Integrated Treatment Facility: An alternative care setting for adults with mental illness

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INTEGRATED TREATMENT FACILITY: AN ALTERNATIVE CARE SETTING FOR ADULT PATIENTS WITH MENTAL ILLNESS
Greenville, South Carolina

A thesis presented to the Graduate School of Clemson University in partial fulfillment of the requirements for the professional degree, Master of Architecture.

Brenna D. Costello
May 2007
ABSTRACT

The current model of community mental health care does not provide adequate therapeutic settings for many mentally ill patients to fully recovery. Due to this deficiency, patients are falling into a harmful cycle where they are admitted to the hospital through the emergency department, stabilized at the acute care setting, and discharged within a matter of days into the larger community where they have limited access to resources and support networks. At this point, patients become overwhelmed, have another event, and come full circle back to the emergency department. As a result, there is a drastic need for new kinds of residential settings that provide an intermediate condition between the institution and independence where there is both refuge and access to therapeutic services, as well as connections to the world at large.

Currently, mental health patients when first admitted for care, or committed by a court, are isolated from society in institutional settings that provide immediate, stabilizing treatment. These settings are unpleasant, sometimes rough environments that are focused on acute treatment and rarely address the longer term therapeutic needs of the patient, let alone
provide a place of refuge. When discharged from the hospital, patients are released into the world at large without any setting anchors and limited access to the services they need. Group homes, or halfway houses, offer patients minimal care and sporadic services with more independence than many patients are ready to assume. Unlike the settings for hospitals and group homes, a more comprehensive therapeutic community, one which is located within the community at large and has immediate access to support and services, can provide a more stable infrastructure for transitioning patients from institutionalized isolation and segregation to an integrated form of care that enhances patient and community interaction.

This thesis studies how architecture can help create a setting that arrives at a balance between supervision, medical treatment, and patient freedom while providing both integration into the community and refuge from the world at large. It is designed to meet the specific residential and therapy needs of patients that are discharged from the hospital but are not ready for independent living on their own or in a group home. Historically, mental health facilities warehoused and mistreated patients, taking away the freedom, comfort and control over their environment. Today relatively barren and untherapeutic settings focus
more on acute care, stabilizing and quickly discharging the patient, thanks to medical technological advances and more specific medications. Due to this rapid treatment and discharge process, patients become lost in their unsupportive environment and unfortunately, wind up back in the hospital again.

In order to establish a platform of information to work from, literature reviews were conducted on topics such as the current trends in the delivery of care to mental and behavioral patients, a historical survey of mental and behavioral health facilities focusing on their immediate environment, healthcare facilities with similar programmatic treatment plans, and the sociological position of the mental health community. An extensive amount of time was spent at Marshall I. Pickens Behavioral Hospital observing and diagramming the daily routine of activities at the facility to understand the environment and its restrictions. To compliment the literature and observation studies, a series of interviews with administrators, nurse managers, nurse technicians, and some casual conversations with patients were conducted to understand the perspectives of everyone involved.
Based on the research conducted, a series of design principles were created in order to guide the design of an intermediate care mental health facility that is integrated into the community and promotes multiple levels of positive social interaction. In a broad sense, architecture must balance the need for both connections and retreat from the life of its neighborhood and the community at large. The facility must serve as a retreat/safe haven for residents where patients have a sense of control over their personal and communal space. When located within a mixed use walkable neighborhood, community oriented retail business can act as filters to the larger community by providing buffering zones and activities between life within the facility and life in the larger community. The form and scale of the facility should not stand out as an institution, but should be physically integrated into and respect the scale, articulation and general character of its surrounding context and neighborhood. Within the facility, institutional corridors should be avoided and circulation spaces should be used as connective, day lit, and multiuse zones that serve as wayfinding and activity nodes for patients and staff. And at the personal level, the facility should function as a community within a community that provides varying levels of interaction allowing the patient the opportunity to engage at each level of interaction when he/she is ready to.
The integrated treatment facility was located within the historic West End district of Greenville, South Carolina, a pedestrian friendly and redeveloping area, in order to supplement the facility’s ability to deliver the level of care needed to guide mentally ill patients out of the reoccurring cycle. The selected land parcel, which is within a half mile radius of all the necessary activities of daily life, will provide the stability, safety, and freedom that an integrated treatment facility demands in order to function as expected and provide mentally ill patients with the proper recovery. The combination of programmatic elements both within the facility and the urban context was designed to help prepare the patients for life on their own and instill a platform for patients to become more interactive in the community.
DEDICATION

For my family, who has supported me, loved me, cared for me and stuck by my side through this process.
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INTRODUCTION

The design of healthcare facilities for the mentally ill typically lacks the understanding of how the mentally ill patient recovers, especially as they transition from needing acute care to independence. Without alternative care models for this patient population and with continuous overcrowding and insufficient funding for acute care facilities in the United States, thousands of mentally ill patients are out roaming the streets. Mental illnesses such as schizophrenia, bi-polar disease, depression, and phobias are debilitating brain conditions which warrant assistance ranging from minimal care to immediate hospitalization. However, if treated properly through a series of coordinated therapy levels, persons with these illnesses have the potential to live normalized lives.

Currently, patients experience a revolving door effect where they are admitted to the emergency department, stabilized at an acute care facility and discharged within a matter of days out into the community at large. In the current healthcare model, the hospital is a stabilizing force, not a long term treatment center. Once discharged from the hospital, the daily living and therapy needs of the patient are often not fully satisfied in either an
independent living situation or in a group home. Patients are unaware and unprepared for the amount of independence and responsibility awarded when living with a family member or alone. Group homes are intended to be an intermediate step by allowing the patients to live in a residential, family like setting, but because the homes are not designed as well rounded therapeutic milieus, they become isolated pods in the neighborhoods that neither integrate the patients into the community nor educate the patients on life skills. Therefore an alternative or intermediate care facility is needed as a transitional setting where the framework for independent living becomes the backbone for the patient’s daily routines.

The architecture of the mental health facilities in the past has led to patients being mistreated and ignored by society. In the not so distant past, facilities were designed as massive structures for warehousing patients in a remote setting that resembled prison-like atmospheres where they were treated poorly if treated at all. Similar to the exterior, the interior appeared institutional and cold because of long, dark corridors that had relatively no personalization and identification to them, no interaction zones for the patients, and hidden fortress-like nurse stations that were intimidating to the patients.
In the early 1960’s, Community Mental Healthcare trends pushed for deinstitutionalization of the large state hospitals and emphasized preventative, community-based, outpatient services. Newer facilities began breaking away from the warehouse design by clustering patient residences around active community courtyards and connecting them with outdoor pathways. The campuses were beginning to focus on creating a more residential setting for the patients that expressed neighborhood-like qualities and personalization of space. These settings evolved before recent developments in drug therapy for many mental health conditions. Medication therapy altered the course of modern mental healthcare for both good and bad. The focus moved to short periods of acute treatment and stabilization then discharge. The patients that not able to handle this abrupt transition or maintain there medication regime fall through the cracks and either end up homeless or cycle back into the acute care setting.

Given the mental health context today, there is a growing need for a new kind of mental health facility that is integrated within the community to create a place where the stigma of the institution will disappear into the rhythm of normal daily activities associated with city living. Patients only achieve temporary recoveries when segregated from the community
because their anxieties and fears reactivates when the patient is transplanted back into their regular environment. Due to advancements in medical treatment, the mentally ill patient is relatively unnoticeable, therefore allowing a seamlessly integrated recovery to be an option. A walkable community design, with access to the activities of daily living, in a context of mixed use pedestrian friendly streets, will create a more therapeutic milieu for mental health patients to navigate and to maneuver through comfortably. This form of a naturally occurring therapeutic community can provide a more stable infrastructure for transitioning patients from institutionalized isolation and segregation to an integrated form of care that enhances patient and community interaction.

Based on the research conducted, a series of design principles were created in order to guide the design of an intermediate care mental health facility that is integrated into the community and promotes multiple levels of positive social interaction. In a broad sense, architecture must balance the need for both connections and retreat from the life of its neighborhood and the community at large. The facility must serve as a retreat/safe haven for residents where patients have a sense of control over their personal and communal space. When located within a mixed use walkable neighborhood, community oriented retail
business can act as filters to the larger community by providing buffering zones and activities between life within the facility and life in the larger community. The form and scale of the facility should not stand out as an institution, but should be physically integrated into and respect the scale, articulation and general character of its surrounding context and neighborhood. Within the facility, institutional corridors should be avoided and circulation spaces should be used as connective, day lit, and multiuse zones that serve as wayfinding and activity nodes for patients and staff. And at the personal level, the facility should function as a community within a community that provides varying levels of interaction allowing the patient the opportunity to engage at each level of interaction when he/she is ready to.

After working closely with the staff at Marshall I Pickens hospital, an absolute need for an intermediate care facility in the Greenville area was eminently clear due to the fact that over 50 percent of their patients are reoccurring patients. An idealized program for an intermediate care facility was developed based on both discussions with the hospital staff and literature research. It serves as a transitional living and treatment setting for patients who have been discharged from the hospital, yet are not ready for the level of independence
found in a group home or independent living. This facility and community program provides a supportive network of availabilities for the patients that include connections to surrounding educational facilities and work related opportunities as well as acting as the preparation tool for the patient to accomplish these tasks.

The program of the integrated treatment facility itself has five major programmatic components that form a cohesive intermediate setting that fulfills the needs of the mentally ill population, each of which is focused on the comprehensive goals of the facility. The residential program is split into a twelve bed acute care unit and an eighteen bed minimal care unit. The residential units need adequate support and administrative departments in order to function properly. An educational division of the facility focuses on patient education and preparation for life outside the facility. To compliment this department, site components such as courtyards and outdoor seating spaces provide settings for interaction and education to occur in nature. Lastly, the first and only physical extension of the facility is a retail component owned and operated by the staff, to generate supplemental income for the facility and patients, and to give patients an opportunity to be employed.
The selected land parcel lies within a pedestrian friendly and redeveloping area where all necessary activities of daily life are within a half mile radius. Since the site is within the Historic West End district, special consideration was placed on a few specific site constraints that relate to building form, massing and materials, parking and site features specifically expressed in Greenville’s Design Guidelines.

The overall architectural goal of the integrated treatment facility is to create a setting that arrives at a balance between supervision, medical treatment, and patient freedom while providing both integration into the community and refuge from the world at large. At the same time, it is designed to meet the specific residential and therapy needs of the mental health patients who have been discharged from an acute care setting but are not ready for independent or group home life.
THE REVOLVING DOOR EFFECT

The design of mental health care facilities continuously falls short of providing adequate therapeutic settings for many mentally ill patients to fully recover causing patients to fall into a crippling circuit of insufficient care. This circuit is both medically and emotionally strenuous for the patients due to the amount of people, places and medications they must keep track of. Ironically, managing these tasks, maintaining a daily schedule and communicating with the public, happen to be the most common burden of most diseases.

Mental illnesses such as schizophrenia, bi-polar disease, depression, and phobias are debilitating brain conditions of which can range from minimal care to immediate hospitalization. However, if treated properly through a series of therapy levels, persons with these illnesses have the potential to live normalized lives. The current treatment model and resulting architectural trends today for the mentally ill patient are not supportive of a continuum of care. Patients are admitted to the emergency department, transferred to the hospital, stabilized and discharged within a matter of days.
Currently, the United States is experiencing an inverse relationship due to the rising acuity levels and number of patients suffering from mental illness and the decreasing number of patient beds and lengths of stay at the acute care facilities. Since hospitals are overcrowded with uninsured patients in need of severe attention and medication, it becomes impossible for staff to attend to all the patients in a therapeutic fashion. Instead they must only medicate the patients and discharge them to another care setting, home or the street. This series of events is just the beginning of the circuit experience for them.

The mental healthcare facilities; hospitals, independent living situations, and group homes are insufficient as a continuum of care model for mentally ill patients. Currently, the hospital disregards the therapeutic qualities of long term care centers and focus specifically on stabilizing the patient’s acute illness. The other options, living alone or in a group home, eliminates the medical stability and enhances the patient’s independence without providing sufficient connections to therapy.

An alternative or intermediate care facility is needed as a transitional zone where the framework for independent living becomes the backbone for the patient’s daily routines.
This model strives to understand the mentally ill patient who struggles to transition directly to independent living and provides the setting that addresses their treatments and socialization needs.
The Current Circuit: An Inadequate Continuum of Care.

Mentally ill patients, specifically those with schizophrenia, bi-polar disease, depression, and phobias, are reoccurring at the hospital all too often. Patients are falling into a cycle in which they are admitted to the emergency department, transferred to the hospital, stabilized and discharged within a matter of days. This current trend is recognized by Andrew Sperling, the legislative director for the National Alliance for the Mentally Ill (NAMI) who says, “People with mental illness leave acute or chronic care facilities without adequate provisions for their housing or support, and end up sliding into homeless shelters or the criminal justice system.” (NPR 2006) The architecture of the current healthcare environments is only reinforcing the trend of instability, since after the hospital, the emphasis of medical and social rehabilitation is left to the patient. The majority of mental illnesses have a common symptomatic problem with retaining information and social interaction. Patients often have trouble scheduling and attending required visits to numerous places, such as outpatient clinics, psychiatry appointments, and drug therapy sessions due to the fear of social interaction and the inability to maintain a daily schedule. If patients are not regularly attending these sessions, their recognition of their illness and ability to maintain a
drug therapy regime fizzes into sporadic, unhelpful visits with clinicians and an all or nothing approach to oral medication. As a result, an overdose of medications saved up by the patient is often a method of suicide. (World Fellowship for Schizophrenia and Allied Disorders).

The diseases within the circuit. Mental illnesses are conditions characterized by the impairment of an individual’s normal cognitive, emotional, or behavioral functioning, and caused by social, psychological, biochemical, genetic, or other factors such as infection or head trauma. (NAMI 2006). Due to the technological increases in medical treatment of the 21st century, mental illness can now be specifically diagnosed and treated. Sophisticated MRI machines produce brain scans that are capable of targeting the most microscopic problems in the brain allowing the medical staff to treat the disease with more specific medications. This allows many patients that were once institutionalized for life to lead somewhat normal lives outside of the institution pending they can independently follow and stay on their medications.
Schizophrenia, a chronic debilitating brain disease, is the most feared and misunderstood mental disorder but when medicated properly and given the ability to work and live in a therapeutic, mixed use, and holistic environment, the disease is relatively unnoticeable. The most common symptoms of schizophrenia are hallucinations, social withdraw, delusions, being fearful of others, and having a lack of expression. Schizophrenics also tend to have an inability to start and follow through with activities, speak in brief sentences that are devoid of content, and a lack of pleasure or interest in life. When properly treated, these patients are pleasant people to be around, can hold steady conversations with others, and can be employed part time. Most people with schizophrenia contend with the illness chronically or episodically throughout their lives, as well as face the stigmatism of the community. (NAMI 2007) People with schizophrenia are particularly vulnerable and need social support systems. “People with schizophrenia become ill at the age they would be making career choices, undergoing training and forming adult relationships. As a result, they often lack social and work skills.” (World Fellowship for Schizophrenia and Allied Disorders). By providing decent housing, financial support, a network of connections for family and friends, as well as daily activities to accomplish, persons with schizophrenia can live normalized lives.
By definition, bipolar disorder is a chronic and generally life-long condition with recurring episodes of mania and depression that can last from days to months and often begins in adolescence or early adulthood. The disease, which affects over 10 million Americans, causes dramatic shifts in mood, energy and ability to function. The symptoms of this disease are very noticeable as the patients usually have poor judgments and move quickly as well as being extremely elated, energetic and happy at certain times and very angry, irritable, and unpleasant at other times. The positive aspect to bi-polar is that it can be monitored and treated to the point where the patient has relatively no signs and symptoms. While medication is one key element in successful treatment of bipolar disorder, psychotherapy, support, and education about the illness are also essential components of the treatment process. The built environment may play a role in the recovery process by providing patients with the proper spaces to interact with others based on their mood. In the height of their disease, they may chose to be in a large group room with multiple people where as in the low of the illness, smaller, more personal spaces will ease their irritable symptoms without harming other patients or staff. Since the disease greatly fluctuates the patient's mood, locating the setting for care within a mixed use, pedestrian friendly
environment allows the patient to be active in the community on their good days and stay in
the facility when having a rough day.

For depressed patients, the environment has the ability to make the most impact on
recovery by designing a setting that allows the patient to feel needed or depended on by
others. Depression is a disorder that takes over your body, mood, and thoughts while
effecting your diet, sleep patterns, and self-esteem. Patients with depression are more often
than not emotionally sad, anxious, and feel empty and worthless. They physically feel a loss
of energy and lose interest in normal hobbies. Along with phobias, these illnesses are less
severe and life threatening to those around them and have the highest ability to be
influenced by the environment. Environmental impacts for this patient population are
addressed at the small scale. For example, by providing a kitchenette within the patient
wing where each day a different patient is responsible for making breakfast for the rest of
the unit, a sense of purpose is established and allows the patients to feel needed. Also, the
depressed population often defies the nursing staff by staying in their bedroom for the
majority of the day. By providing nooks of personal space outside the bedroom, this
population can still fulfill their need to be alone without lying in bed.
Phobic patients suffer from the fear of social settings. In order to address the needs of this patient population, areas for the patient to interact with others in small doses should be provided. The phobic population will blush, sweat, tremble, and become nauseous when placed in a socialized setting. (NAMI 2006) Along with depression, phobias can be overcome or decreased by providing intimate, well lit spaces for the patient to be alone, interact with one or two people, or join in group dynamics. In order to overcome or ease their fears of being watched, the interaction spaces must be critically designed to be hidden from the public view in order for the patients to gradually recover.

For all mental disorders, recovery begins with diagnosis and eventually moves into successful management of the illness within supportive social and community settings. In order to achieve successful recovery, patients must be frequently exposed to learning about the illness and the treatments available, become confident about their image through the support of peers and family members, and finally, acclimate to the surrounding context of the community. In the large scale context, providing patients with the ability to access therapy services outside the facility or hold a part or full time job within walking distance of
the facility, will increase the odds of recovery. The small, but thoughtfully designed areas within their residential setting, such as private, naturally lit spaces or access to kitchenette services can allow the patients to form a family dynamic, can improve the quality of life, speed up the recovery process and provide the backbone for the patient’s to interact with the community.

**Falling through the cracks:** Due to the inadequate continuum of care and transitional care options for the mentally ill, mentally ill patients experience a vicious, multiple phase cycle of which begins with an event that causes them to be admitted to the emergency department. From there they are transferred to the hospital, stabilized and discharged within a matter of days into the community where they have no setting anchor and limited access to therapy needs. The majority of patients living in a group home, with a family member, or alone, experience the lack of a support network of outpatient clinics and therapy and counseling needs is unorganized and daunting to the patient to keep track of. Patients attempt to routinely attend their therapy sessions, doctors’ appointments, and outpatient education classes, but the organization and scheduling of all of these tasks is overwhelming to a patient who has just left the hospital without being educated on how to manage these
complications. At this point, the patient usually breaks down, mismanages their medications, or performs inappropriate behaviors causing them to be admitted to the hospital again.

The first stage of the circuit is typically an acute mental breakdown or event. The patient suffers from out of control thoughts and actions that are harmful to others as well as the patient. The uncertainty of life and the trouble of caring for oneself, causes the patient to have disturbing thoughts and actions such as panic attacks, lashing out on others, and hallucinations.

Once the event occurs, depending on how fierce the actions were, either a family member, friend, or in many cases, the police department takes the patient to the emergency department. The primary goal at this point is to make sure the patient is not causing any harm to others or themselves, diagnose how severe their case is, and medicate as necessary. Since many mental hospitals don't admit patients after a certain time at night, the patient must stay in the emergency department for the night, which is an extremely costly place to stay. The larger problem though is that the mentally ill patients are clogging
the ED. “More than 50% of the patients at Marshall I Pickens Behavioral Hospital in Greenville, SC enter through the Emergency Department” said nurse manager Elizabeth Shatten. The ED commonly has throughput issues, extended wait times, and minimal space even without this patient population being treated.

From the emergency department, the patient is either transferred to the nearest available acute care facility or in severe cases, taken to jail. Usually, when the patient is released from jail, they will spend time in the state hospital before being transferred to the regional or community acute care setting. For the rest of the population, transfer to a psychiatric ward in a large hospital, a stand alone acute care mental health hospital, or a community hospital is the route. Patients are treated and stabilized in these overcrowded, institutional settings for a five to seven day period where there is relatively no emphasis on therapeutic recovery. The hospital’s charge is to stabilize the patient while stressing how important it is to continue their medication regime.

After a short time period at the hospital during their acute phase of the illness, patients are discharged to a secondary level of care in the community. Commonly patients will live in
group homes, with family members, and in some cases, alone. This is a drastic change for
the patients. They come from a place where a nurse or doctor watches over their
medication routine and where they have sixty to eighty other similarly diagnosed patients
nearby, and move to a setting where they have no authority figure to say when to take
medication and at best they may have their immediate family or five or ten people to lean on
in a group home.

The drastic change results in varying stages of confusion for the patient who is attempting to
meld their medication and rehabilitation regime though a series of outpatient clinics and a
handful of doctors and psychiatrists. At this point, they are responsible for their doctor’s
appointments, taking their medication, cooking, cleaning, and working. The large amount of
responsibility and inconsistency of personnel and settings frequently causes the patient to
lapse and sadly, have another event.

The system must look to improve on how the patient transitions from one stage of their
illness to another while realizing their therapeutic and recovery needs. Without this
improvement, patients will continue to slide thought the cracks and wind up in the criminal
justice system as Andrew Sperling says, “What we have now is trans-institutionalization. People with mental illness leave acute or chronic care facilities without adequate provisions for their housing or support, and end up sliding into homeless shelters or the criminal justice system.” (NPR, 2006).
Extremes of Care

Patients are continuously falling into the trap of the circuit due to the large gap in the level of care and the settings for the delivery of care. In the current healthcare model, the hospital is a stabilizing force, not a long-term treatment center. Living independently, although important in the recovery process, is insufficient when used as the next step for patients discharged from the hospital. Patients are overwhelmed and unprepared for the amount of independence and responsibility granted when living in a group home, with a family member, or alone. Therefore, an alternative or intermediate care facility is needed as a transitional zone where the framework for independent living and patient education becomes the backbone for the patient’s daily routines. “Preventing the behaviors through patient education may reduce rehospitalization rates.” (Journal of American Psychiatry, 1995)

The hospital as a stabilizing force. Specific medications are now targeted for specific diseases due to increasing technology of brain scanning and medication. Therefore patients are being simply medically treated at the hospital without the therapeutic values of recovery.
Today, hospitals only provide a five to seven day stay rather than a long term treatment plan. Inversely, the acuity of patient's has risen: “Over the past 45 years, since the first statistics were published, the actual number of mental disorders has increased dramatically, however the average amount of time spent in a mental hospital has decreased from ten years to seven days” (Inland Architect, 1998). Most recently this number continues to rise due to post-traumatic stress war soldiers. According to New England Journal of Medicine, as many as one out of four veterans of Afghanistan and Iraq treated at Veterans Affairs hospitals in the past 16 months were diagnosed with mental disorders. In other cases, the amount of stress placed on college students and their lack of continuing medications such as Prozac now that they are out of their parents house is causing the number of college students with mental disorders to rise. (Marano, 2003)

There are two reasons for the decrease in length of stay. Currently there are not enough hospital beds for these patients to stay for an extended period of time due to insufficient funding from the government and the state. Therefore, if the hospital must be able to accommodate incoming patients admitted through the emergency department in order to free up their beds for incoming emergencies, patients must be discharged quickly.
Secondly, current insurance policies do not cover hospitalization for extended period of time for this population.

Hospitals are designed inadequately to provide a full delivery of care to the patients. They tend to have long corridors aligned with patient rooms, isolated nurse stations, and relatively no access to the therapeutic qualities of nature. At Marshal I. Pickens, the patient wings are designed as double loaded corridors with eight to ten patient rooms along each side causing lengthened corridors and lack of personalization of space as seen in the diagram to the left. The patient bedrooms and group rooms at the end of the corridor provide views to nature, but there is never the opportunity to access the outside due to poor design sense. These patients tend to run away or have family members bring them illegal substances therefore all outdoor spaces that are not fully enclosed by a substantially tall wall will be inaccessible for the patients. Patients at the hospital are heavily medicated, sometimes causing lethargy or dizziness, therefore needing high levels of assistance from the staff. This combination of serious medication and lack of therapeutic design causes the patients to have low levels of interaction with each other and the community.
Independence and Responsibility: The contemporary American community regards the mentally ill patient as scary and dangerous to society and therefore does little to aid the patients to full recovery. Patients are no longer being locked up in institutions for extended periods of time partially due to medications and partially due to minimal medical insurance coverage. The social problem lies in the lack of continuous or follow-up care for this population. Once discharged from the hospital, unhealthy patients are often wandering the streets causing the community to be frightened. Rarely do they attend regular psychiatric visitations or educational meetings regarding medication dosages and the importance of taking medication. These sessions are important in order to prevent remission from the illness. Without proper guidance, patient illnesses flare up rapidly causing them to frequently become out of control and potentially harmful to the community.

Patients are transferred straight from the hospital to their home with relatively no immediate network of services to be a part of. Patients struggle to cope with the responsibility and the demands of caring for themselves and in most cases, wind up back in the hospital. The problem stems from the fact that patients leaving acute care setting are unprepared to be living alone. Instead of being properly taught when and how to take their medication, they
are accustomed to someone else administering it to them. Instead of being taught how to properly cleanse themselves, a staff member at the hospital bathes them while another staff member cleans their linens. The same is true for eating and cleaning since food is prepared for them in the cafeteria and their rooms are cleaned by the housekeeping staff. The nursing and psychological staff rarely have the time to work on communication skills and conversational manors with the patients. This becomes a disservice to the patients since these skills are very necessary for a patient to learn in order to hold a job or interact with the general public.

**Group Home:** Although the group home is an attempt to provide patients with an intermediate care facility where patients are monitored by medically educated staff members and assisted with basic personal tasks within a family-like atmosphere, the model is not completely successful. These homes become small, isolated islands within the community that rarely have the opportunity to educate patients on life outside the home let alone make the connections to community therapy services. Group homes, by definition, are small, residential facilities located within a community and designed to serve children or adults with
chronic disabilities. These homes usually have six or fewer occupants and are staffed 24 hours a day by trained caregivers. (Encyclopedia of Mental Disorders).

The overall goal of these homes was to place individuals with mental illness in less restrictive and more family-like environments while still providing care. However, due to the NIMBY wave, or Not In My Back Yard attitude of many communities, these group homes are either distant from the community and function as isolated entities. Patients enter the homes with relatively no knowledge of how to care for themselves. Since there are limited staff members at these homes, these lessons again are going by the wayside since there is simply not enough time to be covering it all. In general, patients at group homes have lower levels of acuities and less need of assistance than at the hospital and are prime candidates for high levels of interaction with others within the facility.

**The appropriate framework:** The current cycle is extremely debilitating for many patients suffering from mental disorders. Persons with specific illnesses, such as schizophrenia, bi-polar, depression, and phobias struggle with this cycle the most, but yet have the most
potential to thrive in a normalized environment. (Elizabeth Shatten, MIP) The community can not continue to allow for the mentally ill to fall through the cracks and be inadequately housed and stigmatized. An alternative approach to recovery and living is needed for the emotionally frail and frantic population. A more appropriate framework should include an acute care setting that provides the positive, therapeutic, family-like aspects of the group home while attending to the more specific medical needs of patient populations who can not yet live this independently. In this framework, the operational and facility program of this new model must focus on education and treatment as preparation tools for the mentally ill patient to live and interact on their own while being seamlessly integrated into the community.
PROBLEMS IN THE ARCHITECTURE OF MENTAL HEALTHCARE THROUGHOUT HISTORY

The architecture of the mental health facilities in the past has supported or contributed to a model of care where patients have often been mistreated and ignored by society. Historically speaking, the philosophy of care for the mentally ill segregated and isolated the patients outside of the city and in the country. Facilities were designed as massive structures for warehousing patients in a setting that reemphasized that they were locked up in prison-like atmospheres were they were frequently mistreated and ignored. The interior of the facilities presented an institutional, prison-like feel characterized by long dark corridors with relatively no personalization and identification, limited spaces for social interaction of the patients, and hidden fortress-like nurse stations that are intimidating to the patients.

Post WWII analysis of the operational efficiency and effectiveness of mental healthcare led to the Community Mental Healthcare Act of 1963 which mandated deinstitutionalization of large state hospitals and emphasized preventative, community based, outpatient services.
Although mental hospitals were no longer warehousing hundreds of patients under one single roof, they were still segregated from the community. The philosophy of care was starting to break down the big buildings by organizing clusters of patient residences and connecting them with outdoor pathways. The campuses were beginning to focus on creating a more residential setting for the patients that expressed neighborhood like qualities and personalization of space.
Nineteenth Century Architectural Issues with Mental Healthcare

Historically, mental health facilities throughout America were located in the countryside, far from the urban activity centers of town where the land was cheap and where there was less political opposition. They were designed as massive structures that warehoused hundreds of mentally ill patients who subsequently were mistreated and ignored. The philosophy of care for the mentally ill was to send them away from the city center, out into the country where they could heal in isolation and seclusion from the rest of the community. “Facilities were self-contained; virtually untouched by the culture of the communities they served.” (Inland Architect, 1998). Society’s understanding of mental illness was clearly reflected in the design and location of the state hospitals. State hospitals, government entities that were supported by the tax payers of the state, evolved due to reformers such as Dorthia Dix who pushed for humane treatment for the mentally ill in these hospitals settings, rather than behind bars or in poorhouses.
At the time, doctors thought that the best treatment for the mentally ill person was to remove them from their residence and place them into a building surrounded only by nature. (Wagnenaar 2006). Their belief was that distancing patients away from the pollutants and hectic energy of urban centers and placing them in a more nature friendly environment would provide a healthy atmosphere for recovery. Fresh air, natural light, and extensive farmlands were thought to both stimulate and calm patient’s minds. (Kirkbride buildings) Patients were encouraged to work in the farmlands as a therapy tool to both regulate the patient’s mind and to experience the outdoors as well as help make these facilities more self sufficient by decreasing the amount of personnel they had to hire.

However, the theory of the time, distancing the patients from the general public and placing them in the rural institutions, failed to realize that the country is not the only place to make therapeutic connections to nature and provide recovery. Although the patients may have achieved a full recovery at the hospital, they were disconnected from the negative influences of their previous settings causing them to only partially recover. Connections to therapy services and job opportunities outside the hospital are just as necessary as fresh air and relaxation. Therefore an urban campus design that provides both outdoor spaces to rest
and relax yet is within a walkable distance of services and opportunities will fulfill both aspects of recovery for the patients.

**Scale:** Historically, the state hospitals were places where patients were warehoused, often neglected and in many instances mistreated in large footprint, massive buildings or separate structure pavilion typologies. “As the 19th century came to a close, city institutions for the mentally ill were overflowing. The hospitals were little more than warehouses, and treatment and therapy were negligible.” (Bleyer, 2007 Newsday Inc). For example, Danvers State Hospital was designed to hold up to four hundred and fifty patients, a rather large number to begin with, but that number was vastly exceeded near the turn of the century as the hospital piled patients into every nook of the building.

One of the American state hospital typologies was designed based on the influence of Thomas Story Kirkbride. His linear plan concepts were based off the principles of John Connolly’s well ventilated, spread out, courtyard building typology for the design of asylums in Europe. Connolly’s plans were typically six or eight wings (represented in red) of twenty to thirty rooms designed around multiple airing grounds. The elongated Kirkbride plan was...
intended to separate the patients based on sex and acuity of their illness in a hierarchy that placed the most severe patients furthest away from the common areas. However, this order was disregarded once the hospitals became overcrowded. Danvers State Hospital, located on Hawthorne Hill in Massachusetts, is an exact replica of the initial design and the pure intentions he had in mind when designing the Tuscaloosa State Hospital in Alabama. Each wing was offset slightly to allow for fresh air and natural light to enter the facility. The combination of these long rows of rooms with ornamental bars covering their windows and lack of interaction among the patients and staff made these buildings act more like warehouses than healing facilities. “Like prisoners, patients generally became worse; became dependent on asylum culture, and once released, they were unable to function independently.” (Inland Architect, 1998)

Often these hospitals were forced to mix the acuity levels of patients because they were the only places that provided treatment to this population. Severely ill patients were housed in the same facility as those with only slight disabilities. This co-location was problematic for the lower acuity patients as their illnesses tended to become worse as they picked up on the actions and behaviors of the more severe patients. This particular aspect of the state
hospitals is illustrated well in the movie, *One Flew Over the Cookoo’s Nest*. The movie’s title alone exemplifies many characteristics of the state hospital and the patients living there. The nest is, of course, the state hospital. The characteristics of the cookoo bird parallel those of a mental patient. The birds do not build their own nest, they refuse to let other chick stay there when they are born, and they are not fed by their mother. (www.teachit.co.uk) In essence, this movie illustrates the patient dynamic on the wards. The more severe patients were dangerous, territorial, and extremely intimidating to the less severe patients causing them to feel more unwanted and less likely to join in group activities. This forced the lower acuity population to remain in their bedrooms and rarely interact with others which often led to an increase the severity of their illness.

Before the demise of the state hospitals, the evolution of form and massing was taken one step further in an effort that combined the Kirkbride and Connolly ideas together to make the pavilion, or cottage typology. This movement evolved based off of the therapy of care in Gheel, Belgium where the lower acuity patients were cared for in more home-like settings. Hospitals like the one in Kankakee, Illinois still adopted the Kirkbride plan for the front portion of the institution that housed the severely insane and provided the cottage buildings
for the rest of the patients. These cottages however, turned into large dormitories that housed a hundred patients, a far cry from a home-like setting. These pavilion typologies were critiqued by 19th century asylum critic saying that the patients suffered more from the diminished mobility and would “breathe the same air, occupy the same space, and be surrounded by the same objects, day and night.” (Wagenaar 2006).

**Character**: Not only were the state institutions places for warehousing patients, their character or lack there of on the interior was similar to that of a prison. Wards were designed as long corridors with a lack of personalization and no interaction zone. They also presented patients with either fortress-like and intimidating nurse stations or ones that were tucked away and hidden from their view.

The facilities offered only two types of interaction; isolation in their rooms or chaos in the large group rooms. Although many symptoms of mental illness cause patients to be lazy, tired, and anti-sociable, patients were encouraged to spend the majority of their day outside.
their rooms primarily so that staff could keep a close watch over them at all times. However, without frequent group spaces along the wards, patients ended up gathering in the corridors. This resulted in an interaction zone that clogged the corridors, slowing down the time the staff could accomplish tasks which lessened the time allotted to working with patients. The populated corridors produced an intimidating and unhealthy condition for the patients where they were either isolated in their bedrooms or fully engulfed in a group dynamic.

The healthcare environment for these patients only helped reinforce their illness and reasons for living in the facility because they were dark, drab living conditions similar to life in a jail rather than an environment that provided patients with well lit, open gathering spaces. The facility design made patients feel like they were just like everyone else in the facility as they walked all the way down the long, institutional corridor passing many patient rooms that looked identical to their own. This lack of personalization to their room took away their freedom to express themselves.

The facilities commonly used bland wall and floor finishes and rarely had ornamentation on the walls such as art work or pictures. The corridors were usually stark white painted walls
from floor to ceiling without even a chair rail to give it a hint of character. The group rooms within the hospital were again, white walled spaces decorated with plastic, sometimes bolted in place furniture. If the rooms had windows, they were rarely treated with curtains or shading devices as they were seen as dangerous to the patient. Instead, they often had vertical bars on the exterior to prevent patients from escaping.

Lastly, the designs of the state hospitals allowed for the nurse stations to be tucked away and hidden from the patients rather than welcoming personal contact. It is understandable and necessary for the nurse to have the right to step away from situations that cause stress or where he or she may feel like a patient is potentially dangerous, but the design should not promote nurses to interact less with the patients. Nurse stations were not seen as places where patients could always go for help. They were designed such that patients were given the impression that station was either a ‘do not disturb zone’ or a daily pick-up station to get their medication. If the nurse station was not hidden, it was a fortress like center piece positioned so that staff could keep a close watch on each patient at all times of the day. This concept was derived from the late eighteenth century model of jails called the panopticon. The panopticon model strived to achieve power over all the inmates by

Fig. 16. Panopticon plan diagram representing a full 360 view of all the cells from the central tower.
enforcing the fact that they were being watched at all times and therefore staff was controlling their actions at all times. The architecture strived to be a machine for creating and sustaining such power. Although the designs of the mental health facilities were not as forceful as the actual panopticon was, they still presented an authoritative and powerful presence that was intimidating to patients and took all their power and personal being away from them.

Fig. 17. Image of the Panopticon.
Late Twentieth Century Architecture of Mental Healthcare

Although the 20th century brought along new architectural responses to mental healthcare, the models still fell short of efficient care for the mentally ill both in the institution and in the community. The rise of the deinstitutionalization acts in the late 50’s and early 60’s both strived to extend mental healthcare into the community and minimize the number of patients in large state hospitals. However, the acts produced unsuccessful results due to lack of community support and funding which caused many patients to be walking the streets without connections to adequate care.

As an architectural response to the decentralizing of the state hospitals, models of care evolved that addressed the abuses of the earlier facilities. The buildings began to break down in size and scale which led to formation of mental health campuses. The campus approach attempted to minimize the warehousing effect that the previous century had on patient care. Even thought the facilities were starting to address the patient population’s needs through a more neighborhood-like form and character, they were still seen as and
acted as isolated structures outside the community. This was generally because land was less expensive out of town enabling these facilities to expand over a vast amount of property where there was guaranteed therapeutic views and access to nature.

Deinstitutionalization: Around the mid 1950’s, there was a nationwide push for a thorough evaluation and analysis of the issues, both human and economic, with mental healthcare. This led to The Mental Health Study Act of 1955, which produced a document issued by the Joint Commission on Mental Illness and Health. This document summarized and addressed the problems the United States faced in the delivery of care to the mentally ill and advised the nation on how to approach and meet the individual needs of adequate care for this population. (NIMH 2007)

From the research findings of this act, the Community Mental Healthcare Act (CMHA) of 1963 was instated to declare a national program that would approach adequacy in meeting the individual needs of the mentally ill people of America. The CMHA provided the states with federal grants to fund the establishment of community health centers and outpatient
programs under the supervision and guidance of the National Institute of Mental Health (NIMH). The NIMH is a federal research agency that is focused on the brain, behaviors, and mental illness that extended their research efforts to further develop the understanding of brain and psychiatric disorders. The newly established community facilities were set up in order to support the vast number of mentally ill patients released from the state hospitals.

The positive aspects of this act attempted to provide the least restrictive treatment settings, community rehabilitation programs, and emphasized the need for local control and administration (Goldman, Foley, and Sharfstein, 1983). The architectural models that came out of the movement were acute care psychiatric wards within community hospitals, sub-acute community care facilities and newly termed model called clubhouses. (Wagenaar 2006) These “clubhouse” outpatient facilities were not residences nor institutions, but places to go during the day where the mentally ill person could learn how to live and work independently. The focus of the clubhouse was derived from the lack of interaction space in the asylums and state hospitals. (Wagenaar 2006)
The clubhouse model was started in the 1950’s when a group of ex-psychiatric patients living in New York met every day to discuss their troubles and lean on each other for support and recovery of their mental illnesses and thus formed the club-like model of care and social support. The goal of the clubhouse was to set up a structured, work intensive day that included activities such as financial accounting, preparing, serving, and cleaning up meals, chores around the house, and basic team activities. The first example of this model is the Fountain House, an established New York clubhouse for over fifty years. It is a professional self-help program for over 16,000 men and women as well as serving as the model for over four hundred similar programs. The building itself is a five story mansion that provides the setting for patients to work, study, and dine with others. (www.fountainhouse.org)

The downfall of the community mental health act occurred when the communities were unable to support the deinstitutionalization of the mentally ill due to lack of funding, physical facilities and expertise. As a result, many communities experienced many chronically ill patients wandering the streets. This movement caused the permanent and long term mental hospital population to decline dramatically and the homeless population rise. According to the Center for Mental Health and Research in Berkeley, California, in 1958 in
California alone, ten state hospitals were open servicing approximately 37,500 patients. By 1988, the figure had dropped to four hospitals and 6,000 patients. The second result of the movement was incarceration. The nation underwent a transformation between the 60’s and 70’s from institutionalized care to prosecution in the court system. “The shift attributed to unforeseen clinical needs of this new outpatient population, the inability of community mental health centers to meet their needs and the changes in mental health laws, specifically their emphasis on the concept of dangerousness.” (Whitmer, 1980). Therefore, the need for community mental health facilities outpatient clinics could not keep up with all the patients released from the criminal system as well as prevent them from entering the system again.

The failure to establish community based services led to the inadequacy of acceptable accommodations without any improvement to the inefficient state of acute mental hospitals. Post hospitalization care or sub acute facilities were relatively non-existent. Day programs and rehabilitative programs struggled to support their patients due to misguidance and lack of coordination of the government agencies supplying the money. Few classes were offered
on drug medication and therapists were overworked and overwhelmed with the amount of patients they were dealing with. (Center for mental Health and Research, Berkeley).

This resulted in the need for sub acute facilities to house the homeless and mentally ill adults that were now in the criminal system. It also identified a need for similar facilities for children and young adults in order to prevent an increase in the adult homeless population. However, the need for sub acute facilities was only sporadically addressed during the late 60’s and early 70’s, thus causing this to still be a contemporary problem in the delivery of mental healthcare today.

Sub acute facilities that were built such as psychiatric wards in a hospital, new construction community centers, and club house models, were smaller than the state hospitals but were still remotely located. Their design attempted to address a therapeutic milieu modeled after the world at large where all the activities of daily life could be accessed and fulfilled without the need to leave the campus. They were focused on creating a residential setting for the patients that provided them with the refuge and therapy needed to recover.
**Location:** The newer sub acute inpatient facilities were still segregated from the community at large, and were surrounded by vegetative buffering that enclosed the facility and pushed the community away. One of the main reasons for the location was due to the less expensive cost of land outside the city. Also, these large rural sites allowed for total freedom in the design of the facility. However, this separation continued to enforce a disconnect between the facility and the community and minimized the amount of external resources the facility could use. In these remote locations, resources, such as psychiatric therapy, outpatient classes, educational courses, and specific specialized medical services must all be available to the patients within the facility. These resources are costly and therefore are usually not completely provided, thus short-handing the patient. “The organization of services for adults with severe mental disorders is the linchpin of effective treatment. Since many mental disorders are best treated by a constellation of medical and psychosocial services, it is not just the services in isolation, but the delivery system as a whole, that dictates the outcome of treatment.” (Goldman, 1998b). Access to a delivery system is critical for individuals with severe mental illness not only for treatment of symptoms but also to achieve a measure of community participation. (Surgeon General Chapter 4: 2006) Therefore, properly locating the facility within a mixed use context can
provide improved connections to necessary therapy services and can vastly speed up the process of recovery for a mentally ill patient.

One precedent of this issue is represented at Camarillo Hospital and Development Center, located in Camarillo California. It provides a stable, safe, and homelike environment that is nestled in the Santa Monica Mountains and is surrounded by many layers of vegetation. Immense effort was placed on the interior layout and therapeutic needs of the population at hand, but the location of the facility distances itself from any connection to the community at large.

Similarly to Camarillo Hospital, STARS Adolescent Psychiatric Facility is located outside the immediate context of San Leandro, CA. This low density suburban campus lies at the bottom of the San Leandro hills and takes pride in the accomplishment of providing therapeutic views to nature for all of the residents. Due to the amount of land the facility was able to purchase, the campus design could stretch and expand to provide ample amounts of sunlight and access to nature as well as provide multiple outdoor activity spaces.
G. Werber Bryan Psychiatric Hospital is located outside the city center of Columbia, South Carolina in the quiet rural country-side. The vast amount of landscape and vegetation combined with the serene qualities of the lake made the location for this healing village atmosphere an easy sell. However, this campus which is one portion of a larger initiative for providing intensive treatment to the mentally ill in South Carolina, still functions as an isolated facility due to its location.

Remote locations and disconnect from services that are provided within the community only allows these facilities to provide patients with a temporary or false sense of recovery to their disease. As patients move from these isolated treatment centers back into their homes or long term residences, they will find it difficult to adjust to the continuous activity and responsibility that had been hidden while they were living in their segregated village.

**Scale:** Although many of the late twentieth century models failed to address the issues of location, they did attend to the scale and volume as a way of addressing the warehousing
effect or earlier settings. The facilities were typically designed as complexes of smaller, separate buildings that created a more neighborhood-like feel. A conscious effort was made to recognize the importance of multiple levels of social interaction within the facility. And, there was a distinct design difference in public and private spaces complimented by activity zones that were surrounded by the residential units to form a complete campus feel.

One way of achieving this neighborhood feel is to subdivide the residential units into smaller family-like clusters that are co-located near activity, educational, or outdoor spaces. Each cluster could be designed slightly different and have an exterior visual character that sets them apart from the rest and denotes to the patients which home is their own. Connections between the clusters could be physical or landscape features that both provide clear walkways from one residence to the next and direct access to all community gathering areas. A more urban approach to design is to create a “main street” of the neighborhood that the entire campus feeds off of. Residential units could still be broken down into smaller pieces that are located about the retail, therapy, and activity spaces. These ‘street level’ functions could open up to the village green and spill out onto the lawn during special facility wide events.
STARS psychiatric facility, located in San Leandro, California, illustrates the village approach in the design of a residential and sub acute care facility for the treatment of emotionally disturbed children. The treatment center breaks down the campus into five programmatic parts; residential cottages, a skilled nursing wing, an education building, administration, and an activities building. Each of these pieces is connected to one another through a series of hard surfaced or covered walkways that surround a central community courtyard. The scale of the facility creates a less intimidating and more inviting feel for family, staff, and most of all, the patients. For example, the entrance to each of the residential units has a different color façade for children to easily distinguish and remember which cottage is theirs. The entry is also inset from the rest of the façade to provide a front porch for patients to sit and relax, watch the activities happening in the courtyard, or simply be protected from the weather. Also, the central courtyard design allows staff to keep a close watch on the patients from each specialty area, such as the cafeteria, skilled nursing wing, and administration building which makes the family feel more comfortable leaving their children there. Staff and parents can also keep and eye on the patients while they are

Fig. 21. STARS Psychiatric Facility diagram of the functional pieces of the campus.

Fig. 22. STARS Psychiatric Facility diagram of the connective pieces.
having conferences or monitoring the patients’ behavior as an evaluation tool (similar to a one way mirror).

**Character:** At an even smaller scale, the twentieth century models placed special attention on the residential character of the patient living quarters. These new models of care were focused on creating a residential setting for the patients that provided them with the refuge and therapy needed while hinting at the neighborhood-feel and personalization of spaces. Patients could describe what ‘home’ they lived in rather than what floor they were on in the ward. The homes themselves were also broken down further into semi-private bedrooms that surrounded a central living space in order to help promote a family-like bond between the patients that lived in that particular cottage. A conscious effort was placed on providing residential furnishings and less institutional materials within the cottages.

In the state of South Carolina, a system was developed to promote mental health for all citizens that strived to provide a coordinated range of treatment programs specifically focused on the needs of the patient. The first of four villages designed to provide intensive treatment in a residential setting was Bryan Psychiatric Facility, located in Columbia, SC.

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*Fig. 23. Diagram of Bryan Psychiatric Facility in Columbia, SC.*
The village form breaks away from the Kirkbride dormitory and instead the residential lodges, clusters of 8 patients in 4 rooms, were split from one another to form a neighborhood of ‘homes.’ Each lodge was then connected by outdoor walkways surrounding the community activities. The design of the facility allowed patients to interact with others both in the central activity space and in the living room of their ‘home.’ It also was designed to model the world at large with community social, dining, business and recreational activities and settings. These activities, interactions and services were intended to help prepare the residents to engage in equivalent types of social and activity-of-daily-life encounters that they would encounter once discharged.

Between the 19th and 21st centuries, the delivery of care for the mentally drastically transformed in scale and character starting with the state institution and ending up with smaller sub acute inpatient settings and decentralize community-based care. Although the Community Mental Health Care did not completely succeed in providing community based care for the mentally ill, it did release the patients from the confines of the institutional state hospitals. However, many communities were unable to support their mentally ill populations which left millions of homeless people walking the streets and brought about new
architectural typologies for mental healthcare. Acute care settings, psychiatric wards in hospitals, and “clubhouse” settings were all places that attempted to support the patient but collectively failed to provide an adequate therapeutic milieu for all mental health patients that created both connections to the world at large as well as a retreat from the every day hustle and bustle of the city.
THE CONNECTIVE COMMUNITY AS THERAPEUTIC MILIEU

Mental health facilities, especially those providing an intermediate level of residential care should be integrated with other community uses to create a place where the stigma of the institution will disappear into the rhythm of normal daily activities associated with city living. Although it may seem extremely beneficial to segregate the mentally ill population, for both patient recovery and the community comfort, patients can only at best achieve a partial or temporary recovery in these settings alone. Institutional settings and models of care do not adequately prepare the patient to be transplanted back into their regular environment. Due to medical treatment advances, mentally ill patients are no longer as obvious in society as they used to be, therefore allowing a seamlessly integrated recovery is a more viable option today.

A walkable community design, which includes tree-lined, pedestrian friendly streets set up in a hierarchy of order, will create a more therapeutic milieu for mental health patients to navigate and to maneuver through comfortably. By living in a mixed use community, patients can work in nearby businesses, attend local schools or churches and engage in
other activities of daily life that can foster opportunities for positive social interactions with
other members their community.

In the broad scale, a community based, network of treatment facilities can help provide a
more stable infrastructure for transitioning patients from institutionalized isolation and
segregation to an integrated form of care that enhances patient and community interaction.
Having direct connections and access to outpatient services, continuous sociological
therapy sessions, and access to activities of daily life can provide the patients with an
adequate platform of resources that are necessary for patient recovery.

At the immediate campus scale, the design of a flexible, less institutional campus-like setting
can provide the mentally ill patient with a more contextual neighborhood to identify as their
home. The buildings should be modulated in form, similar in materiality, and rhythmic in
their fenestration in order for the facility to blend in with the urban fabric and minimize the
amount of overpowering images the community has on the mentally ill. Community
integrated intermediate care facilities should also strive to provide social interaction and
therapy within a more residential setting. The goal of these community base care settings is
that patients will eventually feel comfortable enough to leave the facility, walk to and from work, lunch meetings, or family outings and ultimately live normalized lives without feeling like social outcasts.
Therapeutic model: Integrating the Mentally Ill into the Community.

The combination of medical advancements and the decentralization and location of mental healthcare facilities can help the mentally ill patient become an integrated citizen, not an isolated figure, of their community where they can work and continuously move to and from the facility to the community. Integration into the community provides the patients with the opportunity to achieve a full recovery without leaving their community.

**Integrating patients:** Treating mentally ill patients within a community anchored setting is more beneficial when striving to achieve a complete and stable recovery. Too often remotely located facilities require that patients fully recover while they are still residing at their facility. Unfortunately when patients leave, their symptoms often reoccur and they will soon become patients again. If located within the community, the symptoms and problems of mental illness can be addressed and treated without removing patients from their familiar setting. “Research has proven that regular contact with the outside world helps patients maintain their dignity, avoid dependency and regression, and retain functional independence.” (Inland Architect, 1998). Since patients would be living in the community,
friends and acquaintances could expect to see them around town on a regular basis. Friends would have no reason to ask how their living situation at 'x' facility was going since they may not even know that the patient is still under supervision. This helps to maintain the patient morale and help them socially feel like they belong. Being able to walk to the grocery store, the bank, or to a part time job allows the patient to avoid being dependent on others to accomplish these tasks for them, thus giving them a sense of independence.

Flow from facility to community: Due to medical treatment advances, the mentally ill patient is no longer as identifiable in society, therefore allowing a seamlessly integrated recovery to be a viable option. These medical advancements make it possible for many patients to now undergo rehabilitation for their diseases and recover to normal lifestyles within the community. “Today thanks to research into the mechanisms of the brain and increasing understanding of the causes of mental illness, there is a new wave of antipsychotic anti-manic and anti-depression medications. Through their use, some 750,000 people across the nation are now living productive lives in society. These medications are not cures, but in reducing the illness’ severe symptoms, they open the doors to rehabilitation.” (Fountain house.com 2006) More specific medications are allowing the patients to have fewer
noticeable side effects. These side effects may have previously hindered a patient's chance of obtaining a job, carrying on a fluent conversation at lunch, or even maintaining attention spans for long enough to prepare a meal. This would not necessarily be problematic to a patient who only interacted with others in a confined campus, but for patients who are integrated into the community, medication plays a huge role in their ability to live, work, and socialize normally with others.

A second way to provide a continuous flow from the facility to the community is through patient education programs. Typically, education classes in an acute care setting are only for the patients living in the facility. People with mental illness living in group homes or with family members go to clinics or community centers for their outpatient education sessions. By integrating inpatient and outpatient programs on the same campus, patients can interact in class and form relationships with one another that will extend beyond the classroom setting. Families can also partake in educational classes with the patients therefore forming a support group for families of mentally ill patients. This can help bring family and friends of all patient populations together as one supportive network to communicate with and lean on in troubled times. Family and friends have the opportunity to visit patients more often, have
lunch or dinner with them, or take them out for the day when it is easily assessable. Localizing the setting also makes it possible for patients and family to travel to classes and/or social events within the community that are outside the parameters of the facility.

The working mentally ill: The proper location and therapeutic design of intermediate mental healthcare settings can help enable transitional patients to find and maintain employment. For example low acuity patients who have proven the ability to understand and execute specific tasks within the facility are ready to hold a temporary job. If the facility was located outside the community, this would require a staff member to drive them into town to their job and pick them up a few hours later. This is very time consuming and costly to the facility. However, if the patient was being treated within the community, he/she may walk down the street to their job, work for a few hours, and walk back. Also, if the patient has a lapse, they are not far from the medical help needed to assist them. By co-locating mental healthcare settings near multiple work opportunities, patients can work short periods of time in the beginning and progress up to full days of work without the travel time and need of travel assistance from staff.
Mental healthcare facilities located within the community can utilize community resources (school systems, healthcare providers, or business owners) to help prepare patients for entering the work world and finding jobs. Nearly 70% of unemployed adults with severe mental illness want to work (NAMI 2004). The majority of the mentally ill population wants to work and can work but for a variety of reasons are not given the opportunity to do so. Employment for people with mental illness may lead to improvements in outcomes by increasing self-esteem, alleviating psychiatric symptoms, and reducing dependency. Helping unemployed people get jobs will cut state costs since many of these people can work with the right assistance. (NAMI 2006)
Physical Community Model: Social Interaction and Therapy Within the Community at Large

Although medications are advancing the opportunities for mentally ill patients, the environment is an equally important part of the recovery process. By living and being treated in a therapeutic, mixed use walkable community that promotes physical activity, patients will simultaneously have the chance to improve mentally, physically, and socially in an environment that is both supportive and understanding of their immediate needs.

**Therapeutic benefits of a mixed use, walkable community:** Through the design of healthy communities, where buildings are close to the street, streets are covered with tree canopies, on-street parking buffers the two lanes of traffic, and careful attention is placed on hidden parking lots or garage parking, patients will be more likely to leave the facility and access the services they need to heal. Full tree canopies provide shading from the sun which helps patients who are overly sensitive to bright lights and shiny reflections. On-street parking can temper the threat of street traffic that often causes hypersensitive patients to become anxious and scared. Therefore, pedestrian friendly street designs provide a more calm and comfortable environment for the mentally ill patient.
Everyday activities should be within a 10-minute walk of home and work so that patients can access these amenities without vehicles. A walkable environment becomes extremely important for the majority of acute care patients since they are not licensed or unable to operate a vehicle if they are severe enough to be living in the facility. These activities become very important in helping the patient regain confidence, independence and liberation. Therefore, their disability should not prohibit them from accessing the necessities of life.

Public transportation systems within the community provide a second level of access to these amenities of daily life for those without vehicles. Public transportation systems in the community can provide opportunities for patients and families to visit more often in situations where family members live further from the facility. Transportation networks also provide the ability to take the patients to public and entertainment events, parks or zoos, and even museums that are located outside the walking radius of the campus. Finally, when a patient is ready to travel alone, having a public transportation system allows them to look beyond local businesses for employment.
Physical activity in the community: Communities that are designed for more walking and less driving are more desirable and become a therapy tool for the mentally ill. Many symptoms of mental illness result in lazy, lethargic and non-enthusiastic patients. Therefore, patients often have high risks for other chronic diseases due to their lack of daily movement. “Individuals with serious mental illness are at high risk of chronic diseases associated with sedentary behavior, including diabetes and cardiovascular disease.” (Psychiatric Services March 2005). Even though this trend is common knowledge, many rehabilitation programs focus solely on managing the patient’s mental illness rather than providing comprehensive therapies that promote health in other dimensions.

Exercise can also alleviate secondary symptoms such as low self-esteem and social withdrawal commonly found in depressed patients. “Physical activity has been proven to relieve symptoms of depression and anxiety and improve the patient’s overall mood.” (Psychiatric Services March 2005) Therefore, promoting exercise and outdoor activities can help the patient physically, mentally and socially.
Seamless Integration: At the urban scale, the design of less institutional campus-like setting will provide the mentally ill patient with a more contextual neighborhood to identify as their home. The composition of the campus buildings should be modulated in form, use similar materials to their surroundings, and be rhythmic in their fenestration in order for the facility to visually minimize the overpowering images the community has on the mentally ill population.

The Center for Addiction and Mental Health (CAMH) is an example of this seamless integration movement in mental healthcare design. The architecture of the CAMH campus breaks down the scale of the buildings into smaller urban blocks that are contiguous with the existing street patterns and fabric of the area, creates pedestrian friendly, walkable streets between the buildings, and provides peaceful outdoor areas within the actual campus for both the public and patients. The revitalization project, designed by C3 Consortium, will replace the existing 19th century intimidating institutional building, with a mixed use, urban village that will integrate psychiatric care into the fabric of the neighborhood.

The long-term goal of the project is to create a hub for mental health, addiction, education, research and health promotion that will ensure seamless access to services and break down
By having access to these services and integrating inpatient and outpatient programs, patients, family, and staff start to interact with a larger number of people. Eventually, integrating community activities, fundraisers, or awareness courses will bring in a larger audience to create an educational hub for mental health education. These types of community events will thrive in an urban campus since it is available for people to walk, ride bikes or take public transportation.

By weaving the street patterns through the campus to continue the grid of the existing city, there is no absolute line you cross to enter the campus. In the past, mental health facilities have been fortress-like, intimidating, and commonly gated off creating a barricade between the patients and the community. Contrary to this feel, CAMH provides contextual street front retail shops and urban outdoor gathering spaces that are not distinguishable from any other block in town. They exemplify the same proportion and character as the surrounding buildings and therefore providing a sense of belonging for patients living on the campus.

The campus also functions as a step down care facility where patients may stay on campus through multiple phases of recovery. This allows the patient the time to form relationships...
with both staff and other patients during their treatment process. Typically the mentally ill person moves from one facility to another and from one doctor or therapist to another in their recover process. By providing a step down facility, patients can remain in one location for an extended period of time therefore becoming accustomed to the people, the environment, and their surrounding neighbors outside the facility.

A Proposed Intermediate Care Facility Model: Community integrated intermediate care facilities should strive to provide social interaction and therapy within residential settings for this particular population. The architecture of the environment can do this by blurring the physical boundaries of the campus edge and creating therapeutic outdoor spaces for family and patients to interact. Also, this can be achieved programmatically by combining inpatient and outpatient programs as a form of collaboration for the patients.

These settings should also strive to realize the therapeutic benefits of providing multiple levels of social interaction. A common symptom of mental illness causes patients to want to be alone in their own rooms isolated from the commotion of group activities that cause them anxiety and over stimulation. Because the environment only provides patients with isolated
or group settings, doctors and nurses must constantly medicate the patients and force them out of their bed and into situations they are not ready for. However, if space was provided for patients to interact with one or two patients until they are comfortable enough to engage in group activities, it will increase their willingness to participate and decrease the amount of time staff need to spend making sure patients do not stay isolated in their rooms.

These settings should also focus on providing a socially supportive residential atmosphere where all the patients in the facility feel wanted and needed. Small group activities should be arranged where patients can be responsible for making sure all the parts are prepared for the entire activity to be completed. For example, if each patient was responsible for waking up early one morning and preparing breakfast for the unit, whether it be setting the table with different kinds of cereal or making biscuits, they would feel like their friends depended on them for nourishment. This little form of dependency goes a long way for these patients. Mentally ill patients desire the feeling of being important or worthwhile to someone, therefore relationships with staff and other patients are crucial at the beginning stages of the recovery process. One way the design can promote these relationships is by providing smaller intimate spaces along the unit or near the front of each patient room where
patients and staff can discuss the plans for the day or how a patient feels after a full day at the facility. If the patient has this privacy they may be more likely to share information and feelings compared to how they might feel if this discussion were to happen within a large group room with everyone around.
DESIGN PRINCIPLES

Based on the combination of research conducted, a series of design principles were created in order to guide the design of an intermediate care mental health facility that is integrated into the community and promotes multiple levels of positive social interaction. The principles are first and foremost designed to promote a more therapeutic and supportive setting for this population. Each principle precisely addresses a way that the environment can enhance the recovery for these patients both physically and emotionally.

In a broad sense, architecture must balance the need for both connections and retreat from the life of its neighborhood and the community at large. The facility must serve as a retreat/safe haven for residents where patients have a sense of control over their personal and communal space. When located within a mixed use walkable neighborhood, community oriented retail business can act as filters to the larger community by providing buffering zones and activities between life within the facility and life in the larger community.
The form and scale of the facility should not stand out as an institution, but should be physically integrated into and respect the scale, articulation and general character of its surrounding context and neighborhood. Within the facility, institutional corridors should be avoided and circulation spaces should be used as connective, day lit, and multiuse zones that serve as wayfinding and activity nodes for patients and staff. At the personal level, the facility should function as a community within a community that provides varying levels of interaction allowing the patient the opportunity to engage at each level of interaction when he/she is ready to.
Balance Between Connections with the Community and Retreat

The site selection and design of an intermediate care setting for the mentally ill must balance the need for both connections and retreat from the life of the city and neighborhood. Mentally ill patients typically experience isolated facilities and strictly enforced care, both of which can be minimized when the facility is located in an urban context. Therefore, the design of the facility should serve as a retreat or safe haven for residents to come home to after a potentially busy, stimulating day in the city. The retreat should also provide patients with a sense of comfort and control over their personal space. Since this patient population can be harmful to themselves and their peers, the quality of their personal space is often dull and flat. Personal belongings are typically taken away causing the patients to basically be stripped of everything that makes them who they are.

The mentally ill population is seen as “scary and dangerous,” intimidating or simply different to the rest of the community. Previously, mental institutions were placed outside the community where patients were isolated from the rest of the world. However, it is important for this patient population’s growth and well-being to be a part of the community and feel like
they are welcome. “Research has proven that regular contact with the outside world helps patients maintain their dignity, avoid dependency and regression, and retain functional independence.” (Inland Architect, 1998). As a crucial part of the therapy regime, it becomes important for mentally ill patients to establish themselves as part of the neighborhood as soon as possible by having opportunities to make friends, work part time, or help out at their church.

Ideally, the facility should be nestled in a mixed use neighborhood that has a critical mass of residential and work opportunities. It should also be within walking distance of the public transit and the activities of daily life such as grocery stores, local businesses, entertainment, food services, and natural settings such as public parks. Yet it should be discretely located and designed in the neighborhood community so as to seem a natural and integral part of its physical, social and civic landscape.

The courtyard urban villas of Italy serve as one example of how to balance integration and access to their urban context while maintaining a discrete level of privacy and security for their inhabitants. Via garibaldi, a main urban thoroughfare in Genoa, Italy, is the home of
many urban Villas designed to provide peace and security within the villa in the middle of the city as if they were in the country setting. One arrives along a busy street and traverses though a series of transitional spaces before entering the calm and quite courtyard. After crossing through the thick masonry walls of the main entry, one enters into a one and a half story greeting space with coffered ceilings that is open to both the street behind you and the staircase to the courtyard in front of you. These stairs lead to the main circulation path that is designed similarly to a colonnaded cloister. By this point, a person is raised above the street elevation and looking into a grand courtyard.

The courtyard simulates the positive and serene aspects of the country within the urban context. These courtyards are usually two or three story spaces that are surrounded by open air circulation paths. Since the buildings basically create a thirty foot wide zone (which includes the bottom floor greeting space and the second and third floor bedrooms) between the street and courtyard, all the noise and commotion on the street is isolated from the interior of the courtyard.
The design of community integrated mental health facilities in the city should also provide a sense of security and privacy for residents while providing an available network of activities within the local area for the patients to utilize. This balance of potentially conflicting objectives can also be achieved by elevating the patient rooms off the first floor and providing enclosed courtyards for the patients to access nature without leaving the facility. The first floor can then be used for public programmatic spaces such as retail shops, larger group activity rooms and potentially covered parking.

Maitri Hopsice, a residence for AIDS patients, is located within the thick urban context of San Francisco yet still provides a secure home for these patients by placing their bedrooms all on the second floor and allowing the public functions to occur below. Elevating the private resident areas off the street allows buffering retail activities to occur at street level. It also allows residents to view out but prevents them from feeling on display to people on the street below. The facility provides patients with access to fresh air and natural light through the design of a central enclosed courtyard on the second floor.
Retail as Buffer

When located within a mixed use walkable neighborhood, community oriented retail businesses can act as filters to the larger community by providing buffering zones and activities between life within the facility and life in the larger community. These street front shops break down the scale and help to modulate the façade of the facility beyond. By locating the facility behind a layer of retail, patients will have access to work opportunities within the shops without traveling onto the potentially hectic main street.

The purpose of the retail buffer is to create transitional zones and activities between living/therapy needs of the residents and the city, and to provide a more human scale and socially activated street front for the facility. In this way the facility can operate positively as a more physically and socially integral part of its neighborhood. Residents of the facility have a hard time being socially active even within the facility, let alone in the community where they are seen as “scary.” By providing a retail buffer between the facility and the main street, patients will be able to enter the retail shop from the back and the main public
through the front. Also, if the patient has a lapse, they can be escorted back to the facility without it being a public scene.

The retail shops along the main street should be contextual to the surrounding retail shops and provide the facility with the human scale characteristics that a vibrant street front needs. By modulating and articulating the façades of these buildings, providing a row of tree canopies, and allowing for benches or tables along the sidewalk, the streetscape will have more of a human scale dimension. The Berweg Project in Rodderdam, an assisted living facility, addresses the streetscape and breaks down the massive front façade by providing street front retail shops. The massive square footage of the assisted living apartments sits behind a row of retail that supports the facility.

At a larger scale, this principle can occur within existing and new urban districts with mixes of business and residential occupancies. The mixed use components of a dense community make the area a vibrant active neighborhood due to the amount of pedestrian activity along the sidewalks. Retail shops along the street front provide those walking to and from work will the convenience to stop and shop before heading home or to dine with a friend at a
street side café for lunch. Without density and pedestrian activity, the principle will be negligible. For example, there is no need for a retail shop to buffer a facility in the country since there is relatively little pedestrian or street activity in the county.

Examples of existing early twentieth century mixed use streetcar suburban communities that provide vibrant street front activities that buffer the residential qualities of the neighborhoods behind include Oak Park IL, Bryn Mawr PA, and Chestnut Hill, PA. These former street car cities are noticeable due to their neighborhood structure and their pedestrian friendly, mixed use character. The city map of Chestnut Hill indicates density along the main street and how the activity behind the retail is more personal and not open to the public. The main streets were typically aligned with storefronts flush with the sidewalk and on street parking. Since these shops were along street car lines, people would exit the car to go shopping or have lunch with a friend before walking the rest of the way to their home.
Integrated Building Form

Once located within a mixed use urban district, the form and scale of the facility should not stand out as an institution, but should be integrated into the physical fabric of its context. This includes respecting the scale, figure ground relationships, articulation and general character of its surrounding context and neighborhood. Buildings should not stand multiple floors higher than the tallest building existing in the neighborhood, nor should they be lower than the smallest building. The facility should provide a similar proportion of building footprint to landscape and hardscape. Modulating and articulating the building facades as well as using contextual materials will visually bind the facility to its surrounding.

Historically, this population has been institutionalized and segregated from the rest of the community. The design of the building should not resemble this attribute of history, but should strive to blend in with the surrounding conditions and not present an iconic "institutional" image in the area.
New construction of the facility within a neighborhood should focus on making sure the residential building components of the complex are similar in size to the surrounding neighborhood buildings. To provide utmost patient privacy, buildings should not exceed the height of the tallest building to the point where people would be able to identify it from a distance. They should also not be the smallest building on campus to the point that people could look down on them and watch what they are doing on a daily basis.

The facility should not present itself to the street as one large massive wall, but should be articulated in human scale proportions - both vertically and horizontally. The Center for Addiction and Mental Healthcare (CAMH) redevelopment project in Toronto exemplifies this proportioning by bringing the street grid thought the new proposed campus which sets up the framework for the urban blocks. The institutional building on the campus is representation of the old state hospital typology, which at the time was constructed in the county. Now that the city has grown to surround the campus and the trend of care has changed, the institution is being reconfigured into a mixed-use urban district. Tree-lined streetscape and specifically placed outdoor green spaces bring nature into the campus and make the campus more inviting to the general public. Each block is designed with the intent
of creating a mixed use development where commercial and public spaces are along the street with residential (patient rooms) above.

The front façade of the community health center will be the primary visual presence to the community and should be articulated and focus on human scale features, but this does not mean that the rest of the building can still be monolithic. Horizontal fenestration and ornamentation patterns are some ways to continue a rhythm along the street front without designing an identical façade to the building next door. Continuing similar programmatic uses vertically, such as retail on the ground floor, offices on the middle floors, and residential at the top, also unifies the buildings on the block. The façade should be modulated in similar proportions to the surrounding context as well and consider using materials of the same character. Richard Rogers’ Boardwick house is an example of how to adapt to the rhythm of the street without simply replicating older neighboring facades. The façade of the house is modulated through various fenestration patterns similar to those of the surrounding buildings. The building is also a mixed use building with retail along the street and residential and office spaces above similar to the ones in the surrounding neighborhood.
Interactive Wayfinding

Within the facility, institutional corridors should be avoided and circulation spaces should be used as day lit, multiuse zones that serve as wayfinding and activity nodes for patients and staff. Multiuse zones, or areas that are not partitioned or walled off from one another and can accommodate more than one activity, should occur along the main circulation spines of the facility to widen and activate typical, boring corridors. Larger community spaces should function as the hinges, or pivot points, between residential and staff areas.

Typically, the mentally ill population becomes very apprehensive of dark spaces and especially long dark corridors. “Patients will walk around areas that are not well lit and will often times simply avoid the area completely,” said Elizabeth Shatten, nurse manager at Marshall I. Pickens Behavioral Hospital. They also tend to lash out or have out of control episodes in zones that are not personally identifiable such as corridors. Mardell Sheply, and the staff at Design Partnership, performed a study called *The Analysis of the Relationship Between Selected Behaviors and Specific Environments*, directly related to this trend. Their hypothesis was that “there is a correlation between behavioral incidents and the location
where they occur.” Their study confirmed this by proving that patients committed acts of self aggression, and staff aggression in the hallways and seclusion rooms. (Shepley 1989).

Alcoves or multi-use spaces should occur frequently along corridors or in between clusters of patient rooms, to make sure that a patient never feels “trapped” in a given space. Long circulations paths can detract from the “feel” of home. “The feeling of home, a private residence, cannot be created if long, monotonous corridors must be traversed to arrive at the patient’s bedroom.” (Verderber 2006) Setting back the entrance to each room in an alcove also provides a more personalized, front porch feel for patients to identity as their own and breaks down the rhythm of a long corridor.

The use of light, visual connections to nature, and group seating in these spaces will provide soothing areas for patients to gather along long corridors. For example, Kaiser Fresno Hospital in California provides waiting areas for family along a well lit, open corridor that looks out into a courtyard. Although the corridor is not extremely wide, the full glass wall, alcove seating areas, and two story high space makes it seem much more open, inviting and relaxing.
Another way to achieve multi-use space is through a non-partitioned corridor that allows circulation pathways to occur within a larger room. Furniture can be used as the defining elements along the circulation path which allows natural light along window wall to service both the corridor and the activity areas in it. If designed this way, one corridor with no walls or doors that allows natural light to both spaces can replace a traditional corridor along solid wall with a door entrance. In Lee Hall, the architecture building on Clemson University’s campus, achieves this concept in the donut-shaped design of the undergraduate studios. The studio spaces align the exterior walls of the donut and the circulation paths align the interior walls. The interior walls are solid glass which provides a well lit circulation spine that has indirect lighting to the studio spaces and visual connections to the studios across the courtyard.
Multiple Levels of Interaction

The facility should function as a community within a community that provides varying levels of social interaction allowing the patient the opportunity to engage at each level of interaction when he/she is ready. The facility design should support a range of social interaction spaces arranged to encourage the patient to want to be out of their room and engaging in activities.

Patient interaction will play a huge role in the recovery of a mentally ill patient. The majority of mental illnesses have side effect that enable patients to be socially active. The patients commonly have trouble interacting with others for extended periods of time and therefore need the opportunity to both be a part of the public domain as well as return to their personal space. Buy structuring spatial settings that support multiple levels of interaction within the facility and between the facility and the community at large, patients can begin to experience the range of social interactions they will encounter as the gain independence in the world at large.
In the ideal setting, the facility would function as a community within the urban community. Starting with the residential spaces, patient rooms would be clustered into pods of four to six patients, a manageable number for staff, which were all connected to a group room. The combination of the group gathering spaces and actual patient rooms forms a residential unit. These units should have specific characteristics that are identifiable to patients and provide them with the sense of belonging to a neighborhood. For example, each unit could apply a theme of which the patient rooms would have to comply with. Each patient room door could be different, have a different bulkhead, or be personalized by how the patient decorates it as long as it fulfills the overall theme. The units should all be connected to one another to form the facility and having multiple facilities forms a community.

Within the facility, the first and lowest level of interaction is the personal or individual level. Patients who tend to spend most of their time by themselves are those who are apprehensive, sweat, or get nauseous around other people and only occasionally partake in larger group functions. These patients, commonly diagnosed as depression or bi-polar disease, rarely want to get out of bed let alone interact with others. To accommodate for this first level, the design should provide intimate, residential-like bedrooms for the patients.
to relax, read, and most often, sleep in. The patient needs to be able to personalize this space as their own and be able to escape to this space when they are having episodes such as panic attacks or hallucinations. From the personal space of their rooms, patients should be able to view the next level of interaction and watch what happens at that stage. This allows them to feel more comfortable with the daily activities happening in this space thus making them feel more comfortable to join in. STARS Psychiatric facility located in San Leandro, California addresses the patient’s personal space through the design of semi-private bedrooms that surround a central family living space. Each of the patients has a clear view to the family zone from his/her bed.

The next level - small group interaction - is primarily for patients who are lonely by themselves but are still anxious in large group activities. These patients hardly enjoy talking and socializing with others but may play a card game or board game with two or three friends. Providing smaller, family-like spaces outside their rooms allows the patients to take the first step towards social interaction with others. This could be accomplished in small alcoves between the rooms, at a round table with a few chairs, or in the family room of the unit if there are not many others around. At STARS Psychiatric facility, the patient
bedrooms surround the central family room which serves as their small group interaction space. The vaulted ceiling and the vast amount of natural light are two qualities that provide patients with a comfortable family room. The room is furnished with movable pieces for ease of configuring different dynamics of interaction. The patient should be able to view from these intimate social spaces to the next stage of interaction in order to become accustomed to the activities occurring in those spaces.

The community level of interaction provides areas for family staff and patients to interact. Nurse and staff members encourage this type of interaction to all patients as it is the most efficient way for the patient to achieve full recovery and self confidence. Community rooms and courtyards provide the setting for patients to play games, have small meals, and participate in educational activities. Once a patient can freely join in activities or conversations and complete specific tasks asked of them, they are ready to proceed to the larger community. At this point, it becomes necessary for the location of the facility to be within the urban context so patients could hold jobs, walk to the grocery store, or take a walk to the park. At STARS Psychiatric facility, the front door of the cottage opens up to a large yet precisely designed courtyard community zone. The courtyard is the central activity

Fig. 42. Diagram of levels of interaction at STARS psychiatric facility.
space for family, friends, staff, and patients to interact in a comfortable and therapeutic setting

Conclusions: When combining all of the above principles and adding a programmatic component to them, the design of an integrated treatment facility will evolve. The principles strive to arrive at well crafted architecture that is focused on the needs of a mentally ill patient. Each principle precisely addresses a way that the environment can enhance the recovery for these patients both physically and emotionally. The final design should unfold as a contextual articulated building form that is nestled into the urban fabric of a mixed use community. The facility will provide spacious, naturally lit, zones that achieve the multiple levels of interaction need to guide the mentally ill patient to a full or manageable recovery from their illness.
BUILDING PROGRAM

Due to the revolving door effect that occurs in all communities, the proposed program for an intermediate care mental health facility serves as a transitional living and treatment setting for psychiatric patients who have been discharged from the hospital, yet are not ready for the level of independence found in a group home or independent living. This facility must provide a supportive network of availabilities for the patients both inside the facility and out. Externally, patients will benefit from connections to surrounding educational facilities and programs, work related opportunities, entertainment events, and natural features such as parks and landscaped outdoor spaces. Internally, the facility must function as a preparation tool for the patient to accomplish and enjoy the external features.

The program of the integrated treatment facility has five major programmatic components, each of which is focused on the comprehensive goals of the facility. The collectively form a cohesive care setting designed to fulfill the needs of the mentally ill population in need of an intermediate level of care. In meetings with the staff at Marshall I Pickens (MIP) Behavioral Hospital in Greenville, South Carolina, they stated an absolute need for intermediate care
facilities in the Greenville area due to the fact that over 50 percent of their patients are reoccurring patients. Nurses and administrators recognize that their patient population tends to revisit the hospital frequently. “It really is becoming a problem. We see the same faces week after week here at the hospital,” said Elizabeth Shatten, nurse manager at MIP. Since MIP is a short stay acute care hospital, the hospital staff diagnoses, stabilizes and treats the patients with the maximum care they can in five to seven days. At this point, patients are discharged to a group home, to a family residence, or to their own apartment, all of which are insufficient as a step down from the hospital. After shadowing patient care in the hospital for weeks and watching the same patients walk through the doors again and again, discussions with the staff at Marshall I. Pickens resulted in identifying a critical need for an intermediate care setting in Greenville for this patient population.
Overall Goals and objectives

The overall goals and objectives of the integrated treatment facility address the needs of the mentally ill population at both the community level and the building level. The program for the facility will need to extend beyond the building site and into the community at large in order to provide a supportive network of availabilities for the patients to utilize as part of their recovery process. Step one will be to establish connections to nearby educational facilities where patients would have the opportunity to take classes at the local schools that are not offered within the facility. Secondly, establishing connections to job opportunities at local businesses will provide the patients with employment and the ability to achieve job skills and people skills as well as time management and responsibility needs. By doing so, the residential facility should be located to exploit connections to opportunities for positive and supportive social interactions within the community for the patients, their families, and the staff. This includes public events in the surrounding areas such as watching a community band play, weekly outings to places like the zoo or museums, or simply taking large or small groups out to lunch or to run errands such as grocery shopping.
The extended program also takes into consideration connections to nature and the importance of nature as a therapeutic recovery tool. Since the facility will be located within a mixed use urban fabric, activities such as daily or weekly trips to the nearby parks and outdoor recreational activities compliment the educational and occupational goals of the extended program.

The goals and objectives of the actual facility are focused on preparation for life on your own, interaction with others both within the facility and outside the facility walls, as well as patient education. It will primarily function as a step down facility to Marshall I. Pickens (MIP) Behavioral Hospital. The majority of patients entering this facility will have just been discharged from MIP with specific discharge plans to live at this facility. The facility will strive to achieve what the hospital can not by providing the structure and support to patients leaving the hospital setting and establishing a preparation platform for independent living guidance. The educational component of the facility will strive to teach the patients what it takes to live independently and how to socially interact with others.
Fig. 43. Diagram of building program.
Building Program

The specific program of the integrated treatment facility has five major programmatic components that form a cohesive intermediate setting designed to fulfill the needs of the mentally ill population.

Residential: The vast majority of the overall building program is focused on two residential programs housing patients of varying acuity levels. Both function as step down care units providing patients with the ability to fluctuate from one unit to the other within the same facility while being cared for by the same staff and administrators. This continuity of care helps establish relationships and familiarity of territory for the patients while they progress (or lapse) through the recovery of their illness.

Fig. 44. Diagram of the residential component of the Integrated Treatment Facility.
Patients in a lower acuity eighteen bed unit require less direct attention from staff and administration, but will lean more on the guidance and educational values provided, which are focused on preparing for independent living. This unit will function as a self-help, semi-independent residential floor with access to small laundry machines, a kitchenette, and dining areas. Part of the program will require patients to be responsible for cooking breakfast, lunch, or a small dinner for the unit. The act of being responsible for others instills “need” and “dependency” on the patients, two emotions that depressed and schizophrenic patients yearn for.

**Support:** The residential units are compiled of more components than just the rooms that supplement staff, patient, and family needs. Staff zones, such as nurse stations, linen storage, med prep zones, and supply areas provide amenities needed to assist with patient care. These zones are smaller than those at the hospital and should be more decentralized throughout the unit.

**Common Areas:** Supplementary patient zones such as dining areas, group rooms, and therapy rooms provide patients with ample space outside of their personal living quarters to
actively participate in group discussions, prepare meals or snacks, socialize, or relax. Unlike large family-room spaces in group homes, which are often used more as a community room for patients to watch TV and relax than educational spaces, the common areas within the facility must be designed to serve as educational settings to work on patient socialization. This requires the spaces to be flexible and be able to break down into smaller spaces for one on one interaction as well as support larger group activities.

Family zones shall be located adjacent to the residential units to provide the opportunity for patients to leave the unit to interact with their family and friends and yet still be near the familiar territory of their rooms. These spaces should supply patients, family, and friends with the ability do a range of activities such as to sit and talk to each other, have a snack, play a game, or work on an educational activity.

**Administrative Areas:** In order to supply the residential units with adequate therapy and support, administrative and social workers need dedicated work space. The psychologists and sociologists will have their own work stations within the administrative core for family,
staff and most of all patient consults. Since most of the people visiting the psychologist are under high amounts of stress, these spaces must be designed as therapeutic and soothing rooms where the patient, family, or staff member can calmly explain their needs. Views to nature, comfortable furniture, and soft lighting will be essential attributes to these spaces.

**Education:** Education, vocation, and preparation play a huge role in the recovery of mentally ill patients. Typically these tasks are not addressed. At the hospital, the primary focus is on the patient’s immediate care while the group home lacks the resources and space to actually educate the patients. Therefore, the integrated treatment facility will provide the following:

A library, which is seen as a resource center for family, staff, and patients, will offer immediate support to patients and the community. Often, once a patient is living with a family member or at a group home, resources are no longer available or are hard to find. A full-time librarian will be accessible for the general population to become more educated and aware of mental illnesses. It will also serve as a quite place for patient to read and relax outside of their residential units.
A computer lab, seen as one of the most beneficial educational tools for the patients will provide both occupational services such as searching for jobs as well as educational sessions that will supply the patients with the tools to become employed while learning about their conditions.

Flexible classroom space provides areas for inpatients and outpatients to be educated together or separate depending on the topic. The rooms have movable furniture and have the infrastructure for partitioning the room into multiple rooms when needed. These education spaces will serve as an integration tool that both establishes relationships between patients in and out of the facility as well as educates the patients and family on medication dosages, the importance of taking the medications, and lessons on caring for oneself. Traditionally these types of classes have been segregated among the populations due to distance between locations.

Art studios, viewed mostly as therapeutic spaces to relieve stress, will provide the patients with the ability to express their emotions as well as seek recognition for their talents and
provide decoration for the facility. The facility will supply space for both public and private display of this work.

**Exterior Activity Spaces:** As necessary as all the interior programmatic spaces are, the exterior is even more crucial as it should provide multiple opportunities for social interaction and learning to occur in varying sized spaces designed for varying purposes. The 12 bed unit requires an enclosed courtyard since the patients are potentially dangerous to others and more likely to flee if given the opportunity. Many hospital settings deprive more acute patients of fresh air and access to nature due to the high security needs of the population as well as providing false hope of accessing the outdoors. "We feel that setting up a barbed-wire barricade screams ‘institution’ worse than the lack of availability to be outside." [Elizabeth Shatten, nurse manager at MIP]. In order to provide a safe outdoor environment for these patients that does not resemble a barbed wire jail courtyard, the physical building must surround the space to avoid any type of fence structure. The courtyard will supply the patients with an outdoor space to sit and have lunch with another patient, read a book, play a card game, or aid the staff in the upkeep of the garden areas.
Due to the location of the facility, a large, central open courtyard will serve as an internal retreat from the community and the most immediate connection to nature for lower acuity residents, staff, families and the public. Outdoor classrooms in this space can provide the patient with a therapeutic setting for learning and enhance the amount of time they spend outdoors. Outdoor seating areas within the courtyard and under shelter will provide patients, family, and staff with a healthy setting to enjoy a meal or a visit with a loved one. The courtyard will also house larger events such as facility wide picnics, social gatherings, and public events. The picnics will serve as another device for families and friends that family and friends to meet and socialize to form a support network. The social gatherings could range from displaying new artwork, to barbeques, to a meal that was prepared by one of the residential units for everyone. Lastly, the courtyard could also be used for fundraising events or large facility-wide educational meetings since it is the largest and only place that can hold everyone at once.

An enclosed parking area will be provided primarily for staff and supporting vehicles, vans or cars needed to take residents out on group events or to specific counseling services. It will also be available for use by family and friends when space is vacant.
Retail: Adjunct retail business shops that are open and geared to serving community retail and commercial needs should be located on site or adjacent to it as the size and location of the site permits. They can provide both financial support to the facility as well as job opportunities for residents. These retail shops will be the first and primary source of employment and public socialization for many of the residents within the facility. Group homes and independent living situations rarely extend support beyond actually finding a job for the patient or providing the transportation to the job. The integrated treatment facility should provide the availability of employment opportunities to be monitored by staff. They can document the progression of the patient’s work ethic, capabilities, and appropriate timeliness of when to take the next step.

In combination, these programmatic elements will produce an environment that provides the framework for the mentally ill patient to recover. However, it will need to be properly sited in order to function to its potential.
DEPARTMENT SQUARE FOOTAGES:

<table>
<thead>
<tr>
<th>NET AREAS</th>
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<td>Residential</td>
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<tr>
<td>Support/Admin</td>
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<tr>
<td>Education</td>
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**GROSS FUNCTIONAL AREA**

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**GROSS LEASABLE**

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Fig.50. Department square footage totals.
## INTEGRATED TREATMENT FACILITY

### RESIDENCE

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<th>Room Type</th>
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<td>Patient rooms (with bath)</td>
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<td>450</td>
<td>8100</td>
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<tr>
<td>Entrance/Recept</td>
<td>1</td>
<td>400</td>
<td>400</td>
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<tr>
<td>Group rooms</td>
<td>2</td>
<td>600</td>
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<td>Med station</td>
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<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Clean utility</td>
<td>1</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Soiled utility</td>
<td>1</td>
<td>100</td>
<td>100</td>
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<tr>
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<td></td>
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### SUPPORT / ADMIN

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<tr>
<td>Cafeteria</td>
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<tr>
<td>Lobby/Central entrance</td>
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### EDUCATION

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</tr>
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<td>Classroom</td>
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<td>650</td>
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<tr>
<td>Computer lab</td>
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<td>450</td>
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<tr>
<td>Fine arts</td>
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<td>450</td>
<td>450</td>
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### RETAIL

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<td>Sholl</td>
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### SITE

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<td>Courtyards</td>
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<tr>
<td>main space</td>
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</tr>
<tr>
<td>12 bed courtyard</td>
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<td>400</td>
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Fig. 51. Facility space list.
SITE AND SETTING

The mixed use urban setting of downtown Greenville, South Carolina provides an applicable site for an intermediate care facility for mentally ill patients. The facility will function as a step down facility to Marshall I. Pickens Behavioral Hospital, the acute care psychiatric hospital located in Greenville, South Carolina. Since it will serve as a transitional setting for patients needing assistance after being discharged from the hospital, the facility should be specifically located to provide easy access to and from MIP for patient transfers and staff assistance. In order for the facility to exert itself as an intermediate care setting where the boundaries between the facility and the community are blurred, the site must be located within a mixed use, walkable community.

Ideally, the selected land parcel should lie within a pedestrian friendly and redeveloping area in which all necessary activities of daily life are within a half mile radius. In order to properly assist patients to the level of recovery needed, the project site needs to be located within a mixed use walkable community. To achieve the utmost flexibility of integration within the community, the setting will need to provide patients with the availability to complete common

Fig. 52. Walking radius of downtown Greenville.
daily activities, such as every day chores for the facility and meet with friends and family, on their own when ready to as part of their therapy. Being located within walking distance of all activities of daily life provides this opportunity for them. There are only a couple of locations in the Greenville area that can satisfy these criteria. Three potential areas were therefore identified for analysis; the North Main region, the Augusta Road region, and the West End district.
Site Location Process

Taking the design principles, program, and project goals into consideration as well as the need for multiple facilities within the area, a few sites were considered within the context of downtown Greenville, SC. In order for the facility to establish itself and its patients in the community, the site should be located within neighborhoods in the city where there are opportunities for the immediate context and the facility to evolve at the same time. It is important for this evolution to happen simultaneously to reduce the stigma the community has on the mentally ill population. People living and working in the area will be aware that there is a mental health population in the area but will be comfortable enough (since they have grown up with it there) to help reduce the stigma of society.

The North Main district is primarily a single family residential area with sporadic opportunities for nearby employment. Although the region borders the edge of downtown, it would not be the most ideal area for the facility because it is not accommodating to those without cars and in need of jobs. The region has periodic sections of mixed use zones, but for the most part, the business and residential portions of the region are separated from one
another. This would make it tough for the proposed facility to blend in unless it was a series of homes grouped together to work as one unit. However, a group home for patients with more abilities and independence would thrive in this area.

Likewise, the Augusta road district, which boarders the south portion of downtown, is inaccessible without a vehicle. This single family residential district, which has a varied income level, provides plenty of opportunities for housing as well as employment along the Augusta Road retail strip that runs through the middle of this district, but due to the heavy traffic along Augusta Road, it is not a safe street to walk along. Therefore, it would be tough for a patient to leave home without a vehicle and thus may cause the facility or even group homes to become isolated islands within this region.

The Historic West End district provides the best location for a program of this kind due to its mixed use, walkable community characteristics. The West End, a currently developing area, is located just south and across the Reedy River from the thriving downtown area. The district density and building heights are growing due to the recent additions of Greenville Drive Stadium to the south and River Place development to the north. The goals and
visions of the district along with the current culture of the area make this a prime location for the integrated treatment facility. The district, first and foremost, has an established critical mass of residential housing either zoned for single family residential or for town homes and apartments. Secondly, the location of a grocery store will provide patients with the ability to buy personal items as well as shop for the facility as an assigned task or chore. The district also provides the opportunity to work either part time or full time at a multitude of nearby businesses. The area is functionally rounded out with multiple opportunities to take part in entertainment events with family and friends, access to financial services at local banks, and relax and enjoy the therapeutic outdoor qualities the Reedy River Park. An additional attribute is that the West End is also socially active and alive do to the amount of people that pass through, live, or work in the region. This activity supports the experiences that the patients should have when completing their daily tasks. Figure 57 locates and labels all of the features and services that are within a half of a mile walking radius of the facility.
Fig. 57. Walkable ADL’s within the West End District.
The setting is also located in an area that will provide access to a public transportation network in order for the patients to travel to and from the downtown area to surrounding areas to visit with family and friends. The buses will also provide the patients with the availability to travel further distances to and from the facility for purposes such as educational courses, or visits with residents at nearby group homes and psychologists outside the facility. Since the majority of patient population living in the facility is without driver’s licenses or on probation, public transportation is the only way for patients to independently travel outside of walking distances.

Fig. 58. Greenville regional bus routes.
Site Selection Process

The actual land parcel to be selected within the West End district must first accommodate the building program. The programmed building area plus parking is 40,000 sq. ft, not including outdoor spaces such as courtyards. Even though the building may be designed as a two or three story structure, the site must be at least this footprint, but ideally greater, in order to accommodate exterior spaces such as the courtyard and entry areas as well as address the street in conformance with the character of the surrounding neighborhood. The site must allow the building to blend in with its context. In order to address the issues of privacy and security of the residential community within, the site should be located, close to but just off the main street ideally behind a row of retail shops. This will also help to break down the visual scale of the building from the exterior.

As part of the integration process, the facility shall have direct connections with street front businesses, both physical and visual, to provide work opportunities right outside the facility doors. The site shall have access to a critical mass of work opportunities within walking distance to provide patients with the ability to work part time (even and hour or two) or a full
day and return to the facility without the need for a vehicle or staff member assistance. And finally, the site must be available for use.

**Site Selection:** The land parcel that was selected is at the corner of River Street and Rhett Street and within a pedestrian friendly portion of the West End. It nestled behind the street front business activity which includes art galleries, a spa, a restaurant, and an abandoned retail shop available for use. Adjacent to the site is the Second Presbyterian church, an old brick structure with a two, three story towers on the front facade.

The actual site size is 46,500 sq ft which can accommodate the total building program of 40,000 sq ft. The selected land parcel is zoned C-4, central business district which will accommodate the integrated treatment facility program.

**Site Constraints:** The design of the facility must be in accordance with the Central business District Guidelines that the city council has instated. Several of these guidelines will influence the viability of the design in its context. The building scale and material choice must be in accordance with VEH.2 and PED.5. The first states that building materials for
new construction should be visually compatible with the predominate materials of the area. Masonry materials that convey a sense of scale are preferred. The latter says the new construction must maintain the distinction between the street level and the upper floor. The first floor should be predominantly transparent glass and the upper floors should be perceived as being more opaque.

In order to enhance the streetscape and continue to provide a pedestrian friendly neighborhood, the Preservation Overlay District Guidelines require the design to maintain the line of the building fronts in the block (AC.1). Where a building must set back from the sidewalk, landscape elements should be used to define the sidewalk edge. It also requests to minimize the visual impacts of a parking lot. (AC.9). Surface lots, if any, should be located on the interior of the block and should strive to never break the street wall of the block.

**Site Opportunities:** The location of the site provides the facility with the opportunity to utilize the most beautiful natural feature of the Greenville area, the Reedy River Falls. The land is also within an eighth of a mile of the new Greenville Drive Stadium and the Peace Center for the Performing Arts.
By meeting regional and local site conditions defined in the criteria, the site strengthens the facility’s ability to deliver the level of care needed to mentally ill patients in order to guide them out of the reoccurring cycle common in mental illness. In order for the facility to function as an intermediate care setting where the boundaries between the facility and the community are blurred, the site location has the qualities of a mixed use, walk-able community within a developing area.

The specific site selected within the West End district will enhance the delivery of care for the mentally ill patient. The proximity to every day amenities, the non institutional character of the existing buildings, and the availability of the land parcel that is located behind a row of street front retail combines to produce a stable and safe location for the patients.
Fig. 62. Site and context diagram of actual site selected.
INTEGRATED TREATMENT FACILITY: AN ALTERNATIVE CARE SETTING FOR ADULT PATIENTS WITH MENTAL ILLNESS.

The overall architectural goal of the integrated treatment facility is to create a setting that arrives at a balance between supervision, medical treatment, and patient freedom while providing both integration into the community and refuge from the world at large. This proposal is also designed to meet the specific residential and therapy needs of mental health patients who have been discharged from an acute care setting but are not ready for independent or group home life.

The overall conceptual diagrams, both plan and models, speak to the architectural response needed for this patient population. The three main driving forces were [1] a courtyard concept that opens to the city and provides the refuge for the patients [2] within an articulated 2-3 story building form that respond to the neighborhood context and [3] residential patient units elevated above public zones to provide privacy for the patients.
At the community scale, the facility provides a series of transitional spaces starting in the public domain beyond South Main Street and ends in the facility courtyard in a semi-private domain. It consciously blends in with the current fabric of the West End due to its articulated and modulated street façade, the overall character, and the proportioning of public and private spaces. The extended program stretches to South Main Street by appropriating abandoned commercial buildings as support retail establishments that both provide the facility with supplemental income and serve as established places for residents of the facility to work.

At the building scale, a sliver of the second floor bridges over the open entrance to create a central courtyard that opens to the city and is visible from Main Street. This courtyard provides safety and security to the patients without giving off the fortress feel from the exterior. With only one entrance and exit, navigational wayfinding is clear and precise from the main drop off and entrance along the new alley through the interior closed loops. These loops circumnavigate the public spaces on the first floor and the patient rooms on the second floor. Smaller more intimate spaces are designed throughout the patient units and larger more open spaces in the courtyards and community rooms to enhance patient and

Fig. 65. Public space zoning diagram representing the transitional spaces from street to interior of the building.

Fig. 66. Circulation diagram of first floor.
community interaction within the facility. This series of spaces, from patient bedrooms to open courtyards, accommodates multiple levels of interaction for patient comfort and control over their environment as well as addressing the varying patient acuity needs.

A conscious design effort was placed on accommodating the patient population’s needs for increased social interaction, educational and vocational support, and views to nature all within the urban context. The residential pods are connected to one another by community spaces that provide family, staff, and patients with the areas to relax and interact. The courtyard walls are designed such that the building feels open and inviting from the interior and exterior through the use of a curvy glass skin doubled with an urban vegetative screen. The clear yet perforated vegetation walls allow patients, family, and staff the opportunity to see across the entire courtyard making all interior spaces feel larger and lighter as well as connecting each interior space to nature. Finally, the outdoor classrooms, or benches specifically organized under tree canopies, provide zones of spaces where inpatients and outpatients gather to be educated on topics related to their illness.
Site and Context

The design of the integrated treatment facility balances the need for both connections and retreat from the life of the city and neighborhood. The overall site concept addresses the connections by locating it within the mixed use urban environment and designing the entrance as a transparent and welcoming space. The overall orientation of the building provides a retreat from the community since it is sited behind a row of retail and designed as an urban courtyard building. Patients have the opportunity to become involved in the area, due to fact that they can easily walk to all the activities of daily life for both employment and pleasure. For the patients who are unable to travel independently outside the facility, group trips can be taken to the nearby amenities such as the Peace Center, the baseball park, and the Reedy River Park.

The overall building concept addresses the balance between connections and retreat from the community by creating two different worlds for the patients; a contextual exterior and a therapeutic interior. The exterior, composed of a three story, modulated brick façade, is contextual with the surrounding street front conditions and contrasts with the interior
vertically vegetated, therapeutic, nature driven retreat. The axonometric drawing of the entire complex illustrates how the exterior and interior of the building read distinctly different to accommodate these to conflicting architectural needs for the facility.

Being that the facility is first and foremost a residence for mentally ill patients to live, work, and heal, its street front presence is designed to be contextual. The form and scale of the facility does not stand out as an institution, but is physically integrated into and respects the scale, articulation and general character of its surrounding context and neighborhood. Through the use of normative building materials and an undulating street façade, the exterior of the building blends in with the surrounding context of the West End. The exterior building façade is seen as a cluster of independent brick building facades not a continuous fortress-like barricade. It is modulated and articulated into smaller building forms in a similar fashion as the Middleton Inn in Charleston South Carolina. From a distance, the Inn’s window patterns nearly disappear into the rhythm of the black grid structure surrounding them creating multiple large facades compared to the many individually fenestrated rooms that appear when looking at it closely. In the West End, the design creates this modulated pattern that emulates the storefront retail along South Main Street.
The urban landscaping on the interior facades of the building creates a completely different world for the patients and staff who live and work there. It is reminiscent of the therapeutic qualities of the vegetative countryside. Patients are able to look out the windows to solid green and growing vegetation that also provides shading to the interior spaces. The vertical screening devices appear to be light and perforated from the interior, but look full and solid when viewed from across the corridor. Compared to just a few trees in the courtyard, the vegetative screening provides a sense of dense vegetation.

The building orients itself with the main entrance flanking River Street. This street is a relatively busy, three lane road that connects highway 123 to South Main street. For the convenience of patient pick up and drop off, the existing alley has been widened at the corner to provide a tree covered vehicular and pedestrian friendly entrance. Since the building must be monitored twenty four hours a day, this serves as the only entrance and exit to the building. A secondary, pedestrian only entry approach is designed between two retail buildings along South Main Street. This pocket park serves as both a community and facility amenity by providing an area of relaxation and respite for patients and the general
public to enjoy a quiet lunch with friends and family. It has a similar character to Paley Park located in New York City. The thirty-five-foot-wide park is located between two large buildings, but yet still provides a peaceful, quiet setting for residents and employees of the area. Movable furniture, vegetation canopies, and a soothing waterfall combine to make this space a retreat within the city.

Adjacent to the pocket part are two abandoned retail shops along South Main Street. It is assumed that the facility operators will acquire these buildings to provide supplemental income for both the program and residents along with therapeutic work opportunities for the patients. These community-oriented retail business shops, combined with the pocket park, act as a physical and social filter to the larger community by providing a buffering zone between life within the facility and life in the larger community. Due to the retail street front, one will never see the facility’s façade in its entirety from Main Street but will have glimpses of it from the corner at River Street and through the pocket park. In this way the presence of the facility can be known but not put on center stage in an institutional way.
The final overall site concept addresses the notion of zoning public and semi-public spaces to provide a progression of public to private spaces as an extended entrance to the facility. The main street retail acts as the primary public zone before entering the initial threshold of a still public but more intimate pocket park between the shops. From the park, one can view into the facility’s main courtyard. The landscaping of the alley to make it a tree covered space provides the facility with another layer of pedestrian activity and vegetative buffering. After crossing the street, one enters though a covered outdoor café under the upper level of the common entry wing into a calm and therapeutic semi-public/semi-private courtyard within the facility. This courtyard is not restricted to the public but the physical construct of the space is designed to subtly signal a more exclusive space that is sometimes used exclusively by residents but can also be enjoyed by the public in some ways. The progression of spaces and thresholds helps provide a transition for patients, staff, or community member from the public realm to the private realm similarly to the way transitional spaces are traversed upon arrival into the urban courtyard villas along Via Garibaldi in Genoa, Italy.
Design Evolution: Building Form and Organizational Concepts

The design progression focuses most on the specific building form and functional zoning, navigational systems and levels of interaction. The two part plan addresses the needs of the acute and minimal care patients in different locations but both are designed to enhance the levels of interaction of the patients. Closed loop navigational pathways direct traffic around the facility and back to the main entrance on all floors.

Articulated building forms: The main functional zoning concept for the building was derived by the residential needs of the patients. First, the design addressed the need for security and privacy for residents by elevating the patient rooms off the first floor and allowing public and administrative support spaces to occur along the street level. Secondly, in order to function as a step down care facility, the organization of the residential components is split into two acuity levels. The twelve bed, highly secured and regulated unit located on the interior of the site, is for patients who have just been released from the acute care hospital. The eighteen bed unit is split into two floors and functions more as group home where patients have more responsibility and independence.
Navigation and Circulation: The navigational and circulation elements within the facility are designed as closed looped, day lit, and multiuse paths that serve as both wayfinding and activity nodes for patients and staff. On the first floor, a covered entry spine leads from the café and covered courtyard entry at public entry space along the edge of the central courtyard and past the pharmacy to a community room for inpatient and outpatient classes. Transitioning from the community room to the education wing occurs along a wavy, full glass corridor decorated with art work created by patients and staff. To close out the first floor loop, a loggia boarders the exterior of the administrative wing and connects back to the main lobby.

On the second floor, circulation runs though the residential units while expanding and contracting to form social interaction spaces along the window wall and overlooking the courtyard below. The design of combined activity and corridor space allows for the circulation around the units to be naturally lit and feel larger and more open than if there was a solid wall on both sides.
**Levels of interaction:** The facility is designed to function as a community within a community which offers varying levels of interaction allowing patients to have the opportunities and incentives to engage at higher and higher levels of interaction when they are ready. As a mentally ill patient, the thought of forced interaction with others on a daily basis can be overwhelming and nerve-racking. The design of the facility gives the patients choices and previews of higher levels of interaction so they can decide on their own whether or not to participate rather than stumble into a situation where they feel uncomfortable. The facility design supports gradual social interaction and encourages patients to engage in activities outside their rooms through four distinctly designed levels of space.

Level one, the patient’s bedroom, is the most personal zone. Patients are encouraged to be out of their rooms for the majority of time interacting with others which is a difficult task for depressed patients who want to just lie in bed all day. It is equally as difficult for patients with schizophrenia and phobias because they are nervous and scared of social settings. The rooms are grouped in pods of three to form a sense of an identifiable neighborhood for the patients while the room itself provides refuge in times of emotional stress. These rooms
are specifically placed across from the small pocket interaction zones to provide the patient with the ability to preview the activities occurring in the space before joining in them.

The small sub-group interaction pockets along the circulation path in the unit are designed with continuous bench seating and defined by the curvy courtyard wall. In these spaces, patients are able to interact at a low, one on one level without being forced to join the larger group activities. These spaces provide views into the courtyard below and allow natural light to penetrate the interior of the building which provide incentives for their use. Patients are provided with measures of comfort and control over their space as it can not be seen from public view.

The next level of interaction can be viewed from the interior and potentially the exterior of the facility making these spaces more public than the other two levels. Patients sitting on the bench seating along the courtyard wall can watch the activities happening in the group spaces while staff can monitor these spaces from the nurse station. These group interaction spaces are located and designed for patients to interact with the entire residential unit.
Nurse stations, small desks with nurse supplies located in the center of the unit, can oversee activities and the patient conduct within these spaces. Typically, these group spaces on the unit will be used for educational meetings, medication distribution, dining activities, and card games. Since there are either nine or twelve patients to a unit, the group interactions spaces are designed to accommodate up to fifteen people at one time.

The next and highest level of interaction within the facility occurs at the entry and public areas within the building and outside in the courtyards. These larger community semi-public spaces provide areas for family and friends to interact with patients. Community rooms are designed as links from one patient unit to the other and provide the opportunity for both resident populations to interact with each other. They also serve as transitional spaces from staff and administration functions to residential units. The full glass wall and courtyard view spaces provide family and friends with ample space to arrange movable furniture into clusters of comfortable arrangements while they visit with the patients.

The most public social interaction spaces within the facility include the café and courtyard areas which are open to the public and begin to break down the barriers between the facility
and the community. Once again, the larger community spaces such as the courtyard can be viewed and previewed from the group spaces within the units and function as the connective piece between the facility and the community for the patients.

### Courtyard spaces:

An enclosed second story courtyard was designed in order to supply therapeutic connections to nature and fresh air without depriving the more acute patients in the twelve bed unit of security and privacy. The courtyard is encompassed by the patient wings and a translucent glass corridor to provide a full enclosure and meet the heightened security needs of these patients who have just been transferred from the hospital and still have a tendency to run away. This courtyard is also designed as a more intimate smaller scale space that can not be seen from the exterior of the building to add another level of comfort to the patients using it. The north wall of the corridor is a glass walkway that allows natural light down into the main courtyard while providing patients confined to the acute unit with the opportunity to view activities happening in the lower courtyard.

In the main courtyard, specifically designed spaces are provided for use as outdoor classrooms. These loosely defined, tree covered zones, provide space for a variety of inpatient and outpatient activities to be conducted with the therapeutic qualities of fresh air
and connections to nature. Benches are arranged in shaded areas under canopy trees to define gathering areas that will commonly be used for medication education, meetings with family and staff, and life safety classes for both inpatient and outpatients. Other social activities such as picnics, birthday parties, or barbeques with family and friends would also occur in the main courtyard both in the lawn and at the benches.

**Courtyard Screen Wall:** The main courtyard north and west walls along the eighteen bed unit are designed as screening devices that provide therapeutic views to nature for the patients. This feature is also intended to introduce the peaceful and serene qualities of nature associated with earlier models of care located the country. The inspiration is similar to the feel of Jean Nouvel’s Musée de Branly in Paris where the design uses vegetation applied vertically to building walls as a soft natural façade within an urban context. Unlike the museum, the wavy walls in the facility are constructed as a double skin not a solid wall with punched openings. The first layer’s structure consists of steel columns with curved glass panels between the mullions. The second wall is a vertical vegetative screen that represents the calm and therapeutic refuge needed within the interior of the facility. The vegetation grows the full length of the façade and provides shade to the interior spaces.

Fig. 93. View of the main courtyard.
The screening aspects of the vegetation also provide a visual filter and add a level of privacy to the upper floors of the patient units.

The application of all the design decisions created a residential live/work setting for the mentally ill patient that arrives at a balance between supervision, medical treatment, and patient freedom while providing both integration into the community and refuge from the world at large. An urban courtyard that opens to the city, but still speaks of refuge for the patients within, provides the facility with connections and retreat from the life of its neighborhood and the community at large. This concept addresses the need for mental patients to be treated within their existing conditions, not transferred to a remote location for only a partial recovery. The three-story articulated and modulated building form of the facility does not stand out as an institution, but is physically integrated into and respects the scale and character of its surrounding context and neighborhood. Privacy and security is provided to the patients by elevating their rooms above the first floor public zones. Within the facility, a conscious effort was placed on avoiding institutional corridors. The circulation paths are well lit and flanked by multiuse activity zones that serve as wayfinding and activity
nodes for patients and staff. The activity spaces adjacent to patient rooms and along the
corridors are designed to promote social interaction for patient through their varying sizes
and locations. These spaces are always positioned to allow visibility from one interaction
zone to the next allowing the patient the opportunity to engage at each level of interaction
when he/she is ready to.

Given the amount of time allotted for this thesis, the product is a true evaluation of the
research conducted and applied to design. Since this was the first pass at designing this
typology of building, another level of detail oriented design would be beneficial. The concept
of the interaction zones and community spaces works to provide the patient with a
comfortable setting to cross over their fears and march past the symptoms of their illness,
but they were not addresses in enough detail. The next round should specifically pinpoint
how the details of the internal environment addresses or hinders the patient’s progress.
Wall finishes, certain pieces of furniture, how high or low lighting should be, and other
details that would affect the patient’s disorders.
APPENDIX

Fig. 94. Overall Research Board.
Fig. 95. Site and Context Presentation Board.

Fig. 96 West End Greenville Analysis Board.
Fig. 97. Building in context: Site plan.
Fig. 98  First Floor Plan.
Fig. 99. Second Floor Plan.
Fig. 100. Third Floor Plan.
Fig. 101. Preliminary Concept Models
Fig 102. Site model #1 of West End Greenville
Scale 1" = 100'

Fig 103. Site model #2 of West End Greenville
Scale 1" = 100'
Fig. 108  Final model in context #1  
Scale 1” = 32’

Fig. 109  Final model in context #2  
Scale 1” = 32’

Fig. 110  Final model in context #3  
Scale 1” = 32’

Fig. 111  Final model in context #4  
Scale 1” = 32’
Fig. 112  Final design in context
Scale 1” = 32’
The site and building concepts for the integrated treatment facility are heavily based on the need for integration into the community as well as refuge from the world at large. Being that this is first and foremost a residence for mental illness patients to work, work, and heal, the design of the facility's streetfront presence needed to be contextual with the surrounding conditions. The building presents itself as a series of multiple buildings similar to the retail along south main street.

River Street building presence

Main entrance drop off area

Diagrammatic Axon building modulation

The refuge since the facility is located within the urban context, it was important to provide the patient with a feeling of security and privacy as well as having therapeutic views to nature. The main interior courtyard can be seen from all circulation spaces giving a more open feel to what would traditionally be a long dark corridor with a group room at the end.

The interior courtyard can be seen at a glance from south main street and takes on a vertical vegetation wall that wraps the facade of the 9 bed units providing shade-shading during the hot summer climate.

Section A_main lobby through to rhett street

Fig. 113. Site and Building Concepts Presentation Board.
ENTRANCE AND NAVIGATION

Due to the population, the facility must have only one entrance of which can be monitored at all times. The facility’s vehicular entrance presents itself to River Street, a fairly busy double lane street that leads to South Main. A drop-off alley entrance was designed for ease of patient arrival and departure from the facility. A secondary path of arrival peaks through from South Main Street. The originally vacant property has been converted into a narrow pocket park that provides vegetative space for patients and community members to have lunch, relax and read a book, or converse.

The patient are allowed and encouraged to leave the facility for rest, visitation with friends and family or for special organized events. If this is not an option, the facility itself provides many places for family and friends to visit. The navigation through the building on both the first and second floor is designed as closed loop systems that are well lit and many times open to the interior courtyard.

Fig. 114 Entry and Navigational Presentation Board
Fig. 115. Levels of Interaction Presentation Board.
Fig. 116. Interior Courtyard Presentation Board.
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