

APPENDIX D VISUAL IMPACT ASSESSMENT

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## A. INTRODUCTION

Douglas County has long been recognized for its outstanding visual attributes. As one of the most scenic of the Front Range counties, it seeks to protect those attributes by promoting the siting and design of telecommunication facilities in a manner that minimizes visual impacts, and thus protects quality of life for residents and businesses in the region. The tool that Douglas County uses to assess the visual impact of a telecommunication facility is a Visual Assessment (VIA). A VIA is required to accompany the Use By Special Review application for a telecommunication facility.

## B. INTENT AND PURPOSE

The purpose of the VIA is to identify and assess how a proposed telecommunication facility will affect the viewshed. It provides a format for gathering the information on the site characteristics of an area and analyzing the resulting impacts. By understanding the relevant environmental qualities, and how they affect visual perception, an applicant is in a better position to both choose a location, and demonstrate that the location meets the provisions of the Zoning Resolution and the Comprehensive Master Plan. It also provides the information necessary to design the facility to blend with the surrounding environment.

The VIA consists of three parts: inventory, analysis, and conclusion. The inventory should contain a thorough description of an area's characteristics, identifying all natural and man-made features, all existing land uses, and all viewer groups that will be visually impacted. The focus of the inventory should encompass the search ring, and an area extending a minimum of one mile in all directions from the edge of the search ring, for every 100 feet or fraction thereof, of height proposed.

The analysis should assess the visual ramifications of placing the facility in various test locations, based on the landscape backdrop information compiled for the inventory. It should describe how the land uses and associated viewer groups will be affected by the different placement locations. A description of how the applicant would propose to design each facility to blend with the surrounding environment must be incorporated into the analysis. For example, a facility proposed and designed for an industrial zone would differ from one proposed and designed for an agricultural zone as each offers different opportunities. Likewise, a facility proposed for the flatter landscape of the southeastern part of Douglas County would differ from one proposed for the mountains of the western part of the County.

If proposed for a mountainous area, a support tower should be sited to be largely obscured from vantage points by topography and vegetation, and designed to mirror the textures in that particular landscape. A support tower proposed for the plains should be sited far from residential areas and out of view from travelers, preferably where it could be partially camouflaged by a butte or rock outcropping. Ground equipment should also be screened to blend with the landscape. If located in the mountains, the accessory equipment buildings and structures may be naturally screened by native vegetation, if located on the plains, equipment could be located in ground vaults, or possibly screened by an opaque or painted face.

The conclusion should summarize the findings of the inventory and analysis, and describe the process that lead to identification of the preferred support tower location. The conclusion must clearly demonstrate that the preferred location meets the objectives of the review/approval criteria required by Subsection 2102 of the Zoning Resolution.

The VIA should be prepared in consultation with a landscape architect or other professional trained and experienced in the preparation of such assessments. The required contents of the VIA are described in the section that follows. It is recommended that maps, photographs and other visual support should be incorporated into the final document.

## C. VISUAL IMPACT ASSESSMENT

### 1. Visual Inventory

The purpose of the visual inventory is to describe the environment of the area for which the telecommunication facility is proposed. Information should be gathered and presented on the topography, vegetation, and land uses in the study area. The viewer groups must also be described. The viewer groups are those that live, work, travel or recreate in the study area. The information collected should be used in the analysis portion of the VIA to determine the visual impacts and their projected duration. The study area should coincide with the search ring and must extend a minimum of one mile in all directions for each 100 feet, or fraction thereof, of height proposed. The minimum study area shall be one mile, however, it may be required to be expanded based on the potential impact as determined by staff at the presubmittal meeting.

Define the Visual Character:

- Describe the physiography and key landforms of the study area providing maps and photographs that support the narrative.
- Describe the predominant vegetation of the study area focusing on the vegetation specific to the proposed facility location.
- Describe the existing land uses in the study area including recreational uses, as well as transportation corridors providing access to, or through, these areas.
- Describe any water features located in the study area and uses associated with each feature.
- Describe the type of wildlife prevalent in the study area particularly birds that could be affected by a support tower.
- Describe any visually sensitive resources located in the study area such as unique geographic features (such as mountain backdrops, ridges, hills, buttes, arroyos), historic sites or scenic vistas.
- Describe the viewer groups, such as those with homes or businesses in the study area, or those that use any part of the study area for recreational or transportation purposes.

## 2. Visual Analysis

The purpose of the visual analysis is to assess the visual impact of possible support tower locations based on the information presented in the inventory. The possible support tower locations should be those identified and justified by the application as being technologically feasible. The analysis should compare those locations, describing whether the potential sites meet the objectives of the review criteria contained in Subsection 2107.49.3 of the Douglas County Zoning Resolution. The comparison should also include analysis of the visual impact to the identified viewer groups. The positives and negatives of each site in terms of meeting the review criteria should be delineated in the analysis. If feasible, the findings may be presented in the form of a matrix. The preferred site will be the one in which the support tower will both blend with the landscape and provide the least visual impact to viewer groups.

### Analyze the Visual Impact

- Using a computer-modeling program, prepare a viewshed map of the study area using USGS digital elevation model data (7.5-minute series). The resulting viewshed map should illustrate maximum proposed structure height above an identified base elevation and should define the maximum area from which the tallest element of a completed facility could potentially be visible within the study area.
- Discuss how the screening effect of existing or future, planted vegetation influences the visibility of the various locations proposed, recognizing that the computer model does not factor in vegetative or structural screens.
- Describe potential project visibility by identifying locations in the study area where a high probability that the facility will be visible, exists. Demonstrate how the impact to viewer groups will be minimized.
- Assess the extent and nature of visibility by viewer groups through field verification and photo documentation. Describe the method of field verification used and the conditions of the field tests.
- Describe and analyze how each viewer group identified will be impacted by a facility sited in the preferred location and discuss seasonal, or other, changes that affect the view.

## 3. Conclusion

The conclusion should summarize the findings of the visual inventory and describe how the information was used in the visual analysis to identify the preferred location for the support tower. The results of the site comparisons should provide the rationale for selection of the preferred location, and include a thorough description of how the preferred location meets the objectives of all review criteria outlined in Section 21 of the Douglas County Zoning Resolution. The mitigation measures proposed to soften any remaining visual

impacts of the facility, including the design, color, material, texture and screening of all visible elements of the facility must be described as well.

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