

But will it look good?

Visual Impact Assessment
and Landscape Architecture

Betsy Severtsen and Kim Marcotte



Outline

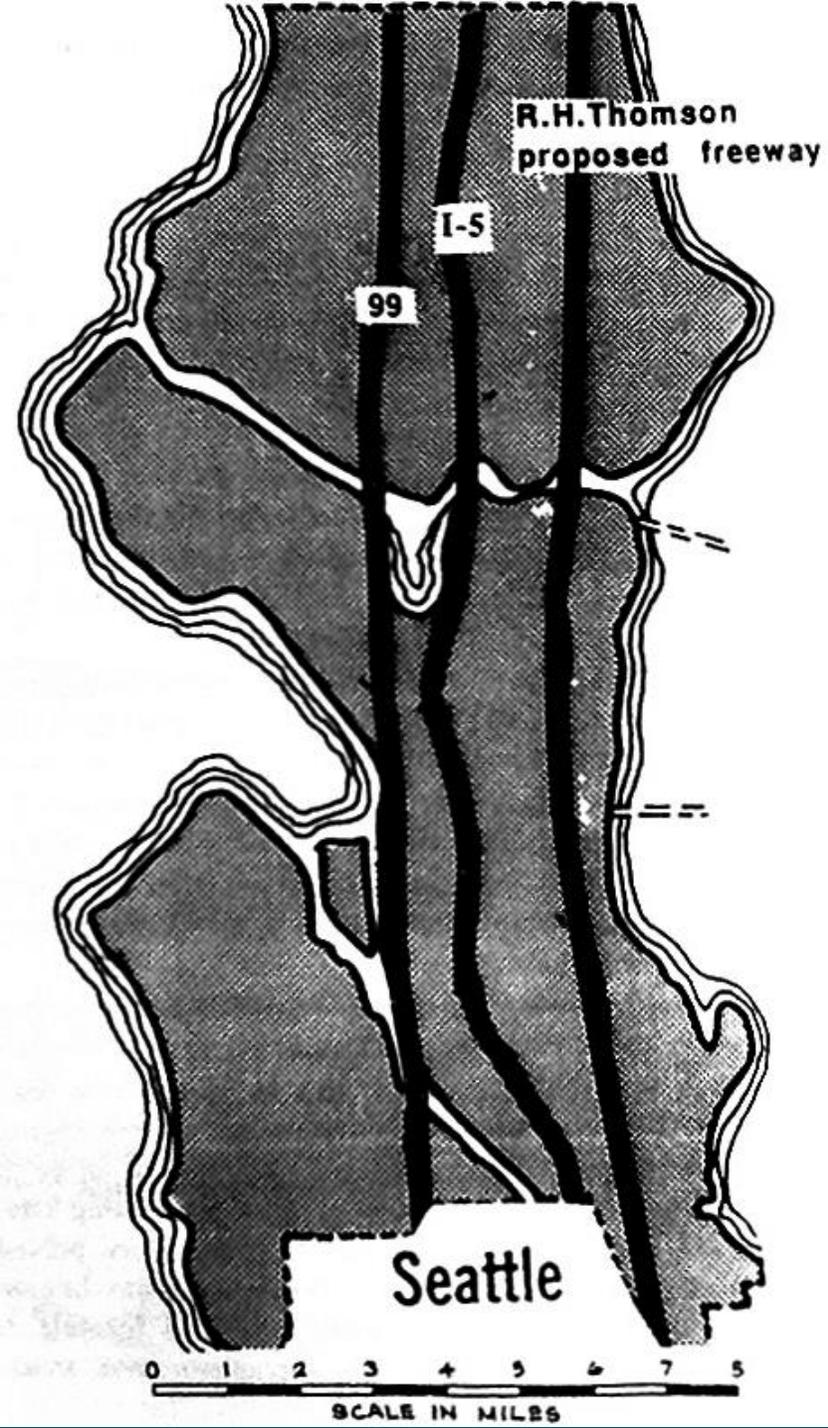
- Importance
- Planning context
- Process
- Lessons learned



Meydenbauer Bay Park







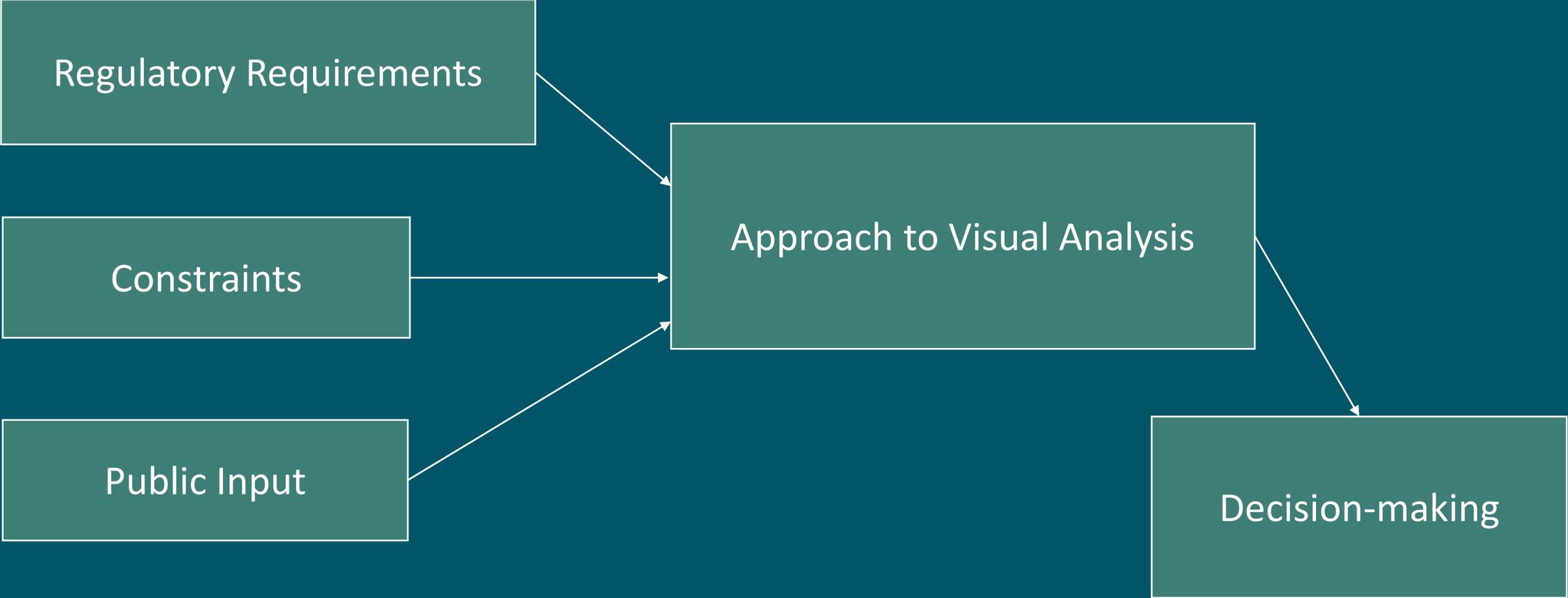




Google Earth

Image Landsat / Copernicus

Planning Context



When is this needed?

- Agency involvement – e.g., public funds, permitting/approvals
- Protected visual resources
- Controversy and public interest



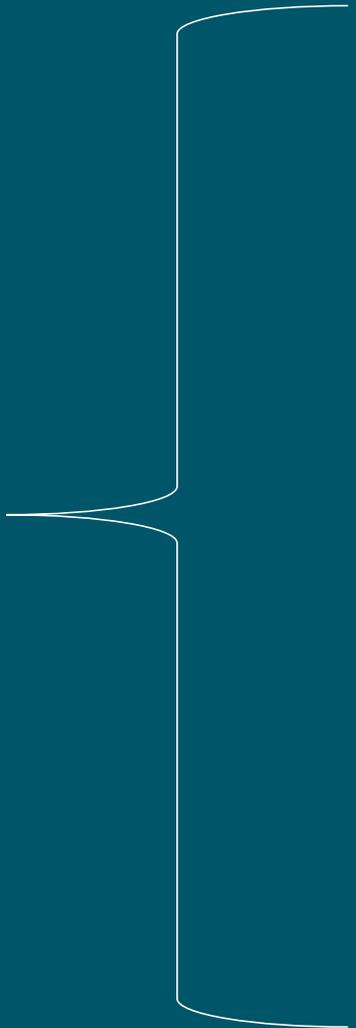
Agency Oversight

It is the...continuing responsibility of the Federal government to use all practicable means to...assure for all Americans...aesthetically pleasing surroundings...and to identify and develop methods and procedures...which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision making



Accepted Methods

Different Mandates



Local Considerations

Growth Management Act

Focuses on maintaining visual character of rural areas

Shoreline Management Act

“The public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally.”

Local Ordinances

Public Involvement

- Mainly during public review (e.g., NEPA) – Disclosure!
- Typically limited opportunities prior to publication



Visual Impact Assessment Process

Identification and Context

Project Description

Regulatory/Thresholds

Inventory

Project Description

Regulatory/Thresholds

Geographic Scope/Viewshed
Analysis

Viewers/Viewpoints

Landscape
Character/Inventory

Assessment

Project Description

Regulatory/Thresholds

Geographic Scope/Viewshed
Analysis

Viewers/Viewpoints

Landscape
Character/Inventory

Visual Simulations

Assessment

Impacts

Mitigation

Project Description

Regulatory/Thresholds

Geo Scope

Viewers/Viewpoints

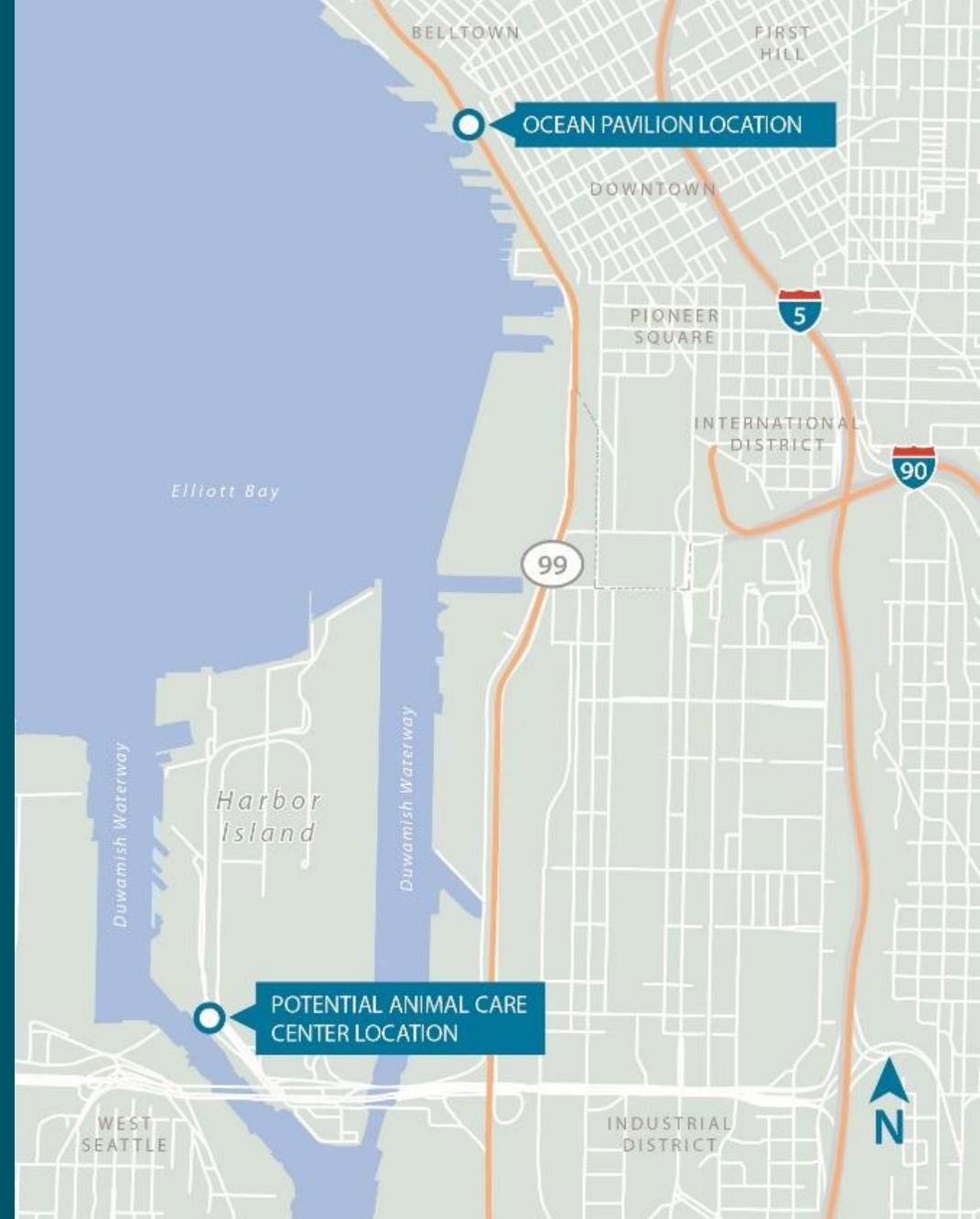
Character/Inventory

Simulations

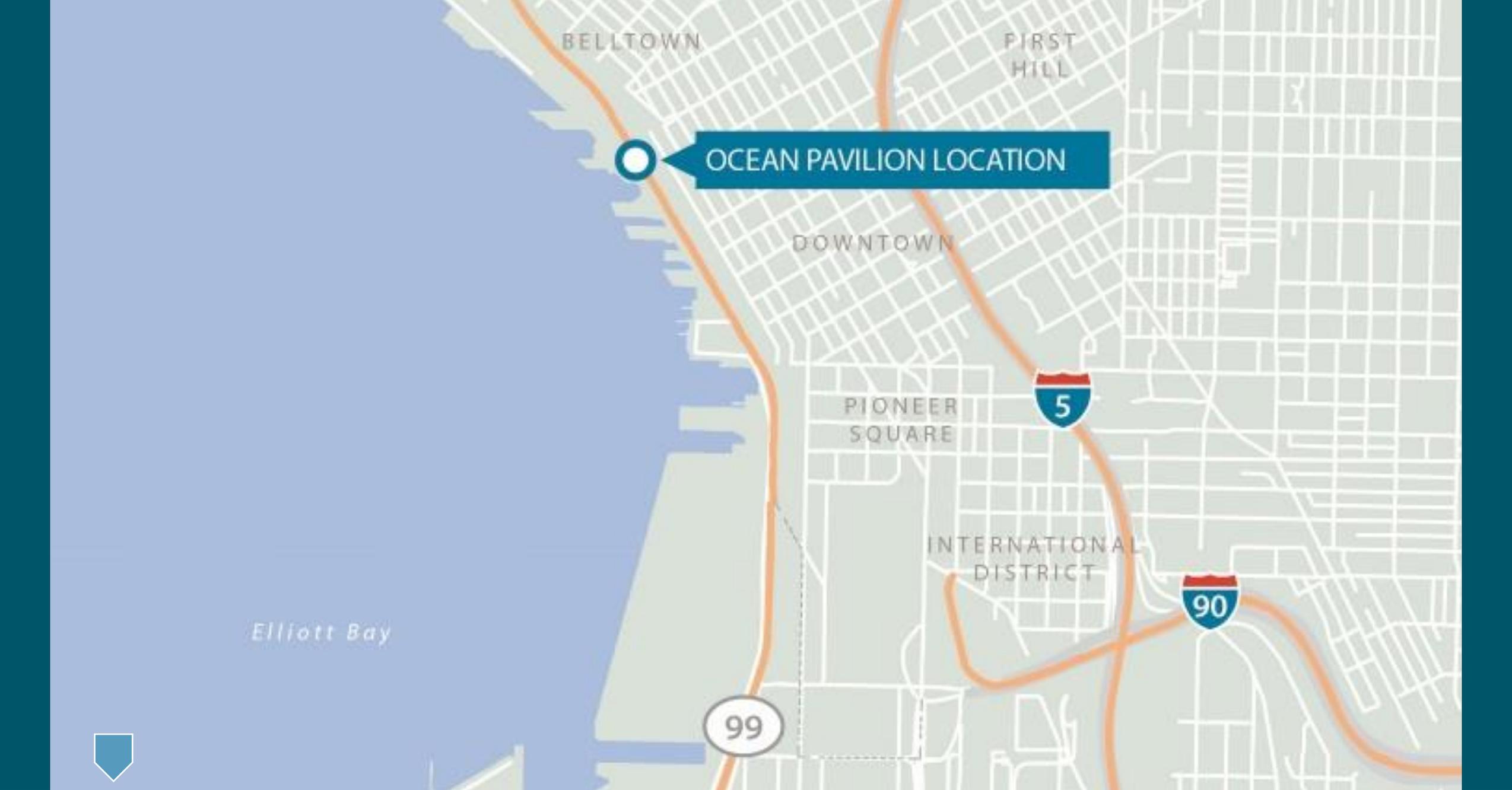
Analysis/Impacts

Process via Case Study

Project Description	Regulatory/Thresholds	Geo Scope	Viewers/Viewpoints	Character/Inventory	Simulations	Analysis/Impacts
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Project Description	Regulatory/Thresholds	Geo Scope	Viewers/Viewpoints	Character/Inventory	Simulations	Analysis/Impacts
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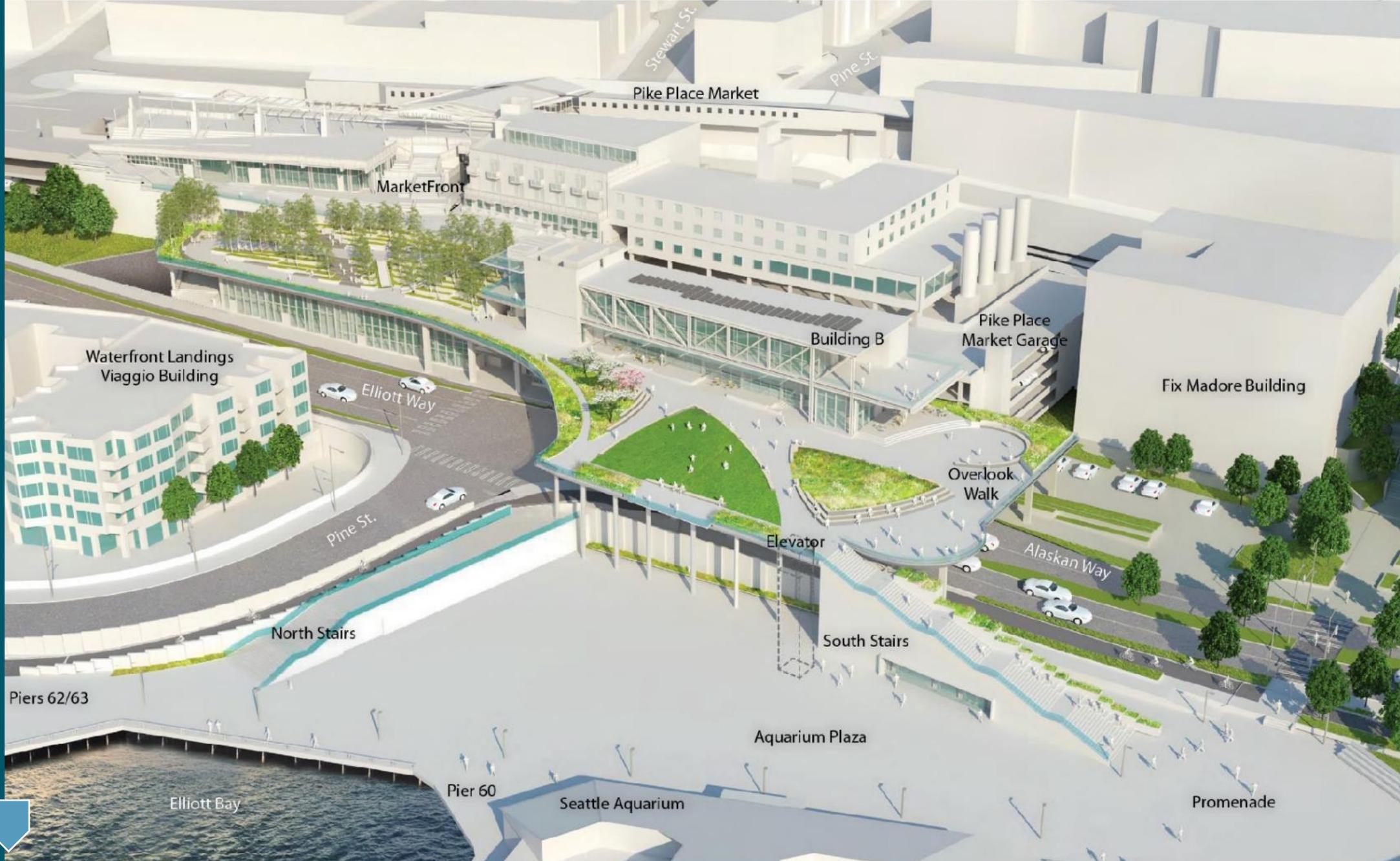
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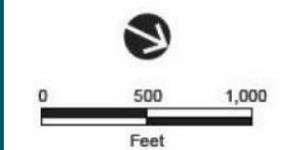
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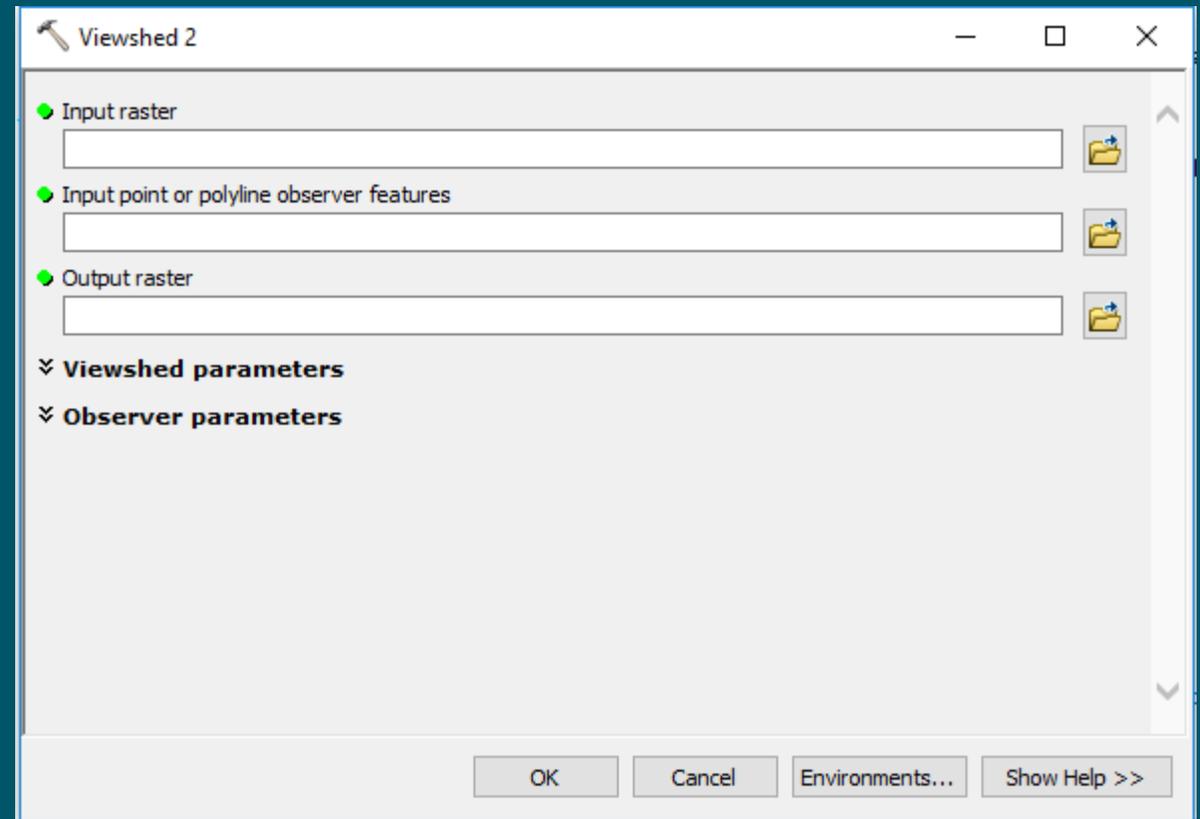
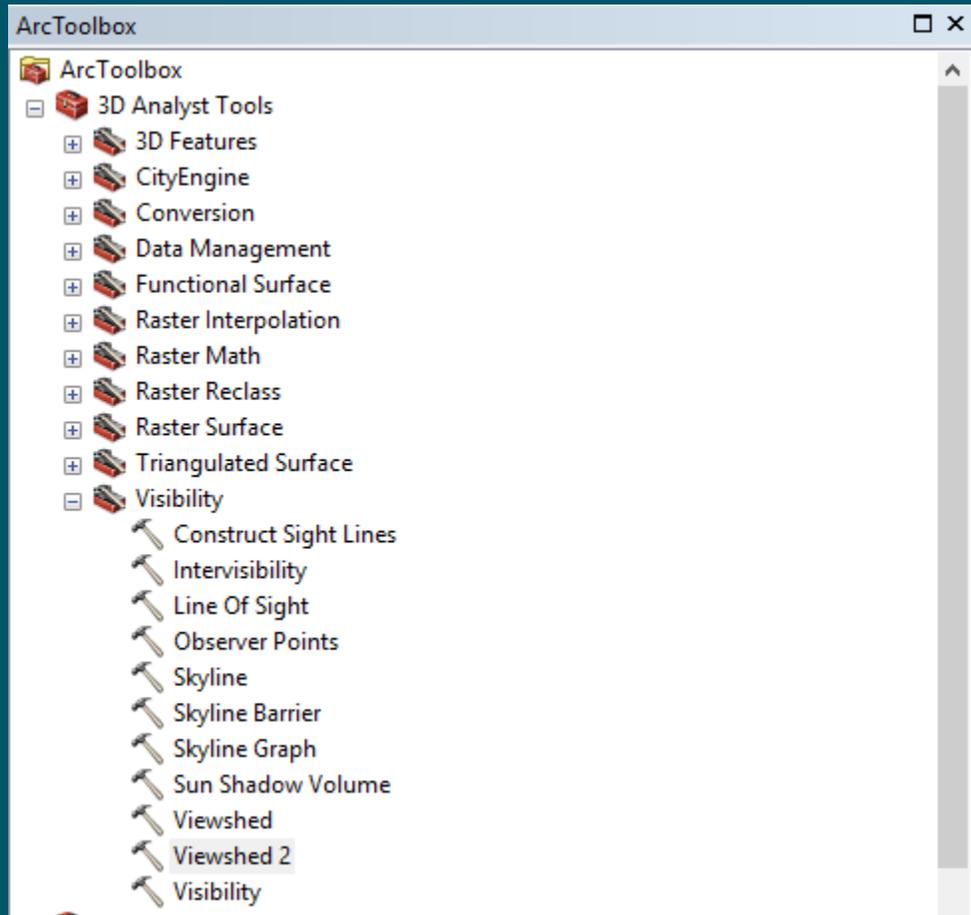
GIS Source: King County, City of Seattle

Preferred Alternative

-  Ocean Pavilion
-  Potential Construction Staging Area
-  Scenic View Routes
-  Extent of View Corridor / Direction of View
-  View Corridor / Direction of View Outside the Project Area
-  Parks with Protected Views

-  Parcel Boundary
-  Building Footprint







Project Description	Regulatory/Thresholds	Geo Scope	Viewers/Viewpoints	Character/Inventory	Simulations	Analysis/Impacts
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Visual_viewshed.mxd - ArcMap

File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

Table of Contents

- Layers
 - Location
 - Topography with Buildings
 - Value
 - High : 1054
 - Low : -67
 - Buildings

ArcToolbox

- ArcToolbox
 - 3D Analyst Tools
 - 3D Features
 - CityEngine
 - Conversion
 - Data Management
 - Functional Surface
 - Raster Interpolation
 - Raster Math
 - Raster Reclass
 - Raster Surface
 - Triangulated Surface
 - Visibility
 - Construct Sight Lines
 - Intervisibility
 - Line Of Sight
 - Observer Points
 - Skyline
 - Skyline Barrier
 - Skyline Graph
 - Sun Shadow Volume
 - Viewshed

Viewshed

Input raster: Topography with Buildings

Input point or polyline observer features: Location

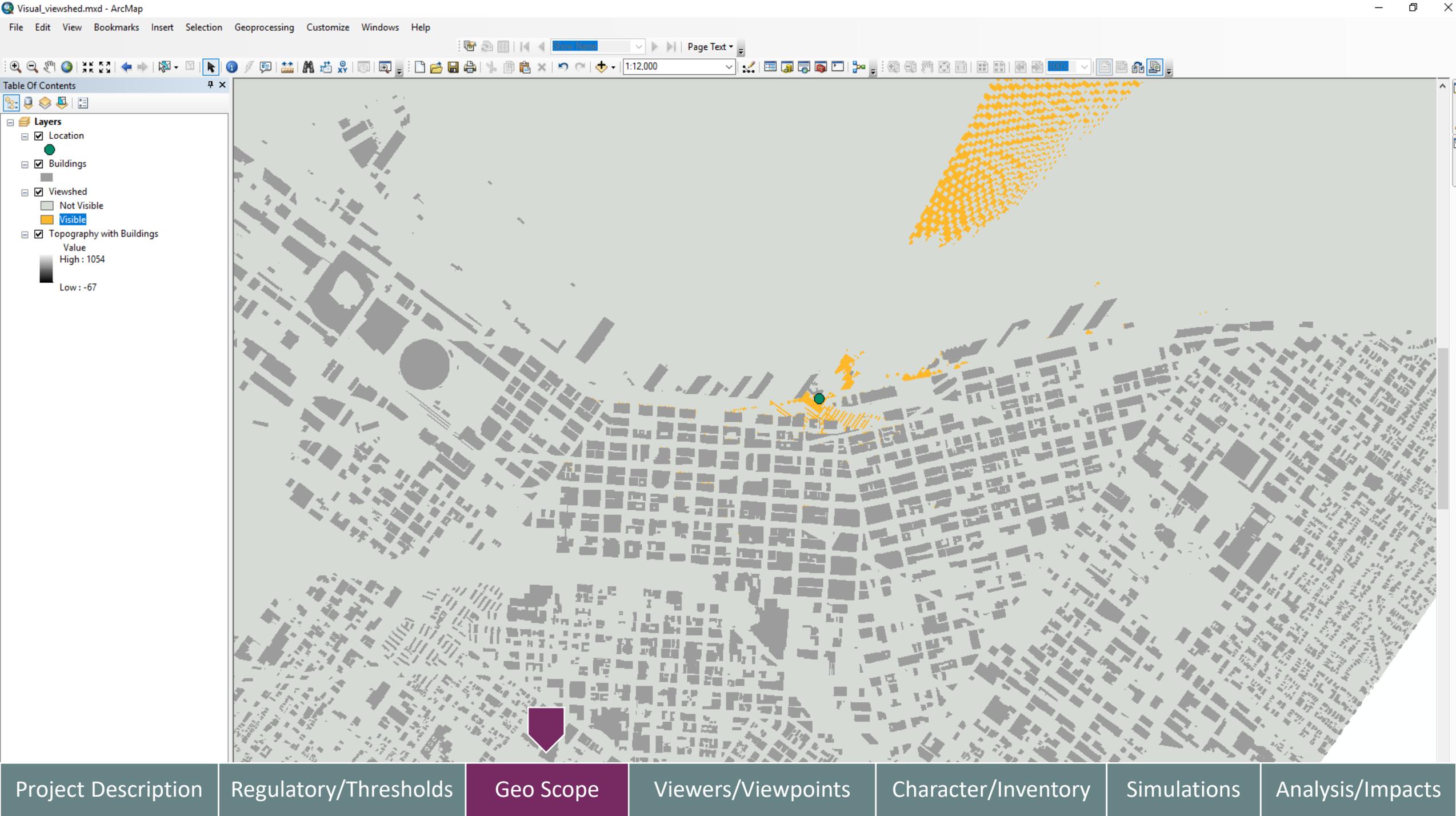
Output raster: Q:\Jobs\Seattle_Aquarium_1206\Aquarium_Expansion\Analysis\Visual\Viewshed

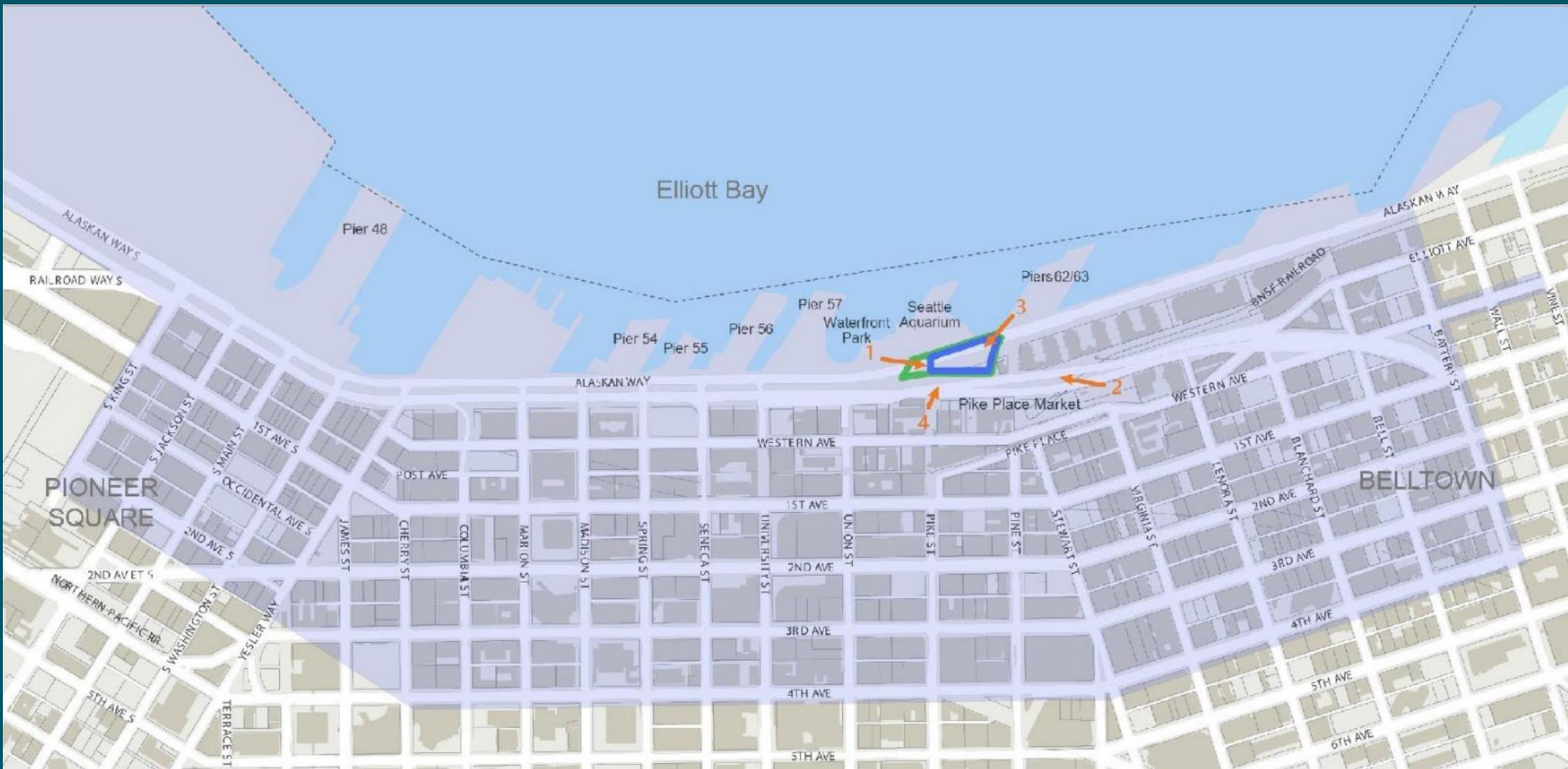
Output above ground level raster (optional):

Z factor (optional): 50

Use earth curvature corrections (optional)

Refractivity coefficient (optional): 0.13





0 200 400
Feet
Source: SDOT

Preferred Alternative

- Ocean Pavilion Area
- Potential Construction Staging Area
- Project Viewshed
- Viewpoint

Parcel Boundary

- Building Footprint
- Outer Harbor Line

Note:
Viewshed extends westward to the horizon.



Visual Quality Definitions (Federal Highway Administration)

Natural Harmony



Project Description	Regulatory/Thresholds	Geo Scope	Viewers/Viewpoints	Character/Inventory	Simulations	Analysis/Impacts
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Natural Harmony



Charlie Day



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Cultural Order



Project Description

Regulatory/Thresholds

Geo Scope

Viewers/Viewpoints

Character/Inventory

Simulations

Analysis/Impacts

Cultural Order



Project Description

Regulatory/Thresholds

Geo Scope

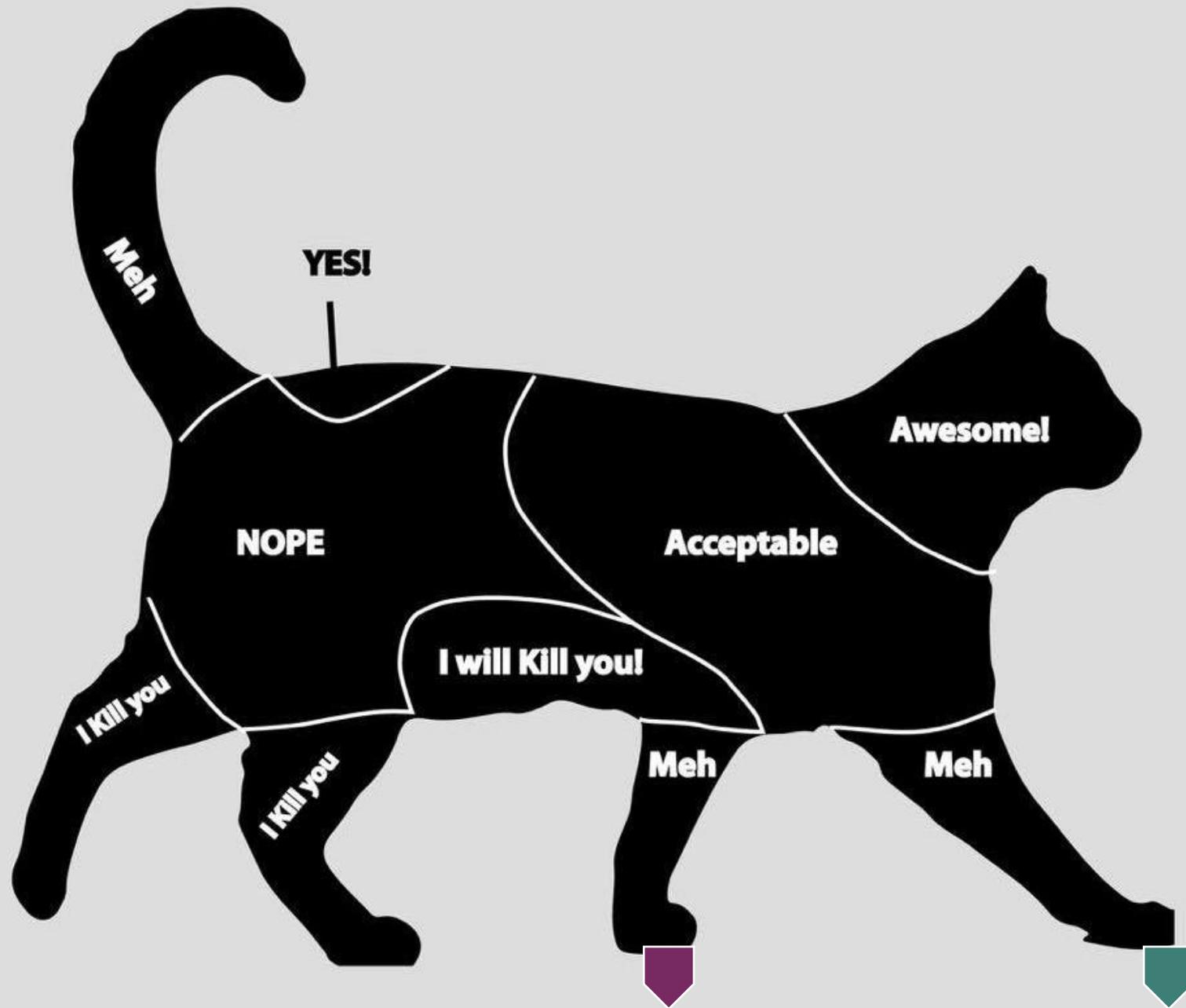
Viewers/Viewpoints

Character/Inventory

Simulations

Analysis/Impacts

Project Coherence



Buzzfeed

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Project Coherence



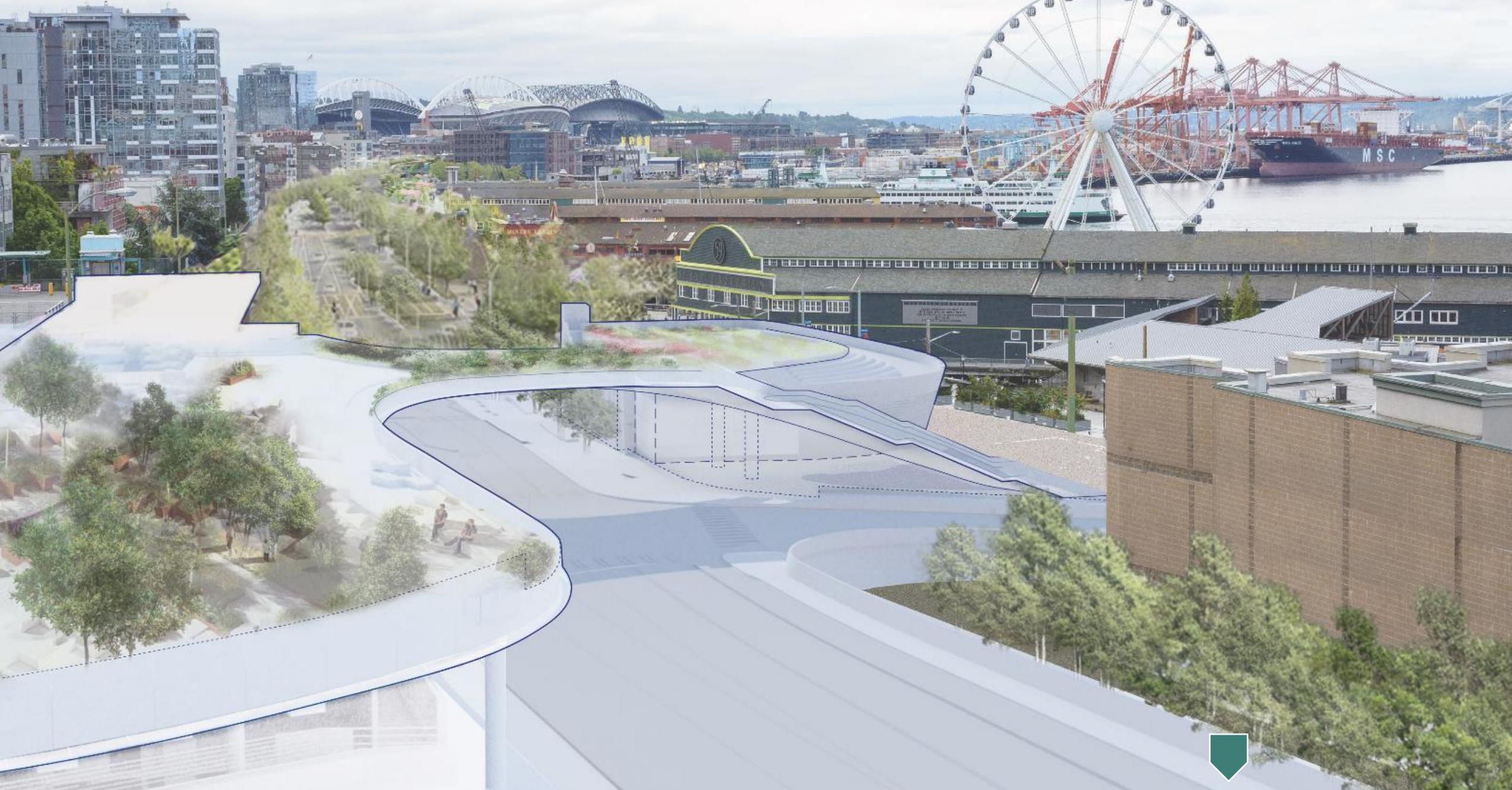
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Lessons Learned and Limitations



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THE L. A. THOMPSON SCENIC RAILWAY, VENICE,
CALIFORNIA.





I Want More!

Visual Resources Clearinghouse:
blmwyomingvisual.anl.gov

VIA Conference - October 2019:
vrconference.evs.anl.gov

2017 Conference Proceedings:
www.nrs.fs.fed.us/pubs/57492

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