FACILITY ASSESSMENT REPORT

YOAKUM COUNTY HOSPITAL

Denver City, Texas

August | 2025

Parkhill Project # 45841.25

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EXECUTIVE SUMMARY

Parkhill was contracted by Yoakum County to perform a Facility Assessment of the Yoakum County Hospital located in Denver City, Texas. On July 30, 2025, a team of architects and engineers visited the hospital to observe the building's current condition and report on the findings. A follow-up visit was conducted on August 25 to gather more information. The information presented in this document represents the findings and recommendations of the Parkhill team. Included in the report are our findings on the following items:

Site/ Civil

Pavement Condition
Site Drainage
Site Accessibility
Site Utilities

Architectural

Architectural – General
Departmental Review

Mechanical/ Plumbing

HVAC Systems
Heating Water System
Domestic Water Heater System
Domestic Water System
Roof Drainage System
Medical Gas System
Fire Protection System

Electrical

Electrical Service
Generator
Switchboard and Panelboards
Automatic Transfer Switches
Branch Panels
Fire Alarm
Lighting
Roof
Patient Bed Locations

SITE/ CIVIL

PAVEMENTS

The pavements are in poor condition with cracks sprawling throughout a majority of the paved areas that are larger than 1-inch in width. However, since there is no vertical elevation difference, a remediation option might be to strip the surface pavement and rework the base, including proof rolling prior to overlaying the HMAC surface with a depth to match what was existing prior to removal. Additionally, several areas within the pavements exhibit poor drainage, which will require improvement.

Figure 1 – East Parking Lot

Figure 2 – East Drive of the Health Center

Figure 3 – East Service Drive

SITE DRAINAGE

Observations indicate that surface drainage adjacent to the existing hospital building is functioning adequately, with no visible signs of moisture accumulation or water ponding along the building perimeter. However, beyond the immediate vicinity of the structure—particularly within the surrounding pavement areas and the service court—positive drainage appears to be insufficient. These areas exhibit poor surface runoff characteristics, which may lead to localized ponding or long-term pavement degradation if not addressed. Further evaluation and potential grade improvements are recommended to enhance overall site drainage performance.

Figure 4 – North Courtyard

Figure 5 – South Entrance to Rehab Center

Figure 6 – Southwest Corner

SITE ACCESSIBILITY

Multiple areas across the site appear to be non-compliant with current ADA standards. Several ramps were observed to have incorrect configurations, including slopes exceeding the maximum allowable 1:12 ratio and lacking proper landings or edge protection. Parking areas also exhibited slope conditions that are likely to exceed the 2% maximum in any direction, as clarified in the 2025 ADA updates. Additionally, handrails on existing ramps do not meet the latest ADA specifications, such as proper height (34–38 inches), continuous gripping surfaces, and required extensions beyond ramp segments. To ensure full compliance with today's ADA standards and avoid potential enforcement actions, all identified deficiencies will need to be addressed through corrective design and construction measures.

Figure 7 – Non-Conforming Ramp East Drive Health Center

Figure 8 – South Entrance to Rehab Too Steep

Figure 9 – Non-Conforming Ramp and Parking

SITE UTILITIES

The condition of site utilities was assessed based solely on visible, above-ground features, as subsurface infrastructure remains inaccessible without specialized evaluation methods. Above-ground utility components observed include chillers, transformers, and gas meters, which fall under the purview of mechanical and electrical disciplines for detailed assessment. From a civil engineering standpoint, the utilities that can be evaluated- namely water and sanitary sewer systems- are typically located underground, making visual inspection insufficient for determining their condition. Accurate assessment of these systems would require more elaborate investigative techniques such as deploying video cameras through the sanitary sewer lines to identify structural or flow issues and conducting pressure testing on the water distribution system to evaluate integrity and conducting pressure testing on the water distribution system to evaluate integrity and performance.

If the owner has not experienced any operational issues with these systems, they may continue to function adequately. However, given that portions of the building are over 50 years old, it is likely that these utilities are original to the structure. Aging infrastructure can pose risks related to reliability, efficiency, and compliance with modern standards. Therefore, a thorough evaluation is recommended to determine the current condition and capacity of these systems.

Upgrades or replacements may be necessary to ensure long-term serviceability and alignment with contemporary building codes and utility performance expectations.

Figure 10 –South Service Court

ARCHITECTURAL- GENERAL

SUMMARY

The architectural assessment of the hospital was evaluated against current best practices as well as Texas Department of State Health Services Title 25 Texas Administrative Code Chapter 133, Hospital Licensing Rules (TDSHS). The findings are consistent with what we see in a hospital of this age. In general, the hospital has been well maintained and functions, but most all of the required departments fail to meet today's regulations. A major issue that is noted in this report is that any renovation of a department requires that the area be brought up to current regulations. Many of the departments don't have enough square footage to meet the current requirements.

The exterior of the building is primarily brick or concrete masonry unit (CMU) and appears to be in relatively good condition. There is a miss-match of materials that indicate where the building has been added on to over the years. No cracking or deterioration was observed that would indicate structural failure. That does not definitively indicate that there are no structural issues, but that none were easily observed.

The roof, though relatively new, does not appear to have adequate slope which causes ponding and has deteriorated some areas and substrates. No failures in the roof membrane were noted but inadequate drainage could decrease the life expectancy of the system.

Figure 11 –Roof Ponding

Staff were unaware of any known asbestos in the building, but an asbestos survey and report should be considered if one does not currently exist.

While not prevented by code, there are many instances of carpet throughout the building. This presents an infection control issue and is not consistent with best practices.

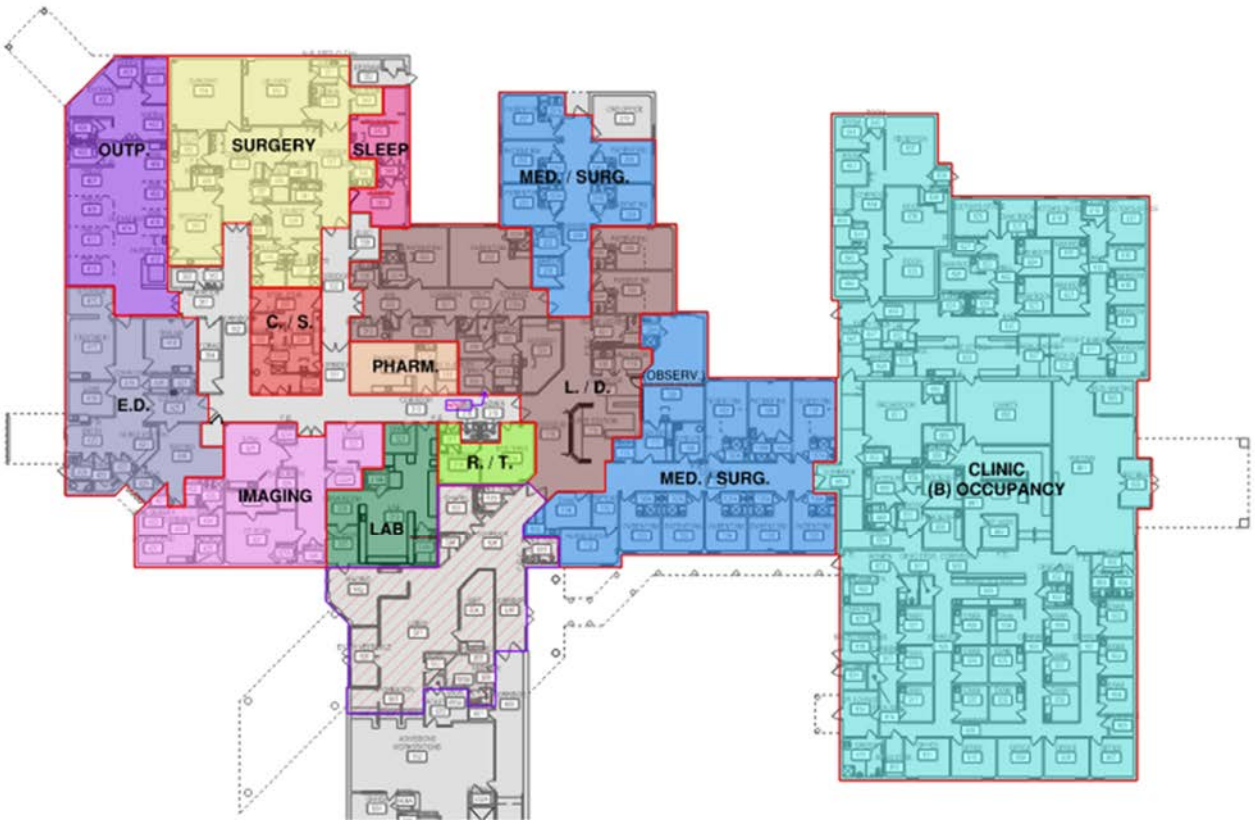

Figure 12 –Current Departmental Plan

ADMINISTRATION AND PUBLIC SUITE

SUMMARY

Administration and public spaces are separated into two areas. Administration is on the south side of the campus while the public spaces are at the hospital's main entry. All required spaces appear to be present and to meet requirements.

FINDINGS

Required spaces are a covered primary hospital entrance with a lobby, reception area, public toilet(s), and admission area with a private interview Space. The administration suite requires Offices, and multipurpose room for conferences, meetings, and health education programs. Storage is also to be provided. Our investigation shows that all of the required spaces are present and seem to work well. One detrimental issue is the front entrance to the hospital is not easily identified by someone that is not familiar with the facility.

RECOMMENDATIONS

No recommendations for these areas.

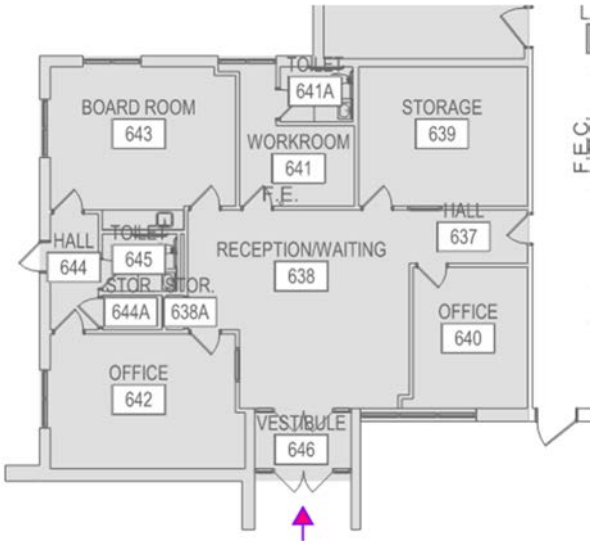

Figure 123 –Administration Suite

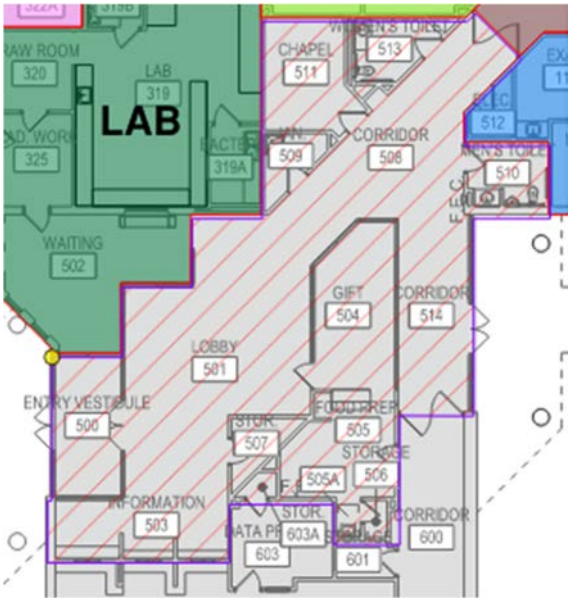

Figure 134 –Public Suite

CART CLEANING AND SANITIZING UNIT

SUMMARY

A facility for cart cleaning, sanitizing and storage is required for carts serving central services, dietary services, and linen services.

FINDINGS

No cart cleaning and sanitizing facilities were observed.

RECOMMENDATIONS

A cart cleaning and sanitizing area should be identified and built to meet TDSHS requirements.

CENTRAL STERILE SUPPLY SUITE

SUMMARY

The existing Central Sterile Supply Suite has the opportunity to become a more effective and safe department to serve the various needs of the Hospital. The current centralized location is ideal and the suite extents are within the architectural and spatial parameters to improve upon. Deficiencies should not be too disruptive to address and correct. The operational flow, however, should be reviewed to ensure that optimal processes and pathways for safety are regarded and applied.

FINDINGS

As mentioned above, the location of the suite appears to be convenient for this function of the Hospital. While it appears to be accessible to directly service the Surgical Suite with clean supplies, there is question as to the path and point of entry for “dirty” instruments and carts. Further, the Decontamination room and Clean areas may not be sufficiently separated. Similarly, the Clean areas may need further separation of processing space and storage of sterile items. (e.g Clean assembly and sterile storage)

Missing required spaces include: a Breakdown storage room, Equipment storage, Cart storage, Office space, and a (dedicated) Housekeeping room within the Decontamination room. Staff facilities are provided however the single user toilet is only accessible from within the Decontamination room and does not appear to be sized for accessibility. For finishes, it appears that the primary entrance for the Decontamination room is located off of a corridor with carpet, thus raising questions about infection control.

RECOMMENDATIONS

Upon further review of the operational flow and processes we can recommend which spaces to connect to periphery access such as corridors that surround the suite. Within the suite, modifications can be made to ensure the delineation and separation of “dirty” and “clean” spaces.

Addressing missing required spaces may be easier to solve compared to other departments since specific square footages are not outlined for the various areas within the Central Sterile Supply Suite. Equipment storage and Cart storage may be effectively combined into a Multipurpose room if a safe operational flow is maintained. Additional spatial demarcations may be easily accomplished if equipment and processing can be reviewed for efficiency, and missing spaces can be added. Additionally, all finishes within the Department and immediate adjacent areas should be reviewed for maximum cleanability and durability to alleviate potential infection control issues for the Hospital.

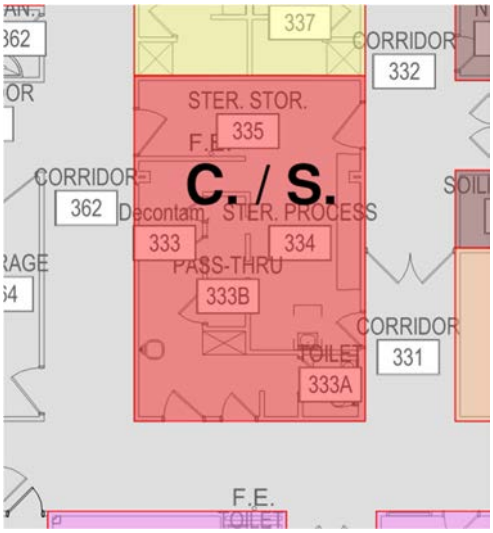

Figure 145 –Central Sterile Supply Suite

DIETARY SUITE

SUMMARY

The dietary suite appears to meet most requirements and function reasonably well. Overall, it's on the small side and is a bit dated.

FINDINGS

A few required spaces were not noted or did not meet current requirements. There is not a required housekeeping room within the suite. Staff toilet and locker space are required but are undersized and do not meet accessibility requirements.

RECOMMENDATIONS

While there are some non-compliant pieces, no major issues are noted. A larger, updated kitchen would be desired but not necessary.

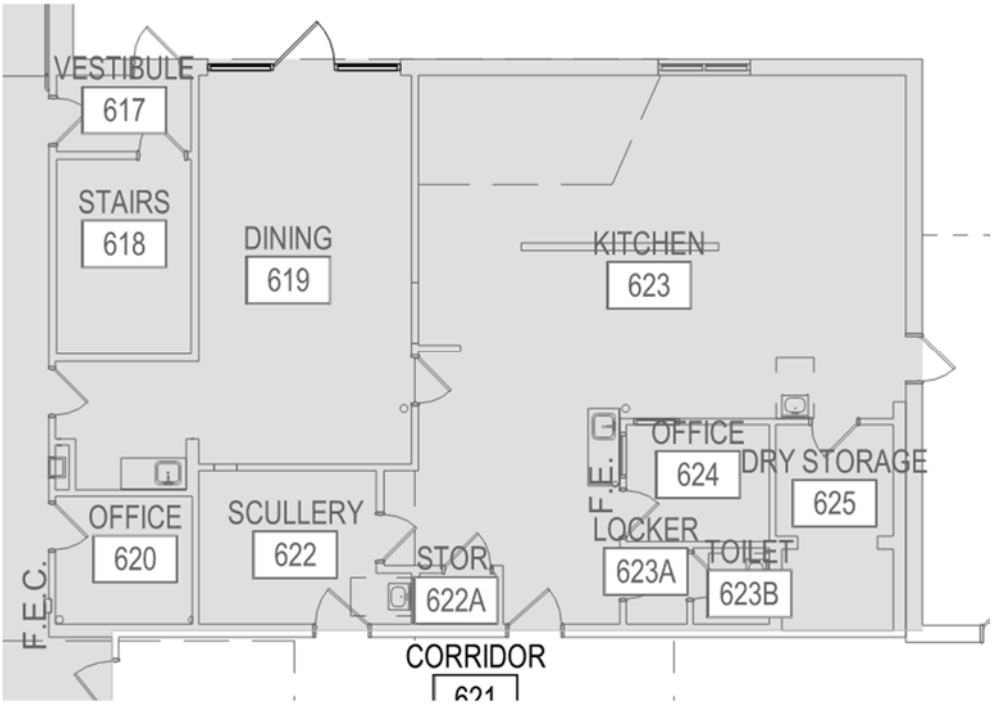

Figure 156 –Dietary Suite

EMERGENCY SUITE

SUMMARY

The existing Emergency Department has numerous deficiencies and is lacking adequate space to meet minimal standards. While efforts have been made to maximize the space available, the lack of area within the suite has limited the efficiency of a modern, well designed emergency department.

FINDINGS

There are numerous required spaces that are missing or don't meet minimum TDSHS standards. Required spaces that are missing are Wheelchair and Stretcher Storage, Soiled Workroom, Housekeeping, and Staff Toilets. While there is a toilet right outside of the suite, it fails to meet minimum accessibility standards and doesn't appear to be staff only dedicated. A required soiled workroom with a work counter, clinical sink and hand washing fixture is not present nor is there a Housekeeping Room within the suite.

Most of the required spaces that are present fail to meet the required minimum standards. A patient toilet is in an appropriate location but is too small to meet accessibility requirements. A separate ambulance and walk-in entrance to the Emergency department is present, but the walk-in entrance lacks proper signage. Regulations call for entrances to the Emergency Department to be "well-illuminated, identified by signs, and protected from inclement weather". The signage that is there is small and not illuminated. Also, the "Ambulance Entrance" sign on the north of the drive through is peeling and is losing legibility. There are no public toilet facilities for the exclusive use of the waiting room. Medical staff work area and charting area are all combined into the small control station. This area is inadequate for the required staff. There is no soiled workroom There is a small Clean Storage room that is extremely undersized. There are multiple issues with the required Decontamination Room. The current room does not meet the required 80 s.f. minimum. There is also a requirement for two handheld showerheads with temperature control. Additionally, there is required a drain that goes to a dedicated holding tank so that water from the shower does not enter the septic sewer system. The room that is designated "Trauma" does not meet minimum 250 s.f. requirements. It also lacks a scrub sink, and 6" integral coved base.

The Trauma room is short one required Oxygen outlet.

There are multiple locations where electrical quad outlets are used which are not allowed.

RECOMMENDATIONS

Renovations to the Emergency Department in its current location are not possible without expanding into another part of the hospital. Some required spaces are missing or vastly undersized. Based on where the hospital sits on the site, there does not seem to be a feasible way to expand the current footprint of the building to give the department the additional area needed. The one possible option is to expand to the north into the outpatient area. This

recommendation comes without deeper discussion and understanding of how the outpatient department operates and the needs of that space. In its current location, the outpatient suite appears to be ideally situated next to surgery and encroachment into that space could prove problematic.

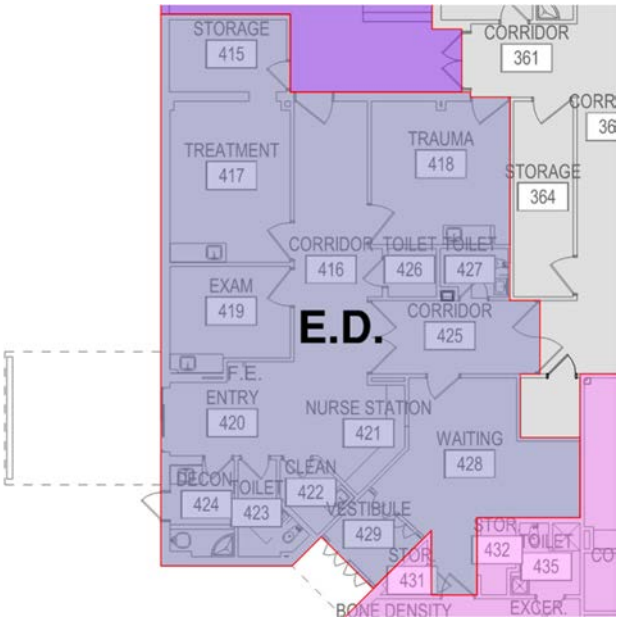

Figure 167 –Emergency Suite

EMPLOYEES SUITE

SUMMARY

TDSHS requires an employee suite including Lockers, lounges, toilets, and showers within the hospital for employees and volunteers. These facilities are in addition to, and separate from, those required for the medical staff and the public.

FINDINGS

No Employee suite was noted.

RECOMMENDATIONS

Should renovations occur that trigger TDSHS compliance, an employee suite would need to be added to the hospital.

ENGINEERING SUITE AND EQUIPMENT AREAS

SUMMARY

An engineering suite is required but not required to be on-site. Required areas are office, general maintenance shop, maintenance storage, and medical equipment storage.

FINDINGS

The required spaces appear to be present at the hospital campus as well as an off-site building.

RECOMMENDATIONS

Engineering suite and equipment areas appear to meet so no recommendations required.

GENERAL STORES

SUMMARY

The general stores for the hospital meet TDSHS requirements.

FINDINGS

General storage and a receiving area are present. The storage area meets the size requirement for 20 square feet per inpatient bed.

RECOMMENDATIONS

No recommendations for general stores.

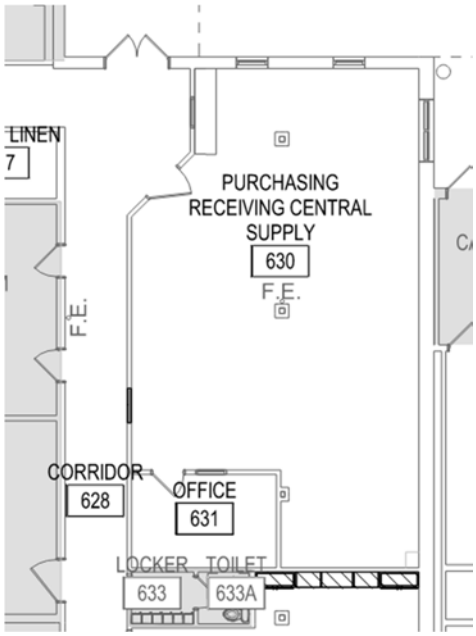

Figure 178 –General Stores

IMAGING SUITE

Imaging suite consists of Xray, CT, Ultrasound, and Bone Density. The imaging suite is disjointed and does not meet TDSHS standards in several areas.

FINDINGS

In general, the imaging department is poorly laid out. To reach the ultrasound and the bone density, a patient must walk through the emergency department. In the CT, a toilet room is provided but doesn't meet accessibility requirements and must allow the patient to exit without having to reenter the room, meaning it must have a secondary door to the corridor. Required toilet rooms don't meet accessibility requirements. Required spaces that are not present are a patient waiting area that is out of traffic and under direct staff visual control and a patient toilet. Other required spaces that are not present are a control desk and reception area, a minimum of one stretcher holding area and a staff toilet.

RECOMMENDATIONS

An expanded imaging department is needed to meet requirements and improve patient flow. This is difficult because the suite is boxed in by the lab, emergency department, and sterile processing. Any renovation would require the entire imaging department to meet all TDSHS requirements.

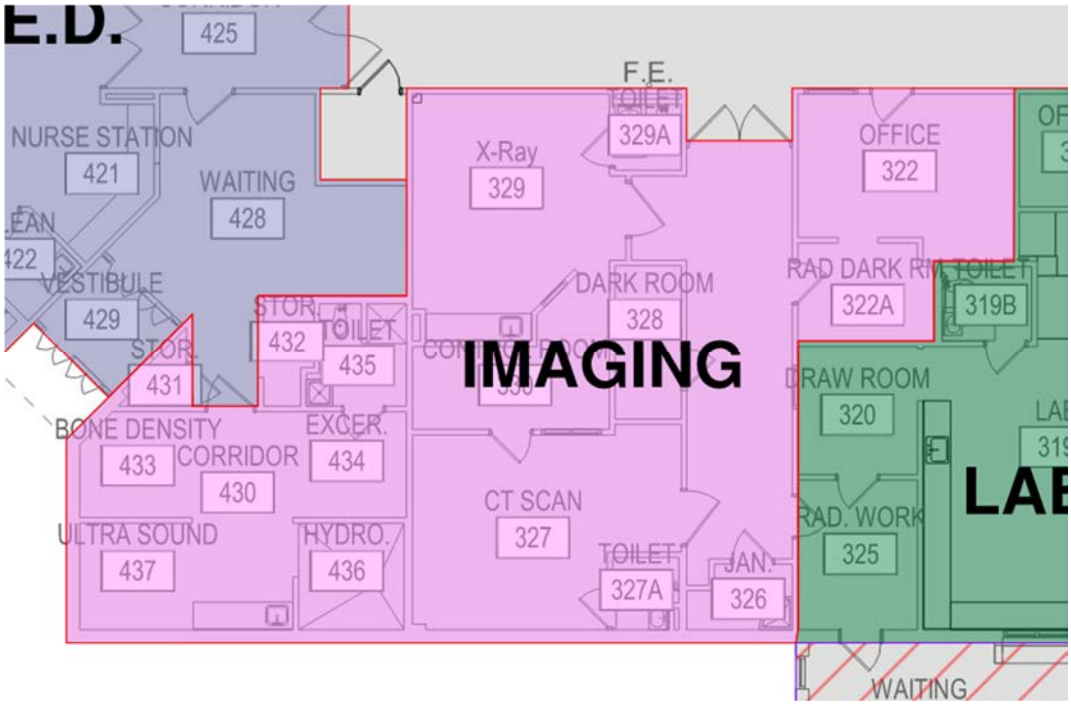

Figure 189 –Imaging Suite

LABORATORY SUITE

SUMMARY

The hospital's lab is undersized, creating an overcrowded space lacking adequate storage and workspace. This is very common in hospitals of this age where the labs were not designed with the current modern equipment needs in mind. Several required areas are missing or don't meet minimum requirements.

FINDINGS

In general, the lab is too small for the equipment, staff, and storage needs. The laboratory workroom is present but does not have space appropriately designed for the equipment. The walls are lined with storage cabinets and shelving, but our observation was that it is inadequate for the lab's needs. Hand washing facilities appeared to be adequate and meet the requirements, but it was noted that the staff constantly battles plumbing leaks and backed up drains. There is an office that, while small, appears to be adequate. Staff facilities, including a lounge, locker and toilet facility are required. These can be located outside of the suite or shared with another department, but we did not observe one present nearby. There is a small toilet in the suite, but it does not meet accessibility standards. A small closet in the suite is being used as a makeshift lounge. There is a blood draw station, but the location is awkward as it's in a traffic area. A housekeeping room is required but not present.

RECOMMENDATIONS

There is nowhere to expand the lab as it is landlocked on all sides with other departments. The lab could be relocated to another area on the property or even an off-site location, but this is not ideal. The lab is currently located in the perfect spot in the hospital near the emergency, surgery, OB, and nursing departments. Relocating to another location would adversely affect the timeliness of lab response. The space could be renovated in its current location to improve flow, but the current space constraints would limit how much improvement could be made and would not be able to meet all requirements.

Figure 20 –Laboratory Suite

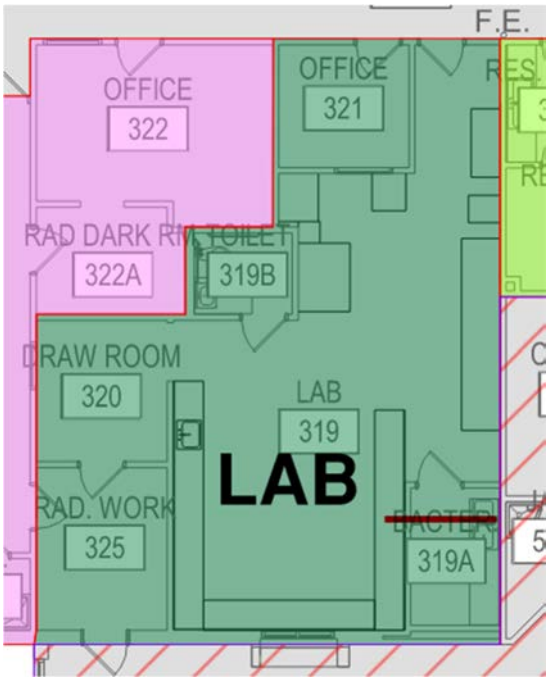

Figure 21 –Laboratory Suite

LAUNDRY SUITE

SUMMARY

A laundry suite is required but is not required to be on-site. There is a laundry suite within the hospital facility.

FINDINGS

The laundry suite does not meet TDSHS requirements. Soiled and Clean processing areas are required and are required to be in separate room, but the current laundry is in one large room. The clean side is required to be positive pressure. The current layout allows cross contamination between dirty and clean laundry. A seven-day laundry supply is required to be stored in the laundry on the clean side. Adequate hand washing processing area is required. A laundry office, cart storage in both clean and soiled areas, cart sanitizing, staff toilet, lockers, and housekeeping are other spaces that are required. In general, the existing laundry falls far short of requirements in numerous areas.

RECOMMENDATIONS

A new laundry should be considered to meet TDSHS requirements and reduce infection from cross contamination. The new laundry can be in the hospital or a new stand-alone laundry.

Figure 22 –Laundry Suite

MEDICAL RECORDS SUITE

SUMMARY

The medical records suite appears to meet all of the requirements and have required spaces.

FINDINGS

The medical records suite is well located and appears to meet all requirements.

RECOMMENDATIONS

Minor finish upgrades could be done but no other changes are recommended.

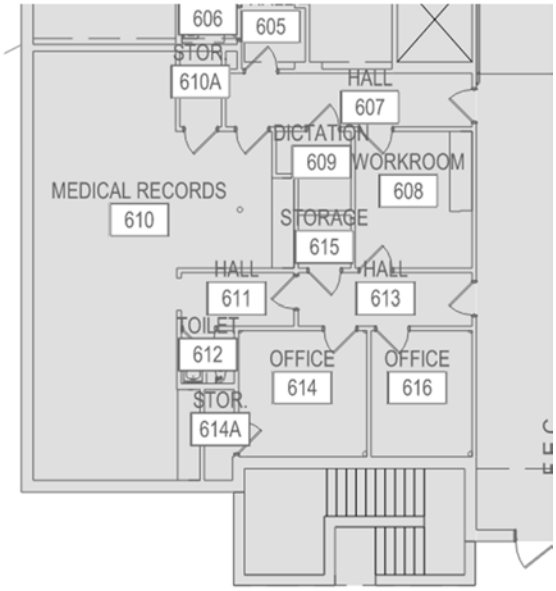

Figure 23 –Medical Records Suite

NURSING UNIT SUITE

SUMMARY

The nursing unit is the central patient area of the hospital. The current suite functions but is deficient in numerous areas. For the most part deficiencies are a result of the building's age and the era in which it was built. There is also a lack of delineation between the Nursing Unit and the OB suite.

FINDINGS

The suite, in general, fails to meet TDSHS requirements. 10% of the patient rooms are required to be accessible. None of the current rooms meet accessibility requirements. Patient rooms are required to have handwashing sinks in both the patient room and the patient bathroom. Currently there are only handwashing sinks in the patient room but not the bathroom. Adequate patient storage is provided. The required airborne infection isolation suite appears to meet the spatial requirements, but it is uncertain if the HVAC system provides the necessary negative pressure. A pressure differential monitor is required and was not present for the Isolation Suite. A disturbed patient room is required in a location that is easily monitored is required and not currently present. The nurse's station appears to meet the regulations but is positioned in a way that does not allow visibility to all patient rooms. The nursing office and charting area meet TDSHS regulations. The medication room occupies what was originally the clean utility space and does appear to meet current requirements. There is a nourishment station that complies with current regulations. There is a requirement for a multipurpose room on the suite but there is not one present. The examination/ treatment room, assisted bathing room, and staff lounge are all present and in compliance. A clean workroom/ clean supply is present but does not meet regulations. The clean workroom/ clean supply lacks a handwashing station and a work counter. A clean linen room in the suite was not observed. Equipment storage room or alcove of 10 s.f. per patient bed is required but the current alcove falls short of this requirement. The original soiled workroom is now being used as a housekeeping room. A soiled workroom was not observed on the suite. There is not a public toilet within the suite. There is a staff toilet but it fails to meet accessibility standards. The observation room contains four patient beds. TDSHS states that the maximum patient room capacity is two but does have caveat that in existing facilities where renovation work is undertaken and the present capacity is more than two patients, the maximum room capacity shall be no more than the present capacity with a maximum of four patients.

RECOMMENDATIONS

A major renovation of the space could bring the space up to standard but there likely is not enough area within the current footprint to accommodate any renovation. Expanding into another area of the hospital would likely be required.

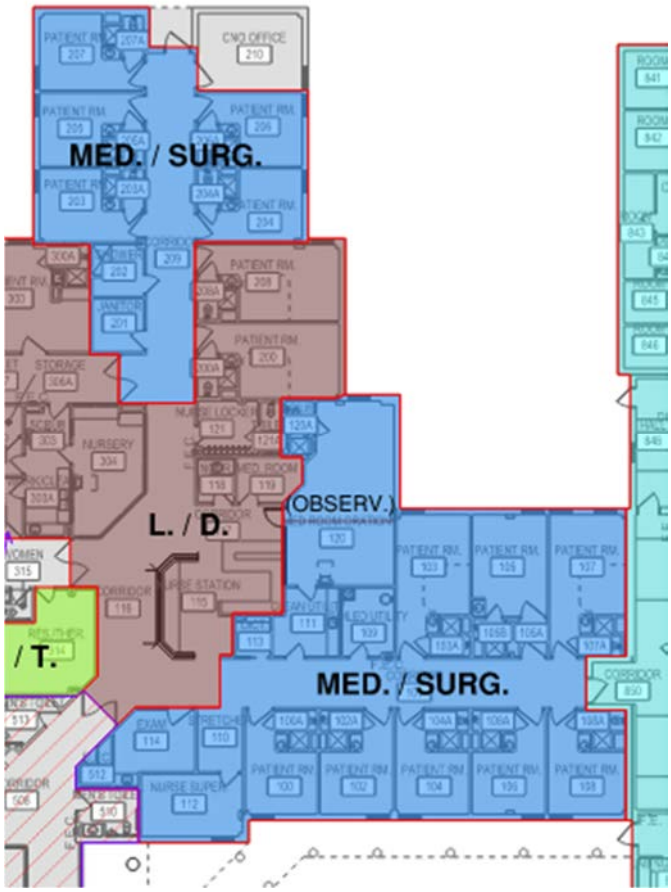

Figure 24–Nursing Unit Suite

OBSTETRICAL SUITE

SUMMARY

The existing Obstetrical Suite has a variety of deficiencies including the location and positioning within the hospital, missing required spaces, and existing spaces that do not meet minimum standards. While efforts have been made to maximize the number of spaces available and dedicated to the Obstetrical Suite, the Suite does not meet the minimum criteria set forth by the State.

FINDINGS

Location | Positioning: The current Obstetrical Suite is situated such that there is merged and mixed traffic with the Medical / Surgical Suite. This may be due to operational flow, shared staff, or shared programmatic spaces however the Obstetrical Suite shall be located and arranged to preclude unrelated traffic through the suite. This rule is in place to ensure the safety of patients, staff, and visitors and to mitigate issues related to infant abduction.

Missing required spaces: There are numerous missing required spaces including a designated Airborne Infection Isolation Labor, Delivery, Recovery, and Postpartum (LDRP), a Consultation area for Lactation, and Infant Formula Facilities. The requirements for accessibility also apply to this suite. At least 10% of and no less than one type of patient room shall be accessible. A designated ADA LDRP room is not provided.

The Nursery is missing the following delineated spaces: an Examination room, an Airborne Infection Isolation room, and a (dedicated) Housekeeping room.

Numerous service areas are missing including a (dedicated) Control Station located to permit direct visual surveillance of all traffic which enters the Obstetrical Suite, a (dedicated) Supervisor's office, Waiting room/area with toilet rooms, hand washing facilities, public telephones, and drinking fountains, Staff toilet facilities, (dedicated) Clean workroom or Clean supply room, and Triage room. Another major missing service area is the Obstetrical Suite staff clothing change rooms which requires areas for male and female personnel with lockers, showers, toilets, and hand washing facilities. This area shall be arranged to provide a traffic pattern so that personnel entering from outside the obstetrical suite can shower, change, and move directly into the restricted areas of the obstetrical suite. This service area alone impacts suite location, extents, and operational flow.

Existing spaces that do not meet minimum standards: Beginning with patient spaces, one of the two larger LDRP rooms does not meet the minimum required clear square footage. Each room shall be designated for single occupancy and have a minimum clear floor area of 260 square feet exclusive of the infant resuscitation area, built-in shelves or cabinets, alcove, vestibules, or other adjoining rooms. The minimum clear room dimension shall not be less than 11 feet.

The two smaller "LDRP" rooms are far from meeting the minimum required clear square footage. The two smaller LDRP rooms also do not have the required mechanical flow of high

and low returns in the rooms. The smaller rooms also did not have the required medgas for the infant resuscitation area.

Further, none of the LDRPs are designated as an ADA room with an accessible toilet room and currently all LDRP toilet rooms are not accessible. At least one room would need to be accessible.

There is a Locker (only) space provided in the area however it is not clear which department uses this space. There is one single user toilet directly accessible from the Locker space however it is not accessible. The lack of accessibility for Nourishment potentially poses an issue, particularly if the public accesses these spaces freely.

RECOMMENDATIONS

It is not possible to develop and arrange the required spaces of an Obstetrical Suite to meet minimum standards within the existing square footage and suite footprint. There would inevitably be consequential disruption to adjacent departments.

The primary challenge is bulking Obstetrical Suite areas together to preclude other department traffic. The current operational flow and overlap between Medical / Surgical and the Obstetrical Suite is problematic. Re-defining these departments would entail reassigning some spaces such as Medical / Surgical areas and possibly Pharmacy. Centralizing viewing is also recommended to provide visual control for the suite access doors.

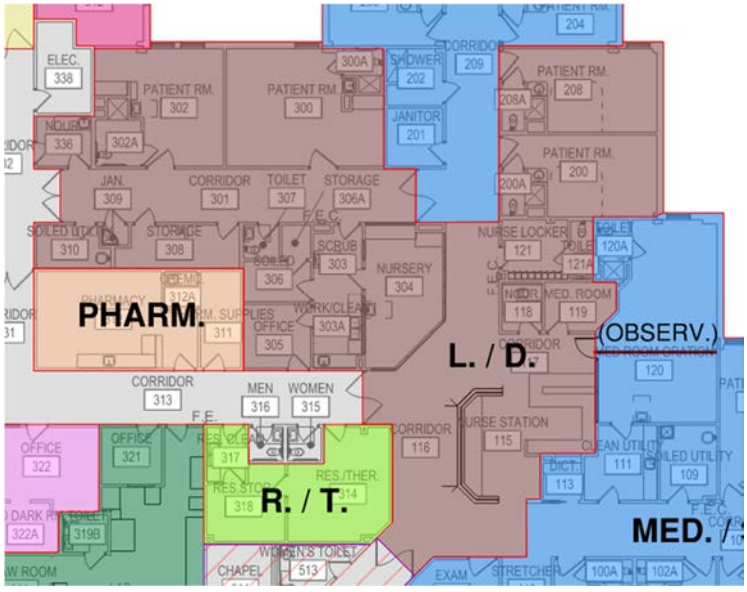

Figure 25 –Obstetrical Suite

OUTPATIENT SUITE

SUMMARY

The Outpatient Suite, while amply sized, does not meet some of the basic requirements set forth by the State. The current extent of the suite would allow for some reconfiguration to provide the additional spaces needed and to create a more efficient and patient-centered space for the Hospital. Criteria for licensing should be reviewed for compliance.

FINDINGS

Exterior signage, drives, and parking need to be reviewed further to ensure adequate wayfinding and safe pathways to this area of the Hospital. A public waiting area is provided however the single public toilet does not appear to be handicapped accessible. Though a square footage requirement is not outlined, the waiting space itself appears quite minimal.

Beyond the waiting area, the patient care spaces offer minimal dignity and privacy. Only a glazed sliding door separates these spaces from the lobby. The pre-op area is large and, in some areas, possibly wasted space. For the number of operating rooms, the patient pre-op area is excessive. The observation spaces are not clear in use. While not an outlined requirement, it is not evident which toilet facilities are conveniently located for staff use.

RECOMMENDATIONS

The Outpatient Suite should be evaluated to determine a balanced space program to delineate all required spaces.

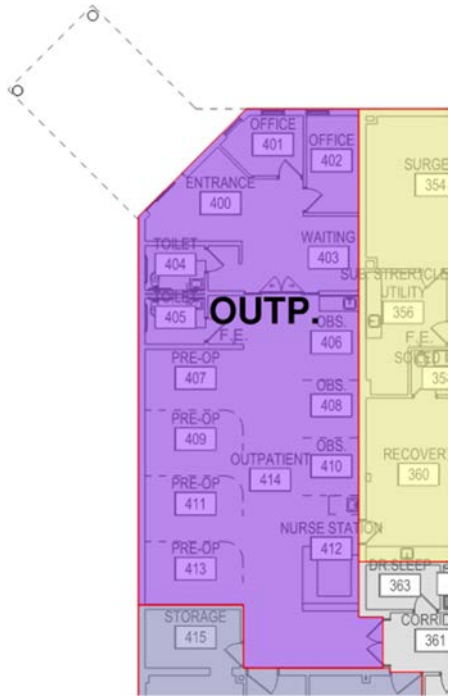

Figure 26 –Outpatient Suite

PHARMACY SUITE

SUMMARY

The Pharmacy suite is in a centralized and ideal location within the Hospital and appears to have adequate room to delineate spaces as needed without disruption to adjacent suites.

FINDINGS

The Pharmacy has minimal built-in storage and ample clear floor space. The main Pharmacy area is one large open room which could benefit from more delineation of Pharmacy functions. It was observed that no hoods were provided due to compounding not occurring within this Pharmacy. The supplies area is only accessible from the main corridor and is potentially inefficient for workflow with no sightlines.

Locking for narcotics as well as appropriate storage for volatiles compounds will need to be confirmed.

Compounding is not currently done in the hospital. Should that be desired in the future, a number of spaces would need to be added to meet regulations.

RECOMMENDATIONS

The Pharmacy is sufficient to serve the current Hospital as is, however would not support an increased level and service line of compounding or the USP 800 requirements. One recommendation is to maximize storage capacity with additional millwork or mobile storage. The supply door could also be relocated to be accessible from within the Pharmacy for added security and visual control. A safety and security risk assessment should be undertaken to ensure best practices for this suite and to update the floorplan accordingly for current functions.

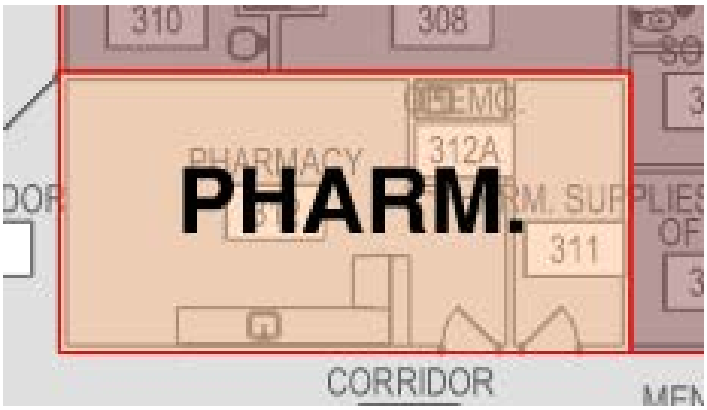

Figure 27 –Outpatient Suite

REHABILITATION THERAPY SUITE

SUMMARY

The existing Rehabilitation Therapy Suite consists of adequate patient care areas, however is lacking some required support spaces.

FINDINGS

The rehabilitation suite is missing a delineated patient waiting area with wheelchair storage space, and a convenient patient toilet.

RECOMMENDATIONS

Some reconfiguration may need to occur, allowing more patient waiting amenities.

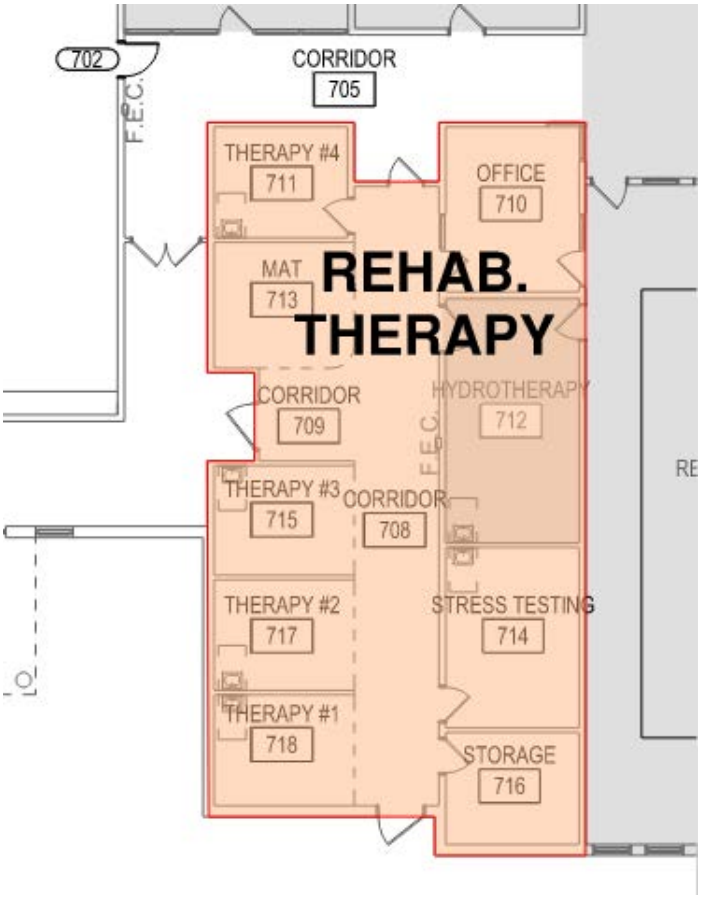

Figure 28 –Outpatient Suite

RESPIRATORY THERAPY SUITE

SUMMARY

The location of the Respiratory Suite is in a convenient and central location within the Hospital. The existing footprint of the suite, however, is small by current State standards. If outpatient services are rendered, several spaces are missing or not delineated.

FINDINGS

The suite utilization within the given footprint is maximized. The officing space also serves as the overflow storage space for equipment and supplies, in addition to the room indicated for storage. For staff amenities, it appears toilets are accessible for staff near the suite and assumed that lockable storage is provided within the officing space. It is not clear which housekeeping room is accessed for this department. It will need to be confirmed blood gas analyses are performed as this requires a separate space with handwashing sink. Similarly, it will need to be confirmed if outpatient respiratory therapy services are offered to determine if additional patient care and support spaces are needed.

RECOMMENDATIONS

While the suite location is centralized, it does not offer an opportunity to expand due to being at a junction point in the floorplan. A separate office area would better delineate functions but would require additional space. Best practice for the suite would be to keep office functions separate from storage.

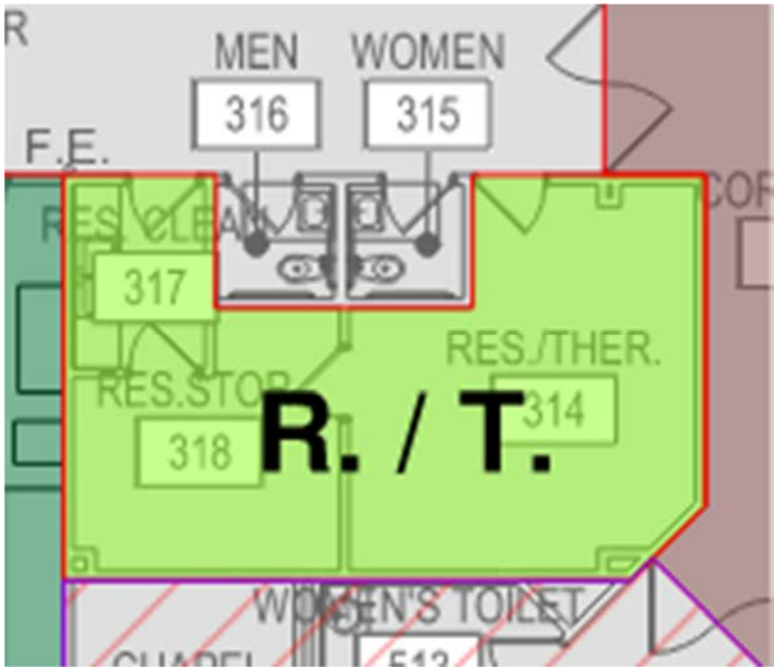

Figure 29 –Respiratory Therapy Suite

SURGICAL SUITE

SUMMARY

The existing Surgical Suite has several different challenges including the location and positioning within the hospital, missing required spaces, and existing spaces that do not meet minimum standards. To meet the minimum criteria set forth by the State, extensive architectural reconfiguring and spatial allocation would need to occur. It would also be recommended to thoroughly assess the operational flow to ensure the safest processes and paths are observed.

FINDINGS

Location | Positioning: The location of the Surgical Suite within the Hospital is appropriate, however, due to the total square footage of missing spaces, there will consequentially be disruption to adjacent departments to accommodate these basic requirements. The Sleep Study spaces seemingly crossing traffic to the Surgical Suite is problematic. Like the Obstetrical Suite, it is required that the Surgical Suite should be located and arranged to preclude unrelated traffic through the suite.

Missing spaces: The aggregate square footage of missing spaces is substantial. These spaces include: a public waiting room with amenities such as toilet facilities, public telephones, and drinking fountains. A Control Station is not provided within the Suite nor is an Office. For support spaces, there is not clear space indicated for an Anesthesia workroom or a Medication station. There is an Anesthesia space indicated on the provided floorplan however this space is being used for a different function. A Soiled workroom is also required to be within the suite. An ice machine for therapeutic purposes was not observed as available.

Existing spaces that do not meet: Spatial allowance | Size: Beginning with the Operating Rooms, the larger OR is just short of the minimum clear required square footage. A minimum of one operating room shall be provided and shall have a minimum clear floor area of 400 square feet exclusive of fixed and movable cabinets and shelves. The minimum clear dimension between fixed cabinets and built-in shelves shall be 20 feet. The current OR is 412 total gross square feet and the overall room dimensions are 20’-0” in each direction. The current Delivery room square footage and dimensions meet the requirements of the additional Infant resuscitation area (40 square feet in addition to the required area of each room), however the larger OR would not if it serves as an emergency c-section room.

While a Recovery room is provided, it is not evident that a post-anesthesia care unit with all related requirements is available within the unit including a medication distribution station, nurse station, and isolation room. A minimum of two stations must be provided per the ratio of only one operating room. Further, it will need to be confirmed if recovery patients are separated; separating all patients subject to general anesthesia from those who did not receive general anesthesia.

The delineation of a Sterile core is not evident. While not outlined as a requirement, it does indicate that clean and dirty paths and processes should be evaluated to identify and mitigate risks.

For suite finishes, the existing Operating Room walls are painted gypsum board. Damaged areas were observed where the painted paper face of the gypsum board was peeled.

RECOMMENDATIONS

To expand the square footage allocated for the Surgical suite would be disruptive for adjacent spaces however may still be the best approach in lieu of growing beyond and outside the existing hospital footprint with an addition. The Sleep study areas should be removed from the suite which would allow the additional space for required support spaces and eliminate non-related traffic to and within the suite. Further, the overall suite extents should be evaluated to determine efficient and safe circulation, improving connections to public amenities and post care.

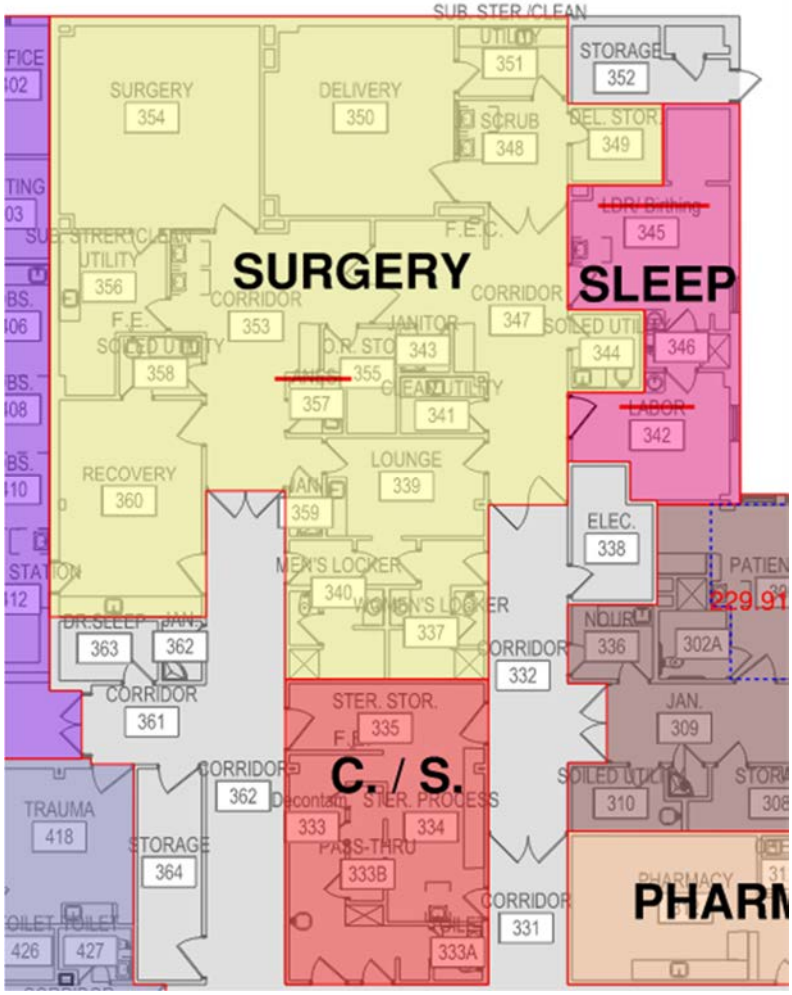

Figure 30 –Surgery Suite

MECHANICAL/ PLUMBING/ MEDICAL GAS/ FIRE PROTECTION

SUMMARY

The overall existing hospital appears to consist of the existing hospital, an addition consisting of a clinic, and an addition consisting of a physical therapy / indoor pool. There have been various upgrades and/or renovation projects over the years to the original hospital that could be observed. Due to the age of the hospital the scope of this assessment only considers the hospital proper, not the clinic or physical therapy / indoor pool additions.

FINDINGS

Existing HVAC Systems: The southern portion of the building is served by gas-fired package rooftop units (RTU). These units vary in their condition, primarily due to the age of the units. There is one RTU in the southwest corner of the roof that is mounted on an adapter curb with the supply and return air ductwork discharging vertically into the ceiling space below. The rest of the RTU's, on this portion of the building, have horizontal supply and return air outlets with the existing ductwork routed on the roof. The existing exterior ductwork is in poor condition. The example of deformed and damaged ductwork, shown below, is systemic for all exterior mounted ductwork.

Figure 19 - Example of RTU's with Exterior Routed Ductwork

Figure 20 - Example of Exterior Ductwork Degradation, visible portion

Figure 21 - Example of Exterior Ductwork Degradation, bottom view of ductwork

The existing exterior jacketed ductwork is damaged all over and in need of replacement. There are numerous portions of the exterior ductwork that are damaged with the upper part of the ductwork having been dented down, thus restricting the designed air flow by reducing the free area of the ductwork.

Figure 22 - Example of No Outside Air Intakes on RTU's

Another issue noted during the site survey was the lack of outside air intakes on the existing RTU's. Per ASHRAE Standard 62.1-2019 and International Mechanical Code 2021 (and previous iterations), there needs to be minimum outside air CFM per person for the various areas within the administration portion of the facility. There are numerous exhaust fans located on the roof; however, there is no discernable outside air system for introducing outside air to the RTU's.

There are numerous evaporation pans for the condensate drainage for the RTU's are in place around the roof. Standing water on the roof can cause troublesome issues; a condensate drainage system disposing the condensate through the existing sanitary sewer system or terminating the condensate at primary roof drains are better at maintaining a drier roof.

Figure 23 - Existing Condensate Evaporation Pans

The RTU’s serving the hospital areas do have outside air intakes on the units. The existing RTU’s configurations appear to meet the current Texas Department of State Health Services (TDSHS) requirements. The main issue observed concerning the hospital RTU’s is the placement of several plumbing vents. Per TDSHS code, no exhaust or plumbing vents shall be closer than 25’-0” from any outside air intake for a hospital (Texas Administrative Code Chapter 133.161.3.D.i.III). The code allows for plumbing vents to be no closer than 10’-0” away from the outside air intakes but must be a minimum of 5’-0” above the level of the outside air intake.

Figure 24 - Plumbing Vents Closer than 25'-0 to RTU

Figure 25 - Tape measure is 5'-0"

The air distribution systems throughout the hospital appear to meet the current TDSHS and ASHRAE standards for non-critical health care areas; however, the operating rooms do not meet the current design standards for Group E non-aspirating type air distribution. Operating rooms should have non-aspirating laminar flow covering the operating table and overlap by 12 inches. Given the sterile nature and the required cleaning practices of operating rooms, supply, return, and exhaust air grilles should be of stainless-steel construction. The existing grilles appear to be painted steel grilles due to the rust beginning to form at the edges of the grilles. A minimum air change rate of 20 to 25 air changes per hour along with a minimum of 4 outside air changes per hour should be confirmed for each operating room. The ability to maintain 30% to 60% relative humidity in the operating rooms should be confirmed to meet current TDSHS standards.

Figure 26 - Ceiling Supply in Operating Room, rust showing on the edges

Figure 39 - Low Return in Operating Room, rust showing on edges

The existing patient rooms are conditioned by package terminal air-conditioning units (PTAC). TDSHS requires minimum 2 outside air changes per hour with a minimum 6 air changes per hour; while some PTAC's are capable of these requirements, it is not apparent that the existing units are capable of the outside air requirements. The outside air needs to be supplied to the rooms through an air handling unit with two filter banks, a pre-filter of MERV 7 and a final filter of MERV 14. There is no apparent method of TDSHS required outside air supply to the patient wings.

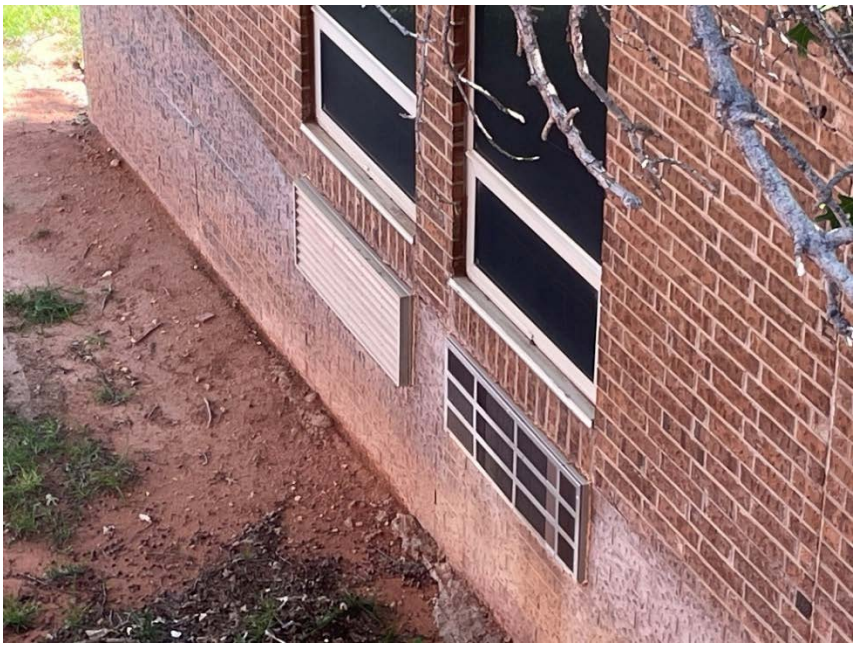

Figure 27 - Existing PTAC Units of Patient Rooms

The two existing goosenecks appear to be supplying exhaust air to areas below. Per TDSHS code, no “positive” pressured exhaust ductwork is allowed inside the hospital, in basic terms all exhaust fans shall be roof mounted in order to only have “negative” pressure exhaust duct inside the hospital. Further investigation would need to occur to decern the systems utilizing the goosenecks.

Figure 28 - Existing Goosenecks on Hospital Roof

There were multiple pieces of HVAC equipment that had hail damage. Vent and / or flue pipe terminations above the roof may not affect their systems effectiveness. Hail damage on RTU's condensing coils will affect the efficiency of the air conditioning units.

The refrigerant piping from the air-cooled condensing units to the RTU's for the hospital area were insulated for the most part; however, they are showing signs of wear due to exposure and there were gaps in the insulation. Proper refrigerant pipe insulation jackets should be installed to preserve the life of the refrigerant pipe and provide continued efficiencies.

Figure 42 - Existing Refrigerant Roof Piping Insulation

Figure 29 - Hail Damaged Flue Vent Termination

Figure 30 - Hail Damaged Exhaust Fan

Figure 45 - Hail Damaged RTU Condenser Coil Fins

Existing Heating Water System: The existing heating water boiler system is currently not functioning. The system has been shut down since a natural gas leak was detected. As of this building assessment, the boilers natural gas supply is slated to be fixed within the next few weeks, prior to the heating season occurring. The leaks were reported to be at the taps from the main natural gas pipe supplying each of the boilers. The heating water boiler system is manufactured by HydroTherm; possibly constructed and installed in 1987.

Figure 31 - Existing Natural-Gas Fired Heating Water Boilers

There is a small air compressor unit located in the basement that provides control-air to outdated thermostats that control heating only pieces of equipment. At the time of the assessment, the air compressor was not operational due to it not being needed based on seasonal temperatures. It was relayed that the system is activated once cooler weather dictates.

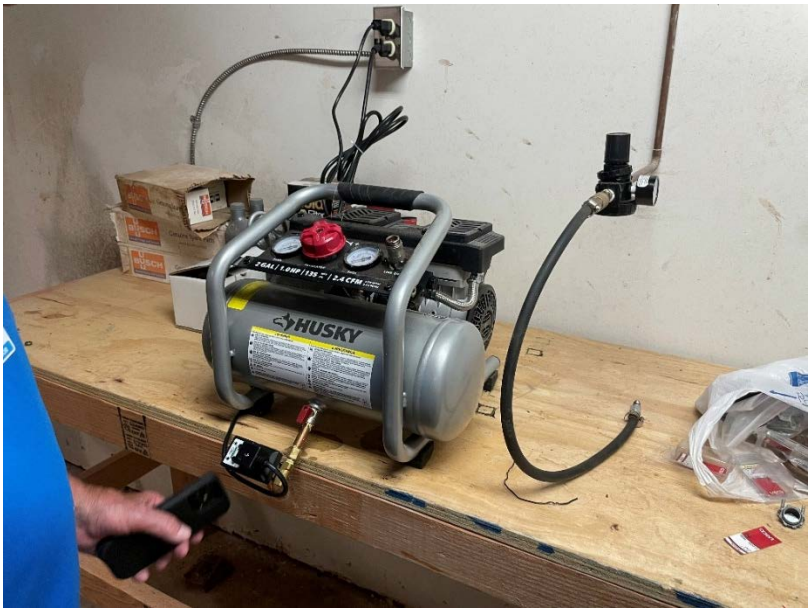

Figure 47 - Existing Heating System Control Air Compressor

Existing Domestic Water Heater System: The existing water heaters have current passing inspection stickers with the next inspection due July of 2026. The system consists of three natural gas-fired water heaters, 300,000 BTUH input and 72-gallon capacity each. The oldest water heater was manufactured in April of 2017 and the newest March of 2022. Each of the water heaters have recirculation pumps connected for constant domestic hot water circulation supply throughout the facility. There were no domestic water heater issues or shortfalls conveyed during the building assessment.

Figure 48 - Existing Domestic Water Heaters

Figure 49 - Existing Boiler and Domestic Water Heater Room

Existing Domestic Water System: There is one domestic water supply to the main hospital. Current TDSHS code requires there be two reduced pressure backflow preventers installed in parallel to maintain domestic water supply to the hospital. The main domestic water supply has a header system in the basement where there are isolation valves providing different sections of the hospital to be isolated for maintenance. There is a soft water system providing service to equipment in the hospital.

Required health care plumbing fixtures were observed in the facility, such as clinic sinks, scrub sinks, hand wash sinks, etc. There were no reported issues with the existing plumbing system other than standard issues for a system of the age of this facility.

Figure 50 - Existing Scrub Sink outside OR

Figure 32 - Existing Clinic Sink

Existing Roof Drainage System: The administration portion of the facility has a primary roof drain with scupper secondary/overflow system. The roof has multiple areas where there are sags, and the roof does not drain well to the primary roof drain for the area. This is evident in

various pictures of the ponding water, debris, and dirty darker discoloration all over the existing roof areas.

Figure 33 - Example of Roof Sag

Figure 34 - Example of Roof Sag, Debris, and Severe Ponding

The dirty darker areas are evidence of mud and dirt denoting the areas where previous standing water occurs. There were places around the roof where the surface was yielding under foot pressure, these areas should be researched further to avoid possible future roofing issues. It

was noted that there were multiple roof drains that did not have adequate slope provided to the roof drain fixture thus adding to the ponding issue throughout the roof areas. One notable area on the roof has severe ponding issues as shown in the following picture.

Figure 35 - Roof Area with Poor Drainage

There appears to only be one roof scupper providing roof drainage to the triangular area, given the roof sloping issues has caused an almost permanent ponding of water in this one area until natural evaporation has occurred. Standing stagnant water on a roof may cause issues not only to the roof, cause slippery conditions for maintenance personnel, but can also be a breeding ground for mosquitoes.

Existing Medical Gas System: The hospital oxygen supply is provided by a stand-alone bulk liquid system on the southwest side of the facility. It is located within a chain-link fenced area with a 12-oxygen cylinder emergency bottle backup header system.

Figure 36 - Bulk Oxygen Supply System

The medical vacuum pump system is operational having recently received a new vacuum pump. Currently the system is operating as a simplex unit; however, it was originally installed and operated as a duplex system. Should the vacuum pump become non-operational, the hospital would not have medical vacuum service to the hospital until a new vacuum pump could be installed. Per NFPA 99 and TDSHS, medical vacuum system shall be a minimum duplex system so in the event of a vacuum pump failure, the other vacuum pump can carry the required load, currently this is not the case. Proper venting of the medical vacuum pump system needs to be verified to meet current TDSHS and NFPA 99 standards.

Figure 37 - Existing Medical Vacuum System

The existing medical air compressor system appears to be in fair condition with the required filtration and air dryer accessories. It will need to be verified if the size meets the required TDSHS standards for medical air based on the size of the hospital's medical air requirements; however, this is doubtful. The air intake appears to be provided from within the space, which is not allowed by TDSHS requirements and should be addressed.

Figure 38 - Existing Medical Compressed Air System

The medical gas system throughout the hospital appear to meet the current TDSHS codes for zone valves and zone monitoring requirements. Each OR had its own zone valves and alarms and the OR's appeared to meet the minimum medical gas outlet requirements. The static pressures observed for the medical gases in the OR area were stable at the minimum required levels; however, there were no procedures occurring at the time of the site visit. The medical gas system is Chemetron. The OR's, ER rooms, and patient rooms appear to meet current minimum TDSHS standards for the number and type of medical gas outlets required. There are locations where proper or required access to zone valves and alarm panels are in question and should be addressed to allow for easier access.

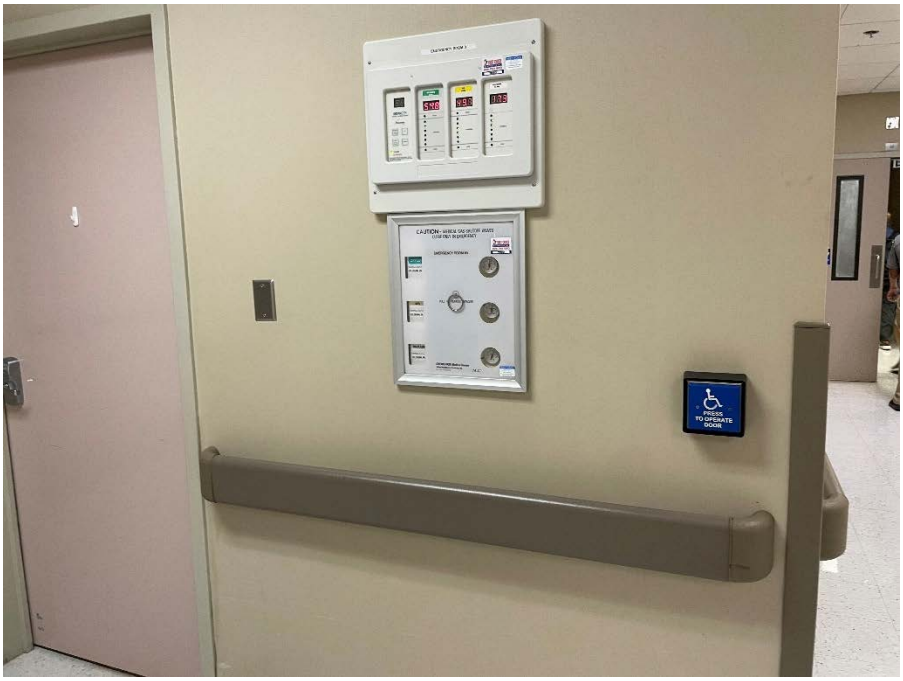

Figure 39 - Example of Medical Gas Zone Valve and Alarm Panels

Figure 40 - Example of Operation Room Medical Gas Alarm Panel

Figure 41 - Questionable Access to Medical Zone Valve Assemblies

Existing Fire Protection System: The existing fire sprinkler system is fed into the building in the basement where the fire riser and backflow preventer is located. No issues were reported with the existing system.

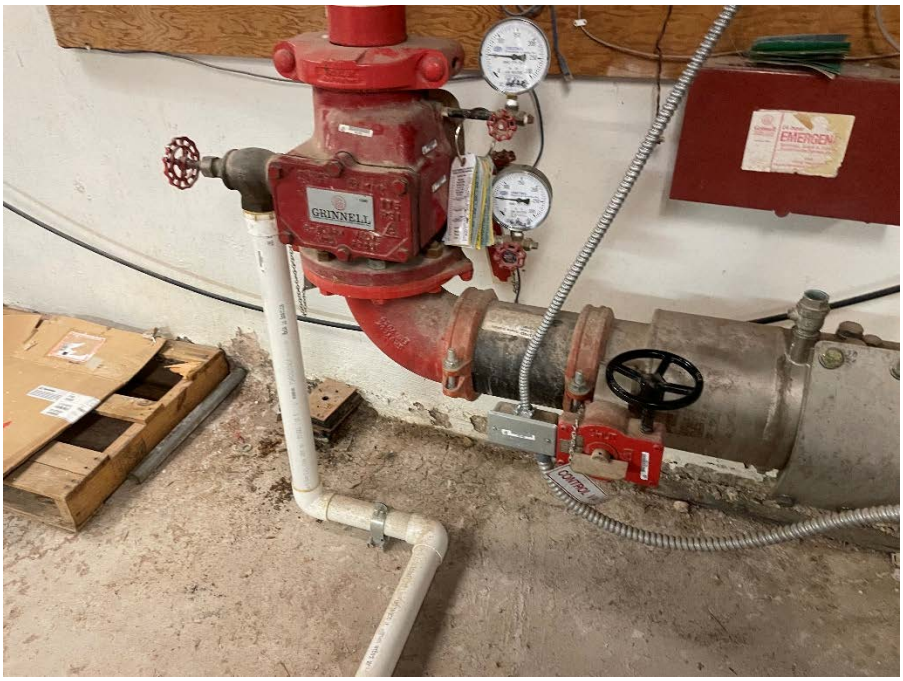

Figure 42 - Existing Fire Riser Valve and Backflow Preventer

RECOMMENDATIONS

Aside from the critical code issues stated above with regards to the violations of the NFPA 99, TDSHS Title 25 Texas Administrative Code, and International Mechanical Code, the hospital is in fair condition given the age of the building. Any upgrades or renovations to the hospital would need to address the numerous code issues stated. The current condition of the building does not appear to be from a lack of attention or due to careless maintenance; rather an indication of the facility's age.

ELECTRICAL SYSTEMS

SUMMARY

An electrical assessment was performed on the Yoakum County Hospital. Observations and statements listed in this assessment will indicate the electrical requirements listed in the current TDSHS Chapter 133 of the Hospital Licensing and the 1999 version of the National Electrical Code (NEC). The TDSHS has the 1999 version of the NEC adopted in Chapter 133.

FINDINGS

Electrical Service:

The hospital is currently served from a pad mount transformer located outside the building next to a parking lot. The electric utility primary feeder appears to be routed underground from a pole in an alley across Mustang Ave.

The existing electrical service appears to be in good condition.

Figure 43 – Pole Across the Mustang Ave.

Generator: A 120/208volt, three phase diesel generator is located adjacent to utility transformer. The generator currently provides emergency backup power to several loads in the hospital but does not backup the entire hospital. The generator appears to be in good condition. The generator consists of an integral 1200-amp main circuit breaker and a 1000-gallon base tank. There is an emergency shut-off push button mounted on the generator. Recommendations include to relocate this switch to the nearest adjacent wall for safety reasons.

Figure 63 – Generator and Utility Transformer

Switchgear and Panelboards: The main normal power switchboard, main emergency power switchboard, automatic transfer switches and most electrical panels are in the main electrical room, located in the basement. The main normal switchboard has a main disconnect, which features a pringle pressure contact switch. These pressure switches over years tend to become an issue to turn off and on. The main normal switchboard appears to have been installed over 40 years ago and appears to be in good to fair condition. This vintage of electrical equipment may be hard to find replacement parts, if any parts need to be replaced.

The main emergency power switchboard appears to be the same vintage as the main normal switchboard. The panels appear to be in good to fair condition. Replacement parts may be hard to find as well.

Automatic Transfer Switches: The main normal power switchboard, main emergency power switchboard, automatic transfer switches and most electrical panels are in the main electrical room, located in the basement. The main normal switchboard has a main disconnect, which features a pringle pressure contact switch. These pressure switches over years tend to become an issue to turn off and on. The main normal switchboard appears to have been installed over

40 years ago and appears to be in good to fair condition. This vintage of electrical equipment may be hard to find replacement parts, if any parts need to be replaced.

The main emergency power switchboard appears to be the same vintage as the main normal switchboard. The panels appears to be in good to fair condition. Replacement parts may be hard to find as well.

Figure 44 – Generator and Utility Transformer

Branch Panels: A majority of the electrical branch panels appear to be the same vintage as the main switchboards. The existing panels are in fair condition but may be close to the end of their life expectancy. In addition, several of the electrical panels are full and do not have any spare circuit breakers for new electrical loads.

Figure 45 – Main Transfer Switch Blocked by Column

Most panels appear to have the required working space clearances except for the equipment branch automatic transfer switch. The door is unable to be fully opened and is blocked by a column. Personnel are unable to properly work in the inside of this equipment and makes for unsafe working conditions. Recommendations include relocating this transfer switch to a location that has the proper working space clearance.

Figure 46 – Panel PB

The electrical rooms on the first floor have panels that appear to be in good condition except for panel PB. Panel PB has exposed components that need to be provided with proper cover plates. Branch panels in these electrical rooms appear to be interconnected with a shared grounding conductor share, per NFPA 70. Most of the panels have conduits that enter/exit the top side of the panel and are then routed to an exposed portion of the acoustic ceiling. The gaps appeared to have firestop pillows stuffed within without any way to secure them. Some of the pillows had fallen on top of the electrical panels. Both 1st floor electrical rooms observed had critical equipment and normal branch panels that were nearly full, with limited spare circuit breakers. Observations included equipment that appeared to be connected to the wrong emergency system (i.e. some of the circuits on the critical panels, when they should be on the equipment branch panels).

Isolation power panels were observed outside of the operating rooms. The isolation power panels appeared to be in good condition.

Fire Alarm: There is currently a fire alarm system located in the hospital. A Notifier NFS-320 is located at the south main entrance area. No issues were reported with the fire alarm system.

Figure 47 – Fire Alarm Panel

Lighting: The majority of the hospital appeared to have interior light fixtures that were in good condition. Exterior lighting appeared to be in good condition and seemed to be LED. No remediation is necessary currently.

Figure 68 – Exterior Lighting

Roof: There are electrical feeders routed above the roof connecting various electrical rooms/panels. Portions of the feeder conduits appeared to have rust and corrosion. Recommendations include replacing these conduits prior to exposed wiring being an issue. Observations also include a receptacle located on the roof that did not have a cover plate. Recommendations include providing cover plates and weatherproof while-in-use covers on all

exterior receptacles. The mechanical equipment disconnects appear to be in good condition but do show some signs of aging.

Figure 69 – Roof Conduit

Figure 48 – Electrical Box Missing Cover

Patient Bed Locations: The quantity of receptacles per patient beds do not appear to meet TDSHS and NFPA 70 requirements. There are also quadraplex receptacles installed, which are not allowed per TDSHS. If any renovations are done to the patient rooms, these items will need to be corrected.

FINDINGS SUMMARY AND RECOMMENDATIONS

Considering the age of the facility, the hospital has been well maintained and functions adequately. Staff have adjusted the way they operate to compensate for the inadequate space, layout, and general operating flow of the hospital. With that being said, the hospital has numerous shortcomings and doesn't meet the minimum requirements or current codes and regulations. This fact makes the idea of renovation a difficult prospect because modifying a department would require bringing the entire suite up to current TDSHS requirements. In most instances, the existing departments are not large enough to meet the requirements that would be required to be met. Not only this, but the disruption to the hospital's operations while major renovations were ongoing would be difficult.

Expansion proves to have its own issue because the hospital is virtually landlocked. The location of the clinic, which is the newest building, hems in the hospital in the only realistic direction of expansion. Any additions to the hospital would likely necessitate the demolition of the clinic to allow for hospital expansion. The possibility of renovating the clinic into hospital space exists, however the clinic building would have to be studied to ascertain whether it meets them more stringent hospital construction requirements.

A replacement hospital on the current hospital project would be the best option, but comes with a greater price tag that the county would have to navigate.

Renovation /Addition Option

To stay in the existing hospital, there would need to be an addition to free space for departments to expand. Most notable, Emergency, Surgery, and Lab need additional square footage. The only feasible place to expand is to the east, where the clinic currently sits. This would necessitate demolishing the clinic to accommodate a contiguous addition. There is a possibility that the clinic could be renovated to become hospital space, but the construction type requirements for hospitals are more stringent than for clinics. A study of the current clinic would need to take place to ascertain the feasibility of repurposing the space. Regardless of the feasibility, a replacement clinic would need to be built. The image below shows what a possible addition and renovation could look like. It shows moving Surgery and Labor and Delivery into a new building on the east side of the hospital. This frees up room for Emergency and Lab to expand with Imaging moving into the space that is currently occupied by surgery. This also frees up space for other support spaces. A high-level Opinion of Probable Cost (OPC) is provided.

There are several downsides to this option. The first is the separation of surgery and L&D from the other services. Patient transport between these services would have to traverse through the patient wing which could mean that an emergency patient might have to be transported down the main public corridor to surgery. Or a surgery patient might have to travel to imaging. This is far from desirable. The second downside is the age of the building and its utilities. Existing septic sewer issues would still be present. A wholesale system replacement would be costly and so disruptive as to be almost unfeasible, meaning issues would persist.

While this option does appeal because of reuse of existing space, it is far from an ideal choice. To bring the areas up to standards and build an addition would come with a high price tag and would leave the hospital still be dealing with many of the same issues as before.

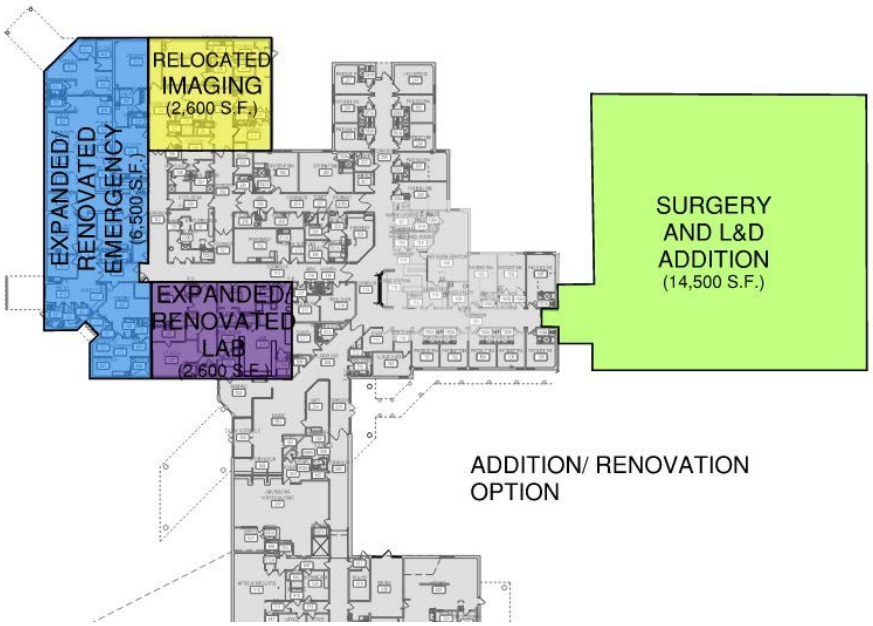

Figure 49 – Renovation/Addition Option

ADDITION AND RENOVATION OPINION OF PROBABLE COST

DEMOLISHING EXISTING CLINIC

			Low	High	Low Cost	High Cost
New Clinic	15500	sf	$500	$600	$7,750,000	$9,300,000
Surgery/ L&D Addition	14500	sf	$725	$800	$10,512,500	$11,600,000
ED/Lab/Imaging Reno	11700	sf	$425	$500	$4,972,500	$5,850,000
Miscellaneous Reno	10000	sf	$200	$250	$2,000,000	$2,500,000
Total Construction Cost					**$25,235,000**	**$29,250,000**

Soft Cost	10%				$2,523,500	$2,925,000
FFE	15%				$3,785,250	$4,387,500
Contingency	10%				$3,154,375	$3,656,250
Total Project					**$34,698,125**	**$40,218,750**

ADDITION AND RENOVATION OPINION OF PROBABLE COST

RENOVATING EXISTING CLINIC

			Low	High	Low Cost	High Cost
New Clinic	15500	sf	$500	$600	$7,750,000	$9,300,000
Surgery/ L&D Renovation	15560	sf	$425	$500	$6,613,000	$7,780,000
ED/Lab/Imaging Reno	11700	sf	$425	$500	$4,972,500	$5,850,000
Miscellaneous Reno	10000	sf	$200	$250	$2,000,000	$2,500,000
Total Construction Cost					**$21,335,500**	**$25,430,000**

Soft Cost	10%				$2,133,550	$2,543,000
FFE	15%				$3,200,325	$3,814,500
Contingency	10%				$2,666,938	$3,178,750
Total Project					**$29,336,313**	**$34,966,250**

Note that the above design and costing model are based on our experience and estimate of square footage. A detailed design process with hospital staff would need to be done to come up with actual space needs and costing.

Replacement Hospital Option

While the costliest, a replacement hospital would be the preferred option. It would move all hospital functions to a new building that would meet all regulatory requirements and hospital best practices, while also having all new utilities. The existing Clinic and Wellness Center could remain. This could be done by building the new hospital on the far east of the property, meaning the existing hospital could operate with no disruption during construction. This option would require the hospital to acquire the parking lot on the southeast side of the property. This would also allow for the area where the existing hospital sits on Mustang to be redeveloped and even sold off if desired. The option below shows a two story 55,000 square foot hospital.

Figure 72 – Replacement Hospital Option

REPLACEMENT HOSPTIAL OPINION OF PROBABLE COST

			Low	High	Low Cost	High Cost
Replacement Hospital	55000	sf	$725	$800	$39,875,000	$44,000,000
Total Construction Cost					**$39,875,000**	**$44,000,000**

Soft Cost	10%				$3,987,500	$4,400,000
FFE	15%				$5,981,250	$6,600,000
Contingency	10%				$4,984,375	$5,500,000
Total Project					**$54,828,125**	**$60,500,000**

Note that the above design and costing model are based on our experience and estimate of square footage. A detailed design process with hospital staff would need to be done to come up with actual space needs and costing.

Minor Renovation and Maintenance Option

The third option is to remain in the current space and continue the minor finish upgrades that are being done currently, while also doing some utility upgrades and maintenance to some of the items mentioned in this report.

One item the hospital might consider is to have a retro-commissioning (RCx) survey done. Retro commissioning is the process of systematically inspecting and optimizing an existing building's systems and equipment to ensure they operate efficiently and effectively according to current operational needs.

This option would likely prevent the hospital from doing renovations that would trigger meeting TDSHS requirements. The hospital could continue to operate in its current state, however, this is not a long-term solution.

The cost of this option would vary depending on what actions the hospital chooses to take and would have a higher maintenance cost associated.

APPENDIX A

STANDARDS AND CODE REFERENCES

- The Americans with Disabilities Act (ADA), 2025
- ASHRAE – Ventilation of Health Care Facilities Standard 170 – 2021.
- Texas Department of State Health Services (TDSHS), Title 25 Texas Administrative Code, Chapter 133 – Hospital Licensing Rules.
- National Electrical Code (NEC), 1999
- NFPA 13 - Standard for the Installation of Sprinkler Systems, 2019
- NFPA 99 – Health Care Facilities Code, 2018
- International Mechanical Code, 2021
- International Plumbing Code, 2021
- International Fire Code, 2021
- Texas Accessibility Standards (TAS), 2012