

U.S AIR FORCE

Architectural Compatibility Guide

For Cannon Air Force Base

2012

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For Cannon Air Force Base

Command Policy

As stated in the AFSOC Facility Excellence Guide, “Regardless of use, all facilities on the installation must be efficient, healthy, safe and comfortable places to work and play”. In addition, the Air Force seeks to:

- Incorporate “Principles of Smart Growth” in planning installation development.
- Foster a strong sense of place for each installation through *architectural compatibility* and people friendly site design.
- Provide quality facilities that achieve very high levels of sustainability and energy efficiency.
- Pursue compact and efficient building designs that minimize land use and reduce costs.
- Utilize cost effective, durable, low-maintenance materials with natural or integral colors.
- Reuse existing infrastructure, facilities and raw materials to the maximum extent possible.
- Incorporate landscaping principles to preserve or restore native vegetation and natural ecosystems and to minimize water usage.

The Cannon Flightline



Cannon AFB today is architecturally diverse

The Purpose

This document establishes architectural and site design standards, often referred to as the *Standard*, for Cannon Air Force Base (CAFB). It encourages creative but practical design solutions to accommodate the growing mission requirements of the 27th Special Operations Wing (27SOW). Specifically, it aims to improve the function and appearance of new and existing facilities, moderate construction and maintenance costs, achieve energy-efficiency and sustainability, and strengthen the overall *architectural compatibility* of the base.

This document should be understood by all persons involved in the design, construction or maintenance of base facilities. Its provisions will be enforced through standard review and approval procedures during project programming, planning, design and documentation, construction and occupancy.

These guidelines shall be applied to all MILCON and O&M projects at Cannon Air force Base (CAFB) regardless of funding source or *client* organization.

As the Air Force mission dictates, this document will be periodically updated and revised.

Achieving Design Excellence

This section outlines the actions necessary to implement the Standards:

1. Distribution of the Design Standard

The Standards will be circulated among the installation leadership including all commanders of significant tenant organizations, all Architectural and Engineering (A-E) firms working on CAFB, the Army Corps of Engineers (COE) and throughout the civil engineering division including operations, branch chiefs, architects, engineers and planners. Copies will be provided to Headquarters of the U.S. Air Force Special Operations Command (HQ AFSOC) for review and coordination. A digital copy in portable document format (PDF) will be available on a publicly accessible folder at the CAFB website. Digital copies may be distributed to A-E firms and other contractors outside the base via CD/DVD or email. Hard copies will be made available on a limited basis.

2. Enforcement of the Design Standard

These Standards will be enforced by the 27 SOW/CC or his designated representative. In the absence of any other designee, the Base Architect shall be assumed to be the representative. Any deviations from these Standards are subject to approval by the 27 SOW/CC or his designated representative during the course of project review. Deviations should be limited to necessary exceptions resulting from special programming requirements or new developments in building materials and technology.

3. Engagement of Design Professionals

Engagement of talented providers of A-E services is essential to the successful implementation of these Standards. Because of the substantial scope of new construction planned for CAFB, consideration should be given to extending design contract opportunities to a greater number of A-E service providers as a means of bringing new talent and ideas to the development of the base.

Design-Builders are expected to provide the same level of service and design excellence as A-E service providers.

4. Design Development and Review

A-E service providers and Design-Builders are expected to collaborate with the designated Air Force Project Manager (PM) to conduct an orderly process of design reviews.

A project design process shall typically begin with a kick-off meeting of interested parties to discuss and confirm program requirements and to establish general design parameters. Subsequently, at scheduled intervals, A-E service providers will submit design progress drawings, renderings or models for review, comment and ultimate approval by appropriate personnel.

Refer to Appendix B for submittal requirements during the phases of project design.



The Visual Districts

Visual Districts are areas of the base where buildings have similar characteristics derived from the common *function, form, scale, color, and texture* of the facilities within each district.

Cannon AFB can be divided into three Visual Districts: the Community Center, the Northwest Flightline and the Southeast Flightline.

District 1: The Community Center

The Community Center district is effectively the *Town Center* for military and civilian residents and workers. It includes administrative buildings, medical facilities, the Commissary/BX, a gas station and convenience store, a library, dry cleaners, a child development and youth activity centers, banks, dormitories and various other amenities. This district is located near the main gate, between a traditional residential neighborhood to the northwest and various facilities supporting the flight line to the southeast.

The Area Development Plan for this District includes substantial demolition and new construction over the next decade as improvements are made to accommodate expected new arrivals. This new development presents an excellent opportunity to transform the Community Center district into a more attractive, sustainable and pedestrian-friendly neighborhood.

The most prevalent exterior wall materials in this district, in various colors, are modular brick, concrete block and stucco. Roofs vary from concealed, low-slope roofs to exposed, medium-slope standing seam metal roofs in colors ranging from older dark brown to the newer red. Buildings in this district are limited to three stories in height.

District 2: The Northwest Flightline

The Northwest Flightline District is an area adjacent to the flightline that supports flight operations and training. In addition to numerous aircraft hangers, this district includes squadron operations facilities, administrative offices, buildings for flight simulators, training, storage and other industrial uses. Future

development in this district will primarily relate to administrative and training functions and flightline support activities.

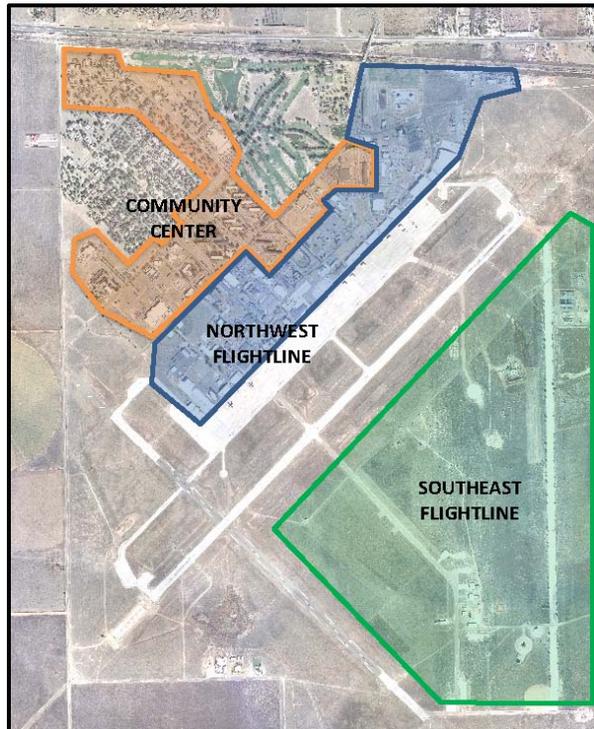
Large metal-sided aircraft hangers along the flightline notwithstanding, the most prevalent finish materials in this district are stucco, modular brick and concrete block of various colors and textures. Several low cost, temporary buildings with painted panel siding are also evident. Standing seam metal roofing is commonly used. Roof colors vary from white to dark brown to newer red.

District 3: The Southeast Flightline

The Southeast Flightline District is a large, developing area adjacent to the flight line. Significant new development is planned for this District that will support nearly every aspect the Air Force mission.

Projects in this district utilize an architectural style derived from historical southwestern and Spanish Colonial influences. It is the stylistic basis for all future projects at Cannon AFB.

The 3 Visual Districts



What is Architectural Compatibility?

According to the AFSOC Facility Excellence Guide, *architectural compatibility* exists when architectural features are “*compatible in function, mass, shape, color and texture*”.

The Oxford English Dictionary defines *compatible* as meaning, “*able to exist or occur together without conflict*”.

Cannon AFB consists of a diverse variety of buildings that reflect the program needs, design values and technologies of the times in which they were built. As a result, there is presently no single, unifying design style for the base. However, *compatibility* does not require *uniformity*. Architectural compatibility can still be gradually achieved through the use of a limited set of building forms and materials that can *exist together without conflict*. This Standard describes the basic forms and materials acceptable for use at CAFB.

Compatibility and Diversity

Many of our existing buildings will eventually be demolished to make room for new construction but many others will remain, possibly for decades. The challenge we face is how best to create a sense of aesthetic cohesiveness, or *architectural compatibility*, in which old and new buildings are able to coexist harmoniously.

Generally, forms and materials already in wide use on the base will continue to be acceptable for renovations and additions to *existing* buildings, but precise duplication of existing architectural features is not required. New features added to existing buildings should incorporate the new design ideas and technologies described in this Standard to enhance *architectural compatibility* and improve the general appearance of Cannon Air Force Base.

When new construction stands alone, as it will in the new *Southeast Visual District*, this Standard establishes a more limited set of building forms and materials.

On a case-by-case basis, when new construction occurs in close proximity to existing buildings, borrowing and blending forms and materials from the existing buildings may be an acceptable means of establishing a visual connection between old and new. In other words, flexibility in the use of forms and materials is permissible in order to improve architectural compatibility.

While the existing diversity of our facilities is undeniable, a more architecturally unified installation remains the objective. This will be achieved over time by the consistent application of this Standard as defined in the pages that follow.

Medical/Dental Clinic Replacement (Conceptual Rendering by Leo A. Daly Architects)



The Cannon Style

Several new projects at Cannon AFB utilize an architectural style derived from historical southwestern influences. It is the stylistic basis of what can be termed *The Cannon Style*.

The Cannon Style utilizes red, sloping metal roofs, light colored stucco with masonry or precast wainscots. Additional materials recommended by project architects will be considered on a project-by-project basis.

The renderings on this page illustrate conceptual and existing projects. Architects for new projects should refer to the Cannon Style. When new buildings will be located near existing ones, architects should be mindful of their forms, massing and materials when developing attractive and practical design solutions.



Existing Dining Facility

Wing Command Building (Concept by USAF)



School Age Program Facility (Conceptual Rendering by OZ Architecture of Denver)



Administrative Campus (Conceptual Renderings by USAF)



Campusing creates opportunities to resolve ATRP requirements at the site perimeter so that buildings can share relatively secure, landscaped common areas and other amenities such as auditoriums, classrooms and break areas. *Campusing* can improve the feasibility of cost and energy-saving amenities such as

rainwater collection for irrigation, geothermal and ice storage cooling systems, and photovoltaic arrays. *Campusing* requires careful cooperation among all Air Force organizations involved in facility planning, programming, funding, contracting, design and construction at Cannon AFB.

The Design Standard

General Requirements

1. This Standard is applicable to all new building projects and all major renovations or additions at CAFB.
2. The International Building Code and all compatible specialty codes issued by the International Code Council (ICC) are applicable to all facility design and construction projects at Cannon AFB. The latest versions of the IBC codes adopted by the USAF and in effect upon commencement of design services shall remain valid provided construction begins within one year of design completion. If the one year period is exceeded, the Air Force Project Manager or Contracting Officer's Representative may require adjustments be made to the project design to accommodate a newer code, for which additional design fees may be warranted.
3. Beginning in Fiscal Year 2012, all new vertical construction and significant renovations shall incorporate sustainable concepts meeting the latest USGBC LEED Minimum Program Requirements (MPR) and shall be formally certified LEED Silver (or better) with not less than 20 points derived from energy efficiency and water conservation.
4. All new vertical construction and major renovations *not* meeting LEED Minimum Program Requirements shall fully incorporate the Federal requirements for High Performance and Sustainable Buildings (HPSB).
5. Every project must incorporate efficient use of materials, systems and assemblies to minimize complexity, improve constructability, reduce maintenance requirements and achieve the necessary performance at minimal cost.
6. Room sizes for all occupancies shall conform to limits defined in Air Force Handbook [AFH 32-1084](#) - Facility Requirements.
7. Anti-Terrorism and Force Protection (ATFP)

requirements will be established during early design phases in coordination with the base Anti-Terrorism Officer (ATO). Refer to Unified Facilities Criteria [UFC 4-010-01](#) - DOD Minimum Anti-Terrorism Standards for Buildings for specific information. See Appendices D and E for standard ATFP site details.

8. Fire Protection: Per [UFC 3-600-01](#) - Fire Protection Engineering for Facilities, buildings that have alteration, modernization, modification, rehabilitation, and renovation costs *equal to or exceeding* 50% of the replacement cost of the building, must bring the entire building into compliance with new construction requirements. (The estimated replacement cost is exclusive of the costs to bring the building into full compliance.) Facilities in which alteration, modernization, rehabilitation, and renovation work is *less than* 50% of the replacement value of the building, the building must comply with the criteria in this UFC for new construction, to the maximum extent practical. All new work accomplished as part of alteration, modernization, modification, rehabilitation, and renovation actions/projects must meet the requirements for new construction.
9. Refer to [UFC 3-100-10](#) – Architecture for additional general requirements.
10. Refer to the [CAFB Electrical Standards](#) for building and site electrical requirements.

Planning

11. *Campusing* multiple projects should be considered early in the planning and programming stages. Coordination and consolidation of site and utility requirements among several buildings may enable the use of various sustainable systems by sharing system costs and advantages among several buildings.
12. Related occupancies should be consolidated within single buildings to the maximum extent practical.

Building Design Basics

13. Building forms should be simple with a linear, horizontal emphasis derived from roof lines, fenestration patterns and wall materials.
14. Buildings should be designed to engage public streets and sidewalks at a human scale through the use of materials, detailing and transparency (within the parameters of security requirements).
15. To the maximum practical extent, develop compact and efficient floor plans to reduce building footprints, construction costs and land consumption.
16. Open floor plans in office areas that are readily adaptable to different uses and space allocations are strongly preferred.
17. Window area, ceiling heights and building floor plan depth should be considered to maximize natural daylighting per LEED Indoor Environmental Quality (IEQ) Credit 8.1.
18. Two and three story buildings are permitted. All buildings shall be fully accessible.
19. New projects will utilize exterior materials identified in Appendix A: Exterior Building Materials List. Other materials will be considered on a case by case basis. Renovations and additions to existing buildings may utilize exterior materials that are identical or complementary to existing materials.
20. Interior mechanical rooms are preferred and strongly recommended. If necessary, mechanical equipment may be located on the building roof or on the ground. Ground locations will require an enclosure and compliance with [UFC 4-010-01](#) - DOD Minimum Anti-Terrorism Standards for Buildings. (See Roofs section for rooftop equipment access requirements.)

Building Entrances

21. Primary building entrances should be clearly recognizable, sheltered and accessible. Entrance elements that are highly transparent and formally external of the main structure are encouraged. Primary entrance storefront frames shall be aluminum with integral thermal-breaks.
22. Secondary building entrances should be clearly recognizable, accessible and provide shelter from the natural elements but should be less prominent than the primary entrance.
23. Service entrances and loading docks should be located away from main entrances and provided overhead protection from the elements. Hollow metal service doors and frames should be painted to match adjacent wall surfaces.
24. In multi-story buildings, an elevator shall be located near the front entrance and immediately visible to visitors.

Windows and Doors

25. In normally occupied spaces with exterior walls, windows shall be designed and located to provide natural daylighting, fresh air, abundant views to the outdoors and adjacent outdoor gathering areas (within the parameters of security requirements). As a general rule of thumb, window area should equal at least 20% of the room floor area.
26. Window curtain walls and storefront systems are permitted. In some instances, curtain walls will be required to meet anti-terrorism requirements as defined by [UFC 4-010-01](#).
27. Windows may be operable in locations accessible from the building interior and in rooms normally occupied (within the parameters of security requirements). Operable windows shall not open more than 4 inches unless a larger opening is required for emergency egress. Exterior screens firmly secured to the window frame are required for all operable windows.

28. Recommended ranges for glazing design values are as follows:
- Insulation Value: $U \leq .35$
 - Solar Heat Gain Coefficient: $SHGC \leq .51$
 - Visible Light Transmittance: $T_{vis} \leq 62\%$
- Glazing design values should be carefully selected to balance the desired levels of thermal performance, privacy and transparency. Generally, greater transparency is preferred.
29. Window shading structures are recommended for curtain walls and large south-facing windows. Shading structures may be internal or external to the building. External shading structures shall be permanent and constructed of factory-coated aluminum or steel.
30. When used, external and internal window shading structures shall be designed and permanently installed to appropriately manage natural light and solar heat gain in both summer and winter. (If additional light control is needed, retractable translucent or opaque window blinds or other interior window treatments should be included in the building furnishings.)
31. Clerestory windows located above the main roof line and tubular daylighting devices (such as *Solatube*) may be utilized to provide natural daylight to interior spaces. Care must be taken to locate, detail and install clerestories to prevent leaks and air infiltration. Horizontal skylights are not permitted.
32. Glass block, translucent glazing and translucent fiberglass panels (such as *Kalwall*) are allowed wherever natural daylighting and interior privacy are desired.
33. Emergency egress doors that are not part of a primary or secondary entrance shall have hollow metal doors and frames painted to match adjacent wall surfaces.

Exterior Walls

34. Exterior walls shall have a typical insulation value of R-19 and a vapor barrier located at the interior side of the insulation.
35. Exterior wall detailing should be limited to *attractive, practical and cost effective* manipulation of materials, textures and colors.
36. Foundations and slabs shall incorporate an integral thermal break or include perimeter thermal insulation at all occupied spaces.
37. Structural wood framing, metal framing and steel structures with non-bearing metal stud walls are preferred over bearing masonry. Stud walls allow for simpler and more cost effective installation of insulation, electrical wiring and devices, plumbing lines and finish materials at a lower relative cost.
38. Brick and cast stone veneer are the preferred exterior wall finish materials for normally-occupied, new projects located in highly visible locations. Combinations of split-face, smooth-face or ground-face concrete blocks are acceptable for renovations and additions to existing projects and may be considered as cost-effective alternatives for new projects. Painting of new exterior masonry is not permitted.
39. Masonry veneer shall be detailed to bear on concrete ledges at least 2 inches above grade. Where practical, masonry veneer may extend to the top of foundation footings. In this case, masonry located below grade shall be concrete block rather than brick and fully grouted, waterproofed and flashed to prevent water penetration.
40. Stucco may be used when masonry is inappropriate or exceeds budget limitations. When used, stucco shall utilize a mesh-reinforced, three-coat system with control joints spaced *roughly* 12 feet on center horizontally and vertically or *approximately*

every 144 square feet. The distance between control joints shall not exceed 18 feet. Control joints should be logically located at corners, long spans and large surfaces in patterns that relate to building fenestration and forms. In areas of the building deemed to be particularly vulnerable to cracking, the use of mesh reinforcing and fiberglass admixtures is required. In all cases, stucco shall be applied to rigid substrates (masonry, concrete or rigid sheathing over metal or wood framing) to minimize cracking and reduce surface warping. Care must be taken during stucco installation to compensate for high winds and temperatures that may accelerate drying time and increase cracking.

41. Stucco shall have a *medium dash* texture with integral color mixed into the finish coat or an elastomeric color coat.
42. Exterior Insulated Finish Systems (EIFS) shall utilize a reinforced, impact resistant assembly.
43. Metal panel siding is approved for use on hangars when located 8 feet or more above finish grade. Panels shall be an insulated sandwich-type with an embossed exterior surface. Use of metal panels on other facilities is discouraged and subject to approval by the 27 SOW/CC or his/her designated representative.
44. Exposed Fastener Composite Wall Panels (such as *Northclad EF Panel System*) are permitted.
45. Fiber cement board panels applied to wood framing and sheathing are permitted.

Roofs

46. Roof assemblies for normally occupied buildings shall have a typical insulation value of R-30 or more with a vapor barrier located at the interior side of the roof insulation or integral to the roof assembly.
47. A 4:12 roof pitch is standard. At roofs with a 2:12 or steeper pitch, red standing-seam metal

roofing is required. Refer to Appendix A: Exterior Building Materials List.

48. At large utilitarian structures such as hangars and warehouses with roofs having less than a 2:12 slope, white standing-seam metal roofing is required. (Note: Red and White roofing should not be used in *visible* locations on the same building.)
49. Low-slope roofs hidden from public view shall have a minimum 1:24 slope. A 60 mil, White TPO (Thermoplastic Polyolefin) fully-adhered membrane is required.
50. New buildings may have a combination of sloped standing seam metal and low-slope TPO roofs.
51. Renovations or additions to existing buildings may utilize existing roof forms, materials and colors in visible locations.
52. Primary roof drains for low-slope membrane roofs shall drain to a roof edge or wall scuppers with gutters and downspouts. Where necessary, internal roof drains are permitted. When used, internal roof drains shall be located to prevent freezing or other damage and shall be insulated to prevent noises in occupied interior spaces. Provide splash blocks or *Rip Rap* channel to facilitate proper discharge to planned detention areas or storm drainage systems as approved by CAFB.
53. Overflow scuppers through roof curbs and parapet walls are standard. When necessary, overflow drains may be piped internally to daylight 12 inches above grade.
54. Where roof drainage crosses a sidewalk, provide a trench with a removable cover plate so that flow occurs underneath the walking surface. Ice build-up on sidewalks and landings must be avoided! Provide splash blocks or a *Rip Rap* channel to facilitate proper drainage away from the building.
55. Rooftop equipment should be minimized. If rooftop equipment requiring periodic maintenance is necessary, a low slope roof area

for placement of the equipment is required. In addition, secure roof access shall be provided from a room within the building interior. Access shall include a permanently installed ladder and lockable roof hatch. Permanent walking pads or pavers must be provided from roof access points to and around all rooftop equipment requiring periodic maintenance.

56. Where rooftop equipment is located in publicly visible locations, screen walls are required.
57. Any rooftop mechanical equipment with moving parts shall be placed on supports capable of damping and isolating vibrations from the building structure.
58. In buildings with three or more stories, at least one secure roof access shall be provided by continuation of a stairwell from grade level to above the roof level. If the stairwell is enclosed, it shall be enclosed for its entire height.

Acoustics

59. Interior room separations require a Sound Transmission Classification (STC) as follows:
 - a. Standard minimum: STC 38.
 - b. Offices, classrooms and conference rooms: STC 43 minimum.
 - c. Rooms identified as having higher requirements: STC 50 minimum. In these rooms, provide acoustic door seals and sound baffles at ductwork and return air openings.
60. Building exterior envelopes and interior rooms requiring special acoustic insulating properties will be identified during project programming.

Miscellaneous

61. At a minimum, HVAC systems shall meet requirements for energy efficiency and performance as set forth in American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) 90.1. Ice-storage cooling, geothermal systems or other creative, highly

energy efficient mechanical design solutions are encouraged.

62. The interior and exterior foot-candle illumination requirements set forth by the Illuminating Engineering Society of North America (IESNA) shall be met.
63. In buildings with an anticipated occupant load of 10 or more, motion sensors are required to control interior lighting.
64. In buildings with an anticipated occupant load of 10 or more, motion-sensing controls for toilets and urinals are required. Devices shall be hard-wired rather than battery powered. Lavatories shall be controlled by motion sensors or manually operated using faucets with self-closing valves.
65. Fire Alarm Control Panel (FACP) and Knox box locations shall be coordinated with the CAFB Fire Department.
66. Ductwork, conduit, piping and other utilitarian items are not allowed on the exterior of any facility.
67. Expansion joints shall be inconspicuously located.
68. Vents and louvers shall be painted to match adjacent surfaces.
69. Exterior handrails shall be brushed aluminum at all entrances and painted steel at other locations.
70. Provide integrally-colored or factory-finished, corrosion-resistant metal flashing in all locations exposed to public view.
71. Joint sealants shall match the color of adjacent materials.
72. In facilities equipped with Aqueous Film Forming Foam (AFFF) or High Expansion (HX) foam fire suppression systems, floor trenches shall not be provided to the extent possible and allowed by applicable building codes/regulations. Facilities requiring floor trenches shall provide removable plugs connected by metal cable to the floor trench gate to keep foam from entering the

sanitary sewer collection system, in addition to other systems such as automatic valves that shut off flow from trenches into the sanitary sewer system. Mechanical rooms housing AFFF/HX foam systems shall not be equipped with a floor drain connected to the sanitary sewer system.

Ancillary Structures

General Requirements

1. All ancillary structures and locations are subject to review and approval by CAFB.
2. All ancillary structures shall meet all current wind-uplift and snow load requirements.
3. All ancillary structures shall use materials and colors listed in Appendix A - Exterior Building Materials List.
4. Weather resistant, factory finished and corrosion resistant materials shall be used.

Pavilions and Shade Structures

5. Tensile membrane shade structures are permitted in all Districts and shall be designed to withstand very high winds common at CAFB. Membranes that are divided into overlapping panels to reduce wind resistance are recommended. At children's play areas, tensile membranes shall be designed to be removed during winter months. Structures shall have beige, translucent canopies with clear anodized aluminum or painted steel posts.
6. Prefabricated metal pavilions are permitted in all Districts *except* for the Southeast Flightline District.
7. All pavilions and shade structures shall be made accessible by concrete walks, pavers or crusher fine paths.

Screens and Enclosures

8. All Anti-Terrorism/Fire Protection (ATFP) walls and site measures shall be addressed during the project's programming stage and developed during design. Projects must meet minimum ATFP standards described in UFC 4-010-01.

9. Any equipment that could be used to conceal an object 6 inches wide, long and deep and is located on the ground within 33 feet of a normally occupied building will require a secure enclosure with a lid or roof to prevent unauthorized access to the equipment.
10. Service yards and storage areas, loading docks and dumpsters should be screened from public view to the extent possible.
11. Screening walls shall be constructed with integrally colored concrete block or other masonry. Landscape elements such as berms, boulders and plant materials may also be used as screening. (Landscaping is an acceptable screening material only if it will be effective year round and easily maintained.)
12. All screen walls shall 8 feet high or shall extend at least 18 inches above the top of any piece of equipment. Screen walls shall provide the necessary clearances for maintenance and equipment operation per the manufacturer's requirements.
13. A typical enclosure for one dumpster shall be 15 feet by 11 feet or larger. A typical enclosure for two dumpsters shall be 28 feet by 16 feet.
14. Where required by ATFP, crash-rated steel gates (as defined by ATFP) shall restrict access to enclosures.
15. Wood plank fences or gates are not allowed for any type of screening or enclosures around facilities. Chain link fences may be acceptable in low visibility, utilitarian locations.
16. Fabric screening is not allowed except for temporary use during construction.
17. Concrete pads are required for all enclosures containing permanently installed equipment.

Movable and Temporary Facilities

18. Movable and temporary facilities are generally prohibited but may be considered if they are essential to the mission of CAFB. If used, they shall be located to minimize their visibility to the public.
19. Movable and temporary facilities shall utilize standard colors and materials in Appendix A: Exterior Building Materials List.
20. All temporary facilities shall be accessible and include stairs, a ramp, site lighting and accessible walkways. A continuous skirt shall be installed immediately after trailer placement.
21. If more than one temporary trailer is provided, all shall be uniform in color and materials when placed in close proximity. Temporary facilities shall be delivered in good condition.

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Site Design

Objective

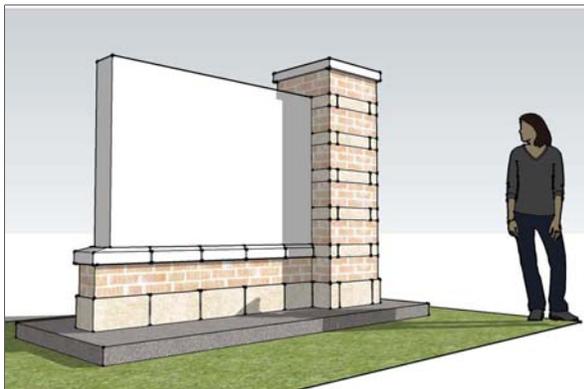
Good site design will create attractive and sustainable outdoor spaces that enhance the appearance of each building and the pedestrian connections between them. It will incorporate native vegetation with minimal irrigation and maintenance requirements, and use natural, durable materials and permeable surfaces to the greatest practical degree.

In addition, good site design will create functional and efficient vehicular circulation, and provide well illuminated parking areas and pedestrian pathways.

Requirements

1. Per [UFC 4-010-01](#) – DOD Minimum Antiterrorism Standards for Buildings, site design shall incorporate security provisions, if required, such as walls, fences, gates, berms or other barriers as determined during project design review. Refer to Appendices D and E for typical security bollard and site wall details.
2. Site Signage: Free-standing monument and marquee signage shall conform to the CAFB standard illustrated below. For other signage, refer to [UFC 3-120-01](#) - Air Force Sign Standard.
3. Each project shall include adequate parking for planned occupants and visitors in accordance with the overall base parking plan.

CAFB Monument or Marquee Signage Standard



4. Outdoor seating and gathering spaces are desired for most normally-occupied buildings. Outdoor spaces shall be observable and readily accessible from the building, include hard-surfaced and porous areas, provide both sunlit and shaded areas, and be shielded from wind and public view by low walls and landscaping. The use of stained or stamped concrete in these outdoor areas is permitted.
5. Refer to the CAFB [Sustainable Landscape Development Plan](#) for a list of recommended plants and other landscaping requirements. *Xeriscaping* for low-water usage is required except in *prestige* areas as noted below.
6. Preserve or restore natural vegetation to the greatest extent possible. All new native vegetation shall be irrigated for one year or until established.
7. Existing trees, if healthy, should be preserved whenever possible. For new projects located at least 300 feet from flightline operations, one new tree should be planted for every 1000 square

feet of on-site paved or landscaped area. Trees must be of a disease and drought resistant species.

8. Grass sod, if used, shall be located *prestige* areas near the building entrances and other important outdoor spaces. Permanent irrigation of grass sod areas will be required.
9. Trees, shrubs and other plantings shall be located to enhance the outdoor spaces by providing shade, wind protection and improved views.
10. Gravel and rock may be used as additional groundcover bordering paved areas and sidewalks. The width of gravel borders should not exceed 8 feet.
11. Site grading shall cause drainage away from the building and sidewalks to on-site locations for detention or off-site discharge in accordance with the overall base drainage plan.
12. A plan for erosion and sediment control shall be provided that meets or exceeds the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) regulation (40 CFR 122) and Environmental Protection Agency (EPA) EPA-833-R-060-4. Additionally, erosion and sediment plans are required for individual construction sites that impact more than one acre.
13. Compliance is mandatory for environmental issues as stated in National Environmental Policy Act (NEPA), Underground Storage Tank (UST), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), the Clean Air Act, the Toxic Substance Control Act (TSCA), the Resource Conservation and Recovery Act (RCRA), the Occupational Safety and Health Act (OSHA), the National Historic Preservation Act (NHPA), Section 438 of the Energy Independence and Security Act (EISA) and all local regulations that are more strict.
14. Site design shall include exterior lighting for parking areas, pedestrian circulation, and other



functions in accordance with user requirements. Solar powered signage and lighting is encouraged. (See the *CAFB Electrical Standards* for more detailed information.)

Pedestrian Circulation

15. Paved walkways to building entrances, connections to adjacent sites and intermediate pathways within the site shall be included for all new construction.
16. Sidewalks shall be constructed of concrete and 6 feet wide (minimum) and increase to 8 feet in width in close proximity to buildings or where pedestrian usage dictates. (ATFP considerations must be taken into account when deciding sidewalk width and bollard placement.)
17. An 8 foot wide intermediate landscaped area shall be provided between streets and walks when space permits. Intermediate areas less than 4 feet wide are not permitted. In such cases, sidewalks shall be adjacent to the back of curb.
18. Typical concrete sidewalks shall have a broomed finish & troweled edges.
19. Sidewalks and recreational paths shall be placed at intersections at a 90 degree angle to roadway traffic.
20. Stamped concrete textures may be used to signify sidewalk intersections, benches or other amenities.

Primary & Secondary Roadways

21. Primary, secondary and tertiary roadways shall be identified during the design review process.
22. Primary roadways shall have sidewalks on both sides.
23. Secondary streets shall have a sidewalk on at least one side of the street.
24. Primary and secondary roads shall include one 6 foot wide bike path between the curbs unless an alternative bike path is available within 200 feet of the roadway.
25. Building site designs shall minimize curb cuts and access points to primary roadways.
26. On street parking should be minimized to the extent possible.
27. Secondary roadways shall have reduced turning radii to limit vehicle speed.

Tertiary Roadways

28. On-site, two lane tertiary roadways require a sidewalk on one side to connect with sidewalks bordering primary or secondary roads.
29. Tertiary lane width shall be 12 feet or more to accommodate large trucks, vans and emergency vehicles but turning radii shall be reduced to limit vehicle speed.

Service Drives

30. Service drives shall be designed to support a 30,000 lb. vehicle with ten wheels.
31. To the extent possible, service drives shall be inconspicuously located.
32. Emergency access road requirements located behind AFTP barriers shall be determined during the design review process.

Other Roadway Requirements

33. All roadways in developed areas shall have an integrated 6-inch concrete curb and an 18-inch gutter. Provide curb cuts to direct water from roadways into landscaping and detention ponds.



34. Within 45 feet of an intersection, limit the height of shrubs to 30 inches and prune low-hanging tree branches to 10 feet above grade.
35. Gravel paving is not permitted in developed areas of the base.
36. All utility work crossing pavement shall be jack-and-bored. Exceptions must be evaluated during the design review process.
37. Paving repairs shall match existing surfaces and materials.
38. Where paved roads encounter unpaved roads, reinforced aprons shall separate the different surface.

Parking

39. The visual impact of parking lots shall be minimized by the placement of the lot on the site and by the use of landscaping, berms, site walls and other built elements along primary and secondary roadways.
40. Shaded parking is preferred. Shade may be created by any combination of large trees or man-made shade structures.
41. Parking lots for 60 or more vehicles shall be designed with islands for shade trees at regular intervals of 10 parking spaces or less. New shade trees should be selected and located to provide shade for at least 20% of the parking area after 5 years of growth.
42. Parking lots with two or more double rows of parking shall have 6 foot wide planting strips between sections, continuous and parallel to the drive lane.

43. Use of porous concrete and other pervious paving strategies at parking areas are permitted.
44. Perpendicular parking (90° to the drive lane) and two-way drive lanes are preferred, space permitting. Angled parking shall not be less than 60° relative to the drive lane. Parking parallel to the curb may be permitted in some instances with the approval of CAFB.
45. A parked vehicle may overhang a sidewalk up to 30 inches if the remaining sidewalk width is 5 feet or greater. (Stall depth may be reduced by half the distance of the allowable overhang.)
46. A typical 90° parking space shall be 9 feet wide and 18 feet long. Two-way drive lanes shall have a width of 24 feet or greater.
47. 60° angled parking spaces shall be 9 feet wide and 20 feet long measured perpendicular to the drive lane. One-way drive lane width with parking on both sides of the drive lane shall be 16 feet or greater. One-way drive lane width with parking on one side shall be 14 feet or greater.
48. Do not combine 90° and 60° angled parking on one drive lane.
49. Parking lot layout shall permit vehicles to easily turn around within the boundaries of the parking lot. (Dead-end, two-way drive lanes with 90° parking for 20 or fewer vehicles may use the drive lane to turn around. Dead-end *angled* parking drive lanes are prohibited.)
50. All curbs and gutters should be monolithic. Independent wheel stops are prohibited.
51. Surface-applied striping, symbols and directional markings shall be of reflective paint.
52. Reserved parking shall be minimized and consolidated in one area. *Reserved* signs shall be mounted on the curb at the front of each space.
53. Designated areas for pedestrian cross-traffic shall be clearly marked.
54. Motorcycle parking spaces shall have concrete pads and be clearly designated in each lot. Shaded parking for motorcycles is preferred.

Appendix A: Exterior Building Materials List

The following products were selected for their appearance. All manufacturers listed below represent an acceptable level of quality but the list is not exclusive. Other manufacturers and products of equal or better quality may be submitted for evaluation. Colors listed represent the design intent. Alternative colors should conform to the design intent, but some color variation may be acceptable on a case-by-case basis.

Brick

Modular brick is standard. Larger sizes will be considered on a case-by-case basis.

Cannon Style: Predominant Color

Manufacturer: Glen-Gery Brick or equal

Color: Burnt Almond (S21-22), Beige

Finish: Smooth

Mortar: To match brick

Cannon Style: Optional Accent Colors

Manufacturer: Glen-Gery Brick or equal

Color: Cedar Ridge (R58), Light Brown

Color: Burgundy Ironspot (WIS81), Dark Brown

Finish: Various

Mortar: To match brick

Cast Stone Masonry Units

Cast stone is a more costly masonry veneer that is suitable for special applications where an enhanced appearance is desired.

Cannon Style: Predominant Color

Manufacturer: Arriscraft or equal

Type: Renaissance

Color: Champagne (Georgia Plant)

Textures and Sizes: Various

Concrete Masonry Units

Designers may combine various unit dimensions, colors and textures (including ground-face, smooth-face and split-face block) to improve building appearance. Unless matching existing materials and colors, provide the following:

Cannon Style: Predominant Color

Manufacturer: Featherlite Building Products or equal.

Color: Buff

Cannon Style: Optional Accent Colors

Manufacturer: Featherlite Building Products or equal.

Colors: Limestone White, Copperstone and Terracotta

Glazing

Unless matching existing materials and colors, provide the following:

Manufacturer: PPG Industries or equal with the following recommended design values:

U-Value: ≤ 0.35

SHGC: ≤ 0.51

Tvis: $\leq 62\%$

Paint Colors

For building exterior applications such as steel doors and louvers, unless matching existing materials and colors, provide one the following:

Cannon Style: Predominant Color

Manufacturer: Sherwin Williams or equal

Color: Match SW7689 - Row House Tan

Cannon Style: Optional Accent Color

Manufacturer: Sherwin Williams or equal

Color: Match SW7705 - Wheat Penny

If matching existing utilitarian exterior applications such as steel bollards and gates, provide the following:

Cannon Style: Cannon Brown*

Manufacturer: Sherwin Williams or equal

Color: Match SW 6061, Tanbark

* Cannon Brown will be gradually phased out and replaced by Accent Color SW7705 – Wheat Penny.

Roofing: Metal

Unless matching existing materials and colors, provide the following:

Cannon Style: For 3:12 or greater roof slopes

Manufacturer: PAC-CLAD (Petersen Aluminum Corp. or equal)

Material: Minimum 24 gage steel

Color: Colonial Red (Finish: Kynar 500/Hylar 5000)

Style: Preformed snap-on battens approximately 1-1/2" high and wide at approximately 18" O.C.

For less than 3:12 low-slope metal roofs on hangars or other utilitarian structures

Manufacturer: PAC-CLAD (Petersen Aluminum Corp. or equal)

Material: Minimum 24 gage steel

Color: White (Finish: Kynar 500/Hylar 5000)

Style: Standing seam approximately 1-1/2" high at approximately 18" O.C.

Roofing: TPO Membranes

Cannon Style: For concealed, low-slope membrane roofs

Manufacturer: Johns Manville or equal

Color: White

Type: TPO (Thermal Polyolefin); Minimum 60 mil, reinforced, fully-adhered membrane with preformed boots, flashing and walking pads.

Rooftop Equipment Screens

Manufacturer: CityScapes or equal

Color: RAL 1014 Ivory or Custom color

Style: Wide Rib or Texture

Top Trim: Flat

Storefronts and Curtain Walls

Storefronts and curtain walls may require blast-resistance per UFC 4-010-01 - DoD Minimum Anti-Terrorism Standards for Buildings. Unless matching existing materials and colors, provide the following:

Cannon Style: Predominant Color

Manufacturer: Kawneer or equal

Colors: Medium Bronze (#28)

Cannon Style: Optional Color

Manufacturer: Kawneer or equal

Clear Anodized (#14)

Stucco and EIFS Colors

A three-coat stucco system is standard. Elastomeric color coatings are permitted. EIFS will be considered only where additional R-value is necessary. Unless matching existing materials and colors, provide the following:

Cannon Style: Predominant Color

Manufacturer: El Rey Stucco or equal

Color: 121 Sandalwood (or match Sherwin Williams SW7689 - Row House Tan)

Finish: Medium dash

Cannon Style: Optional Accent Color

Manufacturer: El Rey Stucco or equal

Color: 125 La Luz (or match Sherwin Williams SW7705 - Wheat Penny)

Finish: Medium dash

Translucent Panels

Manufacturer: Kalwall or equal

Panel Color: White or as approved.

Wall Cladding Materials

Exposed Fastener Composite Wall Panels:

Manufacturer: Northclad EF Panel System or equal

Fiber Cement Board Panels:

Manufacturer: James Hardie or equal



**DEPARTMENT OF THE AIR FORCE
27TH SPECIAL OPERATIONS CIVIL ENGINEERING SQUADRON (SOCES)
CANNON AIR FORCE BASE NEW MEXICO**

11 July 2011

MEMORANDUM FOR 27 SOCES/CEP

FROM: 27 SOCES/CEP

SUBJECT: CAFB Design Review Submittal Standards

1. Cannon Air Force Base (CAFB) requires periodic submittals for review during project design. The number of required submittals may vary with the scope and complexity of each project. Specific submittal requirements for each project shall be defined in the Contract for design services. In every case, submittals must be well drafted, graphically clear and legible. The following requirements are based on the *USAF Project Managers Guide for Design and Construction, Revised November 28, 2007*.
2. **Charette Reports:** A Design Charette is the initial intensive effort to gather inputs from facility users and other interested parties with pertinent information or expertise. The Charette Report summarizes the information gathered in terms of basic user requirements, facility size and organization, cost and schedule. In addition, a Charette Report may identify various documents, codes and standards that are applicable to the project and particular concerns that must be addressed early in the design process. A Charette Report should include the following:
 - a. A written summary of topics discussed, decisions reached and issues remaining.
 - b. Schematic drawings indicating basic site plans, building plans and elevations resulting from the Charette.
 - c. Upon USAF approval of the Charette Report, the design team may proceed with project design.
3. **30% Design Review Submittals:** The 30% Submittal should demonstrate an understanding of the project requirements and limitations and present a practical and appropriate design solution. Unless specifically waived, the 30% Submittal shall include as a minimum:
 - a. An updated parametric cost estimate with a summary of possible value engineering considerations.
 - b. A design narrative and code analysis by all disciplines (civil, architectural, structural, mechanical, electrical, communications, fire detection/protection, etc.)
 - c. A Site Plan (or plans) depicting project location, site boundaries and access, building footprints and orientation, stand-off distances, utility types, sizes and locations, and schematic grading and drainage strategies. Include a parking plan with quantities and basic dimensions, and depicting site access.
 - d. Building floor plans indicating door and window locations and roof overhangs, with basic dimensions and labels to determine room sizes and uses.

- e. Building roof plan identifying roof slopes and materials, proposed rooftop equipment and roof hatch locations and illustrating the roof drainage strategy.
 - f. Building elevation drawings coordinated with the floor plans, identifying materials and openings (doors and windows, etc.), scuppers and downspouts with vertical dimensions for parapets and roof heights.
 - g. At least three perspective renderings to illustrate building massing and fenestration, colors and basic materials.
 - h. Single-line schematic drawings for mechanical, electrical, communications, etc.
 - i. Interior design plans with preliminary furniture footprints.
 - j. A list of proposed specification sections for the project based on the Unified Facilities Guide Specifications (UFGS) format.
 - k. A summary of design issues and informational requirements to be resolved including surveys, geotechnical analyses and investigative reports.
 - l. A summary of waivers and authorizations required.
 - m. Upon USAF approval of the 30% Design Review Submittal, the project is considered 35% complete.
4. **60% Design Review Submittals:** The 60% Submittal should show substantial progress in design development. Unless specifically waived, the 60% Submittal shall include as a minimum:
- a. An updated parametric cost estimate with a summary of possible value engineering considerations.
 - b. A completed Site Plan (or plans) with all necessary dimensions and notations.
 - c. Completed building floor plans.
 - d. A completed building roof plan.
 - e. Completed building elevations.
 - f. Completed building sections.
 - g. Site plan drawings for Civil and Landscaping with proposed details and schedules.
 - h. Building plan drawings for Structural, Mechanical, Electrical, etc. with proposed details and schedules.
 - i. Completed interior design plans and schedules with color and material boards.
 - j. Draft specifications with a Table of Contents based on Unified Facilities Guide Specifications (UFGS) format.
 - k. A summary of design issues and informational requirements to be resolved.
 - l. A summary of waivers and authorizations required.
 - m. Upon acceptance of the 60% Design Review Submittal, the project is considered 65% complete.

5. **90% Design Review Submittals:** The A-E or Design-Builder must present the 90% Submittal as Ready to Advertise (RTA). Unless specifically waived, it shall include as a minimum:
 - a. An updated parametric cost estimate and unit costs for any work or materials of indefinite scope or quantity.
 - b. Completed drawings for all disciplines.
 - c. Completed project specifications for all disciplines.
 - d. A summary of waivers and authorizations required.
 - e. Upon acceptance of the 90% Design Review Submittal, the project is considered 95% complete.

6. **100% Corrected Final Design Submittals:** The contractor for design services asserts that the drawings and specifications are complete and RTA (Ready to Advertise), and submits a complete, stamped and signed set of drawings and specifications to the Air Force for record keeping purposes.

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//SIGNED/wp/5 May 11//
Wayne Pierce, RA
Base Architect, 27SOCES

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**DEPARTMENT OF THE AIR FORCE
27TH SPECIAL OPERATIONS CIVIL ENGINEERING SQUADRON (SOCES)
CANNON AIR FORCE BASE NEW MEXICO**

14 June 2011

MEMORANDUM FOR 27 SOCES/CEP

FROM: 27 SOCES/CEP

SUBJECT: CAFB Project Record Documentation Standard

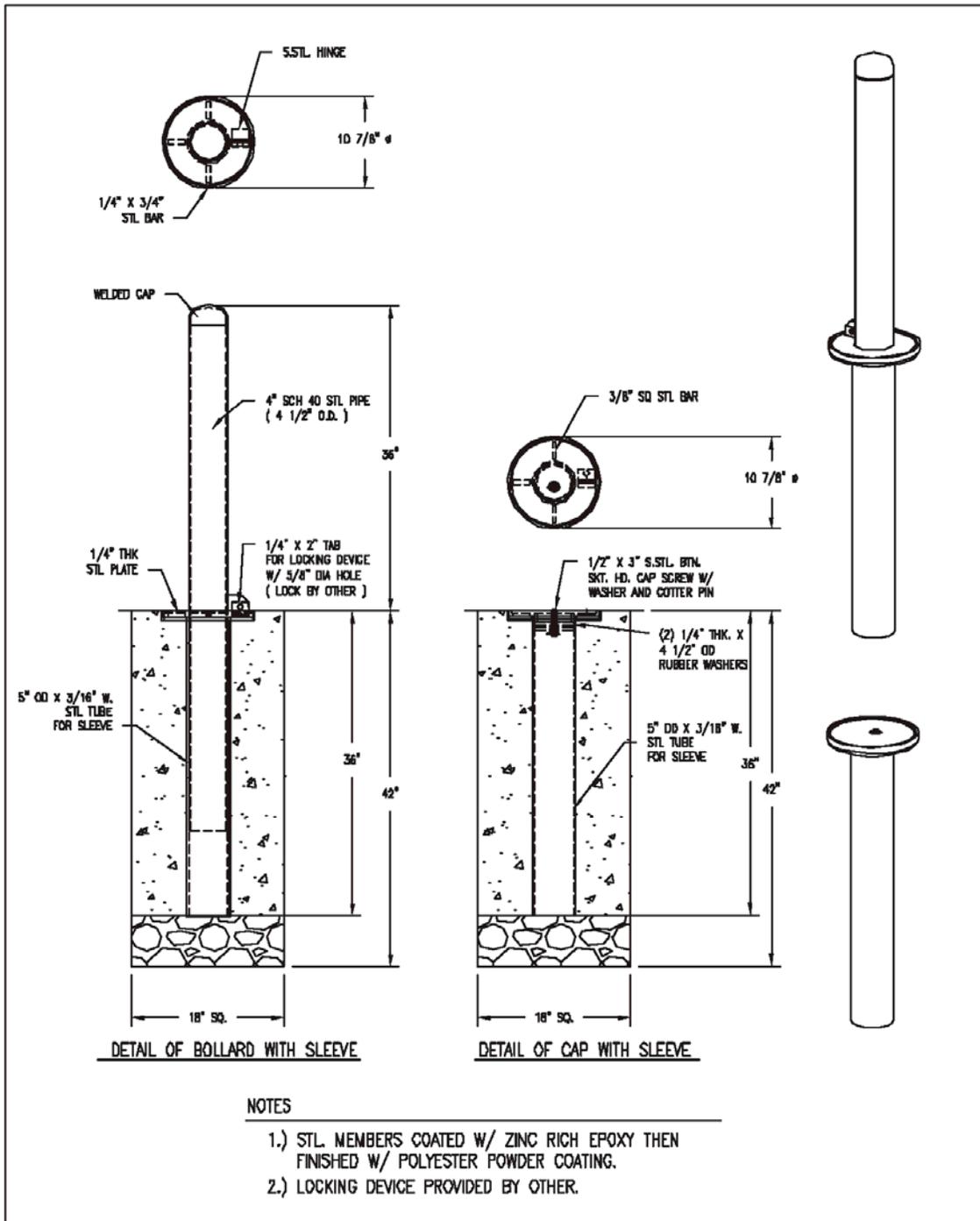
1. CAFB requires accurate documentation of all work performed on base facilities and infrastructure. Such documentation is required to understand the quantity and condition of our building inventory and the locations and capacity of existing infrastructure. This information is essential for successful facility planning and maintenance. Drawing files should be organized in general accordance with the Department of Defense A/E/C CAD Standard (ERDC/ITL TR-09-2) available in PDF format on many federal websites. This document describes CAFB requirements for Record Documents and Geographic Information System (GIS) data.
2. Terminology: There are two kinds of Record Documents: *Contract* documents and *As-Built* documents.
 - a. *Contract* Record Documents are provided at the end of the design phase for bidding or construction purposes and become the basis of the contract for construction. These will be required in printed and electronic form.
 - b. *As-Built* Record Documents are provided at the end of construction and document any deviations from the original Contract Documents. These will be required in electronic form.
3. Contract Record Documents: Unless modified by the Contract for design services, CAFB requires two complete printed sets of the *100% Design Submittal* drawings and specifications upon their approval as RTA (Ready to Advertise). One drawing set may be half-size. These documents will be used by CAFB construction and engineering personnel as reference documents during project construction. In addition, drawings and specifications shall be provided on disk in Adobe PDF format.
4. As-Built Record Documents: Upon completion of project construction, CAFB requires electronic drawing files revised to reflect *As-Built* deviations, if any, from the original construction bid documents. These will be the final record documents for the completed project. The files shall be compatible with AutoCAD 2010, meaning the files can be opened, viewed and printed successfully using AutoCAD. All additional files needed to set line weights and print the files properly (such as *.pc3 and *.ctb files, etc.) must be provided along with the drawing files.
5. All drawing files utilizing external references must be grouped in one folder containing both external references and host files. (Contractors should verify that all external references used in their drawings are present and properly displayed prior to delivering files to CAFB.) In addition, drawings and specifications shall be provided on disk in Adobe PDF format.

6. Geographic Information System (GIS) Data Requirements: All new facilities and utilities shall be located by the Contractor in an electronic format that is compatible with the current base GIS software and includes descriptive information required by the Air Force. When the Contractor is unable to provide GIS information as described, the Contractor shall notify the PM/COR so that other arrangements can be made. In such cases, the Contractor is required to assist Air Force agents or personnel in the generation of GIS information if requested by the PM/COR. The following are the basic requirements for GIS information to be delivered to the Air Force on disk:
- a. DATUM – WGS84
 - b. Coordinate System – UTM
 - c. Units – Meters
 - d. Data in attribute Table will be SDSFIE version 2.6 Compliant
 - e. Shapefile Geodatabase format

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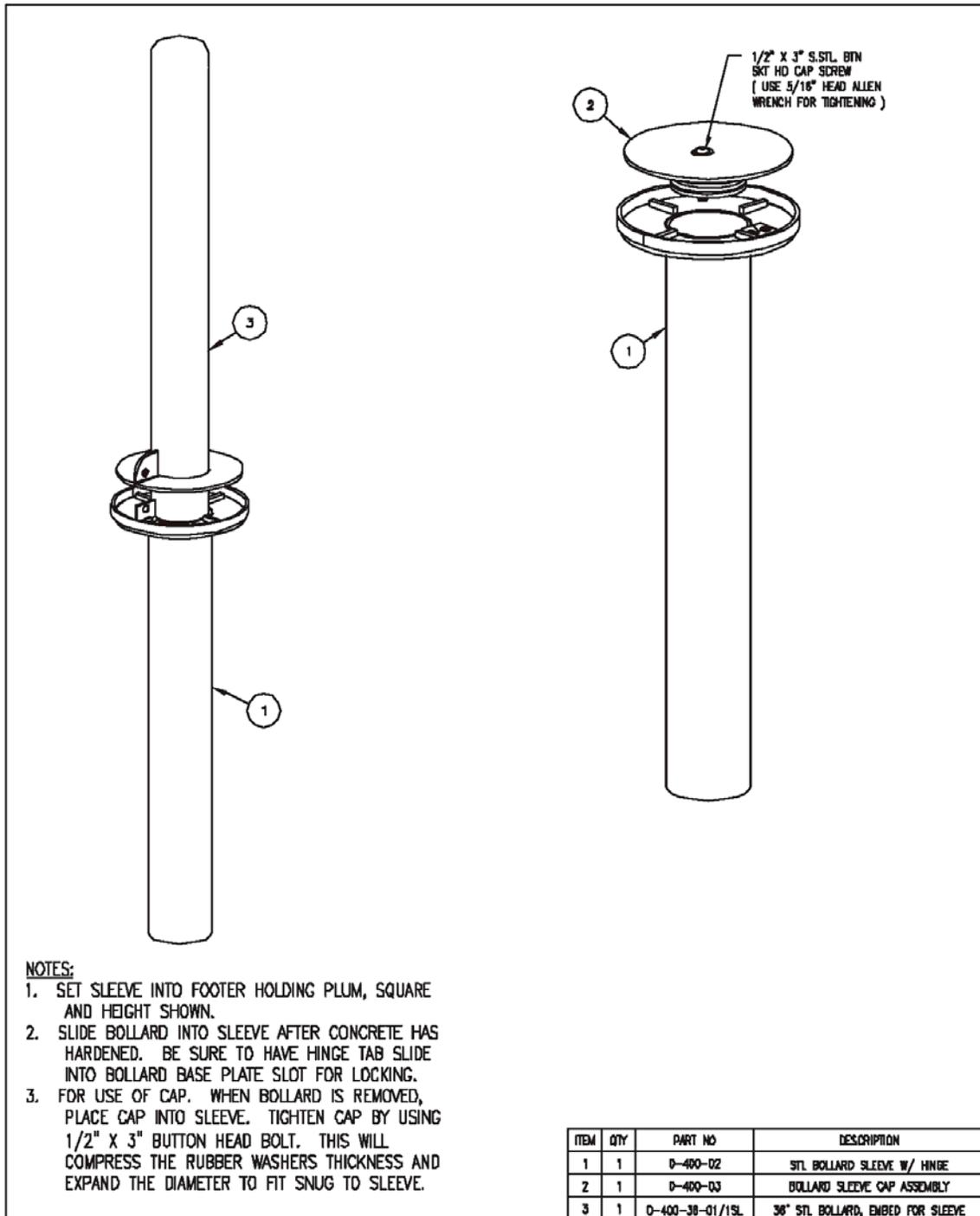
//SIGNED/wp/5 May 11//
Wayne Pierce, RA
Base Architect, 27SOCES

Appendix D: Typical Removable ATFP Bollard Details



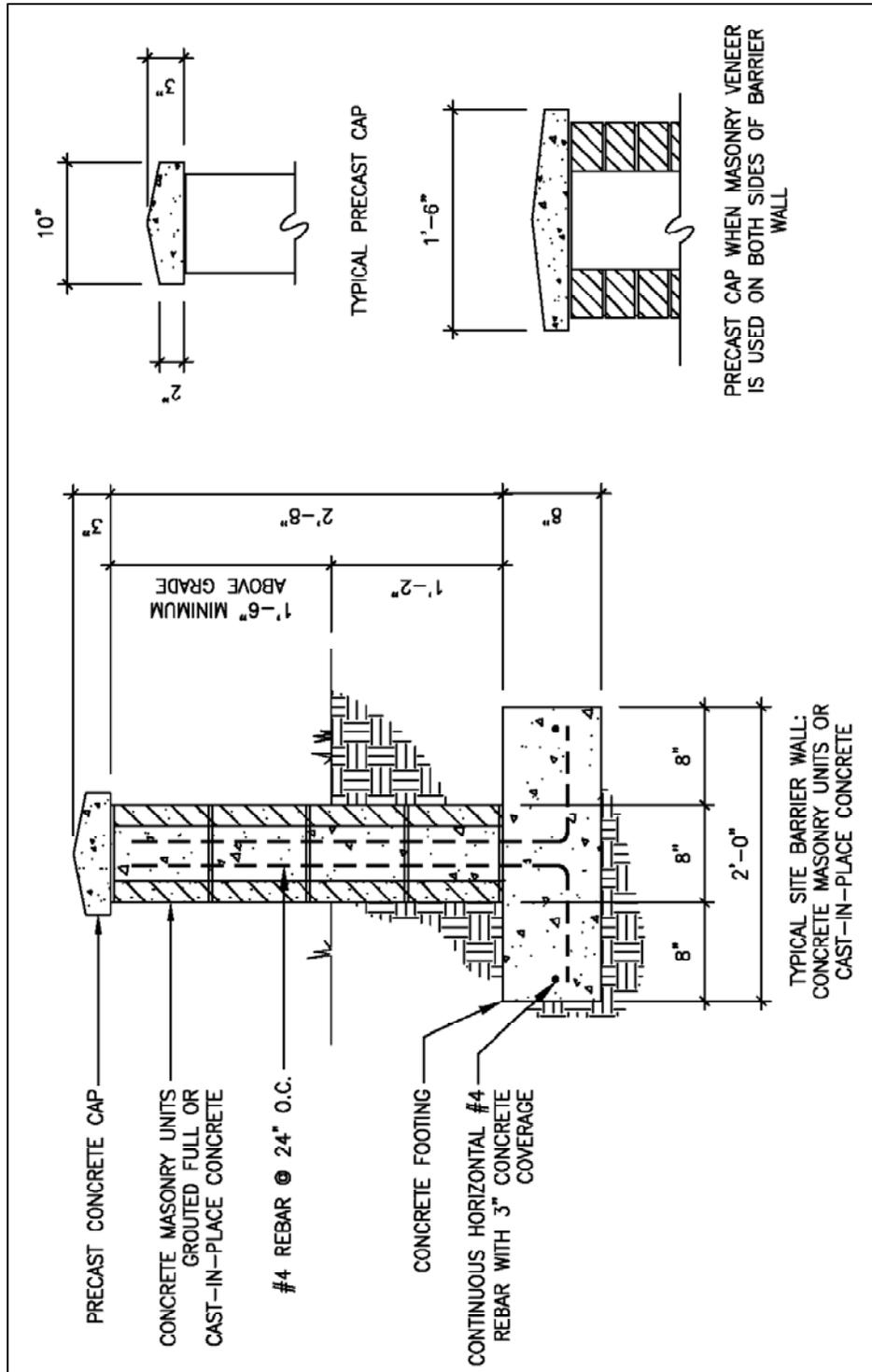
Typical Removable Steel Bollard – Detail I

Appendix D: Typical Removable ATFP Bollard Details (Continued)



Typical Removable Steel Bollard – Detail 2

Appendix E: Typical Site Barrier Wall Detail



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Appendix F: Standard Interior Color Schemes

These color schemes may be used for any project at Cannon AFB. Alternate manufacturers and colors are permitted upon submission and approval of samples and product data indicating compliance with VOC emissions limits and other environmental standards as defined in the project specifications or in the contract for construction.

Interior Finishes – Green Scheme

CABI Cabinetry for Break & Heritage Rooms

Mfg: Merillat Classic

Style: Seneca Ridge

Type: Square Medium [Lower Cabinets]

Arch Medium [Upper Cabinets]

Finish: Oak

CPT1 Carpet for General Use

Mfg: Patcraft Designweave

Pattern: #10102 Homeroom-II

Color: #00336 Creative Writing

Type: Rolled or Modular

CPT2 Carpet for Offices

Mfg: Patcraft Designweave

Pattern: #Z6398 Dash

Color: #00348 Theater

Type: Broadloom/Rolled

CPT3 Carpet for Conference Rooms

Mfg: Patcraft Designweave

Pattern: #10128 Urban Legends

Color: #28403 Perfume Bandits

Type: Broadloom/Rolled

G1 Granite for Break & Heritage Rooms

Mfg: Bedrosians

Color: Tropic Brown

Finish: Slab

LAMI Laminate

Mfg: Wilsonart

Color: Milano Amber #4742K-52

LAM2 Laminate - I80fx

Mfg: Formica Group

Color: Olivine River #3469,

Finish: Radiance

PT1 Paint - Overall Interior Color

Mfg: Sherwin Williams

Color: # 6106 Kilim Beige

Finish: Flat

PT2 Paint for Trim

Mfg: Sherwin Williams

Color: #6076 Turkish Coffee

Finish: Semi-gloss

PT3 Paint (Accent color)

Mfg: Sherwin Williams

Color: #7509 Tiki Hut, #6180 Oak Moss, #6181 Secret Garden

RBI Rubber Wall Base

Mfg: Johnsonite

Color: #03 Sahara Khaki

RFI Rubber Flooring

Mfg: Mondo USA Inc.

Pattern: Harmoni Smooth HAS98 Sand

T1 Porcelain Tile for Entry Vestibules

Mfg: Roman Stone

Color: #Del Conca Gold

Size: 12"x12"

Finish: Unglazed

T2 Ceramic Tile for Restrooms & Shower Walls

Mfg. Daltile

Colors: Urban Putty #0161, Oak Moss #0195, Artisian Brown #0144 (Random Pattern)

Size: 1 1/4" x 1"/Finish: Unglazed

T3 Porcelain Tile for Counter & Backsplash

Mfg. Daltile Keystones

Colors: Mottled Medium Brown#D050

Size 1"x1"/Finish: Gloss

T4 Travertine Tile for Counter & Backsplash

Mfg. Avonite Surfaces

Color: Olivine FI-9154

Backsplash: 4" high

Finish: Satin 12/09

T5 Slate Tile for Break & Heritage Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 12"x12" or 18"x18"

Finish: Gauged/Natural Cleft

T6 Slate Backsplash for Break & Heritage Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 3"x6"

Finish: Gauged/Natural Cleft

VCTI Vinyl Composition Tile

Mfg: Armstrong

Color: #51858 Sandrift White

Finish: Imperial Texture

VWI Vinyl Wall Covering (Modular Only)

Mfg: Universal Forest Products

Color: Mayan Maize,

Finish: Textured Vinyl

Grout (Overall)

Mfg: Custom Building Products

Color: #145 Light Smoke

Finish: Polyblend/Sand

Ceiling Panel

Mfg: Radar

Color: #2110 (White)

Size: 24" x 24" x 5/8"

Finish: Class 2, NRC .55

Plumbing Fixture Finish for Restrooms

Mfg: Kohler

Type: Coralais Single-Control Centerset

#K-15597-5P

Color/Finish: Polished Chrome

Corner Guards

Mfg. Koroseal interior products

Color: TAN

Interior Signage

Mfg: Clovis Sign

Style: Plastic See-Thru Labeling

Type: 6"x 9" One Label/9"x 9" Two Label

Color: To match Sherwin Williams

#6076 Turkish Coffee

CABI Cabinetry for Break & Heritage Rooms

Mfg: Merillat Classic
Style: Seneca Ridge
Type: Square Medium [Lower Cabinets]
Arch Medium [Upper Cabinets]
Finish: Oak

CPT1 Carpet for General Use

Mfg: Patcraft Designweave
Pattern: #10102 Homeroom-II
Color: #00428 Preparatory
Type: Rolled or Modular

CPT2 Carpet for Offices

Mfg: Patcraft Designweave
Pattern: Z6398 Dash
Color: 00549 Gallery Row
Type: Broadloom/Rolled

CPT3 Carpet for Conference Rooms

Mfg: Patcraft Designweave
Pattern: #10128 Urban Legends
Color: # 28505 Trump & The Samaritan
Type: Broadloom/Rolled

GI Granite for Break & Heritage Rooms

Mfg: Bedrosians
Color: Tropic Brown, Finish: Slab

LAMI Laminate

Mfg: Wilsonart
Color: Milano Amber #4742K-52

LAM2 Laminate-180fx

Mfg. Formica Group
Color: Blue Storm #3467
Finish: Radiance

PT1 Paint Overall Interior Color

Mfg: Sherwin Williams
Color: #6106 Kilim Beige, Finish: Flat

PT2 Paint Trim

Mfg: Sherwin Williams
Color: #6076 Turkish Coffee, Finish: Semi-gloss

PT3 Paint Accent

Mfg. Sherwin Williams
Color: #7665 Wall Street, #7507 Stone Lion,
#6244 Naval

VWI Vinyl Wall Covering (Modular Only)

Mfg: Universal Forest Products
Color: Mayan Maize, Finish: Textured Vinyl

RBI Rubber Wall Base

Mfg: Johnsonite
Color: #63 Burnt Umber B

RFI Rubber Flooring

Mfg. Mondo USA Inc.
Pattern: Punti W73 Dark Grey

TI Porcelain Tile for Entry Vestibules

Mfg: Roman Stone
Color: #Del Conca Gold
Size: 12"x12", Finish: Unglazed

T2 Ceramic Tile for Restroom & Shower Walls

Mfg. Daltile

Colors: Urban Putty #0161, Suede Gray #0182, Navy #K189 (Random Pattern), Size: 1 1/4" x 1"/Finish: Gloss

T3 Porcelain Tile for Restroom Counter & Backsplash

Mfg. Daltile Keystones

Colors: Urban Putty Speckle #D201

Size 1"x1"/Finish: Unglazed

T4 Travertine Tile for Restroom Counter & Backsplash

Mfg. Avonite Surfaces

Color: Fargo FI-9138

Backsplash: 4" high; Finish: Satin 06/04

T5 Slate Tile for Break & Heritage Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 12"x12" or 18"x18" , Finish: Gauged/Natural Cleft

T6 Slate Backsplash for Break & Heritage Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 3"x6"

Finish: Gauged/Natural Cleft

VCTI Vinyl Composition Tile

Mfg: Armstrong

Color: #51858 Sandrift White

Finish: Imperial Texture

Grout (Overall)

Mfg: Custom Building Products

Color: #145 Light Smoke

Finish: Polyblend/Sand

Ceiling Panels

Mfg: Radar

Color: #2110 (White)

Size: 24" x 24" x 5/8"

Finish: Class 2, NRC .55

Plumbing Fixture Finish for Restrooms

Mfg: Kohler

Type: Coralais Single-Control Centerset

#K-15597-5P

Color/Finish: Polished Chrome

Corner Guards

Mfg. Koroseal interior products, Color: Cashmere

Interior Signage

(See Green Color Scheme)

CABI Cabinetry for Break & Heritage Rooms

Mfg: Merillat Classic
Style: Spring Valley
Type: Square Toffee [Lower Cabinets];
Arch Toffee [Upper Cabinets]
Finish: Maple

CAB2 Cabinetry for Break & Heritage Rooms

Mfg: Merillat Classic
Style: Spring Valley
Type: Square Sable [Lower Cabinets];
Arch Sable [Upper Cabinets]
Finish: Maple

CPT1 Carpet for General Use

Mfg: Patcraft Designweave
Pattern: #I0102 Homeroom-II
Color: #00539 SAT's
Type: Rolled or Modular

CPT2 Carpet for Offices

Mfg: Patcraft Designweave
Pattern: Z6424 City Style
Color: 00549 Charm
Type: Broadloom/Rolled

CPT3 Carpet for Conference Rooms

Mfg: Patcraft Designweave
Pattern: #I0128 Urban Legends
Color: # 28505 Trump & The Samaritan
Type: Broadloom/Rolled

GI Granite for Break & Heritage Rooms

Mfg: Bedrosians
Color: Tropic Brown
Finish: Slab

LAMI Laminate

Mfg: Wilsonart
Color: Milano Brown #4726K-52, Milano Amber #4742K-52

LAM2 Laminate-180fx

Mfg. Formica Group
Color: Blue Storm #3467
Finish: Radiance

PT1 Paint - Overall Interior Color

Mfg: Sherwin Williams
Color: #6106 Kilim Beige
Finish: Flat

PT2 Paint for Trim

Mfg: Sherwin Williams
Color: #6076 Turkish Coffee
Finish: Semi-gloss

PT3 Paint Accent

Mfg. Sherwin Williams
Color: #0023 Pewter Tankard, #7602 Indigo Batik, #7074 Software

RBI Rubber Wall Base

Mfg: Johnsonite
Color: #80 Fawn

RFI Rubber Flooring

Mfg. Mondo USA Inc.

Pattern: Harmoni Smooth, H78 Light Grey

T1 Porcelain Tile for Entry Vestibules

Mfg: Roman Stone

Color: #Del Conca Gold

Size: 12"x12" Finish: Unglazed

T2 Ceramic Tile for Restroom & Shower Walls

Mfg. Daltile

Colors: #1469 Galaxy, #0132 Mt Uptown Taupe, #K165 Almond (Random Pattern)

Size: 1 1/4" x 1" / Finish: Gloss

T3 Porcelain Tile for Restrooms Counter & Backsplash

Mfg. Daltile Keystones

Colors: Mottled Medium Brown #D050

Size 1"x1" / Finish: Glazed

T4 Travertine Tile for Restroom Counter & Backsplash

Mfg. Avonite Surfaces

Color: High Desert F1-9037

Backsplash: 4" high

Finish: Satin 12/05

T5 Slate Tile for Break and Heritage Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 12"x12" or 18"x18"

Finish: Gauged/Natural Cleft

T6 Slate Backsplash for Break Rooms

Mfg: Surface Source: Lowes #131806

Color: Multi-Colored Slate Gauged

Size: 3"x6"

Finish: Gauged/Natural Cleft

VCTI Vinyl Composition Tile

Mfg: Armstrong

Color: #51858 Sandrift White

Finish: Imperial Texture

VWI Vinyl Wall Covering (Modular Only)

Mfg: Patrick Industries, Inc. Color: Hampton Gray, Finish: Textured Vinyl

Corner Guards

Mfg. Koroseal interior products

Color: Cashmere

Grout (Overall)

Mfg: Custom Building Products

Color: #145 Light Smoke, Finish: Polyblend/Sand

Ceiling Panel

Mfg: Radar

Color: #2110 (White)

Size: 24" x 24" x 5/8", Finish: Class 2, NRC .55

Plumbing Fixture Finish for Restrooms

Mfg: Kohler

Type: Coralais Single-Control Centerset

#K-15597-5P

Color/Finish: Polished Chrome

Interior Signage

(See Green Color Scheme)

CABI Cabinetry

Mfg: Merillat Classic

Style: Somerton Hill

Type: Square Toffee [Lower Cabinets], Arch Toffee [Upper Cabinets]

Finish: Oak

CPT1 Carpet for General Use

Mfg: Patcraft Designweave

Pattern: #I0102 Homeroom-II

Color: #00539 SAT's

Type: Rolled or Modular

CPT2 Carpet for Offices

Mfg: Patcraft Designweave

Pattern: Z6424 City Style

Color: #00776 Fame

Type: Broadloom/Rolled

CPT3 Carpet for Conference Rooms

Mfg: Patcraft Designweave

Pattern: # I0128 Urban Legends

Color: #28309 Alligators in the Storm Drain

Type: Broadloom/Rolled

GI Granite for Break & Heritage Rooms

Mfg: Bedrosians

Color: Tropic Brown

Finish: Slab

LAMI Laminate

Mfg: Wilsonart

Color: Milano Brown #4725K-25, Milano Quartz #4726K-52

LAM2 Laminate-180fx

Mfg. Formica Group

Color: Antique Mascarello #3466

Finish: Radiance

PT1 Paint – Overall Interior Color

Mfg: Sherwin Williams

Color: #6106 Kilim Beige

Finish: Flat

PT2 Paint Trim

Mfg: Sherwin Williams

Color: #6076 Turkish Coffee

Finish: Semi-gloss

PT3 Paint Accent

Mfg. Sherwin Williams

Color: #2806 Rookwood Brown, #7534 Outerbanks, #6118 Leather Bound

RBI Rubber Wall Base

Mfg: Johnsonite

Color: #47 Brown

RFI Rubber Flooring

Mfg. Mondo USA Inc.

Pattern: Harmoni Smooth, HAS 98 Sand

TI Porcelain Tile for Entry Vestibules

Mfg: Roman Stone

Color: #Del Conca Gold

Size: 12"x12"

Finish: Unglazed

T2 Ceramic Tile for Restroom & Shower Walls

Mfg. Daltile

Colors: # 0191 Gold Coast, # 0144 Artisan Brown DT, #0161 Urban Putty (Random Pattern)

Size: 1 1/4" x 1"/Finish: Gloss

T3 Porcelain Tile for Restroom Counters & Backsplash

Mfg. Daltile Keystones

Colors: Marble #D325

Size 1"x1"/Finish: Unglazed

T4 Travertine Tile for Counters & Backsplash

Mfg. Avonite Surfaces

Color: Cairo FI-9130

Backsplash: 4" high

Finish: Satin 07/09

T5 Slate Tile for Break & Heritage Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 12"x12" or 18"x18"

Finish: Gauged/Natural Cleft

T6 Slate Backsplash for Break Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 3"x6"

Finish: Gauged/Natural Cleft

VCTI Vinyl Composition Tile

Mfg: Armstrong

Color: #51858 Sandrift White

Finish: Imperial Texture

VWI Vinyl Wall Covering (Modular Only)

Mfg: Universal Forest Products

Color: Mayan Maize, Finish: Textured Vinyl

Corner Guards

Mfg. Koroseal Interior Products

Color: Cashmere

Grout (Overall)

Mfg: Custom Building Products

Color: #145 Light Smoke, Finish: Polyblend/Sand

Ceiling Panel

Mfg: Radar

Color: #2110 (White)

Size: 24" x 24" x 5/8"

Finish: Class 2, NRC .55

Plumbing Fixture Finish for Restrooms

Mfg: Kohler

Type: Coralais Single-Control Centerset

#K-15597-5P

Color/Finish: Polished Chrome

Interior Signage

(See Green Color Scheme)

CAB I Cabinetry

Mfg: Merillat Classic
Style: Seneca Ridge
Type: Square Cider [Lower Cabinets]
Arch Cider [Upper Cabinets]
Finish: Oak

CPT1 Carpet for General Use

Mfg: Patcraft Designweave
Pattern: #I0102 Homeroom-II
Color: #00238 Academy
Type: Rolled or Modular

CPT2 Carpet for General Use

Mfg: Patcraft Designweave
Pattern: #Z6398 Dash
Color: #00737 Crowded Streets
Type: Broadloom/Rolled

CPT3 Carpet for Conference Rooms

Mfg: Patcraft Designweave
Pattern: #I0128 Urban Legends
Color: #28714 Cell Phone & Fuel Tank
Type: Broadloom/Rolled

GI Granite for Break & Heritage Rooms

Mfg: Bedrosians
Color: Tropic Brown
Finish: Slab

LAMI Laminate

Mfg: Wilsonart
Color: Milano Mahogany #4728K-52

LAM2 Laminate-I80fx

Mfg. Formica Group
Color: Golden Mascarello #3465
Finish: Radiance

PT1 Paint – Overall Interior Color

Mfg: Sherwin Williams
Color: #6106 Kilim Beige, Finish: Flat

PT2 Paint Trim

Mfg: Sherwin Williams
Color: #6076 Turkish Coffee, Finish: Semi-gloss

PT3 Paint Accent

Mfg. Sherwin Williams
Color: #2807Rookwood Medium Brown, #2827 Colonial Revival Stone, #0008 Cajun Red

RBI Rubber Wall Base

Mfg: Johnsonite, Color: #47 Brown

RFI Rubber Flooring

Mfg. Mondo USA Inc.,
Pattern: Mundo HAS98 Sand

T1 Porcelain Tile for Entry Vestibules

Mfg: Roman Stone
Color: #Del Conca Gold, Size: 12”x12”, Finish: Unglazed

T2 Ceramic Tile for Restroom & Shower Walls

Mfg. Daltilo
Colors: # 0171 Cityline Kohl, #0161 Urban Putty, #0093 Fire Brick (Random Pattern), Size: 1 ¼” x 1”/Finish: Gloss

T3 Porcelain Tile for Restroom Counters & Backsplash

Mfg. Daltile Keystones

Colors: Cityline Kohl Speckle #D207

Size 1”x1”/Finish: Unglazed

T4 Travertine for Restroom Counters & Backsplash

Mfg. Avonite Surfaces

Color: Dark Roast FI-7735

Backsplash: 4” high

Finish: Satin 09/04

T5 Slate Tile for Break & Heritage Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 12”x12” or 18”x18” , Finish: Gauged/Natural Cleft

T6 Slate Backsplash for Break Rooms

Mfg: Surface Source: Lowes #131806

Color: #Multi-Colored Slate Gauged

Size: 3”x6”

Finish: Gauged/Natural Cleft

VW1 Vinyl Wall Covering (Modular Only)

Mfg: Universal Forest Products

Color: Mayan Maize,

Finish: Textured Vinyl

VCT1 Vinyl Composition Tile

Mfg: Armstrong

Color: #51858 Sandrift White, Finish: Imperial Texture

Corner Guards

Mfg. Koroseal interior products, Color: Cashmere

Ceiling Panel

Mfg: Radar

Color: #2110 (White)

Size: 24” x 24” x 5/8”

Finish: Class 2, NRC .55

Grout (Overall)

Mfg: Custom Building Products

Color: #145 Light Smoke, Finish: Polyblend/Sand

Plumbing Fixture Finish for Restrooms

Mfg: Kohler

Type: Coralais Single-Control Centerset

#K-15597-5P

Color/Finish: Polished Chrome

Interior Signage

(See Green Color Scheme)

Appendix G: List of Acronyms

A

ACG - Architectural Compatibility Guide
ADA - Americans with Disabilities Act
A/E - Architecture & Engineering
AF - Air Force
AFB - Air Force Base
AFES - Army & Air Force Exchange Service
AFPM – Air Force Project Manager
AFSOC - Air Force Special Operations Comm.
AFRL - Air Force Research Laboratories
ANG - Air National Guard
ASHRAE - American Society of Heating, Refrigerating, and Air Conditioning Engineers
ATFP - Anti-Terrorism Force Protection
ATO - Anti-Terrorism Officer

B

BCE - Base Civil Engineer
BUR - Built-up Roof

C

CAFB – Cannon Air Force Base
CC - Commander
CFC - Chlorofluorocarbons
CFR- Code of Federal Regulations
CGP - Construction General Permit
CMU - Concrete Masonry Unit

CO - Contracting Officer
COE - Corps of Engineers
COR – Contracting Officer’s Representative
CWA - Clean Water Act

D

DE - Deputy Engineer
DoD - Department of Defense
Dwg – AutoCAD drawing file name extension

E

EIFS - Exterior Insulated Finish System
EISA - Energy Independence and Security Act
EPA - Environmental Protection Agency
EPDM - Ethylene Propylene Diene Monomer
EUL - Enhanced Use Lease

F

FC - Foot Candles
FEG – Facility Excellence Guide (issued by AFSOC)

G

GIS – Geographic Information System

H

HQ AFSOC - Headquarters Air Force Special Operations Command

HVAC - Heating Ventilation & Air Conditioning

I

IAW - In Accordance With

IBC - International Building Code

IESNA - Illuminating Engineering Society of North America

J (Not Used)

K (Not Used)

L

LED - Light Emitting Diodes

L

LEED - Leadership in Energy & Environmental Design

M

MAFR - Melrose Air Force Range

MILCON - Military Construction

MUTCD - Manual on Uniform Traffic Control Devices

N

NEPA - National Environmental Policy Act

NFPA - National Fire Protection Act

NHPA - National Historic Preservation Act

NMED - New Mexico Environmental Department

NPDES - National Pollution Discharge Elimination System

O

OSHA - Occupational Safety and Health Act

P

PDF - Portable Document Format

PM - Project Manager

PVC - Polyvinyl Chloride

PVDF - Polyvinylidene fluoride

Q (Not Used)

R

RCRA - Resource Conservation and Recovery Act

RTU - Roof Top Unit

S

SDS – Site Design Standards

SDWA - Safe Drinking Water Act

SF - Square Feet

SHGC – Solar Heat Gain Coefficient

SOCES - Special Operation Civil Engineering Squadron

T

TPO – Thermoplastic Polyolefin Roofing

TSCA - Toxic Substance Control Act

Tvis – the % of daylight that passes through a window

U

UFC - Unified Facilities Criteria

USACE – U.S. Army Corps of Engineers

USC - United States Code

USGBC - United States Green Building Council

UST - Underground Storage Tank

U-value – Resistance to heat transfer in windows; the lower the value, the greater the resistance. (U-value is the reciprocal of R-value.)

V

VOC - Volatile Organic Compound

VOQ - Visiting Officers Quarters

W

WBDG – Whole Building Design Guide assembled by the National Institute of Building Sciences. (http://www.wbdg.org/references/fhpsb_new.php)

X, Y and Z (Not Used)

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