

# ARMY STANDARD DESIGN REQUIREMENTS FOR THE SMALL COMPACT CHAPEL FACILITY TYPE



AUGUST 2013

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Omaha District



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**ARMY COMPACT CHAPEL FACILITY STANDARD DEFINITIVE DESIGN**

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## ARMY COMPACT CHAPEL STANDARD DEFINITIVE DESIGN

### 1 INTRODUCTION:

#### 1.1 DEFINITIVE DESIGN:

This Standard Design package supersedes versions for this facility type previous to October 2014. It has been established after rigorous evaluation of Lessons Learned from the facilities designed and constructed from the 2004 Army Standard Design, from input by the members of the Army Facilities Standardization Committee (AFSC) and from Office of the Chief of Chaplains (OCCH) research of private sector churches begun in 2008 and extending over a period of several years. The Religious Education Facility (REF) elements were developed starting in 2008 with input from the OCCH, and panels of Directors of Religious Education, in addition to research into previous Religious Education Facility design. This Army Compact Chapel Standard Definitive Design has as its primary goal, the optimum support of military congregations of every sort. It can be used as a Troop Chapel (for a Training Center or TOE Unit), Post Chapel or Family Chapel. The facility will serve all faiths and the military community without favoring any one distinctive group in orientation or design. The facility is intended for use anywhere in the continental United States or overseas locations. Many features have been incorporated into the design of this facility to give it the maximum ability to adapt to the different needs of all distinctive faith groups and the general military community. This definitive Army Standard Design has been prepared to meet criteria established by the OCCH, and the corresponding Architectural and Engineering design criteria established by the Headquarters U. S. Army Corps of Engineers (HQUSACE) for each project. Within this document, the terms designer, offerer, and contractor are to be considered as synonyms. This better allows this narrative to apply to all of the different acquisition tools used to acquire specific projects. The size and arrangement of spaces, their relationship to one another, and the form of the building are to remain constant during further development of this Army Standard Design into specific projects. **Design goals for construction type, code compliance, sustainability (LEED, energy reduction and efficiency goals), security (anti-terrorism/force protection (AT/FP) and similar concerns) will need to be applied to specific projects as they are applicable.** These supplemental criteria will be identified for each specific project developed from this standard at the time project design work is authorized. The core functional criteria used in the development of this facility type are as follows:

- A. Support the worship services of all distinctive faith groups including the accommodation of various sub-types of services, to include sacramental, dedication, marriage, memorial and funeral ceremonies. Support religious education and instruction, chapel fellowship activities, chapel outreach programs, soldier ministry programs, family life ministry and religious pastoral care of many kinds.
- B. Support administrative activities necessary to operate and maintain the facility in a manner that ensures maximum support for the military community and the Garrison.
- C. To do so in a facility that provides the highest levels of personal safety, resource integrity and construction technology while also inspiring and encouraging the Army community and the individual user.

#### 1.2 SEATING CAPACITY AND SIZES:

- A. This Army Standard Design (family congregations) Small Compact Chapel facility type has fixed seating with capacity for “special occasion” events beyond the intended needs of the “regular” weekly congregation gatherings. Special activities (sponsored by both the Chaplaincy and the military community) and Memorial Ceremonies often draw military community members from many congregations which meet at other locations, as well as military community members that are not a part of any congregations. Consequently, far greater numbers of persons can be in attendance. As the primary large group gathering space, the Worship Center has been designed to accommodate this greater seating capacity while still maintaining a balanced feeling of intimacy for the regular weekly congregation gatherings. In addition, broadcasting technology, can allow other smaller spaces within

the facility to support remote viewing for attendance demands even greater than has been provided for in the Worship Center.

**B.** In addition, this facility has a Multi-Purpose Area for Religious Education related large gatherings, with non-fixed seating. This room has seating for around 200.

**C.** This size of the facility type is identified as a Small Compact Chapel. It is 65,937 square feet in area with a “regular” weekly congregation target of 200 persons and a special occasion/total capacity of 345 persons in the Worship Center.

### **1.3 COORDINATING FACILITY TYPES:**

#### **1.3.1 Functional Completeness:**

For most Army Chapel Standard Designs, the Chapels are intended to function in conjunction with and to coordinate with (on the same site when possible) a separate Religious Education Facility. In this Army Compact Chapel Standard Design, both the Chapel and Religious Education Facility building types have been combined into a single facility. Complete and appropriate support for Army congregations includes a long list of basic functions and ideally they should never be separated from one another. From a practical and communication point-of-view the total number of functions are often described as more-worship-related and more-religious-education-related. This coordinates with changes in religious activities over time and a resourcing policy that for many years planned on procuring religious worship and religious education facilities in separate actions (much as a typical householder might break up big family purchases into two purchasing events to match family cash flow). Changes in religious practice and dynamic growth have made it significantly more difficult for a modern congregation to function properly without the full range of functions and supporting spaces available to them. This same phenomenon is taking place in private sector congregations for most faith groups.

#### **1.3.2 The Army Condition:**

Separate Army Standard Designs exist for both Chapel Types and Religious Education Facilities. This separation allows for separate procurement, along with the ability to mix and match Chapels and Religious Education Facilities sizes to meet Garrison needs. A Garrison might be best served by a Medium Chapel, but may require an accompanying Large Religious Education Facility. However, separate facilities may take up more site area than a single building. The Compact Chapel Facility Type combines these separate functions into a single facility with the intent of allowing both of these functions to exist on a site when available square footage for religious projects may be severely limited.

#### **1.3.3 Complexes and Communities of Facility Types:**

This Army Standard Design (family congregations) Compact Chapel is intended to be a part of larger scale military communities made up of a multitude of other new facilities constructed as part of one extended period. Movement of troops and Congressional authorization for troop increases are both causes for these kinds on community development efforts. OCCH sponsored facility types are among those included in these military community developments. The corresponding Army Standards and Army Standard Designs apply and should be conformed to just as for any other sort of project.

### **1.4 ROOM FUNCTIONS AND REQUIREMENTS:**

**A.** Most space types are shared by all three sizes of Compact Chapels with proportional differences in quantity or area as appropriate.

**B.** Each space can be associated with either a Chapel function or a Religious Education function.

**C.** Chapel associated spaces include some individual offices for chaplains, group offices (Assistant’s Area) and other administrative spaces required for the Unit Ministry Teams. The major space of these

chapel facilities is a primary Worship Center or auditorium type space with a raised platform in addition to the seating area. Other spaces include a large group activity center, baptistery suite/changing rooms, kitchen/pantry/ suite, recycling-center, primary entry lobby (reception) area, sacristy/robing suite, an exterior covered area at the primary entry, general use multi-purpose rooms in multiple sizes and some special use suites. These specialized suites accommodate a number of special activities as well as being available for special worship use. Special activities might include blessed sacrament/reconciliation functions, choir rehearsal functions, and nursery functions. The suite concept allows some functions to expand into adjacent space when necessary. The goal is to allow each congregation or community group the optimum usable features for their activities in an environment where all share the benefits of a relatively flexible and extremely functional facility.

**D.** Religious Education associated spaces include a Multi-Purpose Area for use by a single or multiple groups as a meeting/event space. Other spaces include individual offices for Directors of Religious Education, a Youth Ministry Center, a Resource Center, small and large classrooms, a kitchen, a primary lobby (reception) area, a reception area, and a conference room.

**E.** In addition to these specific spaces each Compact Chapel will include appropriate circulation spaces, toilet facilities, storage spaces and equipment spaces for mechanical, electrical, communication and electronic equipment to support the total building and all of its functions. Carefully compare all of the criteria sections (such as Architectural, Interiors, and Electrical) when planning a specific design project.

**1.5 STANDARD DESIGN DRAWINGS AND INFORMATION:**

Copies of the drawing and text information that constitutes an Army Standard Design are available from the supporting Center of Standardization (Omaha) U. S. Army Corps of Engineers Omaha District, and numerous military web sites. The primary web site (the address potentially subject to change) to consult is:

"<http://mrsi.usace.army.mil/sites/cos/SitePages/Home.aspx>".

**1.6 MANDATORY ITEMS:**

The **Army Standards** for Chapel and Religious Education Facility design and construction define the mandatory items that must be included in each facility type. Both standards combined provide the mandatory requirements for the Compact Chapel Standard Design. These Army Standards refer to all sizes of Chapels and Religious Education Facilities, so some statements do not apply directly to the this size of Compact Chapel. Each Compact Chapel size is governed by the Standards for the Chapels and Religious Education Facilities of the same size. For example, the Medium Compact Chapel is governed by the Standards for the Medium Chapel and the Medium Religious Education Facility. The Army Standards also include minimum criteria for some things that the Army Standard Design includes more complete and sometimes more stringent criteria. These more stringent criteria are a requirement for any project design developed from this Army Standard Design. The Army Standards are reproduced as follows:

**1.6.1 Army Standards for General Congregation Chapels:**

<b>Item</b>	<b>Criteria:</b>
Site Selection and Planning	The Chapel should be in a visually prominent location that is appropriately related to the portion of the military community it is intended to serve. The site should also include space for an appropriate amount of parking and a bike rack. A location where adjacent existing parking lots are available during "off-hours" is an ideal arrangement for those times when special activities require additional space for parking. A complete Chapel "functional unit", capable of supporting the full slate of Chaplaincy programs, consists of a worship supporting component and a religious

	<p>education supporting component. When the worship supporting component is combined in a project with another Chaplaincy facility type such as the religious education supporting component, it will be referred to as a “Chapel Complex” and will incorporate a covered walkway between the chapel and religious education facility. The preferred arrangement is to have a site that supports both facility components. Providing separate but adjacent sites represents a number of functional compromises and will have a negative impact on function, but may be a practical necessity. Any requirement to separately site these facilities must be validated.</p>
<p>Primary Facility Scope and Capacity - "Worship Support Component"</p>	<p>Provide Chapels (and corresponding Religious Education Facilities) with primary space for occupant loads based upon authorized allowances to support a Garrison’s Army Stationing and Installation Plan (ASIP) population and the recognition that multiple congregations of varied faith groups will be sharing the buildings, often with overlapping activities. The Army Standard Design currently includes three sizes of worship support component facility. These size ranges and the provision requirements for them are as follows:</p> <p>Provide a Chapel Facility (Small) with a primary space for not less than 345 occupants. Provide a building scope of not less than 25,000 gross square feet.</p> <p>Provide a Chapel Facility (Medium) with a primary space for not less than 619 occupants. Provide a building scope of not less than 30,800 gross square feet.</p> <p>Provide a Chapel Facility (Large) with a primary space for not less than 1,181 occupants. Provide a building scope of not less than 48,400 gross square feet.</p> <p>The Basis of Authorization. The Chapel will be authorized on Garrisons IAW the step function criteria found in the Real Property Planning and Analysis System (RPLANS) IAW the data provided by the Office of the Chief of Chaplains, the HQDA functional proponent for religious facilities.</p>
<p>Worship Center</p>	<p>Provide a column free Worship Center space with a balcony. Balcony shall have two primary stairwells leading to the main floor and one secondary rear stairwell. Worship Center ceiling height will not be lower than 20-feet above the floor. Provide fixed, padded pews with padded kneelers. Pew sections must be oriented in arc arrangement towards center of raised platform. Pew capacity: not less than 345 persons in the Small Chapel, not less than 619 persons in the Medium Chapel, and not less than 1,181 persons in the Large Chapel. The required net area for this space shall be not less than 10,700 square feet (SF) for the Small Chapel, not less than 12,500 SF for the Medium Chapel, and not less than 17,800 SF for the Large Chapel.</p>



Immersion Baptistery	Provide an Immersion Baptistery with separate male/female changing areas, located adjacent to the Worship Center of not less than 700 SF for the Small Chapel, not less than 800 SF for the Medium Chapel, and not less than 1,300 SF for the Large Chapel.
Worship Center Religious Fixtures	Fixed, exposed-to-view distinctive religious symbols are not permitted.
Activity Center	Provide an Activity Center that is separate from the Worship Center of not less than 3,100 SF for the Small Chapel, not less than 3,900 SF for the Medium Chapel, and not less than 5,800 SF for the Large Chapel.
Activity Center Storage	Provide the capability to store Activity Center tables, chairs, and a portable stage where readily and easily accessible. (Size requirements for the Activity Center Storage are captured in the overall Storage Room(s) requirements).
Worship Center /Activity Center Audiovisual System	Provide an audio/visual system with multimedia projection capability for separate or simultaneous use in Worship Center, Activity Center, and Multi-Purpose Rooms by separate groups with the potential for feeding any and all of the signals into the Cry Room, Nursery, Nursing Mothers Room, Kitchen, Office Rooms, and the activity and classroom spaces in the adjacent religious education facility when sited together with this facility or to a remote or future location. The sound and visual aspects of the system and the spaces shall be coordinated for optimum line of sight and sound clarity (i.e. see, hear and understand) by a certified audio/visual technician. The media system must be supported by a control space located in the balcony that is open to the Worship Center. Control space shall be NLT 200 SF.
Administrative Offices	Provide not less than two chaplain offices for the Small Chapel and not less than three for the Medium and Large Chapels. Each facility of any size shall have not less than one NCO office and one group chaplain assistant work area. The required net area for this suite of spaces shall be not less than 700 SF for the Small Chapel and not less than 1,040 SF for the Medium and Large Chapels.
Multi-purpose Rooms	Provide not less than two Multi-purpose Rooms. The required net area for these spaces (when added together) shall be not less than 1,800 SF for the Small Chapel, not less than 2,200 SF for the Medium Chapel, and not less than 3,500 SF for the Large Chapel.
Choir Room	Provide a Choir Practice and Preparation Room of not less than 360 SF for the Small Chapel, not less than 500 SF for the Medium Chapel, and not less than 700 SF for the Large Chapel.
Blessed Sacrament Room	Provide a Blessed Sacrament Room (single space with expansion capability to an adjacent storage/flex space via an operable partition) of not less than 300 SF.
Sacristy Suite	Provide a Sacristy Storage/Robing area of not less than 300 SF.
Kitchen Suite	Provide a kitchen which accommodates two separate food preparation and pantry areas in support of distinctive faith group requirements. Kitchen will support the keeping and serving of pre-prepared foods (using residential type appliances) of not less than 260 SF for the Small Chapel, not less than 340 SF for the Medium

	Chapel, and not less than 500 SF for the Large Chapel.
Toddler and Infant Support Rooms	Provide a Cry Room with glass viewing panels connected to the Worship Center and three additional rooms for the support of small children of not less than (for this suite of spaces) 500 SF for the Small Chapel, not less than 700 SF for the Medium Chapel, and not less than 900 SF for the Large Chapel.
Toilet Facilities	Provide separate adult and children toilet facilities. Provide not less than 4 separate adult toilet facilities and not less than 1 separate children's toilet facility in the Small, Medium and Large Chapels. Provide toilet fixtures at a quantity per the Unified Facilities Criteria requirements for the building population. All toilets will provide the appropriate user access to urinals, lavatories, soap dispensers, paper towel dispensers and toilet tissue dispensers. Toilets will be well-lighted. Provide a total toilet area of not less than 730 square feet in the Small Chapel, 870 square feet in the Medium Chapel, and of not less than 1,320 square feet in the Large Chapel. Provide two separate wash rooms (one male, one female) within the toilet rooms that accommodate Islamic worship requirements.
Entrance Areas	Provide primary and secondary entry areas, each with covered porch and integrated access for persons with disabilities. The facility plan may be mirror-imaged so that the primary entrance can relate appropriately to the major sections of parking. Other special purpose entrances and exits are also required as appropriate.
Coat Storage Room	Provide a minimum of one coat storage room located adjacent to primary entrance area. Providing a smaller area adjacent to the secondary entrance is also recommended.
Storage Rooms	Provide 14 storage rooms to store tables, chairs, and portable stage from the activity Center, and multipurpose room(s). Provide not less than 1,740 SF for the Small Chapel, not less than 2,060 SF for the Medium Chapel, and not less than 3,030 SF for the Large Chapel.
Storage Building	Provide a separate storage building (not less than 150 SF), except where a Garrison has all yard and paving maintenance contracted out to others.
Exterior Appearance	Provide a steeple to identify it as religious facility.
Exterior Windows	Provide windows with capability for light control in all exterior rooms. Skylights or other natural light providing devices are not permitted in the Worship Center/Activity Center.
HVAC	Provide a minimum of 4 heating/cooling zones in HVAC system.
Media Control Equipment Support Devices	Provide mezzanine level control consoles and a main floor preparation room to support the various facility activities. Provide space for the support of secure or remote equipment.
Energy	Facilities shall be designed in compliance with all statutes and policies regarding energy conservation.
Sustainable Design Development	Facility shall be designed to meet current sustainable design and development policy requirements as established by the Department

	of the Army.
Recycling Area	Provide a recycling area of not less than 80 SF in the large, medium, and small facilities. Every effort will be made to facilitate recycling/green facility operation.
Accessibility	The Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be met.

**1.6.2 The Army Standard for Religious Education Facilities**

<b>Item</b>	<b>Criteria:</b>												
Site Selection and Planning	Locate the Religious Education Facility in an area that is centrally located in relation to housing areas and chapel facilities on the Garrison master plan. Ensure the site includes sufficient parking and a bike rack.												
Primary Facility Scope and Capacity	<p>Provide a Religious Education Facility (Small) with a primary space for not more than 250 occupants. Provide a building scope of not less than 22,500 gross square feet.</p> <p>Provide a Religious Education Facility (Medium) with a primary space for not more than 500 occupants. Provide a building scope of not less than 28,700 gross square feet.</p> <p>Provide a Religious Education Facility (Large) with a primary space for not more than 750 occupants. Provide a building scope of not less than 36,500 gross square feet.</p> <p>The Basis of Authorization. The Religious Education Facility (REF) will be authorized on Garrisons IAW the following criteria:</p> <table border="0"> <thead> <tr> <th>Population</th> <th>REF Size</th> </tr> </thead> <tbody> <tr> <td>1,601 to 10,000</td> <td>Small (22,500 SF)</td> </tr> <tr> <td>10,001 to 20,000</td> <td>Medium (28,700 SF)</td> </tr> <tr> <td>20,001 to 35,000</td> <td>Large (36,500 SF) *</td> </tr> <tr> <td>35,001 to 45,000</td> <td>Large *</td> </tr> <tr> <td>45,001 to 55,000</td> <td>Large *</td> </tr> </tbody> </table> <p>Notes:</p> <p>* Garrisons with populations over 20,000 will have at least one Large REF and will determine additional REF size requirements based on an analysis of the total square footage needed to support its population.</p> <p>** Requirement generated only where a chaplain is authorized.</p> <p>*** Deviations from REF sizes due to existing facilities will be requested from DACH-4/6/8/EN/Stratcom.</p> <p>Population is defined as:</p>	Population	REF Size	1,601 to 10,000	Small (22,500 SF)	10,001 to 20,000	Medium (28,700 SF)	20,001 to 35,000	Large (36,500 SF) *	35,001 to 45,000	Large *	45,001 to 55,000	Large *
Population	REF Size												
1,601 to 10,000	Small (22,500 SF)												
10,001 to 20,000	Medium (28,700 SF)												
20,001 to 35,000	Large (36,500 SF) *												
35,001 to 45,000	Large *												
45,001 to 55,000	Large *												

	<p>CONUS Population = Authorized Military Population + Dependent Population (Dependent Population = Military Population x 2.5)</p> <p>OCONUS Population = Authorized Military Population + Dependent Population + Civilian Population</p>
Director of Religious Education Offices	<p>Provide Director of Religious Education Offices for each DRE based on size of facility. They will be well lighted and allow for ample workspace. Each office will be not less than 150 square feet.</p> <p>Provide not less than 4 offices in the large facility, 3 offices in the medium facility, and 2 offices in the small facility.</p>
Youth Ministry Center	<p>Provide one Youth Ministry Center for Youth Workers. The area will be a shared work space for two Youth Ministry personnel of not less than 1,232 square feet in the large facility, 840 square feet in the medium facility, and 840 square feet in the small facility.</p>
Resource Center	<p>Provide one resource center with a space for a resource center coordinator in each facility. Provide an area of not less than 1,232 square feet in the large facility, 840 square feet in the medium facility, and 840 square feet in the small facility.</p>
Conference Room	<p>Provide one conference room per facility capable of seating a minimum of 25 people around a single table area and with enough room for chairs around the wall to seat up to 48 persons Provide an area of not less than 758 square feet in the large facility, 680 square feet in the medium facility, and 380 square feet in the small facility.</p>
Classroom (Small)	<p>Provide small classrooms with a storage cabinet for religious instruction/activities. Each small classroom will accommodate 16 students and two volunteers in an area of not less than 528 square feet. Storage cabinets will be not less than 20 square feet. Classrooms designated for infants/toddlers will have child appropriate sinks and toilets with half walls. Provide not less than 20 classrooms in the large facility, 16 in the medium facility and 12 in the small facility.</p>
Classroom (Large)	<p>Provide large classrooms with a storage cabinet for religious instruction/activities. The classrooms in the large facility will be equipped with a sound divider/partition. The storage cabinet will be not less than 12 square feet. Each large classroom will accommodate 35 students and 4 volunteers in an area not less than 850 square feet in the large and medium facilities and not less than 940 square feet in the small facility. Provide not less than 4 classrooms in the large facility, 2 in the medium facility, and 1 in the small facility.</p>
Multi-Purpose Area	<p>Provide not less than one Multi-Purpose area per facility with an area of not less than 3,900 square feet in the large facility, 3,528 square feet in the medium facility, and 2,482 square feet in the small facility.</p>
Kitchen	<p>Provide one full service kitchen complete with counter space, cabinets, and two separate food preparation and pantry areas outfitted with appliances and a double sink. Provide an area not less than 293 square feet in the large facility, 233 square feet in the medium facility, and 233 square feet in the small facility.</p>

Storage Rooms	Provide storage rooms for religious education supplies and equipment and to store tables, chairs and portable platform from the multipurpose room. Storage rooms will be strategically placed throughout the facility near groupings of classrooms, the Multi-Purpose Area, and the offices and conference room with combined storage capability of not less than 1,267 square feet in the large facility, 1,066 square feet in the medium facility, and 945 square feet in the small facility.
Toilets (Adult and Children)	Provide separate adult and children toilet facilities. Provide not less than 2 separate adult toilet facilities and not less than 1 separate children's toilet facility in the large, medium and small facilities. Provide toilet fixtures at a quantity per the Unified Facilities Criteria requirements for the building population. All toilets will provide the appropriate user access to urinals, lavatories, soap dispensers, paper towel dispensers and toilet tissue dispensers. Toilets will be well-lighted. Provide a total toilet area of not less than 1,570 square feet in the large facility, 1,440 square feet in the medium facility, and 1,419 square feet in the small facility.
Reception Area	Provide one reception area per facility with an area of not less than 388 square feet in the large facility, 388 square feet in the medium facility, and 196 square feet in the small facility.
Lobby Area	Provide lobby area that is welcoming, well-lighted and large enough to accommodate flow of traffic in and out. There will be a single multi-door entrance to allow for ease in monitoring of persons entering and exiting the facility. All other exterior doors will be considered fire safety exits rather than general entrance/exit locations. One office/admin space adjacent to the lobby area main entrance will have a large picture window for child safety/ monitoring purposes. Provide a lobby area of not less than 1,422 square feet in the large facility, 1,013 square feet in the medium facility, and 664 square feet in the small facility.
Hallways	Provide hallways that are well-lighted and ample for ease of movement of groups from one area of the facility to another without major disruption of other groups or activities. Hallways will be equipped with water fountains at both child and adult height.
Janitor's Closet	Provide a janitor's closet not less than 28 square feet in the large facility, 22 square feet in the medium and small facilities to store ample bathroom and cleaning supplies and equipment. Provide a mop sink with hot and cold running water.
Recycling/Vending Area	Provide a recycling area of not less than 172 square feet in the large and medium facilities and 160 square feet in the small facility. Every effort will be made to facilitate recycling/green facility operation.
Energy	Facilities will be designed in compliance with all statutes and policies regarding maximum energy conservation
Sustainable Design Development	Facility will be designed to meet current sustainable design and development policy requirements as established by the Department of the Army

Accessibility	The Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be met.
Child Protection	Child protection is a major consideration in the design of this facility. Facility will be designed in such a way that every office, conference room, resource area, storage room, classroom, every hall, lobby, and gathering space provides maximum possibility for line-of-sight monitoring of activity within the space to ensure that unauthorized personnel do not gain entry or that activities throughout the building can be monitored for utmost child safety and security.

### 1.6.3 Additional Criteria

Additional aspects of the facilities that are mandatory for each Compact Chapel facility are as follows:

- 1) The basic spaces and their arrangement as shown on the plan portion of this Army Standard Design package.
- 2) Appropriate vehicle and pedestrian elements including bicycle parking, sustainability features and landscaping features. The nature of the site and the needs of the specific users must be accommodated.
- 3) The separate storage building must exhibit the same materials and substantial looking construction as the chapel facility. While intended to store yard and sidewalk maintenance items not suitable for storage in the main building (due to small amounts of fuel, etc.) this building should not be treated as an unrelated construction of just any sort of material and appearance.
- 4) **Using the most up-to-date code and government criteria and general industry criteria in effect at the time of the design process.** In addition, the Center of Standardization maintains a specifically assigned Project Coordinator and a Technical Representative available to assist in the application of this Army Standard Design. The Technical Representative is particularly available to help with the host of historical and functional issues that led to its current form and should also be aware of the latest lessons learned and new developments not yet incorporated in the design, programming information and cost information. The Office of the Chief of Chaplains should also be contacted whenever a specific project is being proposed to get their assistance in developing programming data and current priorities.

### 1.7 OPTIONAL ITEMS:

- A. Optional Items that may be included in this facility are as follows:
  - 1) The provision of additional parking or access to existing adjacent parking to meet specific needs of the user or Garrison.
  - 2) The provision of additional equipment spaces or yards (program scope) to accommodate unusual specific climates.

THIS HEADING AND PAGE TO SUPPORT CONFLICTING FORMATTING NEEDS ONLY

## **2 SCOPE OF WORK:**

### **2.1 Small Compact Chapel:**

**A.** Provide an Army Standard Design Small Compact Chapel as defined herein with appropriate visual and structural adaptation to the assigned site. The Army Standard Design Small Compact Chapel is designed to support a “regular” weekly congregation approximately 200 person or less and includes a special occasion/total seating capacity of 345 persons in the Worship Center. Staff for Chapel related activities will generally be 6 persons, while variations and visitors to the administrative staff might range from 3 to 12 persons combined. Staff for Religious Education related activities will generally be 3 persons, although at times that number might grow to 34 total persons. Religious Education staff visitors might range from 4 to 8 total person, combined. Provide an enclosure for a dumpster and a small 150 SF exterior storage building for equipment needed to maintain the exterior property. The general concept behind the plan is to allow for the support of multiple faith groups’ religious activities with a minimum of spaces devoted to any particular faith group, and to provide for a great deal of flexibility in how each individual space might be used. Consequently, visual adaptations that focus on a particular faith group are not acceptable.

**B.** The basic floor plan as presented here has been developed to meet building functional, sustainable and programmatic requirements. Slight revisions to the floor plan to accommodate variations in structural members or to optimize sustainability and facilitate functionality are acceptable. Examples include, but are not limited to the following: the sizing and location of fenestration, interior door locations and minor wall placement changes.

**C.** Significant revisions to the floor plan that increase sustainability while preserving programmatic and functional requirements as outlined in the Army Standard may be considered. Recommended changes to the floor plan will only be approved after going through a waiver submission process as outlined by the Office of the Assistant Chief of Staff for Installation Management (OACSIM).

**D.** Due to the potential length of the review and approval process, the waiver process might not be feasible for a specific project.



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### **3 COMPACT CHAPELS:**

#### **3.1 GENERAL REQUIREMENTS:**

**A.** Provide an Army Standard Design Compact Chapel (facility type) as defined herein.

#### **B. Special Coordination Submittals:**

Provide the facility with a special list as a design submittal and again as an early construction submittal. This list will itemize the building features that are to be procured by the government to “fit” into the building fabric supplied by the constructor of the building. For example, a kitchen appliance that is not in the contract but is supported by casework, utilities, and similar features that are a part of the contract supplied “building fabric”. The list shall briefly describe the item and the depth/width/height being provided, the coordinating finishes/colors being provided, the utilities/capacities being provided and any other important note necessary for the government to properly select and purchase the item.

##### **3.1.1 Facility Description:**

Chapel requirements are for a facility intended to support the worship, fellowship, religious education, and varied gathering needs of general military congregations and some specialized congregations. The associated floor plan (provided) has been specifically developed to provide certain required functional capacities and benefits to the Army for this type of religious facility (especially with regard to supporting a wide range of relatively different faith groups) and is mandatory. It includes multiple sizes and types of spaces to allow the facility to better support a diverse religious and general military community. The circulation system and lobbies allow for a smoother flow of incoming and outgoing users as well as multiple groups of users at the same time or one group entering as a second is arriving. This feature also creates some basic acoustic separation between different space types. The design allows small children and special-needs users to be accommodated as well as adults and older children.

#### **A. Facility Goals for the Soldier Community:**

- 1) The facility is intended to support the worship services of all distinctive faith groups including the accommodation of various sub-types of services, to include sacramental, dedications, marriages, and memorial ceremonies. This includes supporting religious education and instruction, chapel fellowship activities, chapel outreach programs, soldier ministry programs, family life ministry and religious pastoral care of many kinds. These goals will impact the layouts and designs of casework, hardware, decorating features, etc.
- 2) The facility is intended to support administrative activities necessary to operate and maintain the Compact Chapel in a manner that ensures maximum support for the military community and the Garrison. These goals will impact finish choices, fitting quality and selection of features.
- 3) The facility is intended to provide the highest levels of personal safety, resource integrity and construction technology while also inspiring and encouraging the Army community and the individual user. These goals will also impact the layouts and designs of casework, hardware, decorating features, finish choices, fitting quality and selection of features.

#### **B. Facility Goals for Operating Staff:**

- 1) All of the individual and group activities require support from the Unit Ministry Teams (the assigned group of Chaplain Staff defined for each Garrison). In turn, these teams require support in the form of professional administrative, activity and personal counseling spaces. Team members will be seeking to support the military community members and their Garrison in three basic ways.

- a) The Unit Ministry Team is responsible for coordinating the use of all the different spaces by all the different users, many of which will be from the general Garrison military community. Good coordination will ensure the most efficient and effective use of the facility and the greatest number of satisfied users.
- b) The Unit Ministry Team is responsible for planning and producing a number of individual and group functions. These could range from counseling or instructing an individual to leading a large group religious activity.
- c) The Unit Ministry Team is responsible for managing the maintenance and operation of the facility and its supporting equipment systems in a way that provides a safe, economical and nurturing environment within the facility and extends the life of the facility to the greatest extent practicable. This will allow the facility to fulfill its mission for many years to come in a very cost effective manner.

### **3.1.2 Facility Relationships:**

**A.** For most Army Chapel Standard Designs, the Chapels are intended to function in conjunction with and to coordinate with (on the same site when possible) a separate Religious Education Facility. In this Army Compact Chapel Standard Design, both the Chapel and Religious Education Facility building types have been combined into a single facility on a single site. Complete and appropriate support for Army congregations includes a long list of basic functions and ideally they should never be separated from one another. In addition, this facility may relate to a wide variety of other Garrison facility types. Specific projects generally define the association preferences of individual Garrisons for each project. Sustainability and other community support considerations will also have an impact.

**B.** This facility should be located in proximity to other service facilities that large numbers of users will frequent on a regular basis. This could be near an exchange, headquarters building, or dining facility. This facility should not be located within purely residential areas because of the large number of vehicles that will be associated with the facility. This facility's location from the perimeter of the Garrison and from trash containers, roadways and parking lots will have an impact on what construction systems will be allowed (and vice versa) for the facility. This is described in UFC 4-010-01. Adjust the facility orientation on the selected site to take advantage of desirable views and according to recognized design principles. Parking acreage requirements for each facility will depend on the size of the facility, how the facility is used, and the availability of adjacent parking areas that may be used.

### **3.1.3 Accessibility Requirements:**

As chapels are government facilities to be utilized by the military, their families, and possibly civilian employees and visitors, it is intended that this facility be as accessible as possible and in accordance with the Architectural Barriers Act (ABA) Accessibility Standards for Department of Defense Facilities. Equipment rooms and closets are examples of exceptions.

#### **A. Counters:**

See Accessibility Standards for Department of Defense Facilities.

### **3.1.4 Building Areas:**

#### **A. General:**

While this document includes considerable guidance regarding building area, the depth and scope of other competing criteria can lead to a specific point of uncertainty. Contact the Center of Standardization for help clarifying any such questions that will assist in completing a specific design.

**B. Gross Area:**

Provide gross building area as directed. For some solicitations an “Appendix A - AREA COMPUTATIONS” will be provided and shall be used for this. Provide the gross building area as shown on the provided drawing. Note also that every building code, life safety code or similar document will want the gross and net areas of the building calculated a different way because they have to focus on specific issues. These other area computations are fine to include on design documents, per se, but must be included in the drawings and specifications with an appropriate label such as "Special Area for Exiting Calculations/Purposes Only:" The phrases "Gross Square Feet” or “Gross Square Footage” must be reserved for the definition herein if it is used on design or contract documents.

**C. Half Space:**

A comprehensive review of the drawings and associated calculations will reveal that there are features (canopies, for example) whose area is counted as one-half of actual in gross-area calculations and some features (inaccessible shafts and the thicknesses of partitions, for example) whose area is not specifically counted in net-area calculations.

**D. Net Area:**

Net space area is defined as the area measured to the inside face of the surrounding partitions or walls. Additional defining information will sometimes be included in an “Appendix A - AREA COMPUTATIONS” section. Provide net area requirements for functional spaces as defined in the Appendix A - AREA COMPUTATIONS, a part of this document. If net area requirements are not specified in the Statement of Work or Appendix A - AREA COMPUTATIONS, the space shall be sized to accommodate the required function, comply with code requirements, comply with overall gross area limitations and other recognized design principles.

**3.1.5 Adapt Build Model:**

When an Adapt-Build Model is available to use as a basis for design and/or construction, it will be posted on the Center of Standardization (CoS) web site, noted in solicitation documentation, or made available upon request as follows:

CoS Web Site address: <http://mrsi.usace.army.mil/cos/SitePages/Home.aspx>

CoS address: U. S. Army Corps of Engineers, Omaha District  
CENWO-ED-DG  
1616 Capitol Avenue  
Omaha, NE 68102-9000

Attn: CoS Technical Representative (Askelon M. Parker)

**3.2 FUNCTIONAL AND OPERATIONAL REQUIREMENTS:**

**3.2.1 Functional Spaces:**

**A. General:**

1) Chapel associated spaces include individual offices for chaplains, group offices (Assistant’s Area) and other administrative spaces required for the Unit Ministry Teams. The major space of these chapel facilities is a primary “Worship Center” or auditorium type space with a podium type raised platform in addition to the seating area and baptistery suite. Other spaces include a large group Activity Center with a seating area, kitchen/pantry room, primary entry lobby (reception) area, sacristy/robing room, an exterior covered area at the primary entry, multi-purpose rooms in

multiple sizes and some special use suites or spaces. These specialized suites or spaces accommodate a number of special activities for all congregations or particular groups of faiths. Special activities might include blessed sacrament/reconciliation functions, choir rehearsal functions, and nursery functions. The suite concept allows some functions to expand into adjacent space when necessary. The goal is to allow each congregation or community group the optimum usable features for their activities in an environment where all share the benefits of a relatively flexible and extremely functional facility.

2) Religious education associated spaces include individual offices for Directors of Religious Education. The major space of these Religious Education Facilities is a Multi-Purpose Area for use by a single or multiple groups as a meeting/event space. Other spaces include a Youth Ministry Center, a Resource Center with classroom space, small and large classrooms, a kitchen/pantry suite, a primary entry lobby (reception) area, a reception area, and a conference room.

3) In addition to these specific spaces the facility will include appropriate circulation spaces, toilet facilities, storage spaces and equipment spaces for mechanical, electrical, communication and electronic equipment to support the total building and all of its functions. Carefully compare all of the criteria sections (such as Architectural, Interiors, and Electrical) when planning a specific design project. This facility type is intended to be a key asset for the total Garrison and the military community, not a closed asset only for the private use of the Chaplaincy.

## **B. Chapel Primary Spaces:**

### **1) Administrative Space for the Unit Ministry Team:**

Provide Group Offices and individual office spaces. Chaplain's offices are often utilized as a counseling space. It is imperative to provide complete confidentiality (protection against understandable speech leaking into adjacent spaces), privacy of counsel (protection against easy identification of those seeking counsel), and personal security (protection against inappropriate actions or false accusations of inappropriate actions of one person against another) be provided.

### **2) Worship Center:**

Provide a Worship Center. The expected uses of this space require an ability to darken the room quickly and with certainty. The baptistery shall be closed off by means of an ornamental curtain (dossal) (this choice will require some sort of safety gate/door to protect people from falling into the baptismal pool) or other suitable decorative device. Provide high quality fixed pews with padded, upholstered seats, backs and integral kneelers for seating in the Worship Center/auditorium. Changes in the pew array from that shown in the Army Standard Design drawings to make space for camera points or other features/benefits are acceptable. Pew spacing shall be no less than 3'-4" from seat back to seat back. Code requirements for maximum length, aisle spacing, and etc. shall be incorporated in the layout design. Provide a pair of fixed projection screens (sized for the volume of the space and vision clarity) behind/above the speaking platform and a single smaller screen so that a speaker or song-leader on the raised platform may be able to see the same things as the congregation). The large screens may be integrated into the wall finishes in such a way as to appear to be part of the partition finishes, if this coordinates well with the interior design. At some Garrisons the local chaplains and other members of the project delivery team working together to define the specific A/V system that they desire to operate may prefer rear projection screens. The drawings accommodate this feature without requiring it. Forward projection or substituting flat-screen televisions or other appropriate technology components for displaying images are also acceptable. The height of the raised platform in this space shall be approximately 2-feet at the primary plane. Provide a telescoping set of choir chair risers (Contractor Furnished/Contractor Installed (CF/CI)) at the rear of the raised platform and integrate the front face of this riser set with the rest of the finishes of the area. Design this riser set to provide an identical seating pattern as used in the choir rehearsal room. Include integral steps

that allow access the riser levels. Provide a lighting and sound control area (appropriate counter space and a visual screening front) at the front of the balcony for the over-all space and another at the raised platform within the ramp assembly. Special decorative features and effects for this space are encouraged. Provide an array of 12 substantial, permanently-mounted decorative hooks suitable for hanging religious banners at suitable places around the perimeter of the Worship Center.

### **3) Activity Center:**

Provide an Activity Center. Provide light darkening devices for any natural light-introducing features into this space. Provide three recessed power operated projection screens (sized for the volume of the space and vision clarity). Provide one screen at each of the largest unbroken walls except above the kitchen. Another option might be to finish the walls at the same locations where an operable screen might be located, so as to be the screen or screens, if this coordinates well with the interior design. Substituting flat-screen televisions or other appropriate technology components for displaying images is also acceptable. Special decorative features and effects for this space are encouraged.

### **4) Baptistry Suite:**

Provide a Baptistry Suite. Special water control features such as applied and sealed strips, special channeling devices or slightly sloped floor portions shall be considered for keeping standing water from escaping into crevices and spaces where it could cause damage. Outside light-introducing features may be provided, but all such features must also keep from interfering with the viewing of baptisms. Provide an ornamental curtain (dossal) (this choice will also require a gate/door to protect persons from accidentally falling into the baptismal pool) or other suitable decorative device to close the baptistry suite from the Worship Center when not in use. Special decorative features and effects for the portion of this space open to view from the worship center are encouraged, but shall be coordinated with any provided for the worship center. Provide a pre-manufactured baptistry pool and system sized for the space and complete with operating features. Provide operating features that allow simple and direct access for operating staff at both the pool location and the equipment location. Provide a packaged system that is capable of filling (once initiated) the baptismal pool to the optimal level of water, automatically shutting down the filling operation by use of level sensors, and then heating/maintaining the baptismal pool water temperature (85-105 deg. adjustable). The heater shall be of sufficient capacity to raise the water temperature by 50 degrees F in a 24 hour period. Provide a draining operation that allows for partial draining (to fine-tune the water level for special situations) and full draining once initiated. All piping and accessories for connection to the pool shall be provided in positions that are easily accessed (but not inappropriately exposed) for future maintenance or replacement. Provide an easily accessible (from the pool area or active Baptistry Suite)

ON/OFF/START/FILL/ADJUST/DRAIN/ETC. control. Consider providing a means of collecting and reusing (for appropriate outdoor purposes) the water (it is not necessary to treat this used water as sacred) used for baptizing once it is ready to be changed out. The unit shall include a glazed section facing the seating area, non-slip foot surfaces, safety gates, a dedicated camera position (somewhat above), integral steps, and a fully coordinated operating system with water heater, safety devices (including protection against overflow of the pool), etc.

### **5) Audio/Visual Production Room:**

Provide an Audio/Visual production room. Note that this particular space is intended to accommodate additional development, such as subdividing partitions, etc. so as to best capitalize on the specific A/V equipment and capabilities of the equipment selected. This means that the floor plan (within this perimeter) may vary considerably from the floor plan shown in the Army Standard Design. Relocating doors along the perimeter walls or adding doors to the adjacent corridor is also generally acceptable.

**6) Kitchen Suite:**

Provide a Kitchen. Provide base cabinets, counter tops and wall cabinets in the kitchen and each pantry (pantry size may require reductions in base cabinet depth). Provide spacing/accommodation for appliances in kitchen, including the warming drawers. The range with oven, hood above the range, microwave, two refrigerators, two warming drawers, and single dishwasher. Appliances shall be high grade residential kitchen type. Since residential icemakers are not usually designed for a high enough capacity to be appropriate for this facility, they shall be commercial type appliances. Coordinate with the Contracting Officer's representative regarding the need for gas or electric ranges and provide all appropriate utilities to support the appliances. Provide open shelving or cabinets, as requested by the user, for the pantries. Provide appropriate materials and hardware for all casework features. Note that the appliance/casework arrangement shown is not intended to limit the designer. Variations that the designer feels will improve the functionality of the space are acceptable. See paragraph 3.1.3 for Accessibility Requirements. Provide a pass-through window between the Kitchen and the Activity Center (place both the Kitchen and Activity Center edge at standard counter-top height) to support various serving arrangements that the congregations might choose to use. One of the most attractive ways to handle this is to use regular double doors (full swing hinges) on the Activity Center wall and a finished back-of-base-cabinet treatment below the counter-top.

**7) Sacristy/Robing Suite:**

Provide the Sacristy Robing room. The under-counter refrigerator shall be a typical high grade residential/office type appliance. Provide the appropriate electrical utilities to support this appliance. Provide base cabinets, counter tops and wall cabinets in the Sacristy/Robing Room and appropriate storage features for each storage space. Include a hand washing sink, a special Sacrament sink, space for an under-counter refrigerator and all of the special kinds of drawers, racks, and shelves typically required for the storage of miscellaneous ecclesiastical items used to support several faith groups. Provide appropriate materials and hardware for all casework features. Note that the casework arrangement shown is not intended to limit the designer. Variations that the designer or contractor feels will improve the functionality of the space are acceptable.

**8) Offering Counting Room:**

Provide an Offering Counting Room. Designers for each specific project should discuss offering money procedures with the local chaplains to identify how best to support their current and future policies with building features. In general, most Garrisons will make use of easily accessible bank deposit facilities in the vicinity to avoid having significant amounts of monies in the facility for any but the briefest lengths of time. At some locations easily accessible bank deposit facilities may not exist and the handling of offering monies may require a safe to be located somewhere in the building. Provide a base cabinet and counter top. Provide appropriate materials and hardware for all casework features.

**9) Multi-purpose Rooms:**

Provide a Multi-purpose room. Special decorative features and effects for these spaces are encouraged. Provide a TV wall mount for a flat screen TV and a wall mount for a media player. Recommend installing media wall mount below TV. Provide at least 12 lineal feet of base cabinets, counter tops and wall cabinets. Provide appropriate materials and hardware for all casework features. Note that the fixture/casework arrangement shown is not intended to limit the designer. Variations that the designer feels will improve the functionality of the space are acceptable.

**10) Choir Room:**

Provide a Choir room. Provide a telescoping set of choir risers at the rear of the raised platform and integrate the front face of this riser set with the rest of the finishes of the area. Design this riser set to provide an identical seating pattern as used in the Worship Center.

**11) Toddler Area:**

Provide a Toddler room. Specifically adapt this space for the care of small children. Exercise special care in considering safety for every aspect of these spaces from utilities to finishes to window and door features. The walls shall include pre-manufactured bumper rails for protection from moving furniture or carts. Provide a number of “play-house” or “adventure” themed architectural features to the room. Allow passers-by some ability to observe the play. All finishes shall be safely compatible with frequent contact by small children. Provide at least 12 lineal feet of base cabinets, counter tops. Provide appropriate materials and hardware for all casework features.

**12) Nursery Area:**

Provide a Nursery room. Provide the capacity and controls to dim the lighting system for this room. Specifically adapt this space for the care of small children, exercise special care in considering safety for every aspect of these spaces from utilities to finishes to window and door features. The walls shall include pre-manufactured bumper rails for protection from moving furniture or carts. All finishes shall be safely compatible with frequent contact by small children. Provide at least 12 lineal feet of base cabinets, counter tops. Provide appropriate materials and hardware for all casework features.

**13) Storage/Flex Space:**

Provide a Storage/Flex room. Provide this space with some special decorative finishes and features that coordinate with the Blessed Sacrament Room so that if it needs to increase in size it can add this space to it.

**14) Blessed Sacrament Room:**

Provide a Blessed Sacrament room. Provide special decorative finishes and features to make this space appropriate to small group religious ceremonies. Also coordinate the placement of the “Eternal Light” fixture and the provision of “hard wire” connection to electricity. (An Eternal Light is a religiously important light fixture that is intended to stay lit except when the lamp needs to be replaced. These lights are often heavily ornamented and sculptural. They can be a wall fixture, a table lamp or a floor lamp.) At some Garrisons the Sacramental ceremonies may also occur in one of the Multipurpose Rooms. Coordinate with the Contracting Officer’s representative regarding any special adaptation to support this activity.

**15) Mediation/Reconciliation Room:**

This room provides space for confessions and prayer and should be accessible from the Blessed Sacrament Room.

**16) Nursing Mother’s Room:**

Provide a Nursing Mothers Room. Provide a lavatory and diaper changing area in this space.

**17) Cry Room:**

Provide a Cry Room. Provide a window into the Worship Center so that parents with crying



children can still see what is occurring in the Worship Center.

**C. Chapel Support Spaces:**

**1) Vestibules:**

Provide entry vestibules at main and secondary entrances.

**2) Lobbies:**

Provide lobbies as required. Due to the nature of lobbies, their specific project characteristics must be coordinated with LEED and Garrison requirements since these requirements change over time. Provide the main lobby with power and communications support for a movable kiosk (reception/information desk) at two points (one is suggested in the drawings) in the lobby and for two (different viewing locations) flat screen televisions to function as electronic message boards. Provide wall mounting brackets for the televisions. Provide the other lobbies with power and communications support and wall mounting brackets for a flat screen television to function as electronic message boards. Provide the main lobby with a fixed display/promotion counter theme kiosk as shown with suitable power and communications support for it, as well. Coordinate the lobby, fixed counter, and kiosk system finishes.

**3) Corridors:**

Provide corridors as required.

**4) Stairways:**

Provide stairways as required.

**5) Coat Storage Room:**

Provide a coat storage room. Provide coat and clothes storage features.

**6) Storage Rooms:**

Provide storage rooms. Provide open storage shelving at one end of the administrative supply closet. Provide shelving and robe or clothes storage features in closets where appropriate.

**7) Janitor's Closet:**

Provide janitor's closets. Janitor's closet shall include a floor mounted mop sink, shelving for supplies, hanging racks for mops and brooms.

**8) Toilet Rooms:**

Provide toilet rooms. Provide child scaled features and fixtures in the toddler area toilet room. Consider providing a counter with inset lavatories where individual wall mounted lavatories are shown. Where lavatories are placed on an outside wall, provide a short partition in front of the exterior wall for the fixtures and space for air to flow behind. Place plumbing in the inner partition. There is great diversity of design opinion related to toilet rooms, and particular fixtures and accessories can work best in different arrangements. In consequence, it is acceptable to rearrange these spaces so long as the fixture count stays the same. This means that the floor plan (within this perimeter) may vary from the floor plan shown in the Army Standard Design.

**9) Equipment Rooms:**

Provide equipment rooms. Integrate a full stair into the lower level mechanical room for access to any upper level mezzanine. Coordinate location for the best integration with the equipment.

**10) Recycling Area:**

Provide a recycling area.

**11) Exterior Canopy Covered Areas:**

Provide exterior canopies at each entrance with a weather, insect, bird, and vermin resistant ceiling material. Main entrance canopy shall be capable of being used as a drop off point for cars. Minimum height of canopy ceiling shall be 9'-0". Provide paved surface below with decorative accent and slip-resistant finish.

**D. Religious Education Primary Spaces:**

**1) Director of Religious Education Offices:**

Provide Director of Religious Education (DRE) office space.

**2) Multi-Purpose Area:**

Provide a Multi-Purpose Area. Ceilings and lighting format shall be integrated with the ceiling/roof structure. Provide a power operated projection screen (sized for the volume of the space and vision clarity) behind/above the speaking area. As an alternative, the large screen may be integrated into the wall finishes in such a way as to appear to be part of the partition finishes, if this coordinates well with the interior design. Provide a mounted projector. Provide adjustable mountings for two (2) flat screen monitors midway on each side of the Multi-Purpose Room to assist viewers near the rear of the room and for additional space flexibility. Special decorative features and effects for this space are encouraged. Provide an array of 8 substantial, permanently-mounted decorative hooks, 2 per wall, suitable for hanging religious banners at suitable places around the perimeter of the Multi-Purpose Area.

**3) Resource Center:**

Provide a Resource Center space. Special decorative features and effects for this space are encouraged. Provide a power operated (from a ceiling slot) projection screen (sized for the volume of the space and vision clarity), and a mounted projector. Provide a mounting for a television screen and space for additional media players. Provide at least 16 lineal feet of base cabinets, counter tops and wall cabinets. At minimum 10 lineal feet of the above listed counter space should have appropriate knee space and high counter heights for computer stations. Provide appropriate materials and hardware for all casework features. Note that the fixture/casework arrangement shown is not intended to limit the designer. Variations that the designer feels will improve the functionality of the space are acceptable.

**4) Youth Ministry Center:**

Provide a Youth Ministry Center space. Special decorative features and effects for this space are encouraged. Provide a power operated (from a ceiling slot), projection screen (sized for the volume of the space and vision clarity) coordinated with the placement of the LCD Projector. Provide at least 19 lineal feet of base cabinets, counter tops and wall cabinets. Provide appropriate materials and hardware for all casework features. Note that the fixture/casework arrangement shown is not intended to limit the designer. Variations that the designer feels will improve the functionality of the space are acceptable.

**5) Conference Room:**

Provide a Conference Room space. Provide a large drop down screen and a mounted projector with visual teleconferencing capabilities.

**6) Small Classrooms:**

Provide Small Classroom spaces. Provide a large drop down screen and a mounted projector. Provide a mounting for a television screen and space for additional media players. Provide at a minimum 10 lineal feet of base cabinets and counter tops, and provide wall cabinets as appropriate for user storage needs. Casework shall be equipped with locking hardware. Provide appropriate materials and hardware for all casework features. Note that the casework arrangement shown is not intended to limit the designer. Variations that the contractor feels will improve the functionality of the space are acceptable. The Infant and Toddler Classrooms shall have shelf cubbies for individual children's items. Infant/Toddler toilet rooms will have child appropriate sinks and toilets with half walls. Classrooms designated for Infants, Toddlers, Pre-K and Kindergarteners shall have additional sinks located in casework.

**7) Large Classrooms:**

Provide Large Classroom spaces. Provide a large drop down screen and a mounted projector. Provide a mounting for a television screen and space for additional media players. Provide a combination of base cabinets, counter tops and wall cabinets equal or greater than 6 lineal feet. Casework shall be equipped with locking hardware. Provide appropriate materials and hardware for all casework features. Note that the casework arrangement shown is not intended to limit the designer. Variations that the contractor feels will improve the functionality of the space are acceptable. Paired Large Classrooms shall be separated by a moveable wall partition.

**E. Religious Education Support Spaces:**

**1) Kitchen:**

Provide a Kitchen space. Provide base cabinets, counter tops and wall cabinets in the kitchen. Provide spacing/accommodation for appliances in kitchen, including the warming drawers and ice machine. The range with oven, microwave/ range hood, two refrigerators, and single dishwasher to be supplied shall be high grade residential kitchen type appliances. Provide one double sink. The ice maker shall be a commercial type appliance. Coordinate with the Contracting Officer's representative regarding the need for gas or electric ranges and provide all appropriate utilities to support the appliances. Provide appropriate materials and hardware for all casework features. Note that the appliance/casework arrangement shown is not intended to limit the designer. Variations that the contractor feels will improve the functionality of the space are acceptable. See paragraph 3.1.3 for Accessibility Requirements.

**2) Toilet Rooms:**

Provide separate adult and children toilet facilities. Provide not less than 2 separate adult toilet facilities and not less than 1 separate children's toilet facility. Place plumbing in the inner partition.

**3) Recycling/Vending Area:**

Provide a Recycling/Vending Area.

**4) Storage:**

Provide Storage space. Provide one wall with built in shelves in each storage room where it is

large enough to be practical.

**5) Lobby:**

Provide Lobby space. Provide wall mounting for a flat screen LCD TV to serve as an electronic message board.

**6) Reception:**

Provide Reception space. Provide the reception area with an unobstructed view to the Resource Center entry. Provide counter space and infrastructure to support a child check-in system. Provide a minimum of 13 lineal feet of base cabinets and countertops.

**7) Waiting Area:**

Provide a waiting area.

**8) Corridors:**

Provide corridor space.

**9) Janitor's Closet:**

Provide a Janitor's Closet. Janitor's closet shall include a floor mounted mop sink, shelving for supplies, and hanging racks for mops and brooms.

**10) Equipment Rooms:**

Provide Equipment Rooms. Coordinate locations for the best integration with the equipment.

**3.3 SITE FUNCTIONAL REQUIREMENTS:**

**A. General:**

The Army Standard Design incorporates typical features for Anti-Terrorism/Force Protection (AT/FP). The level of threat is to be defined by the Garrison and is included in the project design criteria. These criteria are to be referred to for specific definitions and the security measures required to resist a prescribed threat. If greater levels of threat are indicated than accommodated by the typical features of this document, additional features can be added.

**B. Building Orientation:**

1) The building has been designed so that orientation is not critical. However, when possible, locating the entrance doors away from the prevailing winds will help to save energy during colder months in northern climates. Southern exposures of the main entrances are desirable in certain areas to help remove ice buildup on walks. Windbreaks, trees for shade, and preservation of existing landscaping should be considered when selecting a building site, parking areas and walkways. All driveways and parking areas, including trash dumpsters and their enclosures, have location restrictions for force protection reasons.

2) Site specific features may have a significant impact on how the building is oriented and located on the site, how much parking is required, the layout and amount of sidewalks, type and amount of landscaping, fencing, etc. Adjacent parking areas may exist that can be used if conflicts in use can be resolved. Certain existing structures or site features may need to be screened from view. In any case the final layout of the building and site will vary from site to site with the best solution quite possibly being one quite different from the one presented in this document.

3) The characteristics of some sites may indicate value in using a mirror-image-along-the-long-axis of the building plan. This is acceptable.

### **C. Parking:**

1) The site should allow space for the building, an outdoor worship gathering area, a service drive, various walkways and necessary force protection distances from any indicated driveway or parking area. Parking acreage requirements for each facility will depend on the size of the facility, how the facility is used, and the availability of adjacent parking areas that may be used. Parking should be considered for overlapping groups of users who may be in separate areas of the facility.

2) The average population of the pair of buildings assumes two separate congregations in the buildings at one time with a few members from other congregations preparing ahead for their "time slot". In addition there might be one small specialty congregation meeting in one of the multipurpose rooms of the chapel building. Generally, this would be scheduled at the same time that a slightly smaller congregation is using the Worship Center so as not to create too great a demand upon parking. One congregation would occupy the Worship Center. One congregation would occupy the Activity Center. In addition, one should expect a full range of Religious Education activities to be occurring at the same time. Users of the Religious Education spaces may be members of the congregations using the Chapel related spaces at the same time, or they may be separate users groups. All of these various groups should be accounted for when planning parking. The population is hard to estimate and may fluctuate more widely throughout the year. The youngest children of these congregations will probably be in dedicated toddler and nursery spaces. While some Sundays will be relatively lightly loaded, most will be relatively fully loaded. On rare occasions every building space might be at near-maximum capacity. The sum of all these assumptions would appear to indicate that: The average population of the Small Compact Chapel building would be approximately a chapel population of 480 persons and a religious education population of 540 persons, for a total of 1020 persons. .

3) At any facility the number of parking stalls needed depends on how many people drive to the facility. If no traffic analysis were done to indicate otherwise, the number of stalls allocated per chapel would be 30% of the seating capacity of the building. If an analysis is done, the number of parking stalls shall be determined based upon the number of users, the level of ride sharing, available public transport, future growth, average employee absence, and the availability of parking areas adjacent to the facility that may be used during those periods of time when conflicts will not occur. Parking stall widths shall never be less than 9 feet wide. 90 degree parking is the most space efficient parking style and can be used in two directional lanes. Angle parking is usually only one way and less efficient space wise, but quicker and easier to get in and out of. The parking area shall be based on 350 to 400 square feet per parking stall. This square footage accounts for the parking stall the adjacent drive aisle; adjacent parking islands and drive aisles adjacent to the end of the parking lot. Extended drives for access to parking lots and service drives to maintenance areas and drop offs to the front doors, etc., are pavement areas that need to be calculated on a case by case basis depending upon the topography and location of the facility from existing transportation routes.

4) The Small Compact Chapel, with an average population of 1020 persons would have a parking area with drive aisles totaling 306 parking stalls, or 18370 square yards of paving. Additional paving for extended entrance drives, maintenance areas and drop offs should be added to this. The acreage area necessary for properly accommodating the Small Compact Chapel is approximately 10 acres.

### **D. Access Drives And Lanes:**

1) The site plan indicates a drive approaching the building offset from the main entry. This design prohibits a straight line of access for vehicles to the front of the building for force protection reasons. A drop off drive is shown at the main entrance to the Compact Chapel. The

specific direction and necessity for this feature may vary at each Garrison.

2) A service drive of minimal width may be installed on the side of the building for access to the mechanical room. This drive may also serve as an access drive for fire department vehicles. In any case this drive must have a lockable gate or chain to prevent unauthorized access to that side of the building.

### **3.4 SITE AND LANDSCAPE REQUIREMENTS:**

#### **A. General:**

1) Existing environmental cues and sustainability issues will be the primary “drivers” for developing the site for specific projects. Landscaping should be designed to be low maintenance, and compatible with the environment in which the facility is located. Consideration should be given to the offices and other rooms located around the perimeter of the structure when locating plant material. Specific views of the buildings should be appropriately landscaped i.e., to enhance the main entrances to screen mechanical or electrical equipment and large parking areas.

2) Site grading is seldom considered early on in a project. However this is a very important aspect of the project. The site elevation of the building can determine the visual-importance of the building in relation to the adjacent features. The location and elevation of the building will determine the slope and grade of the adjacent walks, roadways, lawns and patios serving the building. The most appropriate grades for walkways to the building are 2%. Provide a smooth access-way (without resorting to ramps) for providing handicapped persons access to the facility.

3) The amount and type of storm drainage will impact the site. Consider early on the type of roof drainage and how it will flow across the site. Avoid having downspouts spill out across walkways and main drives making them hazardous especially during freezing periods. Do not direct storm drainage across major walkways or into inlets near major pathways to or from the parking lot. Major drainage swales should not direct water near the main building. Avoid upward slopes near the main structure to avoid snow accumulation against the building and seepage of water into the structure.

#### **B. Site Structures:**

Provide screen walls and other site features as appropriate and where directed in other paragraphs.

#### **C. Site Utilities:**

Provide as appropriate. Adequate site lighting for pedestrians and cars should also be included in the design. Additional lighting for the facility to accent certain features of the building, landscaping or views should also be considered.

#### **D. Landscaping\Hardscaping:**

Provide as appropriate. Landscaping should be designed to be low maintenance, and compatible with the environment in which the facility is located. Mounding and landscaping can be used to deflect or reduce noise from certain areas. Plantings should be held away from windows and entrances for security purposes. Thick shrubbery and dense plantings should be avoided.

#### **E. Site Specialties and Furnishings:**

1) In addition to the above paved areas, provide outdoor activity spaces where requested for specific projects. These could range from an adjacent patio to expand an indoor activity into the outdoors, all the way to a more developed covered or fully outdoor space. Available resources and local climate may encourage the investigation of such features for a specific project. The optional

outside worship area has been demonstrated adjacent to the building but distant from any parking areas to reduce the amount of disturbing outside noise and visual clutter. A bicycle parking area should be located near the front entry to the building.

2) Small paved areas are located on the outside off the side entrances and exits for outdoor worship or gatherings of large or small groups when weather permits.

### **3.5 ARCHITECTURAL REQUIREMENTS:**

#### **A. General:**

1) Visual appearance and exterior material selections shall coordinate well with the patterns set by the Garrison and its existing adjacent facilities. The impact of climate, security and geography shall also be addressed appropriately. There may be reasons to control exterior noise from entering the facility that would require special treatment or STC ratings on major building components. Provide appropriate and adequate protection from the wind and wind driven precipitation for doors and entries. The development of interior design themes shall relate to the exterior design decisions made and it should receive a thoughtfully coordinated treatment throughout all interior spaces. These interior themes shall also be appropriate to the functions housed. Safety and security for all users will require incorporating features such as thoughtfully placed locking hardware, handrails and non-slip (a generally “smooth matte” finish that shall limit the risks of foot slippage when wet, but not try to eliminate them by presenting a protruding abrasive grit or highly textured surface) floor finishes. Door hardware shall take into consideration the high volume of building users through the week. Interior doors shall be of solid core hardwood but a special STC rated design or the inclusion of complex or actuated sealing devices is not necessary or desired. Provide all appropriate (restroom, normally locked equipment room, normally-locked storage room, and very small closet doors are not appropriate) interior doors with narrow borrow lite windows. Rooms like the kitchen pantries that may occasionally be left unlocked should be included. The doors to the Nursing Mother’s Room and the Chaplain’s offices should have a narrow borrow lite window except that it should also include a “frosted” film or treatment (certain sheer fabrics may also work well) to obscure detail, but still allow a passing observer to note the general placement of people and objects. The goal is to have no accessible space be or appear to be observation free. This has been demonstrated to deter temptation to inappropriate behavior or the claim of inappropriate behavior.

2) Provide an exterior building appearance and massing that coordinates with the plan of the facility. Provide appropriate windows for all appropriate spaces. Window sizes and placement are to integrate with the exterior design theme. Provide window area of a minimum of 10 percent of the exterior wall area (counting wall area below 10 feet above the finished floor) and provide all windows with appropriate sill materials (more than painted gypsum wallboard). Provide steep sloped roofs with a slope of at least 3 on 12, and low sloped roofs with a slope of at least .5 on 12. Provide snow guards over entrances or other features requiring protection along eave edges of low-friction roofing such as metal. Where porcelain tile is called for, install with epoxy grout.

#### **B. Walls:**

The intent of the Army Standard Design for this facility type is to allow for the fullest possible range of exterior wall choices, particularly so that the facility can coordinate optimally with the aesthetic themes of the Garrison upon which it is constructed.

#### **C. Roof Systems:**

The intent of the Army Standard Design for this facility type is to allow for the fullest possible range of roof choices particularly so that the facility can coordinate optimally with the aesthetic themes of the Garrison upon which it is constructed. Sloped metal roofing does have many benefits for a facility of this type.

## **D. Openings:**

The intent of the Army Standard Design for this facility type is to allow for the fullest possible range of exterior opening choices particularly so that the facility can coordinate optimally with the Aesthetic themes of the Garrison upon which it is constructed.

### **1) Chapel Associated Openings**

#### **a) Administrative Space for the Unit Ministry Team:**

Provide the group office and individual office space entry doors with locksets. Provide a glazed borrow lite (approximately 6-feet x 3-feet) between the Lobby and Administrative Group Office. Coordinate with the Contracting Officer's representative on the preferred location and provide one of the exterior entry doors for the building with a mechanical push-button or other special keyless entry device for staff use when the facility is closed for regular business. Provide a glazed borrow lite in the door to the Chaplain's offices are required, but it must include a "frosted" film or treatment to obscure detail, but still allow a passing observer to note the general placement of people and objects. See also paragraph "A. General" in section 3.2.1.

#### **b) Worship Center:**

Provide the worship center entry doors with locksets.

#### **c) Activity Center:**

Provide the activity center entry doors with locksets.

#### **d) Baptistry Suite:**

Provide the baptistry suite entry doors with locksets.

#### **e) Audio/Visual Production Room:**

Provide room entry doors with locksets.

#### **f) Kitchen Suite:**

Provide room entry doors (pantries also) with locksets.

#### **g) Sacristy/Robing Suite:**

Provide the sacristy robing room entry door with a lockset. Provide interior-to-the-suite doors with latch sets.

#### **h) Offering Counting Room:**

Provide the Offering Counting Room entry doors with lockset and accessory mortised long throw dead bolt. Local users may desire additional security features.

#### **i) Multi-purpose Rooms:**

Provide the multi-purpose room entry doors with locksets.



**j) Choir/Presentation Rehearsal Room:**

Provide Choir/Presentation Rehearsal room entry doors with locksets.

**k) Toddler Area:**

Provide Toddler room entry doors (“Dutch” doors) with locksets. The entry doors shall receive locksets of a type operable by staff but not by small children. Local users may desire additional security features. Provide finger guards for doors specifically adapted for the care of small children.

**l) Nursery Area:**

Provide Nursery room entry doors (Dutch door) with locksets. Local users may desire additional security features. Provide finger guards for doors specifically adapted for the care of small children. The entry doors shall receive locksets of a type operable by staff but not by small children.

**m) Storage/Flex Space:**

Provide Storage/Flex room entry doors with locksets.

**n) Blessed Sacrament Room:**

Provide Blessed Sacrament room entry doors with locksets.

**o) Mediation/Reconciliation Room:**

Provide the Meditation/Reconciliation entry door with a lockset.

**p) Nursing Mother’s Room:**

Provide the Nursing Mothers Room entry door with a lockset. Provide the glazing in the door lite with a “frosted” film or treatment to obscure detail, but still allow an observer to be able to note the general location of people and objects for securities sake. An alternative might be a special (sheer) fabric to accomplish the same thing.

**q) Cry Room:**

Provide the Cry Room entry door with a lockset.

**r) Vestibules:**

Provide vestibule entry doors (from the exterior) with locksets. Provide interior facing doors with appropriate push-pull devices.

**s) Coat Storage Room:**

Provide coat storage entry door with latch sets (except a lockset at the corridor side of the room adjacent to the activity center).

**t) Storage Rooms:**

Provide room entry doors with locksets.

**u) Janitor's Closet:**

Provide janitor's closet entry door with a lockset.

**v) Toilet Rooms:**

Provide toilet room entry doors (and ablution cubicle doors), where doors are located on ASD documents.

**w) Equipment Rooms:**

Provide equipment room entry doors with locksets (coordinate the keying of these spaces with the Garrison groups responsible for maintenance and operation).

**x) Recycling Area**

Provide room entry door with a lockset/

**2) Religious Education Associated Openings:**

**a) Director of Religious Education Offices:**

Provide Director of Religious Education (DRE) office space entry doors with locksets.

**b) Multi-Purpose Area:**

Provide the Multi-Purpose Area entry doors with locksets.

**c) Resource Center:**

Provide the Resource Center entry doors with locksets. The doors to the Resource Center shall have glass viewing panels to allow full visual access to the space.

**d) Youth Ministry Center:**

Provide the Youth Ministry Center room entry doors with locksets. The door to the Youth Ministry Center shall have glass viewing panels to allow full visual access to the space.

**e) Conference Room:**

Provide Conference Room entry door with lockset. The door to the Conference Room shall have a glass viewing panel to allow full visual access to the space.

**f) Small Classrooms:**

Provide Small Classroom entry doors with locksets. The door to each Small Classroom shall have a glass viewing panel to allow full visual access to the space. Provide finger guards for doors specifically adapted for the care of small children. Infant and Toddler Classroom locksets shall be of a type operable by staff but not by small children. The Infant and Toddler Classroom wing shall be separated from the rest of the facility by a security door. The door shall be cipher/keypad locked or key-card locked with access limited to only the staff working with those children. Children will be checked in and out at the reception desk.

**g) Large Classrooms:**

Provide Large Classroom entry doors with locksets. The doors to each Large Classroom shall

have a glass viewing panel to allow full visual access to the space.

**h) Kitchen:**

Provide Kitchen entry doors and pantries with locksets.

**i) Toilet Rooms:**

Provide Toilet Room entry doors for adult Toilet Rooms. Toilet Rooms designated for children may choose between providing entry doors or by providing space privacy through partition layouts that limit sightlines into the spaces. Coordinate with the end user for their preference.

**j) Storage:**

Provide Storage space entry doors with locksets.

**k) Vestibules:**

Provide vestibule entry doors (from the exterior) with locksets. Provide interior facing doors with appropriate push-pull devices.

**l) Reception:**

Provide the Reception area entry door with a lockset. The door to the Reception area shall have glass viewing panels to allow full visual access to the space.

**m) Janitor's Closet:**

Provide janitor's closet entry door with a lockset.

**n) Equipment Rooms:**

Provide equipment room entry doors with locksets (coordinate the keying of these spaces with the Garrison groups responsible for maintenance and operation).

**E. Spatial Integration:**

A key concept of this Army Standard Design involves an integration of elements. First, there is the inherent value of a relatively simple roof form for cost efficiency and a long roof life with few problems. Secondly, there is the relationship between spaces where the function requires greater room height and spaces where the function requires only conventional room height. The optimum arrangement of spaces for this facility in plan requires that the former spaces be placed at the core of the plan and the latter spaces be placed on three sides of the core.

**F. Exterior Specialties:**

**1) Steeple:**

Provide the facility with an aluminum steeple. In most cases, fire sprinklering of this steeple is not practical. A reading of the various codes will require a prefabricated aluminum steeple structure since integrating non-combustible components into fiberglass is not really practical. The steeple height (including the steeple base cupola) from the roof crown shall be approximately the same height as the building from the ground to the roof crown (it is understood that air space or other restrictions may limit the height from reaching this proportion at some locations) and the width of the steeple base should coordinate with the width of the building. The inclusion of an operating

electronic carillon system is encouraged. If the style of the steeple makes it appropriate, a protected way of access from inside the building into the steeple area is also encouraged.

**2) Exterior Signage:**

Provide electrical conduits and communication conduits for a lighted and substantial exterior building sign (that will accommodate a future electronic message board) at an appropriate area on the site.

**G. Acoustical Requirements:**

Acoustics is an important consideration in the design of chapels. The following shall be provided:

**1) Chapel Acoustical Requirements**

**a) Administrative Space for the Unit Ministry Team:**

Partition construction around each space shall supply an STC rating of 45 or better.

**b) Worship Center:**

Partition construction shall supply an STC rating of 52 or better.

**c) Activity Center:**

Partition construction shall supply an STC rating of 45 or better.

**d) Multi-purpose Rooms :**

Partition construction shall supply an STC rating of 52 or better.

**e) Choir/Presentation Rehearsal Room:**

Partition construction shall supply an STC rating of 52 or better.

**f) Toddler Area:**

Partition construction shall supply an STC rating of 45 or better.

**g) Nursery Area:**

Partition construction shall supply an STC rating of 52 or better.

**h) Storage/Flex Space**

Partition construction shall supply an STC rating of 45 or better.

**i) Blessed Sacrament Room:**

Partition construction shall supply an STC rating of 45 or better.

**j) Mediation/Reconciliation Room:**

Partition construction shall supply an STC rating of 45 or better.

**k) Nursing Mother's Room:**

Partition construction shall supply an STC rating of 45 or better.

**l) Cry Room:**

Partition construction shall supply an STC rating of 45 or better.

**2) Religious Education Acoustical Requirements:**

**a) Multi-Purpose Area:**

Partition construction shall supply an STC rating of 45 or better.

**b) Resource Center:**

Partition construction shall supply an STC rating of 45 or better.

**c) Youth Ministry Center:**

Partition construction shall supply an STC rating of 45 or better.

**d) Conference Room:**

Partition construction shall supply an STC rating of 45 or better.

**3.5.1 Finishes And Interior Specialties:**

**A. General:**

1) The facility interior shall be a warm, comfortable, and professional environment through the appropriate use of building materials, furniture, finishes, fabrics, color, texture, and the generous use of wood. Coordinate wood finish, such as stain or paint, on a per project basis. Materials and features shall be of high quality, functional, easily maintained and furnished as described herein. In regions where similar materials such as natural stone tiles or other special flooring tiles are competitive in price and provide the same appearance and performance characteristics, these materials are also generally acceptable wherever porcelain tile is specifically called for herein. Recommend the use of several coordinating carpet patterns within the same color-way within the facility to provide variety and continuity between different functional areas. Recommend using variation of color or floor patterns to visually shorten long corridors and add interest. Provide wall and/or floor tile patterns using several coordinating colors in the toilets as appropriate. Tile patterns shall be appropriate to size and shape of rooms. Building finishes and details and furniture style, finish and fabrics shall be complementary and provide a completely coordinated interior design. The interior building appearance shall coordinate with the exterior building appearance. Consider spaces that open up to one another when selecting furniture and building finish and color selections. The criteria within this document identifies the level of quality and special requirements for finishes and furniture, yet provides flexibility for the designer to make creative and appropriate selections to meet user requirements.

2) Interior and exterior building finishes and colors shall be coordinated with the user and Garrison; refer to Section 01 10 00, paragraph 6 for additional guidance. In addition, the exterior building design shall comply with Garrison exterior building guidance.

3) Unless otherwise noted, items in this section shall be Contractor Furnished/Contractor Installed (CF/CI). Dimensions provided are approximate. When a finish has not been included in this paragraph, finish selection will follow applicable standards and User requirements. Designers

are not limited to minimum finishes listed in this section and are encouraged to offer higher quality finishes in addition to materials that aid in meeting LEED requirements.

**B. Finishes:**

**1) Chapel Finishes**

**a) Administrative Space for the Unit Ministry Team:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard protected with chair rails (from moving furniture or carts) for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceilings. The ceiling heights shall be 8'-0" above the finished floor.

**b) Worship Center:**

Provide carpet tile for the floor finish (for some other projects, porcelain tile is also acceptable), wood base for the wall/floor trim, painted wallboard protected with chair rail and accented with some form of high quality above-door-height-trim (such as an exaggerated picture molding, a continuous door head molding, a high-on-the-wall plate-rail type molding or a cornice molding) for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Broadloom carpet is recommended at the raised platform in the worship center. Ceilings and lighting format shall be integrated with the ceiling/roof structure. Where possible, provide wave shaped or similarly canted ribbons or islands of ceiling (placed well below the structural roof deck) with light fixtures up and between them so that the ceiling planes both reflect sound and visually "diminish" the light fixtures from the sight of those in the pews. It might also be feasible to include a catwalk system above the ceiling to access the light fixtures and other ceiling devices. The ceiling heights shall be at least 8-feet above the finished floor at the highest balcony seating level.

**c) Activity Center:**

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, painted wallboard protected with chair rails and accented with some form of high quality above-door-height-trim (such as an exaggerated picture molding, a continuous door head molding, a high-on-the-wall plate-rail type molding or a cornice molding) for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Ceilings and lighting format shall be integrated with the ceiling/roof structure.

**d) Baptistry Suite:**

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, and painted wallboard for the wall finish. Special wall finishes for these spaces are also acceptable. Walls adjacent to the baptismal pool shall include a porcelain tile wainscot (as a minimum). Ceilings and lighting format shall be integrated with the ceiling/roof structure. The ceiling heights shall coordinate with openings, but shall be not less than 8'-0" above the finished floor.

**e) Audio/Visual Production Room:**

Provide vinyl composition tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**f) Kitchen Suite:**

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, and painted wallboard for the wall finish. Provide painted wallboard for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**g) Sacristy/Robing Suite:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**h) Offering Counting Room:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling height shall be 8'-0" above the finished floor.

**i) Multi-purpose Rooms:**

Provide carpet tile for the floor finish, wood base for the wall/floor trim (porcelain tile is also acceptable), and painted wallboard protected with chair rails and accented with some form of high quality above-door-height-trim (such as an exaggerated picture molding, a continuous door head molding, a high-on-the-wall plate-rail type molding or a cornice molding) for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 9'-0" above the finished floor.

**j) Choir/Presentation Rehearsal Room:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at least 12'-0" above the finished floor.

**k) Toddler Area:**

Provide sheet vinyl for the floor finish, integral cove base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**l) Nursery Area:**

Provide sheet vinyl for the floor finish, integral cove base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**m) Storage/Flex Space:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted

wallboard for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**n) Blessed Sacrament Room:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**o) Mediation/Reconciliation Room:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard with chair rails and special trim for the wall finish. Vinyl wall covering or other accent wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**p) Nursing Mother's Room:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Vinyl wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**q) Cry Room:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Vinyl wall covering may also be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. . The ceiling heights shall be 8'-0" above the finished floor.

**r) Vestibules:**

Provide porcelain tile for the floor finish (integrate with floor mats, coordinate with current LEED requirements), porcelain tile base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended gypsum wall board or appropriate "feature" ceiling system with recessed or surface light fixtures for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**s) Lobbies:**

Provide porcelain tile for the floor finish (integrate with floor mats), porcelain tile base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system or a "feature" ceiling and light fixtures as appropriate. The ceiling heights shall be 9'-0" above the finished floor or as appropriate to integrate with the ceiling roof structure.

**t) Corridors:**

Provide porcelain tile and/or carpet tile for the floor finish (there is a wide range of flexibility



provided for the corridors because there are so many possible variables in congregation type, local preference, and aesthetic coordination that may be true for any individual project), resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. Unless otherwise noted, the ceiling heights shall be at least 8'-0" above the finished floor. Provide most corridors with a higher ceiling than that.

**u) Stairways:**

Provide finishes to match the Worship Center for stairways to the balcony/mezzanine in the Worship Center. Provide raised pattern rubber tile for the floor finish (carpet tile with rubber nosing or porcelain tile are also acceptable where appropriate), resilient base for the wall/floor trim, raised pattern rubber treads, rubber riser and tread, and painted wallboard for the wall finish. Provide exposed ceilings and lighting for those portions where this would be appropriate. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format where the upper portions of stairways transition into spaces with this finish treatment.

**v) Coat Storage Room:**

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**w) Storage Rooms:**

Provide vinyl composition tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**x) Janitor's Closet:**

Provide exposed concrete for the floor finish, resilient base for the wall/floor trim, and painted water-resistant wallboard for the wall finish. Provide suspended painted wallboard for the ceiling finish and lighting format. The ceiling height shall be 8'-0" above the finished floor.

**y) Toilet Rooms:**

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, and painted wallboard with porcelain tile wainscots for the wall finish. Other decorative features, such as porcelain tile wall and floor patterns are also acceptable. Provide suspended painted wallboard for the ceiling finish and lighting format. The ceiling heights shall be 8'-0" above the finished floor.

**z) Equipment Rooms:**

Provide exposed concrete for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended painted wallboard or exposed structure for the ceiling finish and lighting format. The ceiling height shall be as appropriate to the space and equipment.

**aa) Recycling Area:**

Provide vinyl composition tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**2) Religious Education Finishes:**

**a) Director of Religious Education Offices:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard protected with chair rails (from moving furniture or carts) for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceilings. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**b) Multi-Purpose Area:**

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, painted wallboard protected with chair rail and accented with some form of high quality above-door-height-trim (such as an exaggerated picture molding, a continuous door head molding, a high-on-the-wall plate-rail type molding or a cornice molding) for the wall finish. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**c) Resource Center:**

Provide carpet tile for the floor finish, wood base for the wall/floor trim, and painted wallboard protected with chair rails and accented with some form of high quality above-door-height-trim (such as an exaggerated picture molding, a continuous door head molding, a high-on-the-wall plate-rail type molding or a cornice molding) for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**d) Youth Ministry Center:**

Provide carpet tile for the floor finish, wood base for the wall/floor trim, and painted wallboard protected with chair rails and accented with some form of high quality above-door-height-trim (such as an exaggerated picture molding, a continuous door head molding, a high-on-the-wall plate-rail type molding or a cornice molding) for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**e) Conference Room:**

Provide carpet tile for the floor finish, wood base for the wall/floor trim, and painted wallboard protected with chair rails and accented with some form of high quality above-door-height-trim (such as an exaggerated picture molding, a continuous door head molding, a high-on-the-wall plate-rail type molding or a cornice molding) for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**f) Small Classrooms:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard protected with chair rails for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**g) Large Classrooms:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim and painted wallboard protected with chair rails for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**h) Kitchen:**

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, and painted wallboard for the wall finish. Provide painted wallboard for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**i) Toilet Rooms:**

Provide porcelain tile floor finish, porcelain tile base for the wall/floor trim, and painted wallboard with porcelain tile wainscots for the wall finish. Provide suspended painted wallboard for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor. Provide solid surface shower units.

**j) Recycling/Vending Area:**

Provide vinyl composition tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**k) Storage:**

Provide vinyl composition tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**l) Lobby:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended painted wallboard for the ceiling finish and lighting format, or appropriate alternative. The ceiling heights shall be appropriate to integrate clerestory windows into the spaces and as appropriate to integrate with the ceiling roof structure. Coordinate the lobby and fixed counter finishes. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**m) Reception:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a

typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**n) Corridors:**

Provide carpet tile for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended acoustic tile with recessed light fixtures in a typical grid pattern type exposed suspension system for the ceiling finish and lighting format. The ceiling heights shall be at minimum 8'-0" above the finished floor.

**o) Stairways:**

Refer to Chapel Finishes item "U) Stairways" for stairway finishes.

**p) Janitor's Closet:**

Provide exposed concrete for the floor finish, resilient base for the wall/floor trim, and painted water-resistant wallboard for the wall finish. Provide suspended painted wallboard for the ceiling finish and lighting format. The ceiling height shall be at minimum 8'-0" above the finished floor.

**q) Equipment Rooms:**

Provide exposed concrete for the floor finish, resilient base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended painted wallboard or exposed structure for the ceiling finish and lighting format. The ceiling height shall be as appropriate to the space and equipment.

**3) Minimum Finish Requirements:**

**a) Carpet:**

Commercial 100% branded (federally registered trademark) nylon continuous filament, permanent static control, loop pile with multi-color (geometric, bold, or floral patterns shall not be used), broadloom carpet - minimum finished yarn weight of 24 oz./sq. yd, carpet tile - minimum finished yarn weight of 20 oz./sq. yd, 1/8" gauge minimum, minimum pile weight density of 4725, synthetic backing. Broadloom carpet installation shall be direct glue. Carpet tile installation shall be with release adhesive.

**b) Porcelain Tile:**

Porcelain tile shall conform to ANSI A137.1, have less than 0.5 percent water absorption and be a minimum commercial heavy traffic grade. Porcelain tile and trim shall be unglazed with the color extending uniformly through the body of the tile or glazed with body color consistent with glaze color. Note: in all places where porcelain tile are listed as requirements, locally available stone or similar other appropriate-for-the-use materials are also acceptable. Provide appropriate acoustical padding and installation techniques when the Worship Center has porcelain tile floor.

**c) Sheet Vinyl:**

Sheet vinyl flooring shall be commercial grade with heat or chemical weld. Type shall be appropriate for intended use. Provide integral cove base.

**d) Vinyl Composition Tile:**

Vinyl composition tile shall conform to ASTM F 1066, Class 2 (through pattern tile), Composition 1, asbestos-free and 1/8 inch thick, with color and pattern uniformly distributed through the thickness of the tile.

**e) Raised Pattern Rubber Tile:**

Rubber tile shall conform to ASTM F 1344, Class 1 homogeneous. Surface shall have a raised pattern, such as but not limited to, round or square studs.

**f) Stair Treads, Risers and Stringers:**

Treads, risers, and stringers shall conform to ASTM F 2169. Surface of treads shall have a raised pattern. Design shall be either a one piece nosing/tread/riser or a two piece nosing/tread with a matching coved riser. Installation shall include stringer angles on both the wall and banister sides and landing trim.

**g) Wood Base, Cornice, Chair Rail and Other Wood Trim Items:**

Shall be of same wood type, character and finish.

**h) Resilient Base:**

Base may be vinyl or rubber, 4 inches high and minimum of 1/8 inch thick.

**i) Fabric Wall covering:**

Fabric with acrylic backing shall be colorfast, stain, and soil resistant, and shall comply with NFPA 101 for textile wall materials. Wall covering shall be able to be cleaned by wiping, vacuuming or washing.

**j) Vinyl Wall covering:**

Vinyl wall covering shall be vinyl coated woven or nonwoven fabric, contain bactericides and mildew inhibitors and be Type II.

**C. Interior Specialties:**

**1) Toilet Rooms:**

**a)** Provide a completely integrated accessory set, shelves for hand-carried items and hooks for clothing. Provide child scaled features and fixtures in the children toilet rooms. Consider providing a counter with inset lavatories where individual wall mounted lavatories are shown.

**b)** Provide multiple robe hooks, a water resistant seat (inside the shower) and curtain rod for the shower in the single-person toilet.

**c)** Provide one pre-manufactured diaper changing unit for each of the public adult restrooms, Nursing Mother's Room, and Cry Room. The unit shall be wall mounted and designed to self-store up against the wall it is mounted on when not in the open position. Unit shall have safety features normally required for this type of unit. Depth in the closed position shall be 3".

**2) Baptistry Suite Items:**

Provide multiple robe hooks, a length of shelf, a water-controlling-slip-resisting floor mat, a water resistant seat and drapery and drapery hardware for each changing alcove.

**3) Toddler Area Items:**

Provide “cubbyhole” storage for parent provided child care items (unless local chaplains prefer to use a free-standing unit). Provide 10 heavy-duty ornamental wall hooks (coordinate height/location with local chaplains) to hang diaper bags, etc. up out of toddler reach but convenient for staff. Include a baby changing station and other appropriate features for the care of small children and their parent-provided supplies.

**4) Nursery Area Items:**

Provide “cubbyhole” storage for parent provided child care items. Include a baby changing station and other appropriate features for the care of small children and their parent-provided supplies.

**5) Signage:**

a) Provide a complete interior signage system that coordinates with the interior design. The facility interior signage system shall be standardized throughout the building and shall be flexible to allow for the addition and deletion of signs and information. Room signs and building directories shall be provided.

b) Room signs for spaces in which the room name, function of the room, or personnel within a room may change shall have a changeable paper insert that can be changed by the user in the future. This applies to chapel spaces such as offices, classrooms, multi-purpose rooms, nursing mother’s room, Resource Centers, meditation and reconciliation, sacrament chapel, etc. Religious Education spaces include offices, classrooms, the Multi-Purpose Area, the Resource Center, and the Youth Ministry Center. Coordinate rooms to have changeable inserts with the user.

c) Directories shall be located in the primary and secondary lobbies and at a minimum shall identify the location of the Worship Center, Activity Center, Blessed Sacrament, Administrative Suite, Nursery, Toddler Area, Nursing Mother’s Room, Restrooms, Multi-Purpose Rooms, Multi-Purpose Area, Resource Center, Youth Ministry Center, Classrooms, and Conference Room.

**6) Window Treatment and Drapery:**

Provide devices to fully block natural light from entering the Worship Center, Activity Center, Multi-Purpose Area, Conference Room, Youth Ministry Center and Resource Center. All other exterior windows shall have horizontal blinds, with the exception of windows at building entrances. Blinds in Multi-Purpose rooms shall be room darkening. Ornamental drapery (dossal) in Worship Center shall be lined and conceal the view of baptistry when not in use and shall not obscure the view of baptismal pool when in the open position. Drapery or fabric shower curtain shall also be provided within the Baptistry Suite at the entries to the changing booths. Drapery fabric within the Baptistry Suite shall be resistant to damage from repeated contact with water. Drapery fabric, fabrication, and hardware shall be appropriate for the intended use and location. Provide blinds in Nursery, Toddler Area and Infant/Toddler Classrooms that have an operable cord or hardware that can be adjusted in length to be out of the reach of children and be strangle-proof.

**7) Marker Boards:**

Provide one marker board in the each DRE Office, Large and Small Classrooms, Resource Center, Conference Room, Kitchens and the Administrative Group Office. Coordinate with the end user whether marker boards shall be digital marker boards. Marker boards shall be wall mounted with a marker tray. Dry erase markings on marker board shall be removable with a felt eraser or dry cloth. Marker board size shall be 4'-0" w x 3'-0" h in the Kitchens, Administrative Group Office, and DRE Offices. All other marker boards shall be 6'-0" wide x 4'-0" high.

**8) Tackboards:**

Provide one tackboard or cork tack strip in each Large and Small Classroom. Tackboards shall be placed at heights appropriate for the intended user group. Tackboard size shall be 4'-0" wide x 3'-0" high.

**9) Presentation Boards:**

Provide one presentation board in the Choir Rehearsal Room and each Multi-purpose Room. Presentation board shall be of the wall hung wood cabinet type with doors. Inside there shall be a marker board writing surface with marker tray and projection screen. Presentation board size shall be 4'-0" w x 3'-0" h.

**10) Entry Mats:**

Provide entry mats at all entry vestibules and lobbies. Entry mats shall be of the shallow built-in type, classified for heavy commercial use and of dirt-hiding construction.

**11) Hardwood Benches:**

Provide one built-in maple or hardwood bench (special recycled material units are also acceptable) with moisture resistant finish in each Baptismal Suite changing booth. Size shall be 1'-6" d x 1'-6" h x length to fit the space.

**12) Range Hoods:**

Contact local suppliers for advice on selection. This range hood unit is to be the kind of unit that can be combined with a microwave in a coordinated assembly or be separate from microwave. If upon coordination with the Garrison it is determined that range hoods shall be separate from the microwave, the range hood shall be CF/CI. Range hoods shall be designed to vent away fumes from food being heated or reheated. Units shall include control switches for selection/adjustment of functions and fan speed. A variety of additional options are available, as are a range of quality and performance characteristics. Locate above range in kitchen. See additional requirements for M13 Microwave in the Equipment section. Coordinate range hood type required with microwave being specified.

**13) Adjustable TV Wall Mounts:**

Provide adjustable TV wall mounts for all flat screen TVs. Contact local suppliers for advice on selection. Coordinate with TVs being purchased as much as possible, but provide a relatively universally designed product so that the TV may be changed out over time. Wall mount shall have the ability to adjust for tilt, angle, horizontal and vertical placement of TV screen.

**14) Adjustable Media Player Mounts:**

Provide adjustable media player wall mounts for media players where desired by end user. Coordinate with end user whether wall mounted media players are desirable and for locations.

Non-wall mounted media players are assumed to be moveable and freestanding. Contact local suppliers for advice on selection. Coordinate with media players being purchased as much as possible, but provide a relatively universally designed product so that the players may be changed out over time. Wall mount shall have the ability to adjust in relation to the TV screen.

**15) Fire Extinguisher Cabinets:**

Provide fire extinguisher cabinets where fire extinguishers are required by UFC 3-600-01, NFPA 10, and NFPA 101. Provide semi-recessed cabinets in all finished areas. Fire extinguisher cabinets shall be capable of housing a 10 lb ABC portable fire extinguisher. Fire extinguisher door panels shall not be locked.

**16) Paper Towel Dispenser and Soap Dispenser**

Provide Paper Towel Dispensers and Soap Dispensers where lavatories and sinks are provided, excluding utility sinks.

**3.6 STRUCTURAL REQUIREMENTS:**

**A. General:**

Column locations and sizes shown on the architectural floor plan are based on a pre-engineered metal building superstructure design condition. Although this has been assumed for the Army Standard Design, a wide variety of structural systems may prove suitable for this facility. The design of structural systems shall be based upon applicable criteria. The foundation system shall be designed according to site specific soil conditions which will require a geotechnical site investigation. The local availability of building materials may be the deciding factor on the type of structural systems chosen. The longer than normal spans in the large seating areas is an aspect of the design that must be given careful consideration. Structural features shown on the Army Standard Design drawings try to reflect a sense for how the structure may function. However, they are not based upon a full design and are essentially arbitrary. Any project design is certain to vary from what is shown. Variations to the structural features will in turn cause slight variations in the spaces they enclose. Such variations are expected and do not imply failure to comply with the Army Standard Design.

**B. Design Loads:**

**1) Live Loads:**

Live loads (including floor and roof live loads, snow loads, wind loads and seismic loads) shall be as specified in the most recent edition of the International Building Code (IBC).

**2) Dead Loads:**

Dead loads shall consist of the weight of all materials of construction incorporated into the building including but not limited to walls, floors, roofs, ceilings, stairways, built-in partitions, finishes, cladding and other similarly incorporated architectural and structural items, and fixed service equipment including the weight of cranes.

**3) AT/FP Requirements:**

UFC 4-010-01 provides guidance on project planning in conjunction with establishing standoff distances for buildings to parking, roadways, trash containers and Garrison perimeters. Minimum standoff distances cannot be encroached upon. These setbacks will establish the maximum buildable area. All standards in Appendix B of UFC 4-010-01 (9 February 2012) must be followed. In addition to the UFC cited in this paragraph UFC 4-020-02FA, (2005) Security Engineering: Concept Design; UFC 4-020-03FA, (2005) Security Engineering: Final Design; UFC



4-020-04FA, (2005) Electronic Security Systems: Security Engineering; and UFC 4-021-01, (9 April 2008) Mass Notification Systems also apply to the facility. The Large Compact Chapel Army Standard Design facilities meet the requirements of this paragraph provided the minimum standoff distances are achieved.

**4) Foundation/Slabs-on-Grade:**

The foundation system shall be designed according to site specific soil conditions which will require a geotechnical site investigation. Provide structural stoops at exterior doors with foundations designed to prevent heave or settlement.

**5) Construction Materials:**

The local availability of building materials may be the deciding factor on the type of structural systems chosen.

**6) Design Analysis:**

The Design Analysis shall include lists of design criteria, structural design loads, structural materials with stress grades and/or ASTM designations, and calculations. A copy of the Foundation Analysis shall be included as an appendix to the Design Analysis.

**C. Modification To Existing Structures:**

Structural requirements for modifications to existing structures shall comply with IBC 2006 Chapter 34 Existing Structures. Implementation AT/FP requirements of UFC 4-010-01 (9 February 2012) is mandatory for existing buildings when triggered by UFC 4-010-01 paragraph 1-8.2 Existing Buildings.

**3.7 SEE PARAGRAPH 6.7 THERMAL PERFORMANCE – NOT USED**

**3.8 PLUMBING REQUIREMENTS:**

**A. General:**

Provide appropriate underground and aboveground domestic water supply (hot and cold), storm, sanitary sewers and natural gas distribution systems. Toilet facilities, kitchen facilities and floor drains make up the majority of the plumbing requirements in this facility. Provide a below sink garbage disposal for one side of each kitchen sink. Provide drainage for each of the spaces in the Baptistry Suite to accommodate the water that drains off of persons after they depart from the Baptismal pool. Provide a special sink with a drain extended to the ground for the Sacarium.

**B. Domestic Water:**

Domestic hot water for the Kitchen and various sinks, and showers shall be provided. Domestic water heating system shall comply with the requirements of the Energy Independence and Security Act of 2007 with respect to the use of solar water heating.

**C. Plumbing Fixtures:**

Provide “WaterSense” certified plumbing fixtures where available. Starting in FY14 all buildings plumbing systems will be required to have a maximum of 0.025% lead in the fixtures and piping.

**D. Gas Piping:**

Gas should be utilized where feasible and available as main source of heating for domestic water

heaters.

### **3.9 COMMUNICATIONS AND SECURITY SYSTEMS:**

#### **A. AV System:**

##### **1) General Audio/Visual (AV) System:**

Provide a complete A/V System design and provide and install supporting raceway system in construction. The A/V system design shall include a complete component list with brands, models, pricing, and a detailed functional description of how the system is intended to operate. Private sector or other designers (for design-bid-build contracts) provide essentially the same thing, but within the format limitations required by this different contract form. For example, specifications may include generic information instead of specific makes and models. The specific details of this will be provided when specific projects are initiated for design. This A/V system shall be a high quality, fully integrated audio-visual system for the facility that allows for all currently common media activities including the ability to integrate media, private and commercial television broadcasts. The system shall have some ability to be controlled by portable computer. The system may consist of component sub-systems, so long as all are fully integrated for operation throughout the facility. The system shall have the ability to transmit separate media to the Worship Center, Activity Center, each Multi-Purpose Room the Multi-Purpose Area, each Classroom, Resource Center, Youth Ministry Center and Conference Room. The system shall also have the ability to allow the Worship Center, Activity Center, and Baptistery Suite to function together and share a single media presentation. The system shall also have the ability to allow the Multi-Purpose Area, each Classroom, Resource Center, Youth Ministry Center, and Conference Room to function together and share a single media presentation. In addition, the Worship Center, Activity Center, and Audio/Visual Production Room shall be able to broadcast to the Multi-Purpose Area, each Classroom, Resource Center, Youth Ministry Center, and Conference Room. From this A/V System design, also provide a complete supporting raceway system in the construction.

##### **2) AV System Control:**

**a)** The “primary” control point for the A/V system shall be located in the Worship Center in a CFCI lockable media control console at the front of the Worship Center balcony, fully set up to control all media items and equipment. Contractor shall coordinate with the end user to ensure media control consoles are appropriately sized for all equipment. Contractor shall provide additional secondary control points for the A/V system in the following locations:

**(1)** In the Worship Center:

- (a)** At the pulpit area
- (b)** At one of the two positions indicated on either side of the raised platform
- (c)** Along the sidewall toward the Primary Entry Lobby

**(2)** In the Activity Center:

- (a)** At one side of where the portable raised platform is shown
- (b)** Along the sidewall toward the Primary Lobby.

**(3)** In the Multi-Purpose Rooms

- (a)** Along one sidewall.

(4) In the Multi-Purpose Area

(a) Along one sidewall

(5) In the Resource Center

(a) Along one sidewall

(6) In the Youth Ministry Center

(a) Along one sidewall

b) All secondary control points shall have basic control functions for on/off/volume-of-each-speaker-grouping-in-the-space/microphone-on-off. Each secondary control point shall also have inputs points for a portable type computer and television quality camera. In rooms with operable projector mounts, the secondary control shall be able to raise and lower each projector. Each secondary control point shall have a lockable cover and be integrated into the supporting features. The control housing at the Worship Center raised platform shall be supported by a quality furniture cabinet or table.

c) The secondary control point in the Multi-Purpose Area shall have the same capabilities as the primary control point in the Worship Center but only capable of controlling media items and equipment in areas designated as REF spaces. The control point shall be a CFCI movable lockable media control console.

**3) AV System Input:**

The system shall be able to process input from all microphones, musical instruments as defined, portable computers, and television cameras. Provide connections/accommodations for wired and wireless, hand-held, mounted, lapel clip and belt clip types of microphones. The contractor shall provide a minimum of 12 plug-in type microphone connection points along the middle and rear edge of the raised platform in the Worship Center. Provide a hanging microphone array (or input connections to support these or other high quality means) to transmit the choir. A permanently mounted camera, microphone boom, and microphone or hanging microphone (both relatively out of sight) shall be installed for the baptismal pool to safely and accurately pick up the view and voices of people in the baptismal pool. The contractor shall provide a minimum of 3 plug-in type microphone connection points evenly distributed in each multi-purpose room. The contractor shall provide a minimum of 4 plug-in type microphone connection points along the rear edge of the presentation area in the Multi-Purpose Area. The contractor shall provide a minimum of 1 plug-in type microphone connection points in both the Resource Center and Youth Ministry Center. The contractor shall provide a booster device (if needed) to accommodate wireless microphone input to the A/V system from the Primary Entry Canopy Area. Contractor shall also provide CATV input to the A/V system.

**4) AV System Output:**

The system shall include a low-level distribution loudspeaker system that provides uniformity of coverage between the frequencies of 100-12,000 Hertz. The system shall be capable of producing an intelligible signal at a minimum of 75 dB throughout the spaces. Speakers may be wall and/or ceiling mounted. Major speaker arrays in the larger spaces shall be mounted behind visual screens or on shelves with "parapet walls" so that they are out of sight for those people in pews. Speakers shall also have volume-on-off control. Contractor may install volume control at each speaker, or have one control per room. Speaker arrays shall be designed for and located in the following rooms: Worship Area, Activity Center, Multi-purpose rooms, Offices, Changing Booths, Baptismal Suite Corridor Stairway, Kitchen, Pantries, Sacristy/Robing Room, Nursing Mothers

Room, Lobbies, Primary Entry Canopy Area, Meditation/Reconciliation, Cry Room, Multi-Purpose Area, each Classroom, Resource Center, Youth Ministry Center, Conference Room, Lobby, Corridors and Restrooms.

**5) AV System Projectors:**

The system shall include LCD projectors. The Worship Area shall have three (3) permanently mounted LCD projectors on fixed projector mounts facing the screens in this area. The Activity Center shall have three (3) permanently mounted LCD projectors on operable projector mounts that allow for raising and lowering the projectors. The Activity Center projectors shall face the screens. Each Multi-Purpose room shall have one (1) permanently mounted LCD projector on an operable projector mount that allows for raising and lowering of the projector unless the local customer representatives make the decision to use flat-screen TV technology to accomplish this same goal. The Multi-Purpose Area shall have one (1) permanently mounted LCD projector on an operable projector mount that allows for raising and lowering the projector. The Resource Center, Youth Ministry Center, all Classrooms, and Conference Room shall each have one (1) accommodation for a permanently mounted LCD projector on a fixed projector mount facing the screen in these areas.

**6) AV System Certifications:**

The system shall be National Systems Contractors Association (NSCA) certified with R-ESI credentials for the system coordinator and C-EST credentials for the installing staff.

**B. Telecommunication Systems:**

**1) Community antenna Television (CATV):**

A CATV system shall be installed in accordance with the Technical Guide for Installation Information Infrastructure Architecture (I3A). A minimum of one (1) CATV outlet shall be located in the following rooms: Offices, Classrooms, Resource Center, Youth Ministry Center, Conference Room, and Multi-Purpose Rooms. A minimum of two (2) CATV outlets shall be distributed along the rear edge of the performance area in the Multi-Purpose Area. A minimum of three (3) CATV outlets shall be distributed along the raised platform in the Worship Center. A minimum of two (2) CATV outlets shall be located in the Activity Center.

**2) Telephone and Data:**

Telephone and data outlets shall be installed in accordance with the Technical Guide for Installation Information Infrastructure Architecture (I3A), with the following exceptions:

**a) Offices:**

Provide a minimum two (2) combination telephone and data outlets available for workstations.

**b) Group Office:**

Provide a minimum four (4) combination telephone and data outlets available for workstations

**c) Multi-Purpose Rooms:**

Provide a minimum six (6) combination telephone and data outlets available for workstations.

**d) Kitchen:**

Provide a minimum of one (1) combination telephone and data outlet.

**e) Sacristy/Robing:**

Provide a minimum of one (1) combination telephone and data outlet.

**f) A/V Production Room:**

Provide a minimum of two (2) combination telephone and data outlet.

**g) Worship Center:**

The media control console in the Worship center shall have a minimum of one (1) data outlet.

**h) DRE Offices:**

Provide a minimum two (2) combination telephone and data outlets available for workstations.

**i) Classrooms:**

Provide a minimum two (2) combination telephone and data outlets available for workstations.

**j) Conference Room:**

Provide a minimum two (2) combination telephone and data outlets available for workstations.

**k) Kitchen:**

Provide a minimum one (1) combination telephone and data outlet.

**l) Multi-Purpose Area:**

Provide a minimum three (3) combination telephone and data outlets available for workstations.

**m) Resource Center:**

Provide at a minimum four (4) combination telephone and data outlets for learning lab computers. Provide at a minimum one (1) combination telephone and data outlet for copier/fax.

**n) Youth Ministry Center:**

Provide at a minimum four (4) combination telephone and data outlets located around the room and one (1) combination telephone and data outlet at the workstation.

**o) Reception:**

Provide at a minimum three (3) combination telephone and data outlets for workstations. Provide at a minimum one (1) combination telephone and data outlet for copier/fax.

**p) Waiting Area:**

Provide at a minimum two (2) combination telephone and data outlets.

**3) Public Address (PA) System:**

The contractor shall make provisions to connect the phones to the A/V system audio for use as a PA system.

**4) Nursing Mother's Room Connectivity:**

The Nursing Mother's Room shall have a permanently installed intercom system. This system shall connect to the Nursery Area and the Toddler Area and allow for two-way communication. If the local customer representatives make the decision to include flat screen television technology in this space, include accommodation for such features.

**5) Wireless Internet:**

Wireless internet shall be installed in accordance with the Technical Guide for Installation Information Infrastructure Architecture (I3A). Wireless internet coverage shall be provided for the Multi-Purpose Area, Resource Center, Youth Ministry Center, Lobby, Reception, Waiting Area, Conference Room, and all Classrooms.

**6) Closed Circuit Television (CCTV) System:**

The CCTV system shall include CCTV monitoring of all Nursery, Infant and Toddler classrooms and care spaces, Pre-K and K classrooms, hallways, and exterior entrances. The CCTV system design shall include overlapping view areas to ensure complete coverage. The CCTV system shall include cameras and camera support equipment including a viewing monitor at a first floor administrative office, the second floor reception area, and in the space where the processing equipment is housed. It shall also provide for an auditable historic record.

**C. Security System:**

**1) Limited Access Areas:**

The suite dedicated to Infant and Toddler care and education shall be separated from the rest of the facility by a security door. The door shall be cipher/keypad locked or key-card locked with access limited to only the staff working with those children.

**D. Mass Notification:**

Provide a mass notification system designed in accordance with UFC 4-021-01.

**3.10 ELECTRICAL REQUIREMENTS:**

**A. General:**

Lighting for this facility shall be according to all applicable criteria and shall take into consideration the functional needs of the spaces. This, along with fans and fractional horsepower motors, will make up the majority of the electrical loads for the facility.

**B. Lighting Requirements:**

**1) General**

Lighting for most spaces with suspended acoustic ceilings shall be of the recessed type. Lighting for the Worship Center, Activity Center, Meditation/Reconciliation Room, Nursing Mother's Room, Multi-Purpose Area, Resource Center, and Youth Ministry shall receive special attention as

to color accents in lighting, fixture type, and flexibility. Creative lighting techniques are encouraged. High lighting shall include some accommodation for maintenance and the changing of lamps. Some past chapel projects have made very successful use of light fixtures that can be lowered to the main floor level for maintenance. Operating hardware shall have automatic stops at lowest point and highest point to facilitate maintenance. Address how light fixtures in high-above-the-floor locations will be maintained when this ASD is applied to a specific project.

**2) Dimming Controls:**

The dimming system shall be capable of controlling lighting down to 1%, and shall have a minimum 3 presets. All illumination levels shall be maintained illumination levels per IESNA recommendations. A dimming system shall be installed to control the Worship Center, Activity Center lighting, Cry Room, Nursing Mother's Room, and Nursery.

**a) Worship Center/Cry Room:**

Lights shall have automatic dimming controls with manual override. Controls shall operate lights in both the Worship Center and Cry Room.

**b) Activity Center:**

Lights shall have automatic dimming controls with manual override.

**c) Nursing Mother's Room:**

Lights shall have manual dimming controls.

**d) Nursery:**

Lights shall have manual dimming controls.

**e) Multi-Purpose Area:**

Lights shall have manual dimming controls.

**f) Resource Center:**

Lights shall have manual dimming controls.

**g) Youth Ministry Center:**

Lights shall have manual dimming controls.

**h) Conference Room:**

Lights shall have manual dimming controls.

**i) Small Classrooms:**

Lights shall have manual dimming controls.

**j) Large Classrooms:**

Lights shall have manual dimming controls.

### **3) Symbolically “Eternal” Light Fixture:**

Provide a special “Eternal Light/Flame” type fixture in the Blessed Sacrament room. This light fixture is available from religious specialty suppliers and comes in numerous forms. As a light fixture (even if of “table” or “floor” lamp form), its significant characteristics are that it be more ornamental than typical fixtures, un-switched or hidden switched, and not of the plug-in type. Certainly the lamp in the fixture shall fail from time to time or other maintenance requires temporary (extinguishment) disconnection, but the goal is to project an appearance of “apparent” permanence to the casual observer.

## **C. Power:**

### **1) Mechanical Equipment:**

Requirements for heating, ventilation, and air conditioning system shall be determined by the project criteria package. Heating, ventilation, and air conditioning system may be distributed into several smaller units throughout the building because of difficulty in running duct systems through the building. Mechanical and Electrical rooms shall be separate. Each room shall have exterior access. Mechanical / Electrical rooms are not to be used for any other purpose unless agreed to by the appropriate mechanical / electrical designers. All exterior on-grade mechanical and electrical equipment shall be located within an enclosed area. Access around equipment shall be provided for service and air flow. In cold climates provide features that will protect plumbing, water lines, and other lines from freezing.

### **2) Support Facilities:**

Full-Immersion Baptistery will require power to run a circulating pump, heater, and automatic valve shut-off or alarm when the pool has reached full capacity. No other power except lighting will be allowed in the Baptistery Alcove. Baptistery adjacent changing rooms will require exhaust fans and GFI receptacles for hair dryers. Raised Platforms will require recessed power outlets and outlets for wired microphones. Power outlets and microphone outlets will be located in close proximity to give the maximum amount of flexibility. Provide the main lobby with power and communications support for a movable kiosk (reception/information desk) at two points (one is suggested in the drawings) in the lobby. Provide the main lobby theme kiosk (as shown) with suitable power and communications support. Provide the Activity Center theme kiosk with suitable power and communications support.

### **3) Miscellaneous Equipment:**

Provide power for all equipment that is identified in this document. This equipment includes, but is not limited to, ranges with ovens, warming drawers, full size refrigerators, stand-alone ice-makers, automatic dishwashers, garbage disposals, and microwaves in the kitchen, and an under-counter refrigerator in the sacristy.

### **4) Kitchen:**

Countertop outlets shall be provided per NEC 210.52 for kitchens. Countertop outlets shall be served by a minimum of 3 circuits. The design ideal/intent is to provide many outlets very close together to support an entire “fleet” of crock-pots, coffee-pots, warming dishes, etc.; all filled with pre-prepared food items that congregation members have brought in for a really large “pot-luck” event. The same is true for a center island in the kitchen. If the local customer representatives strongly desire a commercial grade piece of equipment (not at all intended or recommended by the Office of the Chief of Chaplains), provide these with the increased amount of power necessary for operation.



**5) Child Dominant Spaces:**

Provide tamper resistant receptacles in the Cry Room, Toddler Area, Child's Restroom, Nursing Mother's Room, Nursery Area, and the Infant/Toddler Classrooms. Provide the same in the Multi-purpose rooms for those events that will involve small children.

**3.11 HEATING VENTILATING AND AIR CONDITIONING (HVAC) REQUIREMENTS:**

**A. General:**

1) The facility shall normally be heated and air-conditioned except that the storage and service areas may be ventilated and heated as required by code. The Kitchen shall be cooled not to exceed 85 degrees Fahrenheit and heated to maintain temperature no less than 68 degrees Fahrenheit. The janitor closet and restrooms shall be maintained at a negative pressure relative to adjacent areas. Mechanical rooms shall accommodate space for equipment maintenance access without having to remove other equipment. Mechanical, electrical and telecommunications rooms shall be keyed separately for access by Garrison maintenance personnel and fire department.

2) With the exception of exhaust fan dedicated for restrooms and janitor closet or air cooled equipment, all primary equipment of the HVAC, and plumbing system(s) shall be located in the mechanical equipment room. This includes equipment such as air handling units, dedicated outside air system units, energy recovery units, pumps, central water heaters and water-to-water heat pumps. Air tempering equipment dedicated to provide zone control to different essential areas should typically be located in proximity to the areas served. This includes equipment such as variable air volume boxes, and water-to-air heat pumps. Accessibility for future maintenance to the mechanical equipment shall be taken in account in the design, selection and location of all mechanical equipment. Intake, relief and exhaust louvers shall be provided at the exterior of the building. Each louver shall be provided with a 2-position, parallel blade isolation damper located at or near the louver. Additional modulating flow control damper(s) shall be provided as required by the system equipment and control sequence.

**B. HVAC Design:**

The Heating, Ventilating, and Air Conditioning system(s) shall be based on geographical location, climate and applicable criteria listed in this document.

**C. Mechanical Systems Selection:**

Selection of energy sources and mechanical system(s) shall be based on local availability, energy consumption, maintainability, reliability and life cycle cost. In addition, all mechanical system(s) design and selection(s) shall comply with the requirements of applicable criteria listed in this document.

**D. Concealed Elements:**

1) Conceal all mechanical systems, including the ductwork, in occupied spaces. Coordinate such that concealed shafts or pathways are provided where mechanical system(s) require them. Outdoor intake and relief or return louvers shall be designed in such a way that general public access to these components is restricted.

2) Heating, ventilating, and air conditioning (HVAC) control system shall be easily accessed by staff, but relatively secure from the general public. This facility will be used in many different ways. Some spaces will be filled to capacity at the same time that other spaces will be empty.

## **E. Zoning:**

- 1) Interior spaces should typically be in separate zones from exterior spaces. Zones separation shall be also based on systems isolation and operation. Air handling system serving the Worship and Activity Center requires individual zone control. Areas such as the Multi-purpose Rooms, Multi-Purpose Area, Classrooms, and Choir Rooms shall be served by systems that will provide individual temperature control in each space and should provide for economy of operation when only a few of these spaces are occupied.
- 2) Provide carefully considered zoning to accommodate the optimum number of use combinations. Air distribution systems may include, but are not limited to, systems such as variable air volume, fan coil units, water-to-air heat pumps and variable refrigerant flow systems.

## **F. HVAC Control System:**

Provide a direct digital control (DDC) system for control of the heating, ventilating, and air conditioning system equipment. The control system shall provide automatic operation of the HVAC equipment, but shall also allow for override of system programming in order to accommodate varied uses of the facility. For spaces where the number of occupants varies from just a few to a large number (such as the Worship Center), consideration should be given to the use of CO2 sensors to control the volume of outside air supplied to the space, based on the actual need in lieu of constantly supplying the volume of outside air required for maximum occupancy during all occupied hours. Provide densely-populated rooms (as defined by codes or LEED) with CO2 sensors to control the volume of outside air supplied to the space. Outside air should not be supplied to spaces during unoccupied periods or when spaces are in the warm-up or cool-down mode prior to occupancy. The requirement for integration into a Garrison-wide EMCS shall be investigated and appropriate provisions made. Integration of the building HVAC control system into the Garrison-wide EMCS shall be provided unless specific guidance is provided to the contrary.

## **G. ACOUSTICS:**

Acoustics is an important consideration in the design of chapels. Provide mechanical equipment items placed outside and adjacent to the building with screening and appropriate acoustic control. Also, ensure that operating noises do not intrude into inhabited areas. Designer shall design the air distribution system(s) to be less than or equal to 20 NC. Access clearances for servicing and proper airflow shall be provided when developing the screening and acoustic control of equipment located outside the building.

### **3.12 ENERGY CONSERVATION REQUIREMENTS:**

- A.** Provide all appropriate energy conservation features. Coordinate issues such as siting, sustainability, and meeting all energy conservation requirements listed in other sections.
- B.** Mandated federal criteria are regularly being revised to decrease such energy consumption by increasing energy efficiency. Documents, such as ASHRAE 189.1-2009, have been developed to focus building design on steadily improving their levels of energy efficiency.
- C.** An energy analysis for the Compact Chapel was performed in accordance with ECB Number 2010-14 (28 June 2010), ECB Number 2011-1 (19 January 2011), and the U. S. Department of Energy (DOE) guidance issued in the Federal Register (NARA 2006) which states that savings calculations should not include “plug loads” (process loads) and implies that savings shall be determined through energy reduction cost savings. The energy analysis showed that this facility could meet the targeted energy reduction goals of ECB 2010-14. The target was 40% actual energy reduction from the base-line energy use defined in the criteria of ASHRAE 90.1-2007.
- D.** As a result of this energy analysis, it is recommended that facilities provided for climate zones

1a & b, 2a & b and 3a, b & c have horizontal shades above the windows, shading grills, or other devices or building geometry (like being deeply recessed) techniques (clerestories close to the roof line may accomplish the same benefit with overhangs) to allow for meeting the required energy reduction savings.

**E.** ECB 2012-13 has been issued since the energy analysis was conducted. This document states that when applying ASHRAE Standard 189.1 energy performance standards, ensure that the minimum energy savings to be achieved, through performance or prescriptive paths, is at least 30 percent better than ASHRAE Standard 90.1-2007 (including process and plug loads). The U. S. Army has decided to include/use site energy for the HVAC, lighting, and hot water loads to determine the energy savings. The previously conducted energy analysis results meet the minimum levels outlined by this new ECB.

**F.** It is assumed that both the governing criteria and the energy target (as defined by the U. S. Government and organizations such as the United States Green Building Council (USGBC)) will change regularly. Provide every facility (these will generally be projects appropriated at specific times over several years) so that it meets the requirements of governing criteria and the energy target that are applicable at the time of project development.

**G.** Many federally mandated definitions/requirements or measures of energy consumption criteria (energy reduction cost savings) are not identical with other measures of energy efficiency or sustainability. Examples of different measures are those described in the USGBC “LEED” point criteria.

**H.** Provide a comprehensive analysis of energy consumption during specific project design processes and incorporate what appears to be the best/most-appropriate blend of features/characteristics that will reduce energy consumption of the facility to the minimum practicable levels. Also meet whatever the current mandates or criteria that apply at the time of the specific project under design.

### **3.13 FIRE PROTECTION REQUIREMENTS:**

#### **A. General:**

##### **1) Standards and Codes:**

Provide fire protection and life safety features in accordance with UFC 3-600-01 and the criteria referenced therein.

##### **2) Qualifications:**

The Fire Protection Engineer (FPE) shall meet one of the conditions indicated in the UFC 3-600-01 and shall be part of the design team. Submit qualifications and credentials of the FPE at the start of the project. The FPE shall provide a letter at the completion of the design certifying the project meets UFC 3-600-01 and applicable codes. Fire Protection Engineer shall be responsible for all aspects of the life safety, fire sprinkler, and fire alarm systems for each facility. Fire Protection Engineer is responsible to provide the life safety and fire protection analysis.

##### **3) Fire Protection and Life Safety Analysis:**

Provide a fire protection, building code and life safety analysis for all buildings in this project. This analysis shall be submitted in accordance with the provision described in section 01 33 00 Submittal Procedures and UFC 3-600-01. Provide an analysis per UFC 3-600-01 for each facility.

**B. Fire Suppression Systems:**

**1) Sprinkler System:**

Provide complete sprinkler protection in accordance with UFC 3-600-01. Sprinkler protection shall be designed in accordance with UFC 3-600-01. Wet pipe sprinkler systems shall be provided in all heated areas and dry pipes sprinkler systems shall be provided in areas subject to freezing. Provide a hydrant flow test at the site prior to starting the fire protection design. It is preferred to provide a fire sprinkler system without a fire pump. Refer to Paragraph 8.

**2) Sprinkler Service Main and Riser:**

Sprinkler service mains shall be dedicated lines from the distribution main. Do not combine sprinkler service piping and domestic service piping. Sprinkler service mains shall be provided with an exterior post indicating valve with tamper switch reporting to the fire alarm control panel (FACP) inside of each building. Underground fire service pipe penetrating floors shall be provided with a pipe sleeve. The sprinkler riser shall include a double check type backflow preventer, a fire department connection and an exterior wall test connection for testing of backflow prevention assembly. The sprinkler system shall include an indicating control valve for each sprinkler riser, a flow switch reporting to the FACP, and an exterior horn and strobe at the location of the fire department connection. Each floor shall be provided with a separate control valve with tamper switch and flow switch. Coordinate with the local base fire department to determine the exact exterior notification appliance they prefer such as water gong, horn and strobe, etc.

**3) Backflow Preventer:**

Provide a double check valve assembly for all fire sprinkler water supplies. An exterior flush wall test connection with dual hose connections with OS&Y valve shall be provided to allow testing of the backflow preventer. Provide sign that says "Test Connection."

**4) Fire Department Connection:**

A fire department connection shall be provided for each building provided with a suppression (sprinkler) system. The location shall be accessible by the fire department, shall be unobstructed, and shall be within 150 feet from the nearest fire hydrant. Coordinate with the local base fire department whether they prefer a free-standing connection versus a wall mounted connection. Fire Department Connections shall generally be placed on the address side of the building where Fire Department Personnel will be entering the building.

**5) Fire Pump:**

The requirement for a fire pump shall be determined by the Contractor based on hydrant flow data from the project site and fire protection system design for the project. If required, a complete fire pump design and installation shall be provided for the facility. Fire pump design and installation shall comply with the requirements of UFC 3-600-01 AND NFPA 20. It is preferred to design and provide a fire sprinkler system without a fire pump.

**6) Sprinkler System Materials and Components:**

Materials and components for sprinkler systems and fire pumps shall be in accordance with UFC 3-600-01, NFPA 13 and NFPA 20. Sprinkler head type shall be quick response (wet pipe system only). Piping shall not be exposed in finished areas.

**7) Area of Demand, Design Density, and Exterior Hose Stream:**

Area of demand, design densities and exterior hose stream shall be in accordance with UFC 3-600-

01, Table 4-1.

**8) Fire Water Supply:**

Provide fire hydrant flow test(s) at the site prior to any design. Any flow data provided in the Appendix is for information only and not to be used to develop the fire protection design. Provide a water supply analysis per UFC 3-600-01 as part of the design to determine whether there is adequate water supply and duration for the project. Provide hydrants as required per UFC 3-600-01, and NFPA 1.

**9) Kitchen:**

Because the facility is a Place-of-Assembly, provide an appropriate form of fire suppression equipment for the ranges. If the local customer representatives strongly desire a commercial grade piece of equipment (not at all intended or recommended by the Office of the Chief of Chaplains), provide these with a commercial kitchen hood and wet chemical suppression system and automatic shut-off for electric or gas fuel sources per NFPA 96 and 90A. Design shall conform to UFC-3-600-01. If the local customer representatives select residential grade pieces of equipment (the ideal/intent of this ASD), a residential hood may be provided.

**10) Fire Extinguishers:**

Travel distance to/from the extinguisher cabinets shall not exceed that required by NFPA 10. Fire extinguisher cabinets shall be capable of housing a 10 lb ABC portable fire extinguisher. Fire extinguisher door panels shall not be locked. Fire extinguishers are to be provided as part of the project.

**C. Fire Detection And Alarm Systems:**

Provide an addressable type fire alarm system with addressable devices per NFPA 72, UFC 3-600-01, and UFC 4-021-01. Type, function and location of the fire alarm annunciation panel shall be coordinated with the local Authority Having Jurisdiction (AHJ). For additional information, refer to Electrical and Communication paragraphs in this section. Fire Alarm and Mass Notification Systems shall be controlled from a single panel. Coordinate with local base fire department for the type and style of the fire alarm system as well as the monitoring and reporting equipment.

**D. Mass Notification:**

Provide a mass notification system designed in accordance with UFC-4-021-01.

**3.14 SUSTAINABLE DESIGN:**

**A.** Many features that make a facility sustainable can be integrated into a typical building and site. Reduction in the use of water is a key element that generally applies to every building and site. However, other very beneficial features/techniques (such as shading devices for buildings or building orientation for sites) or materials might also have application but need to have a more tailored building and site to be effective.

**B.** The offerer (for design-build contracts) or designer (for design-bid-build contracts) is encouraged to suggest sustainable material substitutions or building feature modifications for consideration where they appear to provide benefit without appearing to interfere with functionality.

**C.** See Paragraph 6.14 for additional Sustainable Design guidance.

**3.15 SEE PARAGRAPH 6.15 ENVIRONMENTAL DESIGN – NOT USED**

**3.16 SEE PARAGRAPH 6.16 PERMITS – NOT USED**

**3.17 SEE PARAGRAPH 6.17 DEMOLITION – NOT USED**

**3.18 SEE PARAGRAPH 6.18 ADDITIONAL FACILITIES – NOT USED**

**3.19 EQUIPMENT AND FURNITURE REQUIREMENTS:**

**A. General:**

The criteria within this document identifies the level of quality and special requirements for furniture and equipment, yet provides flexibility for the designer to make creative and appropriate selections to meet User requirements. Furniture and equipment shall be complementary and compatible with the building design and provide a completely coordinated interior design. Unless otherwise noted, items in this section shall be Government Furnished/Government Installed (GF/GI); also refer to Section 01 10 00, paragraph 6. Dimensions provided are approximate.

**3.19.1 Furnishings:**

**A. General:**

Furniture shall not have sharp edges. Clips, screws, and other furniture construction elements shall be concealed where possible. Upholstery for office areas, lounge furniture and stacking seating shall meet Wyzenbeek Abrasion Test, 55,000 minimum double rubs. Furniture style details and finishes shall be compatible throughout the facility and coordinated within a room. Furniture finishes and fabrics shall be appropriate for intended use. Upholstery fabric (color, pattern and fiber content) shall be easily cleaned and help hide soiling. Provide patterned fabrics for seating to help hide soiling. Upholstered stacking seating fabric shall have a soil retardant finish to aid in cleaning and maintenance.

**B. Accessories:**

- 1) **A01 - Small Trash Receptacle:** Small trash receptacle, minimum 28 quart capacity. Size 1'-2" w x 10' d x 1'-3" h.
- 2) **A02 - Large Trash Receptacle:** Large trash receptacle, minimum 12 gallon capacity. Size 1'-3" in diameter x 2'-9" h.
- 3) **A03 - Paper Recycle Receptacle:** Small paper recycle trash receptacle, minimum 28 quart capacity. Size 1'-2" w x 10" d x 1'-3" h.
- 4) **A04 - Toilet Receptacle:** When built-in-to-the-partition trash receptacles are not included in the design, provide free-standing toilet receptacles of an appropriate capacity, material, and finish. Coordinate the specific receptacle selected with the local chaplains.

**C. Desks And Storage:**

Furniture can be wood, plastic laminate or metal finish, coordinate finish material with the User. Preferred top for wood furniture is plastic laminate that closely matches adjacent wood with mitered solid wood edge. Glass tops shall be provided for furniture with wood tops. Tops for case goods with plastic laminate or metal construction shall be plastic laminate. Location, use, and frequency of moving furniture shall be considered when determining appropriate finish material and construction. Furniture constructed of particleboard with plastic laminate finish is not acceptable. Plastic laminate shall be high pressure plastic laminate, not low pressure plastic laminate. Box and file drawers shall have a heavy-duty suspension system. Furniture shall be constructed with concealed fasteners. Furniture storage shall be lockable. Verify with User if keyboard trays are required at desks; many Users prefer not to have keyboard trays since laptops are used. Recommend full modesty panel at

primary work surface between personnel and guest. If provided at building walls, modesty panel shall allow access to wall electrical and data outlets. Provide for the following Desk and Storage Items:

- 1) **D01 - U Shaped Workstation with Right Return:** Workstation shall have a primary work surface with a pencil drawer and pedestal; desk height bridge with adjustable keyboard tray and mouse attachment ( if required); and secondary work surface with pedestal. Unit shall also have overhead storage, tackboard, and task light under all overhead storage, and modesty panels. Storage shall be lockable. The size of the primary work surface shall be 6'-0" w x 2'-6" d. The size of the bridge shall be 3'-6" w x 2'-0" d. The size of the secondary work surface shall be 6'-0" w x 2'-0" d. The work surface height shall be 2'-6".
- 2) **D02 - U-Shaped Workstation with Left Return:** Workstation shall have a primary work surface with a pencil drawer and pedestal; desk height bridge with adjustable keyboard tray and mouse attachment (if required); and secondary work surface with pedestal. Unit shall also have overhead storage, tackboard, and task light under all overhead storage, and modesty panels. Storage shall be lockable. The size of the primary work surface shall be 6'-0" w x 2'-6" d. The size of the bridge shall be 3'-6" w x 2'-0" d. The size of the secondary work surface shall be 6'-0" w x 2'-0" d. The work surface height shall be 2'-6".
- 3) **D03: Not Used**
- 4) **D03A: Not Used**
- 5) **D04 - Bookcase:** Five-shelf bookcase with 4 adjustable shelves. 3'-0" w x 1'-3" d x 5'-6" h. Bookcase shelving shall be deep enough to store required materials and supplies.
- 6) **D05 through D07: Not Used**
- 7) **D08 - L-Shaped Workstation with Left Return:** Workstation has a primary work surface with a pedestal and a desk height return. Return has a pedestal and an adjustable keyboard tray with mouse attachment. If space allows, unit shall also have overhead storage, tackboard, and task light under all overhead storage. Primary worksurface shall also have pencil drawer. Storage shall be lockable. The size of the primary work surface shall be 6'-0" w x 2'-6" d. The size of the return shall be 3'-6" w x 2'-0" d. The work surface height shall be 2'-6". Coordinate requirement for "transaction" surface with customer.
- 8) **D09: Not Used**
- 9) **D10 - Lateral File with Shelving:** Storage with two lateral file drawers below and adjustable shelving above. Size 2'-6" w x 24" d.

#### **D. Seating:**

- 1) **S01 - Desk Chair:** Ergonomic desk chair with non-upholstered adjustable height arms, padded contour cushioned and upholstered seat and back, back tilt and locking capability, pneumatic seat height adjustment, back height adjustment, adjustable lumbar support, seat depth adjustment, five star base on casters. Size 2'-0" w x 2'-2" d x 2'-8" to 3'-2" h. Verify that seat height is appropriate for casework height and kiosks, and make changes as necessary. Provide desk chair with adjustable seat height range of 4 ½", range to include 16 ½" - 20".
- 2) **S02: Not Used**
- 3) **S03 - Guest Chair:** Guest chair with arms and upholstered cushioned seat and back. Wood back is also acceptable. Style shall complement the desks and desk chairs. Size 1'-9" w x 1'-11" d x 2'-6" h.

4) **S04 - Lounge Chair:** Fully upholstered lounge chair with enclosed arms. Armrests and legs/base may be wood, frame shall be solid hardwood with all parts glued and fastened. Size 2'-7" w x 2'-7" d x 2'-9" h.

5) **S05: Not Used**

6) **S06 - Stacking Chair, Plastic:** Sled base high-density stacking chair, stack 30-50 on dolly and has glides. Glides shall be appropriate for floor finish. Frame shall be solid base stock with chrome plate or durable color finish. Polypropylene seat and back. Size 1'-7" w x 1'-11" d x 2'-7" h for the back and 1'-6" for the seat.

7) **S06A - Stacking Chair, Uph:** Sled base stacking chair with upholstered seat and back shall stack a minimum of 10 on dolly and a minimum of 6 on floor, with glides. Glides shall be appropriate for floor finish. Frame shall be solid base stock with chrome plate or durable color finish. Approximately 40% of the seating located in the Activity Center shall be able to be stored in the adjacent storage room. Size 1'-7" w x 1'-11" d x 2'-7" h for the back and 1'-6" for the seat.

8) **S07 - Stacking Chair Dolly (Plastic):** Dolly shall stack 30-50 S06 chairs and shall fit through single wide door with stacked chairs.

9) **S07A - Stacking Chair Dolly (Uph):** Dolly shall stack 10 S06A chairs and shall fit through single wide door with stacked chairs.

10) **S08 - S09: Not Used**

11) **S10 - Small Children's Chair:** Small stackable children's chairs for preschool through 2nd grade, fabricated of easily maintainable finishes, heavy-duty construction. Size 1'-4" w x 1'-4" d x 2'-0" h for the back and 1'-2" high for the seat. Coordinate with User to establish which classrooms will be used for children and what age groups so correct size of furniture can be specified.

12) **S11 - Medium Children's Chair:** Medium stackable children's chairs for 2nd through 4th grade, fabricated of easily maintainable finishes and of heavy-duty construction. Size 1'-6" w x 1'-6" d x 2'-2" h for the back and 1'-4" high for the seat.

13) **S12 - Rocker-Glider:** Chair base shall remain stationary while upper seat has rocking/gliding motion. Chair shall be constructed of wood and include an easily cleanable or removable upholstered seat and back cushion. Size 1'-11" w x 2'-2" d x 3'-8" h

14) **S13 - High Stool:** Ergonomics desk chair with adjustable arms, separate upholstered cushioned seat and back, back tilt and locking capability, pneumatic seat height adjustment, back height adjustment, five star base on casters with a footring. Size 2'-0" w x 2'-2" d. Stool seat height shall be appropriate for height of built-in counter where it is located.

#### **E. Tables:**

1) **T01 - Multi-Purpose Table, 72" x 30":** Tables shall be designed for heavy use, be adjustable in height, and have folding legs with automatic locking leg feature. Table shall be lightweight and tabletop shall be easily cleaned and maintained (ABS plastic is an excellent choice; other choices are usually too heavy). All working parts shall be recessed behind an apron. Top surface and edge treatment shall withstand heavy use. Size shall be 6'-0" long x 2'-6" d x 1'-8" h to adjust to 2'-6" h.

2) **T02 - Children's Table:** Tables shall be designed for heavy use, be adjustable in height, and have folding legs with automatic locking leg feature. Consider lightweight tables and tables with easy clean surface. All working parts shall be recessed behind an apron. Top surface and edge



treatment shall withstand heavy use. Size shall be 6'-0" long x 2'-6"d x approximately 1'-8"h and adjust to 2'-6" h. Table height shall be appropriate for height of children's chairs. Coordinate with User to establish which classrooms will be used for children and what age groups so correct size of furniture can be specified.

3) **T03 - Table Dolly:** Dolly type, size and quantity shall transport and store all of the T01 and T20 tables. Fully loaded dolly shall be capable of being maneuvered within the facility, fit through a singlewide door. Provide quantity to store all folding tables.

4) **T04 - Lobby End Table:** Detailing and finish to match seating and other furnishings in room. Recommend a plastic laminate tabletop that can be easily cleaned and maintained. Size shall be 1'-11"w by 1'-11"d x 1'-10"h.

5) **T05 - End Table:** Detailing and finish to match seating and other furnishings in room. Recommend a plastic laminate tabletop that can be easily cleaned and maintained. Size shall be 1'-11"w by 1'-11"d x 1'-10"h.

6) **T06 - 30-Inch Diameter Table:** Detailing and finish to match seating and desks in offices. Recommend a plastic laminate tabletop with wood edge that can be easily cleaned and maintained. Size shall be 30" in diameter.

7) **T07 : Not Used**

8) **T08: Not Used**

9) **T21 - Table 72" Diameter:** Tables shall be designed for heavy use. Recommend a plastic laminate tabletop that can be easily cleaned and maintained. Size shall be 72"dia x 1'-10"h.

10) **T22 - Table 36" Diameter:** Tables shall be designed for heavy use, be adjustable in height, and have folding legs with automatic locking leg feature. Table shall be lightweight and tabletop shall be easily cleaned and maintained. Size shall be 36"dia x 1'-10"h.

11) **T23 - Children's Crescent Table:** Tables shall be designed for heavy use, be adjustable in height. Consider lightweight tables and tables with easy clean surface. Top surface and edge treatment shall with stand heavy use. Size shall be 6'-0" long x 3'-0"d x approximately 1'-6"h and adjust to 2'-6" high. Table height shall be appropriate for height of children's chairs. If appropriate for a specific project and to meet User requirements.

### 3.19.2 Equipment:

#### A. Miscellaneous Items:

1) **M01 - Portable Podium:** Movable stand-up lectern, adjustable height shelf and angled reading shelf with pen rail to prevent items from sliding off shelf.

2) **M02 - Medium Equipment Cart:** Three shelf mobile cart. Size appropriately for TV size. Consider lockable cabinet for additional storage and/or TV.

3) **M03 - Small Equipment Cart:** Mobile Cart for audiovisual equipment. Size appropriately for equipment requirements.

4) **M04 - Organ:** Electronic organ with bench to be appropriately sized for the number of seats in the Worship center. Also provide a dolly for moving the organ. Contact local suppliers for advice on selection.

5) **M05 - Grand Piano:** Movable grand piano with bench and dolly for moving. Select one of M05 or M06. Size of facility will affect type of piano required. Contact local suppliers for advice

on selection.

**6) M06 - Baby Grand Piano:** Moveable baby grand piano with bench and dolly for moving. Select one of M05 or M06. Size of facility will affect type of piano required. Contact local suppliers for advice on selection.

**7) M07 - Upright Piano:** Moveable upright piano with bench and dolly for moving. Contact local suppliers for advice on selection.

**8) M08 - Refrigerator:** Contact local suppliers for advice on selection. Each unit shall have a minimum 14 cubic feet of storage volume and include compartments for freezing and cooling. Not every standard refrigerator is wide enough to hold a typical bakery sheet cake, but these are often used for celebratory events. Clarify this when specifying the refrigerator. Swing of door shall be appropriate to traffic flow in kitchen. Select a high grade residential refrigerator. Refrigerator shall be Energy Star rated, Tier I. An automatic icemaker is not required since facility will have an icemaker. Each facility shall determine what size, features, storage compartments and configurations are required to meet the requirements of the congregations since requirements may vary.

**9) M09 - Range:** Contact local suppliers for advice on selection. Recommend a single oven, automatic control, oven viewing window, clock, oven interior light, and four burners. Coordinate cooking surface type with User, ceramic or coil surface type. A residential style range will be sufficient for most facilities, but some Garrisons may prefer a style range between residential and commercial. If a larger style range is chosen, the designer must revise the design to accommodate the different size.

**10) M10 - Dishwasher:** Contact local suppliers for advice on selection. Determine which capacity, control features, and dishware arrangements are required to meet the requirements of the congregations since requirements may vary. Dishwasher shall be Energy Star rated, Tier I. Coordinate size of dishwasher with kitchen layout, features and casework to assure it is compatible with the kitchen configuration. Note that this item is Contractor Furnished/Contractor Installed (CF/CI).

**11) M11 - Ice Machine:** Contact local suppliers for advice on selection. A simple design of sturdy components and easily understood operation controls is recommended. Unit shall be Energy Star Tier I rated and use modern refrigerants. The speed of ice production and the amount of ice storage capacity can vary widely. Determine facility requirements. Discuss options with local supplier and type of ice required (cubes, half cubes, crushed, etc.) if there is a preference. Consider the unit's noise production and heat load.

**12) M12 - Under Counter Refrigerator:** Provide an under counter type refrigerator will be placed in the sacristy for communion items, and also in the Infant Classrooms. Refrigerator shall be Energy Star rated, Tier I. Each unit shall have approximately 5.7 cubic feet of storage volume.

**13) M13-Microwave:** An under wall cabinet, over-the-range combination microwave oven and exhaust hood, coordinated with casework and other appliances. Unit shall have a minimum of 1.9 cubic feet of interior capacity and a mix of control features. Contact local suppliers for advice on selection. Microwave shall be units designed to heat or reheat food items. This microwave unit is to be the kind of unit that is combined with a range hood in a coordinated assembly. Units shall include control switches for selection/adjustment of functions, timing, and power. A variety of additional options are available, as are a range of quality and performance characteristics. Note, if Installation preferences, code interpretations, or similar issues appear to make separate microwaves and hoods a better choice, this is also acceptable.

**14) M14 - Warming Drawers:** In-the-base-cabinet under counter units coordinated with casework and other appliances, capable of temperature adjustment to hold food in an optimally

warm condition prior to serving. Warming drawer placement has been designed so that two can fit one above the other but below a standard countertop. Note that this item is Contractor Furnished/Contractor Installed (CF/CI).

**15) M15 - Keyboard/Synthesizer:** Movable keyboard/synthesizer with stand and bench. Contact local suppliers for advice on selection.

**16) M16 - Outdoor Furniture (Optional):** Table and chairs shall be designed for outdoor commercial use.

**17) M17 - Portable Projector:** Contact local suppliers for advice on selection. Portable projectors shall be units designed to receive input from laptops or cable feeds and to project the visual portions on a wall or screen. Units shall include a hand-held controlling "remote", adjustment for vertical aim, brightness, and focus. A variety of additional options are available, as are a range of quality and performance characteristics.

**18) M18 – TV, Flat Screen:** Contact local suppliers for advice on selection. Flat screen televisions shall be units designed to receive input from media players, antennae or cable feeds and to show such programming as selected. Units shall include a hand-held controlling "remote", channel selection, volume control, adjustment for brightness, and focus. A variety of additional options are available, as are a range of quality and performance characteristics.

**19) M19 - Media Player:** Contact local suppliers for advice on selection. Media Player shall be units designed to receive input from media transfer devices and to transmit it to networks, televisions or other displaying devices. Units shall include a hand-held controlling "remote", adjustment for volume and programming/feature selection. A variety of additional options are available, as are a range of quality and performance characteristics.

**20) M20 - M22: Not Used**

**21) M23 - Crib:** Crib shall be commercial grade. Requirements to be further coordinated with the User.

**22) M24 – Stage, Large:** Activity Center stage shall be portable, overall size 16'w x 12'd x 16"h, have two sets of stairs and ADA ramp, removable skirting at front and side (not at stairs or ramp) and legs shall have levelers. Stage floor shall have a grommet or hatch to manage electrical and communication cables.

**23) M24A – Stage, Small:** Multi-Purpose Area stage shall be portable, have an overall approximate height of 16", and consist of four 4' x 6' sections combined to create a 6' x 16' stage. This stage shall have a set of stairs and Architectural Barriers Act (ABA) compliant ramp, removable skirting at front and side (not at stairs or ramp) and legs shall have levelers.

**24) M25 - Stage Dolly:** Mobile cart(s) shall be provided to transport disassembled stage components. Carts shall be stored in the storage rooms adjacent to the Activity Center and Multi-Purpose Area.

**25) M26 - Kiosk:** A circle plan unit in four movable sections with outer modesty screen and dual height counter (approximate 30" work station height and customer standing height). One section shall include fittings for an overhead banner display. All section wheels shall include brakes. One section shall be especially designed for entry to and exit from the inner circle area. Kiosk may be composed of all premanufactured components, but shall be visually coordinated with nearby custom counter units. Counter tops shall include an array of cord grommets. Vertical faces shall include a variety of display features for posters, announcements and changeable signage. When not in use, the kiosks shall be stored in the storage room adjacent to the Activity Center.

**26) M27 - Portable Projection Screen:** Contact local suppliers for advice on selection. Portable Projection Screen shall be a premanufactured unit for that purpose with screen and integral stand in a single unit designed to “close up” and be easily stored or carried about. Minimum recommended screen size is 8’ X 8’ but other sizes may also be selected.

**27) M40 - Storage Cabinet:** Heavy-duty 72” binder storage tambour door cabinet with roll back doors with five shelves and a roll out work surface. HIPAA- compliant tambour doors have a two point locking system with magnetic catch; the doors slide into cabinets walls to save space. For a specific project must discuss with User to meet their requirements. Size 39”w x 18”d x 78”h.

**28) M41 - Open Display Shelving:** Contact local suppliers for advice on selection. Wall mounted for resource display with clear plastic dividers. Fabricated of easily maintainable finishes, heavy-duty construction. For a specific project must discuss with User to meet their requirements. Available in a variety of finishes & size options.

**29) M42 - Low Display Shelving:** Contact local suppliers for advice on selection. Typical children’s furniture fabricated of easily maintainable finishes, heavy-duty solid wood construction with a wide variety of shelving options. For a specific project must discuss with User to meet their requirements. It should be free-standing moveable unit. Shelving available in a variety of finishes & size options such as 48”w x 11”d x 28”h.

**30) M43: Not Used**

**31) M44 – Child Check-In System and Cart:** Mobile cart houses child check-in computer system equipment. Cart shall be appropriate for standing height, have at least one shelf, lockable doors, grommets for wire management and lockable casters. Specific requirements to be determined by the User. (Provide building power and communication to support the child check-in system.)

## **B. Ecclesiastical Equipment:**

Note that ecclesiastical equipment is Contractor Furnished/Contractor Installed (CF/CI). The pews shall be fixed and have upholstered cushion seat, back and kneeler, contoured seat and back, and waterfall front. Back side of pew backs shall be wood. The following standard options shall be included: storage for hymnals, communion cup holder, and pencil and envelope/card holder. Stacking pew chairs with kneeler, chancel chairs and stacking chairs for choir shall have upholstered cushion seat and back. Stacking pew chair with kneeler shall have the following standard options: ganging, and under seat bookrack. Pew and chair kneelers shall rotate for out of the way for storage. The altars, altar rail unit, communion table, credence table and offertory table shall all be constructed of solid wood and have the same style and detailing. Lectern, pulpit and kneeler/pre-dieu shall also be constructed of solid wood and have the same style and detail and coordinate closely with the altars and tables; provide them with hidden-from-view casters with brakes for ease of relocation. All kneelers shall have upholstered cushion. Chancel chairs shall also be constructed of solid wood and have the same style and detail and coordinate closely with the altars and tables. The baptismal font shall have a metal or ceramic receptor with an approximate diameter of 1’-6”. The portable altar shall separate into smaller parts and or include attached handles or wheels for ease of relocation. All furniture and decorative motifs shall be non-faith group specific and coordinate with and complement the building finishes and design. Ecclesiastical equipment shall be high quality wood construction and of similar style. Furniture shall not have sharp edges. Clips, screws and other furniture construction elements shall be concealed where possible. Furniture shall be designed for ease of mobility and shall be constructed according to guidelines of the Architectural Woodwork Institute, premium grade. All veneers and solid wood pieces shall be Grade 1, premium quality, plain, quarter or rift sawn. Upholstery in Worship Areas shall meet Wyzenbeek Abrasion Test 175,000 minimum double rubs.

**1) E01 - Altar: 5’-0”w x 2’-6”d x 3’-3”h**

- 2) **E02 - Small Altar:** 4'-0"w x 2'-6"d x 3'-3"h
- 3) **E03 - Communion Table (Optional):** 5'-0"w x 2'-6"d x 2'-6"h
- 4) **E04 - Credence Table (Optional):** 3'-0"w x 2'-0"d x 2'-6"h
- 5) **E05 - Offertory Table:** 2'-0"w x 1'-4"d x 3'-3"h
- 6) **E06 - Lectern:** 2'-0"w x 1'-8"d x 3'-6" high at front of reading surface and 4'-0" high at back.
- 7) **E07 - Pulpit:** 2'-8"w x 2'-2"d x 3'-6" high at front of reading surface and 4'-0" high at back. Unit has internal bookshelf.
- 8) **E08 - Pews:** Provide pews as shown on the plan.
- 9) **E09 - Stacking Pew Chairs with Kneelers:** 1'-8"w x 1'-11"d x 2'-8"h
- 10) **E10 - Chancel Chair:** 2'-0"w x 2'-0"d x 3'-8"h
- 11) **E11 - Stacking Chair for Choir:** 1'-7"w x 1'-7"d x 2'-7"h
- 12) **E12 - Baptismal Font:** 2'-0"w x 2'-0"d x 3'-0"h
- 13) **E13 - Kneeler/Pre-Dieu with Screen:** Combination Kneeler/Pre-Dieu with tall confessional screen. Pre-Dieu 1'-10"w x 1'-9"d x 2'-8"h, Screen 2'-8" w x 5'-6"h. Kneeler has a 2'-0"w x 9"d x 2" thick fabric upholstered cushion and screen is upholstered, has wood trim and has a confessional panel.
- 14) **E14 - Altar Rail Unit:** Portable altar rail unit, 4'-0"w x 1'-9"d x 2'-8"h. Unit shall have a 4'-0"w x 9"d x 2" thick upholstered cushion.
- 15) **E15-Portable Altar:** 3'-0"w x 2'-0"d x 3'-3"h

### 3.20 FACILITY SPECIFIC REFERENCES - NOT USED

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# APPENDIX A

## ARMY STANDARD DESIGN AREA COMPUTATIONS

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**SMALL COMPACT CHAPEL**

**SPACE TYPES AND NET AREAS**

<b>ROOM OR ROOM GROUP NAME</b>	<b>SQ. FEET</b>		<b>NOTES</b>
<b>1st Floor Chapel Spaces</b>			
Worship Center	7,775		
Multipurpose Rooms	1,880		
Baptistery Suite	590		
Choir Suite	1,153		
Sacristy Robing Suite	356		
Blessed Sacrament Reconciliation Suite	453		
Audio/Visual Production Room	368		
Infant and Toddler Suite (w/ REF Classrooms)	3,566		
Offering Counting Room	105		
Activity Center	4,132		
Kitchen	390		
Pantries	146		
Recycling Center	110		
NCO Office	116		
Chaplain's Office	116		
Chaplain's Office	117		
Group Assistant's Office	618		
Restrooms	1,308		
Janitor's Closet	85		
Storage Rooms	1,740		
Equipment Rooms	2,907		
Circulation, Lobbies, and Vestibules	8,670		
<b>2nd Floor Religious Education Spaces</b>			
Multi-purpose Area	3,058		
Classrooms (Small)	4,413		
Classrooms (Large)	1,060		
Resource Center	834		
Youth Ministry Center	830		
Kitchen	305		
Recycling / Vending	187		
DRE Offices	394		



## APPENDIX B

### ARMY STANDARD DESIGN SYSTEMS DESCRIPTIONS

#### INDEX

DESCRIPTION 1	AUDIO/VISUAL (AV) & BROADCASTING EQUIPMENT SYSTEM
DESCRIPTION 2	CHILD CHECK IN (CCI) EQUIPMENT SYSTEM
DESCRIPTION 3	CLOSED CIRCUIT TELEVISION (CCTV) EQUIPMENT SYSTEM
DESCRIPTION 4	MEETING ROOM SCHEDULING (MRS) EQUIPMENT SYSTEM

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## **AUDIO/VISUAL MEDIA (A/V) & BROADCASTING SYSTEM**

**This system is to enhance the functional ministry and communication capabilities and to ensure a more uniform and professional worship and religious education experience for every person in the facility. Properly designed electronic A/V systems can increase the success and ease of meeting these goals; indeed, they have become essential for most contemporary worship and religious education activities.**

The Army Standard Design requirements for this system are that the video portion of the A/V system shall be capable of simultaneously recording and displaying images in the Worship Center, Activity Center the Audio/Visual Production Room, Multi-purpose Area, Resource Center and the Youth Ministry Center. The A/V system shall be capable of delivering high definition images to computer monitors, television monitors, front projection screens, and rear projection screens. (It is intended that high definition units be procured from OMA funding sources in that process.)

Images from the Worship Center shall be capable of broadcast to the Audio/Visual Production Room, Baptistry Suite Corridor, Nursing Mother's Room, Nursery Area, Toddler Area, Activity Center, Multi-Purpose Rooms, Choir Rehearsal Room, Blessed Sacrament Room, Multi-Purpose Area, Resource Room, Youth Ministry Center, Classrooms, Conference Room, primary Lobby, and the individual and group Offices.

Images from the Activity Center shall be capable of broadcast to the Audio/Visual Production Room, Baptistry Suite Corridor, Nursing Mother's Room, Nursery Area, Toddler Area, Worship Center, Multi-Purpose Rooms, Choir Rehearsal Room, Blessed Sacrament Room, Multi-Purpose Area, Resource Room, Youth Ministry Center, Classrooms, Conference Room, primary Lobby, and the individual and group Offices.

Images from the Audio/Visual Production Room shall be capable of broadcast to the Worship Center, Baptistry Suite Corridor, Nursing Mother's Room, Nursery Area, Toddler Area, Activity Center, Multi-Purpose Rooms, Choir Rehearsal Room, Blessed Sacrament Room, Multi-Purpose Area, Resource Room, Youth Ministry Center, Classrooms, Conference Room, primary Lobby, and the individual and group Offices.

The Activity Center shall be capable of recording and displaying images in the Activity Center, or displaying images from the Worship Center and from the Audio/Visual Production Room. Multi-Purpose Rooms shall be capable of displaying images from the Audio/Visual Production Room, Worship Center or Activity Center.

Images from the Resource Center shall be capable of broadcast to the Multi-purpose Area, Youth Ministry Center, Classrooms and Conference Room.

Images from the Youth Ministry Center shall be capable of broadcast to the Resource Center, Multi-purpose Area, Classrooms and Conference Room.

The Audio portion of the A/V package shall be capable of functioning identically to the video portion of the system (recording audio and audio playback).

There shall be full coordination features between several control points for activities in the Worship Center. These include the speaker's podium located at the raised platform, the Equipment Control Console located at the raised platform, the Equipment Control Console located at the front of the balcony, and the Audio/Visual Production Room.

The speaker's podium located at the raised platform shall support only basic A/V controls (on and off switch, volume adjustment, and control of the projector program). In most cases this control location will only be used when assisting staff or volunteers are not available.

The Equipment Control Console located at the raised platform shall support relatively complete A/V controls. In most cases this control location will be used primarily to adjust the sound and image for those persons on the raised platform.

The Equipment Control Console located at the front of the balcony shall support complete A/V controls. In most cases this control location will be used primarily to adjust the sound and image for those persons in the seating areas facing the raised platform, but at times it may become the central operation point for the entire system.

The Audio/Visual Production Room shall support complete A/V controls. In most cases this control location will be used primarily to coordinate the pre-recorded sound and images transmitted to the Worship Center, Activity Center, etc. or the live sound and images transmitted from the Worship Center, Activity Center, etc. It will also be the central operation point for the production of pre-recorded sound and image programming.

The cable TV system may optionally be used to distribute audio and video to all of the other A/V capable spaces.

An integrated Public Address capability shall allow for audio messages to be broadcast from the individual and Group Offices and the Audio/Visual Production Room to all of the above spaces (somewhat selectively) and every other enclosed room except equipment rooms, storage rooms, and closets.

Note: By Army Regulation, MILCON (MCA) funding cannot generally provide the equipment for this system. MILCON (MCA) funding can currently provide infrastructure support only. The equipment must be procured and installed by the Garrison with separate funds. Where a project is to be acquired by the Request-For-Proposal (RFP) design-build process, the contract shall call for the submittal of a design proposal of sufficient detail to evaluate general quality, media and recording/broadcasting supporting features, and appropriateness. This design will then form the basis for what supporting infrastructure is to be included in the construction.

## **CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM**

**This system is to enhance the safety and security for people in the facility and to protect the facility itself by providing visual monitoring of spaces. Properly designed electronic CCTV systems can increase the success and ease of meeting these goals.**

The Army Standard Design requirements for this system are that it shall include CCTV monitoring of all Nursery, Infant and Toddler classrooms and care spaces, Pre-K and K classrooms, hallways and exterior entrances. The CCTV system design shall include overlapping view areas to ensure complete coverage. The CCTV system shall include cameras and camera support equipment including a viewing monitor at a first floor administrative office, the second floor reception area, and in the space where the processing equipment is housed. It shall also provide for an auditable historic record.

Note: By Army Regulation, MILCON (MCA) funding cannot generally provide the equipment for this system. MILCON (MCA) funding can currently provide infrastructure support only. The equipment must be procured and installed by the Garrison with separate funds. Where a project is to be acquired by the Request-For-Proposal (RFP) design-build process, the contract shall call for the submittal of a design proposal of sufficient detail to evaluate general quality and appropriateness. This design will then form the basis for what supporting infrastructure is to be included in the construction.

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## MEETING ROOM SCHEDULING (MRS) SYSTEM

**This system is to enhance the ability of facility staff and space users in the administrative processes required to assign and prepare meeting rooms, support/meet the meeting functions, and the people participating in the meetings. Properly designed electronic MRS systems can increase the success and ease of meeting these goals.**

The Army Standard Design requirements for this system are that the system shall provide for computer assisted scheduling of multiple rooms at multiple times and dates and include an integrated schedule display at/for each classroom as well as a master display via that can be accessed by computer or computers. The system “core” shall be centralized and readily accessible to administrative staff. The system shall include relatively simple controlled access by non-staff. Individual displays shall be a minimum of 4-inches (diagonally) of display space, capable of legibly displaying times, purpose of reservation, and the identity of the room scheduler.

The MRS system shall allow persons to identify room capacity, features, availability, and available choices for set-up. It shall also allow them to reserve rooms and define the capacities, features, timing and selection of choices that they desire. The system will also identify how confirmation is to work, what staff persons will be involved, and allow/require them to enter personal identification information.

Note: By Army Regulation, MILCON (MCA) funding cannot generally provide the equipment for this system. MILCON (MCA) funding can currently provide infrastructure support only. The equipment must be procured and installed by the Garrison with separate funds. Where a project is to be acquired by the Request-For-Proposal (RFP) design-build process, the contract shall call for the submittal of a design proposal of sufficient detail to evaluate general quality and appropriateness. This design will then form the basis for what supporting infrastructure is to be included in the construction.

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## APPENDIX C

### ARMY STANDARD DESIGN COST INFORMATION

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## APPENDIX D

### ARMY STANDARD DESIGN DRAWINGS (UNDER SEPARATE COVER)

#### INDEX

G-001	COVER SHEET AND INDEX
C-101	SITE PLAN
A-110	COMPOSITE FIRST FLOOR PLAN
A-120	COMPOSITE SECOND FLOOR PLAN
A-300	BUILDING SECTIONS
I-110	COMPOSITE FIRST FLOOR FURNITURE PLAN
I-111	ALTERNATE FURNITURE PLANS
I-120	COMPOSITE SECOND FLOOR FURNITURE PLAN

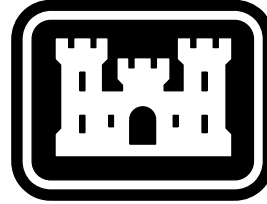
*BUILDING STRONG!*



**US Army Corps  
of Engineers** ®

Omaha District





US Army Corps  
of Engineers  
Omaha District

# COMPACT CHAPEL - SMALL ARMY STANDARD DESIGN

## VARIOUS LOCATIONS (CONUS)

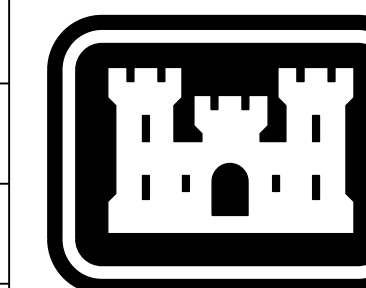
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DESIGN FILE	SHEET NO.	DESCRIPTION
RF_CESG-001.DGN	G-001	COVER SHEET AND INDEX
RF_CESC-101.DGN	C-101	SITE PLAN
RF_CESA-110.DGN	A-110	COMPOSITE FIRST FLOOR PLAN
RF_CESA-120.DGN	A-120	COMPOSITE SECOND FLOOR PLAN
RF_CESA-300.DGN	A-300	BUILDING SECTIONS
RF_CESI-110.DGN	I-110	COMPOSITE FIRST FLOOR FURNITURE PLAN
RF_CESI-111.DGN	I-111	ALTERNATE FURNITURE PLANS
RF_CESI-120.DGN	I-120	COMPOSITE SECOND FLOOR FURNITURE PLAN

THIS PROJECT WAS DESIGNED BY THE OMAHA DISTRICT OF THE US ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152.

THE FOLLOWING SIGNATURES BELOW INDICATE OFFICIAL APPROVAL OF ALL DRAWINGS IN THIS SET DATED \_\_\_\_\_

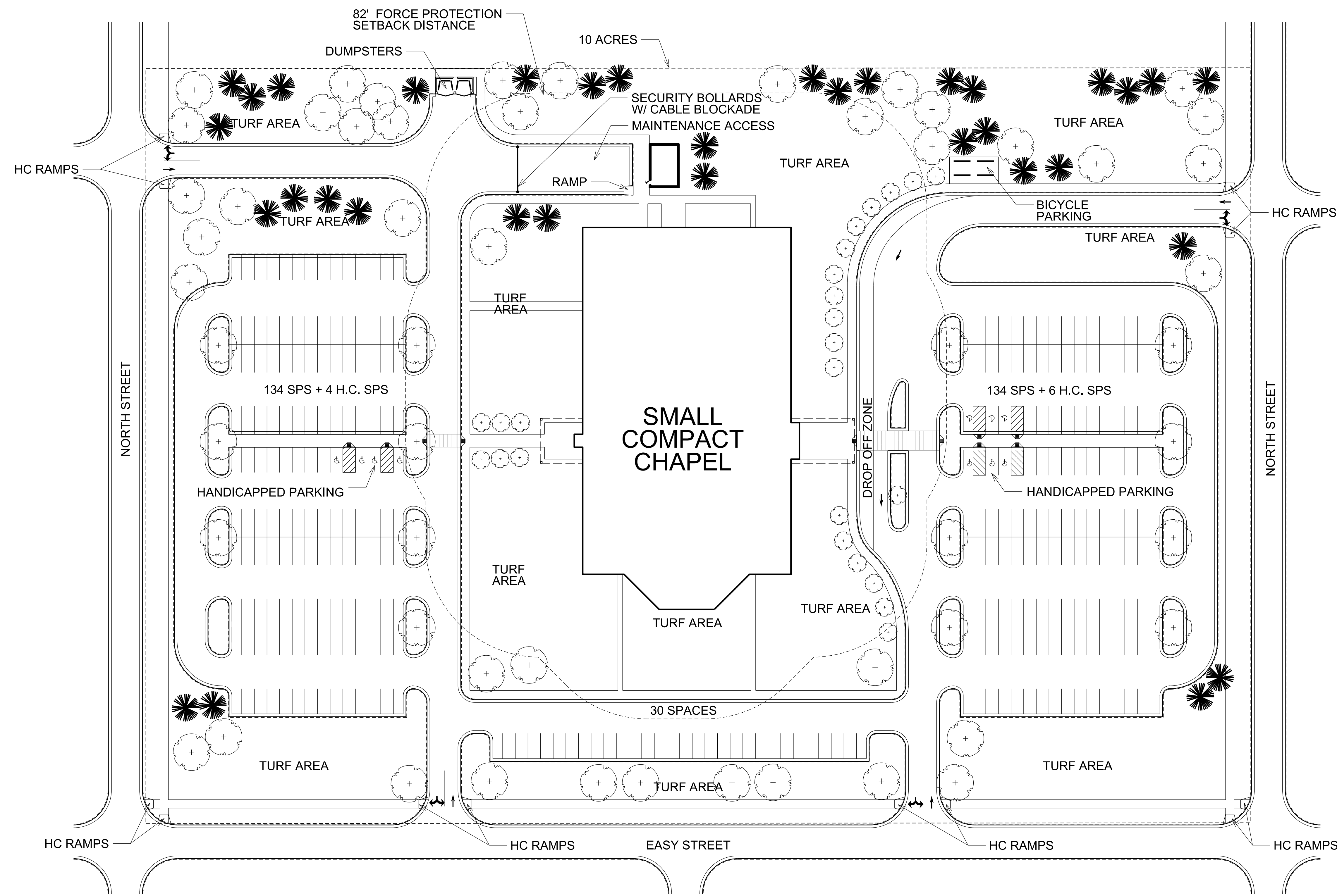
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SUBMITTED BY:	PE	
CHIEF:	ENVR	SECTION
SUBMITTED BY:	PE	
CHIEF:	MECH	SECTION
SUBMITTED BY:	PE	
CHIEF:	STRUCT/INTER	SECTION
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CHIEF:	GEO	SECTION
SUBMITTED BY:	CADD	
	PROJECT COORD.	



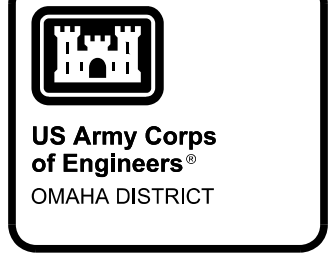
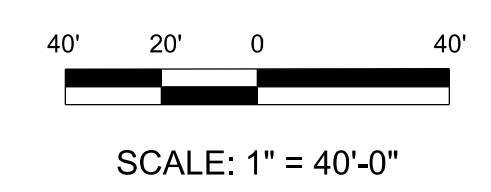
US Army Corps  
of Engineers  
Omaha District

1 2 3 4 5

D  
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B  
A



SCC OCCUPANCY = 1020 (30% = 306 PARKING)  
 PARKING SPACES SHOWN = 308 (INCL. 10 HC)



DATE	DESCRIPTION	MARK	DATE	APPR.

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SUBMITTED BY: X	PLotted DATE: X	FILE NUMBER:

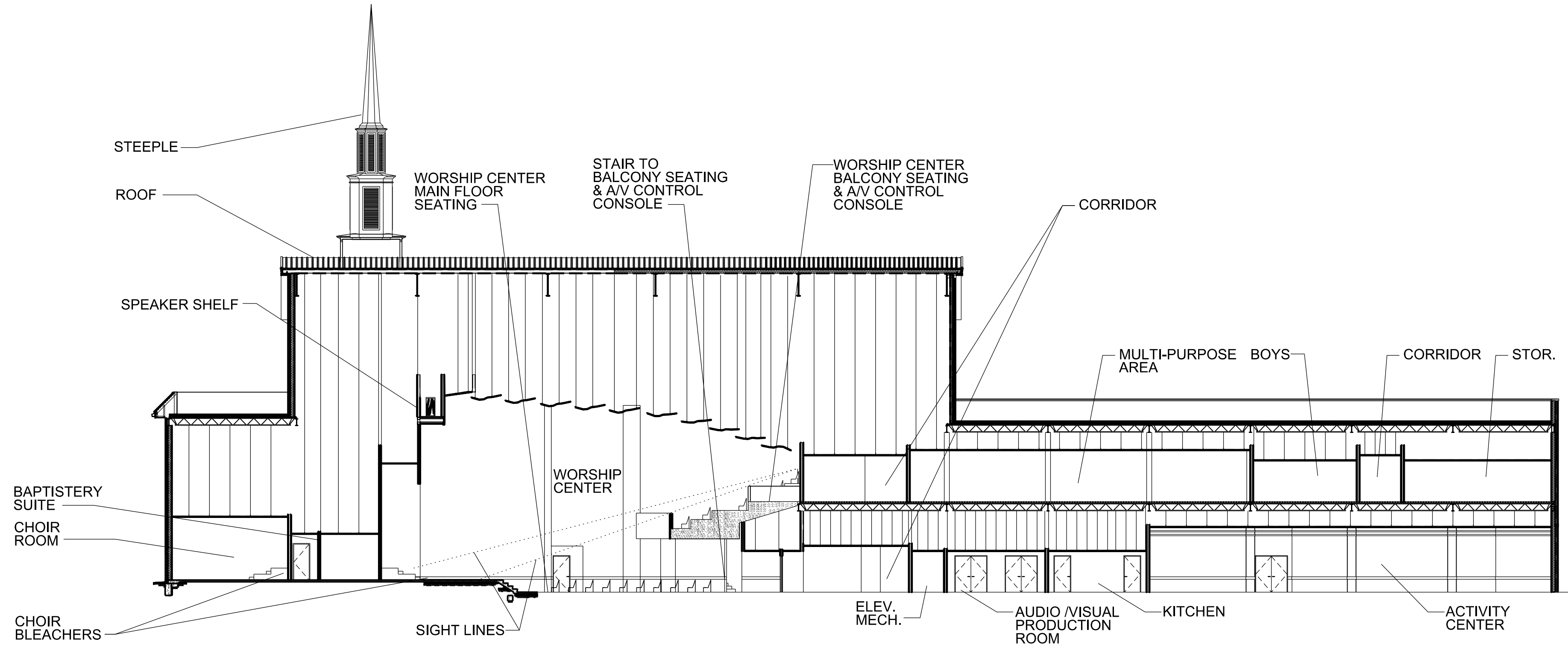
US ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 OMAHA, NEBRASKA

VARIOUS LOCATIONS  
 3D BIM TRANSLATION - ARMY STANDARD DESIGN  
 SMALL CHAPEL  
 COMBINE PLAN SERIES  
 SITE PLAN

SHEET IDENTIFICATION  
**C-101**



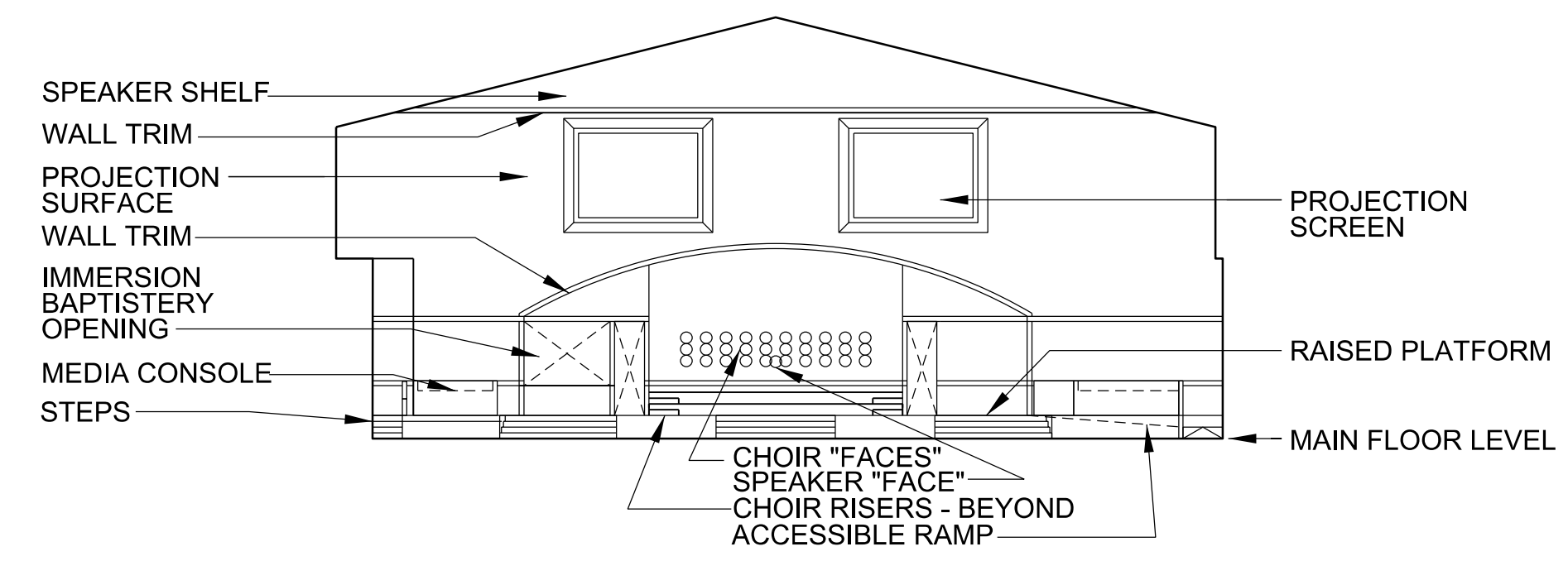




**BUILDING SECTION**

SCALE: 1/16" = 1'-0"

1  
A-110



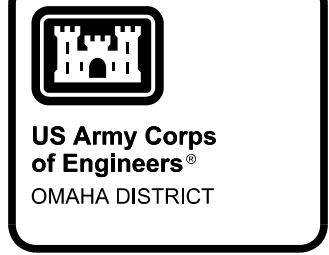
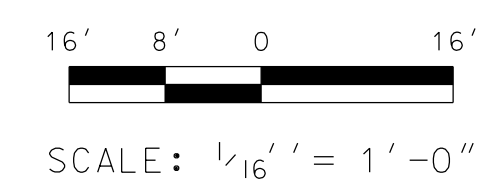
**INTERIOR ELEVATION**

SCALE: 1/16" = 1'-0"

2  
A-110

**GENERAL NOTES:**

1. MANY ASPECTS OF THE INTERIOR ELEVATIONS ARE FLEXIBLE AND MAY BE MODIFIED ON A PROJECT BY PROJECT BASIS SO AS TO IMPROVE AESTHETIC OR VISUAL CONTINUITY. ENSURE THAT PROPER LINE OF SITE IS MAINTAINED BETWEEN THE AUDIENCE AND ALL OPERATIONAL PORTIONS OF THE RAISED PLATFORM. THIS INCLUDES THE PROJECTION SCREENS, THE CHOIR RISERS, THE BAPTISTRY, AND THE SPEAKING PLATFORM. FURTHERMORE, NONE OF THE PREVIOUSLY MENTIONED FUNCTIONS SHOULD VISUALLY SCREEN ANOTHER.
2. THIS BUILDING CROSS SECTION IS NOT BASED UPON A FULL DESIGN. WHILE STRUCTURE AND WALL COMPOSITION TRY TO REFLECT SOME SENSE FOR THESE FEATURES THEY ARE ESSENTIALLY ARBITRARY AS SHOWN. ANY PROJECT DESIGN MAY VARY SUBSTANTIALLY TO A LESSER DEGREE. THIS IS ALSO TRUE OF THE SPACES ENCLOSED BY THE STRUCTURE. SUCH VARIATION IS EXPECTED AND DOES NOT IMPLY FAILURE TO COMPLY WITH THE ARMY STANDARD DESIGN.



DATE	DESCRIPTION	MARK	APPR.

DESIGNED BY:	DATE: 2013	SUBMITTED BY:	CONTRACT NO.:
PROJ. BY:	ACW	PLOT DATE:	FILE NUMBER:
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US ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
OMAHA, NEBRASKA

VARIOUS LOCATIONS  
3D BIM TRANSLATION - ARMY STANDARD DESIGN  
SMALL CHAPEL  
COMBINE PLAN SERIES  
BUILDING SECTIONS

SHEET IDENTIFICATION  
**A-300**





US Army Corps of Engineers  
OMAHA DISTRICT

FURNITURE AND EQUIPMENT LEGEND

- ECCLESIASTICAL EQUIPMENT:**  
E01 ALTAR  
E02 ALTAR, SMALL  
E03 COMMUNION TABLE\*  
E04 CRENDENCE TABLE\*  
E05 OFFERTORY TABLE  
E06 LECTERN  
E07 PULPIT  
E08 PEW  
E09 STACKING PEW CHAIR WITH KNEELER  
E10 CHANCEL CHAIR  
E11 STACKING CHAIR FOR CHOIR  
E12 BAPTISMAL FONT  
E13 KNEELER/PRIE-DIEU WITH SCREEN  
E14 ALTAR RAIL UNIT  
E15 PORTABLE ALTAR

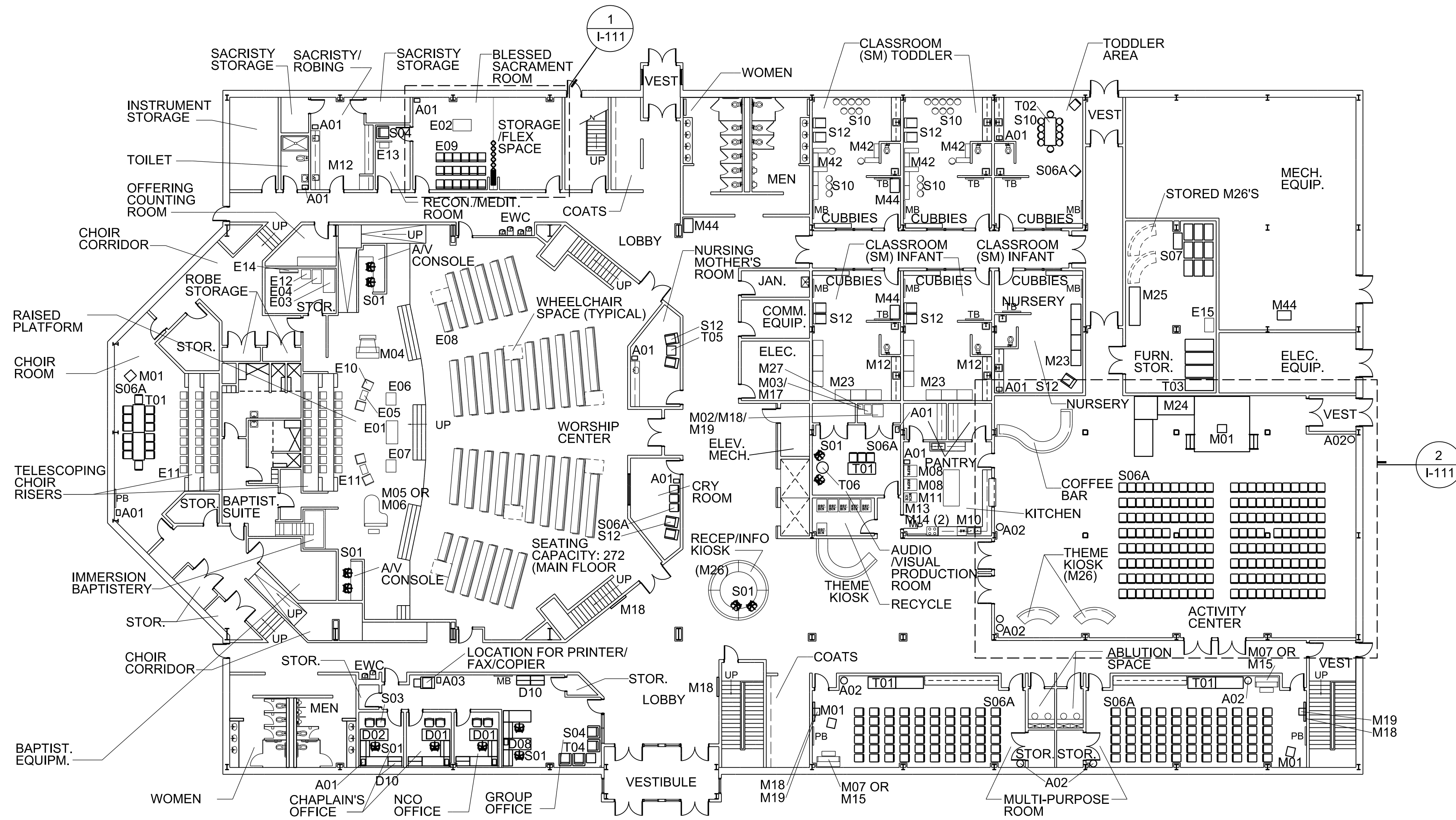
- ACCESSORIES:**  
A01 SMALL TRASH RECEPTACLE  
A02 LARGE TRASH RECEPTACLE  
A03 PAPER RECYCLE RECEPTACLE  
A04 TOILET RECEPTACLE

- DESKS AND STORAGE:**  
D01 U-SHAPED WORKSTATION, R-RETURN  
D02 U-SHAPED WORKSTATION, L-RETURN  
D03-D03A NOT USED  
D04 BOOKCASE  
D05-D07 NOT USED  
D08 L-SHAPED WORKSTATION WITH LEFT RETURN  
D09 NOT USED  
D10 LATERAL FILE W/ SHELVING

- MISCELLANEOUS:**  
M01 PORTABLE PODIUM  
M02 MEDIUM EQUIPMENT CART  
M03 SMALL EQUIPMENT CART  
M04 ORGAN  
M05 GRAND PIANO  
M06 BABY GRAND PIANO  
M07 UPRIGHT PIANO  
M08 REFRIGERATOR  
M09 RANGE  
M10 DISHWASHER  
M11 ICE MACHINE  
M12 UNDERCOUNTER REFRIGERATOR  
M13 MICROWAVE  
M14 WARMING DRAWER  
M15 KEYBOARD/SYNTHESIZER  
M16 OUTDOOR FURNITURE\*  
M17 PORTABLE PROJECTOR  
M18 TV, FLAT SCREEN  
M19 MEDIA PLAYER  
M20-M22 NOT USED  
M23 CRIB  
M24 STAGE, LARGE  
M24A STAGE, SMALL  
M25 STAGE DOLLY  
M26 KIOSK  
M27 PORTABLE PROJECTION SCREEN  
M40 STORAGE CABINET  
M41 OPEN DISPLAY SHELVING  
M42 LOW DISPLAY SHELVING  
M43 MOBILE WORK ISLAND  
M44 CHILD CHECK-IN SYSTEM AND CART

- SEATING:**  
S01 DESK CHAIR  
S02 NOT USED  
S03 GUEST CHAIR  
S04 LOUNGE CHAIR  
S05 NOT USED  
S06 STACKING CHAIR, PLASTIC  
S06A STACKING CHAIR, UPH  
S07 STACKING CHAIR DOLLY (PLASTIC)  
S07A STACKING CHAIR DOLLY (UPH)  
S08 NOT USED  
S09 NOT USED  
S10 SMALL CHILDREN'S CHAIR  
S11 MEDIUM CHILDREN'S CHAIR  
S12 ROCKER/GLIDER  
S13 HIGH STOOL

- TABLES:**  
T01 MULTI-PURPOSE TABLE, 72" X 30"  
T02 CHILDREN'S TABLE  
T03 TABLE DOLLY (72" X 30" TABLE)  
T04 LOBBY END TABLE  
T05 END TABLE  
T06 30" DIA TABLE  
T08 CONFERENCE TABLE, 60" X 144"  
T21 72" DIA TABLE  
T22 36" DIA TABLE  
T23 CHILDREN'S CRESCENT TABLE



- PLAN LEGEND**
- DCS DIAPER CHANGING STATION
  - EWC ELECTRIC WATER COOLER
  - MB MARKER BOARD
  - PB PRESENTATION BOARD
  - RB RECYCLE BIN
  - TB TACKBOARD
  - V VENDING MACHINE

**FIRST FLOOR COMPOSITE FURNITURE PLAN**

SCALE: 1/16" = 1'-0"

**NOTES:**

1. ITEMS IDENTIFIED WITH AN ASTERISK IN THE LEGEND ARE OPTIONAL. COORDINATE REQUIREMENT WITH THE USER.
2. REFER TO THE STANDARD DESIGN FOR REQUIRED LOCATIONS OF TOILET RECEPTACLES.
3. COORDINATE LOCATIONS AND QUANTITIES OF M44 CHILD CHECK-IN SYSTEM AND CARTS WITH THE USER. POSSIBLE LOCATIONS AND QUANTITIES ARE SHOWN BUT MAY VARY BASED ON USER REQUIREMENTS.
4. PROVIDE FURNITURE TO SUPPORT PRINTER/FAX/COPIER IN GROUP OFFICE IF EQUIPMENT IS NOT FREESTANDING. COORDINATE REQUIREMENT WITH THE USER.
5. PEW LAYOUT IS PROVIDED FOR INFORMATION ONLY. LAYOUT CAN BE REVISED AS LONG AS THE REQUIRED NUMBER OF SEATS ARE PROVIDED, PROJECT COST ISN'T INCREASED AND THE LAYOUT IS COORDINATED WITH AND APPROVED BY THE USER AND COS. LAYOUT SHALL COMPLY WITH THE STANDARD DESIGN PARAGRAPH 3.1.3 ACCESSIBILITY REQUIREMENTS AND PARAGRAPH 3.1.3 FIRE PROTECTION REQUIREMENTS.



SCALE: 1/16" = 1'-0"

DATE	DESCRIPTION	APPR.

DESIGNED BY: DATE: 2013	SOLICITATION NO.:
DRAWN BY: LOMBEL	CONTRACT NO.:
CHECKED BY: WRE	FILE NUMBER:
DATE: 09/27	FILE NAME: sheet_09/27_she01.dgn

US ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
OMAHA, NEBRASKA

VARIOUS LOCATIONS  
3D BIM TRANSLATION - ARMY STANDARD DESIGN  
SMALL CHAPEL  
COMBINE PLAN SERIES  
FIRST FLOOR COMPOSITE  
FURNITURE PLAN

SHEET IDENTIFICATION  
**I-110**



