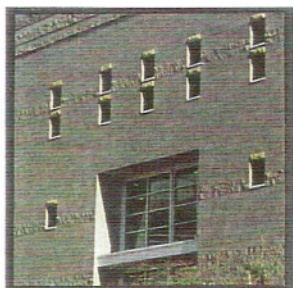


Building Development Design Theme
Desert Tech Architectural Guidelines

Williams Gateway Airport



Guidelines Consultant:

Abell & Associates
ARCHITECTS, LTD.

Architecture • Landscape Architecture • Planning & Urban Design



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W I L L I A M S G A T E W A Y A I R P O R T

Preface The following six pages of architectural guidelines are intended to provide an overview for quality building development and building renovation at Williams Gateway Airport. The guidelines were developed in response to the obvious question, "What is Desert Tech?" These architectural guidelines must be used in concert with other WGA and City of Mesa development guidelines, regulations, and ordinances.

Additional information can be obtained within the WGA Design Review Committee informational packet.

WGA Development Plans Williams Gateway Airport (WGA) is developing as an aerospace center with aircraft maintenance, modification and manufacturing, air cargo operations and flight training. WGA is a reliever airport to Phoenix Sky Harbor International Airport. An association may be established to manage the maintenance and administration costs of landscaped open space.

City of Mesa Zoning City of Mesa M - 1 DMP zoning known as: Limited Industrial with a Development Master Plan. The DMP allows some variations of certain requirements within the City of Mesa Zoning Code [see the WGA Design Guidelines for details]. Special situations may require additional processing through the City of Mesa.

Signage & Landscape A comprehensive sign plan and landscape design guidelines can be found in the Williams Gateway Airport DRC information packet.

New Development Processing The Williams Gateway Airport's [WGA] Design review Committee [DRC] reviews all development on airport property. The WGA's Design Theme brochure should be reviewed for basic standards of design and additional detailed information can be obtained from WGA's Design Guidelines. Submittals to the City of Mesa will be with the assistance of the Airport.

City of Mesa processing will be required for the following building sizes and types:

- Greater than 20,000 sq ft - fronting onto Sossaman Road - commercial, office, restaurant or retail uses - submit to the City of Mesa Design Review Board.
- Greater than or equal to 35,000 sq ft - fronting on Sossaman Road - submit to the City of Mesa Design Review Board.
- Greater than 100,000 sq ft - submit to the City of Mesa Planning & Zoning Board and City Council.



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Massive, Middle, and Human Scale



- ▲ A progression of freestanding pylons, screen walls, metallic shade canopies and a layering of building masses creates a meaningful transition from human scale to industrial scale.

Because of the the sheer size of many existing buildings and the potential for many new users within the airport requiring large structures, great design skill will be required to modulate between the starkness of massive scale and the need for comfort of human scale.

In the tradition of historical southwestern architecture, the use of "mid-range proportion elements" such as oversize, bold forms at building entries, or employing deep recesses or projection elements as building accents can span the gap between human scale and massive, industrial building scale.

To ensure approval by the Williams Gateway Airport Design Review Committee [WGA DRC], it is recommended that stand alone elements constructed of masonry or concrete achieve depth and mass whenever possible. Examples include free-standing walls, colonnades, signage pylons, and other architectural elements.

Layering and Stepping of the Building Form



- ▲ A recessed entry, a shaded colonnade 'carved from' the structure, and horizontal building skin accents all contribute to layering and 'breaking down' the bulk of large building masses.

To offset the monotony of large buildings and, at the same time, to evoke our southwestern architectural heritage, Desert Tech guidelines mandate the use of layering and stepping back of building forms.

By developing a hierarchy of form and space, the interior functions of office, lobby, receiving / shipping, and warehouse / operations can be an exterior expression of interior function while helping transition the scale of large buildings down to human sized elements.

Development schemes that exhibit abrupt shifts in scale are less likely to secure approval from the WGA DRC unless such bold jumps in scale are planned and integrated as an overall design strategy and display merit as a design concept with quality of materials and quality of proportioning.

Likewise, simply employing a stepping or layering approach will not ensure approval without attention to clarity and expression of the layering and stepping design development; thin "stagefronts", or false hierarchies without corresponding interior volumes are discouraged.



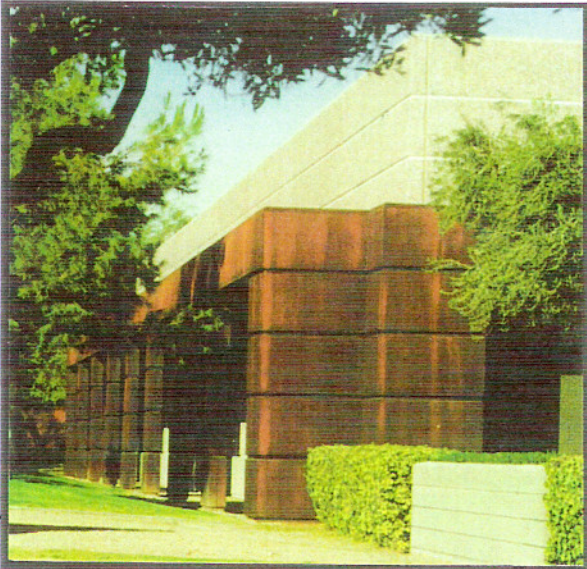
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W I L L I A M S G A T E W A Y A I R P O R T

Use of Desert Tech Materials; Too Little, Too Much



▲ Three straightforward building material choices of exposed aggregate concrete tilt-slab, a colonnade of weathering 'Corten' steel, and center-score grey concrete masonry walls lend elegant simplicity to this structure.



▲ Repetitive combination of polished metal, stone masonry, integral color concrete panels & recessed glass working together in a cohesive arrangement.

The material palette adopted for WGA Desert Tech recognizes a balance between economy and quality expressions of building development. It is understood that in this profit-driven market segment that new or renovated buildings clad predominately in prestige materials of Arizona sandstone and copper would be rare. Likewise, it is understood that many development proposals will show approved economy materials such as metal building siding or appropriate stucco finish as the dominant building skin, but will require excellence in design in their application to secure approval. On large buildings, a majority of economy materials is expected, but punctuated and well articulated use of prestige materials to 'warm' and ameliorate the building surfaces must be a strong accompanying presence.

Each development proposal should seek out highly qualified architects and design services that will utilize the economies of scale inherent in large building renovation and new construction while maximizing the expression of quality development and corporate character. The WGA Architecture Guidelines are intended to help support design professionals reach a natural balance between quality treatments and economy materials that in no way intended to replace the need for quality architectural services and experienced professional design.

The Williams Gateway Airport Design Review Committee [WGA DRC] will approve only those development proposals that show a balance and harmony of the approved building material palette. Simply using one or two materials on the list [or worse, using a little bit of all the listed materials !] will not result in WGA DRC approval.

It is recommended that each design submittal express an overall thematic development in the use of materials on the Desert Tech approved list. For example, if brushed aluminum is selected as an accent material to be played against an overall theme of split face masonry, this interplay should be expressed thematically throughout the entire project: in the major corporate identity signage, at the entry portico or canopy, at spaced intervals throughout the exterior envelope of the building, and, perhaps, even continuing into the interior lobby area.

The token use of prestige materials in just one or two locations as an accent against a 'sea' of budget oriented building systems will be discouraged and will likely be rejected at the WGA design review submittal. A thematic approach throughout the project is not the only design approach, however. If the use of prestige materials is expanded beyond thin tokenism to become a grand gesture of a quality building material in a few strategic locations, a correct balance between quality and economy could also be achieved.



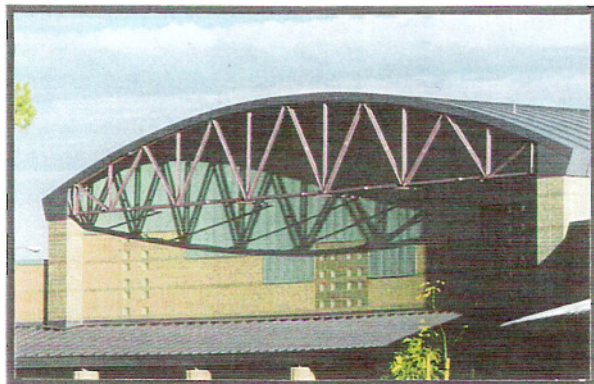
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High Technology and Form



▲ Shallow arc roof form with 'flying truss' exemplifies high technology while casting an interesting, ever changing shadow-pattern.



▲ Metallic clad entry pylons add visual interest while the scale of office uses eases the transition to the larger bulk of industrial scale at rear.

WGA Desert Tech guidelines are intended to create a family of structures within the overall development that express not only the traditions of materials and colors of the desert southwest, but also the emergence of the Phoenix Metro area at the leading edge of technology. Expression of "High Technology" in the architecture of each development proposal is essential to the overall success of the "Desert Tech Theme".

Building designs that express technology in a harmonious balance with southwestern materials and colors will be most likely to receive timely approvals without the need for revisions and resubmittals.

A strong form already present in the inventory of existing structures at WGA is the "Shallow Arc Roof Form" that has been adopted as a 'signature form' within the Desert Tech guidelines. This unifying element lends itself easily to new development schemes in its application to long span roofs, short span entry canopies, and corporate signage pylons. While the use of this form in many different variations is encouraged, a restrained and appropriate use of this element is paramount. This distinctive shape is to be integrated into the building development's form and material palette, rather than "tacked on". Overuse of this form as a repetitive thematic element will be discouraged; selective and restrained use of this signature form will be encouraged.

Other expressions of high technology and form that are encouraged are ones that have real function and performance at their core:

- Metallic canopies or 'eyebrows' over window openings for solar control.
- Truss work, structural steel shapes, steel brackets, diagonal whalers, or functioning structure honestly displayed.
- Airfoil shapes used for shade / raincover.
- Shapes or forms that are the honest and logical outcome of structural components manufactured for ease of installation, erection, economy of weight, and the like.
- Stand alone elements such as high tech. light poles and bollards.

Examples include structural strengthening gussets lightened by circular punch-outs, crenelated steel sections, knurled or embossed metal panels, exposed allen head bolts, and most any manufactured element honestly expressed.



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Shade, Shadow & Rhythm



▲ Repetitive use of forms and materials to develop a distinctive pattern of metal accents, articulated solids, shade and shadow.

While the architectural expression of Desert Tech is found in the materials, textures and surfaces selected, the spirit and emotion of Desert Tech will be captured in the shade, shadow, and depth of space perceived in the building development.

Strong desert light begs for strong shapes and recesses to model and capture the light. In addition to deep recesses, a significant element of Desert Tech will be the manner in which technological elements and architectural accents cast distinctive shadows on the ground plane or on adjacent building surfaces.

The use of artificial lighting by night to achieve the same effect is encouraged. While airside lighting applications need to conform to FAA Guidelines, dramatic uplighting can be an excellent method of achieving corporate identity and distinctive character while showcasing the technological elements of the architecture.

Repetition & Artificial Infinite One, Two, Three ... Many.



▲ Simple repetition of columnar elements results in an expressive and functional entry device.

The use of repetitive elements in developing the architectural expression is encouraged. Southwestern desert architecture has a great tradition of repetition in vegas, latillas, and colonnades that shade and shelter the building mass while providing the pleasing rhythm and repetition of human scaled elements.

Human perception of repetitive elements is such that after a certain number of repetitions [widely held by many to start at 7 or 9 repetitions], the mind stops counting and shifts to the 'uncountable mode' and artificially registers the infinite. For large industrial buildings, this device can be employed to break down the sheer bulk of the building and modulate large, unbroken expanses of building skin. Additional examples include the use of repetitive roof dormers to let in natural light [and to possibly conceal and gang-up roof vents and penetrations], the use of repetitive wall vents for mechanical exhaust or fresh air intake, the repetitive use of windows, structural pilasters, or roof overhang brackets. All of the above elements are conducive to expressions of technology as well.

The Use of Metal

The use of metal to articulate the Desert Tech theme will likely fall into two broad categories: 1] Premanufactured and prefinished building system components, and 2] High quality, high finish architectural accent elements of copper, stainless steel, and other prestige metals. All metal finishes must be incorporated into the structure in such a way as to pose no glare or reflection that is hazardous to flight operations.

In the first category, it is expected that the use of economy premanufactured building panels will be trimmed, mounted, or



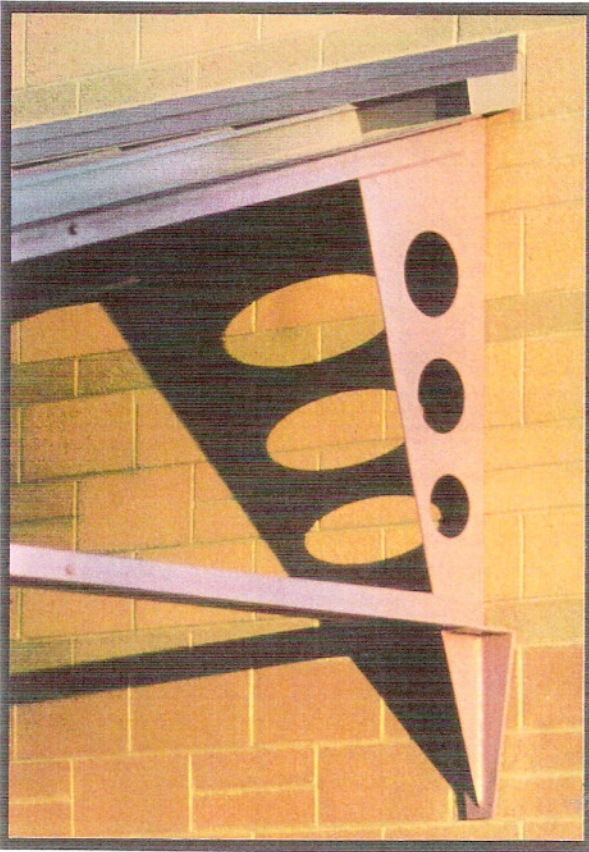
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The Use of Metal



▲ Expressive gusset plate of metal shade canopy boldly projects shadows onto multi-colored and patterned masonry building face.

detailed in such a way as to elevate these treatments beyond the usual pre-engineered effect of 'kit' type buildings. The use of non-standard fascia, larger overhangs, epoxy colored 'tech' fasteners, copper or brushed aluminum sill channels, gutter, drain pipe leaders, and jamb & head pieces would all be examples of exploiting the economies of these standard building panels while expressing these components in a Desert Tech fashion.

Consider using these standard building panels in new ways to break the look of economy systems; the use of non-standard metal panel profiles, horizontal applications of siding, and the strategic application of color are all suggestions for customizing the appearance of pre-engineered structures.

In the second category, there are many examples and opportunities to use high quality, high finish metal components to achieve the Desert Tech objective:

- Industrial sheet metal with raised lugs in galvanized or aluminum [such as "tread brite"], or industrial perforated metal panels used as building skin, or used as overhead shade panels.
- Steel tubes, angles and other standard shapes used as trellis elements in copper, stainless steel, galvanized, brushed aluminum or weathered 'corten' steel finishes.
- Light fixtures on brackets mounted to the building face or on free standing sculptural standards.
- Building accents such as diagonal struts [whalers], cross bracing, handrails, exposed stair towers, expressive entry canopies, skylights, and window shade canopies.

The Use of Masonry



▲ Arizona sandstone, rich in color and texture, enhances wall surfaces and ground planes.

The expressive use of masonry materials will be a major contributor to the southwestern flavor within the Desert Tech theme. Just as the expressive use of metal contributes to the feeling of technology, the expressive use of local masonry materials such as split face concrete masonry, hollow brick, plain CMU, 'Founders Block', and Arizona sandstone will infuse our desert heritage of unit masonry into each building development.

It is highly recommended that all masonry materials be integrally colored and constructed with colored mortar. Arizona sandstone is available widely in the marketplace as 'gauged tiles' lending to thinset wall applications with good economy. Even better, special merit will be given by Williams Gateway Airport Design Review Committee [WGA DRC] in approvals for actual stone construction of roughly 4" wythe dimension [known to quarriers as 'snap cuts'] laid in coursed ashlar or random ashlar patterns. WGA DRC encourages the use of darker sandstone colors for the Desert Tech theme.



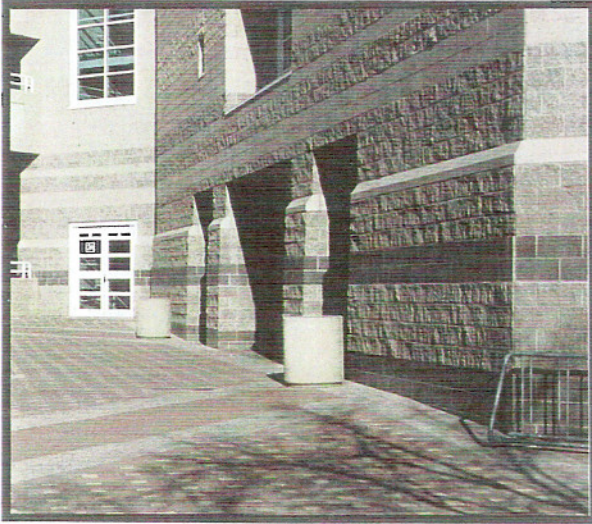
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The Use of Masonry



- ▲ Excellent visual interest is achieved in mixing several types and colors of standard concrete masonry units.

All masonry selections are to conform to the intent and spirit of the Desert Tech master color scheme and must be used as an integral expression of the building development rather than a thin facing. It should be obvious that submittals proposing economy structures 'dressed up' with masonry materials here and there will be rejected.

As mentioned before, successful submittals will exhibit a thematic approach to the entire building development where masonry selections appear in site walls and site development, within the building's entry statement, thoughtful integration throughout the building's skin, and possibly, in significant interior spaces.

While masonry is a traditional material, contemporary detailing of masonry surfaces holds much potential to communicate the technological aspect of Desert Tech: punctuated use of glass block, face grinding or 'honed' concrete masonry [such as 'superstone' CMU], and the dramatic blending of masonry textures and colors within a wall surface are all examples of masonry products and effects that are very desirable.

Strong Color / Sensitive Use of Color



- ▲ The verdigris patina of copper shingles contrasts nicely with the Arizona sandstone entry wall and bold paint colors of the building.

The WGA design guidelines encourage "the strong use of color" yet, more than any other design element, the use of color is a highly subjective topic.

It makes sense, however, that when color choices are made, design elements that are expressive of a building's character [that which makes it special] receive special care in their color selection and are easily deserving of the use of strong color. They are accents. Be strong, but be sparing in their volume and quantity.

Similarly, when color choices are made about large expanses of building skin or aspects of the building that are fundamental [that which makes it mundane], color choices should be muted and retiring. Over time, our culture has seen large structures of arresting color fade quickly into yesterday's cliché. The family of desert-toned colors of the WGA Desert Tech Guidelines are intended to create harmony and unity for the entire area over many years that reflect the southwestern traditions of color that have pervaded over many, many years. Consult the WGA Desert Tech color palette in your information packet.

Your proposed color scheme will be expected to continue this tradition while allowing a reflection of your own personality within this context. Thoughtful innovations within this family are encouraged. Arresting, garish and self aggrandizing schemes will be rejected.



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