Advanced Medical Imaging Re-Design

An Honors Thesis (HONRS 499) by:

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Abstract

The creative project I chose to complete for my Honors thesis aligns with the requirements for an Interior Design senior project, which it also served as. The purpose of the senior project is to represent what has been learned through the four-year program in Interior Design that Ball State offers. From programming to construction documents, the project I have completed is very similar to one which might be completed by an interior designer working in the professional world.

The following contents detail the design process through the two semesters of work on my chosen project. The beginning of the packet contains a lengthy introductory paper. The paper is a full explanation of how this particular project came about, what the requirements were for the project, and the different phases my creative process took. The paper details my concept for the project as well as goals and issues to avoid.

The first pages included after the introductory paper are printouts of a schematic presentation which include initial layout ideas. The second set of printouts is of a midterm presentation with mostly complete plans and the beginnings of my finishes, furniture and lighting choices. There is also a programming manual, a second part of the midterm requirements. The rest of the included documents are the final requirements for my senior project. These include presentation boards, which feature inspiration, a design summary, floor plan, and perspective drawings. Then there are construction documents detailing the demolition and new construction, ceiling, lighting, finishes, furniture, and
floor pattern plans as well as details and elevations. Lastly, I have included manuals for finishes, furniture, and lighting as well as several schedules and three specification sections for various finishes.

The finished product is a good representation of Interior Design for people unknowledgeable of the Interior Design profession. Without going into too much detail, one can see the variety of required processes from initial planning to prepare the project for construction.

Introduction

Upon entering my senior year, I was required to find an existing facility on which to base my final studio project. The requirements were that the building had to be a minimum of 5,000 square feet and of commercial use. The first portion of the project was completed in Programming (FCSMR 390), in Fall 2007. For this class we completed initial programming to find out client’s needs and wants and analyzed issues with the building in order to determine how to improve the current facility. Then, in Spring 2008, we entered into the schematics and final construction phase of the project, Studio 6 (FCSMR 484). Here we used what was learned in Programming to determine the best solutions and then narrow that down to one design, for which we completed construction documents.

The facility I chose to complete my project is Advanced Medical Imaging in Kokomo, Indiana. The facility is a medical office building run by two radiologists who work in conjunction with a staff of administrative assistants, a business manager, and technicians who complete patient exams using X-Ray, mammography, bone density,
nuclear medicine, CT, MRI, P.E.T., and ultrasound technology. Advanced Medical Imaging houses state-of-the-art imaging equipment to provide the best results and care for its patients. The facility has been in business and serving the community of Kokomo since 2003. Advanced Medical Imaging is located in an area of the city where there are other small medical facilities such as dental offices, OBGYN, and family practice offices. There are also other imaging centers located nearby in competition with AMI. While AMI uses advanced technology and is housed in a fairly new building, the facility has some issues. If these issues affected Advanced Medical Imaging’s facility were to be resolved and better functionality implemented, it would improve employees’ and patients’ experience, which could improve AMI’s livelihood.

My first visit to the facility was in August of 2007, just a week after the semester began. I spent several hours at the facility, speaking to everyone present that day about concerns they had and ideas for improvement. They all expressed some concerns with the building that interfere with or affect their daily work. I also spoke with the business manager, who was my main contact during the project.

**Programming**

Through the semester of programming, a series of assignments were completed in order to gain a full understanding of problems and the ways in which the users of the building function. Some of the assignments completed were developing design issues, client needs, an information index, a criteria matrix, and design benchmarks. These involved revisiting the facility, visiting other facilities to compare and contrast, going over client concerns, researching trends, and much more.
**Design Issues** (Developed as part of Programming)

I developed a list of design issues to address. These are mostly based on concerns expressed to me by the staff of Advanced Medical Imaging.

1. Storage- The current facility lacks storage in several areas of the building. The reception and open office area could really benefit from an addition to upper storage cabinets. These would be visible from the lobby and would hide the clutter that currently sits on top of the base cabinets. The CT/MRI and Mammography/Bone Density control rooms lack storage as well in the form of upper and lower cabinets. Again, more storage eliminates unsightliness of clutter and makes staff feel as through they are in a more pleasant environment. Storage for patients is limited as well in the dressing rooms. The storage drawers are not deep enough to store clothing. Their comfort and feeling of security is very important in a place where they may feel vulnerable.

2. Privacy- Privacy is very much a concern in the existing facility. The reception office needs to be less audible from the lobby for staff privacy. Areas of the reception office that are used by staff are open to patients' view, which isn’t necessary or wanted. There are currently two workstation areas further down from the reception desk that are totally open to the lobby above counter height. If these were closed and staff had more privacy, they could be more comfortable and efficient in their work. The workstations central to the open office lack privacy as well, which again, can make staff feel uncomfortable.
3. Audibility-Because the current lobby and reception are very open, noise travels easily from one place to another. This is an overall issue in the building. In the same area that the office lacks privacy from the lobby where workstations are open above counter height, noise is able to travel to and from the lobby and reception.

4. Circulation- Circulation needs to be improved in order to increase patient and staff satisfaction with the facility overall. In order to maximize existing amenities, the unused transaction spaces should be closed off and made into staff workstations. The existing dressing rooms are closed off by accordion doors. These are a problem in that they do not give patients enough privacy and the option to lock the door when dressing. Also, they are difficult to get out of as there aren’t door handles on the inside of the rooms. These have been removed with the new plans for the imaging center. In addition, one of the door frames in the building has been damaged because the door frame across the corridor from it is too narrow to move cots in and out of and the corridor is too narrow. In the new plan, doorway clearances and corridor widths are an important consideration to ensure staff and patients can easily enter and exit rooms.

5. Comfort- Comfort is a key issue and an important factor to any facility providing a service such as Advanced Medical Imaging does. The furniture in the lobby looks as though it may be sufficiently comfortable. However, they aren’t appropriate for commercial healthcare use because they do not provide enough support for physically weak or elderly people and are difficult to get up from. More appropriate and supportive seating is a necessity.
6. Durability-The finishes in the current facility have not held up as long as they should have and need to be replaced. Since I am re-designing the entire facility, the current conditions of some of the finishes are a good example for me of what not to specify and have directed me toward looking at other options. The carpeting in the reception office show wear and stains and are unsightly. The vinyl composition tile used in the exam rooms and corridors is beginning to split apart because of the heavy equipment moved around the facility.

7. Visibility- Natural and artificial lighting are both an issue in the existing space. The lighting conditions in these two rooms can be bothersome to patients and staff on very bright days. The fluctuation of lighting during the day can also be bothersome, particularly to staff. Relocation of affected rooms is a consideration as well as a professional blind/louver system to control natural daylight. Artificial lighting, too, is an issue in some exam rooms where light shines directly in patients’ eyes, such as in the MRI room. This problem will be taken into consideration when working on the lighting plan.

Though there are more issues than these seven, these are the main issues that I have researched for ways to improve and have taken most into consideration when during the re-design in schematics and in the final design.
Concept and Goals

Concept: The re-design of Advanced Medical Imaging, based on the idea of a day spa, will create an environment that meets patients’ comfort and medical needs. In addition, it will provide a comfortable work environment for staff. The new design will promote efficient exams and a pleasant experience for patients. It will provide a sense of pride in work for staff and will offer personalized care in visits for patients.

Tangible Goals:
- Barrier between lobby and reception
- Adequate storage throughout facility
- ADA accessibility throughout space
- Adequately equipped rooms (especially in conference and break rooms)
- Proper sizes and space in all exam rooms
- Supportive furniture in facility
- Appropriate natural and artificial lighting
- Updated finishes
- Design that allows for state-of-the-art technology
- Design that allows for quick and accurate patient visits

Intangible Goals:
- More welcoming environment for patients
- Atmosphere that is relaxing and provides peace of mind
- Design that supports a strong reputation among local doctors and hospitals
- An environment that fosters open communication among staff
- An enjoyable and comfortable work environment
- A feeling of privacy for patients when in facility
- Design that takes into consideration employees’ needs and motivates their work
- An environment that makes patients feel they are treated especially for their needs
- An environment that fosters open communication between patients and staff while maintaining confidentiality
- Appropriate balance of medicinal and therapeutic in the environment

Schematics

Upon entering the second and final semester, we were asked to research benchmark projects—those that were an inspiration to our own projects with elements
that could be implemented. In addition we were to find design trends particular to our area of design. Some benchmark projects or medical office buildings I found include the TMC Advanced Imaging in Goodyear Arizona, designed by the Stein-Cox Group. This imaging center features warm and inviting finishes, privacy to the reception office, lighting fixtures and wood touches, all of which I like. The MemorialCare Breast Center in Anaheim, California, designed by Taylor & Associates Architects features a contemporary but relaxed environment, well-equipped dressing rooms, a mixture of curvilinear and angular features, and use of metal and glass, which I like as well. The last benchmark of an existing facility I found I appreciated was the Resurrection Medical Center in Chicago, designed by Loeb Schlossman & Hackl. This facility features warm lighting, curvilinear features, and an impressive reception desk.

The other main portion of my research was on trends in the healthcare industry. One really helpful article I found and read was *The Role of the Physical Environment and Social Environment in Promoting Health, Safety, and Effectiveness in the Healthcare Workplace*, by the Center for Health Design:

- It is important for family to be accommodated and incorporated into a patient’s care.
- Healthcare work is more effective when practitioners work in well-developed teams and interdependently of patients a family.
- It has also been found that healthcare has moved from treating patients physically to more holistic treatment—emotionally and spiritually also
- Physical environment affects health and safety of healthcare employees
• Back pain is common among healthcare workers, ergonomics is important to their jobs—softer floors, evaluation of workspaces needed

• Office areas for interactive work are important, staff lounges, neutral zones as well as dedicated spaces

• Inadequate lighting and chaotic work environments increase the likelihood of error

• Similarly equipped rooms help people avoid confusion

From the article *The Marriage of Form and Function: Creating a Healing Environment* by KI, I found the following trends:

• A healing environment is not only one that takes care of the patient but the family of the patient and the caregivers or healthcare workers

• Bring the outside in

• Lounge area for staff to relax in

• Concealed storage

• Finishes and furnishings that give a home-like feel

One other thing we were asked to consider during schematics was finding an item or concept of inspiration that we could base our design on in order to make it stronger.

Because several of the trends of the healthcare industry that I found relate to comfort and healing environments, I decided I would implement a day spa theme in my design. I decided I would create an environment pleasing and comfortable to staff and patients through what I found about spa design. The finishes too would reflect the color schemes of many day spas—soothing greens, yellows, and blues and a mix of materials such as
wood, glass, and metal. This theme benefits the new design because it will provide a healing, restorative environment and it will improve patients’ feelings toward medical facilities. Most patients, whether visiting any kind of medical or dental office, feel some apprehension about their visit. The calming finishes and relaxing environment will make people more comfortable and give them a different attitude toward medial appointments.

**Construction Documents**

After midterm reviews and any last changes had been made to the final plans, I was ready to begin the construction document phase. The final documents due for the project were a set of construction documents 18”x24” at least twenty pages long, two presentation boards 24”x36” and manuals for lighting, furniture and finishes, as well as schedules and specifications for three different finishes.

My construction document list is as follows:

- A1 Coversheet
- A2 Existing Floor Plan
- A3 Demolition Floor Plan
- A4.1 Construction Floor Plan
- A4.2 Construction Enlarged Plans
- A5.1 Interior Elevations
- A5.2 Interior Elevations
- A5.3 Interior Elevations
- A5.4 Interior Elevations and Sections
- A6.1 Interior Sections
Conclusion

With this project being the most complete project I have completed in my education at Ball State University, I have learned a lot and have improved my abilities. I have been able to apply what I’ve learned in different classes throughout the last four years. The two semesters dedicated to this project have also helped ensure time to complete the start-to-finish process. I am glad that plenty of time was allotted for programming. Through meeting with my clients and completing assignments in FCSMR 390 and additional programming in FCSMR 484, I was given ample time to decide what needs to be changed from the current design and develop ideas for improvement.
Developing goals and a concept statement helped me decide what was most important in my design. A schematics phase with several reviews with my professor helped me draft a few floor plans and narrow down the best option. The construction document phase was intensive, but is very important because it illustrates the complexity of the project and how it is to be completed. Overall, even though I have had experience in most design phases that were completed in this project, I still learned quite a lot. This project has shown itself to be a culmination of my skills and talents as an interior designer and has definitely prepared me for the professional world.
Introduction to the project...

Client:
--main client: office manager, female, early 30s,
--other clients: all employees, male and female, young adult to middle-aged
--patients: all ages, male and female, mainly middle-aged to elderly

Mission:
My mission for this project is to serve my client by providing her and her employees with the needs and wants they have for improving the facility in a well-organized and well-thought out design. Through addressing all issues concerning employees and patients of the space, I intend to provide a more sound and efficient facility. I will effectively address the issues I have found through researching the best solutions and will implement them in a well-planned design. Addressing and achieving the goals I have set will provide employees and patients with satisfaction in knowing their needs have been met.
Goals for the re-design . . .

After reviewing my initial program for the project, I have made a list of goals based on client needs for improvement:

--More of a barrier between lobby and reception
--Outlets on all walls
--Storage in exam rooms
--All patient restrooms need to be uniform and accessible
--Exam rooms and prep room doorways need to be wide enough for equipment
--Proper doors on dressing rooms
--Ultrasound room needs to be larger than existing
--Better equipped conference room: mini fridge, projection screen, countertop

• Proper storage in this room
• Storage on back wall
• Reception/office area needs privacy
• Accordion doors need to be replaced
• Needs to be ADA accessible!
• Better-equipped conference room
Goals for the re-design . . .

Continued:

-- Appliances needed in kitchen, larger table to seat many
-- Break Room/Kitchen further from patient care
-- Sliding doors in lobby entrance
-- Better storage in dressing rooms
-- More supportive furniture in lobby
-- Privacy panels in office workstations
-- Quiet room away from utilities
-- Counterspace in laundry room
-- Update finishes in corridor, reception, various exam rooms
-- Shading from sunlight in front of building

*Improved storage in dressing rooms*

*More amenities in kitchen*

*Furniture needs to be improved*

*Privacy at these workstations is needed*

*Updated flooring in corridors*
Inspiration...

- Warm tones in corridors
- Pleasant lighting
- Avenon Collection
  Studio Q

- Attractive storage
- Exam room with uniform storage
- Steelcase Nurture ideas

- Johnsonite IQ flooring
- Steelcase Nurture ideas
- Ampie storage in exam room

Miscellaneous:
- Centrality
- Uniformity
- Warmth
- Comfort
- Support
- Durability

Health Design Article

Alexa Collection
Studio Q
Schematic Ideas and Layouts...

Ideas:
-- Centrally located reception accessible to patient and employee areas
-- Common office areas together
-- Exam rooms near each other

Final Schematic Layout
DESIGN CONCEPTUALIZATION

Concept Statement:
The re-design of Advanced Medical Imaging, based on the idea of a day spa, will create an environment that meets patients' comfort and medical needs. In addition, it will provide a comfortable work environment for staff. The new design will promote efficient exams and a pleasant experience for patients. It will provide a sense of pride in work for staff and will offer personalized care in visits for patients.

Tangible Goals:
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- An enjoyable and comfortable work environment
- A feeling of privacy for patients when in facility
- Design that takes into consideration employees' needs and motivates their work
- An environment that makes patients feel they are treated especially for their needs
- An environment that fosters open communication between patients and staff while maintaining confidentiality
- Appropriate balance of medicinal and therapeutic in the environment

Demographic:
- Staff: 30's to 50's, college education
- Patients: any person needing a medical imaging, men and women, all ages, mainly middle-aged to elderly

Key words:
- Relaxation
- Comfort
- Therapeutic

- Durability
- Specialization
- Functional
- Accessible
FLOOR PLANS

EXISTING FLOOR PLAN
SCALE: 1/16" = 1'-0"

DEMOlITION PLAN NOTES
1. REMOVE NON-STRUCTURAL WALL
2. REMOVE EXISTING TOILET ANSI PANELS AND TRAPS
3. EXISTING FIXTURES AND METAL TRIM TO BE REMOVED
4. REMOVE EXISTING MACHINERY AND SHELVES

ALL INTERIOR WALLS, DOORS, PANELS AND WINDOWS ARE TO BE SAVED. SASH, FIXTURES AND SPECIAL EQUIPMENTS ARE TO BE REMOVED BUT SAVED FOR FUTURE USE.

DEMOlITION PLAN
SCALE: 1/16" = 1'-0"
ELEVATIONS AND SECTION

KITCHEN/BREAK ROOM ELEVATION
SCALE: 1/4" = 1'-0"

RECEPTION DESK ELEVATION
SCALE: 1/4" = 1'-0"

WEST WALL SECTION CUT VIEW
SCALE: 3/16" = 1'-0"
(CUT PLANE SHOWN IN NEW FLOOR PLAN)
SPECIAL FINISHES

- Formica Venetian Gold Granite laminate
- Chemetal Bounce laminate
- Chemetal Franklin laminate
- Formica Creme Quarstone laminate
- Bigelow Picadilly

Sherwin Williams
- Majolica Green
- Moderne White
- Ramie

Johnsonite Visualizer:
- Benjamin Moore Cascade Mountains paint
- Johnsonite Wallbase Inflection Profile in Snow White
- Johnsonite Optima Homogenous Carmel Infusion flooring

Armstrong Connection Corlon Light Gold vinyl

Armstrong Optima grid ceilings
Advanced Medical Imaging: Project Program

Lee A. Miller   FCSMR 484   Sect. 3   Program Addendum
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Project Summary

BASIC HISTORY:

Advanced Medical Imaging is a medical facility in Kokomo, Indiana, specializing in medical imaging. Two radiologists who work in conjunction with local doctors, referring patients, run the facility. Advanced Medical Imaging houses state-of-the-art imaging equipment to provide the best results and care for its patients. The facility has been in business and serving the community of Kokomo since 2003. Advanced Medical Imaging is located in an area of the city where there are other small medical facilities such as dental offices, OBGYN, and family practice offices. There are also other imaging centers located nearby in competition with AMI. While AMI uses advanced technology, and is housed in a fairly new building, the facility has some issues. If these issues affecting Advanced Medical Imaging’s facility were to be resolved and better functionality implemented, it would improve the employees’ and patients’ experience, which could improve AMI’s livelihood.

SCOPE OF THE PROJECT:

A few months ago, I visited the facility during business hours and spoke with several employees.
They all expressed some concerns with the building that interfere with or affect their daily work. I also spoke with the manager, who is my main contact during the project.

In general, storage is a great need throughout the building. Other changes my clients would like to see include a better noise barrier between the lobby and reception area, optimizing space in reception to allow for more workspace, more outlets for equipment, moving some rooms for better utilization, widening doorways, improving patient dressing rooms, changing the lighting plan in some places, providing a blind system in several rooms, more supportive patient seating, more seating in back hallway, adding appliances to the kitchen, maximize seating in kitchen, and making some spaces into places for storage. In several parts of the building, rooms need to be re-designed to fill the needs of that particular area. For example, there is a mammography waiting room that is rarely used. The clients would like to see this room turned into a restroom for patient use. There are also some issues with the finishes. Some are not durable enough and need replaced; some are just unattractive.
Project Summary

Throughout the programming phase during FCSMR 390, until this semester, I had intended to maintain the original facility layout and just make minor spatial changes with my re-design. However, I have now decided to re-design the entire floorplan, starting with a clean slate and designing the imaging center as if it were new construction. Through this approach I will be able to show more creativity while still keeping in mind the clients' needs in order to design a fully functional facility. I have re-allocated space for all components of the imaging center including the reception and waiting area, exam rooms, offices, utilities, restrooms, etc. I will provide a demolition plan for the existing building, a new floor plan, ceiling plan, furniture layout, lighting layout, and finishes for the entire facility. The facility is all on one level within a square-like structure and is about 10,000 square feet. For the re-design I will be keeping in mind the interior aesthetics and atmosphere of spas. Because medical visits are often dreaded and patients may feel uncomfortable in medical environments, I have been inspired to create a new environment. The re-design I am working on is one that will be relaxing and soothing to patients and comfortably functional for staff. In this way it will reflect a spa atmosphere but will also be a professional and clean environment.
Design Issues

Issue: Storage (Convenience)
The current facility lacks storage in several areas of the building, as shown in photos below. The effects on each area are listed below the photos.

This area of the reception office could really benefit from upper cabinet storage because it is visible from the lobby.

The current storage situation in this control room prevents staff from having a more professional-looking work area and increases the likelihood of clutter. Proper storage would make for a more pleasant and organized workspace.

The control room between which staff moves from mammography to bone density lacks lower cabinet storage. Having storage for a printer and computer tower would alleviate the unsightliness of cords and be beneficial if storage were needed for other reasons too.

The storage found in this dressing room, identical to the other three is impractical because patients do not have sufficient space to store items such as outerwear.
Issue: Privacy
Privacy is very much a concern in the existing facility. The reception office needs to be less audible from the lobby for staff privacy. Areas of the reception office that are used by staff are open to patients' view, which isn't necessary. The effects on each area are listed below the photographs.

The right side of what's shown in this photograph was meant to be an additional transaction counter to assist patients at, however, it is not used for this purpose. Instead it is used for staff work and needs to be closed off from the lobby to ensure more comfort and productivity.

As apparent in this photograph, the patients in the lobby awaiting their visits have a clear view of what's going on in areas of the reception office. This can make staff feel insecure in their work and needs to be changed.

These central workstations are situated in the middle of the reception office. This placement can make staff working at these desks feel insecure and vulnerable, so it is important to give them privacy in their work.
Design Issues

Issue: Audibility (Noise traveling)
Because the current lobby and reception area are very open, noise travels easily from one place to another. This is an overall issue in the building and is detailed more specifically in the below photographs.

The break room shown in this photograph is located too close to patient care rooms, which is an issue that has been expressed by staff of the facility. The current location of the break room is a contributor to disturbing levels of noise heard in exam rooms from time to time.

It is easy to see in this photograph how open the reception transaction counters are to the lobby. Unlike some offices where there is a window into the lobby, this countertop is totally open up to the ceiling and creates an easy way for sound to travel from the lobby to the reception office.

This photograph, taken from the lobby, is evidence of how well patients can see the reception office, and again, evidence of how easily sound can travel from the lobby to the reception office.
Issue: Circulation
Circulation needs to be improved in order to increase patient and staff satisfaction with the facility overall. The below photographs are examples of spaces where the circulation could stand improvement.

In order to maximize existing amenities, the unused transaction spaces should be closed off and made into staff workstations. However, now that the plan is being totally redone, this unused spaces will not exist, but I will keep in mind maximizing space within the reception office.

The damage done to the door frame in this photo is because of a doorway across from this one that is too narrow and causes difficulty moving cots in and out of the room. In the new plan, doorway clearances are an important consideration to ensure staff and patients can easily enter and exit rooms.

The existing dressing rooms are closed off by accordion doors. These are a problem in that they do not give patients enough privacy and the option to lock the door when dressing. Also, they are difficult to get out of as there aren't door handles on the inside of the rooms. These have been removed from the new plans for the imaging center.
Design Issues

Issue: Comfort
Comfort is a key issue and important factor to any facility providing a service such as Advanced Medical Imaging. The below photographs detail how comfort is an issue in the existing environment.

The dressing rooms patients are provided are inadequate in many ways. The unusually low bench and narrow room may make patients feel uncomfortable and may be difficult to use. It is important to me to provide better changing facilities in the new plan.

The furniture shown in the above and below photos look as though they may be sufficiently comfortable. However, these aren't appropriate for commercial healthcare use because they do not provide enough support for physically weak or elderly people and are difficult to get up from.
Issue 1: Durability
The finishes in the current facility have not held up as long as they should have and would need to be replaced. Since I am re-designing the entire facility the current conditions of some of the finishes are a good example for me of what not to specify and have directed me toward looking at other options.

Because much of the equipment used at Advanced Medical Imaging is very massive and heavy, durable flooring in the exam rooms and corridors is essential. The conditions in an exam room are worse than the above photo, but I was unable to obtain access to that room for photographing.

The carpeting shown in this photo is in the current reception office. The wear and stains are unsightly, and I will be looking at more durable flooring for this area as well as the rest of the building.
Design Issues

Issue 1: Visibility/Lighting
Natural and artificial lighting are both an issue in the existing space as shown in the photographs. The lighting conditions in these two rooms can be bothersome to patients and staff on very bright days. The fluctuation of lighting during the day can also be bothersome, particularly to staff. Relocation of affected rooms is a consideration as well as a professional blind/louver system to control natural daylight.

Although I do not have a photograph to illustrate this, artificial lighting is an issue in some exam rooms where light shines directly into patients' eyes, such as in the MRI room. This problem will be taken into consideration when working on the lighting plan for the new plan.
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<th>Client Needs</th>
<th>Requirements/Needs</th>
<th>Preferences/Wants</th>
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<tbody>
<tr>
<td>User</td>
<td></td>
<td></td>
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<tr>
<td>Office Employees</td>
<td>Close manager office from lobby visibility/hearing Create more staff workstations</td>
<td>Give center work desks more privacy</td>
</tr>
<tr>
<td>Mammography</td>
<td>Outlets on all walls in mammography room Base and upper cabinets for storage</td>
<td>Locate a restroom nearer to the mammography room Base cabinets in mammography exam room</td>
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<tr>
<td>CT</td>
<td>Wider doors for CT and MRI Can lighting around perimeter of room Different doors for dressing rooms</td>
<td>Storage on back wall of control room Blind/louvers needed in CT room, more storage in exam room</td>
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<tr>
<td>MRI</td>
<td>Widen doorway for patient prep/consult room near MRI Intercom for laundry and MRI rooms</td>
<td>Some storage for pillows in MRI exam room</td>
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<tr>
<td>Ultrasound</td>
<td>Room needs to be larger Room needs more durable flooring</td>
<td></td>
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<tr>
<td>PET/Nuclear Medicine</td>
<td>Equip facility with proper PET room Keep nuclear medicine and PET adjacent to one another</td>
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<tr>
<td>Client Needs</td>
<td>Requirements/Needs</td>
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<td><strong>User</strong></td>
<td><strong>Requirements/Needs</strong></td>
<td><strong>Preferences/Wants</strong></td>
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<tr>
<td>Bone Density</td>
<td>Outlets on all walls</td>
<td>Keep restroom adjacent to exam room</td>
</tr>
<tr>
<td></td>
<td>Proper storage in control room</td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td>Oven, stove, dishwasher in kitchen</td>
<td>Move kitchen/break room further from patient care</td>
</tr>
<tr>
<td></td>
<td>Replace existing tables with a larger one for more people</td>
<td></td>
</tr>
<tr>
<td>Patients</td>
<td>Less audibility from lobby</td>
<td>Sliding doors in entrance, not opening out</td>
</tr>
<tr>
<td></td>
<td>Better storage in dressing rooms</td>
<td>Coat storage in dressing rooms</td>
</tr>
<tr>
<td></td>
<td>Firmer furniture in lobby</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Feeling of safety and relaxation in facility</td>
<td></td>
</tr>
<tr>
<td>Conference Room</td>
<td>New table</td>
<td>Mini-fridge, projector and screen,</td>
</tr>
<tr>
<td></td>
<td>Shading from bright sunlight</td>
<td>Some storage with countertop</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Blind/louver systems for rooms</td>
<td>Put quiet room in a more suitable location</td>
</tr>
<tr>
<td></td>
<td>Replacement of various flooring</td>
<td>Massage room not needed</td>
</tr>
<tr>
<td></td>
<td>Countertops in laundry room</td>
<td></td>
</tr>
<tr>
<td>Considerations</td>
<td>Goals</td>
<td>Facts</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Function</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People</td>
<td>Collaborative and common workspaces</td>
<td>Doctors, office personnel, technicians, patients</td>
</tr>
<tr>
<td>Activities</td>
<td>Adjacencies to related activities</td>
<td>Exams, waiting, office work, consultations</td>
</tr>
<tr>
<td>Relationships</td>
<td>Comfort among all people in the facility</td>
<td>Doctor-staff, staff-patient, patient-doctor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>Considerations</td>
<td>Goals</td>
<td>Facts</td>
</tr>
<tr>
<td>----------------</td>
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<td>-------</td>
</tr>
<tr>
<td>Sequential flow</td>
<td>Lobby dressing rooms&gt;exam rooms&gt;lobby</td>
<td>Unnecessary traffic because of locations of spaces</td>
</tr>
<tr>
<td>Mixed flow</td>
<td>Staff entr.&gt;offices&gt;ctrl rooms&gt;exam rooms&gt;repeated pattern</td>
<td>Clear division of staff and patient areas</td>
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<tr>
<td>Relationships</td>
<td>Professional, friendly</td>
<td>Ensuring patients feel they are receiving individualized care</td>
</tr>
<tr>
<td>Communication</td>
<td>Open but confidential</td>
<td>n/a</td>
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<tr>
<td><strong>Considerations</strong></td>
<td><strong>Goals</strong></td>
<td><strong>Facts</strong></td>
</tr>
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<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Form</strong></td>
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</tr>
<tr>
<td>Site</td>
<td>To attract business over other imaging centers;</td>
<td>Located near other medical office buildings in expanding area of city</td>
</tr>
<tr>
<td>Environment</td>
<td>More comfort and relaxed feel for all</td>
<td>Sterile, bright, spacious</td>
</tr>
<tr>
<td>Quality</td>
<td>Sustainable and durable finishes, supportive furnishings</td>
<td>Some deteriorating flooring, finishes, poor furnishings in waiting area</td>
</tr>
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<td>Considerations</td>
<td>Goals</td>
<td>Facts</td>
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</tr>
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<td>Initial Budget</td>
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<td>Operating Cost</td>
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<tr>
<td></td>
<td>n/a</td>
<td>none</td>
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<tr>
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</tr>
<tr>
<td>Life-cycle Cost</td>
<td>Replace existing finishes/features that will be more lasting than current</td>
<td>Flooring already needs to be replaced in more than one area</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>Effectively solve issues through re-design</td>
<td>Built in 2003, operating since then</td>
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<tr>
<td></td>
<td></td>
<td>Operating with some issues</td>
</tr>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Future</td>
<td>Be a more functional facility after re-design</td>
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<tr>
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</table>
The basic location relationships I determined from my client interviews will remain the same because the clients' needs are most important to me. However, some rooms may be located nearer to other rooms as a result of re-allocation of spaces within the facility. The square footages for most rooms remain the same because the existing sizes of most exam rooms were sufficient for the necessary equipment and it is important that I keep similar dimensions and square footages. In most rooms I tried to allow for some extra space for easier circulation and access. The reception area and lobby are now very centrally located—symmetrically so to the surrounding exam rooms and other remaining rooms. The situation of central reception/office areas allows staff easy access to the surrounding rooms.
The environment at TMC Advanced Imaging seems as if it would be very comforting to patients. The finishes in this facility are warm and inviting, unlike some very sterile medical office environments that make patient uncomfortable. Unlike some other facilities, including Advanced Medical Imaging, this one does not have a reception area open to the waiting room, though it is clear to patients where to check in. The mass of the wood trim in the facility are obvious but not overbearing.

The pattern in the carpet and texture on the tile wall are also apparent but not over-stimulating. The imaging room seems to be a very calm place, again, unlike some more sterile medical offices. The lighting in this room is subtle, not too bright, and the unique lighting fixture above seems to give off warm light. Though the room seems a little plain, the unique floor pattern gives it some interest.

Source: Healthcare Spaces, No. 1, Roger Yee
MemorialCare Breast Center at Anaheim Memorial Medical Center

MemorialCare Breast Center seems to offer a relaxed but contemporary environment in which to treat their patients. The women's waiting area seems to be a comfortable, quiet area for sit before their appointments. The adjacent dressing rooms seem to be functional. From the photo, I can see that the dressing rooms each have a comfortable-looking bench for patients to sit on or place their belongings on while changing, as well as a hook to hang clothing on. These dressing rooms provide some good ideas for me to use on my project at Advanced Medical Imaging because the dressing rooms in the facility need to be improved.

The check out area counters and partitions are angular and massive, while the ceiling lighting is curvilinear, which seem to balance each other.

The colors used throughout the space are cool but inviting and calming. Though materials such as metal and glass are used, which sometimes seem too sterile are very appropriate in the space and are complemented by the colors.

Source: Healthcare Spaces, No. 1, Roger Yee
Resurrection Medical Center, Chicago, Illinois

Loeb Schlossman & Hackl

The Radiology Department at Resurrection Medical Center appears to be a comfortable environment for patients. The lobby is very warm and inviting. The lighting has a warm, rather than sterile feel. The curvilinear reception desk and side tables as well as lampshades and ceiling coves are complemented by the angular details in the reception desk, the window mullions, and the wall openings. The millwork and custom reception desk are massive though very attractive.

Some items of concern in this space are the lack of non-neutral colors, except for the seating, and the lack of signage. The imaging room meshes well with the equipment it houses. The neutral colors on the walls and casework make the room appear very uniform. There is ample storage in this room, necessary in any medical space.

Source: Healthcare Spaces, No. 1, Roger Yee
Benchmarks: Day Spa

Imaging Center turned day spa...

benefits:
- healing, restorative environment
- improving patients' view of medical facilities
- calming finishes

Trends in healthcare industry...

Article: The Role of the Physical Environment and Social Environment in Promoting Health, Safety, and Effectiveness in the Healthcare Workplace. The Center for Health Design

- Family is important to incorporate into a patient's care
- Healthcare work is more effective when practitioners work in well-developed teams and interdependently of patients and family
- Healthcare has moved from treating patients physically to more holistic treatment—emotionally and spiritually also
- Physical environment affects health and safety of healthcare employees
- Back pain is common among healthcare workers, ergonomics is important to their jobs—softer floors, evaluation of workspaces needed
- Office areas for interactive work are important, staff lounges, neutral zones as well as dedicatates spaces
- Inadequate lighting and chaotic work environments increase the likelihood of error
- Similarly equipped rooms to avoid confusion

Article: The Marriage of Form and Function: Creating a Healing Environment. KI

- A healing environment is not only one that takes care of the patient but the family of the patient and the caregivers or healthcare workers
- Bring the outside in
- Lounge area for staff to relax in
- Concealed storage
- Finishes and furnishings that give a home-like feel
The project I chose to focus on for my senior project is a healthcare facility, Advanced Medical Imaging. The facility is located in Kokomo, Indiana and is about 10,000 square feet in size. Throughout the programming phase I had intended to maintain the original facility layout and just make minor spatial changes with my re-design. However, I have now decided to re-design the entire floorplan, starting with a clean slate and designing the imaging center as if it were new construction. Through this approach I will be able to show more creativity while still keeping in mind the clients' needs in order to design a fully functional facility. I have re-allocated space for all components of the imaging center including the reception and waiting area, exam rooms, offices, utilities, restrooms, etc. I have provided a complete set of construction documents from the demolition plan to the finishes and furniture plan.

Throughout the re-design I have kept in mind the concept of spa design, in particular, the interior aesthetics and atmosphere of spas. Because medical visits are often dreaded and patients may feel uncomfortable in medical environments, I was inspired to create a new environment. The completed project is intended to provide a space that is relaxing and soothing to patients and comfortably functional for staff. In this way it will reflect a spa atmosphere but will also be a professional and clean environment.
CONSTRUCTION SHEET LIST:

A1. COVERSHEET
A2. EXISTING FLOOR PLAN
A3. DEMOLITION FLOOR PLAN
A4.1 CONSTRUCTION FLOOR PLAN
A4.2 CONSTRUCTION ENLARGED PLANS
A5.1 INTERIOR ELEVATIONS
A5.2 INTERIOR ELEVATIONS
A5.3 INTERIOR ELEVATIONS
A5.4 INTERIOR ELEVATIONS AND SECTIONS
A6.1 INTERIOR SECTIONS
A6.2 INTERIOR SECTIONS
A6.3 INTERIOR SECTION S
A7. INTERIOR PARTITION TYPES AND DETAILS
A8.1 DOOR ELEVATIONS AND DETAILS
A8.2 DOOR AND WINDOW SCHEDULE, WINDOW DETAILS
A9.1 FINISHES PLAN
A9.2 FINISHES SCHEDULE
A9.3 FLOOR PATTERNS
A9.4 ENLARGED FLOOR PATTERNS
E1.1 REFLECTED CEILING PLAN
E1.2 LIGHTING SCHEDULE
F1.1 FURNITURE PLAN
F1.2 FURNITURE SCHEDULE

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<table>
<thead>
<tr>
<th>Sheet Number</th>
<th>Sheet Name</th>
<th>Square Footage</th>
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<tbody>
<tr>
<td>1</td>
<td>Space Planning</td>
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<tr>
<td>2</td>
<td>Entrance Area</td>
<td>100.1</td>
</tr>
<tr>
<td>3</td>
<td>Office Area</td>
<td>100.1</td>
</tr>
<tr>
<td>4</td>
<td>Store Room</td>
<td>100.1</td>
</tr>
<tr>
<td>5</td>
<td>Command Center</td>
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</tr>
<tr>
<td>6</td>
<td>Central Room</td>
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</tr>
<tr>
<td>7</td>
<td>Gym Area</td>
<td>100.1</td>
</tr>
<tr>
<td>8</td>
<td>Club Room</td>
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<tr>
<td>9</td>
<td>Equipment Room</td>
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</tr>
<tr>
<td>10</td>
<td>Conference Room</td>
<td>100.1</td>
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SHEET LIST:

- A1. COVERSHEET
- A2. EXISTING FLOOR PLAN
- A3. DEMOLITION FLOOR PLAN
- A4.1 CONSTRUCTION FLOOR PLAN
- A4.2 CONSTRUCTION ENLARGED PLANS
- A5.1 INTERIOR ELEVATIONS
- A5.2 INTERIOR ELEVATIONS
- A5.3 INTERIOR ELEVATIONS
- A5.4 INTERIOR ELEVATIONS AND SECTIONS
- A6.1 INTERIOR SECTIONS
- A6.2 INTERIOR SECTIONS
- A6.3 INTERIOR SECTION S
- A7. INTERIOR PARTITION TYPES AND DETAILS
- A8.1 DOOR ELEVATIONS AND DETAILS
- A8.2 DOOR AND WINDOW SCHEDULE, WINDOW DETAILS
- A9.1 FINISHES PLAN
- A9.2 FINISHES SCHEDULE
- A9.3 FLOOR PATTERNS
- A9.4 ENLARGED FLOOR PATTERNS
- E1.1 REFLECTED CEILING PLAN
- E1.2 LIGHTING SCHEDULE
- F1.1 FURNITURE PLAN
- F1.2 FURNITURE SCHEDULE
DEMOLITION PLAN NOTES
1. DEMOLISH EXISTING WALL FROM FLOOR TO CEILING
2. REMOVE EXISTING DOOR, DOOR FRAME, DOOR HARDWARE
3. REMOVE EXISTING LIGHTING FIXTURES
4. REMOVE WINDOW, DEMOLISH FRAME
5. REMOVE EXISTING KITCHEN FIXTURES
6. REMOVE STORAGE CABINETS
7. REMOVE COUNTER TOP
8. REMOVE SINK, DRAIN LINES, AND COUNTER TOP IF PRESENT
9. REMOVE TOILET, DRAIN LINES
10. REMOVE MIRROR, SOAP DISPENSERS, PAPER TOWEL DISPENSERS, AND GRAB BARS IF PRESENT
11. DEMOLISH FIREPLACE STRUCTURE
12. REMOVE EXISTING FLOORING, BASE BOARD

SPECIAL NOTES:
ALL INTERIOR WALLS, DOOR FRAMES, AND WINDOWS ARE TO BE DEMOLISHED. SINKS, KITCHEN APPLIANCES AND SPECIAL EQUIPMENT ARE TO BE REMOVED BUT SAVED FOR FUTURE USE.
CONSTRUCTION PLAN NOTES

- INSTALL 5/8" DRY. ON 4 1/2" STURD WALL (W/ SOUND BATS), INSTALL FROM FLOOR TO 6" ABOVE FINISHED CEILING LINE
- INSTALL 5/8" DRY. ON 4 1/2" STURD PLUMBING WALL, INSTALL FROM FLOOR TO 6" ABOVE FINISHED CEILING LINE
- INSTALL 5/8" DRY. ON 2 1/2" STEEL STUD WALL (W/ SOUND BATS), INSTALL FROM FLOOR TO 6" ABOVE FINISHED CEILING LINE
- INSTALL 5/8" DRY. ON 3 1/2" STEEL STUD WALL FOR POCKET DOORS, INSTALL FROM FLOOR TO 6" ABOVE FINISHED CEILING LINE
- PAINT ALL WALLS AS INDICATED IN FINISH PLANS
- INSTALL NEW WOOD DOORS AS INDICATED IN DOOR SCHEDULE
- INSTALL NEW SASHED DOORS AS INDICATED IN DOOR SCHEDULE
- INSTALL NEW UPPER CABINETS, BASE CABINETS AND PLASTIC LAMINATE SURFACE AS INDICATED IN FINISH PLANS AND SCHEDULES
- INSTALL MECHANICAL EQUIPMENT, APPLIANCES
- INSTALL NEW COUNTER TOPS, SINKS AND BASE CABINETS
- INSTALL NEW APPLIANCES, BASECOAT SCHEDULE
- INSTALL APPLIANCE FRAMING, BASECABINET SCHEDULES
- INSTALL REFRACTOR
- INSTALL KITCHEN SINKS
- INSTALL MANOMOGRAPHY EQUIPMENT
- INSTALL BONE DENSITY EQUIPMENT
- INSTALL ULTRASOUND EQUIPMENT
- INSTALL P.E.T. EQUIPMENT
- INSTALL P.E.T. CONTROL ROOM EQUIPMENT
- INSTALL NUCLEAR MEDICINE EQUIPMENT
- INSTALL WASHER AND DRYER
- INSTALL X-RAY EQUIPMENT
- INSTALL CT EQUIPMENT
- INSTALL MR EQUIPMENT
- INSTALL CT CONTROL ROOM EQUIPMENT
- INSTALL MR CONTROL ROOM EQUIPMENT
- INSTALL DOOR NUMBERS
- INSTALL WINDOW NUMBERS
- INSTALL ROOM NUMBERS
- INSTALL ELEVATOR CALLS
- INSTALL SQUARE FOOTAGES OF ROOMS
FLANGE SUPPORTING PANEL ON WALL

SUPPORT BARREL

BARREL CAP

3-FORM PANEL

POCKET DOOR

3/8" GYP. BOARD EACH SIDE

LAMINATE COUNTERTOP

2"X4" SUPPORT

1-1/2" PLASTIC LAMINATE ANGLED SUPPORT PANEL

WOOD VENEERED CABINET FACE

1-1/2" PLASTIC LAMINATE ANGLED SUPPORT PANEL

WOOD VENEERED FRON Panel

CHROME SUPPORTS AND CAPS

GLASS LEDGE

WOOD VENEERED SURFACE

1"X3" SUPPORT

1"X3" SUPPORT

1"X3" SUPPORT

1"X3" SUPPORT

1"X3" SUPPORT
FINISH PLAN NOTES

- CARPET
- TILE
- RESILIENT FLOORING
- WALL BASE AND ACCESSORIES
- PAINT
- RESIN PANELS
- WOOD CASEGOODS
- LAMINATE SURFACES

*Exact pattern specified on
floor finish pattern sheet
<table>
<thead>
<tr>
<th>Tags</th>
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<th>Style</th>
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<td>Duke's Creek 0990</td>
<td>2404 Catch and Release</td>
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<td>C3</td>
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<td>Medintech</td>
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<td>L3</td>
<td></td>
<td>Formica</td>
<td>Polished Finish</td>
<td>African Limba 7011</td>
<td>Reception Desk</td>
</tr>
<tr>
<td>L4</td>
<td></td>
<td>Formica</td>
<td>Matte Finish</td>
<td>Carrara Envision 7944-58</td>
<td>All countertops except Laundry, Restrooms</td>
</tr>
<tr>
<td>L5</td>
<td></td>
<td>Chemetal</td>
<td>Polished Finish</td>
<td>Pewter Vines 264</td>
<td>Reception Desk</td>
</tr>
</tbody>
</table>
EXAMPLE OF RANDOM FLOOR PATTERNS TO BE PUT IN PLACE IN EXAM ROOMS

OATMEAL SHEET VINYL, R1
MOSS SHEET VINYL, R2
NEUTRAL GREY SHEET VINYL, R3

ENLARGED FLOOR FINISH PATTERN
SCALE: 1/4" = 1'-0"
REFLECTED CEILING AND LIGHTING PLAN NOTES

- 4" DECORATIVE PENDANT
- 11" SURFACE MOUNTED CYLINDER
- 24" DOMIO SEMI-RECESSED
- 24" DOMIO PENDANT
- 24" LITE DOMIO PENDANT
- 6" RECESSED CAN LUMINAIRE
- 48" DIRECT/INDIRECT SUSPENDED LUMINAIRE
- 54" WALL MOUNTED LAMP
- 2' X 2' FLUORESCENT LAY-IN LUMINAIRE
- EXIT SIGNAGE
- DARK ROOM LIGHT
- 2' X 2' ACOUSTICAL PANEL CEILING
- CEILING HEIGHT SWITCH
- THREE WAY SWITCH
- WIRING
- C1 GYPSUM CEILING BOARD
- C2 ACOUSTICAL PANEL CEILING
<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Lighting Type</th>
<th>Series</th>
<th>Style Name</th>
<th>Style Number</th>
<th>Application</th>
<th>Mount</th>
<th>Lamps</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Philips</td>
<td>Pendant</td>
<td>Signature</td>
<td>Lamplight</td>
<td>6370-C</td>
<td>General, Ambient</td>
<td>Monopoint</td>
<td>22W</td>
<td>11</td>
</tr>
<tr>
<td>Delta-Cavo</td>
<td>Compact Fluorescent</td>
<td>Pass</td>
<td>83-4003 TU 63-4102 BC</td>
<td>Task</td>
<td>Recessed Can</td>
<td>2x36W PL-T</td>
<td>44</td>
<td></td>
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<tr>
<td>Delta-Cavo</td>
<td>Compact Fluorescent</td>
<td>Dimo</td>
<td>50-251-DB</td>
<td>Amount</td>
<td>Recessed Can</td>
<td>60W PL-T</td>
<td>2x36W PL-T</td>
<td>11</td>
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<tr>
<td>Delta-Cavo</td>
<td>Compact Fluorescent</td>
<td>Dimo A,B &amp; P</td>
<td>50-342-PI</td>
<td>General</td>
<td>Pendant</td>
<td>4x20W PL-T</td>
<td>9</td>
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<tr>
<td>Delta-Cavo</td>
<td>Fluorescent</td>
<td>LFC Lighting</td>
<td>57-1103 TC-T</td>
<td>General</td>
<td>Pendant</td>
<td>4x20W TC-T</td>
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<tr>
<td>Can Lighting</td>
<td>Incandescent</td>
<td>Progess Lighting</td>
<td>F5 Tropics</td>
<td>45030-32</td>
<td>Track/Spot</td>
<td>Recessed Can</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Lumen Lighting</td>
<td>Incandescent</td>
<td>S24-9W Suspended</td>
<td>LED</td>
<td>120V 240V/12V</td>
<td>General Satin</td>
<td>Wall</td>
<td>120V 240V/12V</td>
<td>20</td>
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<tr>
<td>O-Lighting</td>
<td>LED Fluorescent</td>
<td>24W-12W Line</td>
<td>106364-101540</td>
<td>General</td>
<td>Ceiling</td>
<td>120V 240V/12V</td>
<td>13</td>
<td></td>
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<tr>
<td>Lumo Lighting</td>
<td>LED Fluorescent</td>
<td>12W-12W Line</td>
<td>106364-101540</td>
<td>General</td>
<td>Ceiling</td>
<td>120V 240V/12V</td>
<td>14</td>
<td></td>
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<tr>
<td>Pegasus Associates Lighting</td>
<td>LED</td>
<td>Edge, 8 LED Exit Sign</td>
<td>PLFXTLU-120CA/M</td>
<td>Specialty</td>
<td>Ceiling</td>
<td>3 W 120V</td>
<td>5</td>
<td></td>
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<tr>
<td>Electromed Microscopy Associates</td>
<td>Specialty</td>
<td>Prosize 1/2&quot; 2 Saltight</td>
<td>T4230-DC</td>
<td>Clinic Room</td>
<td>Wall</td>
<td>25 Watt</td>
<td>1</td>
<td></td>
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</tbody>
</table>

**Summary**

- **Quantity**: 183
- **Total Lamps**: 1
<table>
<thead>
<tr>
<th>Tag</th>
<th>Function</th>
<th>Product</th>
<th>Finish</th>
<th>Other Finishes</th>
<th>Notes</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>10</td>
<td>Desk (2)</td>
<td>Steelcase</td>
<td>Finish: Dark Walnut</td>
<td>24&quot; wide</td>
<td>1</td>
<td></td>
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<tr>
<td>11</td>
<td>Bookcases (2)</td>
<td>Steelcase</td>
<td>Finish: Dark Walnut</td>
<td>36&quot;h x 24&quot;w</td>
<td>2</td>
<td></td>
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<tr>
<td>12</td>
<td>Bookcases (1)</td>
<td>Steelcase</td>
<td>Finish: Dark Walnut</td>
<td>36&quot;h x 24&quot;w</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Bookcases (1)</td>
<td>Steelcase</td>
<td>Universal Storage Bookcase</td>
<td>Champagne Metallic Finish</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Desk (5)</td>
<td>Steelcase, Series 9000</td>
<td>Finish: Dark Walnut</td>
<td>24&quot;w x 5 adjustable shelves, 24&quot; tall</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Chair (1)</td>
<td>Steelcase, Series 9000</td>
<td>Finish: Dark Walnut</td>
<td>24&quot;w x 5 adjustable shelves, 24&quot; tall</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Right (1)</td>
<td>Steelcase, Series 9000</td>
<td>Finish: Dark Walnut</td>
<td>24&quot;w x 5 adjustable shelves, 24&quot; tall</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Left (1)</td>
<td>Steelcase, Series 9000</td>
<td>Finish: Dark Walnut</td>
<td>24&quot;w x 5 adjustable shelves, 24&quot; tall</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Chair (1)</td>
<td>Steelcase, Series 9000</td>
<td>Finish: Dark Walnut</td>
<td>24&quot;w x 5 adjustable shelves, 24&quot; tall</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Chair (1)</td>
<td>Steelcase, Series 9000</td>
<td>Finish: Dark Walnut</td>
<td>24&quot;w x 5 adjustable shelves, 24&quot; tall</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Chair (1)</td>
<td>Steelcase, Series 9000</td>
<td>Finish: Dark Walnut</td>
<td>24&quot;w x 5 adjustable shelves, 24&quot; tall</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Product:**
- **CUl'1ency Universal Storage System**
- **Wolfgang Modular Library**
- **Metallic Hinge, Brass panel upholstery**
- **Metallic Hinge, Brass panel upholstery**
- **Metallic Hinge, Brass panel upholstery**
- **Metallic Hinge, Brass panel upholstery**
- **Metallic Hinge, Brass panel upholstery**
- **Metallic Hinge, Brass panel upholstery**

**Notes:**
- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.
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- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.
- Height, depth, and width, adjustable arms.

**Design:**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**
- **Designers, Misc Swatches**

**Dimensions:**
- 24"w x 5 adjustable shelves, 24" tall
- 24"w x 5 adjustable shelves, 24" tall
- 24"w x 5 adjustable shelves, 24" tall
- 24"w x 5 adjustable shelves, 24" tall
- 24"w x 5 adjustable shelves, 24" tall
- 24"w x 5 adjustable shelves, 24" tall
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- 24"w x 5 adjustable shelves, 24" tall
- 24"w x 5 adjustable shelves, 24" tall
- 24"w x 5 adjustable shelves, 24" tall

**Color Reference:**
- **Acorn Cabinets (34")**
- **Upper Cabinets (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**

**Material Reference:**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**

**Finish Reference:**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**
- **Burnished Silver Granite (12")**

**Design notes:**
- **DESIGN ASSOCIATES**
- **FURNITURE SCHEDULE**
Colorway: Medium Oak

Style: Timberline

Manufacturer: Armstrong

Tag #: R4

Description: To be used in corridor, pattern
Colorway: Medium Wenge

Style: Timberline

Manufacturer: Armstrong

Tag #: R5

Description: To be used in corridor, pattern
Finish Specifications - Advanced Medical Imaging

**Colorway:**
Oatmeal 88412

**Style:**
Medintech

**Manufacturer:**
Armstrong

**Tag #:** R1

**Description:**
To be used in exam rooms, utility rooms

**Additional Information:**
Finish Specifications - Advanced Medical Imaging

Colorway: Moss 88460

Style: Medintech

Manufacturer: Armstrong

Tag #: R2

Description: To be used in exam rooms

Additional Information:
Colorway:
Natural Grey 88464

Style:
Medintech

Manufacturer:
Armstrong

Tag #: R3

Description:
To be used in exam rooms, laundry room
Finish Specifications - Advanced Medical Imaging

Colorway:
Catch and Release 2404

Style:
Duke’s Creek D990

Manufacturer:
Blueridge

Tag #: C1

Description:
To be used in open office area

Additional Information:
Colorway: President

Style: Boardroom

Manufacturer: Mannington

Tag #: C2

Description: To be used in doctors' office, manager office, consult room

Additional Information: 
Colorway:
Canvas 11

Style:
Diplomat

Manufacturer:
Johnsonite

Tag #: B1

Description:
To be used throughout facility, except for laundry, restrooms, and utilities
Finish Specifications - Advanced Medical Imaging

**Colorway:**
Canvas 11

**Style:**
Standard Toe

**Manufacturer:**
Johnsonite

**Tag #: B2**

**Description:**
To be used in laundry, utilities
Colorway: London Fog

Style: Bliss

Manufacturer: Designtex

Description: To be used in open office sitting area, task chairs; refer to furniture schedule

Additional Information:
Colorway: Prairie Dust

Style: Bliss

Manufacturer: Designtex

Description: To be used on task chairs; refer to furniture schedule

Additional Information:
Colorway: Savanna

Style: Bliss

Manufacturer: Designtex

Description: To be used in lobby sitting area, task chairs; refer to furniture schedule

Additional Information:
**Colorway:**
Toast

**Style:**
Bliss

**Manufacturer:**
Designtex

**Description:**
To be used on task chairs; refer to furniture schedule