

V

Architectural and Landscape Design

I. INTENT

Public Purpose. Several policies in the *Comprehensive Plan* and *West Side Strategic Plan* address design. The *Comprehensive Plan* supports design standards that are “appropriate to the Plan area” (Policy 5.1), and that “preserve and enhance...cultural and historical features that identify Albuquerque...sub-areas as distinct communities” (Policy 8). The *West Side Strategic Plan* contains an objective to “preserve a sense of community and quality of life” (Objective 4) and envisions more detailed designed guidelines to be developed in subsequent Plans such as this one (Policy 4.6). The concepts of quality, place, community and neighborhood identity are supported in the Volcano Heights Plan by architectural and landscape regulations as provided here and elsewhere. In part, these are related to approved building and landscape materials but also are fostered by distinct themes in the built and natural environment established through regulations that are compatible with the unique natural environment of the area and that foster a sense of place and identity that are important to people’s sense of well being.

Quality. The quality of individual buildings contributes to the sense of place and permanence. These architectural and landscape standards apply to individual buildings, lighting, utilities, walls, and landscape design, with the intent of creating a high quality built environment with lasting character that draws on southwestern regional styles and traditions. Individual design expression and the diverse character of the land use districts can all flourish within an overall framework of quality.

Climate. Architectural elements respond to unique southwestern climatic conditions. This means providing shade as relief from harsh sunlight and heat, and conserving water.

Views. In order to fully understand the rationale for the regulations related to the visual qualities of buildings and landscaping, it is necessary to understand the importance of the area culturally and to the rest of the city. Ruth Eisenberg in communication with members of Save the Volcanoes expressed the visual significance of the Escarpment in 1980: “When people say ‘volcanoes’ they do not mean the cones and nubbins alone.... They are referring to the desert sloping up gradually, the expanse ending in the row of cones which seem to accentuate our sky, especially at sunset.” Many points throughout the city offer panoramic views of the full length of the volcanic flows.



Suburban Residential Neighborhood

Suburban Residential Neighborhood

An analysis of the views of Volcano Heights and from Volcano Heights provides the basis for regulations dealing with color, reflectivity, lighting, building materials, and landscape design. To minimize the visual impact of development, predominant colors used on structures will blend with the natural colors of the mesa.

2. VIEW SHED FINDINGS

The Volcano Heights Plan addresses preserving views and visual experiences especially related to the volcanic cones, the buffer edge of the Escarpment, Rio Grande, and Sandia Mountains. A background discussion related to these concerns is contained in section “I. Conditions and Considerations, 2. The Meaning of Place: Natural / Cultural Features.”

The objectives include preserving views:

- Of the Volcanic cones from within the Volcano Heights Plan Area and the rest of the city of Albuquerque to the east,
- Minimizing the visual impact of Volcano Heights development, especially along the Escarpment edge, to the city of Albuquerque,
- Protecting views from key cultural locations including from the Volcanic cones and the Petroglyph cluster within the North Geologic Window to the Rio Grande and the Sandia Mountains; minimizing the visual impacts of Volcano Heights development from these locations.

The Volcano Heights Plan establishes building height restrictions consistent with these objectives. These objectives are also addressed through architectural standards such as building materials, reflectivity, and color. Others are achieved through providing facilities such view points on the Escarpment and calling for streets to be aligned to preserve views.

Analysis

A View Shed analysis was conducted to determine what could be seen from different locations within Volcano Heights and the city assuming that the area was completely developed at the maximum heights allowed. This was done by building a 3-D computer model of the land use plan and then moving the “observation point” to different locations. The light green shading in the Exhibits that accompany this discussion indicates what is visible from the observation point.

Views from Volcano Heights Looking East

The views from Volcano Heights to the east are shown in (**Exhibit 30, *View Shed Analysis from Observation Points 1 and 2***). Observation 1 is from a point within the North Geologic Window containing a number of Petroglyphs. The Planning Team was told that active Pueblo cultural practices call for protecting this view. The map indicates it will be possible to see from the foothills to the crest of the Sandia Mountains from this location assuming development as in the land use plan. The light green shading in these Exhibits indicates what part of the landscape it is possible for one to see from the Observation Point. Apparently it will not be possible to see the Volcano Heights buildings from this location.

An analysis was conducted from each of the Volcanic Cones as separate observation points. Observation 2 from the northernmost volcano is typical of the results. From the northernmost Volcanic Cone one has an almost uninterrupted view to the east toward the Volcano Heights Plan Area, the Rio Grande, city of Albuquerque, and the face of the Sandia Mountains beyond.

Both the maps in Exhibit 30 indicate the part of the Sandias within lines that start at the tops of the two northernmost volcanoes and move through the concentration of Petroglyphs on the Escarpment at the Boca Negra arroyo. As indicated in section "I. Conditions and Considerations, 2. The Meaning of Place: Natural / Cultural Features" an important path for Native Americans was from the former Pueblos along the Rio Grande along the Boca Negra arroyo to the North Geologic Window and these two volcanoes. Some traditional Pueblo people place importance on the straight line connections between landscape features. In this case, these lines frame the least steep and most accessible route from the Sandia foothills to the Crest. It is assumed that this path was used to access shrines and other resources on the face and crest of the Sandias.

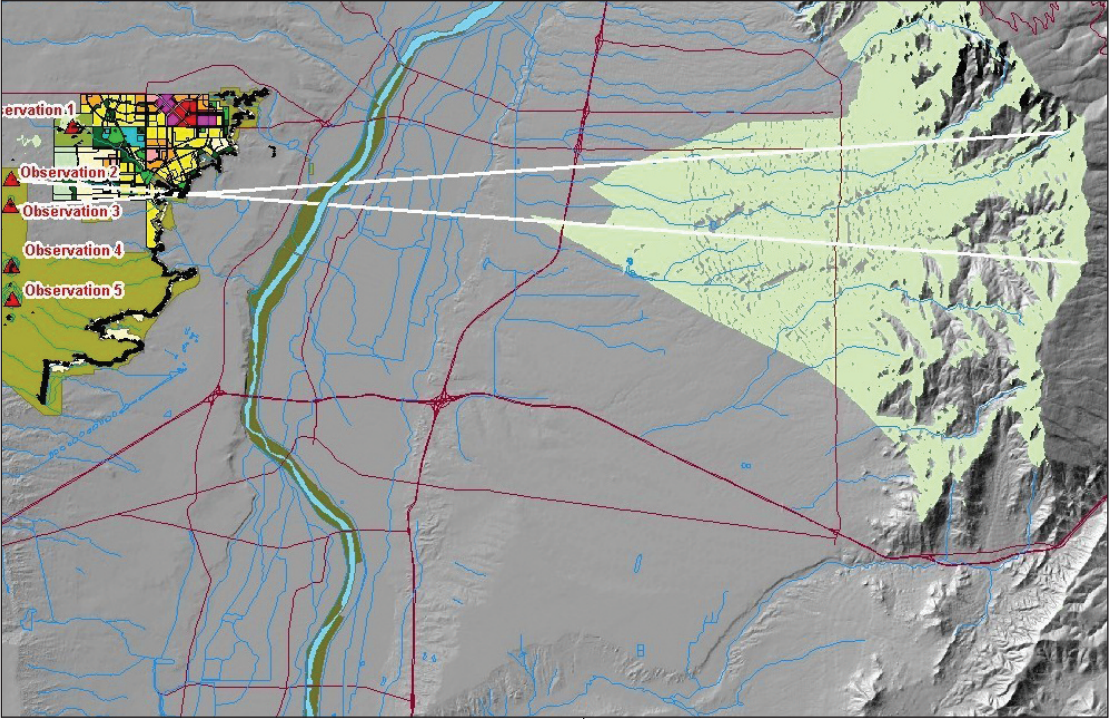
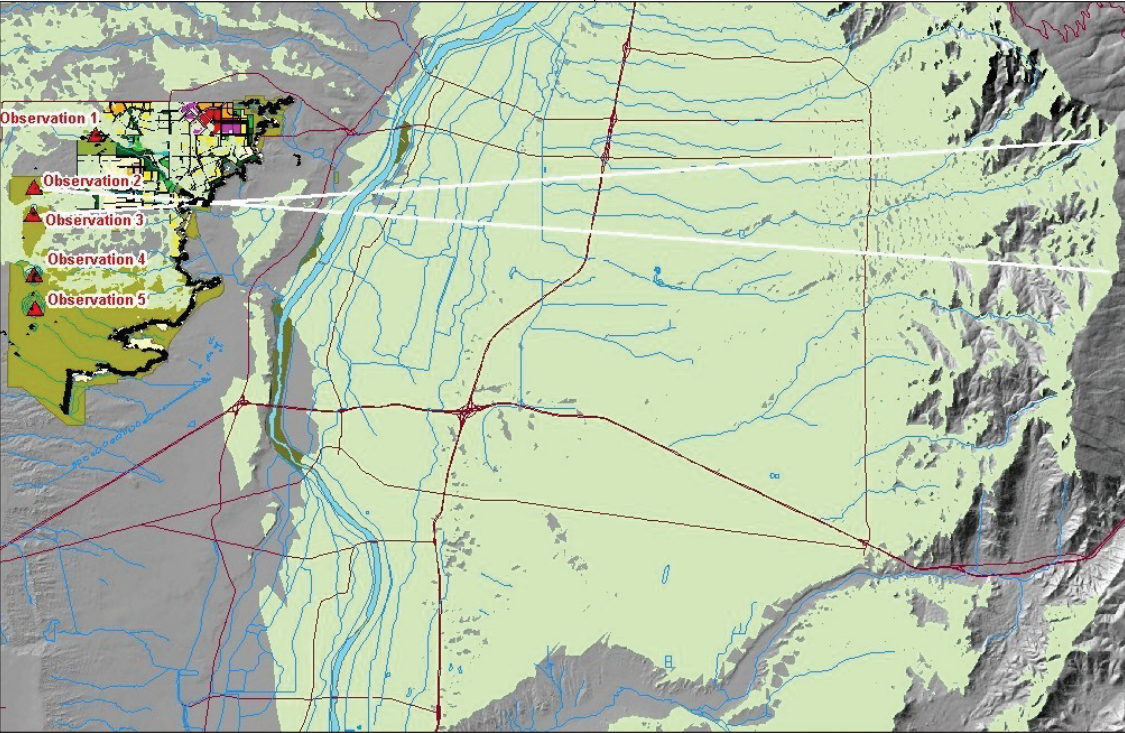


Exhibit 30
View Shed Analysis from
Observation Point 1



View Shed Analysis from
Observation Point 2

Views from the City of Albuquerque to Volcano Heights

The View Shed (indicated in light green) from Observation Point 6 (See Exhibit 31, *View Shed Analysis from Observation Points 6 and 9*) is from an observation point at Paseo del Norte and Golf Course Road. This map indicates that the only buildings that could be built in a small portion of eastern edge of the La Cuentista subdivision may be observable from this location.

This situation changes materially when the observation points are moved further east and south. The views from the overpass at Interstate 25 and Paseo del Norte and from a point at the University of New Mexico (Observation 9) are nearly the same. One is able see development on the eastern portion of Volcano Heights–SAD 227, further north and east within Volcano Heights, and the eastern parts of the Town Center and the Universe Village Center. Importantly, one is also able to see the lower density executive and rural residential areas to the west of the Universe Village Center to the Volcanic cones. The views appear to be unimpeded from these locations in the city to the open space in the Petroglyph National Monument.

Conclusion

The View Shed analysis found that:

- Important views from locations within Volcano Heights to the Rio Grande basin, the city of Albuquerque and the Sandia Mountains are protected; and
- Development within Volcano Heights will be visible from most of the City of Albuquerque; hence care needs to be taken in order to achieve non-visually intrusive development especially in the lower density residential areas and in all of Volcano Heights.

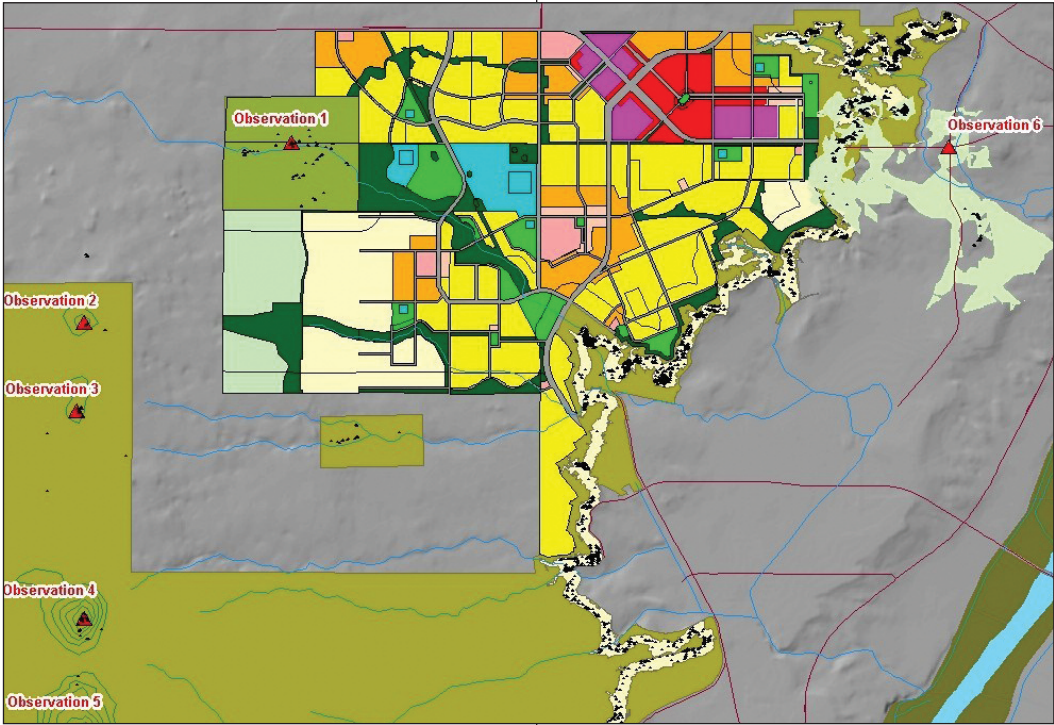
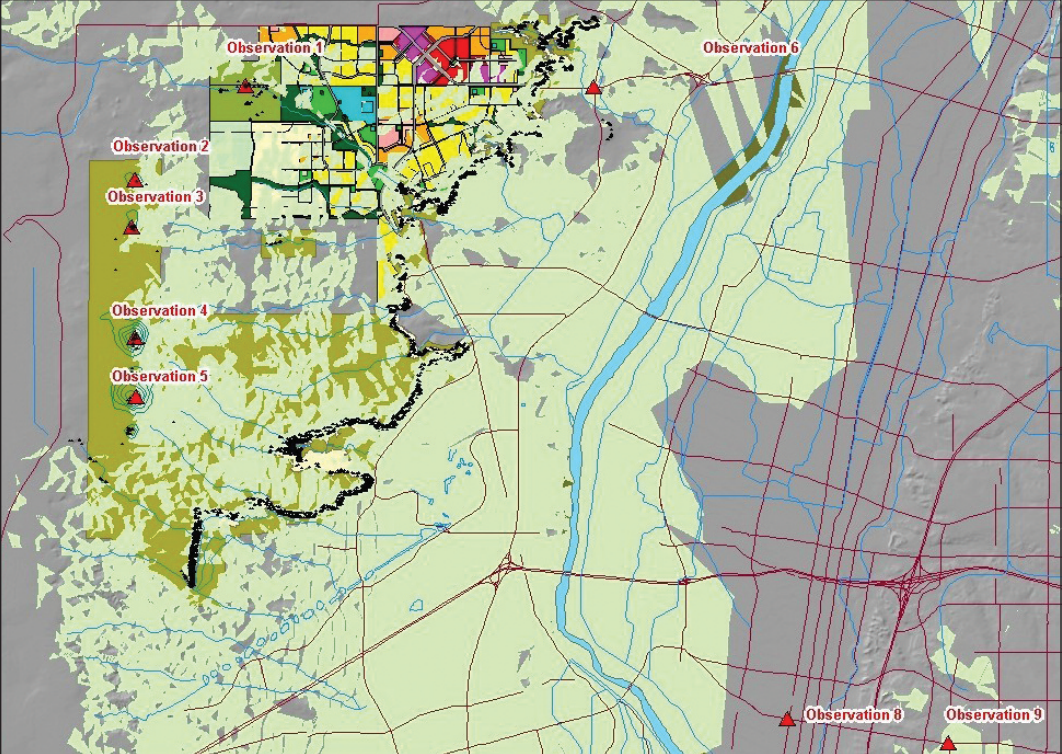


Exhibit 31
View Shed Analysis from Observation Point 6



View Shed Analysis from Observation Point 9

3. ARCHITECTURAL DESIGN STANDARDS

Architectural Design Standards are applied to all uses as specified below.

Climatic Response. Building elements that shelter pedestrians such as portals and arcades are required as specified in the “Urban Design” section. Windows and openings shall be deeply recessed or accompanied by verandas, deep eaves, or metal, glass, or cloth awnings. These responses to climate reduce solar gain with traditional southwestern features.

Building Walls. Walls shall be stucco, masonry, rammed earth, adobe, native stacked stone (or synthetic equivalent), or straw bale. Plain block is not allowed for exterior walls. Wood and reflective panels shall not be used as an exterior finish. Stucco and concrete shall have integral color. Veneer materials shall extend around exterior corners at least one foot. Brick coping and trims as per traditional New Mexico architectural styles are permitted. Steel and synthetic wood substitutes are permitted for trim and detailing. Massing and articulation are required to be developed so that no more than 60 feet of wall may occur with an offset vertically or horizontally of at least 24 inches, or at same intervals, a change in material may be used for articulation. For free-standing walls see “Walls & Fences” in “4. Landscape Design Standards”.

Posts & Beams. Exterior posts and beams shall consist of heavy timbers, concrete or steel. Beams made of composition or laminated wood are not to be used.

Roofs. Roof forms shall be traditional to New Mexico. Reflective roofs are prohibited. Parapets shall hide flat roofs. Asphalt shingle and mansard roofs are prohibited. Solar panels are permitted. Flashing shall match roof or building color.

Windows. Windows shall be recessed in the façade so that the glass plane is a minimum of 1 1/2” back from the external plane of the adjacent wall. Glass on any surface shall not be reflective or mirror glass, that is, glass having greater than 15% average daylight exterior reflectance. Highly reflective or mirrored glass is prohibited. Glass for non-residential and mixed-use areas shall have light transmission between exterior and interior rated at a minimum of 90% for the ground story and at least 75% for the upper stories (modifications permitted as necessary to meet any applicable building and energy code requirements).

Entrances, Porches, Stoops & Vestibules. See “4. Other Essential Building-Street Relationships” described earlier in “IV. Urban Design”.

Color. Building walls and roofs in lower density residential areas (i.e. Suburban Residential–Small Lot, Suburban Residential–Large Lot, Executive Residential, Rural Residential zones) shall not use bright colors (accept as accents). Buildings throughout shall not use highly reflective surfaces. Colors used on building walls and roofs within all lower density residential areas (Suburban Residential–Small Lot, Suburban Residential–Large Lot, Executive Residential, and Rural Residential zones), shall use earth tones and reflectivity standards consisting of “Approved Colors” specified in the Plan Appendix. Mechanical devices, roof vents and screening materials are also subject to this regulation, as are fences and walls. Trim materials constituting less than 10% of the façade’s opaque surface may be any complementary color.

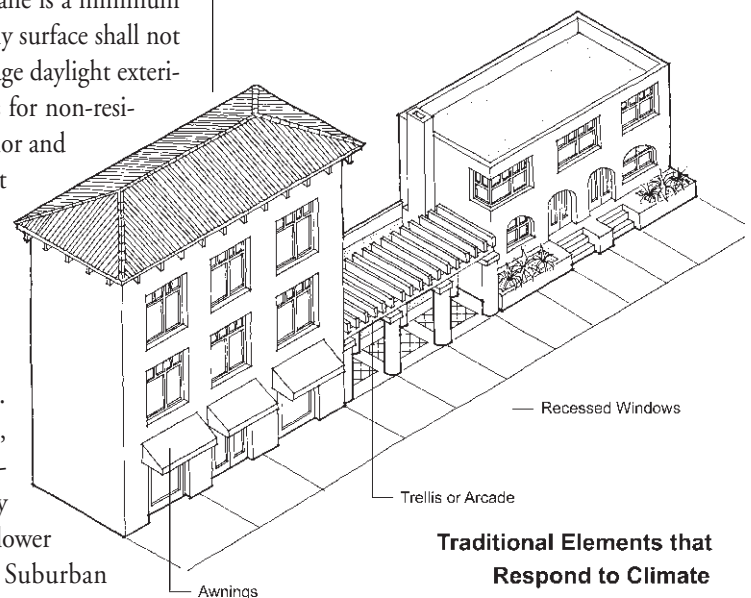


Diagram 25
Traditional Elements that
Respond to Climate

Within Town, Village centers, Neighborhood Mixed-Use, Office Campus, and Urban Residential Districts, colors outside the Approved Colors list may be used.

Service Areas. Service areas shall not be visible from streets or public open spaces. They shall be located away from streets or recessed within the building envelope. Service areas recessed within the building envelope, and facing streets or public open spaces, shall not comprise more than 20% of a building's linear frontage; and be accompanied by roll-up doors. Free-standing equipment and refuse containers shall be screened from view of streets and public open space.

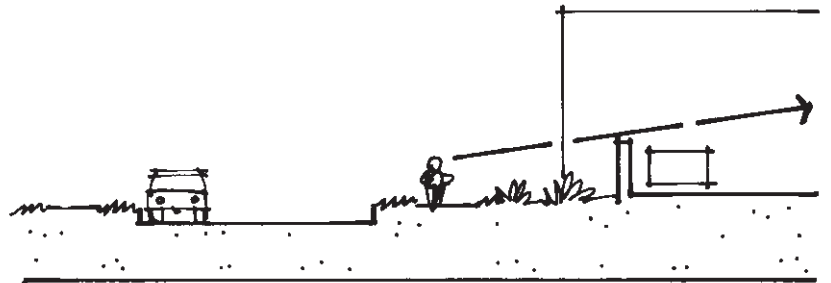
Commercial Signage. Signs shall complement adjacent architecture. Appropriate signage includes blade signs, awning signs, and wall-mounted or hanging metal panel signs. Internally illuminated box signs, billboards, roof-mounted, free-standing, any kind of animation, and painted window signs, and signs painted on the exterior walls of buildings are not allowed. No flashing, traveling, animated, or intermittent lighting shall be on or visible from (i.e. through windows) the exterior of any building.

Wall signs are permitted within the area between the second story floor line and the first floor ceiling within a horizontal band not to exceed 2 feet in height. Letters shall not exceed 18 inches in height or width and 3 inches in relief. Company logos or names may be placed within this horizontal band or placed or painted within ground floor or second story office windows and shall not be larger than a rectangle of 8 sq. ft. Projecting signs may not be more than 24 inches by 48 inches and a minimum 10 feet clear height above the sidewalk and may be hung below the third story level. Signs may not project more than 36 inches perpendicular to the right of way beyond the façade.

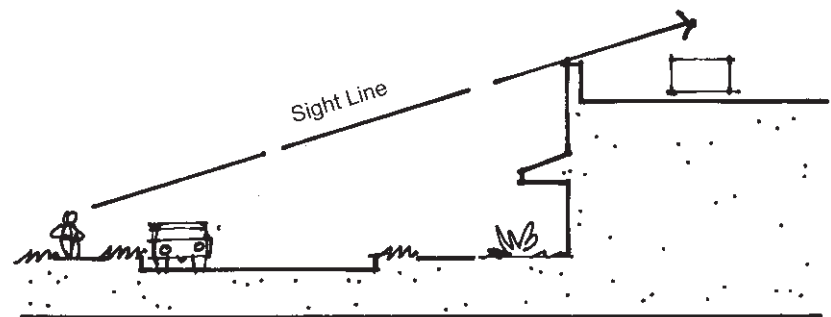
Awnings shall be cloth or equivalent, metal, or glass. "Quarter-cylinder" awning configurations are not permitted. Lettering on awnings is limited to 9 inches in height.

Equipment & Antennas. Mechanical equipment and antennas shall not be visible from a street or public open space. Equipment may be recessed within the profile of the building, or it may be screened architecturally, such as though the use of false dormers, parapets or cupolas. Roof-mounted heating and air conditioning equipment shall be fully screened from views, both from the ground and from the escarpment. Screening materials shall be of Approved Colors in "Appendix B" of this Plan.

Mechanical Equipment



Equipment and service area screened by wall.



Equipment screened by parapet.

Diagram 26

Energy-Efficient Buildings. Buildings that are energy efficient are strongly encouraged. One or more of the following features shall be included in building design:

- interior daylighting;
- fluorescent lighting;
- shaded windows;
- heat-exchange units;
- super-insulated low-emissive windows;
- passive solar heating;
- passive solar hot water;
- natural cross-ventilation;
- highly efficient appliances, heating and cooling systems; and
- generation of electricity through wind generation and photovoltaics.

Arroyos, Petroglyph National Monument Buffer, and Other Public Open Space Corridors. See “8. Scenic Corridors” in “VI. Open Space” below.

4. LANDSCAPE DESIGN STANDARDS

Walls & Fences– Height & Placement. Walls and fences are allowed in the Development Envelopes (Backyard portion) of houses in Suburban Residential–Large Lot and in the Development Envelopes of Executive Residential and Rural Residential. Properties generally along the Petroglyph National Monument and Open Space in higher density areas has special design requirements (see “VI. Open Space”). Post and Wire fences, utilizing the standards addressed in “Walls & Fences–Materials and Design” below, are allowed at the parcel perimeter of these zones, except as provided otherwise in “4. Neighborhood Edge / Transitions” in section “VI. Open Space”.

In the Town Center, Village Centers, Neighborhood Mixed Use, Urban Residential areas and Suburban Residential–Small Lot zones, walls shall be constructed within 3 feet of street-facing property lines, where buildings are not within 10 feet of the property line. Walls and fences should not exceed a height of 48 inches where allowed within street-facing setbacks (except for columns that support arcades or trellises). Fences and walls should not exceed a height of 72 inches along rear and interior side property lines, where they are outside of required street-facing setbacks.

Walls & Fences– Materials & Design. Walls shall be stucco, masonry, rammed earth, adobe, native stacked stone (or synthetic equivalent) or straw bale. Walls may be clad or plastered with stucco, brick and tile masonry, or native stone (or synthetic equivalent). Plain Block, including all colors, is not allowed for exterior walls. Stucco and concrete should have integral color (see “Color” above). The end of walls should have a pier or pilaster that is at least 12 inches in width, to give a substantial appearance. Fencing should be post and wire, or coyote fencing. Fencing of the Conservation Easements is limited to post and wire. Post and wire fence shall be 3 inches to 4 inches diameter wooden posts, approximately 36 inches in height, spaced about 15 feet apart, with no more than 4 strands of non-barbed wire. (See **Exhibit 32, Allowed Perimeter Fencing** for example) Wood board, cyclone, chain-link, and razor-wire fencing are prohibited.

Yards & Courtyards. An irrigated zone of up to 600 sq. ft. per unit is allowed within the Town Center, Village Center, Neighborhood Mixed-Use, and Urban Residential Zones. Xeric plants are permitted as specified in “Plant List B” (See “5. Appropriate Planting Lists”).

Please refer to “IV. Urban Design, 6. Conservation Development and Development Envelopes” section for the landscape standards in the following Zones: Suburban Residential–Large Lot, Executive Residential, and Rural Residential.

Pedestrian Walkways. Arcades, trellises awnings, and/or trees are encouraged along pedestrian paths for shade and spatial definition. In parking lots, Pedestrian Walkways should not extend more than 75 feet without one of these features.

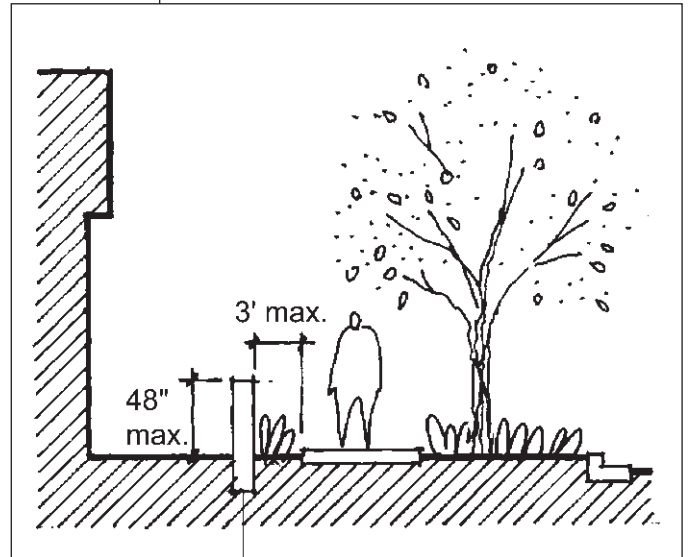


Diagram 27
Front Walls



Exhibit 32
Allowed Perimeter Fencing

On-Lot Trees. Where buildings are placed more than 10 feet from a street-side property line, at least one tree should be planted per property within the street-side setback. Properties with a long street frontage should have one tree every 50 feet or less. Street trees on local streets shall be maintained by the property owner. Street trees on collector or higher capacity streets shall be maintained by the City Parks and Recreation Department.

Lighting. Lighting shall have a cut-off angle that directs light downward and only toward the property on which the light source is located. Light fixtures shall be of a type that throws light downward and have baffles, hoods or diffusers so that no light point source should be visible from a distance greater than 1000 feet. On-site light poles shall not exceed a height of 16 feet. High-intensity discharge lamps and sodium lamps shall not be used. Other lighting standards can be found in “2. Arroyos and Drainage”, “3. Petroglyph National Monument Buffer”, “6. Multi-Use Trails”, “7. Parks”, and “8. Scenic Corridors” in section “VI. Open Space”. For street lighting, see “3. Street Design” in “II. Transportation”.

Overhead Utilities. Construction of new overhead electrical distribution lines is prohibited. City code allows an exception where subsurface conditions make underground lines economically unreasonable. If this exception is sought, PNM shall provide justification. Granting of this exception must be reviewed and approved by the City Council.

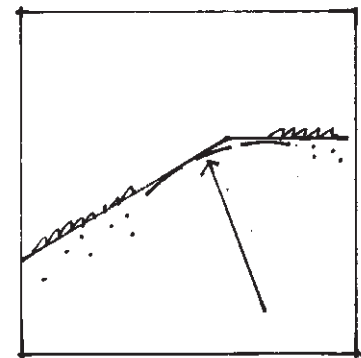
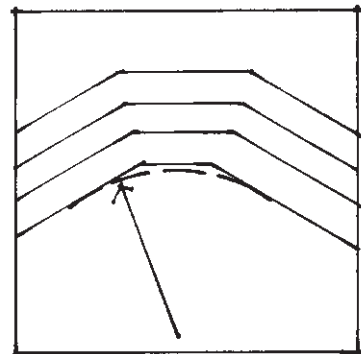
The City shall work with the electric utility company to explore ways to either re-route or place underground the major overhead 115kV utility transmission lines along Universe at the Village Center locations. At these locations if the transmission system is above ground the electric lines should be stacked vertically and the utility easement limited to 20 feet.

Current PNM practice is to place large electrical transmission facilities overhead. If underground transmission and/or distribution lines are desired for a particular project or area, the requesting entity should examine the funding mechanisms available to fund underground installation of distribution and/or transmission line facilities consistent with the requirements of any applicable rules of the electric utility on file with the NMPRC or successor agency. Installation of underground facilities would be contingent upon (1) the agreement of the electric utility that undergrounding is appropriate and that any undergrounding system would be technically and operationally equivalent to the above ground system that would otherwise be constructed; and (2) the availability of funding for the differential costs associated with underground construction.

Gateway Monuments. Pillars or walls may be built at entry points to neighborhoods and projects. Walls shall not be more than 12 feet long and conform with “Walls & Fence” guidelines above. Pillars shall not be more than 3 feet in width and 10 feet in height. Pillars and walls should be stucco, masonry, rammed earth, adobe, native stacked stone (or synthetic equivalent) or straw bale. Plain block, including all colors, is not allowed. Stucco and concrete should have integral color (see “Color” in “3. Architectural Design Standards” above).

Archeological Sites. Development, trails, and recreation areas should be set back at least 50 feet from prehistoric Petroglyphs or other sites with high archeological value, unless designed under the guidance of a qualified archeologist. In general, calling attention to archeological sites is discouraged either through fencing or signage. Appropriate

Naturalistic Grading



Round contours, in plan and in section, to make graded areas look more natural.

Diagram 28

City of Albuquerque Open Space Division or Petroglyph National Monument staff shall determine the appropriate design and development standards in situations where it is necessary to either exclude people from a site or to draw attention to an archeological site.

View Corridors. Views should extend from archeological sites of major cultural importance toward the Sandia Mountains to the east, the two northernmost volcanoes to the west, and the Rio Grande and should be considered in site and master planning. (See “2. View Shed Findings” above.)

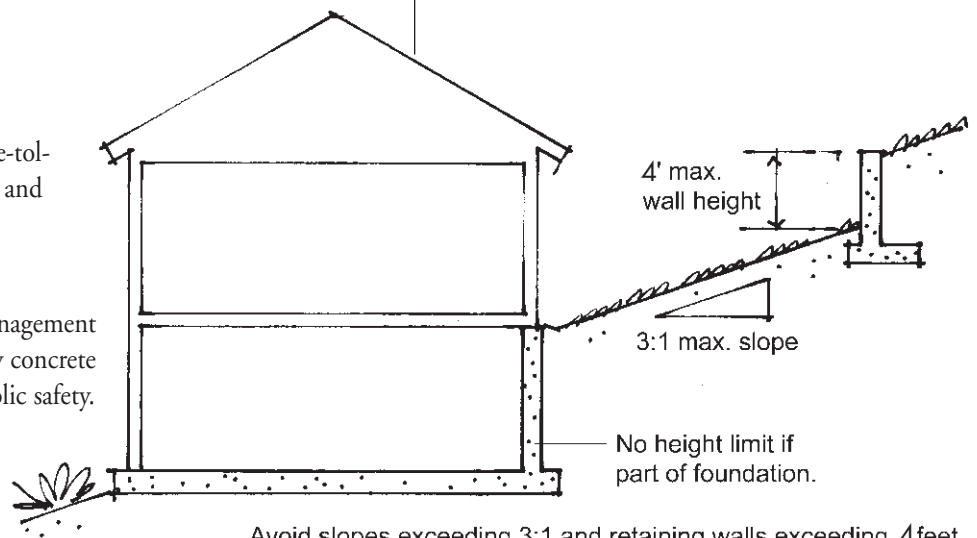
Grading. Cut and fill slopes shall be no steeper than 3:1 on average; and retaining walls shall not exceed 4 feet in height unless incorporated within a building’s foundation. Graded areas shall maintain the character of the natural terrain by varying gradients, undulating contours, and rounding the toe and crest of any slope greater than 10 feet in height. Fill shall be limited to a height of 4 feet measured from one corner of the Development Envelope, except to fill discrete depressions, and except in zones containing Development Envelopes including Suburban Residential–Large Lot, Executive Residential, and Rural Residential where the height at one corner of the Development Envelopment shall not exceed 18 inches except to fill discrete depressions.

Stormwater Quality and Management. (See **Diagram 30, *Benefits of Natural Drainage and Infiltration Opportunities***) Hydrological study and design may be required of new development by the City of Albuquerque to identify appropriate stormwater detention and energy dissipation features. Development projects shall incorporate unobtrusive stormwater features that facilitate the detention and infiltration of stormwater, and the filtration of pollutants from urban run-off. At all densities and intensities, appropriate techniques include:

- permeable pavers & concrete,
- infiltration beds place below paved areas,
- stone-filled reservoirs and dry-wells, and
- small “rain gardens” (low-lying with moisture-tolerant grasses, wildflowers, shrubs, and trees); and
- vegetated swales (in courtyards and street medians and planting strips).

Materials and treatments used for stormwater management shall be natural in appearance. Channels lined by concrete or rip-rap are prohibited, unless necessary for public safety. Fencing shall be avoided, meaning that the bottom slopes of detention basins should be designed for safety. For properties adjacent to Arroyos, Petroglyph National Monument Buffer, and Other Public Open Space Corridors, see “Scenic Corridors” below.

Conservation Development. In Conservation Development areas, only native plants as contained in Plant List A should be used in Community Conservation Areas and areas held in Conservation Easements. See “6. Conservation Development and Development Envelopes” in “IV. Urban Design” for other open space requirements.



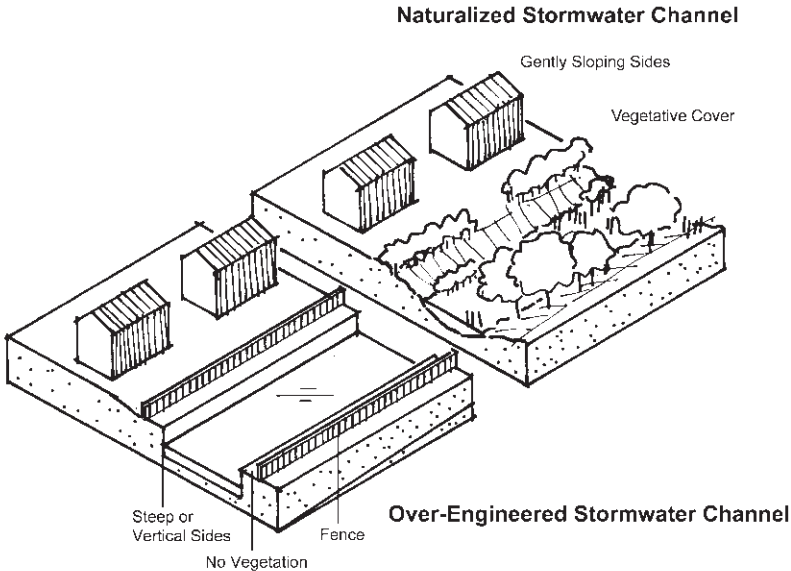
Avoid slopes exceeding 3:1 and retaining walls exceeding 4 feet.

Alternatives to Mass Grading

Diagram 29

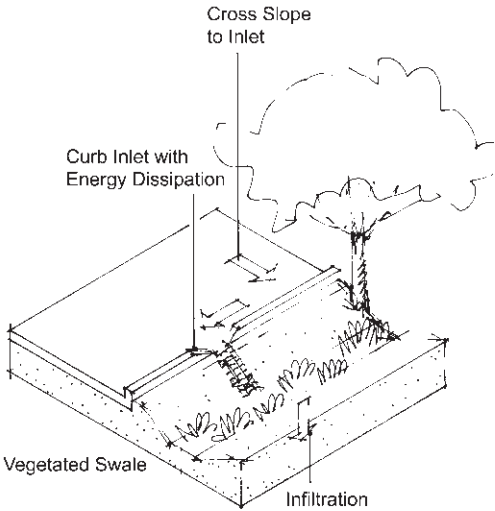
Construction Mitigation. Construction within the Volcano Heights Sector Development Plan area or parts of the area shall be mitigated as provided by the regulations in “Appendix D. Construction Mitigation”. These regulations are fully part of this Sector Plan and shall be enforced as such.

Benefits of Natural Drainage



Swale Streets

Urban Curb with Inlet to Swale



Urban Curbless Drainage to Swale

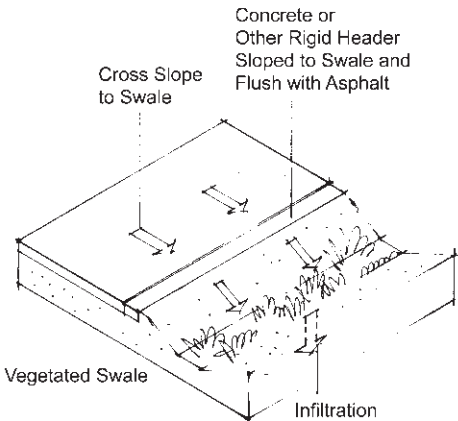
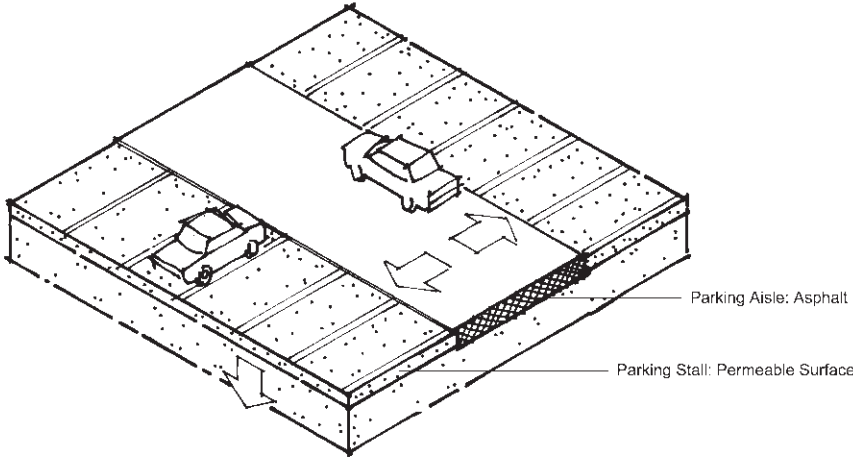


Diagram 31

Infiltration Opportunities: Parking Lots



Parking stalls receive less wear and make good locations to increase infiltration through the use of permeable materials.

Diagram 30

5. APPROPRIATE PLANTING LISTS

The purposes of directing landscaping plants are to: reduce water usage, maintain the character of native plants now existing in the Monument, and to provide a harmonious landscape image.

Two plant lists shall guide landscaping within Plan Area. Shrubs and trees shall be nursery grown when available. The Plan expressly supports enforcement activities to prevent illegal removal of naturally occurring vegetation from its existing location. More specific landscaping for subareas of Volcano Heights shall be provided in required site plans and master plans.

List A - Petroglyph National Monument Plant List.

These are the plant species that were inventoried by the National Park Service in 1994-5 and represent almost 200 plants (amended). This plant list is in Appendix C.

List B - Xeric Plant List:

The plant species are the official xeric or low-water use plant list of the City of Albuquerque Water Conservation Office. The majority of the list is low and medium water-use plants. Some high-water use plants are also listed in order to classify them as such in implementation of the water conservation program. This xeric plant list is extensive and is maintained by the City. Contact the City of Albuquerque Water Conservation Office to obtain the most current information.

Where landscaping follows the Plant List B, at least 50 percent of the landscaped area should be covered by live plants in contrast to rock.

Land disturbed in development shall be re-vegetated using the appropriate Plant List above.

**Table 14
Appropriate Planting Lists**

X= Allowed

	Plant List A Native	Plant List B Xeric
Conservation Areas (Arroyos, Buffer Areas, and so on)	X	
Rural Residential, Executive Residential, and Suburban Residential – Large Lot Outside Development Envelope	X	
Rural Residential, Executive Residential, Suburban Residential – Large Lot Inside Development Envelope		X
Town Center, Village Center, Neighborhood Mixed-Use, Office Campus, Urban Residential, Suburban Residential – Small Lot		X (1)
Scenic Corridor	X	
Other Roads		X (1)

(1) Landscaping within this range to be determined at the level of specific plans for these areas and roads.