ARMY STANDARD DESIGN REQUIREMENTS FOR THE MEDIUM RELIGIOUS EDUCATION FACILITY TYPE

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U.S. Army Corps of Engineers
Omaha District

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ARMY MEDIUM RELIGIOUS EDUCATION FACILITY STANDARD DEFINITIVE DESIGN

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ARMY MEDIUM RELIGIOUS EDUCATION FACILITY STANDARD DEFINITIVE DESIGN

1 INTRODUCTION:

1.1 DEFINITIVE DESIGN:

This Standard Design package supersedes versions for this facility type previous to October 2011. The Standard Design was developed starting in 2008 with input from the Office of the Chief of Chaplains (OCCH), and panels of Directors of Religious Education, in addition to research into previous Religious Education Facility design. This Army Religious Education Facility Standard Definitive Design has as its primary goal the optimum support of military families and advanced trainee congregations in their religious education needs. 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. This definitive 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. 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 design into specific projects. **Design goals for construction type, code compliance, sustainability (LEED, energy reduction and efficiency goals), security (anti-terrorism) 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 design work is authorized. The core functional criteria used in the development of this facility type are as follows:

A. Support the religious education and instruction of all distinct faith groups. Support the worship services of all distinctive faith groups (see paragraph COORDINATING FACILITY TYPES below).

B. Support administrative activities necessary to operate and maintain the Religious Education 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 CAPACITY AND SIZES:

All three Army Standard Design Religious Education Facility type sizes have Multi-Purpose Areas for large gatherings. The Small Religious Education Facility shall be no less than 22,500 square feet in area with a multi-purpose area seating around 200. The Medium Religious Education Facility shall be no less than 28,700 square feet in area with a multi-purpose area seating around 350. The Large Religious Education Facility shall be no less than 36,500 square feet in area with a multi-purpose area seating around 400. All additional occupied spaces for each facility size are proportional in area and occupancy to the Multi-Purpose Area.

1.3 COORDINATING FACILITY TYPES:

1.3.1 Functional Completeness:

This Army Standard Design Religious Education Facility type is intended to function in conjunction with and to coordinate with a separate Chapel. 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:

These functions have been separated into two facility types for one reason; every Garrison possesses a different mix of existing more-worship-related and more-religious-education-related religious use space. To ensure new facility provides the optimum balance of functional spaces in relation to the full Garrison needs, some projects will require more or less worship-related space and more or less religious-education-related space in the same project. For example, Garrison A may best be served by the combination of a Medium Chapel and a Large Religious Education Facility in a single project. In contrast, Garrison B may best be served by the combination of a Large Chapel and a Small Religious Education Facility in a single project. In consequence, the OCCH and AFSC have directed the development of three sizes of two facility types and corresponding Army Standards and Army Standard Designs for each facility type. Any individual project should include one size of each facility type on the same general site.

1.3.3 Complexes and Communities of Facility Types:

These Army Standard Design Chapel and Religious Education Facility types are also 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 of 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 Religious Education Facility with proportional differences in quantity or area as appropriate.

B. 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 individual offices for Directors of Religious Education, a Youth Ministry Center, a Resource Center, small and large classrooms, a kitchen, a primary entry lobby (reception) area, an exterior covered area at the primary entry, a reception area, and a conference room.

C. In addition to these specific spaces each Religious Education 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.

1.5 STANDARD DESIGN DRAWINGS AND INFORMATION:

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

“http://mrsi.usace.army.mil/cos/SitePages/Home.aspx".

1.6 MANDATORY ITEMS:

The **Army Standard** for Religious Education Facility design (all sizes of facilities) and construction defines the mandatory Items that must be included in each Religious Education Facility. This Army Standard refers to all three sizes of Religious Education Facilities so some statements do not apply directly to the Large Religious Education Facility. The Army Standard also includes 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 Standard is reproduced as follows:

Item	**1.6.1 Criteria:**
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	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. 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. 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. The Basis of Authorization. The Religious Education Facility (REF) will be authorized on garrisons IAW the following criteria: 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 * Notes: * 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. ** Requirement generated only where a chaplain is authorized. *** Deviations from REF sizes due to existing facilities will be requested from DACH-4/6/8/EN/Stratcom. Population is defined as: CONUS Population = Authorized Military Population + Dependent Population (Dependent Population = Military Population x 2.5) OCONUS Population = Authorized Military Population + Dependent Population + Civilian Population

Director of Religious Education Offices	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. Provide not less than 4 offices in the large facility, 3 offices in the medium facility, and 2 offices in the small facility.
Youth Ministry Center	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.
Resource Center	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.
Conference Room	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.
Classroom (Small)	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.
Classroom (Large)	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.
Multi-Purpose Area	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.
Kitchen	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.
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.

A. Additional aspects of the facilities that are mandatory for each Religious Education Facility are as follows:

1) The basic spaces and their arrangement as shown on the plan portion of this 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) 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 available to help with historical and functional issues that led to this document and is also aware of the latest lessons learned and new developments not yet incorporated in the design, programming information and cost information. The Chief of Chaplains Office 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.

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2 SCOPE OF WORK:

2.1 MEDIUM RELIGIOUS EDUCATION FACILITY:

A. Provide an Army Standard Design Medium Religious Education Facility as defined herein with appropriate visual and structural adaptation to the assigned site. Include all appropriate coordination with the site. Staff capacity will generally be 4 persons, although at times that number might grow to 51 total persons. Visitors to the administrative staff might range from 6 to 8 total persons, combined. Provide an enclosure for a dumpster. The general concept behind the plan is to allow for the support of multiple faith groups' religious education 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).

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 FUNCTIONAL/OPERATIONAL REQUIREMENTS FOR THE RELIGIOUS EDUCATION FACILITY TYPE:

3.1 GENERAL REQUIREMENTS:

A. Provide an Army Standard Design Religious Education Facility 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:

Religious Education Facility requirements are for a facility (in various sizes) intended to support the religious education, fellowship, 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 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.

2) The facility is intended to support administrative activities necessary to operate and maintain the Religious Education Facility in a manner that ensures maximum support for the military community and the garrison. These goals will impact finish choices, 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, 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 for religious education in the form of professional administrative and activity spaces. Team members will be seeking to support the military community members and their garrison in three basic ways.

2) 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.

3) 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.

4) 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. This Army Standard Design Large Religious Education Facility type is intended to function in conjunction with and to coordinate with (on the same site when possible) a separate Chapel. 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 pair of facilities 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 facilities 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:

Provide the physically handicapped complete access to all appropriate spaces (equipment rooms and closets are examples of exceptions). There are spaces for which handicapped access needs to be limited in specific ways.

A. The Infant/Toddler Classroom Toilet Rooms:

No toddler will be operating an adult sized wheelchair. No handicapped person will be operating the toddler room alone or be called upon to assist a toddler in the toilet room. Modifying this space to provide blanket (adult-in-a-wheelchair) accessibility clearances and features only shows a lack of understanding. Provisions actually suitable for a handicapped toddler are quite appropriate.

B. Counters:

Setting all counter heights in a space or a facility to meet accessibility criteria as if they were the only users of the facility is very inappropriate. Counter heights for base cabinets and apron rails in all spaces may include appropriate portions for the independent use of the handicapped, but the rest (majority) of such features must be designed to accommodate typical adults without special needs.

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 points 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 Q - 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 and Excluded Spaces:

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 Q - 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 the 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 68102-4901

Attn: CoS Technical Representative

3.2 FUNCTIONAL AND OPERATIONAL REQUIREMENTS:

3.2.1 Functional Spaces:

A. General:

1) Each variation in size of Religious Education Facility includes 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, an exterior covered area at the primary entry, a reception area, and a conference room.

2) In addition to these specific spaces each Religious Education 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.

B. 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 24 lineal feet of base cabinets, counter tops and wall cabinets. At minimum 13 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 feat 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.

C. 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) Vestibules:

Provide Vestibule space. Due to the nature of vestibules, their specific project characteristics must

be coordinated with LEED and garrison requirements since these requirements change over time.

6) Lobby:

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

7) 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 23 lineal feet of base cabinets and countertops.

8) Waiting Area:

Provide a waiting area.

9) Corridors:

Provide corridor space.

10) 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.

11) Equipment Rooms:

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

12) Exterior Canopy Areas:

Provide an exterior canopy at the primary entrance with a weather, insect, bird, and vermin resistant ceiling material. Minimum height of canopy ceiling shall be 9'-0". Provide paved surface below with decorative accent and slip-resistant finish.

3.3 SITE FUNCTIONAL REQUIREMENTS:

A. General:

The Army Standard Design incorporates typical features for threat protection. 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) Site limitations may preclude some building orientations, but whenever possible, the building should be oriented to optimize energy usage, sustainability and functionality. 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.

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.

C. Parking:

1) The site should allow space for the building, 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 Medium Religious Education Facility building would be approximately 836 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 Religious Education Facility 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 Medium Religious Education Facility, with an average population of 836 persons would have a parking area with drive aisles totaling 251 parking stalls, or 11,160 square yards of paving. Additional paving for extended entrance drives, maintenance areas and drop offs should be added to this. In addition, for functional completeness for the Army congregations being served this facility type should be co-located with an appropriately sized Chapel.

5) The acreage area necessary for accommodating the Medium Religious Education Facility is approximately 8 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 Religious Education Facility. The necessity of this feature will vary at each garrison.

2) Normal access to the building is intended to be through the main entrance.

3) 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 classrooms 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 electrical equipment and large parking areas.

2) B 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 (without resorting to ramps) for handicap 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:

1) Provide as appropriate. 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.

2) 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. A bicycle parking area should be located near the front entry to the building.

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 matt" 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. All public visitors should enter through the main entrance into the lobby. This allows for better monitoring of visitors for increased child safety. All other exterior doors shall be emergency exits only and shall have appropriate door hardware and security systems to accomplish this. 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. 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. High borrow lite windows are recommended for the small and large classrooms for additional light and to potentially aid in natural cross ventilation. 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. Where porcelain tile is called for, install with epoxy grout.

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 flat 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 System:

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.

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) Director of Religious Education Offices:

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

2) Multi-Purpose Area:

Provide the Multi-Purpose Area entry doors with locksets.

3) 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.

4) 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.

5) 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.

6) 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.

7) 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.

8) Kitchen:

Provide Kitchen entry doors and pantries with locksets.

9) 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.

10) Storage:

Provide Storage space entry doors with locksets.

11) Vestibules:

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

12) 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.

13) Janitor's Closet:

Provide janitor's closet entry door with a lockset.

14) 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 design involves the integration of two 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 four sides of the core.

F. Exterior Specialties:

1) 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 Religious Education Facilities. The following shall be provided:

1) Multi-Purpose Area:

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

2) Resource Center:

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

3) Youth Ministry Center:

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

4) 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) 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 9’-0” above the finished floor.

2) 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 least 4 inches above all clerestory windows.

3) 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 9'-0" above the finished floor.

4) 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 9'-0" above the finished floor.

5) 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 9'-0" above the finished floor.

6) 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 9'-0" above the finished floor.

7) 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 9'-0" above the finished floor.

8) Kitchen:

Provide porcelain tile for the floor finish, porcelain tile base for the wall/floor trim, and painted wallboard for the wall finish. Provide suspended painted wallboard for the ceiling finish and lighting format. The ceiling heights shall be at minimum 9'-0" above the finished floor.

9) 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 9'-0" above the finished floor. Provide solid surface shower units.

10) 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 9'-0" above the finished floor.

11) 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 9'-0" above the finished floor.

12) Vestibules:

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 painted wallboard 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 9'-0" above the finished floor.

13) Lobby:

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 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.

14) 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 9'-0" above the finished floor.

15) Waiting Area:

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 at minimum 9'-0" above the finished floor.

16) 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 9'-0" above the finished floor.

17) 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 9'-0" above the finished floor.

18) 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.

19) Minimum Finish Requirements:

a) Carpet:

Commercial 100% branded (federally registered trademark) nylon continuous filament, permanent static control, loop pile with multi-color (geometric, bold, directional 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. 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.

c) Sheet Vinyl:

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

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

Shall be of same wood type, character and finish. Coordinate chair rail height with chair back heights. Consider locations and thickness of wood base and chair rail when developing furniture layouts.

f) Resilient Base:

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

g) Vinyl Wallcovering:

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

C. Interior Specialties:

Provide the following Interior Specialties

1) Toilet Rooms Items:

a) Provide multiple robe hooks, a water resistant seat (inside the shower) and curtain rod for the shower in the group toilet compartments.

b) 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.

c) Provide one pre-manufactured diaper changing unit for each of the public adult restrooms. 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) Signage:

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. 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 rooms such as offices, classrooms, the Multi-Purpose Area, the Resource Center, and the Youth Ministry Center. A directory shall be located in the Lobby and at a minimum shall identify the location of the Multi-Purpose Area, Resource Center, Youth Ministry Center, Classrooms, Conference Room, and Restrooms.

3) Window Treatment:

Provide room darkening shades to fully block natural light from entering the Multi-Purpose Area, Conference Room, Youth Ministry Center and Resource Center. All other exterior windows, with the exception of windows at building entrances and Lobby clerestory windows shall have horizontal blinds. Provide blinds in 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.

4) Marker Boards:

Provide one marker board in each DRE Office, Large and Small Classrooms, the Resource Center and the Conference Room. 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" wide x 3'-0" high for the DRE Offices. All other marker boards shall be 6'-0" wide x 4'-0" high.

5) 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.

6) 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.

7) Range Hood:

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.

8) 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.

9) 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 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.

10) 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.

11) 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 Religious Education Facility Standard design facilities meet the requirements of this paragraph provided the minimum standoff distances are achieved.

4) Foundations/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. Modifications 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 above ground domestic water supply, storm, sanitary sewers and gas distribution. 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.

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 COMMUNICATION 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 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 Multi-Purpose Area, each Classroom, Resource Center, Youth Ministry Center, and Conference Room. 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.

2) AV System Control:

a) The "primary" control point for the A/V system shall be located in the Multi-Purpose Area in a CFCI lockable media control console at the rear of the Multi-Purpose Area, fully set up to control all media items and equipment. This console shall be placed so that it does not create line-of-sight problems. Contractor shall coordinate with the end user to ensure the media control console is appropriately sized for all equipment. Contractor shall provide additional secondary control points for the A/V system in the following locations:

(1) In the Resource Center: Along one sidewall.

(2) In the Youth Ministry Center: 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.

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 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 evenly distributed 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. 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. 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: 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 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 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. Telecommunications:

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: DRE Offices, Classrooms, Resource Center, Youth Ministry Center and Conference Room. A minimum of two (2) CATV outlets shall be distributed along the rear edge of the performance area in the Multi-Purpose Area.

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) DRE Offices:

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

b) Classrooms:

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

c) Conference Room:

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

d) Kitchen:

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

e) Multi-Purpose Area:

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

f) 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.

g) 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.

h) 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.

i) 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) Wireless Internet:

Infrastructure for wireless internet shall be installed in accordance with the Technical Guide for Installation Information Infrastructure Architecture (I3A). Design of infrastructure for wireless internet shall provide coverage of the following areas:

a) Multi-Purpose Area
b) Resource Center
c) Youth Ministry Center
d) Lobby
e) Reception
f) Waiting Area
g) Conference Room
h) Small Classrooms
i) Large Classrooms

The installation of wireless internet equipment is recommended, but not required. Installation of

wireless equipment shall be coordinated through the installation specific approval process, and the installation NEC. Wireless internet may require internet service from a local Internet Service Provider (ISP).

5) Closed Circuit Television (CCTV) System:

The CCTV system shall include CCTV monitoring of all Infant/Toddler classrooms, Pre-K and K classrooms, Lobby, 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 the 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) Door Alarms:

All exterior doors except the main lobby entrance shall be exit only and shall set off an alarm when opened.

2) Limited Access Areas:

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.

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 Multi-Purpose Area, Resource Center and the Youth Ministry Center 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 religious projects have made very successful use of light fixtures that can be lowered to the main floor level for maintenance. Operating hardware shall 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:

A dimming system shall be installed to control the Multi-Purpose Area, Conference Room, Resource Center, Youth Ministry Center, and Classrooms. The dimming system shall be capable of controlling lighting down to 5%, a minimum of 3 presets, and manual raising/lowering of the light levels. All illumination levels shall be based on IESNA recommendations.

a) Multi-Purpose Area:

Lights shall have automatic dimming controls with manual override.

b) Resource Center:

Lights shall have manual dimming controls.

c) Youth Ministry Center:

Lights shall have manual dimming controls.

d) Conference Room:

Lights shall have manual dimming controls.

e) Small Classrooms:

Lights shall have manual dimming controls.

f) Large Classrooms:

Lights shall have manual dimming controls.

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:

Power outlets and microphone outlets will be located in close proximity to give the maximum amount of flexibility.

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.

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 Infant/Toddler Classrooms.

3.11 HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC):

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 System 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:

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. Heating, ventilating, and air conditioning (HVAC) control system shall be easily accessed by staff, but relatively secure from the general public.

E. Zoning:

Provide carefully considered zoning to accommodate the optimum number of use combinations.

Interior spaces should typically be in separate zones from exterior spaces. Zones separation shall be also based on systems isolation and operation. Areas such as the Classrooms and Multi-Purpose Area 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. Air distribution systems may include, but are not limited to, systems such as variable air volume, water-to-air heat pumps and variable refrigerant flow systems.

F. HVAC Control System:

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. 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. The 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. For spaces where the number of occupants varies from just a few to a large number (such as the Multi-Purpose Area), 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. 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. Air distribution system(s) shall be designed 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 Large REF 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) Qualification:

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.

4) Fire Protection Letter of Certification:

The Fire Protection Engineer who is the Designer of Record must provide a letter at 100% design submission in accordance with UFC 3-600-01 that the facilities meet all applicable codes, and Unified Facilities Criteria including NFPA and IBC.

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 combined 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 fire 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 Hood:

If range is a commercial grade piece of equipment, provide Range 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 range is a residential grade piece of equipment, a residential hood may be provided and without a fire suppression system.

10) Fire Extinguisher:

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 - 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.

C. Desk 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.

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; 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; 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) 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.

D. Seating:

1) S01 - Desk Chair: Ergonomic desk chair with adjustable arms, separate upholstered cushioned seat and back, back tilt and locking capability, pneumatic seat height adjustment, back height adjustment, seat depth adjustment, five star base on casters. Size 2'-0"w x 2'-2"d x 2'-8" to 3'-2"h.

2) S02: Not Used

3) S03 - Guest Chair: Guest chair with arms and upholstered cushioned seat and back. 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: Sled base, plastic shell stacking chair. Shall stack a minimum of 30-45 on dolly and a minimum of 10 on floor, with glides. Glides shall be appropriate for floor finish. Frame shall be solid base stock with chrome plate or durable color finish. Size 1'-7"w x 1'-11"d x 2'-7"h for the back and 1'-6" for the seat.

7) S07 - Stacking Chair Dolly: Dolly shall stack up to 45 S06 chairs and shall fit through single wide door with stacked chairs.

8) S08 - S09: Not Used

9) 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.

10) 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.

11) 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” high.

12) 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: Not Used

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” high. If appropriate for a specific project and to meet User requirements.

3) T03 - Table Dolly: Dolly type, size and quantity shall transport and store all of the 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 - T06: Not Used

6) T08: Not Used

7) T20 - Classroom Table: Classroom/training table 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” high. Table height shall be appropriate for height of children’s chairs. If appropriate for a specific project and to meet User requirements.
8) 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.

9) 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.

10) 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 - M07: Not Used

3) 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 1. 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.

4) 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.

5) 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 (CFCI).

6) 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 shall be Energy Star Tier 1 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.

7) M12 - Undercounter Refrigerator: An under counter type refrigerator will be placed in the Infant Classrooms. Refrigerator shall be Energy Star rated, Tier 1.

8) 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.

9) M14 - Warming Drawers: An in-the-base-cabinet under counter unit coordinated with casework and other appliances, capable of temperature adjustment to hold food in an optimally warm condition prior to serving. Note that this item is Contractor Furnished/Contractor Installed (CFCI).

10) M15 - M17: Not Used

11) M18 - TV: 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.

12) M19 - Media Player: Contact local suppliers for advice on selection. Media Players 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.

13) M20 - M22: Not Used

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

15) M24 - Stage: Stage shall be portable, overall approximate height 16"h, see drawings for actual size. 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.

16) M25 - Stage Dolly: Mobile cart(s) shall be provided to transport disassembled stage components. Carts shall be stored in the storage room adjacent to the Multi-Purpose Area.

17) 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.
18) 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.

19) 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.
20)

3.20 FACILITY SPECIFIC REFERENCES - NOT USED

APPENDIX A

ARMY STANDARD DESIGN AREA COMPUTATIONS

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ROOM OR ROOM GROUP NAME	SQ. FEET		NOTES
Multi-purpose Area	3,534		
Classrooms (Small)	6,360		
Infant / Toddler Classrooms (Small)	2,088		
Classrooms (Large)	1,808		
Resource Center / Small Classroom	890		
Youth Ministry Center	865		
Kitchen	311		
Recycling / Vending	172		
DRE Offices	453		
Conference Room	691		
Toilets	1,482		
Janitor's Closet	35		
Storage Rooms	1,067		
Equipment Rooms	1,587		
Circulation, Lobby, and Vestibules	4,890		
Reception and Waiting Area	457		
Walls, Partitions and Shafts	2,588		
Sub Total of Building Envelope	29,244		
Half the Canopy Area	200		
Total Calculated Area	29,444		
Rounded Total Facility Area/Scope	**30,000**		
Square footages shown here are taken from functional floor plans, and may deviate slightly from minimum square footages listed in the REF Army Standard.			

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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 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 Multi-purpose Area, Resource Center and the Youth Ministry Center. The A/V system shall be capable of delivering images to computer monitors, television monitors, front projection screens, and rear projection screens.

Images from the Multi-purpose Area shall be capable of broadcast to the Resource Center, Youth Ministry Center, Classrooms and Conference Room. They shall also be capable of broadcast to an adjacent building through a separate system.

Images from the Resource Center shall be capable of broadcast to the Multi-purpose Area, Youth Ministry Center, Classrooms and Conference Room. They shall also be capable of broadcast to an adjacent building through a separate system.

Images from the Youth Ministry Center shall be capable of broadcast to the Resource Center, Multi-purpose Area, Classrooms and Conference Room. They shall also be capable of broadcast to an adjacent building through a separate system.

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).

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 to 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 Installation 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.

Audio/Visual Media (A/V) & Broadcasting System

CHILD CHECK-IN (CCI) SYSTEM

This system is to enhance the safety and security for parents, their children, and the temporary care-givers in the facility when families make use of "watch care" services. Watch care services are defined as parents temporarily placing their small children in the care of other adults (typically teachers or parent volunteers, but this can vary). The purpose might be to place the children in an environment/space more suitable to the children's age and interests so that they (the parents) are able to pay fuller attention to and participate in Worship, Fellowship, or other group functions in other spaces. The system can also be used for children being dropped off for specific Religious Education Facility activities. Such services are recognized as providing potential benefits to all parties so long as confusion is avoided and safety and security are maintained. Properly designed electronic CCI systems can increase the success and ease of meeting these goals.

The Army Standard Design requirements for this system are that it provide a simple but secure means of temporarily "tracking" both parents and children when parents (or parent designated representatives) choose to temporarily transfer care responsibilities for children to other adults and then (later) returning to reassume that responsibility (or arranging for a parent designated representative to assume that responsibility). It must ensure the integrity of the process, provide clear means of identification for all parties, adequate means of determining authenticity of this identification, and provide an auditable historic record. It must also be user friendly.

The CCI system shall include a minimum of 3 computers, dedicated printers (to print matching wrist bands or devices that function in a similar fashion for adults and children), and work stations outside and inside of the secure perimeters of the child care areas.

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 Installation 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.

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 Infant/Toddler classrooms, PreK/K classrooms, Lobby, 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 the 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 Installation 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.

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 Installation 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.

APPENDIX C

ARMY STANDARD DESIGN COST INFORMATION

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CI13853 Standard Medium Religious Education Facility

Estimated by	CENWO-ED-C
Designed by	
Prepared by	JLB
Preparation Date	3/12/2009
Effective Date of Pricing	3/12/2009
Estimated Construction Time	360 Days

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Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	CostToPrime	ContractCost	ProjectCost
summary			**2,344,228**	**52,818**	**2,874,948**	**6,115,482**	**7,491,790**	**8,314,763**
			2,344,227.52	*52,817.87*	*2,874,948.18*	*6,115,482.19*	*7,491,790.31*	*8,314,763.47*
Construction of Buildings	**1.00**	**EA**	**2,344,228**	**52,818**	**2,874,948**	**6,115,482**	**7,491,790**	**8,314,763**
			80.16	*1.81*	*98.31*	*209.13*	*256.19*	*284.33*
Building	**29,243.00**	**SF**	**2,344,228**	**52,818**	**2,874,948**	**6,115,482**	**7,491,790**	**8,314,763**
			11.05	*0.85*	*11.65*	*23.54*	*31.74*	*35.22*
Substructure	**29,243.00**	**SF**	**323,047**	**24,755**	**340,582**	**688,385**	**928,063**	**1,030,010**
			3.83	*0.95*	*21.65*	*33.15*	*38.74*	*43.00*
Superstructure	**29,243.00**	**SF**	**111,973**	**27,840**	**633,132**	**969,305**	**1,132,983**	**1,257,442**
			107,015.14	*37.91*	*260,988.95*	*458,222.01*	*535,597.98*	*594,433.42*
Exterior Closure	**1.00**	**EA**	**107,015**	**38**	**260,989**	**458,222**	**535,598**	**594,433**
			3.34	*0.01*	*8.90*	*15.12*	*17.67*	*19.61*
Roofing	**29,243.00**	**SF**	**97,649**	**184**	**260,308**	**442,018**	**516,658**	**573,413**
			10.69	*0.00*	*9.14*	*24.81*	*29.00*	*32.19*
Interior Construction	**29,243.00**	**SF**	**312,573**	**0**	**267,216**	**725,535**	**848,050**	**941,208**
			2.13	*0.00*	*7.83*	*12.10*	*14.20*	*15.76*
Interior Finishes	**29,243.00**	**SF**	**62,150**	**0**	**229,063**	**353,760**	**415,217**	**460,829**
			3.81	*0.00*	*3.99*	*9.73*	*11.37*	*12.62*
Plumbing	**29,243.00**	**SF**	**111,328**	**0**	**116,788**	**284,576**	**332,630**	**369,169**
			1.74	*0.00*	*1.33*	*3.89*	*4.55*	*5.05*
Fire Protection System	**29,243.00**	**SF**	**50,772**	**0**	**38,866**	**113,886**	**133,117**	**147,739**
			4.48	*0.00*	*7.19*	*14.68*	*17.16*	*19.05*
Interior Electrical	**29,243.00**	**SF**	**131,032**	**0**	**210,212**	**429,422**	**501,934**	**557,072**
			6.71	*0.00*	*4.78*	*14.77*	*17.26*	*19.16*
Other Electrical Systems	**29,243.00**	**SF**	**196,339**	**0**	**139,692**	**431,926**	**504,861**	**560,320**
			28.74	*0.00*	*12.93*	*41.67*	*56.17*	*62.34*
HVAC	**29,243.00**	**SF**	**840,349**	**0**	**378,099**	**1,218,448**	**1,642,679**	**1,823,127**

APPENDIX D

ARMY STANDARD DESIGN DRAWINGS
(UNDER SEPARATE COVER)

INDEX

G-101	COVER SHEET AND INDEX
C-100	MEDIUM RELIGIOUS EDUCATION FACILITY GENERIC SITE PLAN
A-100	MEDIUM RELIGIOUS EDUCATION FACILITY FLOOR PLAN
A-200	MEDIUM RELIGIOUS EDUCATION FACILITY BUILDING ELEVATIONS
I-100	MEDIUM RELIGIOUS EDUCATION FACILITY FURNITURE FLOOR PLAN

BUILDING STRONG!

US Army Corps
of Engineers ®
Omaha District

MEDIUM RELIGIOUS EDUCATION FACILITY
ARMY STANDARD DESIGN

VARIOUS LOCATIONS (CONUS)

DESIGN FILE	DRAWING NUMBER	SHEET NUMBER	DESCRIPTION
RF_EMG-101.DGN	G-101	1	COVER SHEET AND INDEX
RF_EMC-100.DGN	C-100	2	MEDIUM RELIGIOUS EDUCATION FACILITY GENERIC SITE PLAN
RF_EMA-100.DGN	A-100	3	MEDIUM RELIGIOUS EDUCATION FACILITY FLOOR PLAN
RF_EMA-200.DGN	A-200	4	MEDIUM RELIGIOUS EDUCATION FACILITY BUILDING ELEVATIONS
RF_EMI-100.DGN	I-100	5	MEDIUM RELIGIOUS EDUCATION FACILITY FURNITURE LAYOUT

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 _____

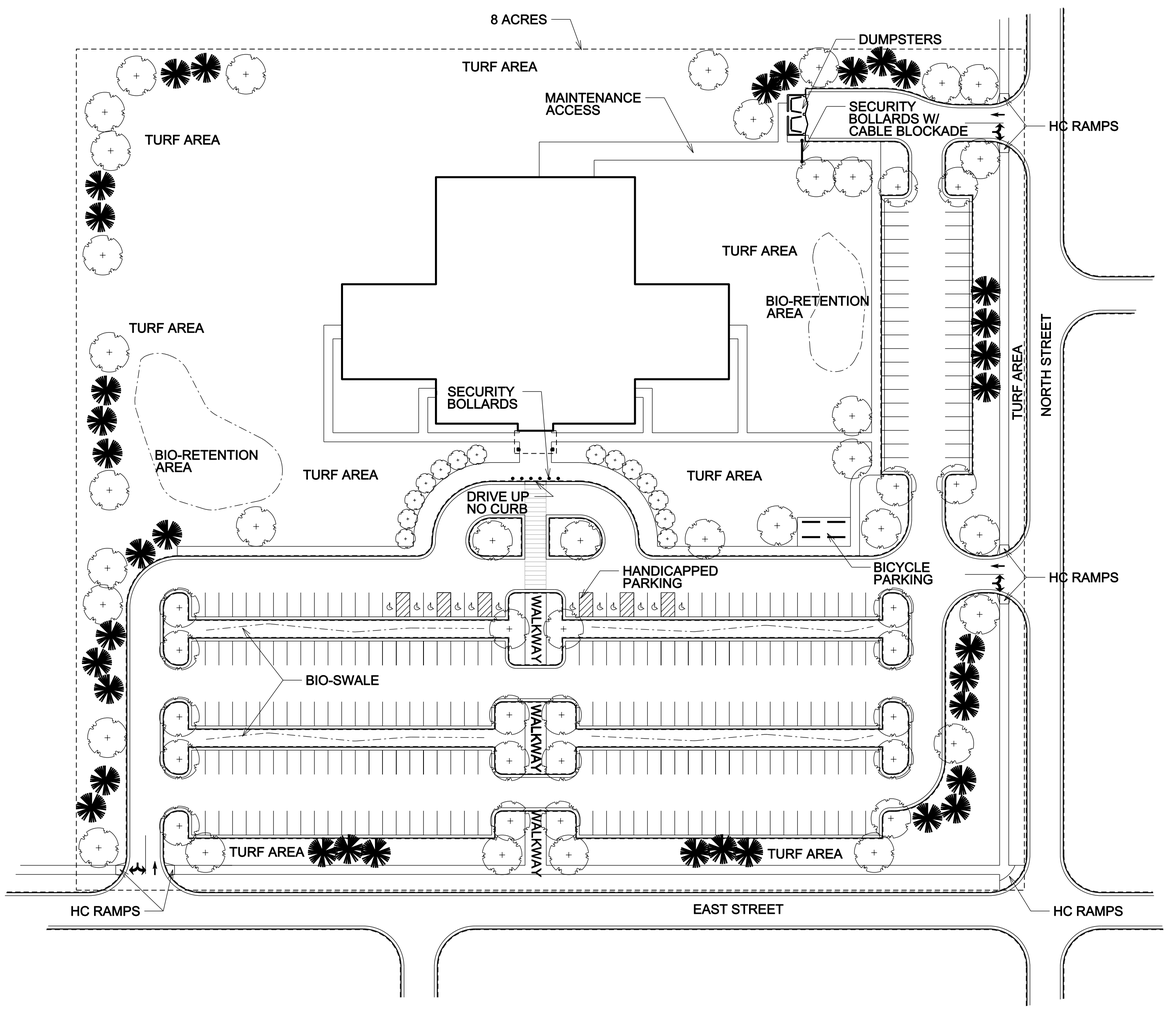
SUBMITTED BY: RA CHIEF: ARCH SECTION	US Army Corps of Engineers Omaha District
SUBMITTED BY: PE CHIEF: CIVIL SECTION	
SUBMITTED BY: PE CHIEF: ELECT SECTION	
SUBMITTED BY: PE CHIEF: ENVIR SECTION	
SUBMITTED BY: PE CHIEF: MECH SECTION	
SUBMITTED BY: PE CHIEF: STRUCT/INTER SECTION	
SUBMITTED BY: PE CHIEF: GEOT SECTION	
SUBMITTED BY: CADD PROJECT COORD.	

JUNE 2012

CENTER OF STANDARDIZATION PROGRAM

US Army Corps
of Engineers
Omaha District

ARMY RELIGIOUS EDUCATION FACILITY



MEDIUM RELIGIOUS EDUCATION FACILITY CONCEPTUAL SITE PLAN

50' 25' 0 50'

SCALE: 1" = 50'-0"

US Army Corps of Engineers®
OMAHA DISTRICT

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

US ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

DESIGNED BY: TJD		DATE: JULY 2012	
DWN BY: TJD	CKD BY: JVH	SOLICITATION NO.: Z	
SUBMITTED BY: X		CONTRACT NO.: Z	
PLOT SCALE: 1:1	PLOT DATE: 8/16/2012	FILE NUMBER: Z	
SIZE: 22 x 34	FILE NAME: 01 Title / Plan		

VARIOUS LOCATIONS
3D BIM TRANSLATION
ARMY STANDARD DESIGN
RELIGIOUS EDUCATION FACILITY
MEDIUM RELIGIOUS EDUCATION FACILITY
GENERIC SITE PLAN

SHEET IDENTIFICATION
C-100

G6EDXTJD
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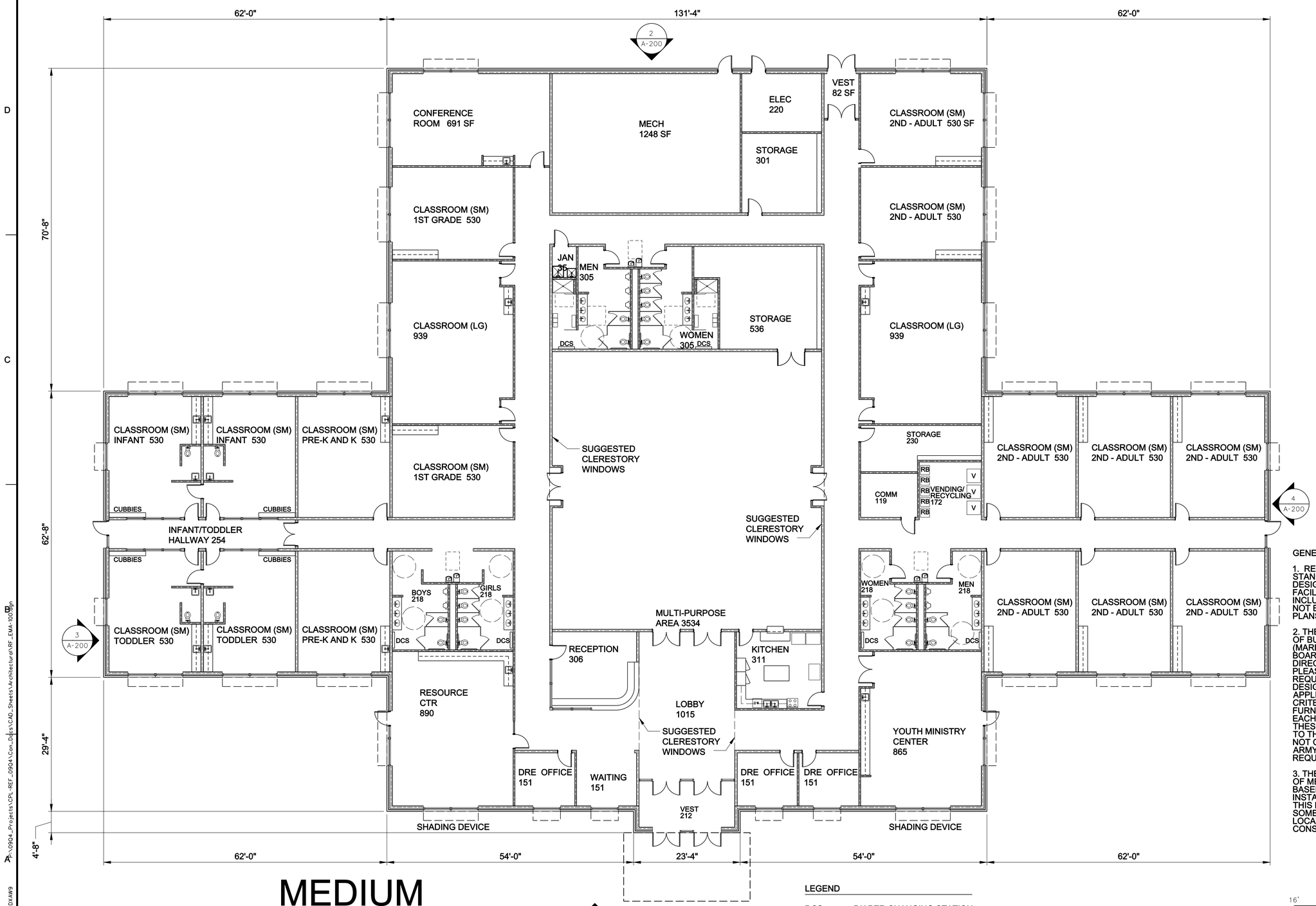


MEDIUM
29,244 SF
(PLUS APPROX. 200 SF CANOPY)

LEGEND

DCS	DIAPER CHANGING STATION
RB	RECYCLE BIN
V	VENDING MACHINE

GENERAL NOTES:

1. REFER TO THE ARMY STANDARD AND ARMY STANDARD DESIGN DOCUMENTS FOR ALL FACILITY DESIGN REQUIREMENTS INCLUDING THOSE THAT MAY NOT BE ILLUSTRATED IN THESE PLANS.

2. THE LOCATION AND NUMBER OF BUILDING ACCESSORIES (MARKER BOARDS, TACK BOARDS, TOILET ACCESSORIES, DIRECTORIES, ETC.) IS FLEXIBLE. PLEASE SEE ROOM FURNISHING REQUIREMENTS IN STANDARD DESIGN TEXT (AS WELL AS ANY APPLICABLE CODES AND CRITERIA) FOR SPECIFIC FURNISHING REQUIREMENTS. EACH INSTALLATION MAY ADD TO THESE REQUIRED FURNISHINGS TO THE EXTENT THAT THEY DO NOT CONFLICT WITH OTHER ARMY STANDARD DESIGN REQUIREMENTS.

3. THE NUMBER AND LOCATION OF MEDIA CONSOLES IS FLEXIBLE BASED ON THE NEEDS OF EACH INSTALLATION AND USER GROUP. THIS DOCUMENT ILLUSTRATES SOME OF THE POSSIBLE LOCATIONS FOR MEDIA CONSOLES.

16' 8' 0 16'
SCALE: 3/32" = 1'-0"

US Army Corps of Engineers®
OMAHA DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: ACW
DWN BY: ACW
CKD BY: BRG
SUBMITTED BY: BRG
DATE: JULY 2012
SOLICITATION NO.: Z
CONTRACT NO.: Z
FILE NUMBER: Z
PLOT SCALE: 1:1
PLOT DATE: 07 Feb 2012
FILE NAME: RF_EMA-100.dgn
SIZE:

US ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

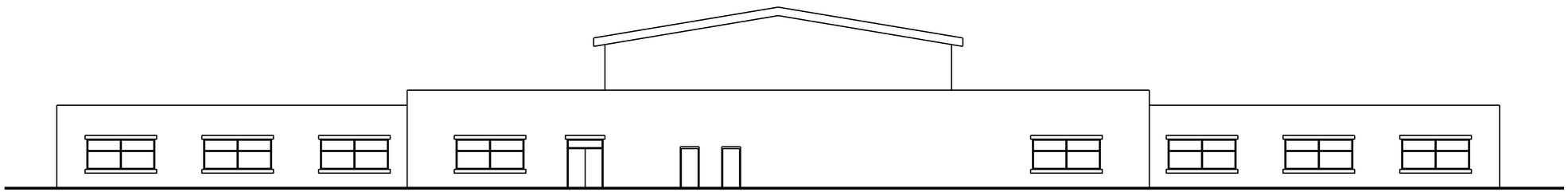
VARIOUS LOCATIONS
3D BIM TRANSLATION
ARMY STANDARD DESIGN
RELIGIOUS EDUCATION FACILITY

MEDIUM RELIGIOUS EDUCATION FACILITY
FLOOR PLAN

SHEET IDENTIFICATION
A-100

P:\0904_Projects\CPL-REF_0904\Con_Docs\CAD_Sheets\Architectural\RF_EMA-100.dgn
GSEDXAW9

1 A-100 BUILDING ELEVATION
3/32" = 1'0"



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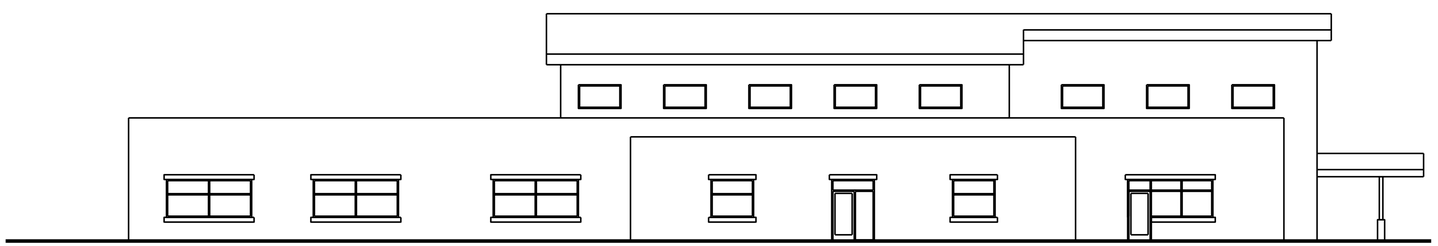
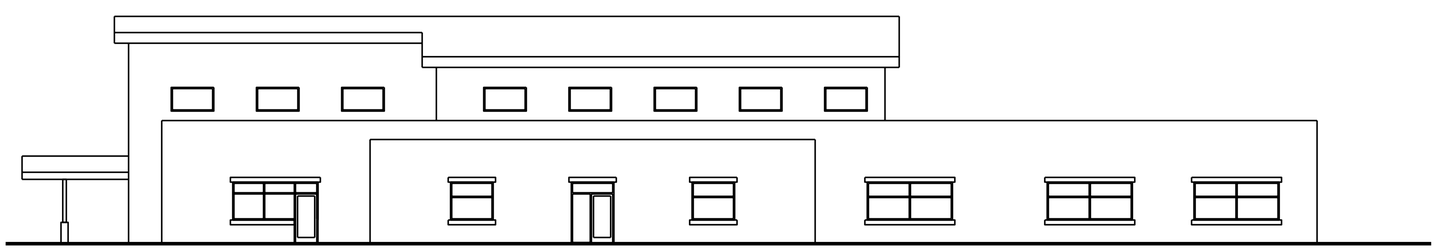


3 A-100 BUILDING ELEVATION
3/32" = 1'0"



4 A-100 BUILDING ELEVATION
3/32" = 1'0"

16' 8' 0 16'

SCALE: 3/32" = 1'-0"

US Army Corps of Engineers®
OMAHA DISTRICT

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

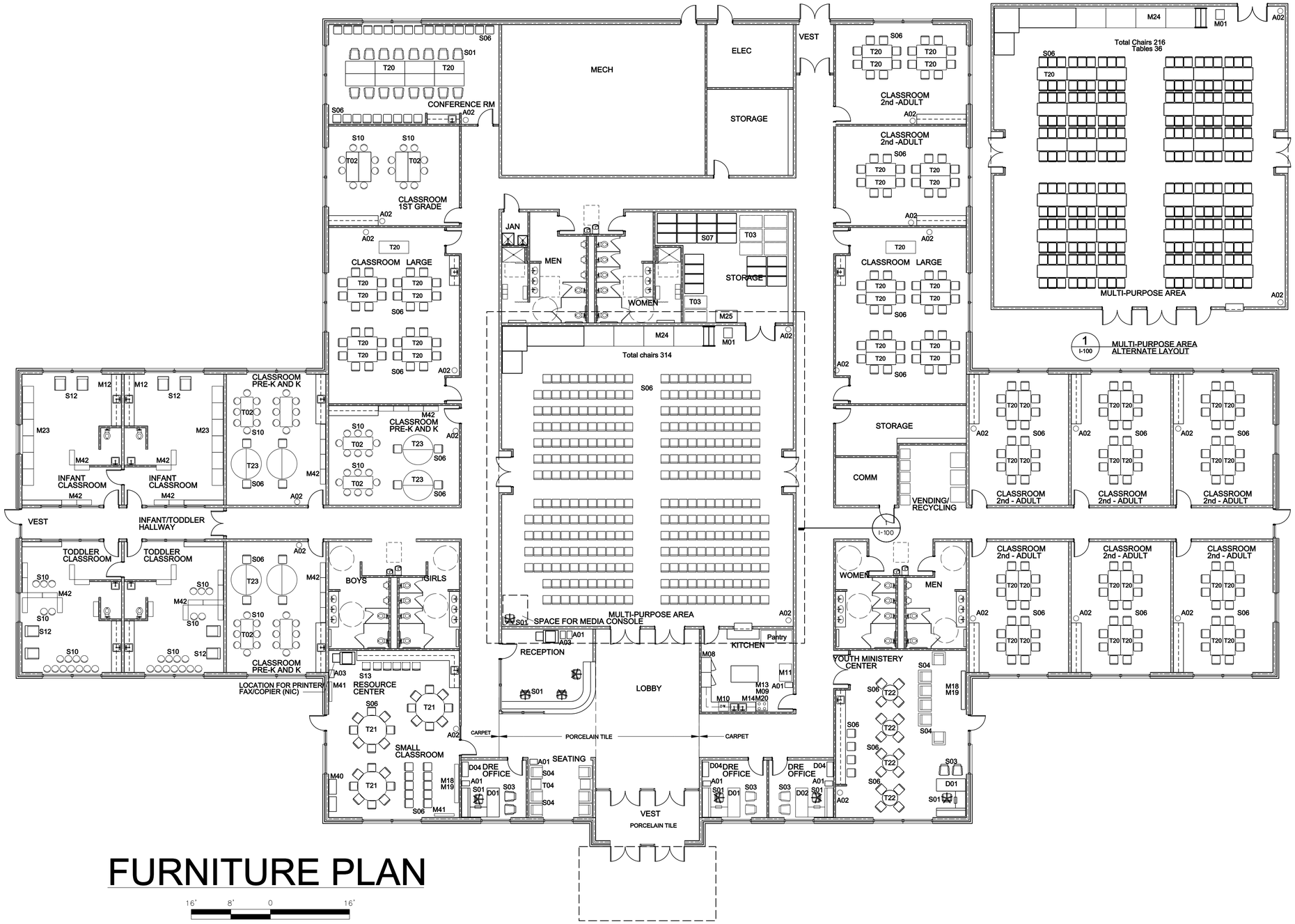
DESIGNED BY: ACW
DWN BY: ACW
CKD BY: BRG
SUBMITTED BY: BRG
DATE: JULY 2012
SOLICITATION NO.: Z
CONTRACT NO.: Z
PLOT SCALE: 0.1 Un = 1 Ft
PLOT DATE: 8/16/2012
FILE NUMBER: Z
FILE NAME: RF_EMA-200.dgn
SIZE:

US ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

VARIOUS LOCATIONS
3D BIM TRANSLATION
ARMY STANDARD DESIGN
RELIGIOUS EDUCATION FACILITY
MEDIUM RELIGIOUS EDUCATION FACILITY
BUILDING ELEVATIONS

SHEET IDENTIFICATION
A-200

A:\0904_Projects\CPL-REF_0904\Con_Docs\CAD_Sheets\Architectural\RF_EMA-200.dgn
G6EDXAW9



FURNITURE PLAN

16' 8' 0 16'

SCALE: 3/32" = 1'-0"

FURNITURE AND EQUIPMENT LEGEND

ADMIN FURNITURE

ACCESSORIES:
A01 SMALL TRASH RECEPTACLE
A02 LARGE TRASH RECEPTACLE
A03 PAPER RECYCLE RECEPTACLE

DESKS AND STORAGE:
D01 U-SHAPED WORKSTATION, R-RETURN
D02 U-SHAPED WORKSTATION, L-RETURN
D03 NOT USED
D04 BOOKCASE

MISCELLANEOUS:
M01 PORTABLE PODIUM
M02 NOT USED
M03 NOT USED
M04 NOT USED
M05 NOT USED
M06 NOT USED
M07 NOT USED
M08 REFRIGERATOR
M09 RANGE
M10 DISHWASHER
M11 ICE MACHINE
M12 UNDERCOUNTER REFRIGERATOR
M13 MICROWAVE
M14 WARMING DRAWER
M15 NOT USED
M16 NOT USED
M17 PORTABLE PROJECTOR
M18 TV
M19 MEDIA PLAYER
M20 RANGE HOOD
M21 NOT USED
M22 NOT USED
M23 CRIB
M24 STAGE
M25 STAGE DOLLY
M40 STORAGE CABINET
M41 OPEN DISPLAY SHELVING
M42 LOW DISPLAY SHELVING
M43 NOT USED

SEATING:
S01 DESK CHAIR
S02 NOT USED
S03 GUEST CHAIR
S04 LOUNGE CHAIR
S05 NOT USED
S06 STACKING CHAIR
S07 STACKING CHAIR DOLLY
S08 NOT USED
S09 NOT USED
S10 SMALL CHILDREN'S CHAIR
S11 MEDIUM CHILDREN'S CHAIR
S12 ROCKER/GLIDER
S13 HIGH STOOL

TABLES:
T01 NOT USED
T02 CHILDREN'S TABLE
T03 TABLE DOLLY
T04 LOBBY END TABLE
T05 NOT USED
T06 NOT USED
T20 CLASSROOM TABLE
T21 72" DIA TABLE
T22 36" DIA TABLE
T23 CHILDREN'S CRESENT TABLE

NOTES:

1. WHITE BOARD (WB) AND BULLETIN BOARD (BB) ARE CF/CI.

US Army Corps of Engineers®
OMAHA DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: MEL | DWN BY: MEL | CKD BY: WRB | SUBMITTED BY: WRB | PLOT SCALE: 1:1 | PLOT DATE: 03 Feb 2012 | DATE: JULY 2012 | SOLICITATION NO.: Z | CONTRACT NO.: Z | FILE NUMBER: Z | FILE NAME: RF_EMI-100.dgn | SIZE:

US ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

VARIOUS LOCATIONS
3D BIM TRANSLATION
ARMY STANDARD DESIGN
RELIGIOUS EDUCATION FACILITY

MEDIUM RELIGIOUS EDUCATION FACILITY
FURNITURE LAYOUT

SHEET IDENTIFICATION
I-100

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