# Suitability Analysis

*V5 – Rev 6/20/25*

## Introduction

The suitability of land to carry future development is influenced by many factors. These factors that influence future development can be broken down into both positive and negative factors.  Positive development factors are those that promote the development of property, whereas negative factors are those that restrict development from occurring.  Any given property in the city has variable opportunities and threats to being productively developed.  As such, when a realtor tries to sell a property, the realtor promotes the infrastructure and amenities that are near the property.  Legal counsel, engineers, and architects might warn a developer of environmental concerns about a property that would limit full development.  Any of these factors can make or break a project, but what makes the location of a property?  As the age-old saying goes in the realty market, properties are about "location, location, location".  So, what factors influence what makes the location of one property more or less desirable than another?

This investigation conducts a geographical information system (GIS) analysis that divides the city into one (1) acre hexagons of equal size to create a hex-grid.  The positive development factors are all assigned a weight from +3 to 0, and the negative development factors are assigned a weight from 0 to -3, based on the existence of a feature.  By making both positive and negative factors be in 4 groups, the scale can go from -12 to +12.  Thus, each hexagon in the grid can be assigned any of these 25 scores, and mapped on a gradient, similar to a heatmap.

The following breakdown of the factors was used for each factor:

# Suitability Analysis

*V3 – Rev 5/29/25*

## Negative (constraints)

*Yes/No feature existence*

1. Slope

   I.   (-3) Extreme Slopes (over 30%)

   II.  (-2) Very Steep Slopes (20 to 30%)

   III. (-1) Steep Slopes (10 to 20%)

   IV.  (-0) Little-to-no Slope (Less than 10% Slope)

2. Floodplain

   I.   (-3) Floodway

   II.  (-2) 1% Annual Chance to Flood Zone (100-year flood)

   III. (-1) 0.05% Annual Chance to Flood Zone (500-year flood)

   IV.  (-0) Outside the Floodplain

3. Wetlands

   I.   (-3) In a Wetland

   II.  (-0) No Wetlands present

4. Highly visible hillsides

   I.   (-3) In a highly visible hillside

   II.  (-0) Outside a highly visible hillside

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*V5 – Rev 6/20/25*

## Positive  (development pressure)

*Yes/No feature existence -or- Proximity calculation*

1. Roads/Transportation (Functional Classification)

    I.    (+3) Arterial

    II.   (+2) Collector

    III.  (+1) Local / Minor

    IV.   (+0) None / Private

2. Utilities (Public Water & Sewer)

    I.    (+3) Water & Sewer Available

    II.   (+2) Sewer Available

    III.  (+1) Water Available

    IV.   (+0) None / Private

3. Parks & Recreation / Non-Motorized Mobility

    I.    (+3) Trail and/or Sidewalk + Nearby Park

    II.   (+2) Nearby Park

    III.  (+1) Trail and/or Sidewalk

    IV.   (+0) None

4. Emergency Services

    I.    (+3) Fire, Police, Ambulance Station & Medical Facility nearby

    II.   (+2) Fire Station nearby

    III.  (+1) Police Station, Ambulance Station, or Medical Facility nearby

    IV.   (+0) None