Determining Suitability of Developable Land: Irving, Texas

The goal of this project is to determine the most suitable areas in the city of Irving, Texas for creating new residential development. Irving is located between Dallas and Fort Worth with a portion hemmed in by Dallas Fort Worth International Airport. The goal is to determine the most suitable areas for residential development. My definition of "the most suitable area" is one where it is easy to walk and access public transportation. My intention is to highlight areas where it is possible to plan development without "false constraints" or lack of use.

Irving was a difficult choice for a study city, as there are no zoning or strict land use policies. The best areas are around the two Trinity Railway Express (TRE) stations and one major bus station in Irving. It is an area experiencing rapid growth and development.

The criteria I developed to determine suitability were split into two sections: constraints against development (top and preferences for development (bottom)).

**Constraints**

- **100 Year Floodplain**: area within the formation that has an elevated chance of flooding during heavy precipitation.
- **Airport Runways**: at the airport, a 600 foot buffer between runways should be maintained for noise and safety reasons.
- **Industrial Areas**: a 500 foot buffer is used to separate residential and industrial uses.
- **Streams**: a 100 foot buffer is created around streams and bodies of water and have a 1-in-100 chance of flooding.

**Preferences**

- **Public Transit**: Park and Ride, TRE Rail Station, Transit Center, Regional Highways
- **Major Arterial**: Roads
- **Industrial Areas**: Buffer
- **Retail**: Buffer
- **Parks**: Buffers

**Steps:**

1. Erase Constraints
2. Combine Preferences

**Theme:**

**Suitability = Walkability**

**Results:**

**Best Areas for Residential Development**

- **Site 1: North Irving Transit Center Vicinity**
- **Site 2 & 3: West & South Irving Stations**

**Cartographer:** Jason Kurian, Tufts University Department of Urban and Environmental Policy and Planning (UEP)

**Sources of Information:**

- North Central Texas Council of Governments (NCTCOG), Dallas Fort Worth Metropolitan Planning Organization, (DFWMPO), and Metropolitan Statistical Area (MSA) Regional Transportation Planning Organization (RTP), National Agricultural Imagery Program (NAIP), Dallas Area Rapid Transit (DART), Trinity Railway Express (TRE), and US Census Data.

**Coordinate System:**

NAD_1983_StatePlane_Texas_North_Central_FIPS_4202_Feet