included a control system consisting of movable shades on the inside of the facade partially covering the glass wall. While staff and visitors may enjoy natural light and views to the outside, too much daylight may cause discomfort from glare. Excessive heat gain may also be uncomfortable and affect energy efficiency.

### Methodology

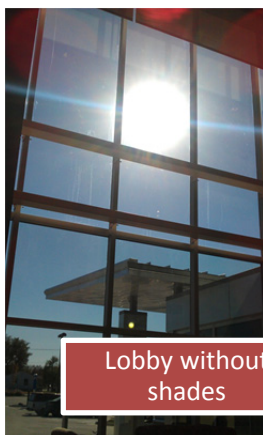
A light meter was used to measure illumination levels at 13 points in the lobby under two conditions, first without the shading devices and then in an altered state with the shades fully lowered. The readings occurred in late fall during full sun conditions at 1:15 pm with the lobby overhead lights turned on (controls on the lights would not allow them to be turned off.)

### Findings

The light levels in the unaltered state ranged from a low of 85 footcandles to a high of 2,149 footcandles with three points over 1,000 footcandles and 10 points under 300 footcandles. Under altered conditions, the light levels were significantly lower ranging from 78 footcandles to 204 footcandles. The recommended illuminance range for the lobby is 2 to 50 footcandles with the higher value only recommended for performing visual tasks of a large size. All readings greatly exceeded the desirable illuminance.

### Recommendations

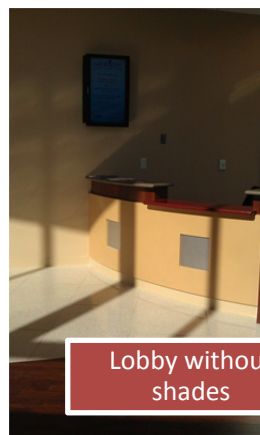
Lower the window shades in the afternoons to reduce glare and overall illumination levels.



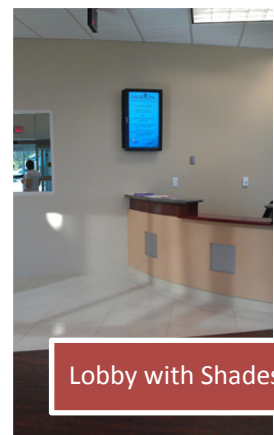
Lobby without shades



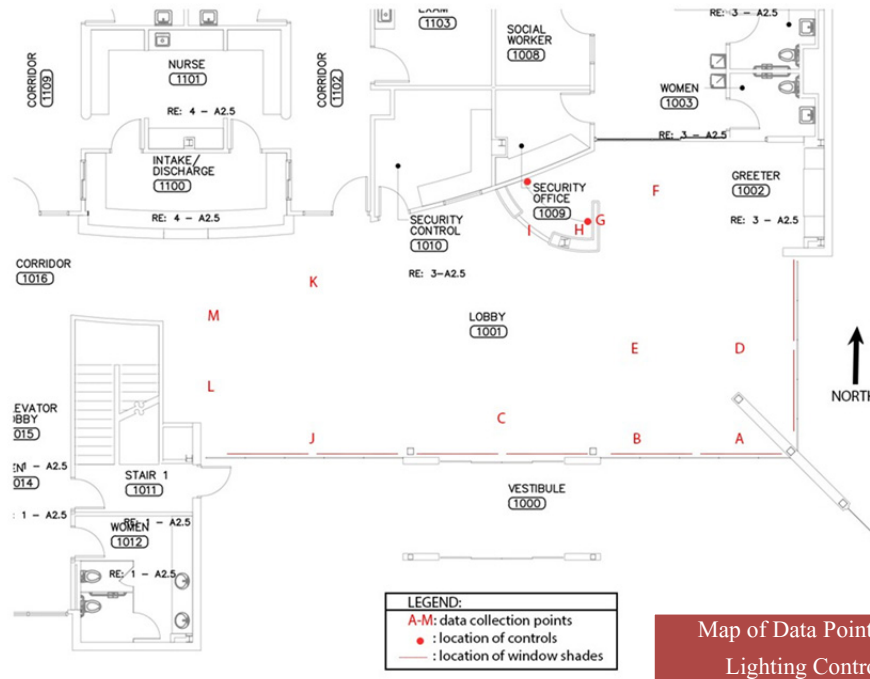
Lobby with shades



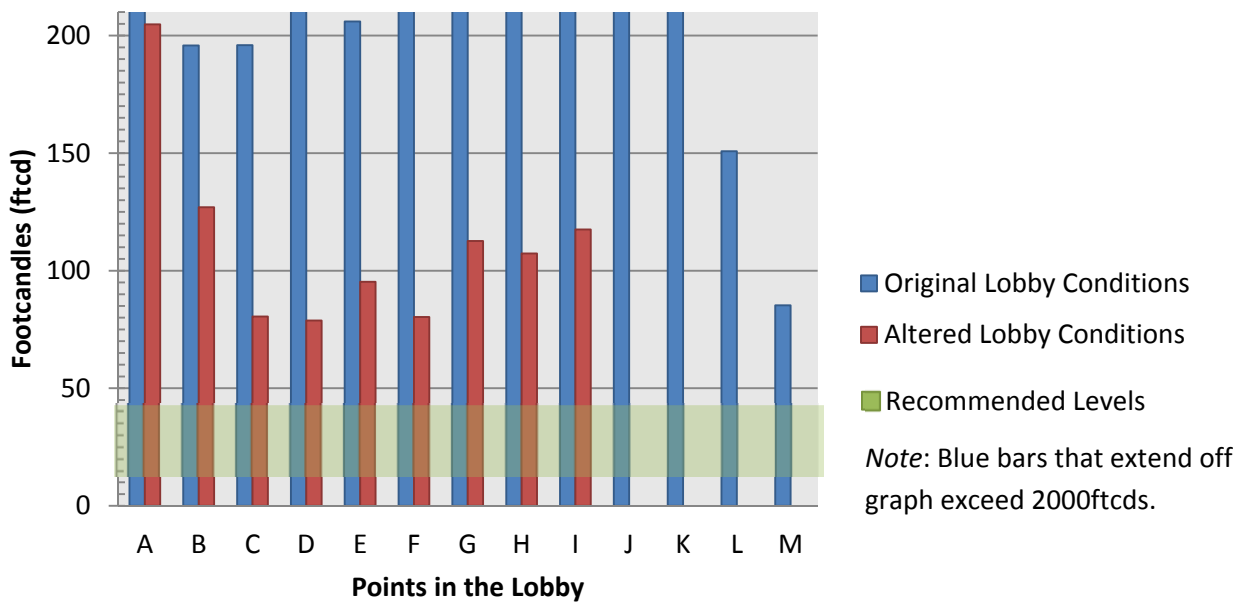
Lobby without shades



Lobby with Shades



**Light Levels in the Clinic Lobby (from 0-230 ftcd)**



Adjust the lighting controls in the lobby to turn off the overhead lights during the day unless light levels drop below 20 footcandles. A manual control for overriding the automated controls is also desirable for user controls.

The interior window shades do little to reduce heat gain. Only exterior shading devices can greatly reduce the amount of thermal radiation entering the building. Future studies are needed to determine the amount of heat gain, the size and effect of exterior shading devices and their level of cost effectiveness.

## Wayfinding

*Researcher, Kolton Barnes*

### Issue Description

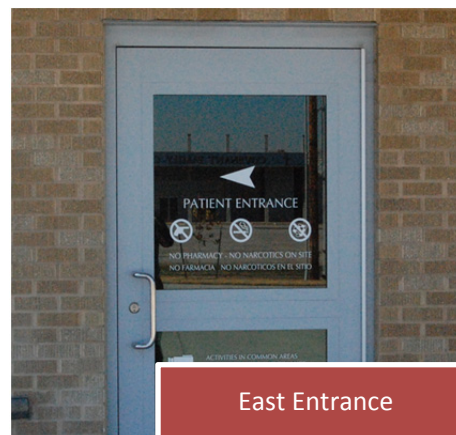
Orientation and wayfinding is important for the comfort of new visitors, the efficient movement of staff and evacuation during emergency egress. An easy to understand floor plan and legible architectural features are required for proper orientation. When the physical environment does not provide adequate wayfinding cues, signage is often used to remedy the situation.

### Methodology

Examination of the Tisdale Clinic wayfinding conditions consisted of simple field observations of public areas during site visits. Printed floor plans were used for making notes. Photographs were taken for analysis.

### Findings and Recommendations

While the main entrance of the building is clearly visible, the side doors on the east side of the building are less legible and only have door decals identifying their purpose, particularly troubling for the ambulance entrance. Protruding signs or canopies should be added to these entrances for clarity especially once they are being used regularly. Directional signage in the parking lots could also be used to direct traffic to the appropriate entrance.



Visitors entering the main lobby may be confused and experience anxiety due to ambiguous architectural cues. Visitors are greeted by an empty reception desk with a suspicious one-way mirror adjacent. The main check-in desk is recessed and to the left. There is no visible means of vertical travel to the second floor and no general directory is provided. The security guard should sit at the front desk instead of behind the one-way mirror. The mirror should be covered by a new general directory.



Security Desk



Lab Check-in

The laboratory check-in signage is low contrast and hard to distinguish from the tan color walls. Introduce a high contrast background such as a wood plaque stained to match nearby millwork between the letters and the wall.



Exam Signage Distance



Exam Signage Closeup

The signs for the checkout areas are small and difficult to see from a distance making it difficult for patients to complete their visit. Replace with larger signs.

A ceiling sign designating the location of restrooms is needed in the examination room area.

Some exit signs are mounted high on the ceiling and can only be seen at a steep viewing angle. Use extension stems to lower fixtures to better positions.



Exit Sign Angle



Exit Sign Closeup

The two you-are-here maps have north pointing up but are not mounted on north walls. Most people translate up as forward on maps like these. Move maps to north walls or replace with reoriented maps.

## Security of Private Spaces

Researcher: Kate Wallace

### Issue Description

It is important that visitors to the clinic only have access to public areas to protect clinic property and assets, including drugs, protect patients from harm and insure their privacy.

### Methodology

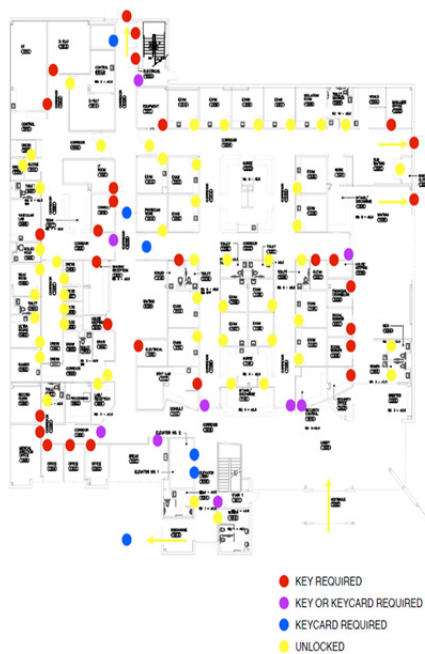
All twenty-two of the doors on the first floor of the clinic were checked to see if they were secure by key or electronic card key.

### Findings

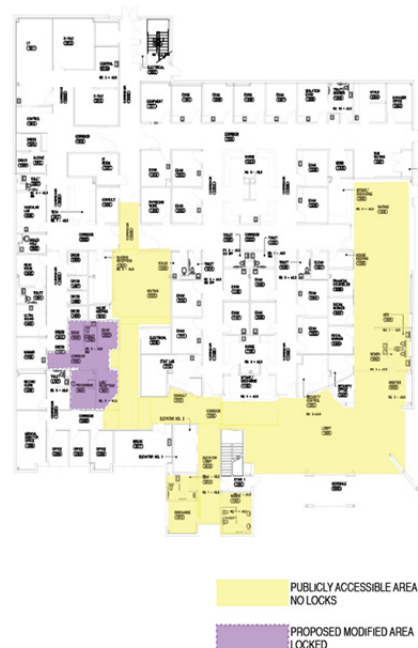
Only five doors were unlocked and open to the public, four doors to restrooms and one door to the laboratory and blood draw area. The rest of the doors were adequately secured by key or card key.

### Recommendations

The laboratory and blood draw area needs a lock activated by card key or button located at the check-in desk.



Access Points



Proposed Publicly Accessible



### **Miscellaneous Observations**

The overhead lighting in the radiology room flicker when dimmed to the lowest level. Clinic staff often set the lights to the lowest level when making x-ray images. Replace fluorescent lamps with dimmable LED lamps. If fixtures do not accept alternate lamps then replace fixtures.

The decorative pendant lights above the second floor waiting area where the CHED is located produce excessive glare. Install light shields around the top of the fixtures to reduce glare or just leave the fixtures permanently turned off since they do not provide useful illumination.

In the south stairwell on the upper run of stairs, the handrail adjacent to the wall does not maintain an adequate separation between the rail and the wall. About halfway up there is a protrusion where a hand could be pinched between the rail and the wall unexpectedly. Remove the handrail and reinstall with adequate spacing.