Design Philosophy and Application

US ARMY MEDCOM Interior Design Master Plan Volume 1



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MEDCOM Interior Design Master Plan

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MEDCOM Interior Design Master Plan

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1. Values, Vision, Mission



Loyalty. Duty. Respect. Selfless Service. Honor. Integrity. Personal Courage.

Vision

Army Medicine is the Nation's premier expeditionary and globally integrated medical force ready to meet the everchanging challenges of today and tomorrow.

Mission

Army Medicine provides sustained health services and research in support of the Total Force to enable readiness and conserve the fighting strength while caring for our Soldiers for Life and Families.



2. Purpose

GENERAL INTRODUCTION TO THE 2019 US ARMY MEDCOM INTERIOR DESIGN MASTER PLAN

The MEDCOM Interior Design Master Plan is a comprehensive and standardized approach for all Army MEDCOM projects that require interior design services. The MEDCOM Interior Design Master Plan is comprised of four volumes. Each Volume responds to earlier findings in specific interior elements. These responses include discussions, photos, drawings, design philosophy, recommendations and suggested products which illustrate the benchmark of quality desired for MEDCOM finishes, furnishings and accessories. The guidelines included in the MEDCOM Interior Design Master Plan facilitate the design, procurement and maintenance processes by providing product information, specification and guidelines for replacement, remodeling and renovation space.

Each Volume is organized for ease of use and updating: **Volume 1** addresses Design Philosophy and Application; **Volume 2** addresses Facility Related Finishes, including Signage and Wayfinding; **Volume 3** addresses Furniture and Finishes, Accessories and Artwork; and Specialty Areas; **Volume 4** includes back-up documentation and White Papers. Volumes 1, 2, and 3 contain the following: Narrative, Products with specifications, and Application Guidelines. The header and side bar of each page (Volume 1-4) contain the following information: The volume is represented by color; the side bar title and number in the header box represent the section; the subsection is located next to the header box with the number changing to represent the subsection; the subcategory to the subsection is located under the subsection title next to the header box. All Volumes begin with a new numbering system to facilitate future modifications.

The MEDCOM Interior Design Master Plan is intended for the use of the project teams (comprised of MEDCOM personnel, the A-E team and the appropriate Health Facility Planning Agency (HFPA)/Defense Health Agency (DHA) team members). Projects undertaken pursuant to the MEDCOM Interior Design Master Plan will benefit greatly from a sense of ownership derived from inviting physician, nursing, administrative and housekeeping representatives, as well as logistics, facilities managers and designers, to contribute recommendations based on their unique knowledge and experience. The MEDCOM Interior Design Master Plan has been developed as a tool to assist with this process. A material renovation (replacement or updating of material finishes) of a small administrative space may be accomplished with reference to this guide alone. However, even a minor alteration to a major public entry is a complex task, and should not be undertaken without professional design assistance or other substantial guidance. In the case of more challenging design efforts, the MEDCOM Interior Design Master Plan serves as a reference for the design professional, and a standard by which the facility project manager may judge the design solution.

2019 US ARMY MEDCOM INTERIOR DESIGN MASTER PLAN DESIGN CONSIDERATIONS

The US Army MEDCOM Interior Design Master Plan provides a tool for planners and designers when developing world class healthcare facilities. The main objectives of the US Army MEDCOM Interior Design Master Plan are:

- To ensure that the final design is appropriate for and in support of the function of the facility.
- To create an environment that enhances the facility's public image and promotes employee morale, while implementing solutions that are durable, cost effective, environmentally sensitive, easy to maintain and support life safety.
- To incorporate evidence-based design principles into new and renovated US Army MEDCOM facilities.
- To create "world class" healthcare facilities for the US Army world-wide.
- To recommend current products and solutions that support innovation and initiative in Army Medicine Healthcare design.

Resources are available for the design team or facility when planning a new or renovated space in US Army MEDCOM healthcare facilities:

- World Class Checklist, Military Health System, US Department of Defense.
- Facility Guidelines Institute (FGI) Guidelines for Design and Construction of Health Care Facilities.
- Unified Facilities Criteria (UFC 4-510-01) Design: Medical Military Facilities.
- Furniture Design Features and Healthcare Outcomes", authored by Eileen B. Malone, RN MSN, MS, EDAC and Barbara Dellinger, MA, AAHID, IIDA, CID, EDAC, May 2011.
- Military Health System.
- Whole Building Design Guide.

For additional resources see Section 5, Resources, Volume 1.

The color copies that appear in these Volumes may vary from actual product colors. **Product samples should be obtained by the facility to verify colors before procurement.** The manufacturer's name and contact information are located at the end of each Product section under "Manufacturers Source List".



3. Design Philosophy

The design philosophy of the MEDCOM Interior Design Master Plan is to establish standardization of building finishes and furnishings, to support evidence-based design principles, to institute the facility's brand/public image, to enhance the healthcare environment for patients, visitors and staff, and to promote employee morale. The standards are established to meet the following criteria:

Durability

- Products meet all requirements in the latest published edition of the Unified Facilities Criteria UFC 4-510-01, Design: Military Medical Facilities.
- Products can be easily cleaned using solvent-free, water-based cleaners. Most products selected are stain resistant.
- Products are selected for maximum longevity according to their intended use.
- Carpet tiles are 100% solution dyed nylon, branded type 6,6.
- Vinyl and polyurethane upholsteries incorporate anti-microbial, stain resistant and ink resistant finishes.
- Upholsteries have a minimum of 75,000 double rubs. Polyurethanes and silicone upholsteries are PVC free and many vinyl's are 100% Phthalate free.
- Countertops are solid surface which is easy to maintain.
- Porcelain tiles include "Hydrotect" that protects and enables the tile to be self-cleaning.
- Sheet vinyl's are no wax, no buff.
- Wall protection is used in the form of corner guards, bumper guards and sheet goods to provide impact and stain resistance.
- Doors, kick plates and door frame protection options provide for an impact resistance covering, mitigating door repairs.
- Toilet partition options include textured stainless steel or a high-density polyethylene (HDPE) which offers abrasion and graffiti resistance.

Infection Prevention

- Products specified are easy to maintain and are manufactured for the healthcare industry.
- Products are inherently anti-microbial or have built-in anti-microbial properties.
- Privacy curtain options include an integrated silver anti-microbial fiber that permanently inhibits the growth of bacteria and fungi. This silver fiber is irreversibly bound to a polymer, so it becomes a physical part of the fiber. It is permanent, and performance does not diminish over time. The intent is to reduce environmental contamination on the textile material and the risk of cross-contamination to humans. Disposable privacy curtains are also included as an option choice. Some of these disposable curtains include a time meter indicating when they are to be disposed of.
- Privacy curtains are to be laundered routinely in accordance with facility's cleaning policies and infection prevention recommendations.

Infection Prevention Continued

- Standard Solid Surface material is a seamless product eliminating joints and cracks where bacteria can build-up. Solid surface material is fungal/bacterial resistant, nonporous (inhibiting the growth of dangerous bacteria and pathogens), and is hygienic. This product is recommended for countertops, shower stalls and operating room walls. EOScu (Cupron Enhanced EOS) is a **Preventive|Biocidal Surface**[™]. It's the only synthetic hard surface EPA-registered for public-health claims, continuously killing harmful bacteria within 2 hours of exposure. When bacteria and copper ions come into contact, the copper ions weaken the outer membrane of the bacteria cell through the process of oxidation. Copper is toxic to the inside of the cell and, eventually, the copper ions cause the cell to rupture. The cell then loses its vital structure and dies. This would be very effective in patient rooms. Pre-fabricated showers have less seams and are easier to maintain. Solid surface sinks incorporating off-set drains help to alleviate airborne pathogens.
- Paints are EPA approved microbiocidal with an anti-bacterial property that kills over 99.9% of pathogens.
- Rubber Flooring provides slip-resistance, stain resistance, is bacteriostatic & resistant to bacteria, fungi and micro-organisms, provides soft footfall (reduces noise and provides comfort underfoot); low maintenance (no-wax, no-stripping), and is easier to maintain than vinyl and carpet flooring.
- Sheet vinyls incorporate Nano silver technology and are anti-static, anti-fungal and antibacterial.
- Ceiling Tiles are available with anti-microbial finishes specifically geared to the healthcare environment.
- Upholsteries are healthcare grade fabrics and include bleach cleanable nylon, Crypton (moisture barrier), Incase, Vinyl, Polyurethane and Silicone options. All include anti-microbial and stain resistant properties and can be cleaned with bleach solutions. Some also offer ink resistant properties.
- Wall protection sheets have anti-microbial finishes. Handrails are available in very realistic faux wood finishes. Wood is not a recommended product for healthcare as the finishes eventually wear off leaving a porous surface susceptible to germs and bacteria.
- Window shades are PVC-free and are easier to clean than window blinds. They can be
 powered or manual. The shade cloth can range in opacity offering glare free views. Double
 shades can incorporate room darkening shade cloths offering the option for privacy control or
 daylight views.
- Toilet partition options of textured stainless steel or high-density polyethylene (HDPE) provide moisture resistance and are mold, mildew and fungal free.

<u>Cost</u>

- Products are cost-effective over their anticipated life cycle.
- Consideration is given to sustainable products and are to be specified where appropriate.

Aesthetics

- Color palettes are based on warm and cool color schemes using appropriately placed accents with neutral backgrounds.
- Permanent architectural features remain in neutral colors; color accents may be used in a limited, constrained capacity.
- Random small-scaled patterns are encouraged; avoid large geometric or rigid patterns.
- Wayfinding materials incorporate floor and wall finishes along with lighting accents and are adapted to meet the needs of all patient populations.

Life Safety

- Products specified are Class A or Class 1, are in accordance with the NFPA 101 Life Safety Code and meet the requirements proscribed in the UFC 4-510-01.
- All adhesives are water-based, non-toxic and emit no or low-level VOCs.
- Application of materials and finishes comply with current ABA (Architectural Barriers Act) regulations.

Flexibility

• Maximize flexibility by creating MEDCOM standards for interior finishes.

Sustainability:

MEDCOM Green - Improve the Present, Respect the Future

- The mission of MEDCOM is to promote, sustain and enhance Soldier health; train, develop and equip a medical force that supports full spectrum operations; and deliver leading edge health services to our Warriors and military family to optimize outcomes.
- To succeed in this mission, MEDCOM must continue to act in a manner that is fiscally, environmentally, and socially responsible and embrace sustainable practices that will help support our mission into the future. Understanding that the adage, "First, Do No Harm" applies to the environment and community as well as to patients, MEDCOM has developed and is implementing a Sustainability Strategy. This Strategy will enable MEDCOM to sustain readiness, improve quality of life, strengthen community relationships, and help reduce total costs of operation and ownership.

Sustainability & Healthcare

- The medical profession has pledged to "First, Do No Harm" since the time of Hippocrates. However, in many cases purchasing habits, facility operations, and building design standards are not consistent with the professional values of healthcare. Applying sustainable practices can benefit healthcare facilities. For example:
 - Purchasing items which have less environmental impact can create a healthier environment for our Warriors and military family members.
 - Reusing and recycling items can reduce disposal costs.
 - Using recyclable, reusable, or biodegradable food containers instead of polystyrene foam containers produces less waste and reduces our dependence on foreign oil.
 - · Conserving resources can decrease utility, water, and disposal costs.
 - Using healthier building materials can provide a more healing environment for patients.
 - Some elements of building design, such as use of natural daylight and views of nature, can improve patient outcomes and help patients heal faster.

Evidence-Based Design

In 2008, The Center for Health Design defined Evidence-based Design as follows:

"Evidence-Based Design is the process of basing decisions about the built environment on credible research to achieve the best possible outcomes."

The core principles for evidence-based design come from hundreds of laboratory and clinical studies. Research has shown that material and finish selections for healthcare environments play a key role in the health and emotional well-being of staff, visitors, and patients. Material and product selections in the MEDCOM Interior Design Master Plan are based on evidence-based design concepts and sustainability principles, as well as accessibility, ergonomics, durability, flexibility and cost.

Implementing Evidence-Based Design (EBD) principles helps create a "therapeutic environment", which is frequently defined as a health care environment that achieves three critical measures (according to an analysis of research completed by Roger Ulrich and Craig Zimring):

- Provides clinical excellence in the treatment of the body.
- · Meets the psycho-social needs of patients, families, and staff.
- Produces measurable positive patient outcomes and staff effectiveness.

To help increase knowledge and awareness of evidence-based design issues, one tool known as the "EBD Wheel" graphically constructs 12 elements of the built environment which are impacted by EBD principles. More information on the EBD Wheel can be found in the published article entitled, "The Evidence-Based Design Wheel: A New Approach to Understanding the Evidence in Evidence-Based Design" by Lyn Geboy, PhD (Healthcare Design Magazine, March 2007).



1. Single Patient Rooms: Research supports that providing single patient rooms in lieu of semiprivate bedrooms contributes to the following: a) shorter lengths-of-stay; b) fewer medication errors; c) lower rates of hospital-acquired infection; d) fewer patient transfers; e) increased privacy - impacts HIPAA; f) creates less noise, therefore fewer sleep disturbances; g) more patient control; and h) higher patient satisfaction.

Ways to enhance the single patient room experience include:

- · Create opportunities to create family-zones within space.
- Provide furnishings so that family member may spend the night.
- Reduce the amount of equipment and furniture to navigate around.
- Configure room to allow headwall to be near patient toilet.
- Ensure that every patient has access to window views.
- Noise: Research supports that an excessive or persistent noise within patient care areas contributes to the following: a) sleep disruption; b) confusion; c) impediment to healing; d) creation of stress and anxiety; e) potential increase in the use of prescription medications; and f) the possibility of increasing staff errors.

Ways to reduce noise within the patient care environment include:

- Select materials which deaden or absorb sound (carpet, rubber flooring, acoustical ceiling tiles).
- Isolate noisy equipment away from patient areas.
- Eliminate overhead paging, intercom.
- Decentralize certain functions/activities to reduce the concentration of noise.
- 3. Windows with Views of Nature: Research supports that providing patient care areas (and staff areas, as well) with physical access to nature, or by simply viewing nature through a window contributes to the following: a) reduction in recovery time; b) patient experiences fewer complications; c) patients request less pain medication; and d) patients have more control over the environment. Employees with access to windows/nature views experience less stress, better health, and higher job satisfaction.

Ways to introduce access to nature in patient care environments:

- Provide windows in each patient care area with a view of nature.
- Provide opportunities for staff to have access to windows with nature views.
- Install photographic artwork of nature scenes within patient and staff zones.

4. Daylighting and sufficient artificial lighting: Research supports that access to daylight in patient care and staff areas contributes to the following: a) improved patient outcomes; b) reduced depression, pain and agitation; c) improved sleep; d) balanced circadian rhythms; e) reduced the length of stay; and f) improved staff accuracy and effectiveness.

Ways to incorporate daylighting and sufficient artificial lighting within patient care areas include:

- Provide natural light integrated with electrical lighting.
- Provide dimmers for electrical light sources when possible.
- Provide access to areas where natural daylight can be observed and enjoyed.
- Provide wall sconces and decorative lighting fixture (less institutional).
- 5. Healing Gardens: Research supports that access to gardens (whether indoor or outdoor) contributes to the following: a) improves recovery time for patients; b) creates less stress, anxiety and pain; c) patients require less pain medication; and, d) offer patients/visitors/staff direct interaction with the restorative, calming effects of nature.

Ways to incorporate healing gardens within patient care areas include:

- · Create healing gardens for patient & staff use.
- Use natural materials (stone, wood, plants, etc.) in both interior and exterior design.
- 6. Positive Distraction: Research supports that providing elements which introduce positive distraction contributes to the following: a) improved mood and stress relief; b) attention is attracted and sustained; c) positive reactions; and d) a lessened perception of pain.

Ways to incorporate various therapies and elements which provide positive distractions within the patient care areas include:

- Provide access to music de-stresses, lessens pain.
- Realistic art (no abstract art) and sculpture. Images are to reflect regional scenery. Duplication of art images is not allowed.
- Views to Nature trees, flowers, and water.

7. Furniture Arrangements: Research supports that furniture groupings which enhance conversation and social interaction contribute to the following: a) a more intimate (less institutional) feeling; b) promotes social interaction; c) encourages family members and friends to stay longer during visitation.

Ways to enhance the furniture arrangements within the patient environment include:

- · Include comfortable, supportive furniture within waiting areas.
- Create more conversational and "activity" zones.
- Promote small, flexible groupings with furniture.
- Provide children's furniture and interactive games where needed.
- Include dining tables (or round tables) to encourage social interaction.
- 8. Indoor Air Quality: Research supports that improved indoor air quality contributes to the following: a) less infection/transmission of bacteria; and, b) improved patient outcomes with respect to hospital-acquired infections (HAI).

Ways to enhance indoor air quality within the patient care environment include:

- Use of HEPA filters which reduce infection thru HVAC design/upkeep.
- Use low-toxicity, low-emitting materials (such as low VOC paints, stains, adhesives) to reduce indoor pollutants.
- Minimize use of solvent-based cleaners and cleaners with strong fragrances.
- Allow enough time for material finishes to off-gas before occupancy.
- 9. Floor Finishes: Research supports that slip-resistant, sound-absorbing, anti-microbial, and safe flooring contributes to the following: a) safer floors which reduce noise/slips/falls; b) improved noise reduction due to soft foot-fall; c) improved infection-control protection.

Ways to provide flooring which is safe, sound-absorbing and aesthetically-pleasing within the patient care environment include:

- CARPET reduces noise, deadens sound, increases ease of walking, reduction in falls and resultant injuries, provides more homelike/non-institutional ambience as compared to vinyl.
- CERAMIC/PORCELAIN TILE provides anti-bacterial coatings which prevents the development of new pathogens; odors are eliminated; requires minimum care and is eco-friendly.
- RUBBER provides slip-resistance, stain resistance, bacteriostatic & resistance to bacteria, fungi and micro-organisms. Provides soft footfall (reduces noise and provides comfort underfoot); low maintenance (no-wax, no-stripping), and is easier to maintain than vinyl and carpet flooring.

Note: Refer to the UFC 4-510-01 Appendix B to determine the appropriate floor finish for designated healthcare area

10. Wayfinding: Research supports that providing effective wayfinding elements within the healthcare environment contributes to the following: a) enhanced patient orientation; b) reduced stress and time wasted while traveling to the desired destination; c) diminished staff time spent giving directions; and, d) a coordinated system that addresses human behavior, environmental design and hospital policies & practices.

Ways to incorporate effective wayfinding within patient care areas include:

- Use of signage, imagery, icons, patterning.
- Incorporating solutions which include cueing with lighting and architectural elements.
- Use of elements which convey movement through the space.
- 11. Nursing Centers/Workstations: Research supports that providing the proper combination of decentralized and centralized nurse centers within the patient care environment contributes to the following: a) reduction in errors when nurses are close to patients; b) decreased nurses' travel time/distance; c) increased nurses' time spent caring for patients/families; and d) improved job satisfaction for nursing staff.

Ways to incorporate decentralized nurse's stations (as appropriate) within patient care areas include:

- Provide flexible furniture (carts, workstations).
- · Locate computers outside patient rooms (workstation on wheels).
- 12. Ergonomics: Research supports that providing improved ergonomic equipment and furnishings contribute to the following: a) patient and staff safety and comfort; b) decreased patient falls in ergonomically designed space; c) enhanced patient comfort during medical procedures; d) improved hospital stay with thoughtfully designed furnishings; and, e) reduced stress and injuries among staff.

Ways to incorporate ergonomic furnishings and elements within patient care areas include:

- Include comfortable waiting seating with easy entry/exit.
- Ensure that chair arms contour (no sharp corners).
- Introduce specialty patient seating (hip chairs, bariatric seating).
- Use of safe patient-handling devices (increases staff safety).
- Ensure that staff areas are outfitted with fully adjustable task chairs and workstations.



4. Application

4.1 Narrative

4.2 Color Scheme Palettes

4.3 Application Guide

- 4.3.1 Lobby
- 4.3.2 Reception
- 4.3.3 Waiting Area
- 4.3.4 Corridor
- 4.3.5 Exam Room
- 4.3.6 Nurse Station
- 4.3.7 Emergency
- 4.3.8 Lab / Blood Draw
- 4.3.9 Pharmacy
- 4.3.10 Dental Treatment
- 4.3.11 Patient Room
- 4.3.12 Labor & Delivery
- 4.3.13 Conference Room / Break Area
- 4.3.14 Administrative Office
- 4.3.15 Dining Area

4.4 Budget / Life Cycle Costs

4.5 Finish Schedule Examples



4.1 Narrative

Finish and Color Selections:

The finishes, furnishings and upholsteries shown in the MEDCOM Interior Design Master Plan have been proven performers in the healthcare market and in particular for Army MEDCOM facilities. Finishes included in this document have been selected for durability, infection prevention, life cycle cost (see Section 4.4), sustainability and ease of maintenance. Material finishes selected for military healthcare facilities must be extremely durable and must maintain their aesthetic appeal for many years. Permanent structural elements that are not easily replaced (such as wood, stone and tile) are to have a neutral and/or natural finish that will endure; these neutral hues provide a timeless palette and are not swaved by color trends. Other less permanent elements that are stocked by the facility and ordered on a continuing basis (such as general paint, wall protection products, and ceiling tiles) are to be neutral in color as well. Accent colors augment the neutral color palette, but these saturated hues are utilized in strategic places and limited application; for example, accent wall paint and an array of brightly-colored performance fabrics provide color and interest, but can be easily changed in the healthcare environment. Since color accent placement is generally restricted to easily replaceable finishes, color addition and location are extremely important and will have a larger effect within the space. Color in wayfinding can minimize (or "right size") the amount of signage required and can provide cueing information for patients and visitors navigating through the facility. Colors found in artwork and upholstery add impact and visual interest. Additional information concerning color theory can be found in articles provided in Volume 4. White Papers.

The MEDCOM Interior Design Master Plan features both warm neutral palette and cool neutral palette options. (Refer to Section 4.2, Color Scheme Palettes, for examples).

Color Application:

Color application is complex and multi-faceted. Color association can be affected by religious, cultural and geographic biases. In addition, each individual will approach color differently based upon psychological and physiological differences. Other factors, such as texture, pattern, contrast, daylighting and artificial lighting all influence color choices and placement.

The MEDCOM Interior Design Master Plan incorporates a rust, yellow, several green hues, blue and violet color accents, which can be used in concert with the neutral palettes. This allows for a variety of color applications. Developed color schemes can be full spectrum, monochromatic, analogous, complimentary, or variations of triad and tetrad. Recent findings from several studies indicate that blue and green hues are the most preferred color accents, as they are perceived as soothing and calming. These two colors comprise the majority of colors found in nature and are often used in healthcare environments

Color families presented in the MEDCOM Interior Design Master Plan include Full Spectrum, Warm palette and Cool palette.

Application Guide:

In Section 4.3, Application Guide, photographs illustrate the use of the MEDCOM Interior Design Master Plan in Army Healthcare facilities, and how the materials and colors were applied within those spaces. Rendered images indicate the application guidelines for materials and color.

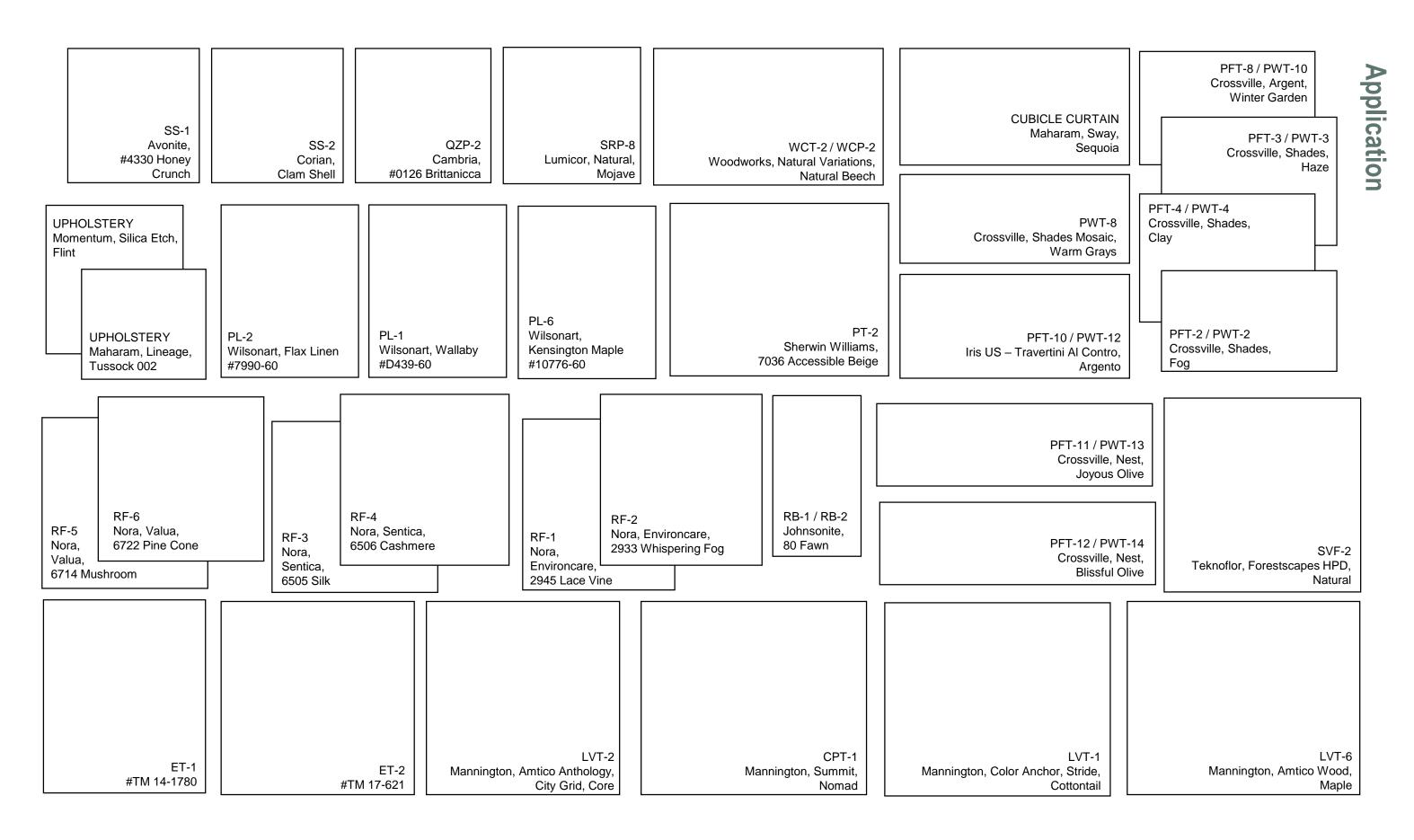
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4.2 Color Scheme Palettes

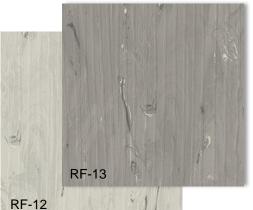


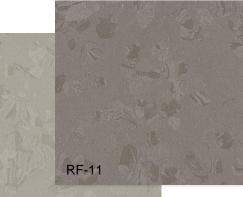
COLOR SCHEME PALETTES WARM NEUTRAL 4.2

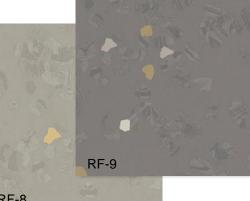


COLOR SCHEME PALETTES WARM NEUTRAL 4.2

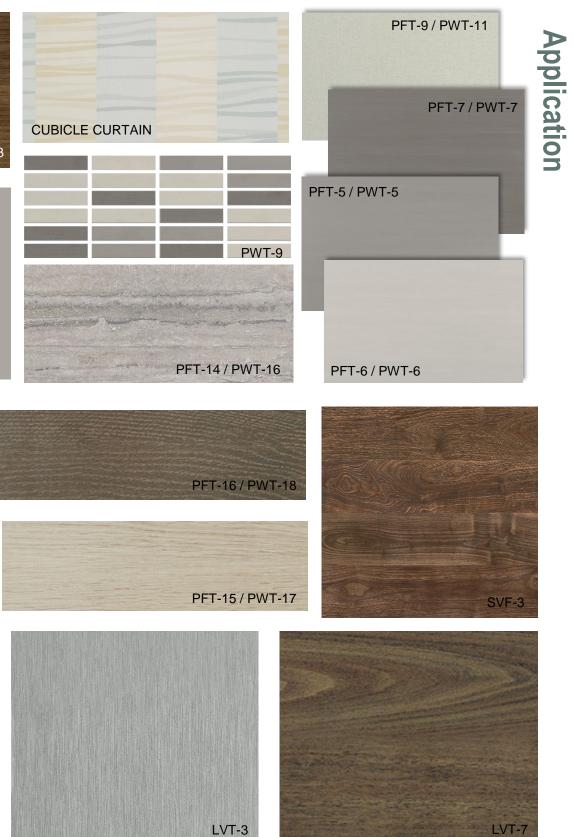






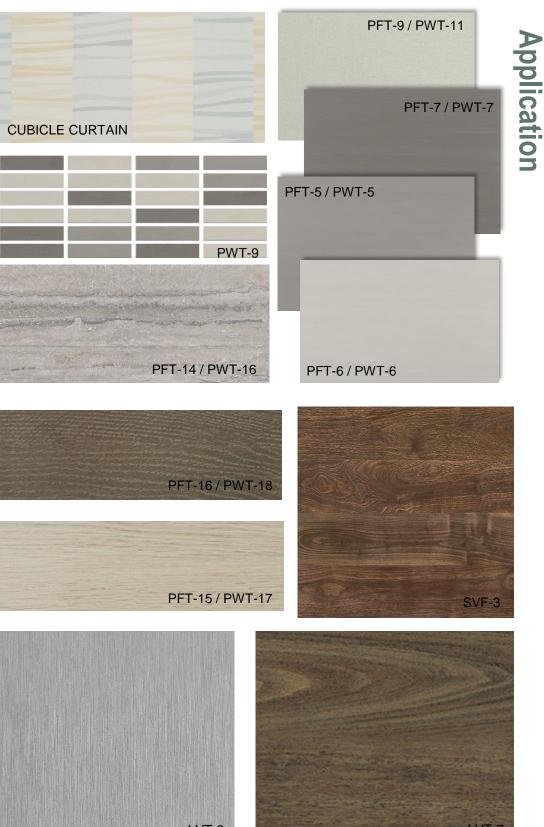




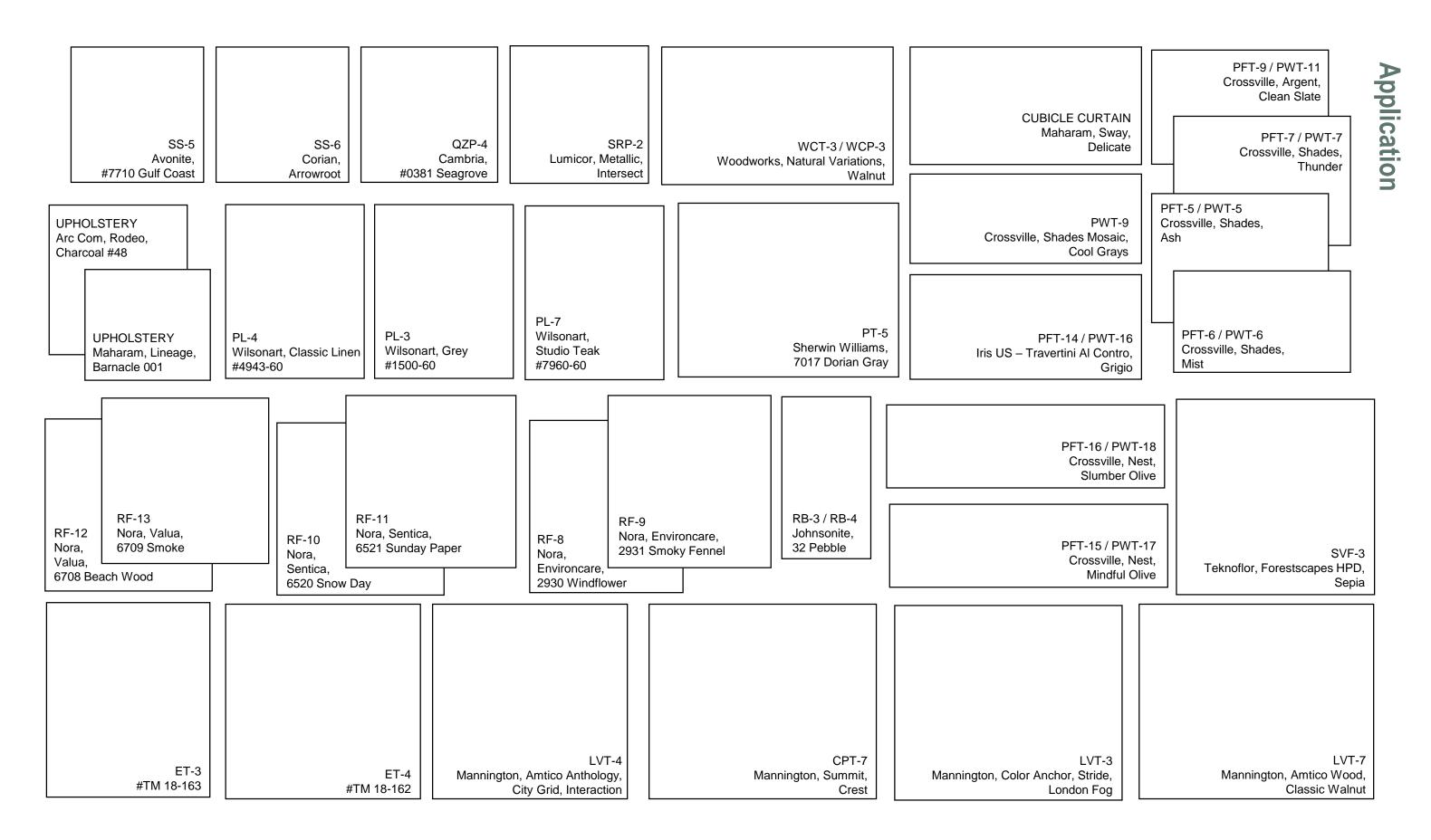








COLOR SCHEME PALETTES 4.2 **COOL NEUTRAL**



COLOR SCHEME PALETTES COOL NEUTRAL 4.2

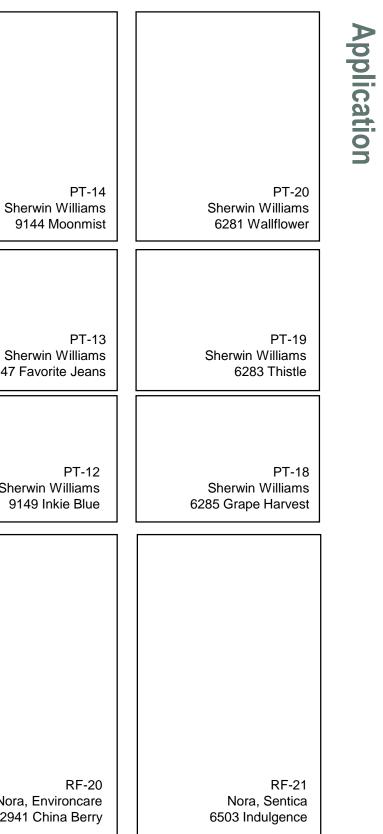
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COLOR SCHEME PALETTES COLORS 4.2



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COLOR SCHEME PALETTES COLORS 4.2



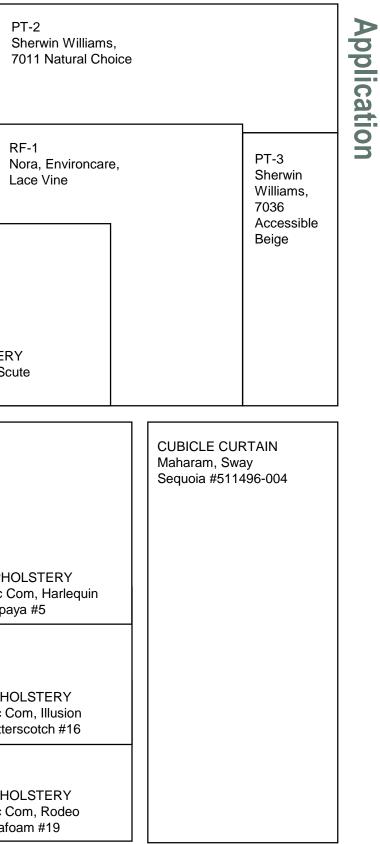




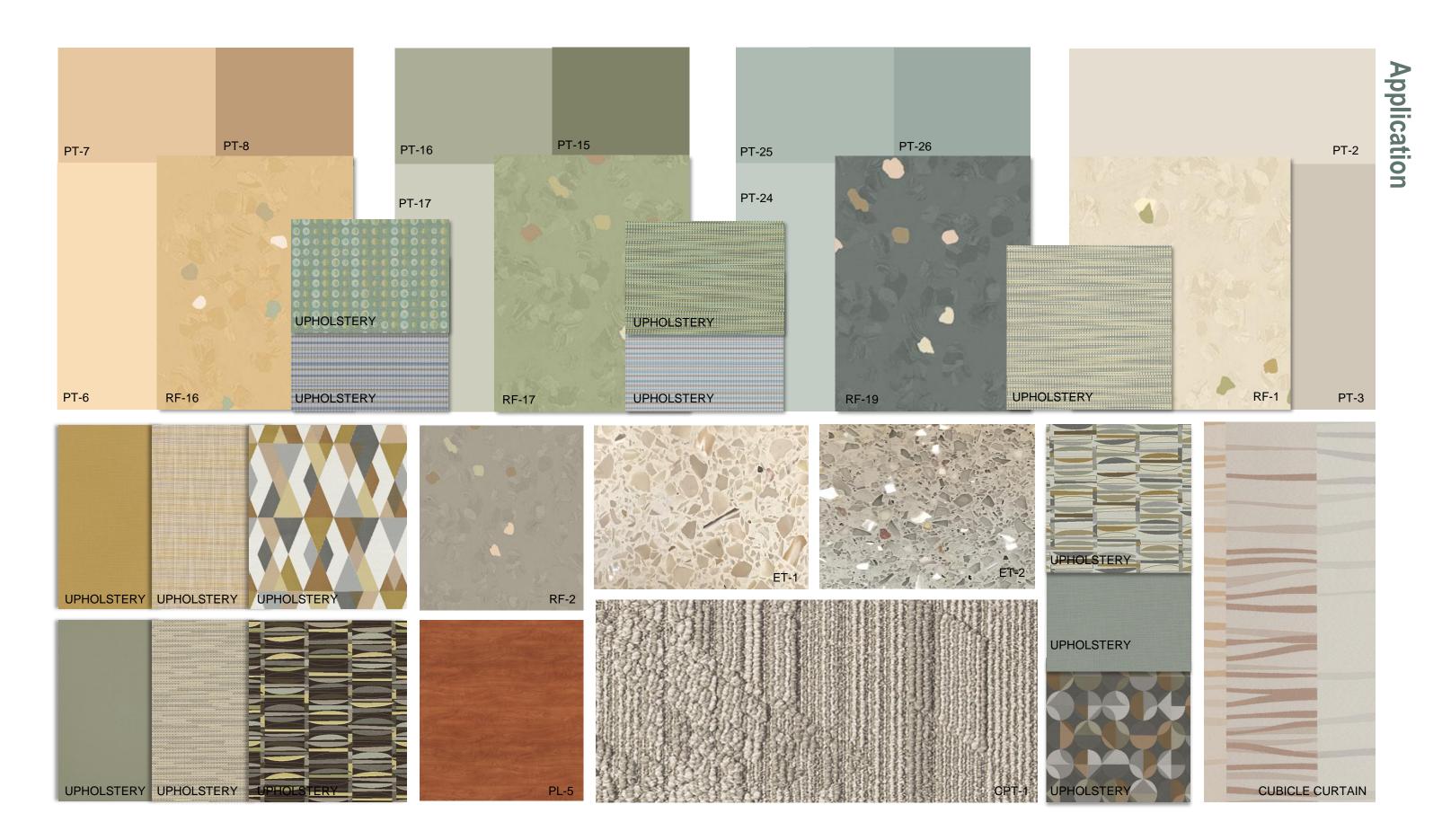
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COLOR SCHEME PALETTES



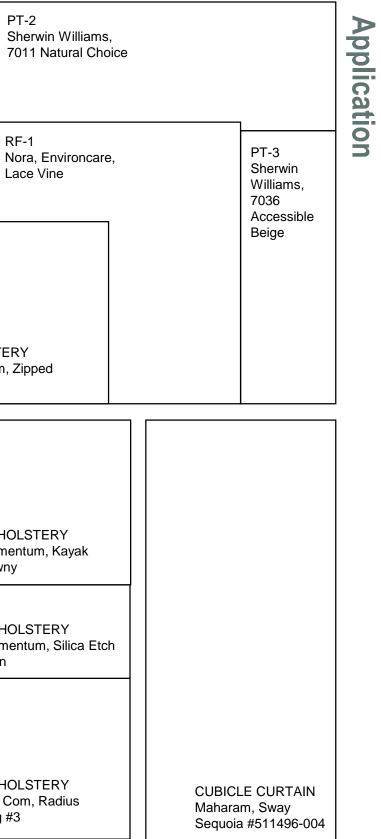
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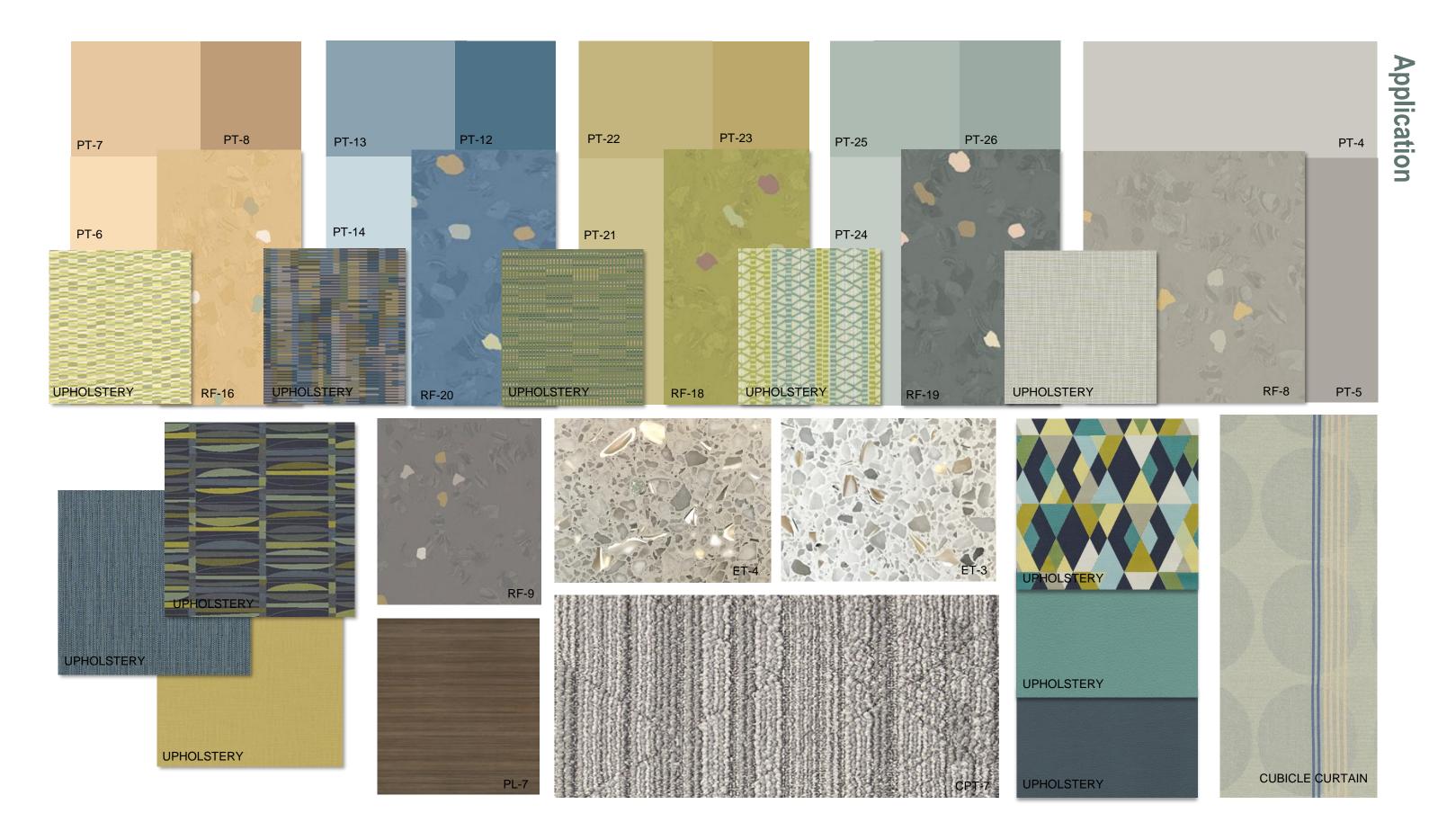


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COLOR SCHEME PALETTES

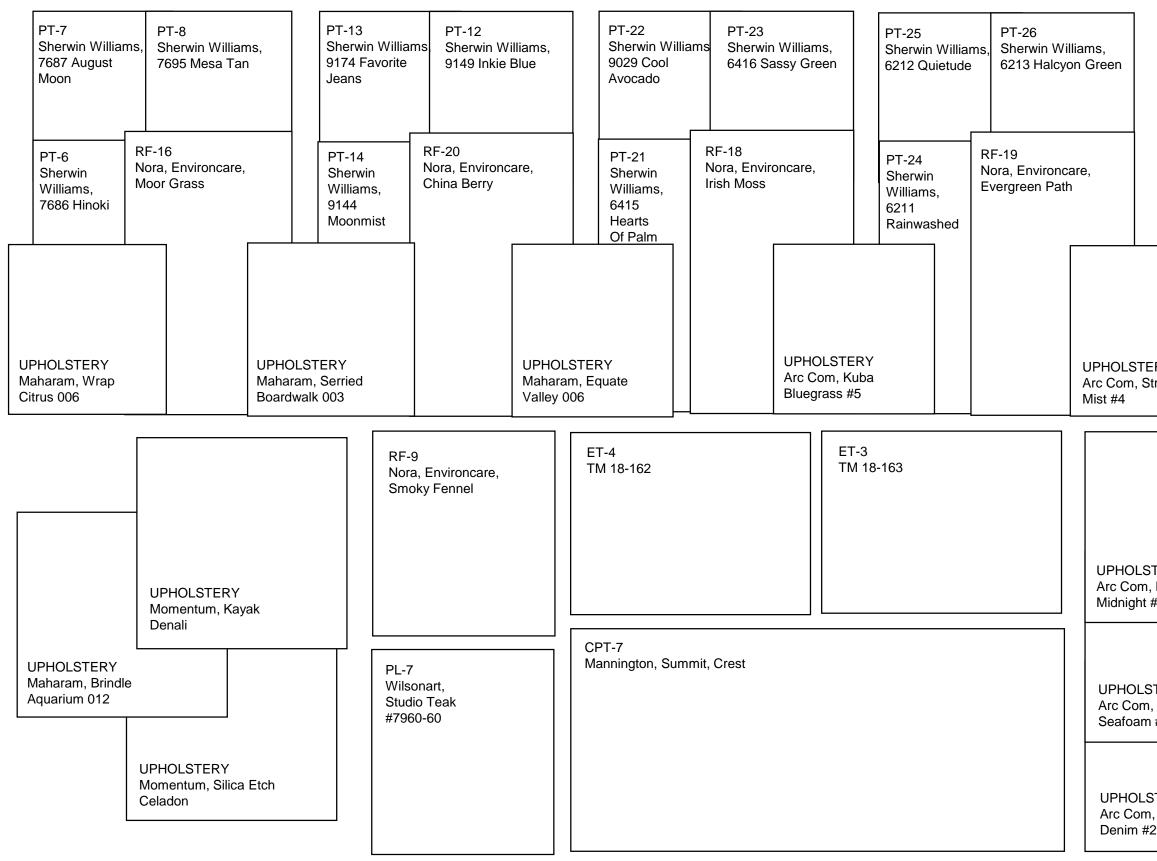


4.2





COLOR SCHEME PALETTES



COLOR SCHEME PALETTES

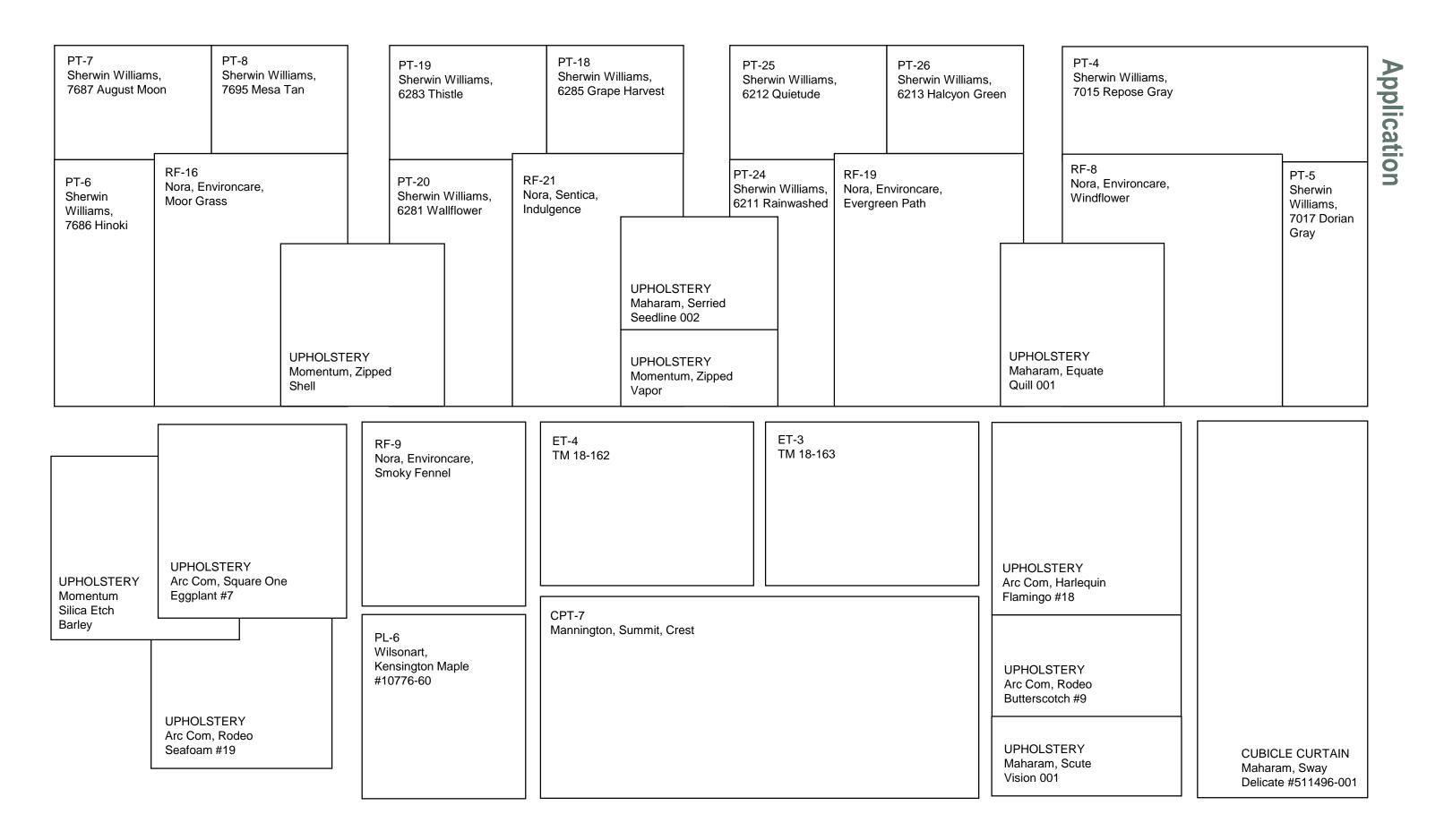


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RF-8 Nora, Environcare, Windflower	PT-5 Sherwin Williams, 7017 Dorian Gray	ON		
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COLOR SCHEME PALETTES
COOL





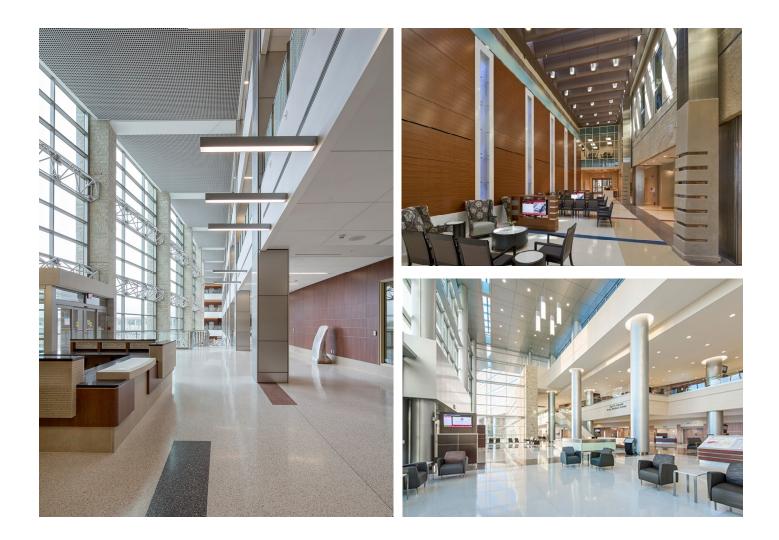
COLOR SCHEME PALETTES

4.2



4.3 Application Guide

Left: Irwin Army Community Hospital, Ft. Riley KS (JV: RLF/LAD); Right Upper: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Lower: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket)





The lobby presents the first impression to patients and visitors entering the healthcare facility, and conveys the "brand" or "story" of Army Medicine. An interior space featuring high-quality finishes and well-appointed furnishings will reinforce the perception that "world class" healthcare is provided at the facility. Upgraded finishes and furnishings are generally specified for these areas.

Floor: Provide flooring suitable for heavy traffic patterns and troop gatherings. Color and pattern additions will be minimal but thoughtfully placed to provide the greatest impact and aid in wayfinding. **Base:** The wall base is durable, typically same material as flooring and raised to a higher height for impact resistance.

Walls: Provide walls with a durable finish that can accommodate large seating areas and pedestrian throughput. Wall finishes also contribute to the aesthetic appeal of the space, as well as offer opportunities for artwork, signage, general information and branding.

Ceiling: Ceilings are required to provide acoustical sound attenuation in these larger spaces but also provide an opportunity for an aesthetic design with integrated lighting and mechanical systems. **Millwork:** Provide millwork finishes that are durable for high traffic patterns on both the facades and the countertop. If budget allows, quartz countertops and Fiber Reinforced Laminate or other strong durable materials for impact resistance may be used. Column Covers offer durability as well as aesthetic appeal.

Furniture: Furniture styles provide flexibility by offering a variety of seating arrangements. Seating is to feature high performance fabrics, wallsaver legs, replacement components and removable slipcovers. Fabric can be used on chair backs but a non-woven upholstery is to be used on the seats, preferably with an ink resistant feature. Arm caps are to be specified in either polyurethane or solid surface material.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Ensure that locations receiving 3-dimensional or heavy artwork have extra blocking in the walls or ceiling. Explore opportunities to utilize artwork in wayfinding. Select artwork that supports evidence-based design and provides a positive distraction to the viewer.

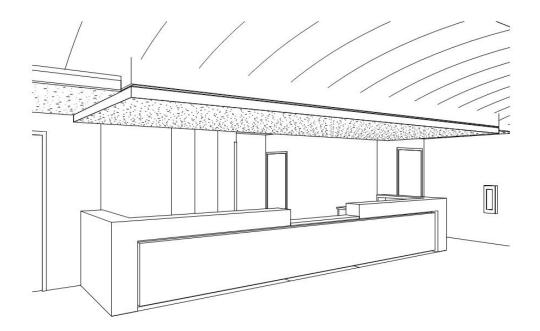
Signage: Signage should be minimal, intuitive and integrated within the design. With proper placement, minimal signage can provide directions required. Wayfinding cues found in flooring, walls and ceiling along with the design and placement of the reception desk can aid and supplement signage. All signage is to comply with ABA (Architectural Barriers Act) requirements.

Lighting: Provide natural daylight along with accented LED lighting or indirect lighting.

Scale: Furniture, artwork and lighting selected for lobby areas are to be specified in the appropriate scale, given that lobbies may present large voluminous spaces and may require products of a different scale than other areas of the facility.

Left: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD); Right Upper: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket); Right Lower: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD)





Floor: Flooring type will be dependent on the location of the desk. Floor patterns, if used, may reinforce the location of this desk. Color additions will be minimal.

Walls: Accent walls may be used to highlight the reception desk location.

Ceiling: Capitalize on opportunities for ceiling design to emphasize the reception desk location, which aids in wayfinding. Signage may be incorporated into the ceiling or soffit design.

Reception Desk: The reception desk may be systems furniture or built-in millwork. For both options, provide durable finishes for high abuse on both the facades and the countertop. Due to HIPAA (Health Insurance Portability and Accountability Act) requirements, patient privacy is to be considered in the design or layout of the desk as well as placement and orientation to nearby seating. Desk design is required to meet ABA (Architectural Barriers Act) requirements. Provide paper management tools (to organize pamphlet and hand-outs) at the desk area.

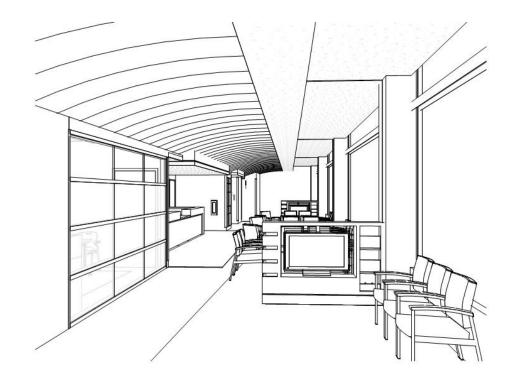
Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer.

Signage: Signage should be clear and concise and integrated within the design. All signage is to comply with ABA (Architectural Barriers Act) requirements. Wayfinding cues found in flooring, walls and ceiling along with the design and placement of the reception desk can aid and supplement signage.

Lighting: Natural daylight at reception and waiting areas is optimal here to support evidence-based design. Incorporate accent pendant lighting, LED lighting or indirect lighting.

Left: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD); Right Upper: Soldier Family Care Center, Ft. Bliss, TX (Hoefer Wysocki); Right Lower: Carl R. Darnell Army Medical Center, Ft. Hood, TX (HKS)





Floor: Depending on the location of the waiting area, the flooring may be an extension of the corridor and should be durable to accommodate heavy traffic patterns. Carpet tile may be used at some locations for aesthetics and to help with acoustics. More critical care spaces may utilize rubber flooring for durability and ease of maintenance.

Base: Provide base that is reflective of flooring material used.

Walls: Provide walls with a durable paint finish. Waiting wall provide opportunity for accent color / material placement or used as simple backdrop for artwork.

Ceiling: Ceilings should provide acoustical sound attenuation but also be aesthetically pleasing with integrated lighting and mechanical systems.

Furniture: Furniture styles provide flexibility by offering a variety of seating arrangements. Seating is to feature high performance fabrics, wallsaver legs, replacement components and removable slipcovers. Fabric can be used on chair backs but a non-woven upholstery is to be used on the seats, preferably with an ink resistant feature. Arm caps are to be specified in either polyurethane or solid surface material. Locate Queuing monitors for maximum visibility.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Ensure that locations receiving 3-dimensional or heavy artwork have extra blocking in the walls or ceiling. Explore opportunities to utilize artwork in wayfinding. Select artwork that supports evidence-based design and provides a positive distraction to the viewer.

Lighting: Natural daylight at reception and waiting areas is optimal here to support evidence-based design. Incorporate accent pendant lighting, LED lighting or indirect lighting. Window shades should be provided if direct sunlight and / or glare are issues. Shades are available in solar, electrical and manual.

Signage: Provide Signage that is clear and concise and integrated within the design. All signage is to comply with ABA (Architectural Barriers Act) requirements. Wayfinding cues are critical along paths to waiting areas and reception desks. Cues can be found in flooring, walls and ceiling can aid and supplement signage.

Left: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Upper: Ft Belvoir Community Hospital, Ft. Belvoir, VA (HDR); Right Lower: Evans Army Community Hospital, Ft. Carson, CO (DLR Group)







Corridor finishes will vary depending on location; for instance, main corridors (off of lobby spaces) may receive different finishes than patient corridors. In-patient hospital corridors will receive different finishes than "back-of-the-house" corridors and administrative corridors.

Floor: Reference the UFC 4-510-01 Appendix B for floor finish types at each location. Provide durable flooring for areas that receive heavy traffic (both pedestrian and wheeled). Provide intuitive flooring patterns that reinforce wayfinding. Select neutral flooring colors which are timeless and optimal for longevity. Ensure that color accents used in floor patterning is minimal and easy to change out.

Base: Base material will be dependent on the flooring system. Rubber bases are available in 4" and 6" heights.

Walls: Walls are to receive a durable paint finish but may also require a wall protection system depending on location. This wall protection system will include corner guards at a minimum. Handrails will be used at patient locations, crash rails will be added along all transportation paths and wall protection sheets may be incorporated into the design if budget allows.

Ceiling: Ceilings provide acoustical sound attenuation but are also to be aesthetically pleasing with integrated lighting and mechanical systems.

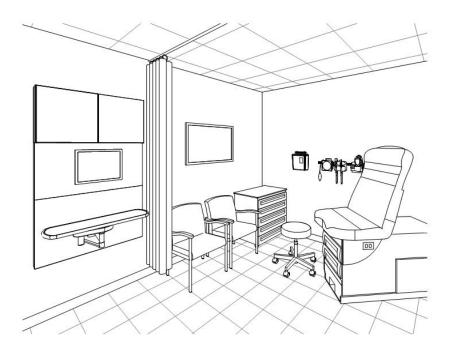
Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer. Explore opportunities to utilize artwork in wayfinding.

Signage: Signage should be minimal, intuitive and integrated within the design. All signage is to comply with ABA (Architectural Barriers Act) requirements. With proper placement minimal signage can provide directions required. Wayfinding cues found in flooring, walls and ceiling can aid and supplement signage. Ensure that overhead signage provided does not block the view of Exit Signage.

Lighting: Incorporate indirect lighting along stretcher travel paths. Lighting levels are required to comply with UFC 4-510-01.

Left: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Upper: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD); Right Lower: Troop Medical Clinic, Ft. Jackson, SC (HFPA)





Floor: Provide rubber tile flooring in exam spaces, per the UFC 4-510-01 Appendix B. Incorporate subtle floor patterns for aesthetic interest; ensure that color accents used in the floor patterning are minimal.

Base: Provide 4" high rubber base.

Walls: Provide walls with a durable paint finish. Accent walls may be used on a single wall to provide a nice aesthetic for the patient. Wall protection features may be used as required.

Ceiling: Provide ceilings with acoustical sound attenuation along with integrated lighting and mechanical systems. Privacy curtain tracks are to be provided for patient privacy. Ensure that track location does not interfere with lighting or mechanical systems.

Furniture: Select the physician's workstation from a variety of options (i.e., panel-supported systems product, wall mounted product, free-standing cart, etc.). Wall mounted product requires approval from Facilities Management and the HNC Medical Designer of Record. Provide guest chairs with open arm, metal frame, wallsaver legs and non-woven upholstery on seat and back. Ink resistant and anti-microbial finishes for the upholstery are recommended. Furniture upholstery offers a excellent opportunity for color and/or pattern; specify the chair upholstery in patterns and colors that coordinate with the privacy curtains and other elements in the space. Privacy curtains specified can be either fabric or disposable.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer.

Lighting: Provide lighting that meets the UFC 4-510-01 requirements. Indirect lighting is preferred. Take color index into account for proper physician diagnoses where flesh tone readings are important.

Signage: All signage is to comply with ABA (Architectural Barriers Act) requirements. Some signs may incorporate flag systems for occupancy use.

Hand Washing sinks: Explore option to change out porcelain lavatory sink to wall-mounted solid surface modular sink unit with off-set drain. Provide wall-mounted modular rail adjacent to sink unit that accepts soap dispenser, towel dispenser, anti-microbial gel, etc.

Left: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Upper: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD); Right Lower: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket)





Nurse stations should be easily identified on an in-patient floor or area.

Floor: Provide durable flooring for stretcher and wheelchair traffic. Incorporate subtle floor patterns to reinforce wayfinding and highlight nurse station locations; ensure that color accents used in the floor patterning are minimal.

Base: Provide suitable base material (either 4"-6" rubber wall base or an integral coved base), depending upon the location and design of the nurse station.

Walls: Provide walls with a durable paint finish. Walls may be accented to help accentuate and identify the nurse station.

Ceiling: Provide acoustical sound attenuation in the ceiling. The design of the ceiling / soffit can help in identifying the nurse station location and add to the aesthetics.

Millwork: Millwork is not generally specified for nurse stations, but if used, provide durable facades and countertops to withstand high abuse from carts and equipment. Select solid surface countertops and incorporate accent panels/lighting into the front of the nurse stations. Provide adequate wall protection, if necessary. Millwork can be combined with systems product (i.e., millwork "shell" with systems product storage and ergonomic accessories along the back side of the built-in desk). Ensure that millwork meets ABA (Architectural Barriers Act) requirements.

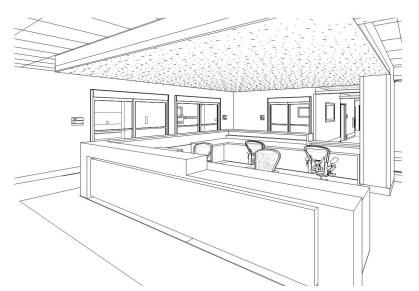
Furniture: Systems Furniture is preferred for use in creating the nurse station because of its flexibility in configuring and ease of maintenance and repair. Provide metal-based tile and frame system with additional wall protection, as necessary. Select solid surface countertops and durable tile surfaces to insert into the frames. Ensure the nurse station meets ABA (Architectural Barriers Act) requirements. Provide task seating that is highly adjustable, ergonomic and warranted for 24/7 (three-shift) operation.

Signage: Provide signage that is intuitive and integrated within the design. All signage is to comply with ABA (Architectural Barriers Act) requirements. With proper placement minimal signage can provide directions required. Wayfinding cues found in flooring, walls and ceiling along with the design and placement of the nurse station can aid and supplement signage.

Lighting: Provide indirect lighting with the required lumens for task intensive use; accent LED lighting can be incorporated for aesthetics. Provide under-counter lighting as an option.

Left: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket); Right Upper: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket); Right Lower: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD)





The Emergency department is typically busy, noisy and stressed-filled. Provide finishes and furnishings in this area that promote evidence-based design principles and provide positive distraction to the patients and visitors.

Floor: Provide durable flooring for heavy stretcher traffic and heat weld where required. Rubber flooring is preferred. Incorporate subtle floor patterns to reinforce wayfinding and highlight nurse station locations; ensure that color accents used in the floor patterning are minimal.

Base: Provide suitable base material (either 4"-6" rubber wall base or an integral coved base), depending upon the location.

Walls: Provide a durable paint finish on walls. Accent colors can help to alleviate stress if used properly and in soothing colors. Provide wall protection in this area to protect the walls and corners from cart and stretcher traffic.

Ceiling: Provide ceilings with acoustical sound attenuation that can be easily cleaned. Soffits can be introduced to provide interest and act as a backdrop for signage. Provide privacy curtains for patient privacy and ensure that track location does not interfere with lighting or mechanical systems. **Millwork:** Millwork is not generally specified for nurse stations, but if used, provide durable facades and countertops to withstand high abuse from carts and equipment. Select solid surface countertops and incorporate accent panels/lighting into the front of the nurse stations. Provide adequate wall protection, if necessary. Millwork can be combined with systems product (i.e., millwork "shell" with systems product storage and ergonomic accessories along the back side of the built-in desk). Ensure that millwork meets ABA (Architectural Barriers Act) requirements.

Furniture: Systems Furniture is preferred for use in creating the nurse station because of its flexibility in configuring and ease of maintenance and repair. Provide metal-based tile and frame system with additional wall protection, as necessary. Select solid surface countertops and durable tile surfaces to insert into the frames. Ensure the nurse station meets ABA (Architectural Barriers Act) requirements. Provide task seating that is highly adjustable, ergonomic and warranted for 24/7 (three-shift) operation.

Artwork: Artwork in the ED can act as a distraction and help alleviate stress if the images and colors are soothing and relate to nature.

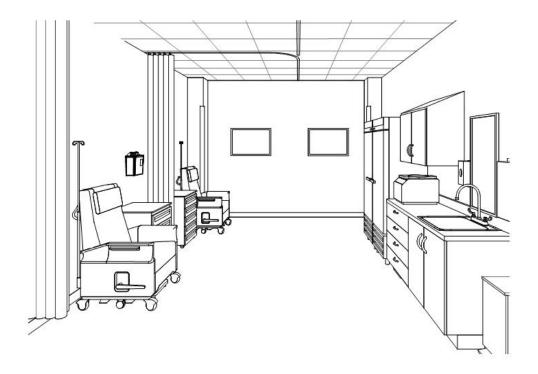
Signage: Provide signage that is intuitive and integrated within the design. All signage is to comply with ABA (Architectural Barriers Act) requirements. With proper placement minimal signage can provide directions required. Wayfinding cues found in flooring, walls and ceiling along with the design and placement of the emergency desk can aid and supplement signage.

Lighting: Provide lighting that meets the UFC 4-510-01 requirements. Indirect lighting is preferred. Take color index into account for proper physician diagnoses where flesh tone readings are important. Specific treatment lighting may be required in the ED bays.

4.3.8 LAB / BLOOD DRAW

Left: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket); Right Upper: Soldier Family Care Center, Ft. Bliss, TX (Hoefer Wysocki); Right Lower: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket);





Floor: Provide seamless rubber flooring, per the UFC 4-510-01 Appendix B. Incorporate subtle floor patterns for aesthetic interest; ensure that color accents used in the floor patterning is minimal.

Base: Provide integral base; typically 6" in height.

Walls: Provide an epoxy paint finish on walls for ease of maintenance.

Ceiling: Provide ceilings with acoustical sound attenuation and can be easily cleaned. Provide privacy curtains for patient privacy and ensure that track location shall not interfere with lighting or mechanical systems. Ceiling material will be dependent on location per the UFC 4-510-01 Appendix B.

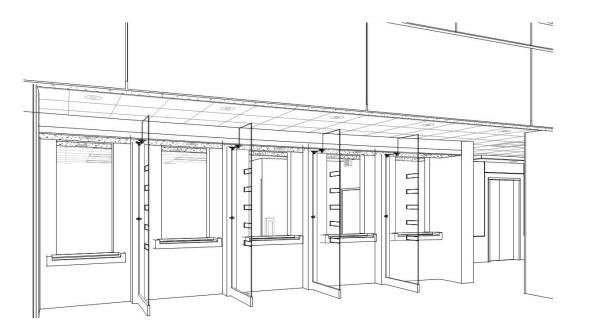
Furniture: Provide flexible systems product for laboratory areas, for ease of reconfiguration; systems product may include electrical raceways and plumbing chases where required. Ensure that counter heights are adjustable to accommodate equipment, and specify locking carts with storage drawers. Select the appropriate countertop material (chemical resistant, stainless steel, solid surface, epoxy resin, etc.) for the function. Provide adjustable height lab stools in a durable non-woven upholstery. Provide phlebotomy chairs that are adjustable, cleanable and have the ability to recline.

Lighting: Provide indirect lighting for general illumination.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer.

Left: Soldier Family Care Center, Ft. Bliss, TX (Hoefer Wysocki); Right Upper: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Lower: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD)





The pharmacy waiting area is one of the most highly utilized spaces within the hospital or clinic. Attention to acoustics, privacy and comfort in designing these spaces is important.

Floor: Provide durable flooring for heavy traffic patterns. Incorporate subtle floor patterns to reinforce wayfinding and highlight pharmacy window locations; ensure that color accents used in the floor patterning are minimal.

Base: Provide suitable base material, either 4"-6" rubber wall base or an integral coved base, depending upon floor material.

Walls: Provide walls with a durable paint finish but also provide an aesthetic appeal to the waiting areas incorporating accent walls.

Ceiling: Provide ceilings with acoustical sound attenuation along with integrated lighting and mechanical systems. Soffits can be introduced to provide interest and act as a backdrop for signage.

Millwork: Millwork, at pharmacy intake and dispensing windows, should have durable finishes at the countertop and front facade. If budget allows, quartz countertops and Fiber Reinforced Laminate or other strong durable materials for impact resistance may be used. Millwork is to be ABA (Architectural Barriers Act) compliant. Patient privacy for HIPAA (Health Insurance Portability and Accountability Act) compliance has to be considered in the design of these counters. Panel separation or other design elements that can be used to achieve this are required. Panels should be durable but can also add to the aesthetic appeal of the space. Review locations of TV monitors for viewing height. Locate Queuing monitors for maximum visibility.

Furniture: Provide flexible systems product for pharmacy areas, for ease of reconfiguration. Ensure that counter heights are adjustable to accommodate equipment. Provide adequate storage and dispensing bins within systems product for pharmacy use.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer.

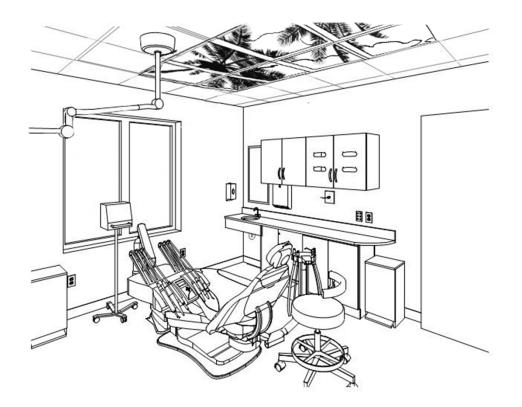
Signage: Provide signage that is intuitive and integrated within the design. Provide a sign system that is easy to read and understand; and works in conjunction with the Queuing system. All signage is to comply with ABA (Architectural Barriers Act) requirements.

Lighting: Provide natural daylight along with accented LED lighting or indirect lighting.

4.3 APPLICATION GUIDE 4.3.10 DENTAL TREATMENT

Left: Hagan Dental Clinic, Ft. Jackson, SC (HFPA); Right Upper: Presidio of Monterey, US Army Garrison, CA (RLF); Right Lower: Vicenza Army Health Care Center, Vicenza, Italy (RLF)





Floor: Provide flooring in treatment spaces, per the UFC 4-510-01 Appendix B. Incorporate subtle floor patterns for aesthetic interest; ensure that color accents used in the floor patterning are minimal. **Base:** Provide suitable base material, either 4"-6" rubber wall base or an integral coved base, depending upon floor material.

Walls: Provide walls with a durable paint finish. Accent walls can be used to provide interest to the treatment rooms.

Ceiling: Provide ceilings with acoustical sound attenuation along with integrated lighting and mechanical systems. Overhead ceiling transparency images can be added to provide interest for the patient.

Millwork: Provide millwork with durable finishes suited for the dental operatory suite. Unique configurations are available depending on operatory layout and use. Provide solid surface material on the countertops.

Furniture/Equipment: Dental treatment chairs and stools typically come as a package and can be coordinated in style, finish, upholstery and color.

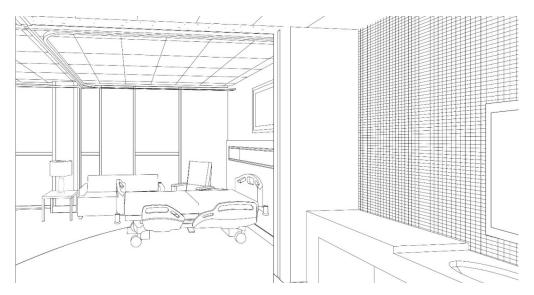
Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer. Incorporate "Healing Ceiling" image above dental exam chair, where possible.

Signage: Provide signage that is intuitive and integrated within the design. All signage is to comply with ABA (Architectural Barriers Act) requirements. With proper placement minimal signage can provide directions required. Wayfinding cues found in flooring, walls and ceiling can help and lead visitors to their destination.

Lighting: Provide natural daylighting accented with LED lighting or indirect lighting. Specific treatment lights are also required.

Left: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Upper: Ft. Belvoir Community Hospital, Ft. Belvoir, VA (HDR); Right Lower: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD)





Patient Rooms provide comfort, respite and a place of recovery for the patient. These rooms feature finishes and furnishings that are both aesthetically pleasing and meet infection prevention measures. Surfaces in these spaces are to have the ability to be aggressively cleaned and disinfected. Ensure that the patient has access to natural daylighting and views to nature.

Floor: Provide rubber tile flooring in these rooms, per the UFC 4-510-01 Appendix B. Provide flooring that is durable for wheeled traffic, especially under the patient bed. Epoxy adhesives may be required here. If flooring patterns are used, they should be simple, reinforce the design of the room and color should be minimal.

Base: Rubber base is typically used. Millwork base profiles may be used for aesthetics. Some facilities may require a 6" high base.

Walls: Provide walls with a durable paint finish for ease in cleaning and repair. Accent colors may be introduced for aesthetics. Colors should be subtle and soothing. Wall protection sheets may also be used to protect the walls from furniture and cart traffic.

Ceiling: Provide ceilings with acoustical sound attenuation along with integrated lighting and mechanical systems. Provide privacy curtains for patient privacy and ensure that track location does not interfere with lighting or mechanical systems. If a patient lift system is required, the privacy curtain track is to be designed around the patient lift system.

Millwork: Provide solid surface material on counters. Some solid surface materials offer a biocidal matrix that aids in infection prevention by killing bacteria. Integral seamless sinks are preferred and should have offset drains. The back wall of the sink with mirror offers an area for accent that will draw the eye. This can aid in reminding staff to wash their hands upon entering and leaving. Head and footwalls can be furniture or millwork. Footwalls will incorporate storage, in addition to lighting, seating and patient information boards. Millwork may include a "garage" to house the patient lift apparatus.

Furniture: Furniture will include a recliner, patient chair and a sleeper sofa. Metal frame chairs with urethane arm cap is preferred for durability, infection prevention and ease in maintenance. Include moisture barrier seats and non-woven upholstery with ink resistant and anti-microbial properties. Complimenting patterns can be introduced for overall room aesthetics.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer.

Signage: Incorporate patient precaution notices in the Signage at the patient room entry. All signage is to comply with ABA (Architectural Barriers Act) requirements.

Lighting: Optimize natural daylight in these rooms along with LED indirect lighting for overall illumination, exam lighting and ambient / reading lighting. Provide amber colored nightlights at the entry of the patient toilet.

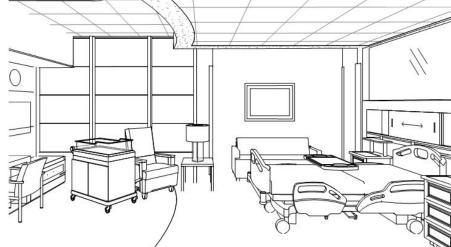
Window Shades: Provide patient operable dual window shades that control glare while allowing exterior views and provide room black-out.

Left: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Upper: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Lower: Carl R. Darnell Army Medical Center, Ft. Hood, TX (HKS)



APPLICATION GUIDE 4.3.12 LABOR & DELIVERY SUITE





Refer to UFC 4-510-01, Appendix B for the most current finish guidelines

Labor and Delivery suites provide comfort, respite and a place of recovery for the patient, and may offer accommodations for the newborn and family. These rooms feature finishes and furnishings that are both aesthetically-pleasing and meet infection prevention measures. Surfaces in these spaces are to have the ability to be aggressively cleaned and disinfected. Ensure that the patient has access to natural daylighting and views to nature.

Floor: Wood-look seamless vinyl flooring is typically provided in these suites. Epoxy adhesives may be required under the patient bed. If flooring patterns are used, provide simple patterns that reinforce the design of the room and minimal color, if any.

Base: Provide integral base of flooring material.

Walls: Provide walls with a durable paint finish for ease in cleaning and repair. Accent colors may be introduced for aesthetics in subtle, soothing tones. Wall protection sheets may also be used to protect the walls from furniture and cart traffic.

Ceiling: Provide ceilings with acoustical sound attenuation along with integrated lighting and mechanical systems. Provide privacy curtains for patient privacy and ensure that track location does not interfere with lighting or mechanical systems. If a patient lift system is required, the privacy curtain track is to be designed around the patient lift system.

Millwork: Provide solid surface material on counters. Some solid surface materials offer a biocidal matrix that aids in infection prevention by killing bacteria. Integral seamless sinks are preferred and should have offset drains. The back wall of the sink with mirror offers an area for accent that will draw the eye. This can aid in reminding staff to wash their hands upon entering and leaving. Head and footwalls can be furniture or millwork. Footwalls will incorporate storage, in addition to lighting, seating and patient information boards. Millwork may include a "garage" to house the patient lift apparatus.

Furniture: Furniture will include a glider / rocker, patient chair and a sleeper sofa. Metal frame chairs with urethane arm cap is preferred for durability, infection prevention and ease in maintenance. Include moisture barrier seats and non-woven upholstery with ink resistant and anti-microbial properties. Complimenting patterns can be introduced for overall room aesthetics.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer.

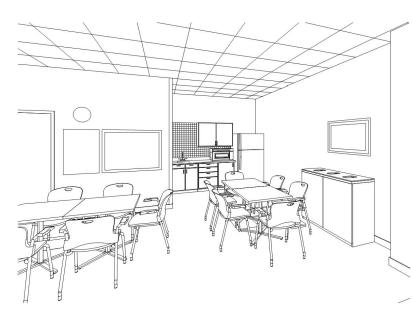
Signage: Incorporate patient precaution notices in the Signage at the patient room entry. All signage is to comply with ABA (Architectural Barriers Act) requirements.

Lighting: Optimize natural daylight in these rooms along with LED indirect lighting for overall illumination, exam lighting and ambient / reading lighting. Special procedure lighting may be required in the ceiling. Provide amber colored nightlights at the entry of the patient toilet.

Window Shades: Provide patient operable dual window shades that control glare while allowing exterior views and provide room black-out.

Left: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD);); Right Upper: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD); Right Lower: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket)





Finishes and layout of the room will vary depending on the room code. Staff lounges should be calming respite areas for staff to rejuvenate. Provide warm and comforting materials and finishes. Conference rooms may have more of a high tech, commercial aesthetic. Provide flexible spaces that can be easily changed.

Floor: Rubber or LVT flooring may be used in lounge / break rooms and in conference rooms that include a sink. Some conference rooms may use carpet tile which helps in acoustics. Provide simple flooring patterns with minimal color.

Base: Rubber base will be 4" height.

Walls: Provide walls with a durable paint finish. Accent walls can be used for aesthetics in subtle colorations. Wall protection sheets and / or chair rails may be used for wall protection.

Ceiling: Provide acoustical sound attenuation in the ceiling material. Conference rooms may have a more elaborate ceiling design that incorporates lighting types related to room function and mechanical systems.

Millwork: Provide solid surface on all counters.

Furniture: Provide furniture that is flexible and offers a variety of configurations. Provide furniture with metal frames. Provide breakroom chairs that stack and incorporate wallsaver legs. Provide non-woven upholstery with simple patterns. Conference chairs around the table may have 5 star bases with casters. Provide additional side chairs in the conference room that coordinate in style with the conference chair but allow flexibility by stacking. Tables may have a flip-top depending on shape and size. Incorporate power/data/communication connections in conference room tables. Credenzas can incorporate conference room equipment. Provide whiteboards and tackboards.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Select artwork that supports evidence-based design and provides positive distraction to the viewer.

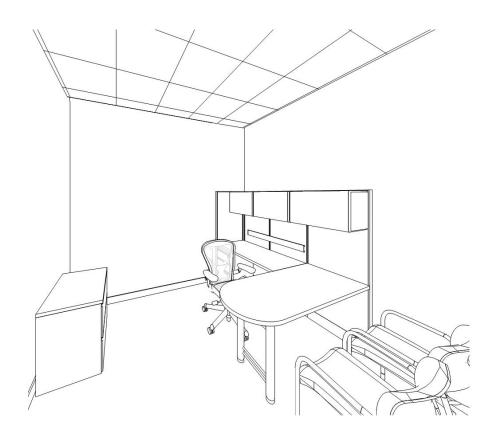
Lighting: Optimize natural daylight in breakrooms along with accented LED lighting or indirect lighting. Provide specialized lighting over conference tables that allow for a variety of lighting levels.

Signage: All signage is to comply with ABA (Architectural Barriers Act) requirements. Some conference room signage may include functions or features for scheduling and to let others know if the room is occupied.

Window Shades: Provide operable window shades that control glare. Black-out shades may be required in Conference room spaces.

Left: Irwin Army Community Hospital, Ft. Riley, KS (JV: RLF/LAD); Right Upper: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket); Right Lower: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket)





Floor: Provide either rubber tile flooring or carpet tiles, depending upon the room code and location. **Base**: Provide rubber base, 4" in height.

Walls: Provide walls with a durable paint finish. An accent wall may be incorporated.

Ceiling: Provide ceilings with acoustical sound attenuation along with integrated lighting and mechanical systems. Depending upon room code, privacy curtain tracks and privacy curtain may be required; ensure that track location does not interfere with lighting or mechanical systems.

Furniture: Furniture off of the IMMSS contract provides for free-standing (panel based) desk units utilizing power from wall outlets. Wall mounted furniture is not allowed. Follow the Military Health System (MHS) Templates for standard furniture layouts. Furniture systems and storage components are metal based for durability and longevity. Incorporate sit/stand desks where budget allows. Under shelf lighting will be provided. Add ergonomic tools to the workstation, such as keyboard tray, monitor arm and paper management. Provide ergonomic desk chairs with a 5 star base and operable arms. Provide open arm guest seating with a nonwoven upholstery for the seat; fabric chair backs with a pattern can be considered for room aesthetics.

Signage: Provide flexible room signage with removal inserts. All signage is to comply with ABA (Architectural Barriers Act) requirements.

Lighting: Follow UFC criteria for optimal lighting levels.

Left: Weed Army Community Hospital, Ft. Irwin, CA (JV: RLF/Ellerbe Becket); Right Upper: Carl R. Darnell Army Medical Center, Ft. Hood, TX (HKS); Right Lower: Martin Army Community Hospital, Ft. Benning, GA (JV: RLF/Ellerbe Becket)





The Dining space is the heart of any facility. It is where patients, family members and staff congregate together. This area needs to be a respite to staff and a calming, warm environment for family members. This space is also an extension of the lobby in terms of conveying the "brand" or "story" of Army Medicine. An interior space featuring high-quality finishes and well-appointed furnishings will reinforce the perception that "world class" healthcare is provided at the facility. Upgraded finishes and durable furnishings suitable for dining are generally specified for these areas.

Floor: Provide flooring suitable for heavy traffic patterns and troop gatherings. Color and pattern additions will be minimal but thoughtfully placed to provide the greatest impact and aid in wayfinding. **Base:** The wall base is durable, typically same material as flooring and raised to a higher height for impact resistance.

Walls: Provide walls with a durable finish that can accommodate large seating areas and pedestrian throughput. Wall finishes also contribute to the aesthetic appeal of the space, as well as offer opportunities for artwork, signage, general information and branding.

Ceiling: Ceilings are required to provide acoustical sound attenuation in these larger spaces but also provide an opportunity for an aesthetic design with integrated lighting and mechanical systems. **Millwork:** Provide millwork finishes that are durable for high traffic patterns on both the facades and the countertop. If budget allows, quartz countertops and Fiber Reinforced Laminate or other strong durable materials for impact resistance may be used. Column Covers offer durability as well as aesthetic appeal.

Furniture: Furniture styles provide flexibility by offering a variety of seating arrangements and heights. Seating is to feature high performance fabrics, wallsaver legs, replacement components and removable slipcovers. Fabric can be used on chair backs but a non-woven upholstery is to be used on the seats, preferably with an ink resistant feature. Arm caps are to be specified in either polyurethane or solid surface material.

Artwork: Provide artwork that complements the interior environment, is cognizant of the locale and is soothing to the eye. Ensure that locations receiving 3-dimensional or heavy artwork have extra blocking in the walls or ceiling. Explore opportunities to utilize artwork in wayfinding. Select artwork that supports evidence-based design and provides a positive distraction to the viewer.

Signage: Signage should be minimal, intuitive and integrated within the design.

Lighting: Provide natural daylight along with accented LED lighting or indirect lighting.

Scale: Furniture, artwork and lighting selected for dining areas are to be specified in the appropriate scale, given that dining areas may present large voluminous spaces and may require products of a different scale than other areas of the facility.



4.4 Budget / Life Cycle Costs

	Paint	Wall Protection Sheets	Wall Tile
Initial Cost	\$	\$\$\$\$	\$\$\$\$
Maintenance Cost per Year	\$	\$	\$
Composition	High Performance Latex; titanium dioxide and extender pigments	Polyvinyl Chloride (PVC) / Polyethylene Terephthalate Glycol (PETG)	Unglazed or matte glazed porcelain
Durability	Fair*	Excellent	Excellent
Stain Resistance	Good	Excellent	Excellent

\$ = Least Expensive \$\$\$\$ = Most Expensive * Requires wall protection (i.e., corner guards)

Note: All maintenance requirements for wall finish shall be in accordance with manufacturer's recommendations.

4.4

Application

FLOORING COMPARISON MATRIX

	Carpet	Porcelain Tile	Resin Flooring	Epoxy Resin Terrazzo
Initial Cost	\$	\$\$\$	\$\$	\$\$\$\$
Maintenance per year	\$\$	\$	\$\$	\$\$
Composition	Type 6,6 nylon (100% solution dyed)	Clay and Natural Minerals, Feldspar, and Silica	Polyurethane Mortar System with graded quartz aggregates	Resin with marble and/or glass aggregates
Durability	Good	Excellent	Excellent	Excellent
Recycled Content/ Rapidly Renewable Materials	45%-65% recycled materials	4% -7% pre- consumer recycled materials	n/a	23.3% pre- consumer & 23.3% post- consumer recycled materials
Hygienic Properties	No anti-microbial additives	Inherently anti- microbial when installed with epoxy grout	Inherently anti- microbial	Inherently anti- microbial
Stain Resistance	Contains additive for Soil and Stain Protection	Inherently stain resistant	Chemical Resistance	Products contain factory applied protection sealer
GreenGuard/ SCS Certified/ Green Label Plus	SCS; CRI Green Label Plus; NSF-140 Sustainable	Green Squared Certified	n/a	n/a
Benefits	Comfort underfoot; acoustically absorptive; cost efficient	Extremely durable, long-lasting floor finish	Extremely durable, long- lasting floor finish	Extremely durable, long- lasting floor finish
Challenges	Cleaning & soiling challenges; replacement every 10-15 yrs	Initial cost	Initial Cost, Aesthetics	Initial cost

Application

FLOORING COMPARISON MATRIX

	Luxury Vinyl Flooring	Rubber Flooring	Wood Sheet Vinyl
Initial Cost	\$\$	\$\$\$	\$\$
Maintenance per year	\$	\$	\$
Composition	Polyvinyl Chloride, Plasticizers, Pigments, and backing. Urethane Coating	Vulcanized rubber compound w/natural fillers and pigments	Virgin Polyvinyl chloride, Urethane Coating with Ceramic Bead
Durability	Good	Excellent	Excellent
Recycled Content/ Rapidly Renewable Materials	n/a	10% rapidly renewable materials	52% Post Consumer recycled materials
Hygienic Properties	Antimicrobial finish, no wax flooring, easy to maintain	Inherently resistant to bacteria, fungi and micro-organisms, no wax flooring, easy to maintain	Antimicrobial finish, Anti-Fungal, seamless application with heat weld, no wax, easy to maintain
Stain Resistance	Susceptible to scratching. Excellent stain resistance	Excellent stain & chemical resistance	Chemical Resistance
GreenGuard/ SCS Certified/ Green Label Plus	Floorscore Certified	Green Guard	Floorscore Certified
Benefits	Aesthetic, durable & cleanable	Acoustics; Comfort underfoot; Sustainable; Cleanability; Resists stains; slip- resistant; dimensionally stable; can be used in sterile and aseptic environments	Can be used in sterile and aseptic environments; excellent static load resistant
Challenges	Initial cost; environmental impact	Initial cost	Initial cost, aesthetics over time

CEILING COMPARISON MATRIX

Application

	Acoustical Ceiling Tile	Wood Ceiling Tile/Plank	Acoustical Ceiling Cloud
Initial Cost	\$	\$\$\$\$	\$\$\$
Maintenance per year	\$	\$	\$
Composition	Wet-formed mineral fiber with painted face.	Wood Veneer Biobased product available in perforated or unperforated with acoustical fleece backing	Variety of shapes and sizes. Standard ceiling tile, metal, wood tiles can be used in open accent grid.
Acoustics	Excellent	Fair	Excellent

CEILING COMPARISON MATRIX

	Metal Ceiling Tile	Healing Ceiling	Gypsum Board Ceiling
Initial Cost	\$\$\$	\$\$\$\$	\$\$
Maintenance per year	\$	\$\$	\$
Composition	Durable steel panels available in perforated or unperforated with acoustical fleece or infill backing	EcoPlus LED back lit light box, lens, and frame sit in ceiling tile grid	Gypsum wallboard
Acoustics	Excellent	N/A	Fair

Application

Application

CODE	MANUFACTURER	COLOR	MATERIAL PRICE/ SF	INSTALL PRICE / SF	
Carpet					
CPT-1	Mannington - Summit	Nomad	\$ 2.67	\$ 3.89	
CPT-2	Bentley - Roadside Attractions	Minister's Treehouse	\$ 3.56	\$ 4.67	
CPT-3	Masland - Lava	Inferno	\$ 2.49	\$ 3.60	
CPT-4	Bentley - Outlier	Frontier	\$ 3.56	\$ 4.67	
CPT-5	Bentley - Repose	Composure	\$ 3.56	\$ 4.67	
CPT-6	Bentley - Ritual	Composure	\$ 3.56	\$ 4.67	
CPT-7	Mannington - Summit	Crest	\$ 2.67	\$ 3.89	
CPT-8	Bentley - Roadside Attractions	Radon Health Mines	\$ 3.56	\$ 4.67	
CPT-9	Masland - Lava	Radiate	\$ 2.49	\$ 3.60	
CPT-10	Bentley - Outlier	Radiate	\$ 3.56	\$ 4.67	
CPT-11	Bentley - Repose	Social Conduct	\$ 3.56	\$ 4.67	
CPT-12	Bentley - Ritual	Social Conduct	\$ 3.56	\$ 4.67	
CPT-13	Mannington - Arroyo	Sediment	\$ 3.33	\$ 2.33	
		Approximate Price	\$ 3.24	\$ 4.20	
Porcelain I	Floor Tile				
PFT-1	Crossville - Shades	Vapor	\$ 4.72	\$ 9.72	
PFT-2	Crossville - Shades	Fog	\$ 4.72	\$ 9.72	
PFT-3	Crossville - Shades	Haze	\$ 4.72	\$ 9.72	
PFT-4	Crossville - Shades	Clay	\$ 4.72	\$ 9.72	
PFT-5	Crossville - Shades	Ash	\$ 4.72	\$ 9.72	
PFT-6	Crossville - Shades	Mist	\$ 4.72	\$ 9.72	
PFT-7	Crossville - Shades	Thunder	\$ 4.72	\$ 9.72	
PFT-8	Crossville - Argent	Winter Garden	\$ 5.08	\$ 10.08	
PFT-9	Crossville - Argent	Clean Slate	\$ 5.08	\$ 10.08	
PFT-10	Iris US - Travertini Al Contro	Argento Al Contro	\$ 3.75	\$ 8.75	
PFT-11	Crossville - Nest	Joyous Olive	\$ 5.30	\$ 10.30	
PFT-12	Crossville - Nest	Blissful Olive	\$ 5.30	\$ 10.30	
PFT-13	Mediterranea USA - Touch	Sun Glow	\$ 3.50	\$ 7.00	
PFT-14	Iris US - Travertini Al Contro	Grigio Al Contro	\$ 3.75	\$ 8.75	
PFT-15	Crossville - Nest	Mindful Olive	\$ 5.30	\$ 10.30	
PFT-16	Crossville - Nest	Slumber Olive	\$ 5.30	\$ 10.30	
PFT-17	Mediterranea USA - Touch	Pearl Essence	\$ 3.50	\$ 7.00	
		Approximate Price	-	\$ 9.46	

CODE	MANUFACTURER	COLOR	MATERIAL PRICE/ SF		STALL CE / SF
Terrazzo					
ET-1 - ET-4				\$	19.00
*Reference T	errazzo cost calculator insert.	Approximate Price		\$	19.00
Resinous Fl	ooring				
RES-1	Stonhard - Stonclad UR	Beechwood	\$ 6.00	\$	12.00
RES-2	Stonhard - Stontec TRF	Silver Sage	\$ 9.00	\$	14.00
RES-3	Stonhard - Stonclad UR	Pewter	\$ 6.00	\$	12.00
RES-4	Stonhard - Stontec TRF	Smokey Mountains	\$ 9.00	\$	14.00
		Approximate Price	\$ 7.50	\$	13.00
Rubber					
RF-1	Nora - Environcare	Lace Vine	\$ 6.50	\$	11.50
RF-2	Nora - Environcare	Whispering Fog	\$ 6.50	\$	11.50
RF-3	Nora - Sentica	Silk	\$ 6.50	\$	11.50
RF-4	Nora - Sentica	Cashmere	\$ 6.50	\$	11.50
RF-5	Nora - Valua	Mushroom	\$ 6.50	\$	11.50
RF-6	Nora - Valua	Pine Cone	\$ 6.50	\$	11.50
RF-7	Nora - Arago	Calm	\$ 6.50	\$	11.50
RF-8	Nora - Environcare	Windflower	\$ 6.50	\$	11.50
RF-9	Nora - Environcare	Smoky Fennel	\$ 6.50	\$	11.50
RF-10	Nora - Sentica	Snow Day	\$ 6.50	\$	11.50
RF-11	Nora - Sentica	Sunday Paper	\$ 6.50	\$	11.50
RF-12	Nora - Valua	Beach Wood	\$ 6.50	\$	11.50
RF-13	Nora - Valua	Smoke	\$ 6.50	\$	11.50
RF-14	Nora - Arago	Balance	\$ 6.50	\$	11.50
RF-15	Nora - Environcare	Fallen Acorn	\$ 6.50	\$	11.50
RF-16	Nora - Environcare	Moor Grass	\$ 6.50	\$	11.50
RF-17	Nora - Environcare	Sage	\$ 6.50	\$	11.50
RF-18	Nora - Environcare	Irish Moss	\$ 6.50	\$	11.50
RF-19	Nora - Environcare	Evergreen Path	\$ 6.50	\$	11.50
RF-20	Nora - Environcare	China Berry	\$ 6.50	\$	11.50
RF-21	Nora - Sentica	Indulgence	\$ 6.50	\$	11.50
		Approximate Price	\$ 6.50	\$	11.50

Note: All pricing should be verified by manufacturer at time of purchase.

4.4

Application

CODE	MANUFACTURER	COLOR		TERIAL CE/ SF		STALL CE / SF
Sheet V						
SVF-1	Teknoflor Forestscapes HPD	Sunrise	\$	3.26	\$	3.87
SVF-2	Teknoflor Forestscapes HPD	Natural	\$	3.26	\$	3.87
SVF-3	Teknoflor Forestscapes HPD	Sepia	\$	3.26	\$	3.87
		Approximate Price	\$	3.26	\$	3.87
Luxurv	Vinyl Tile					
LVT-1	Mannington - Color Anchor	Cottontail	\$	4.00	\$	4.56
LVT-2	Mannington - Amtico - Anthology	City Grid-Core	\$	4.00	\$	4.56
LVT-3	Mannington - Color Anchor	London Fog	\$	4.00	\$	4.56
LVT-4	Mannington - Amtico - Anthology	City Grid - Interaction	\$	4.00	\$	4.56
LVT-5	Mannington - Amtico - Wood	American Cherry	\$	4.00	\$	4.56
LVT-6	Mannington - Amtico - Wood	Maple	\$	4.00	\$	4.56
LVT-7	Mannington - Amtico - Wood	Classic Walnut	Ψ \$	4.00	φ \$	4.56
		Approximate Price	ф \$	4.00	φ \$	4.56
			Ψ	4.00	Ψ	4.00
Specialt	y Flooring					
Physical	Therapy					
SF-1	Connor Sports-ElastiPlus	#1019 Arid Bronze			\$	11.50
SF-2	Ecore- Galaxy RX	#2702 Beam me up beige	\$	6.33	\$	8.86
SF-3	Ecore- Galaxy RX	#2703 Princess Geya	\$	6.33	\$	8.86
SF-4	Connor Sports-ElastiPlus	#7001 Silver Mine			\$	11.50
SF-5	Ecore- Galaxy RX	#2706 Rastro Grey	\$	6.33	\$	8.86
SF-6	Ecore- Galaxy RX	#2708 Dark Vadar	\$	6.33	\$	8.86
SF-7	Ecore - Forest RX	#3360 Mahogany	\$	5.45	\$	7.63
SF-8	Ecore - Forest RX	#3290 Warm Beech	\$	5.45	\$	7.63
SF-9	Ecore - Forest RX	#9824 Aged Oak	\$	5.45	\$	7.63
		Approximate Price	\$	5.95	\$	9.04
Nutrition	Care					
SF-10	Stonhard-Stonclad UT	Beechwood	\$	7.50	\$	12.00
SF-11	Stonhard-Stonclad UT	Pewter	\$ \$	7.50	\$	12.00
		Approximate Price	φ \$	7.50	\$	12.00

CODE			MATERIAL PRICE/ SF				 ISTALL ICE / SF
	y Flooring				 		
Operating							
SF-12	Stonhard-Stonres RTZ	Santa Fe	\$	11.00	\$ 24.00		
SF-2	Ecore- Galaxy RX	#2702 Beam Me Up Beige	\$	6.33	\$ 8.86		
SF-3	Ecore- Galaxy RX	#2703 Princess Geya	\$	6.33	\$ 8.86		
SF-13	Stonhard-Stonres RTZ	Canvas	\$	11.00	\$ 24.00		
SF-5	Ecore- Galaxy RX	#2706 Rastro Grey	\$	6.33	\$ 8.86		
SF-6	Ecore- Galaxy RX	#2708 Dark Vadar	\$	6.33	\$ 8.86		
		Appoximate Price	\$	7.89	\$ 13.91		
Pharmac							
SF-14	SikaFloor- ComfortFloor Deco Pro	Beige 248	\$	5.00	\$ 16.00		
SF-2	Ecore- Galaxy RX	#2702 Beam Me Up Beige	\$	6.33	\$ 8.86		
SF-3	Ecore- Galaxy RX	#2703 Princess Geya	\$	6.33	\$ 8.86		
SF-15	SikaFloor- ComfortFloor Deco Pro	Gray	\$	5.00	\$ 16.00		
SF-5	Ecore- Galaxy RX	#2706 Rastro Grey	\$	6.33	\$ 8.86		
SF-6	Ecore- Galaxy RX	#2708 Dark Vadar	\$	6.33	\$ 8.86		
SF-7	Ecore - Forest RX	#3360 Mahogany	\$	5.45	\$ 7.63		
SF-8	Ecore - Forest RX	#3290 Warm Beech	\$	5.45	\$ 7.63		
SF-9	Ecore - Forest RX	#9824 Aged Oak	\$	5.45	\$ 7.63		
		Appoximate Price	\$	5.74	\$ 10.04		

4.4

WALL BUDGET / LIFE CYCLE COST

Application

CODE	MANUFACTURER	COLOR	MATERIAL PRICE/ SF		INSTALL PRICE / SF	
Paint						
PT-1	Sherwin Williams	7005 Pure White	\$	0.05	\$	0.85
PT-2	Sherwin Williams	7011 Natural Choice	\$	0.05	\$	0.85
PT-3	Sherwin Williams	7036 Accessible Beige	\$	0.05	\$	0.85
PT-4	Sherwin Williams	7015 Repose Gray	\$	0.05	\$	0.85
PT-5	Sherwin Williams	7017 Dorian Gray	\$	0.05	\$	0.85
PT-6	Sherwin Williams	7686 Hinoki	\$	0.05	\$	0.85
PT-7	Sherwin Williams	7687 August Moon	\$	0.05	\$	0.85
PT-8	Sherwin Williams	7695 Mesa Tan	\$	0.05	\$	0.85
PT-9	Sherwin Williams	6644 Champagne	\$	0.05	\$	0.85
PT-10	Sherwin Williams	6348 Reynard	\$	0.05	\$	0.85
PT-11	Sherwin Williams	6349 Pennywise	\$	0.05	\$	0.85
PT-12	Sherwin Williams	9149 inkie Blue	\$	0.05	\$	0.85
PT-13	Sherwin Williams	9147 Favorite Jeans	\$	0.05	\$	0.85
PT-14	Sherwin Williams	9144 Moonmist	\$	0.05	\$	0.85
PT-15	Sherwin Williams	6179 Artichoke	\$	0.05	\$	0.85
PT-16	Sherwin Williams	6178 Clary Sage	\$	0.05	\$	0.85
PT-17	Sherwin Williams	6176 Liveable Green	\$	0.05	\$	0.85
PT-18	Sherwin Williams	6285 Grape Harvest	\$	0.05	\$	0.85
PT-19	Sherwin Williams	6283 Thistle	\$	0.05	\$	0.85
PT-20	Sherwin Williams	6281 Wallflower	\$	0.05	\$	0.85
PT-21	Sherwin Williams	6415 Hearts of Palm	\$	0.05	\$	0.85
PT-22	Sherwin Williams	9029 Cool Avocado	\$	0.05	\$	0.85
PT-23	Sherwin Williams	6416 Sassy Green	\$	0.05	\$	0.85
PT-24	Sherwin Williams	6211 Rainwashed	\$	0.05	\$	0.85
PT-25	Sherwin Williams	6212 Quietude	\$	0.05	\$	0.85
PT-26	Sherwin Williams	6123 Halcyon Green	\$	0.05	\$	0.85
		Approximate Price	\$	0.05	\$	0.85

WALL BUDGET / LIFE CYCLE COST

CODE	MANUFACTURER	COLOR	MATERIAL PRICE/ SF		INSTALL PRICE / SF	
Porcelair	Wall Tile					
PWT-1	Crossville - Shades	Vapor	\$	4.72	\$	9.72
PWT-2	Crossville - Shades	Fog	\$	4.72	\$	9.72
PWT-3	Crossville - Shades	Haze	\$	4.72	\$	9.72
PWT-4	Crossville - Shades	Clay	\$	4.72	\$	9.72
PWT-5	Crossville - Shades	Ash	\$	4.72	\$	9.72
PWT-6	Crossville - Shades	Mist	\$	4.72	\$	9.72
PWT-7	Crossville - Shades	Thunder	\$	4.72	\$	9.72
PWT-8	Crossville - Shades Mosaics	Warm Grays	\$	4.72	\$	9.72
PWT-9	Crossville - Shades Mosaics	Cool Grays	\$	4.72	\$	9.72
PWT-10	Crossville - Argent	Winter Garden	\$	5.08	\$	10.08
PWT-11	Crossville - Argent	Clean Slate	\$	5.08	\$	10.08
PWT-12	Iris US - Travertini Al Contro	Argento Al Contro	\$	3.75	\$	8.75
PWT-13	Crossville - Nest	Joyous Olive	\$	5.30	\$	10.30
PWT-14	Crossville - Nest	Blissful Olive	\$	5.30	\$	10.30
PWT-15	Mediterranea USA - Touch	Sun Glow	\$	3.50	\$	7.00
PWT-16	Iris US - Travertini Al Contro	Grigio Al Contro	\$	3.75	\$	8.75
PWT-17	Crossville - Nest	Mindful Olive	\$	5.30	\$	10.30
PWT-18	Crossville - Nest	Slumber Olive	\$	5.30	\$	10.30
PWT-19	Mediterranea USA - Touch	Pearl Essence	\$	3.50	\$	7.00
		Approximate Price	\$	4.79	\$	9.79

4.4

4.4 BUDGET / LIFE CYCLE COSTS

WALL BUDGET / LIFE CYCLE COST

Application

CODE	MANUFACTURER		MATERIAL PRICE/ LF	INSTALL PRICE / LF
Wall Prote	ection			
Crash Rail				
	Acrovyn: #SCR-64N		\$ 15.00	*
		Approximate Price	\$ 15.00	
Chair Rail				
			¢ 00.00	*
	Acrovyn: #FR-251N	Approximate Price	\$ 80.09 \$ 80.09	
Hand Rail			• • • • • • • •	*
	Acrovyn: #HR-6CN		\$ 92.00	
	Acrovyn: #HRS-6C		\$ 27.00	*
	Acrovyn: HRB-4CN		\$ 22.00	*
	Acrovyn: #HRB-10CN		\$ 30.00	*
		Approximate Price	\$ 42.75	
Decorative	e Hand Rail			
	Koroguard - BellaLucent		\$ 55.00	\$ 71.50
		Approximate Price	\$ 55.00	\$ 71.50
Corner Gu	lards			
	Acrovyn: #CO-8	price per item	\$ 46.93	*
	Acrovyn: #SM-20N	price per item	\$ 31.21	*
	Acrovyn: #FS-20N	price per item	\$ 66.37	*
		Approximate Price	\$ 48.17	
Sheet Wa	Il Protection			
	Acrovyn 4000	price per 4'x8' sheet	\$ 64.44	*
		Approximate Price		
Wall Prote	ection Mural			
v ai i i ole	Acrovyn by Design	price per 4'x8' sheet	\$ 240.00	*
		Approximate Price		

* = Verify Install price with installer. Note: All pricing should be verified by manufacturer at time of purchase.

CEILING BUDGET / LIFE CYCLE COST

			N	IATERIAL	I	NSTALL	
CODE	MANUFACTURER	COLOR	Р	RICE/ SF	PRICE / SF		
Acoustic	al Ceiling Tile						
ACT-1	Armstrong - Ultima	1911 Tegular	\$	1.80	\$	4.00	
ACT-2	Armstrong - Ceramaguard	605 Square Edge	\$	3.49	\$	7.75	
ACT-3	Armstrong - Clean Room VL	868 Square edge	\$	2.59	\$	5.75	
ACT-4	Armstrong - Lyra	8730pb Tegular	\$	3.26	\$	7.25	
		Average Price	\$	2.79	\$	6.19	
Wood Ce	iling Tile / Plank						
WCT-1	Armstrong - Vector Panels	Dark Cherry	\$	20.25	\$	45.00	
WCT-2	Armstrong - Vector Panels	Natural Beech	\$	20.25	\$	45.00	
WCT-3	Armstrong - Vector Panels	Walnut NWN	\$	20.25	\$	45.00	
WCP-1	Armstrong - Linear Veneer Planks	Dark Cherry	\$	20.25	\$	45.00	
WCP-2	Armstrong - Linear Veneer Planks	Natural Beech	\$	20.25	\$	45.00	
WCP-3	Armstrong - Linear Veneer Planks	Walnut NWN	\$	20.25	\$	45.00	
		Average Price	\$	20.25	\$	45.00	
Metal Ce	iling Tile						
MCT	Armstrong - Metalworks Tegular		\$	6.30	\$	14.00	
		Average Price	\$	6.30	\$	14.00	
Acoustic	al Ceiling Clouds						
ACC	Armstrong - Formations Clouds		\$	7.65	\$	17.00	
		Average Price	\$	7.65	\$	17.00	
Gypsum	Board Ceiling						
GYP			\$	1.50	\$	8.50	
		Average Price	\$	1.50	\$	8.50	
Healing	 Ceiling						
	Sky Factory - Luminous SkyCeiling		\$	2,500.00	\$	2,780.00	
			pri		Luminous Tile		
		Average Price	\$	2,500.00	\$	2,780.00	

Application



4.5 Finish Schedule Examples

FINISH SCHEDULE EXAMPLES

Application

Room Name	Code	Floor	Base	Walls				Ceiling	STC	Notes
				NORTH	SOUTH	EAST	WEST			
Classroom/Training	CLR01	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Conference Room	CRA01	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Office, Command	OFC01	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Office, Private Admin	OFA01	СРТ	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Consult Room, Behavioral Health	OFDC2	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Inpatient Room, Behavioral Health	BRNP1	RTF	RB	PT-b	PT-b	PT-b	PT-b	PT-b	45	
Inpatient Room, Behavioral Health, Seclusion	BRNP5	RSF	ICB	PT-b	PT-b	PT-b	PT-b	PT-b	45	
Inpatient Toilet, Behavioral Health	TLTP1	PFT	PTB	PT-d	PT-d	PT-d	PT-d	PT-d	45	
Inpatient Toilet/Shower, Behavioral Health	TLTP3	PFT	PTB	PWT	PWT	PWT	PWT	PT-e	45	
Office, Behavioral Health Provider	OFDC1	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Dental Treatment Room, General	DNTG1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-1	40	
Dental Treatment Room, Surgery	DNTS1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	PT-e	40	
Conference Room, Emergency Operations	CROP1	SP	SP	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Exam, Emergency Room	EXER1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	PT-e	50	
Treatment, Emergency Care	TRET4	RSF	ICB	PT-e	PT-e	PT-e	PT-e	PT-e	50	
Consult Room	OFDC2	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Exam Room	EXRG1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Exam Room, Forensics	EXRG9	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-1	50	
Exam Room, OB/GYN	EXRG8	RSF	ICB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Exam Room, Pediatric	EXRG1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Exam Room, Speech-Language Pathology	EXOS1	RTF	RB	AF	AF	AF	AF	ACT-1	50	
Exam, Telehealth	EXTH1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Exam Room, Urodynamics	EXUD1	RSF	ICB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Eyelane	EYEL1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Immunization	OPIR1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Lab	LBSC1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-2	40	
Nurse Station	NSTA1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Office, Provider	OFD01	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Patient Room	BRMS1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Patient Room, Airbourne Infection Isolation	BRIT1	RSF	ICB	PT-b	PT-b	PT-b	PT-b	PT-b	45	
Patient Room, ICU/CCU	BRIC1	RSF	ICB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Patient Room, ICU/CCU, Airbourne Infection Isolation	BRII1	RSF	ICB	PT-b	PT-b	PT-b	PT-b	PT-b	45	
Patient Toilet/Shower	TLTS2	PFT	PTB	PWT	PWT	PWT	PWT	PT-e	45	
Team Room	OFA03	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Veterinary Exam/Treatment	VEX01	RSF	RB	PT-e	PT-e	PT-e	PT-e	ACT-2	50	
Waiting Room	WRC01	SP	SP	PT-b	PT-b	PT-b	PT-b	ACT-1	50	

Note: Refer to UFC 4-510-01, Appendix B for the most current finish guidelines and room codes. Refer to Volume 2, Section 1 for definition of finish codes.

4.5 FINISH SCHEDULE EXAMPLES

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Room Name	Code	Floor	Base	Walls				Ceiling	STC	Notes
				NORTH	SOUTH	EAST	WEST			
Labor & Delivery, LDR/LDRP	LDRP1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-2	45	
Labor & Delivery, LDR/LDRP Isolation	LDRP3	RSF	ICB	PT-e	PT-e	PT-e	PT-e	PT-e	45	
Lactation Room	LAC01	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Nursery	NYNN1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-2	50	
Nursery, Patient Education	NYPT1	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Nursery, Transport Unit Storage	NYTU1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
Patient Room, NICU	NYUN1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-2	50	
Medical Records	MRS01	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Oncology	OPCT1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Nurse Station, Operating Room	NSTA5	ET	ETB	PT-e	PT-e	PT-e	PT-e	PT-e	40	
Operating Room	ORGS1	ET	ETB	PT-e	PT-e	PT-e	PT-e	PT-e	45	
Operating Room, Equipment Clean Up	OREC1	RTF	RB	PT-e	PT-e	PT-e	PT-e	PT-e	45	
Operating Room, Equipment Storage	ORGE1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	PT-e	40	
Operating Room, Patient Prep/Induction	ORPP1	RTF	RB	PT-e	PT-e	PT-e	PT-e	PT-e	40	
Operating Room, Sterile Storage	ORSS1	ET	ETB	PT-e	PT-e	PT-e	PT-e	PT-e	45	
Triage	EXTR1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Patient Bay, Pre-Operative Holding/ Recovery	RRBP1	RTF	RB	PT-b	PT-b	PT-b	PT-b	PT-b	40	
Pharmacy	PHR01	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Pharmacy, Chemotherapeutics Compunding	PHC01	RTF	RB	PT-e	PT-e	PT-e	PT-e	ACT-2	40	
Pharmacy, IV Admixture	PHIV1	RTF	RB	PT-e	PT-e	PT-e	PT-e	ACT-2	40	
Physical Therapy	PTEA1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Chapel	RAMR1	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Dining	FSCD1	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Elevator Lobby	LOB03	ET	ETB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Food Service, Kitchen Areas	FSGB1	QT	QTB	PT-e	PT-e	PT-e	PT-e	PT-e	50	
Food Service, Servery Area	FSSL1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-1	40	
Food Serivce, Station	FSSS1	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-1	40	
Ganged Restroom	TLTM2	PFT	PTB	PT-b/CW	PT-b/CW	PT-b/C	PT-b/C	PT-b	45	
Office, Radiology	OFDR1	CPT	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	50	
Xray, Radiographic	XDR01	RTF	RB	PT-e	PT-e	PT-e	PT-e	ACT-1	40	
Changing Room	DR001	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Storage Room, Sterile	SRS04	RSF	ICB	PT-e	PT-e	PT-e	PT-e	ACT-2	40	
Clean Utility	UCCL1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	40	
Soiled Utility	USCL1	RTF	RB	PT-e	PT-e	PT-e	PT-e	ACT-1	40	
Staff Locker	LR002	RTF	RB	PT-e	PT-e	PT-e	PT-e	PT-e	40	
Staff Shower	SHWR1	PFT	РТВ	PWT	PWT	PWT	PWT	PT-e	45	
Staff Lounge	SL001	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	
On-call	DUTY1	RTF	RB	PT-b	PT-b	PT-b	PT-b	ACT-1	45	

Note: Refer to UFC 4-510-01, Appendix B for the most current finish guidelines and room codes. Refer to Volume 2, Section 1 for definition of finish codes.



5. Resources (Codes and Criteria)

Review the following documents for the most current and up-to-date information

Whole Building Design Guide (WBDG) - www.wbdg.org

- UFC 4-510-01 Design: Medical Military Facilities
- UFC 3-101-01 Architecture
- UFC 3-120-01 Design: Sign Standards
- UFC 3-120-10 Interior Design
- Military Health System (MHS) Templates (formerly "Guide Plates")
- MHS World Class Checklist Requirements, Executive Order 13514
- DOD –"ABA (Architectural Barriers Act) Accessibility Standard"
- Uniform Federal Accessibility Standards
- Life Safety Code, NFPA 101
- International Building Code (IBC)
- Facilities Guideline Institute (FGI)
- Behavioral Health Facility Consultants (BHFC) Design Guide for the Built Environment of Behavioral Health Facilities.
- Architectural Woodwork Standards (AWS)
- National Fire Protection Association (NFPA)
- NFPA 70 National Electrical Code
- NFPA 99 Health Care Facilities
- The Joint Commission (TJC) Environment of Care
- Occupational Safety and Health Administration (OSHA)
- · Business and Institutional Furniture Manufacturers Association (BIFMA)
- UL 94 Tests for Flammability of Plastic Materials for Parts in Devices and Appliances
- EM (Engineer Manual)-385-1-1, "Safety and Health Requirements Manual"
- ASTM (American Society for Testing and Materials) International
- American National Standards Institute (ANSI)
- LEED (Leadership in Energy and Environmental Design) for Healthcare
- American Society of Heating and Air-Conditioning Engineers (ASHRAE)