Airport Development Guidelines

Adopted October 12, 2012

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I. Introduction

These Airport Development Guidelines have been established: (1) to insure a minimum standard of consistency of design and construction; (2) to contribute to the overall aesthetic quality of the Airport facilities, and (3) to insure that all new development and modifications of existing airport facilities adhere to all necessary and relevant airport design practices.

The Airport Development Guidelines are intended to apply to any project of improvement, reconstruction, major repair or remodel of any existing building structure, paved surface, drainage system, or other existing infrastructure at the Asheville Regional Airport (AVL).

The Asheville Regional Airport is owned and operated by the Greater Asheville Regional Airport Authority (Authority or GARAA). The airport is located within the city limits of Asheville, NC, and Buncombe and Henderson Counties. Chapter 78, Article VI of the Code of Ordinances, Buncombe County, and other relevant Articles and Sections shall apply to all development projects on the Asheville Regional Airport, and are incorporated herein by reference. Portions of the airport that are within unincorporated portions of Henderson County or the Town of Mills River are subject to applicable ordinances of those jurisdictions.

The existence of standards and guidelines contained in this document shall not relieve any developer, contractor, company or person, from investigating and adhering to any Buncombe County, Henderson County, or City of Asheville code, ordinance, or requirement which is relevant to the project and its features.

II. Development Process

This section provides a general overview of the process necessary in order to develop facilities on the Asheville Regional Airport. Other steps may be necessary in order to provide for a complete process, and those other steps may or may not be able to be undertaken simultaneously with these steps:

a. Initial meeting with Executive Director and/or Deputy Executive Director of Development and Operations.

   At this meeting, the developer should be prepared to provide information about the project to be undertaken, including lot and building space requirements, type of activities to be carried out on the property, number of jobs created, type and number of aircraft expected to be based on the leasehold and overall development schedule. The developer should also be able answer any additional questions that airport management may have concerning the project and subsequent activities. At this meeting, airport representatives will generally provide an overview of available properties or sub-lease opportunities, and provide other general information about the airport that may assist the developer in their undertaking.

b. Site Selection

   Airport management will work with the developer to identify property on the airport considered suitable for the nature of the operations to be carried out on the property. Unless an exception is granted for good cause, properties will only be permitted to be utilized for those aeronautical or non-aeronautical activities that have been identified on the Airport Layout Plan (ALP) and in the most current Airport Master Plan document. Surveys of property, lots, and other areas considered for lease are the responsibility of the developer.

c. Lease Agreement Approval

   Lease Agreements are generally drafted by the Executive Director with assistance from Airport Legal Counsel and other airport staff if necessary. The Executive Director will draft a Lease Agreement once all pertinent information is received and negotiations with the developer concluded. This

Asheville Regional Airport – Development Process

includes submittal of an Application for Commercial Business, as provided for in the Minimum Standard Requirements for Airport Aeronautical Services.

Once a Lease Agreement for the property or facilities has been agreed upon between the Airport Authority and the developer, the document must be approved by the Greater Asheville Regional Airport Authority Board at one of its regularly scheduled meetings. Occasionally it may be necessary for Authority staff to provide information on a pending project to the Authority Board at one of its monthly meetings, in advance of approval at a subsequent meeting. To avoid delays in the overall project schedule, developers should take into consideration the process of obtaining Authority Board approval of the lease agreement when preparing their project schedule.

Additionally, depending upon the circumstances of the development or subsequent operations to take place on the airport, the Authority and/or developer may have been required to communicate and coordinate the matter with Buncombe County, Henderson County, the City of Asheville, or one of the economic development organizations that serve the region, as appropriate. The approval of the lease by the Airport Board may be conditional upon approvals from any one or more of these entities.

d. Submittal, Review and Approval of Development Plans

At minimum, each developer will be required to submit for review and approval an overall site plan, civil and architectural drawings, utility designs, storm water features, plans for site signage, and any other item required by the Authority. These documents are reviewed and approved at the staff level. In addition to an initial site plan, the developer will be required to submit stamped design drawings at the 30%, 60%, and 95% benchmarks, and to also provide staff with a complete set of bid plans and specifications for construction. Authority staff shall be permitted to participate in planning meetings and discussions throughout the design process to ensure that the developer's plans are consistent with the Authority's requirements, and to avoid any delays in the review and approval process.

Airport staff review and approval shall generally take place prior to submittal and review by Buncombe County or other required jurisdictions. However, under certain conditions, simultaneous review and approval by Buncombe County through the appropriate review process may be possible.

e. Submittal and Approval of Aeronautical Study

No vertical construction or development will be permitted to start until the Federal Aviation Administration (FAA) has completed and approved an airspace analysis which investigates whether the structure will have a negative impact on the navigable airspace on and around the airport. This process averages approximately 30 days to complete once an FAA Form 7460-1 has been submitted to the FAA. The FAA Form 7460-1 is typically submitted by either the Authority on behalf of the developer, or by the developer's architectural/engineering firm, once certain necessary information is provided by the developer. This procedure is typically undertaken simultaneously with other steps of this process. It is recommended that submittal of the FAA Form 7460-1 be accomplished as early as possible in the planning phase of the project, in order to avoid delays in the start of project construction.

f. Completion of Airport Development Checklist

The Airport Development Checklist **(Exhibit A)** shall be used throughout the process by the Developer and the Airport Authority to ensure that each significant task in the development process is sufficiently completed prior to the developer's application for a building permit. The checklist shall be included with the developer's submittal for a building permit, and shall be completed and signed by an authorized representative of the Authority.

g. Application and Issuance of Building Permit

Once all of the above steps have been successfully completed, the developer may submit an application to Buncombe County for site permits as applicable. Depending upon the scope of the project, these permits may include zoning, grading and erosion control, stormwater, and water extension. Once the applicable permits have been issued, construction may commence on the property.

Note: Review processes and additional steps required by the Authority and/or local government agencies may be required depending on the nature of the development and activities taking place on the property.

III. Authorized and Non-Authorized Uses

The Asheville Regional Airport limits activities and operations on the airport to those that are aeronautical and non-aeronautical in nature, support aeronautical and commercial aviation operations of the airport facility, or are commercial in nature and contribute to the airport's overall economic vitality.

Authorized uses include, but are not limited to, those activities contained within the Greater Asheville Regional Airport Authority Minimum Standards for Airport Aeronautical Services, and Chapter 78, Article VI of the Code of Ordinances, Buncombe County.

Non-Authorized uses include, but are not limited to:

a. New residential uses
b. Churches
c. Day care centers
d. Public or private elementary, middle or high schools
e. Uses which generate potential hazards to the operating environment of an airport.
f. Any operations that creates noxious, offensive or illegal activities.
g. Any operations that create significant dust, odor, smoke, or other visual impairments to visibility.
h. Other uses considered or determined to be incompatible land uses, incompatible with the operating environment of a public airport, or as specified by the FAA.

IV. FAA Requirements

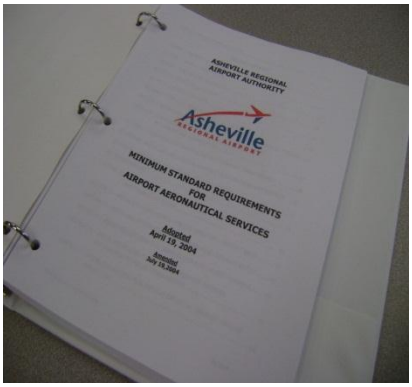
All development site plans and designs shall at all times adhere and comply to those standards, practices, recommendations, regulations and requirements as set forth by the FAA. In evaluating adherence and compliance with FAA requirements, the following documents shall be considered and used:

a. FAA Advisory Circular 150 series
b. FAR Part 139
c. FAR Part 77
d. TSAR Part 1542
e. Federal Grant Assurances
f. FAA policy guidance, directives, or any documentation or instructions from the FAA concerning a specific use or activity.

Furthermore, any other comments, concerns or requirements that the FAA may have concerning the program shall be considered in the design of the project.

V. Airport Minimum Standards

The Greater Asheville Regional Airport Authority has adopted "Minimum Standard Requirements for Airport Aeronautical Services" (Minimum Standards). The Minimum Standards establish the minimum acceptable qualification of participants, level and quality of service, and other conditions that are required of those that propose to provide aeronautical services at the Asheville Regional Airport. Additionally, the Minimum Standards document also contains the Application for Commercial Businesses, which is required to be submitted by each person, firm or corporation proposing to provide services on the airport.

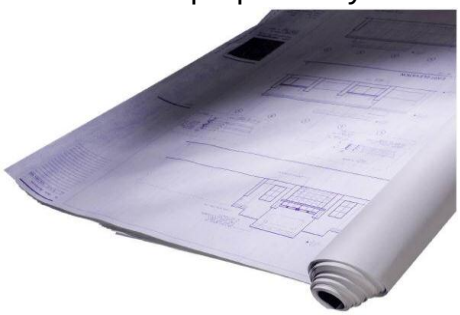


The imposition of these Minimum Standards is in the public interest, and is intended to provide protection from irresponsible, unsafe or inadequate service providers. Furthermore, the Minimum Standards are also intended to help ensure the Authority's compliance with Federal Grant Assurances which the airport is subject to as a condition of the receipt of federal grant monies for past, present, and future capital improvement projects at the airport.

VI. Architect and Engineering Service Requirements

a. All site plans, drawings, specifications, and other details of any development proposal shall be prepared by a qualified architect/engineer licensed to conduct business in the State of North Carolina. All final versions of site plans, drawings, specifications and other details intended for use and construction shall be stamped and signed with the responsible architect/engineers official stamp as required by the State of North Carolina.

b. All site plans, drawings, specifications and other details of any aeronautical areas, or otherwise intended to be utilized by aircraft shall be prepared by a licensed architect/engineer in the State of North Carolina. Such architect/engineer shall have adequate knowledge of airport design and engineering practices and all of the applicable Federal Aviation Regulations, Advisory Circulars, and other requirements relevant to the design and construction of such areas.



c. The Greater Asheville Regional Airport Authority reserves the right to reject any site plans, drawings, specifications or other details produced by any architect/engineer that in the Authority's sole discretion, does not possess or demonstrate adequate knowledge or expertise in designing and constructing projects in an airport environment.

VII. Design and Construction Drawing Submittals

a. At each phase of completed design of any project (30%, 60%, 95%), the developer or architect/engineer, shall submit two full hard copy sets of available plans (24x36 size), and two sets of specification documents for the project to the Authority for review and comment. The Authority shall have the right to review the documents and return comments to the developer within a reasonable period of time. The developer shall incorporate those comments into future revisions of the plans and/or specifications unless otherwise approved by the Authority.

b. Two complete hard copy sets (24x36) of 100 percent plans and specifications for bidding and/or construction shall be provided to the Authority prior to bidding and/or construction by the developer.

c. Within 90 days of completion of the project, the developer or his/her architect/engineer shall provide to the Authority two full hard copy sets of record drawings (as-builts) for the project (24x36 size), and a complete set of electronic record drawings produced in the latest version of AutoCAD, or another AutoCAD compatible format which is acceptable to the Authority.

VIII. Storm Water Management and Spill Prevention

a. The Asheville Regional Airport has developed and adopted a Storm Water Pollution Prevention Plan (SWPPP) in accordance with 40 CFR 122, and State of North Carolina Department of Environmental and Natural Resources (NCDENR) requirements. The SWPPP is consistent with the National Pollutant Discharge Elimination System (NPDES) program requirements, and identifies:

   i. Steps and activities designed to identify potential sources of stormwater pollution or contamination; and

ii. Best management practices (BMP's) that will prevent or help reduce the introduction of pollutants into the airport's stormwater system.

b. The airport has also developed and adopted a Spill Prevention Control and Countermeasure (SPCC) Plan in accordance with 40 CFR 112, which provides for systems and procedures to prevent, reduce, and respond to spills of oil based products stored and utilized on site.

c. Each new development on the Asheville Regional Airport shall incorporate those structural BMP's and systems deemed necessary by the architect/engineer, EPA, NCDENR, and/or the Authority, in order to adequately comply with the necessary SWPPP and SPCC documents of both the airport, and the prospective tenant which will be operating on the property.

IX. Review and Approval

Prior to bidding, receipt of proposals for construction or application for a Building Permit, all final site plans, drawings and specifications must be approved by the Authority. In most cases, this will be accomplished at the staff level, but depending upon the nature, significance and circumstance of the development, formal approval by the Airport's Board may be necessary.

The Authority may require that the plans be reviewed by an architectural, engineering, or planning consultant which represents the Authority. If this is determined to be necessary the developer shall be responsible for reimbursing the Authority for any and all costs associated with the review. The Authority reserves the right to utilize any consultant it deems appropriate to conduct reviews of any airport development proposal.

The Authority reserves the right to withhold its approval of final site plans, drawings and specifications if they are determined to be inconsistent with the Airport Layout Plan, any development guideline of the Authority, or any Federal Aviation Regulations relevant to the Asheville Regional Airport. Furthermore, the Authority may withhold its approval of the site plans, drawings or specifications if they are determined to create any difficulty or problems related to airport operations, or any condition of non-compliance with any regulation or requirement of the airport or the Authority with any local, state or federal agency.

Approval by the Authority does not supersede the requirement for the developer to obtain all of the necessary reviews, approvals, and the issuance of permits by Buncombe County, or any other agency or entity with jurisdiction, all of which is the sole responsibility of the developer.

X. Airport Development Zones and Map

The Greater Asheville Regional Airport Authority has established four specific Development Zones within the boundaries of the Asheville Regional Airport. Each Development Zone is intended to accommodate different types of activities for which facilities may be developed within those zones, although some zones permit for similar activities of other zones.

*The Airport Development Zone Map **(Exhibit B)** delineates the locations and boundaries of each Airport Development Zone*. The Airport Development Zone Map does not supersede any official zoning map or the zoning requirements of Buncombe or Henderson Counties.

a. **Development Zone A** - Terminal Operations

Terminal Operations include those activities that are related to scheduled and non-scheduled air carrier and passenger operations. These include, but are not limited to:

i. Airline/Air Carrier Operations
ii. Restaurant and Gift Shops
iii. Other Airport Concessions/Vendors/Businesses
iv. Rental Car Operations
v. Security Functions
vi. Commercial and Non-Commercial Parking Facilities
vii. Administrative and Tenant Offices
viii. Federal Aviation Administration and Transportation Security Administration Operations

b. **Development Zone B** - Commercial and Non-Commercial Aeronautical

Commercial and Non-Commercial Aeronautical activities include properties and facilities intended to directly serve, support, or otherwise accommodate aviation related activities on the airport. These include but are not limited to:

i. Fixed Base Operators (FBO's)
ii. Airframe and Power Plant Facilities
iii. Flight Training Facilities
iv. Aviation Fuel Farms
v. Aircraft Parking and Storage Areas and Facilities
vi. Air Cargo Facilities
vii. Specialized Aeronautical Service Operators (SASO's)

viii. Other Commercial and Industrial Aviation Activities
ix. Other General Aviation Facilities
x. Federal Aviation Administration Facilities

c. **Development Zone C** - Commercial Non-Aeronautical

Commercial Non-Aeronautical activities include commercial activities that are not direct aviation uses, but exist in large part to provide support services to the aviation users, passengers and the general public utilizing the Asheville Regional Airport. They may also include non-aeronautical commercial uses that are considered compatible with the airport environment, and contribute to the revenues and economic vitality of the airport. These activities include but are not limited to:

i. Business and Corporate Offices
ii. Lodging Facilities
iii. Organizational Headquarters
iv. Commercial and Non-Commercial Parking Facilities
v. Training Centers
vi. Commercial and Industrial Warehouses and Manufacturing
vii. Airport and Tenant Support Facilities
viii. Public Park Areas
ix. Retail Stores and Gas Stations
x. Advertising

Certain Commercial Aeronautical activities that do not require airfield access may also be located within the Commercial Non-Aeronautical Development Zone.

d. **Development Zone D** - Commercial and Non-Commercial Multi-Use

Commercial and Non-Commercial Multi-Use includes all of the activities contained in Development Zones A, B and C above, and further includes, but is not limited to:

i. Other Rental Properties and structures
ii. Public Safety Training Facilities
iii. Recreation Areas

XI. Site Plan Requirements

The developer shall provide to the Authority prior to significant design (more than 10 percent of overall design) a Site Plan of the proposed project and its layout within the boundaries of the chosen airport site upon which development will occur. Additionally, an updated Site Plan shall be included either separately, or

or as a component of each set of plans, drawings and specifications which are submitted to the Authority at the noted benchmarks of design. At minimum, the Site Plan shall include, to scale, each major element of the proposed project to be constructed on the airport property, including but not limited to the following:

a. Location and orientation of all buildings and structures.
b. Location and layout of all taxiways, taxilanes, aprons, and aircraft movement and parking areas.
c. Location and orientation of fueling facilities and outdoor aircraft or equipment servicing areas.
d. Layout of automobile roadways, driveways, parking areas, loading areas etc.
e. Identification of the boundary between the secure and non-secure sides of the site, including fence line and vehicle and/or pedestrian gate locations.
f. Areas to be landscaped.
g. A north arrow and scale.
h. Any other item which is considered a significant feature of the improvements to be made to the property or as requested by the Authority.

XII. Minimum Lot Size Requirements

The overall size and configuration of prospective buildings, ramps, taxiways/taxilanes, and other features to be constructed shall determine the minimum size of any lot or parcel to be leased by a developer. The lot size shall not be smaller than that required in the Minimum Standards for the category of airport service operator. In no case however shall the lot size be smaller than 10,000 square feet, including a minimum width of 100 feet. The lot size shall be sufficient to hold the proposed structure, paved areas, and other features, and provide for all buffers and setbacks required by any federal, state or local jurisdictions. Constrained parcels that are not capable of meeting the minimum requirements may be waived at the sole discretion of the Authority.

XIII. Setback Standards

The following minimum setback standards shall be required:

a. Front of building: 35 feet.
b. Side of building: 10 feet, unless adjacent to a residential district, then the setback shall be 50 feet
c. Rear of building: 20 feet, unless adjacent to a residential district, then the setback shall be 50 feet.
d. Landscape and buffering standards may require further setback.
e. Between buildings: Per Buncombe County Fire Prevention Ordinance.

XIV. Minimum Building Size Requirements

a. The minimum size of any permanent building, hangar, or other occupied structure located on any airport parcel shall be no less than the space requirements outlined in the Minimum Standards, or that minimum space as determined necessary for the buildings intended use by the Authority in its sole discretion.

b. The location of buildings shall be consistent with the adopted Airport Master Plan of the Asheville Regional Airport. No building or structure shall be permitted to encroach past the Building Restriction Line (BRL) as identified on the Airport Layout Plan (ALP), or as otherwise determined by the Authority. In addition to setbacks, no structures may be of such height to penetrate the imaginary surfaces governed by FAR Part 77, Objects Affecting Navigable Airspace. Additionally, no structure may cause any line of sight barriers between the airport traffic control tower and any portion of the airport required to be visible from the tower, unless otherwise waived by the FAA.

XV. Exterior Building Finishes

Building exterior finishes should harmonize with the natural environment. Visual continuity between buildings and major building materials is desirable throughout the airport and between leaseholds. Metallic and glass coatings that create or increase glare are generally not permitted due to their ability to impair the vision of cockpit personnel. Base and trim colors must be coordinated, compatible with adjacent structures, and must be approved by the Authority prior to the ordering of building materials. The use of textured materials, such as stone, brick, stucco or other materials that match other structures are encouraged to be used as accent features around building bases, corners, entryways, and other visible

areas. Building materials should be selected that will age without reduction of its aesthetic properties.

XVI. Interior Building Finishes

Building interiors should reflect the nature of their intended use. Lobbies, offices, public restrooms, and other interior spaces accessible by the general public, or intended to be utilized for operational, administration, or customer service related areas, shall have the following minimum finishes:

a. Completed, finished, and painted walls.
b. Hung acoustical or finished dry-walled ceilings.
c. Carpeted or tiled floors.

Hangar, workshop, or storage areas may have exposed sealed concrete floors and unfinished walls and ceilings.

XVII. Life Safety Equipment

All life safety equipment, including but not limited to fire extinguishers and emergency medical devices that are intended to become the property of the Authority after installation, shall be of the same manufacturer, model, type or nature, to ensure uniformity of such equipment with other similar equipment located throughout the airport facility. A detailed list of all life safety equipment shall be submitted to the Authority prior to purchase and/or installation for review and approval.

XVIII. Landscape Requirements

a. Landscaping of each development on the airport shall be provided as a critical visual element that will help define the overall character of the airport

property, and to provide for a continuous landscape character when compared with pre-existing and adjacent developed and landscaped properties. The placement of landscaping elements shall be accomplished in accordance with applicable regulatory requirements within the vicinity of any aircraft operational areas. Generally, landscaping shall be avoided within aircraft operational areas, and utilized primarily within landside facility areas, including roadways, driveways, parking lots, and building buffer and setback areas.

b. Landscaping shall incorporate trees, shrubs, flowers and other plants that are indigenous to Western North Carolina, and that are similar and compatible in growth patterns, appearance, and in the required care of other pre-existing landscaping elements already located upon the airport property. Plant, shrub, flower beds, and tree bases shall utilize an appropriate ground cover of sufficient density and weight to not be displaced by typical wind speeds in the vicinity, or by nearby jet or propeller blast.

c. Building sites shall use landscaping as a visual buffer to screen views of utility buildings and trash collection areas. Each site shall utilize a multiple variety of trees, shrubs, plants and flowers in appropriate settings to create an aesthetically pleasing environment for the development.

d. As a minimum, front yard or lawn areas surrounding buildings, parking areas, roadways and driveways shall be grassed, and shall also include landscaping beds at entrances, along edges, and within parking lot islands as appropriate. If deemed necessary, landscaped areas shall be served by an automatic and programmable irrigation system connected and metered from one of the buildings that are a part of the subject development.

e. A Landscaping Plan shall be included in every development proposal, and shall be submitted along with, or as part of each set of design plans or drawings.

f. Consideration shall be given to species of trees concerning lifetime growth heights to ensure that as trees mature, they remain in compliance with FAR Part 77 height restrictions.

g. All surfaces on the leasehold shall be covered by buildings, pavement, landscaping, or grass. No portion of a leasehold shall be permitted to remain dirt, gravel or otherwise uncovered. Hangars and buildings located entirely within the aircraft operations area (AOA) are exempt from this requirement.

h. A minimum of 10 percent of the total leased area shall be landscaped. Landscaping shall be distributed evenly on each side of the building(s), except that portion or portions of the building(s) located inside the AOA.

i. The developer shall not plant any species of tree, shrub or plant that produces berries, nuts, or any type of fruit that can become an attractant to birds or other wildlife.

j. Planting areas shall drain within themselves and not onto paved surfaces where possible.

k. All landscaped areas shall be maintained by the developer or subsequent owner or tenant at all times.

l. Landscaping shall not be located in any area that may interfere with visibility of pedestrian or vehicular traffic, or around fire hydrants so as not to obstruct access.

m. Parking lots shall conform to all of the minimum landscape requirements. Landscaping shall be provided between all property lines and roadways and driveways, and within all buffer or setback areas.

   Whenever possible and/or practical, trees shall not be planted immediately adjacent to, or underneath light poles or other lighting fixtures, or in a manner that may cause eventual interference between the two as the tree grows and matures.

XIX. Outside Storage, Equipment and Enclosures

a. All outside storage of equipment or other materials shall be screened by an opaque screen utilizing the same or similar building materials as the main structure located upon the development. Equipment shall not be stored in areas fronting the landside access roadways or facing aprons or taxiways/taxilanes.

b. All locations for ground mounted mechanical equipment, utility meters, storage tanks, and general storage of any other type shall be screened from public thoroughfares, other building sites, and aprons or taxiways/taxilanes. Screening shall utilize the same or similar building materials as the main structure located upon the development.

c. Each development shall provide for a screened trash/dumpster enclosure, utilizing the same or similar building materials as the main structure located upon the development. Trash/dumpster enclosures shall be located in conjunction with the above requirements, but outside of any AOA or secured portion of the airport. If the only suitable location is within the AOA or secured portion of the airport, the location shall take into account the safety of aircraft, as it relates to the movement of trash collection vehicles inside the AOA. Such locations inside the AOA or secured portion of the airport require specific review and approval by the Authority. Each trash enclosure shall have gates so that all four sides of the enclosure shall screen the trash receptacles within them.

d. The location, configuration, size and design of all enclosures shall be included in the plans submitted to the Authority. Driveways, roadways or other paved surfaces providing access to enclosures shall be depicted.

e. All ground mounted mechanical equipment shall be screened from other buildings, public thoroughfares and aircraft operating areas, using the same methods noted above.

f. All rooftop mounted mechanical equipment shall be screened from public view utilizing extended walls, rooflines, or other methods acceptable to the authority.

XX. Temporary and Portable Structures

a. Temporary and/or portable structures, including but not limited to sheds and storage containers, shall not be permitted except with written permission of the Authority. If permitted, each temporary or portable structure shall be painted a color which either matches the other building(s) on the property, or a neutral earth tone color as approved by the Authority. Truck trailers or other trailer mounted storage containers shall not be permitted.

b. Portable or fixed “booths”, used by rental car agencies or other airport tenants for routine and common operations shall all be of the same manufacturer and of the same model, and meet all of the specifications and requirements contained in these Development Guidelines. The approved manufacturer and model of any booth installed for such purposes shall be: Madison Industries, Standard 6x8 Exit Booth. Exterior colors and finishes, including stone veneer shall match existing.

c. This section shall not apply to temporary and portable structures or trailers utilized during the construction phase of any project on the airport. All temporary and portable structures utilized during the construction phase of any project shall be removed from the airport within 30 days of the completion date of the project.

XXI. Exterior and Site Lighting

a. Each building constructed on the Asheville Regional Airport shall have exterior lighting provided in accordance with applicable regulatory requirements for aircraft operational areas. Both wall and light pole mounted light fixtures shall be utilized where appropriate, and shall be fully shielded and/or directed to avoid any interference with aircraft operations.

b. Exterior and site lighting shall be positioned and installed in a manner to provide both security for the site, as well as the illumination of parking areas, walkways, sidewalks, and other areas that vehicles and pedestrians will utilize for general safety.

c. Where pedestrian walkways are not adequately illuminated by street, parking, or building lighting, walkway lights shall be installed in a manner which provides consistency with the style and design of other lighting. As an alternative to pole mounted lights, other types of sidewalk lighting may be approved by the Authority provided it meets the aesthetic goals of the airport or the development.

d. Each entrance to the primary structure intended to be used by customers, employees, or the general public shall include a light fixture directly overhead the door.

e. All light poles and light fixtures shall match the style, type, design and color of other standardized light poles on the airport, and detailed as:

i. Light poles shall be single or dual head (as appropriate) 6 inch straight square aluminum (Tenonbase) light pole, manufactured by Philips-Gardco/Philips-Emco. Item No/Catalog No. SAA6-STB-30H. Color BRA (Bronze) Anodized, 30 foot height, Drilling 2Way (D2@180).

ii. Light fixtures shall be Philips-Gardo, Item Description: Form 10 square EH/H/HT arm mounted, Type A and Type D, 19 inch square extruded luminaire, twin assembly, Type V distribution: 400 watt, 480 volt, fusing in head: Item No. EH19-2-Q-400PSMH-480-BRA-F.

iii. Lamps shall be MH/PSMH 400W type 4X luminaire with E28/BT28 jacket lamp.

iv. Light head options include: Type C – EH 19-1-3-400PSMH-480-BRA-F (Single Head); Type G – EH19-1-3-250PSMH-480-BRA-F (Single Head – 250 Watt/480 volts); or Type DA – EH19-2-3-250PSMH-480-BRA-LF (Dual Head – 250 Watt/480 volts.

v. Alternate manufacturers and brands of light poles and light fixtures such as General Electric Lighting Solutions products may be permitted by the Authority if it provides the same level of appearance and light output as the above standard equipment, and does not require significantly different maintenance techniques or procedures to maintain. Additionally, alternatives for LED or other low voltage or use equipment may be permitted by the Authority.

f. Lights poles shall not be erected in a manner to penetrate any protected airspace as defined in FAR Part 77, Objects Affecting Navigable Airspace. All light fixtures shall be directed downward and/or in manners where the light will not interfere with aircraft operations or air traffic control operations.

g. Light poles and fixtures shall avoid being placed adjacent to or underneath trees or other landscaping to avoid interference as the tree or landscaping grows and matures.

XXII. Site Security Requirements

a. All facilities and developments that require access to the AOA shall incorporate airport security measures into their design. Whenever possible, primary buildings shall be oriented to become part of the security perimeter barrier separating the AOA or other secure areas of the airport from the non-secure portions of the airport. All sites, buildings and improvements constructed on the airport shall be carried out in a manner which is consistent with the Asheville Regional Airport Security Plan, and all applicable FAA and TSA regulations and requirements.

b. Fencing

i. All site fencing shall be galvanized chain link, six feet in height, with two strands of barbed wire above the top rail, to form a minimum 8 foot tall barrier. Design, materials, and placement, shall be consistent with Federal Aviation Administration and Transportation Security Administration (TSA) specifications and/or requirements. Vinyl coated chain link is permitted with prior approval of the color by the Authority.

ii. In some locations, it may be permissible to install high tensil woven wire game control fence, 8 feet tall with a minimum of two strands of barbed wire above the top of the wire fabric (10' total) that matches existing fence immediately adjacent to it. Design, materials, and placement shall be consistent with Federal Aviation Administration and Transportation Security Administration (TSA) specifications and/or requirements.

iii. Other decorative fencing types, materials, colors and designs may be considered on a case by case basis. Approval by the Authority of other decorative fencing shall be subject to the approval of the TSA or FAA as appropriate, and as provided for within the approved Airport Security Plan (ASP), or its amendments.

iv. All fencing shall be installed atop a continuous formed concrete strip (mow strip / intrusion barrier) of the same design and dimensions as other pre-existing mow strips on the airport. Fencing shall be installed on the mow strip flush with the bottom of the fence material. Mow strips shall be designed and constructed to provide for positive drainage away from the center of the strip. **Exhibit C** depicts the approved design requirements for mow strips.

v. Where fencing meets a building wall, the end post shall be placed as close as practical, but no more than four inches away from the wall to ensure that a person or animal cannot fit through the remaining gap.

vi. Trees, ground mounted equipment, and other features that may permit a person or animal to easily climb over the top of fencing shall not be located within ten feet of any portion of the fence.

vii. The exact placement and location of all fencing and gates shall be included in the plans submitted to the Authority for approval. Further review and approval by the Transportation Security Administration shall also be required. Any fencing that is erected or altered during construction of any development must be coordinated with, and receive advanced approval from the Authority in order to ensure review by and compliance with all TSA Regulations. Any proposed changes to the fence placement or location during construction must be scheduled to permit for adequate review and approval by the TSA prior to its installation or relocation to the newly proposed location.

viii. Standardized “No Trespassing” perimeter fence signs shall be placed on all perimeter fencing, spaced no more than 200 feet apart from one another. All signs shall be made of .80 gauge aluminum and be 24”x24” in size, and utilize red and black lettering on a white reflective background, as depicted in **Exhibit F** included herein.

c. Gates

i. All vehicular access points shall be controlled with a hydraulically operated vertical pivot gate, manufactured by the Ideal Manufacturing Company, and more commonly known as a “Tilt-A-Way” gate.

ii. Gate location and sizes shall be approved in advance by the Authority.

iii. All gate numbers (vehicular and pedestrian) shall be assigned by the Authority and in conjunction with the existing gate numbering system already in use at the airport.

iv. All vehicular and pedestrian gate equipment and operators shall match existing airport and Authority operated gates and systems, and shall be constructed entirely of aluminum. Gates and gate equipment shall be constructed and installed to specifications and guidelines of the Authority in order to ensure compatibility with existing Authority security systems.

v. All gate equipment shall be provided by the developer as a cost associated with the development of the airport site. Once installed and operable, the developer or subsequent owner or tenant shall remain responsible for the on-going cost of maintenance, upkeep and repairs of the gates.

vi. All gates shall incorporate a manufacturer provided and installed heater for the hydraulic reservoir and other critical components in order to ensure proper operation during periods of low temperatures.

vii. All systems upon installation shall become an integral component of the overall airport security perimeter and access control system and shall be under the control of the Authority.

viii. Details of each gate installation by location, including any appurtenances, attachments, extensions, gaps between pavement and the bottom of the gate, or other features, shall be adequately depicted in the plans for approval by the Authority. Because each gate will become an integral component of the overall Airport Security System and plan, any installation which is not compliant with the approved plan shall be removed and re-installed in a manner which is compliant with the plans approved by the Authority.

ix. Pedestrian Gates shall be tubular steel in nature, and be constructed to match existing pedestrian gates on the airport. Pedestrian gates shall incorporate all access control systems required of vehicular gates.

x. Standardized gate signs shall be placed on each vehicular and pedestrian gate, and on each door that accesses the secure portion of the airport.

xi. Gate signs shall include the following:

1. One sign on each vehicle gate, installed on the non-secure side that reads “Authorized Persons and Vehicles Only Beyond This Point”. Signs shall be made of .80 gauge aluminum and be 18” wide by 12” tall in size, and utilize red reflective lettering on a white background. Sign characters shall be 1 5/8” tall in red, with a red border around the edge of the sign. See **Exhibit D** for sign samples.

2. One sign on each Pedestrian gate installed on the non-secure side, that reads “Authorized Persons Only Beyond This Point”. Signs shall be made of .80 gauge aluminum and be 18” wide by 12” tall in size, and utilize red reflective lettering on a white background. Sign characters shall be 1 5/8” tall in red, with a red border around the edge of the sign. See **Exhibit D** for sign samples.

3. Two signs, one on each side of the gate (vehicular and pedestrian) with the Authority assigned gate number depicted on them. Signs shall be made of .80 gauge aluminum and be 10”x10” in size, with red reflective lettering on a white background. Characters shall be 3 3/8” tall. See **Exhibit E** for sign samples.

d. Building Through-Access

i. Buildings and sites shall be designed and oriented in order not to permit any person or vehicle from entering any building on the site and being able to pass undetected or without obstacles through to the AOA or secure portion of the airport.

ii. Interior and exterior doors shall be controlled through the use of a combination of access control systems (see requirements below), constant visual monitoring, or by locked doors or other features approved by the Authority and contained within the Airport Security Plan.

iii. Each door within a building that provides access to the secured portion of the airport shall have a sign or decal affixed directly on or immediately adjacent to the door that reads “Authorized Persons Only Beyond This Point”. Each sign shall use lettering of a color that contrasts with the background or glass to which it is affixed, and shall be a minimum of 9 ½ inches wide, by 6 ¼ inches tall, with 1 inch tall letters. See **Exhibit F** for sign samples.

e. Access Control Systems

i. All vehicular and pedestrian gates, and in some cases building doors, shall incorporate the Asheville Regional Airport standard access control system, including hardware and proximity card readers.

ii. All access control equipment shall be provided by the developer as a cost associated with the development of the airport site. Once installed and operable, the developer or subsequent leaseholder shall remain responsible for the on-going cost of maintenance, upkeep and repairs of the access control equipment.

iii. All access control equipment shall be constructed and/or installed to specifications and guidelines specified by the Authority, in order to ensure compatibility with existing Authority security systems.

iv. All systems upon installation shall become an integral component of the overall airport security perimeter and access control system and shall be under the control of the Authority. The developer shall utilize the services of the Authority's approved vendor for providing and installing all access control systems.

v. Where deemed necessary by the Authority, dual card readers shall be installed at the same location in a vertical configuration to allow access by vehicles of all sizes.

f. Site Lighting

Site lighting where appropriate, including but not limited to wall light fixtures, driveway lights, and parking lot lighting, shall be provided as a measure of security and safety at each developed site on the airport.

g. Storm Water Systems and Grates

All storm water systems and grates shall incorporate the security of the airport into their design and placement. Inlet and outlet grates on all pipe over 12 inches in diameter shall have a security grate or cage installed over them. Borrow ditches that cross beneath fence lines or otherwise span between secure and non-secure portions of the airport shall have features installed to eliminate the possibility of persons or animals using the ditch to enter into the secure portion of the airport.

h. Closed Circuit Television Cameras (CCTV)

i. The developer, or any subsequent owner or tenant located upon the airport property, shall permit the Authority to place at an appropriate location upon the exterior of any building, a CCTV camera, along with any other hardware, software or support equipment, which the Authority deems necessary in order to provide or meet the security requirements of the airport facility.

ii. If installed by the Authority, the placement of cameras, hardware, wireless and other equipment shall be accomplished at the sole cost of the Authority. The developer or subsequent owner or tenant shall permit such equipment to run on the building's electrical system with no reimbursement or compensation for the power which such equipment regularly uses.

iii. This requirement includes the running of power, video cabling and other wiring throughout the building as may be necessary to serve the CCTV equipment.

iv. The developer, owner or tenant shall have no right to have access to the images or video viewed or recorded by any CCTV camera.

v. The developer may install its own CCTV camera system independent of any component installed by the Authority, for which it will be solely responsible.

XXIII. Aprons, Taxiways and Taxilanes

a. All paved surfaces, including non-paved surfaces within safety or object free areas, shall be designed and constructed to meet all applicable FAA Advisory Circular recommendations, including but not limited to the current version or change of each of the following:

i. FAA AC 150/5300-13, Airport Design
ii. FAA AC 150/5320-5, Surface Drainage System
iii. FAA AC 150/5320-6, Airport Pavement Design and Evaluation
iv. FAA AC 150/5340-1, Standards for Airport Markings
v. FAA AC 150/5340-18, Standards for Airport Sign Systems
vi. FAA AC 150/5340-30, Design & Installation Details for Airport Visual Aids
vii. FAA AC 150/5370-10, Standards for Specifying Construction of Airports.

b. All paved areas designed and intended for use by aircraft shall include pavement/apron edge lighting, pavement markings, and shall have area lighting included where appropriate.

c. Pavement shall be designed and constructed to accommodate the weight, footprint, and wingspan of the largest aircraft that could be anticipated to utilize the surface. At minimum, the pavement shall be designed and constructed to accommodate the weight, footprint, and wingspan of the largest aircraft capable of being placed inside any aircraft hangar located upon the site.

d. All pavement surfaces, including base and sub-base materials, shall be constructed of materials that meet FAA specifications as outlined in the applicable FAA Advisory Circular, unless otherwise approved in writing by the Authority.

e. All pavement surfaces shall provide for proper drainage away from the paved surfaces and all buildings, while maintaining grades that will facilitate the towing and movement of aircraft which are not under their own power.

f. Surface catch inlets shall be installed as necessary to facilitate drainage to the appropriate storm water management system where necessary. All surface grates located within paved areas shall be capable of supporting the weight of the heaviest aircraft as outlined in c. above, and shall be designed with openings that are narrower or smaller than the footprint of the smallest aircraft wheels.

XXIV. Roadways, Driveways and Auto Parking

a. All roadways, driveways and auto parking area pavement shall meet the Authority's minimum design standards, and shall include the use of integral concrete curb and gutter which matches existing curb and gutter on adjacent airport areas. Asphaltic curbs shall not be permitted, except as temporary measures until permanent concrete curb and gutter are constructed. See **Exhibit G** for roadway, driveway and curb and gutter detail requirements.

b. All landscape islands within parking areas shall utilize concrete curb and gutter.

c. Concrete paving shall be utilized at all operational areas such as loading docks, truck aprons and drives, dumpster pads, and other similar areas. These areas shall be located within the leasehold, in a manner that avoids large vehicle maneuvering on airport public roadways.

d. Roadways and driveways that access aircraft operational areas shall be designed to minimize interference with aircraft operations, and the need for vehicles to cross ramp areas and other locations where aircraft operate.

e. All driveways, roadways and parking lot lanes shall be a minimum of two lanes wide to permit simultaneous opposite direction traffic.

f. All roadways, driveways and parking lot areas shall be striped, marked, and signed appropriately utilizing standard traffic control paint, signs and colors.

XXV. Sidewalks

Each development on the airport shall provide for minimum 5 ft. wide concrete paved sidewalks between parking areas and main building entrances and along driveway and roadway entrances where appropriate. Sidewalks within the development shall tie into the nearest sidewalk existing on the airport in order to provide for an expanded network of continuous pedestrian walkways that provides access between main tenant buildings and areas of the airport facility. Sidewalks shall be located and utilized in order to provide a means of access between auto parking areas and building entrances with no breaks in the presence of paved surfaces upon which to walk.

Wheelchair ramps shall be located as required and shall match the design and configuration of other existing wheelchair ramps. Each ramp shall utilize a Neenah Foundry Company R-4984 Cast Iron Detectable Warning Plate that complies with the Americans with Disabilities Act Accessibility Guidelines and current Architectural Barrier Act Guidelines. See **Exhibit G** for sidewalk and wheelchair ramp details.

XXVI. Building and Site Signage

a. All signage (except Regulatory Signage) located upon a leasehold shall be designed to match the aesthetic and architectural features of the main building(s) located upon the leasehold.

b. Signage details, including size, colors and materials shall be included in the design plans for the overall development of the property, which are submitted to the Authority for review and approval.

c. All signage shall be located outside of the public and private roadways and associated visibility sight triangles, and away from airside areas where they may interfere with aircraft operations.

d. All signs shall be placed upon the leasehold, and not be located off of the leasehold without permission from the Authority.

e. Authorized off-leasehold signage or other directional or informational signs that may be permitted by the Authority, shall be constructed to match the standard design, colors, materials, and finish of other informational and directional signage installed and maintained by the Authority.

f. Exterior signs that display the street address number of each building shall be provided, and shall match those installed on other buildings. Such signs shall be 18 inches wide by 12 inches tall, with 6 inch tall white numerals on a teal green background. See **Exhibit E** for sign samples.

g. All signs required as part of the Airport Security Plan and other site security requirements, meeting the specifications contained in these Development Guidelines shall be provided at the specified locations.

h. Regulatory signage are those signs of standard City, County, State or other agency design that identify and/or designate regulated areas and zones, such as handicapped parking, fire zones, speed limits, crosswalks, no parking zones, etc. Placement of these signs shall be as appropriate using such standard designs, colors and materials, and shall be noted in the overall project development plans.

i. Temporary signs, other than project or contractor identification signs during construction, shall only be permitted on a case by case basis and with specific written permission from the Authority. Temporary signs shall be removed after 30 calendar days from placement.

j. Permitted signs upon the leasehold include wall and ground signs. One wall mounted sign, either illuminated or non-illuminated, may be placed on the exterior of the main building on a leasehold, facing the airside, and another facing the landside, if such building has access from both areas. Ground mounted signs may be placed between the main building and any public roadway, provided it meets all of the other requirements for placement noted herein.

k. Prohibited signs include, but are not limited to:

   i. Beacons or flashing lights.
   ii. Signs attached to light poles or regulatory or traffic signs.
   iii. Portable signs, except when used for a special event.
   iv. Signs mounted on vehicles or trailers when parked for the primary purpose of displaying an advertisement or business name.
   v. Signs that create a traffic or pedestrian hazard.
   vi. Signs erected off of the leasehold, unless approved in advance by the Authority.

l. Illuminated signs shall be illuminated in a manner that does not interfere with aircraft operations, or creates any glare or blinding effect of any nature for aircraft operations, air traffic control operations, vehicular roadways, or other adjacent leaseholds and structures. Light fixtures shall be of the type and nature that allows alignment and/or direction to be fixed and/or adjusted away from such areas. No signs shall be permitted to blink or flash. No electronic signs shall be permitted that are not owned or operated directly by the Authority for general advertising of the airport.

m. All lighted signs shall comply with all applicable Buncombe County Zoning Ordinances.

n. All signs shall be designed and constructed with access panels that facilitate easy access to the interior of the sign for routine maintenance. The design and access locations of each sign shall be depicted in the plans.

o. The Authority shall have the right, at its sole discretion, to reject any sign proposed to be erected or placed upon any leasehold or development upon the airport property for any reason whatsoever.

XXVII. Fuel Farm Facilities

a. Separate storage tanks shall be provided for each grade of fuel stored and dispensed on site. All tanks and equipment shall be labeled and color coded per FAA requirements, NFPA recommendations, and local building or fire code requirements. Dead man controls shall be provided for bulk fuel transfers between tanker trucks and the tanks, and when transferring fuel from the tanks to mobile refueler vehicles.

b. The minimum storage tank size for aviation fuels (100LL and Jet A) shall be 10,000 gallons for each tank and grade of fuel. Minimum storage tank size for diesel and unleaded automotive fuel shall be 500 gallons.

c. All above ground tanks shall be installed with secondary containment, consisting of either double walled steel tanks, or for single walled tanks, an impervious concrete secondary containment dike surrounding the tank(s) with a capacity of 110 percent of the volume of the largest single tank located within the containment wall. The area within the containment wall or around the tanks (if no containment wall exists) shall be designed to capture any accidental spill of the contents of the fuel storage tank(s) and or the delivery or receiving vehicle, in accordance with all EPA, NFPA, and other federal, state or local laws.

d. All tanks shall have an emergency shut off station located near the fuel tank(s) which is easily accessible, well-marked, and lit at night.

e. All surface drainage at or near the fuel facility shall be captured in a closed drainage system and directed through a fuel spill containment device, or oil/water separator device approved by the Authority.

f. Designated parking areas for mobile fuel trucks shall be designed with devices and measures to capture accidental spills from such vehicles without entering the storm drain system.

g. All fuel storage dispensing equipment shall be equipped with metering devices that maintain and produce accurate records of fuel dispensed or transferred between the tanks and fuel tankers or mobile refueler vehicles. Such metering equipment shall be calibrated and inspected by the State of North Carolina on the required schedule.

h. All fuel farms and storage facilities, including any single tank located upon the airport property, shall be secured with a standard chain link fence meeting all FAA requirements and a lockable access gate which shall remain locked at all times when unattended. Additionally, all such facilities shall have area lighting installed to provide for illumination for both nighttime safety and security and shall be maintained in working order at all times.

i. Fuel storage facilities may be required to be equipped with dry pipe or wet fire suppression systems if deemed necessary or required by local code.

j. Fuel storage facilities shall comply with all applicable requirements of NFPA, EPA, NCDENR/NCDWQ, and local regulations and requirements, including all adopted policies, practices and requirements of the Asheville Regional Airport Storm Water Management Plan and Spill Prevention Control and Countermeasures Plan.

k. Underground fuel storage tanks are prohibited.

XXVIII. Site Utilities

a. All utilities shall be constructed below ground, following all of the required specifications and design standards of the utility provider.

b. Utilities shall be located within the roadway right of ways or adjacent to or underneath private roads or driveways.

c. Each development lot shall connect to utilities utilizing existing or newly installed service pedestals, boxes, transformers, or other equipment provided by the utility provider. All such equipment shall be located outside of roadway line of sight areas and triangles.

d. If installed, landscape irrigation systems shall be designed so as not to directly throw or spray water on utility service equipment.

e. Utility meters shall be installed whenever possible in inconspicuous locations, but in areas that are accessible from outside the secured portions of the airport.

f. Temporary power poles or above ground service lines shall be removed prior to the issuance of a Certificate of Occupancy.

g. Utility stub-outs, valves, or other equipment which facilitates the easy extension of the utilities to service another adjacent location in the future may be required by the Authority, and shall be installed at the sole expense of the developer if required.

h. All electrical lines, cable, fiber optic, video, communication, or other underground utilities that cross beneath paved surfaces, shall be installed in an appropriately sized conduit that allows for a minimum of 100 percent additional capacity in the future.

i. Additional spare/unused conduits may be required to be installed at other certain locations beneath pavement as determined by the Authority, in order to provide access for future utility crossings at that location. Such spare conduits shall be installed at the sole expense of the developer if required. Spare conduits shall be available to the Authority if needed in the future for other utility crossings at the discretion of the Authority.

XXIX. Terminal Building Tenant Remodeling or Refinishing

a. No remodeling or refinishing of any exterior of interior portion of the passenger terminal building facilities shall be permitted without specific authorization from the Authority.

b. All colors and finishes for common areas shall be required to match existing colors and finishes which are standardized throughout the terminal building complex.

c. Individual finishes and designs for concession spaces consistent with that of the theme or finish of other similar spaces by the tenant shall be permitted with the approval of the Authority.

d. No structural changes to any walls, ceilings, floors, columns, or other components of the building shall be permitted without specific approval from the Authority.

e. No tenant signs shall be permitted to be installed or affixed upon any wall within a common use area, or where monitors or other displays are provided by the Authority for the display of tenant company logos or other information. No signs shall be affixed to any exterior or interior wall without specific permission from the Authority.

f. The Authority reserves the right to require all tenants to utilize matching sizes, colors, configurations and presentation methods for free standing signage on stanchions or frames for legally required signage.

g. Cable runs or installation of other communication or utilities shall be done at the direction of the Authority utilizing existing chases, conduits, cable trays, or other devices and accesses installed specifically for such purpose. No holes or accesses shall be cut, drilled or installed without permission from the Authority. All cabling or other wiring pulled or installed in any location by any tenant shall be removed upon that tenant's vacating of its leased space within the terminal building, unless otherwise approved by the Authority.

h. No equipment of any nature shall be installed that requires significant power draw, causes system overloads, or has other requirements that are either in excess of the existing building systems, or has a noticeable, significant, or otherwise unwanted impact on building utility expenses, without the specific permission of the Authority.

i. All remodeling or refinishing shall comply with applicable sections of the North Carolina State Building Code. Depending upon the extent of the remodeling, building permits or other smaller stand-alone permits may be required. Nothing in these Development Guidelines is intended to supersede or pre-empt state building code standards.

j. All new telephone, data, and other information technology related hardware, software and equipment shall comply with the Greater Asheville Regional Airport Authority Telecommunications Infrastructure requirements contained in **Appendix 1** herein.

XXX. Tenant Structure Remodeling or Refinishing

a. Buildings and structures owned by the Authority and leased to and occupied by tenants or their sub-tenants shall not be remodeled or refinished in any manner whatsoever without advance permission from the Authority. Any such remodeling or refinishing project of an Authority owned building or structure shall follow all of the same requirements and conditions identified in these Guidelines, except that finishes shall match the existing finishes of that particular building or structure, unless otherwise approved by the Authority.

b. No tenant owned building or structure shall be remodeled or refinished without first submitting plans and specifications for such remodel or refinish to the Authority for review and approval in advance.

c. All exterior remodeling or refinishing shall adhere to the requirements of these Development Guidelines as if the building or structure was being constructed new.

d. All remodeling or refinishing shall comply with applicable sections of the North Carolina State Building Code. Depending upon the extent of the remodeling, building permits or other smaller stand-alone permits may be required. Nothing in these Development Guidelines is intended to supersede or pre-empt state building code standards.

e. All new telephone, data, and other information technology related hardware, software and equipment shall comply with the Greater Asheville Regional Airport Authority Telecommunications Infrastructure requirements contained in **Appendix 1** herein.

XXXI. Tenant Pavement Maintenance and Repair

a. After initial construction, the developer or tenant responsible shall routinely carry out programs of maintenance and repair to all paved surfaces in order to maximize the pavement useful life, and to minimize the risk of injury to persons or damage to aircraft due to failing pavements.

b. Major repairs, including pavement overlays, re-construction, remove and replace, milling, and other methods, shall be coordinated with and approved in advance by the Authority. All such work shall be carried out in a manner that provides for a section of pavement that meets or exceeds the original design of the pavement when constructed, and which meets the needs of the pavement given its current use.

Asheville
REGIONAL AIRPORT

Airport Development Guidelines

Exhibits & Appendices

Asheville
REGIONAL AIRPORT
Take the easy way out.

EXHIBIT A

Airport Development Checklist

This form shall be completed and signed by the appropriate Asheville Regional Airport representative prior to developer, tenants, or contractors application for a building permit. Developer/Tenant/Contractor shall transmit this completed form to the Buncombe County Planning/Permits & Inspections Department at the time of building permit application.

DEVELOPER/TENANT: _____ PROPERTY: _____

Description	Complete	Initials
1. Issuance / Review of Initial Documents:		
a. Lease Sample	☐	_____
b. Minimum Standards	☐	
c. Airport Development Guidelines	☐	
d. Airport Layout Plan	☐	
2. Site Plan Approval	☐	_____
3. Site Design & Building Plans Approved:		_____
a. Site Configuration	☐	
b. Colors	☐	
c. Signage	☐	
d. Landscape	☐	
e. Aircraft Paved Areas	☐	
f. Auto Parking & Driveways	☐	
g. Security Systems	☐	
h. Setback Requirements	☐	
i. Storm Drainage	☐	
4. Utility Companies Coordination	☐	_____
5. FAA Aeronautical Study Submitted, Approved or Pending	☐	_____

For Remodel & Building Upgrade Projects Only: Completion of this section indicates review and approval of appropriate plans/details of the noted project by the Greater Asheville Regional Airport Authority.

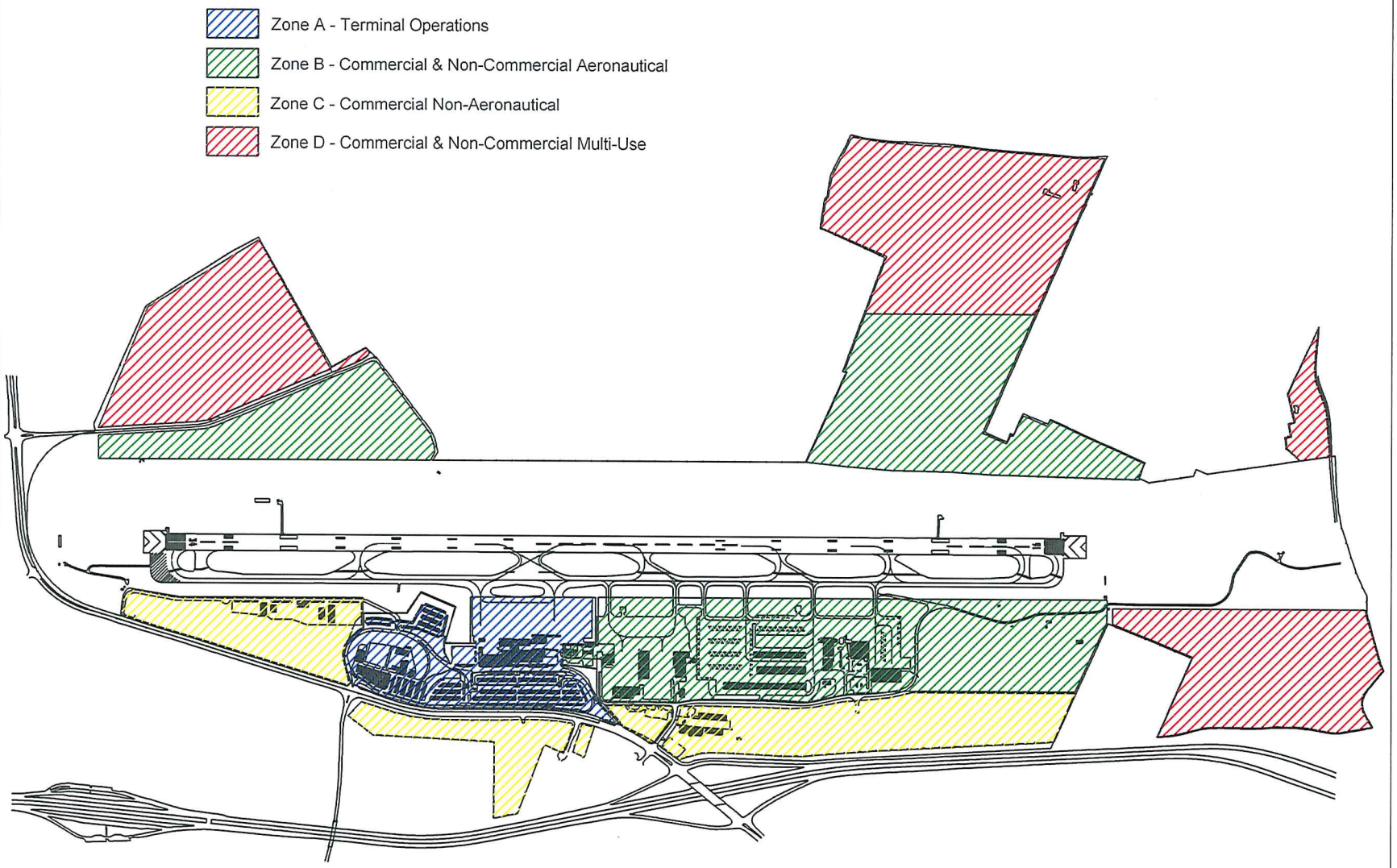
Contractor: _____ Project: _____

Location: _____ Initials: _____

Airport Authority Approval:

_____
Authorized Representative Date

_____
Title



Asheville Regional Airport

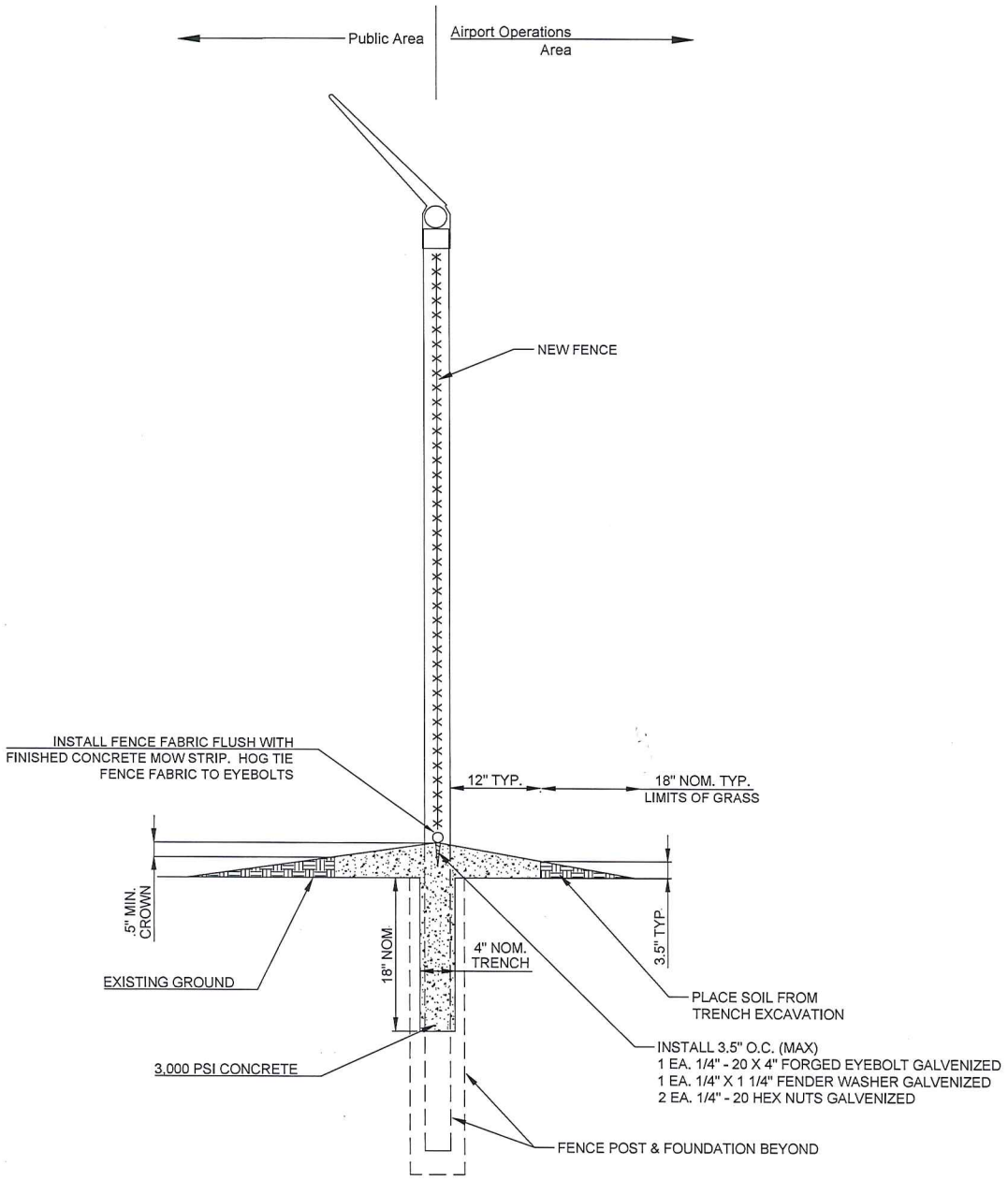
Airport Development Zones

Exhibit B

Asheville REGIONAL AIRPORT

8/1/2012

This Airport Development Zone Map relates to types of activities authorized on different portions of the Asheville Regional Airport, and does not supersede any official zoning map or zoning requirements of Buncombe County, Henderson County, or the City of Asheville, NC.



Asheville Regional Airport

Mow Strip / Intrusion Barrier Detail

EXHIBIT C

Asheville REGIONAL AIRPORT

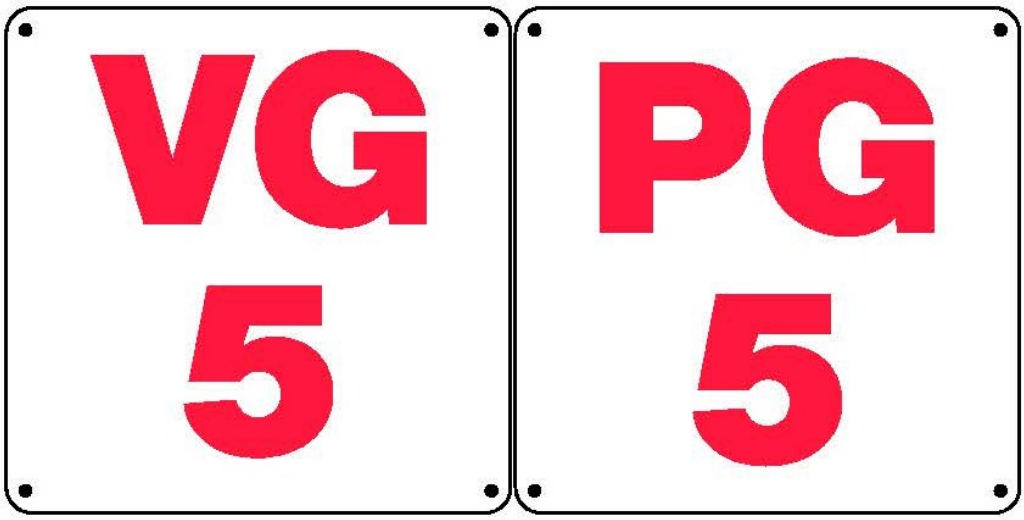
8/30/2012

Exhibit D

Vehicle Gate Sign
18”x12”
.080 Gauge Aluminum
1 5/8” Reflective Red Lettering (Large)
1 ¼” Reflective Red Lettering (Small)
White Background

Pedestrian Gate Sign
18”x12”
.080 Gauge Aluminum
1 5/8” Reflective Red Lettering (Large)
1 ¼” Reflective Red Lettering (Small)
White Background

Exhibit E

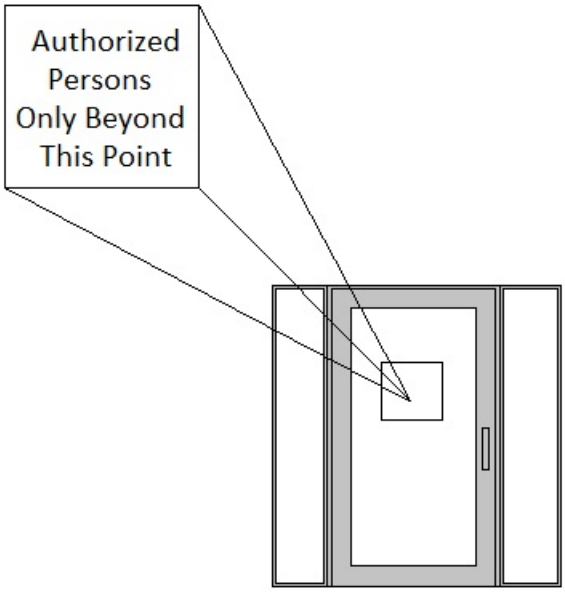


Gate Number Sign
10”x10”
.080 Gauge Aluminum
3 3/8” Reflective Red Lettering
1” Stroke
White Background

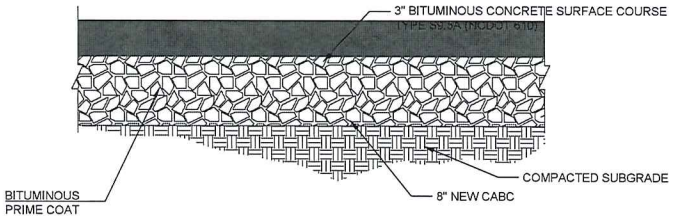
Building Street Address Sign
18”x12”
.080 Gauge Aluminum
6” White Lettering
Teal Green Background

Exhibit F

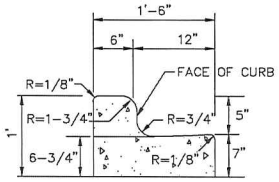
Perimeter Fence Sign
24”x24”
.080 Gauge Aluminum
2” Red Lettering
1” Black Lettering
White Retro-Reflective Background



Building Door Sign
9 ½” x 6 1/4“
Vinyl Lettering or Placard
1” Upper Case Lettering
Contrasting Color



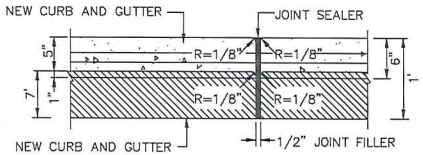
NEW PAVEMENT SECTIONS



**NOTE:

FOR REVERSE CURB AND GUTTER MODIFY GUTTER AS TO DIRECT FLOW OF WATER AWAY FROM CURB AT 1/2" PER FOOT.

(1'-6") CONCRETE CURB AND GUTTER



TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

GENERAL NOTES:

CONTRACTION JOINTS SHALL BE PLACED AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.

JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.

CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED.

ALL CONSTRUCTION JOINTS, SHALL BE FILLED WITH JOINT FILLER AND JOINT SEALER.

EXPANSION JOINTS SHALL BE SPACED AT 90' INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS.

CURB & GUTTER DETAILS

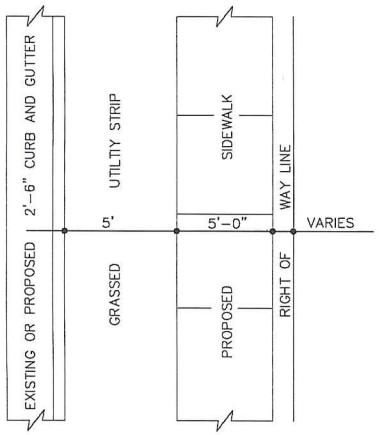
Asheville Regional Airport

Pavement Section & Curb & Gutter Details

EXHIBIT G
PAGE 1

Asheville REGIONAL AIRPORT

8/23/2012

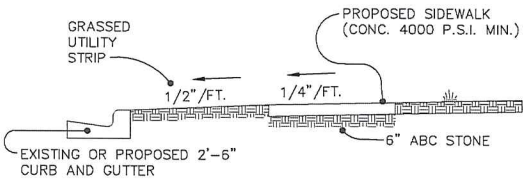


PLAN VIEW

NOTES:

1.) TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.

2.) ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.



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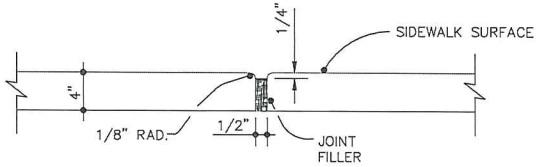
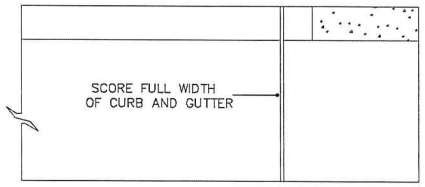


TRANSVERSE EXPANSION JOINT

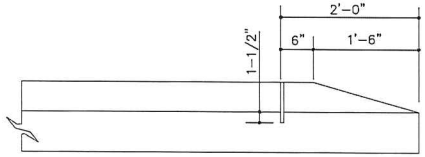
NOTE:

1. ALL CURB & GUTTER SHALL BE 1'-6".

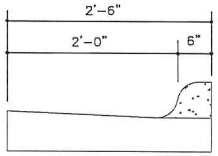
STANDARD CONCRETE SIDEWALK



PLAN



FRONT



END

NOTE:

1. ALL CURB & GUTTER SHALL BE 1'-6".

STANDARD METHOD OF ENDING CURB & GUTTER

Asheville Regional Airport

Standard Sidewalk Details

Standard Method Of Ending Curb & Gutter

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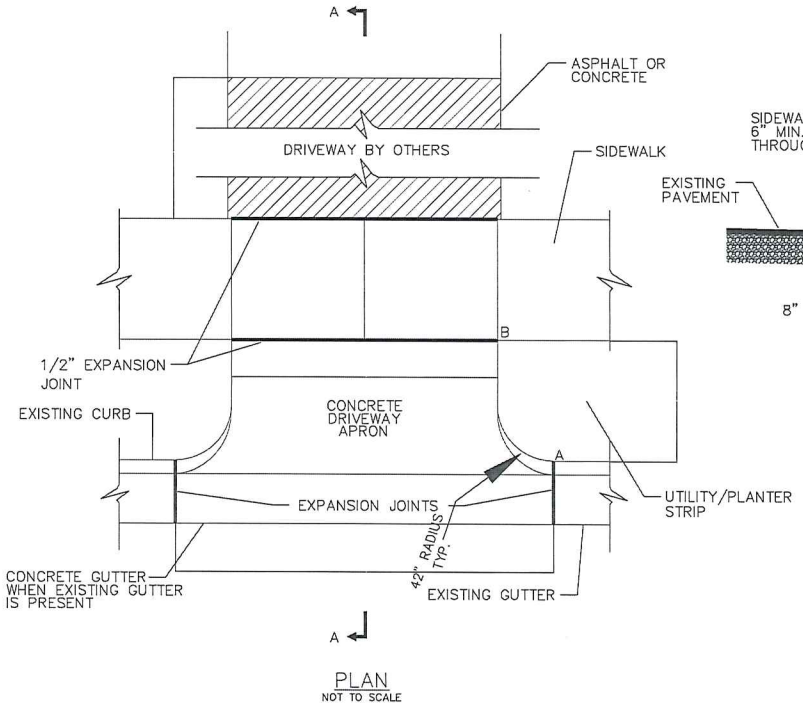
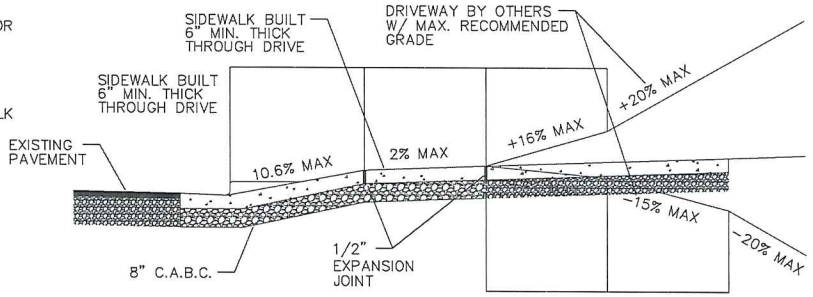


PLAN
NOT TO SCALE



SECTION AA
NOT TO SCALE

NOTES:

1. RESIDENTIAL DRIVEWAYS–6" CABC WITH 6" CONCRETE FOR FULL LENGTH & DEPTH OF DRIVEWAY APRON
2. CURB SHALL BE TAPERED TO FINISH FLUSH WITH SIDEWALK.
3. RADIUS SHALL NOT ENCROACHED ON ADJACENT PROPERTIES.
4. SIDEWALK SECTION SHALL NOT BE REQUIRED ALONG STREETS WHICH ARE NOT PLANNED FOR SIDEWALK.
5. DRIVEWAY APRON MUST EXTEND A MINIMUM OF 10' FROM ROADWAY EDGE WHERE SIDEWALK IS NOT PRESENT
6. WHERE SIDEWALK IS OR TO BE INSTALLED, DRIVEWAY APRON MUST EXTEND A MINIMUM OF 10' PAST SIDEWALK.

NOTES TO CONTRACTOR:

1. RESIDENTIAL DRIVEWAYS TO BE 12' TO 18' IN WIDTH.
2. COMMERCIAL AND INDUSTRIAL DRIVEWAYS TO BE A MAXIMUM OF 36 FEET WIDE.
3. ALL CONCRETE SHALL BE A MINIMUM OF 4000 P.S.I.
4. ELEV. "B" MINUS ELEV. "A" EQUALS 1 INCH.

STANDARD DRIVEWAY APRON

Asheville Regional Airport

Standard Driveway Apron

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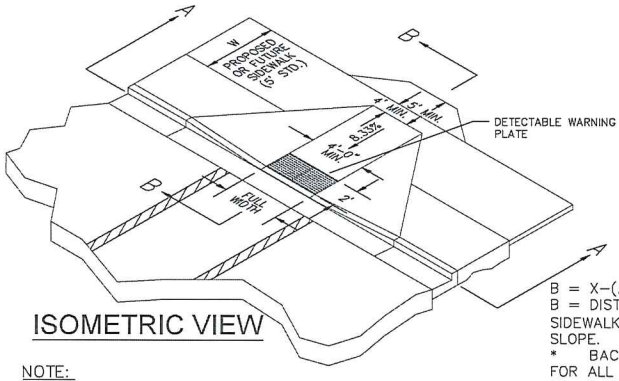
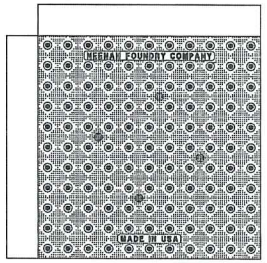


ISOMETRIC VIEW

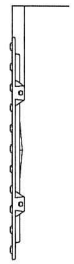
W	A	W+A+9"	X	B
5'	0.0'	5.8'	5.8'	5.0' *
6'	0.0'	6.8'	6.8'	6.0' **
7'	0.0'	7.8'	7.3'	6.5' **
8'	0.0'	8.8'	7.3'	6.5' **
5'	2.0'	7.8'	7.8'	5.0'
5'	2.5'	8.3'	8.1'	4.8'
5'	3.0'	8.8'	8.3'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4.0'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9'	3.1'

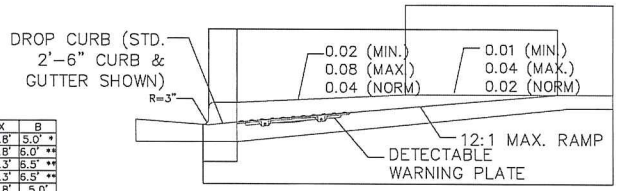
B = X−(A+9")
B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.
* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.
** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.02.

NOTE:
USE NEENAH FOUNDRY COMPANY R−4984 DETECTABLE WARNING PLATE OR EQUAL AND MUST COMPLIES WITH ADAAG (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES) AND ARCHITECTURAL BARRIER ACT 1968 GUIDELINES.

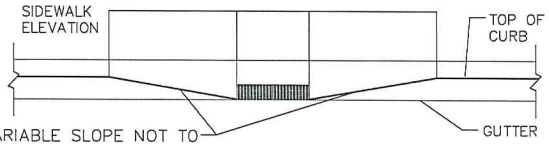


CAST IRON DETECTABLE WARNING PLATE

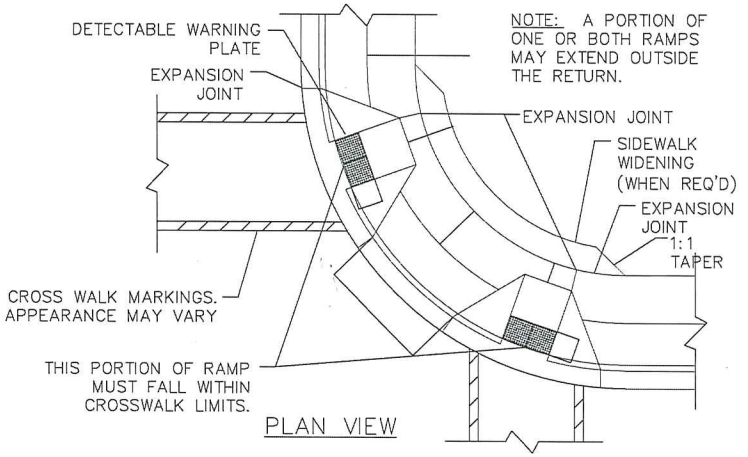




SECTION B−B



SECTION A−A



PLAN VIEW

NOTE:

1. **DETECTABLE WARNING PLATE TO BE POWDER-COATED FEDERAL YELLOW.**

STANDARD WHEELCHAIR RAMP

Asheville Regional Airport
Standard Wheelchair Ramp

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Appendix 1

Telecommunications Infrastructure Requirements

I. GENERAL

The following minimum specifications and requirements shall be utilized by any developer, tenant, or entity undertaking construction, re-modeling, or finish out of any spaces located with the Asheville Regional Airport Terminal Building Complex, or any other Airport Authority owned building or structure.

A. References – The design and construction shall comply with applicable requirements of the following standards. Where compliance is required, the latest standard in effect shall govern. In addition, the design and construction shall comply with applicable local codes and requirements.

B. American National Standards Institute (ANSI)

i. ANSI/NFPA 101, Life Safety Code
ii. ANSI/NESC, National Electrical Safety Code

C. Electronic Industries Association (EIA)

i. ANSI/TIA/EIA-568-B.1, Commercial Building Telecommunications Cabling Standard – General Requirements
ii. ANSI/TIA/EIA-568-B.2, Commercial Building Telecommunications Cabling Standard – Balanced Twisted-Pair Cabling Components
iii. ANSI/TIA/EIA-568-B.3, Optical Fiber Cabling Components Standard
iv. ANSI/TIA/EIA-569A, Commercial Building Standard for Telecommunications Pathways and Spaces

D. Building Industry Consulting Services International (BICSI)

i. ANSI/NECA/BICSI-568-2006, Standard for Installing Commercial Building Telecommunications Cabling

II. DEFINITIONS

A. Backbone Cabling: The cabling that distributes from the entrance facility (i.e., Terminal, maintenance building, etc.) to the equipment room (Communications Room), and between buildings.

B. Backbone Pathways: The portion of the pathway systems that permits the placing of backbone cabling between the entrance location and all cross-connect points within a building.

C. Cable Tray: A ladder, trough, or pine system intended for the support of telecommunications cabling.

III. FIBER OPTICS – STANDARDS FOR FIBER OPTICS

A. Fiber optic cable shall be a minimum 24 strand single mode, all-dielectric fiber optic cable. The fiber optic cable shall be specifically designed for outdoor use or indoor/outdoor use with either a tight buffer or loose tube construction. Single mode fibers shall be graded Index, solid glass waveguides with a nominal core diameter of 8.3 microns and a nominal cladding diameter of 125 microns. The strands shall be grouped in four six-strand bundles. Bundles shall be contained in an overall polyethylene outer jacket. The fiber optic cable shall conform to EIA/TIA-586-B.3.

B. Fiber Optic Cable Minimum Performance Requirements. The fiber shall have dual transmission windows centered at 1310 and 1550 nanometer wavelengths. The attenuation at 1310 nanometer shall be 0.4 db/km or less and the attenuation at 1550 nanometer shall be 0.25 db/km or less. Single mode fibers shall be Class Iva.

C. Fiber Optic Cable Splice. New fiber optic cable from the facility shall be fusion spliced to existing Terminal campus backbone fiber optic cable for purposes of ARAA controlled Access Control, CCTV and/or Telecommunications and data.

D. Fiber Optic Splice Enclosures. Fiber optic splice enclosures shall be specifically designed for outdoor use. Enclosures shall be complete with mounting hardware and splice trays. Enclosures shall be provided with a minimum of six splice trays and be able to accommodate a minimum of five pass-through bundles. Each splice tray shall accommodate twelve fusion splices.

E. Fiber Optic Cable Terminations. At each Communications Room, the fiber optic cable shall be terminated either by fusion splicing to a pre-connector cable assembly/breakout kit or by using field installable SC connectors. Field installable SC connectors and connectors on the cable assembly/breakout kit shall be SC type connectors with ceramic ferrule material and have a maximum insertion loss of 0.5db. Cable assemblies/breakout kits and field installable connectors shall be in accordance with ANSI/TIA/EIA-568-B.2.

F. Fiber Optic Cable Installation.

i. Fiber optic cable bends shall have a radius of not less than the manufacture's recommended bending radius during and after installation.
ii. A load-tension measuring/limiting instrument shall be used during installation to ensure that the pulling tension on the cable does not exceed the installation tension value specified by the manufacturer.
iii. Thirty feet of fiber optic cable slack shall be provided at all hand holes. Fiber optic cable shall be routed along the walls of the hand hole and be secured to the cable rack hooks. Fiber optic cable shall be routed as not to exceed the manufacture's recommended bending radius during the installation and final placement.
iv. Fiber optic cable shall be continuous between end points. Splicing is not allowed except to the backbone cable.

G. Fiber Optic Cable Testing.

i. End to end attenuation media tests shall be performed on all fiber strands with the fiber optic cable on the reel at the job site prior to installation. Tests shall be made in both directions at both 1310 and 1550 nanometer wavelengths. When reel test results indicate that the fiber optic cable does not comply with the factory test reports, manufacturer shall be contacted for arrangements of replacement at no cost to ARAA.
ii. End to end attenuation media tests shall be performed on all fiber strands after installation has been completed. Typically, testing shall be from the new facility to Communication Room 101 and vice versa.
iii. Attenuation tests shall be performed in accordance with EIA/TIA-568-B.3.
iv. Two hard copies and one electronic copy of approved test reports shall be turned over to ARAA prior to project closeout. Approved test reports shall be signed and dated by contractor (entity performing tests) and shall be signed off by design engineer as part of the project final inspection process.

IV. PREMISES DISTRIBUTION

Facilities on the Airport property shall be designed and constructed with a telecommunications infrastructure to accommodate telecommunications needs throughout the facility. The following section will address the premises distribution portion of the telecommunications infrastructure. Premises distribution refers to all telecommunications components within a facility. This includes backbone cabling and pathways, horizontal cabling and pathways, cross-connects and connecting hardware.

A. Telecommunications Rooms. Facilities shall have as a minimum one dedicated room to house telecommunications equipment, horizontal and backbone cabling and connecting hardware. The telecommunications room shall not be used to serve any other function, such as storage or to house electrical and mechanical equipment.

B. Multistory facilities shall have a minimum of one telecommunications room per floor.

C. Telecommunications rooms in multistory facilities shall be vertically aligned.

D. Multiple telecommunications rooms shall be required on a floor if the cable length between the horizontal cross-connect (path panel) in the telecommunications room and the furthest telecommunications outlet exceeds 295 feet.

E. Telecommunications room should not be located where there is a threat from flooding. For example, avoid locations adjacent to restrooms and kitchens.

F. The telecommunications room size shall be a minimum of 12’ in length and 8’ in width.

    i. This size accommodates three racks in the desired straight-line configuration. Any deviation from this size and layout shall be specifically proposed to and approved by ARAA IT. Additional racks can generally be supported by adding two feet to the length of the room per rack.

G. Provide a minimum of 3’-6’ clearance in front of wall mounted cross-connect fields and equipment.

H. Provide a minimum of 2’-8’ clearance in the front and back of floor-standing racks, frame and cabinets.

I. Doorways. Telecommunications room doors shall be fully opening, lockable and a minimum of 36” in width by 80” in height. Doors shall open outward if allowed by fire code). If fire code restricts door from opening outward, the door shall have hinges that allow for the door to be removed. Door sills and center posts are not allowed.

J. Dust and Static Electricity. Telecommunications room floors shall not be carpet. Floor shall be tile or other hard-finished surface. Floors and walls shall be treated with paint or coating that reduces static electricity and dust.

K. Environmental Control. Telecommunications rooms shall have heating, ventilation and air conditioning that will maintain a continuous and dedicated control (24/7/365) and a temperature range of 64F to 75F with relative humidity range of 30% to 50%. A positive pressure shall be maintained with a minimum of one air change per hour. The air-handling equipment must dissipate the heat generated by active devices and satisfy applicable building codes. A typical indoor facility would have a separate controllable zone (cooling only and year round).

L. Ceilings. False ceilings shall not be permitted. The minimum ceiling height shall be 8’6”.

M. Fire Protection. Telecommunications rooms located in a building with an automatic sprinkler system. Sprinkler heads within telecommunications rooms shall have wire cages installed to prevent accidental operation.

N. Telecommunications rooms shall have a minimum one-hour fire rated wall. Refer to NFPA 101 (Life Safety Code) for conditions that require a higher fire rated wall.

O. Fire stops shall be provided when fire rated walls and floors are penetrated. All materials that are used to seal penetrations in fire rated walls and floors shall be listed for the specific application and comply with applicable UL requirements.

P. Automatic detection equipment shall be installed to provide early warning of fire. The equipment used shall be listed smoke detection-type system and shall be installed and maintained in accordance with NFPA 72, National Fire Alarm Code.

Q. Provide listed portable fire extinguishers of the carbon dioxide type or a halogenated agent type in each telecommunications room.

R. Piping, ductwork, mechanical equipment or power cabling not serving the telecommunications rooms shall not pass through the telecommunications room.

S. A cable tray shall be installed in the telecommunications room over racks and around room perimeter to allow for easy cable routing inside the room.

T. Overhead pathway entries (trays, conduits, trunks, etc.) into the telecommunications room shall protrude into the room a distance of 2" at a minimum height of 8'.

V. TELECOMMUNICATIONS ROOMS GROUNDING AND ELECTRICAL REQUIREMENTS

A. Racks shall be grounded with #6 AWG insulated green conductor run to the ground bus bar in the telecommunications room.

B. One ground bus bar shall be provided in each telecommunications room. Ground bus bar shall be 24" x 4" x ¼" thick and shall be installed with support brackets and insulators.

C. Ground bus bar shall be connected to the facility ground grid/counterpoise.

D. When possible, the telecommunications room shall be fed from a panel board without large motor loads or high harmonic loads.

E. When possible, one 30-amp, 120 volt locking type outlet (NEMA L5-30R) shall be provided per rack mounted UPS. Outlet shall be mounted on cable try directly above the equipment rack.

END