

Design of the Pivot Development Center in Oklahoma City

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Oklahoma City is faced with a large population of people without homes and many those are below the age of eighteen. Currently, organizations that endeavor to aid these homeless youth are limited by the inadequacies of their current building. This project provides a design to the Pivot organization in Oklahoma City to support their efforts of preparing homeless youth for a self-sustaining and healthy life.

The Pivot organization is a rather unique client because they offer a wide range of services to an even wider range of people. Their main focus is caring for the homeless youth of Oklahoma City. These youth can receive temporary housing provided in the form of an apartment-like room or one of the many tiny houses on Pivot's current site. In addition to this, Pivot provides life skills training for the youth, developing them into self-sufficient, responsible, and healthy young adults once they exit the program. Other areas of focus for the Pivot organization include providing an overnight emergency shelter, basic health services, a food pantry, and a clothing closet. The challenge of this project was to provide a design that integrates these aspects in a thoughtful, functioning, and affordable design.

In response to Pivot's needs and vision for the new development center, this design is tailored to enhance the transition from dependence to independence. The concept of the ideal transitory process manifested itself in three unique aspects of the overall design. Firstly, the education and development-related spaces gravitate around a central interior courtyard. These spaces comprise the inwardly focused section. Secondly, the multipurpose room and late-night drop-in center are separated from the inward section by the lobby and lounge. This outwardly focused section is rotated off axis to emphasize its

unique communal role in the transitional campus. Thirdly, visibly continuous structural elements span the length of the development center, connecting the two dichotomous sections of the project. This highlighted structure serves as a physical reminder of the youth's transition from a state of dependence to a state of independence.

The inwardly focused spaces were organized according to three categories: store, office, and education. The stores are located on the north side, which is where most people enter the building. These spaces include the food pantry, casual clothing, formal clothing, and the loading bay for these spaces. As part of the design concept to enable the youth to be independent, it was important to give them as 'normal' of an experience as could be provided. It is like a shopping mall except everything is free, giving people in need a rather unique experience. Imitating a mall, the clothing and food is seen from outside the storefront and people can go from store to store picking out whatever they want.

Offices are arranged in two stories to the south of the interior courtyard. They are removed from the store area to give both the Pivot staff and the people using Pivot's services the option for varying levels of privacy. Counseling offices are on the second floor to provide an even greater level of privacy when having sensitive conversations and separate waiting areas allow the option to have conversations in a more open environment. This allows the design to respond to drastically different levels of comfort which Pivot's clients often have. These waiting areas also serve the double purpose of being easily converted into offices in the future. They were designed to follow the same proportions and grid as the offices in anticipation of future growth.

The education spaces are located on the east and west side of the interior courtyard. These spaces include the teaching kitchen, classroom, and three conference rooms. Education spaces are placed in the middle of the stores and offices because they unite the two. These are places where people in need and the Pivot staff come together. The kitchen and classroom both have direct access to the lobby and lounge area. Being visible from the entrance makes it much easier for people to navigate than Pivot's current maze-like floor plan.

The anchor of these three inwardly focused zones is the interior courtyard. This space is dominated by greenery and nature, signifying the growth that is at the heart of Pivot's transformative process. Clients and staff can gather here for games, meals, education, or relaxation. The courtyard was originally going to have a shading device or canopy above it, but because it is shielded from the south by the two-story office block, it already receives a decent amount of shading. In addition to the shade provided by the building, the design implements a large tree in the center of the courtyard to provide another layer of shading in the summer when the sun is almost directly overhead. In the winter, the tree sheds its leaves allowing sunlight to pass through and provide light and warmth to the surrounding spaces.

Concerning the exterior of the building, one of the only points raised by Pivot leadership was that it should avoid feeling institutional, carrying connotations like bland, sterile, boring, and, above all, the lack of emotional connection. They wanted a place that people in need would not be ashamed to be associated with. To stay true to the nature of

Pivot's work with youth, the exterior of the building needed to convey a sense of playfulness.

The project's playfulness manifests itself throughout the form, and organization of the spaces, but the major components in which it is found are the roofline, exterior walls, and the multipurpose room. Visible from both the Pivot campus to the north and the passersby on the road to the south, the roofline acts as the first impression for the rest of the experience. Because its visible relation to the viewer is typically to be seen from a long distance, it is fitting that the roof should have larger, more gestural movements rather than detailed accents associated with human-scale interactions. The asymmetrical undulation of the office block roof derives its form from the low, rolling hills of Oklahoma and responds to the open courtyard to the north. The changes in pitch and ridgeline vertices are coordinated with the edges of the interior courtyard as seen from the rest of the pivot campus. This coordination helps communicate the presence and importance of the interior courtyard to the exterior viewers.

Such communication could simply not be achieved without the presence, or seemingly lack thereof, of the flat roof which adorns the single-story spaces to the north. In many of the previous design iterations leading up to present, this roof mimicked the roofs of the office and multipurpose room. While its presence contributed to the overall playfulness of the design, a vital aspect of the project was lost; the interior courtyard seemingly lost its gravity and power of an organizing element.

Transitioning to the current flat roof design provided both conceptual and practical benefits. As the interior courtyard is a major component and foundational element to the

design concept, roof design should respond to accommodate and further its impact. By changing to a flat roof, the hierarchical presence of the roof in that area is dramatically reduced thereby allowing the windows, through which the courtyard can be seen, to become the regional focal point.

Practically, the flat roof design provides two main benefits over the pitched roof option. The first practical benefit is the avoidance of unnecessarily complex roof to wall terminations which would eventually lead to unwanted water penetration. By using a 1/4"/12" sloped EPDM roofing design, the roof either terminates into raised parapets, roof drains, or downspouts. This simplification allows for the second practical benefit: a water catchment system. Incorporating a rainwater runoff collector into the design is a sustainable option to save on both water usage and bills. Because the design for the Pivot organization is very budget-conscious, this water catchment system is a useful supplement to the design.

In keeping with the playfulness of the office roof, the exterior walls follow similar horizontal undulations. The first-floor portion pulls away from the form when the roof vertices peak and returns to an anchor point when the valleys find their lowest position. Such correlation not only enhances the playfulness of the design but also enables the coordination of practical features such as roof drainage and downspouts.

Because walls are interacted with up at a human scale as well as from a distance, their materiality is of great importance. While the overall form works to establish a certain playfulness and draw people in, the materiality works to establish a subconscious sense of comfort and trust. Because first impressions are vital to building a new relationship, the

materiality of the proposed design must begin the task of establishing trust before a person even meets a Pivot worker. Feelings of comfort and trust stem from one's familiarity with an environment. Because the people using Pivot are likely most familiar with red clay brick, as it is exceedingly abundant in Oklahoma, red clay bricks were chosen as the main exterior material.

While the choice of the design's primary exterior material was logically derived, the secondary material is not interacted with at the human scale and is therefore chosen as a complement to the main material and to enhance the movement of the form. For this, a vertical metal panel system was chosen. As a complement to the familiarity and vernacular nature of red clay brick, the off-white panel system brings with it a more contemporary expression. Because the site is in an industrial area, it was vital that the new design should stand out as a non-industrial building and choosing a more contemporary, yet still affordable, material accomplished this.

In addition to complementing the familiarity of brick, the vertical panels also serve to visibly distinguish aspects of the design. On the southern walls, it acts as the backdrop for the more dynamic pushing and pulling of the brick walls. The vertical aspect of the material stands in direct contrast of the horizontal movements of the brick, adding a layer of separation between the undulating wall and roof. This separation emphasizes the movement better than if the entire building had been one material or if everything had been dynamic.

While the same material vocabulary was used on the multipurpose room, many more detailed aspects make this space unique. Conceptually, the multipurpose room

serves as the outwardly focused terminus of transition, signifying the youth's readiness to begin an independent and healthy life. Several factors distinguish the multipurpose room from the education and development section of the project. Beginning with the most obvious, the multipurpose room is pivoted slightly off axis from the structural grid which defines the rest of the spaces. Despite this rotation, the structure continues to follow the original grid direction contrary to typical designs where structure and envelope are either perpendicular or parallel to one another. This intentional break from convention highlights the change in orientation, creating a separation of function while at the same time unifying the two central aspects of the design.

To further emphasize the uniqueness of the multipurpose space, the structural system shifts from standard steel beam construction to a custom glulam and steel truss system. In order to not lose visibility of the angled ridgeline of the ceiling overhead, a scissor truss was chosen over a flat-bottom truss. Using a standard scissor truss shape also creates a far more dynamic and dramatic experience inside. The interior trusses are continuous throughout the multipurpose room and even extend outside, defining an exterior courtyard and setting the space apart visually.

The use of glue-laminated timber for the truss chords and three-inch steel pipes for the webbing provides several benefits over the previous steel W-shape design. While this continuation would have caused many thermal bridging issues if done out of steel members, the thermal bridging of wood members is negligible and will not be an issue. In addition, the use of timber trusses allowed for better coordination of envelope penetrations. Because the wall section through which the wood chords penetrate uses



vertical panels of a consistent width, the wood members only interact with a single vertical section, avoiding the issue of cutting into the sides of panels to fit around the truss. This coordination gives the exterior a clean and natural look because everything aligns.

Suspended from the outdoor truss members is a canvas sunshade device. In order to remain affordable and elegant, this design only uses two shapes of canvas sail: a triangular sail and a quadrilateral sail. While the quadrilateral sail provides a buffer between the triangular sail and the wall, the triangular sail derives its shape from the orientation of the multipurpose room with one side parallel to the trusses, one perpendicular, and the other parallel to the multipurpose room. This arrangement directly reflects both the orientation of the multipurpose room and the continuation of the structure and is the final outward expression of the space.

If one combines the outward and inward expressions of this design, Pivot's transformational process from dependence to independence can be clearly seen. By accomplishing this integration of concept and design, this proposal provides the Pivot organization with a functional, affordable, and meaningful solution to their current and future needs.