

Human & Environmental Factors



Objective

On completion of this unit, students will be able to use **Human and Environmental Factors** when planning, designing, and/or evaluating a given project.

Human & Environmental Factors

- Distance
- Angle of Observation
- Length of Time in View
- Season of Use
- Motion
- Atmospheric Conditions
- Light Conditions
- Scale
- Spatial Relationships
- Recovery Time

Human and Environmental Factors can help you plan and design a project to minimize visual impacts

AND

Help you assess visual impacts of a proposed project.

Distance

How far is the viewer from the proposed project?



Distance

As viewing distance increases, the project becomes less visually dominant.



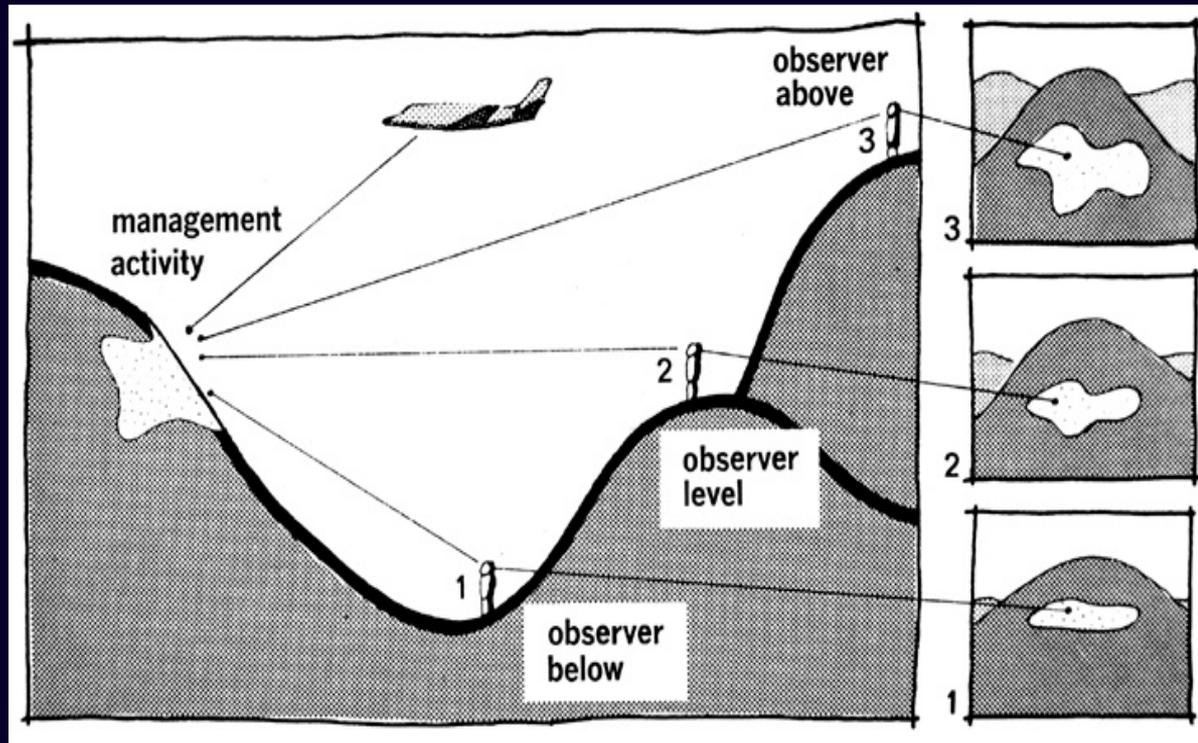
Distance

As viewing distance increases, color values decrease toward uniformity.



Angle of Observation

Are you looking up at the project, looking down at the project, or are you at the same level?



Apparent size of project is directly related to angle of observation.

Angle of Observation

Observer Below



Surface disturbance not seen

Angle of Observation

Observer Almost Level



Surface disturbance mostly not seen

Angle of Observation

Observer Above

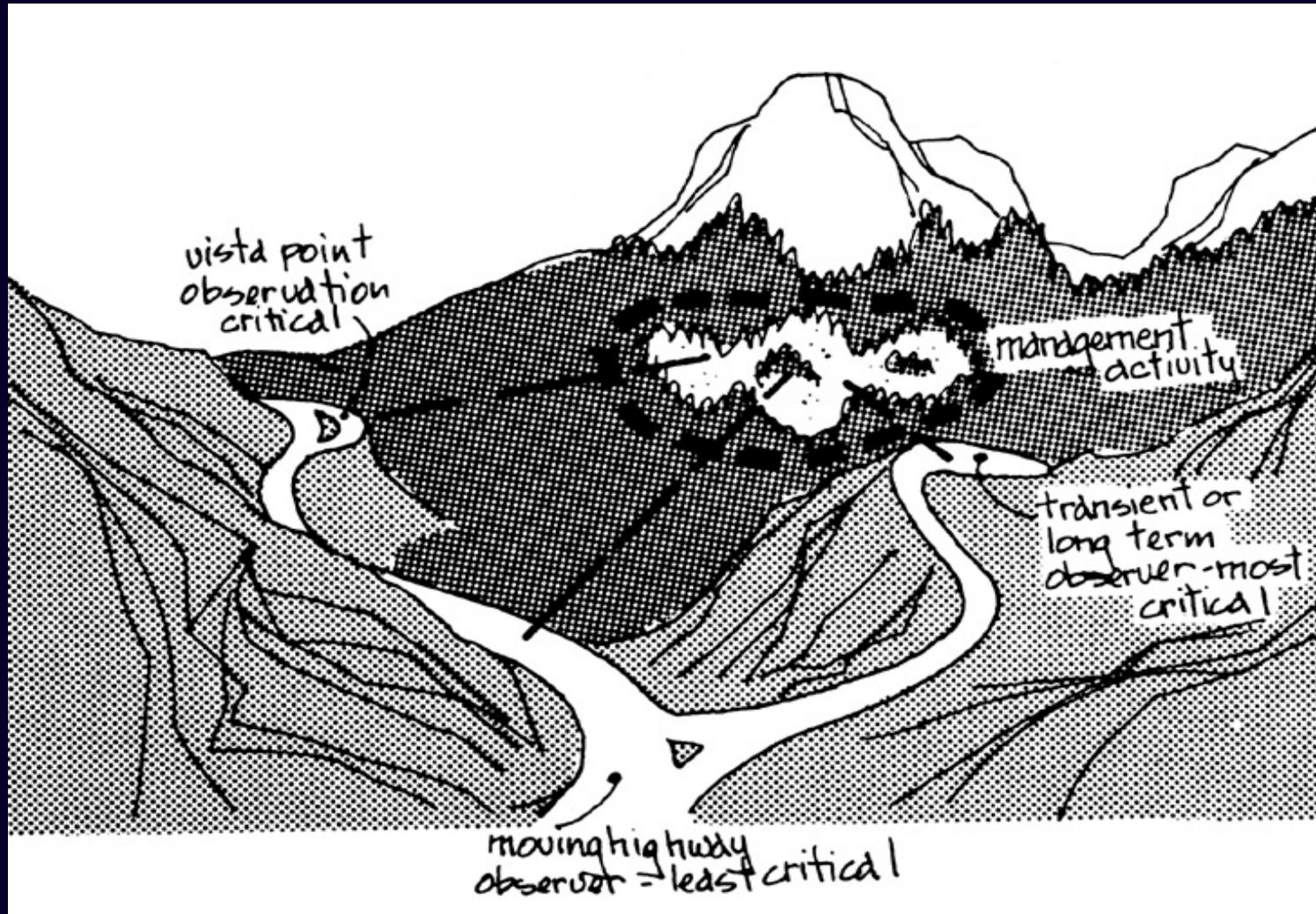
In addition to the structures, all the surface disturbance is visible.



Angle of Observation



Length of Time in View



Length of Time in View



Length of Time in View

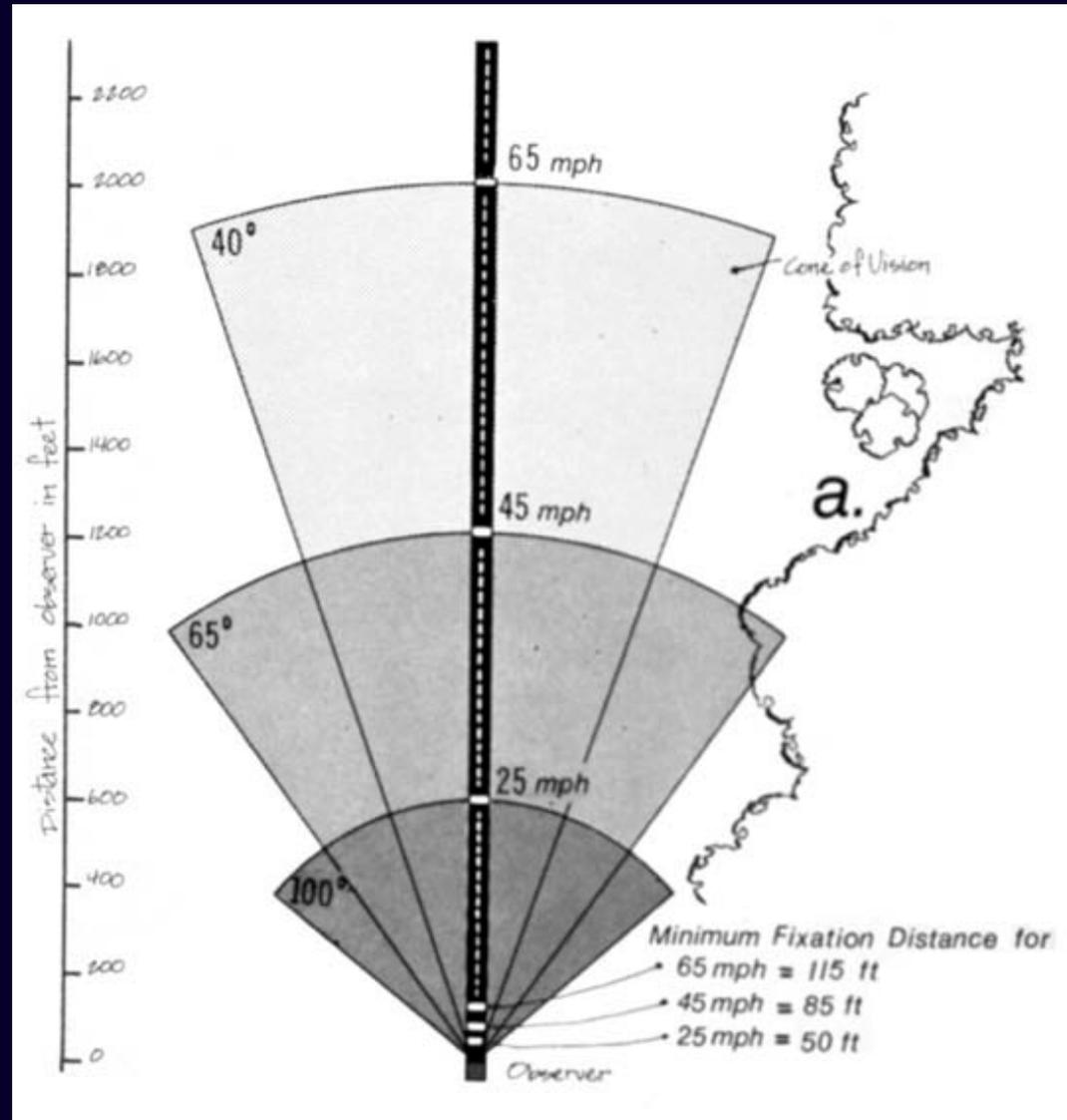
Oil & Gas facility is in view the entire time the observer is present



Length of Time in View

The longer a project is in view, the more significant the visual contrast.

Three/tenths of a second is needed for the eye to fixate.



Season of Use



Season of Use



Season of Use



Motion

Motion draws attention to a project or activity.



Motion



Motion



Motion is often visible at great distances in open country

Atmospheric Conditions



Skies are usually bright and clear in the West. Atmospheric conditions will not limit visibility of most human activity.

Atmospheric Conditions



Atmospheric Conditions

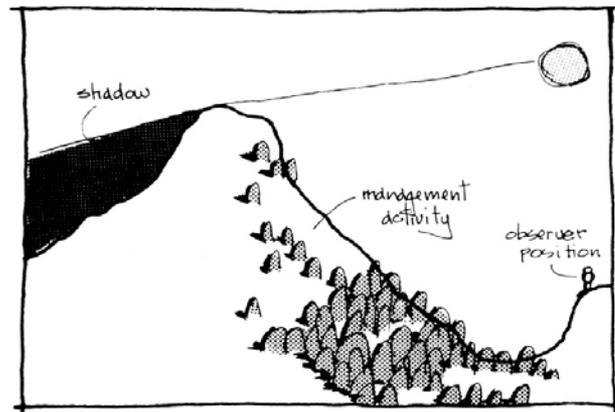


Light Conditions

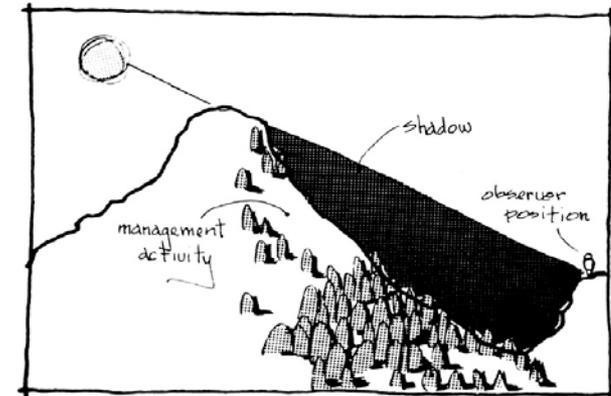
The direction, angle and quality of light affects the color intensity, reflection, shadow, form, and texture of visual aspects of a landscape.

Time of day/Time of year???

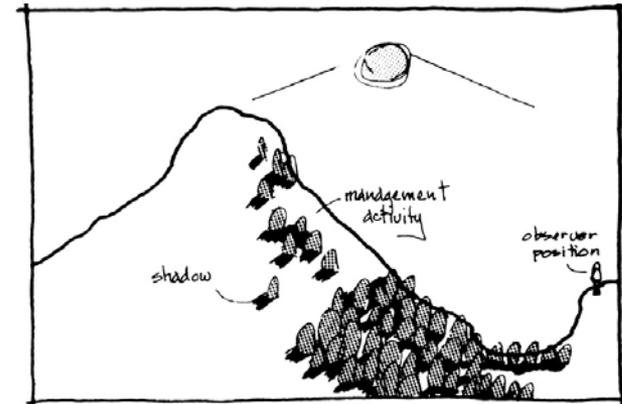
Intensity of light?



Frontlighting



Backlighting



Sidelighting

Light Conditions

Front Lighting

vs.

Back Lighting



Light Conditions

Side lighting: Creates Contrast, Accentuates Features



Scale

A project is more visible if it is large relative to the visible landscape



Scale



Spatial Relationships

Spatial qualities of a landscape are determined by the three-dimensional arrangement of objects and voids.

The elevation and location of objects in the landscape relative to topography affect their prominence.

High and exposed positions are more prominent than low obscured positions.

Spatial Relationships



Spatial Relationships



Recovery Time

- The amount of time needed for successful revegetation/rehabilitation.
- Normally takes several years.



Recovery Time



Human & Environmental Factors

Environmental Factors in Combination

Environmental Factors in combination may increase or decrease the Visual Impact from a given activity or project.

