

A map of the San Francisco Bay Area, showing the bay and surrounding land areas. The land is divided into various shades of gray, representing different jurisdictions or regions. The bay is a dark blue color. The map is positioned on the right side of the slide, with the text on the left.

# Building Permit Metrics for the San Francisco Bay Area

CPLN 680 – Feb 11th

by Alexander Nelms

[LINK TO PRESENTATION](#)

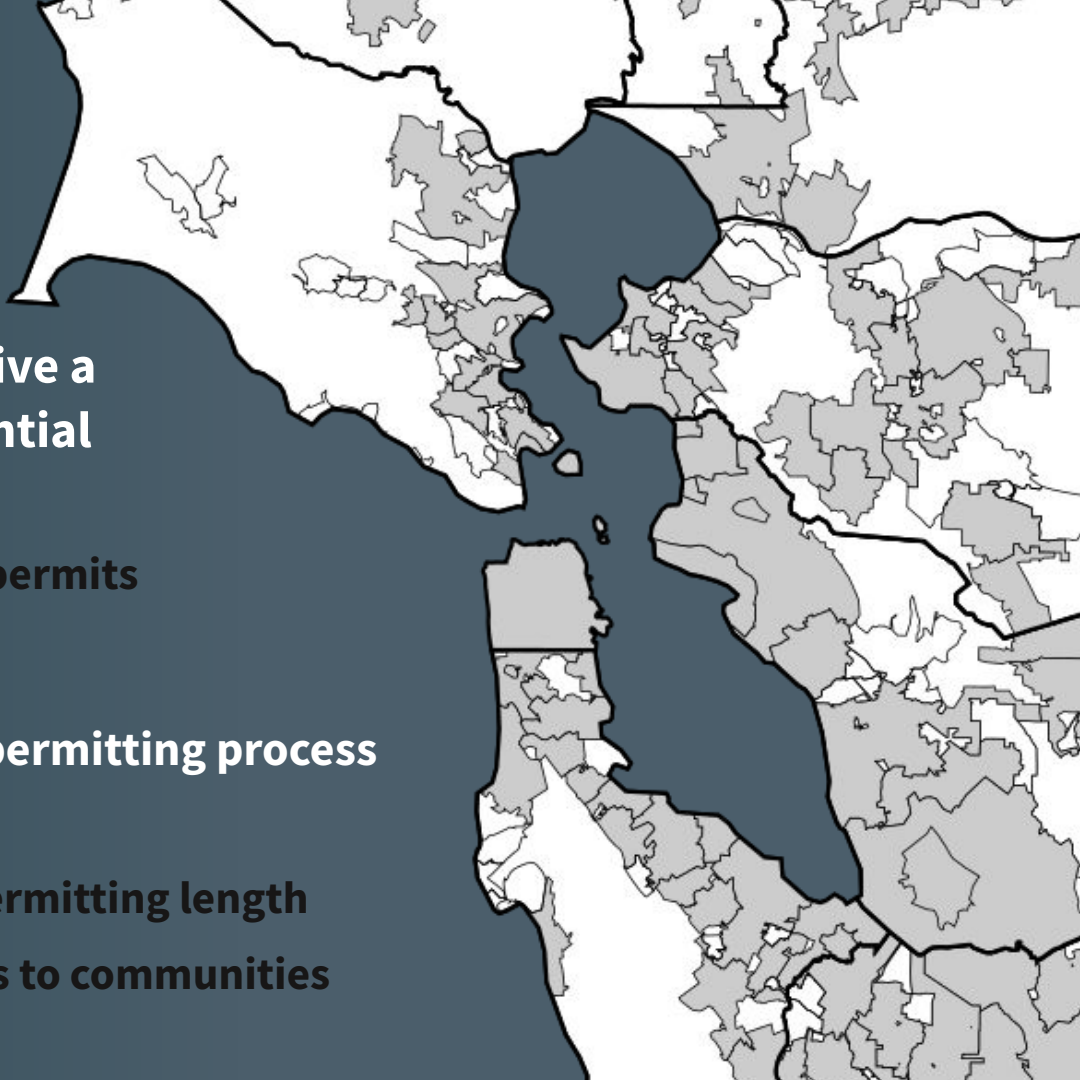
## Research Questions

1. **How long does it take to receive a Permit to Construct a Residential Building?**
2. **Which factors lead to a longer permitting process & an denied permit?**
  - Is it the building's size?
  - Is it the public hearing process?
  - Is it the compounding result of white elites developing & maintaining discriminatory real estate practices & restrictive land-use controls that preserve racial, political, & economic hierarchies & segregation?



## Research Paper

1. **How long does it take to receive a Permit to Construct a Residential Building?**
  - A. **Scripts that measure the permits**
2. **Which factors lead to a longer permitting process & an denied permit?**
  - B. **Correlate the factors to permitting length**
  - C. **Spatially compare permits to communities**



## Study Areas

### 1. Walnut Creek

*similar to Villanova, Thousand Oaks*

- wealthy, primarily white suburb
- population of 69k
- data cleaning is already completed

### 2. San Francisco

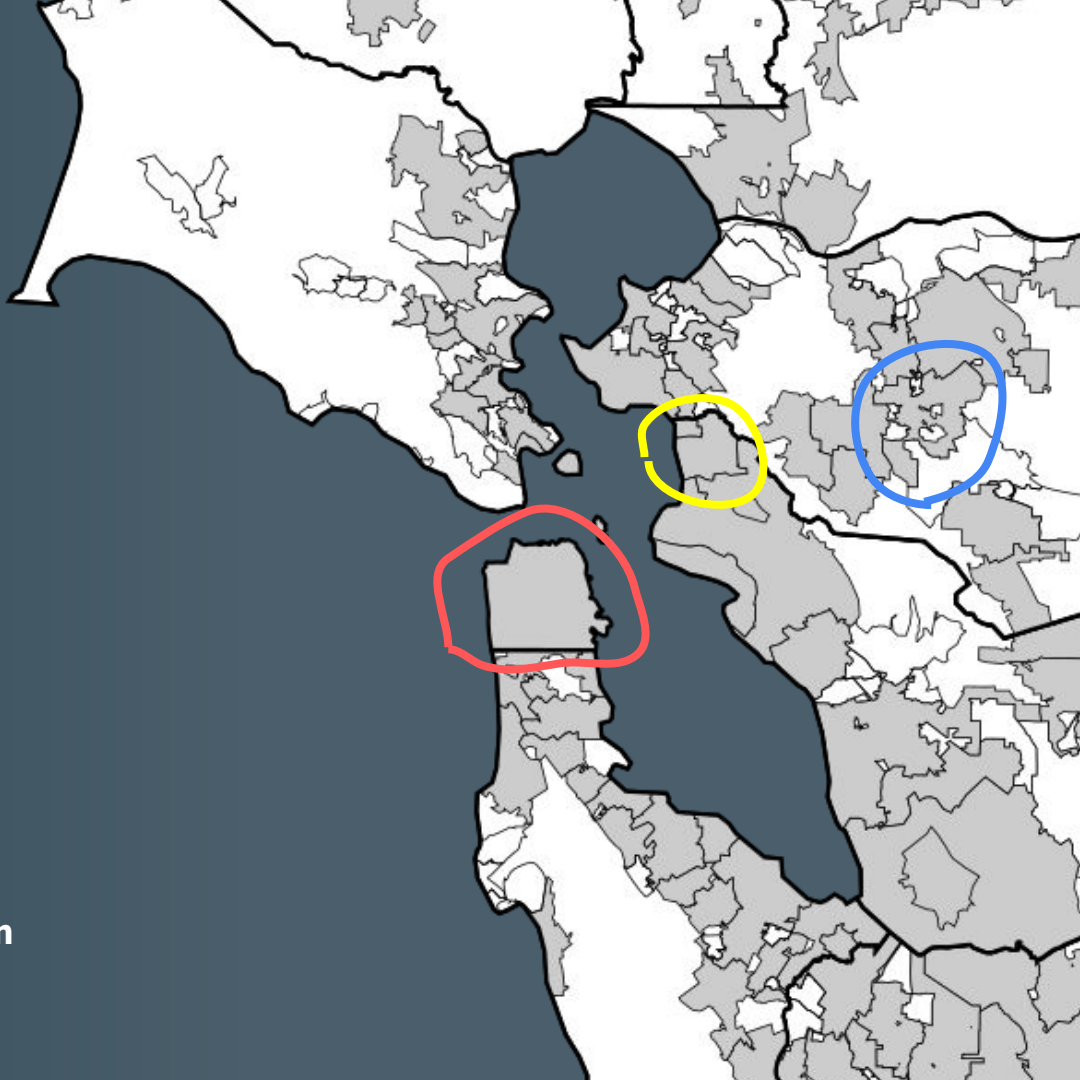
*similar to Center City, some of Manhattan*

- higher density, diverse city
- population of 874k

### 3. Berkeley

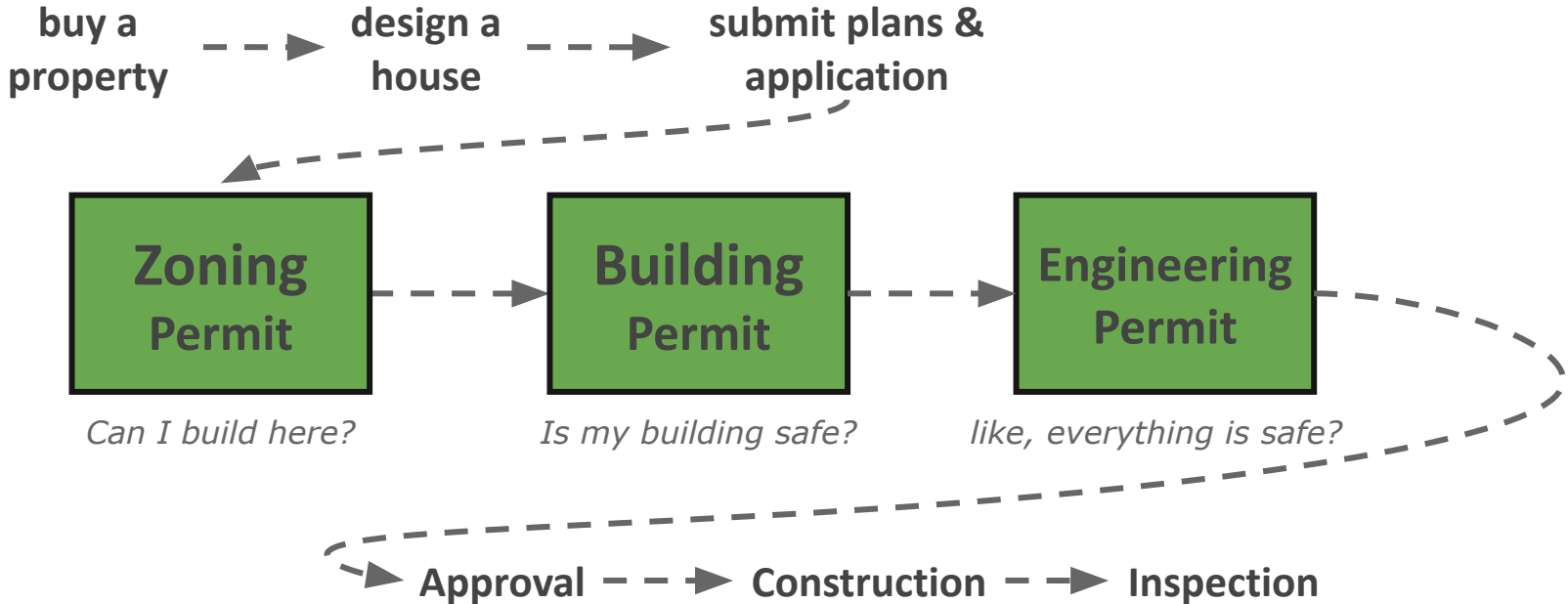
*similar to University City, West Philly, Cambridge*

- suburban & semi-dense college town
- population of 121k



# ~~How Can I Obtain a Building Permit?~~ (simplified)

*how can i obtain a permit to build a building?*



# How Can I Obtain a Zoning Permit?

*APPLICANT (Developer or Homeowner)*

submit  
application

resubmit  
application

**INCOMPLETE**

Internal  
Review

Application  
Deemed  
Complete

Administrative  
Decision

**APPROVED**

Public Hearing  
Commission

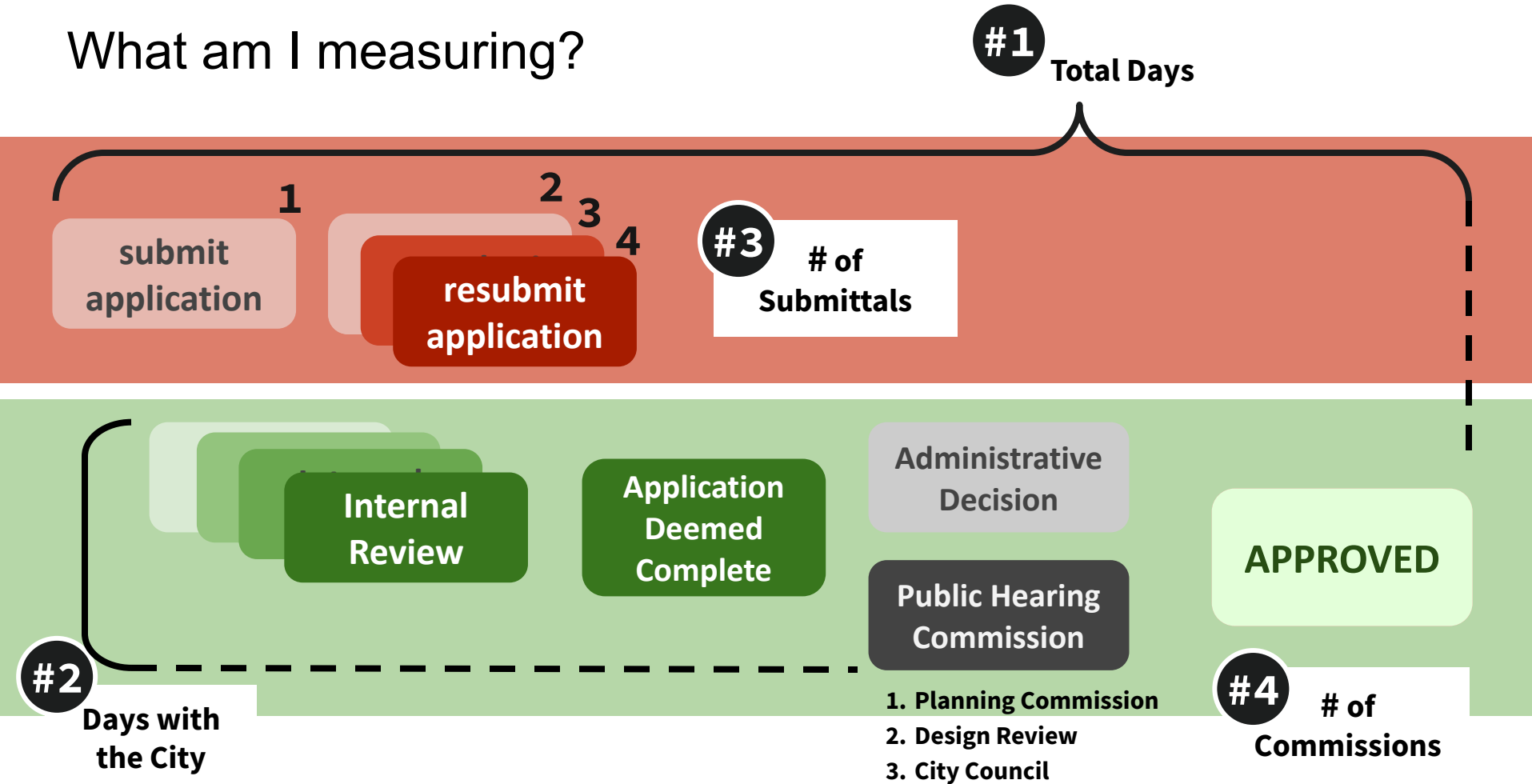
**CITY GOVERNMENT**

- Complete Application  
Compliant with Zoning?  
with other Departments?
- Planning? • County?
  - Building? • Environmental
  - Engineering? Agency?
  - Fire? • State?

- PC • Historic Preservation
- DRC • Public Works
- TC • City Council



# What am I measuring?



# What does the data look like?

## Permit Timeline

- from a Government Permitting Database
- Timeline of Tasks

## Permit Information

- Building Type
- Associated Permits
- Address

**#3**

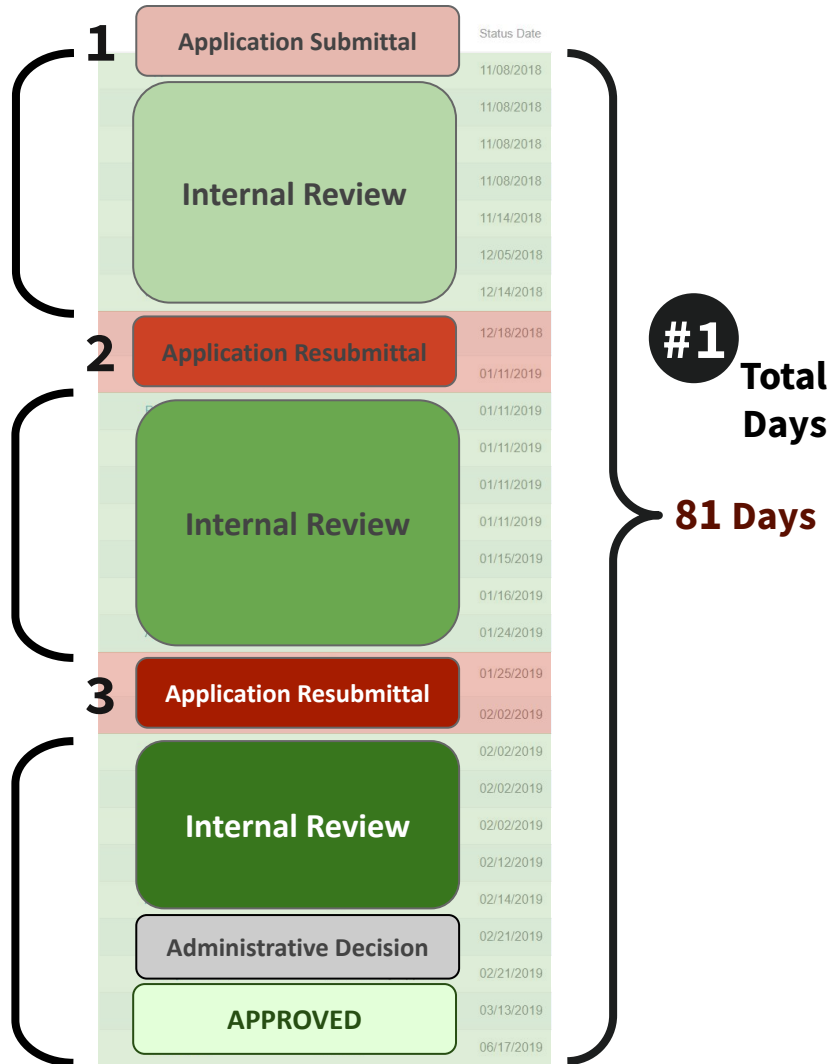
**# of Submittals**

**3 Submittals**

**#2**

**Days with the City**

**52 Days**







# Walnut Creek

## Permit Metrics

### 2017-2019

All Applications

1 Submittal

2 Submittals

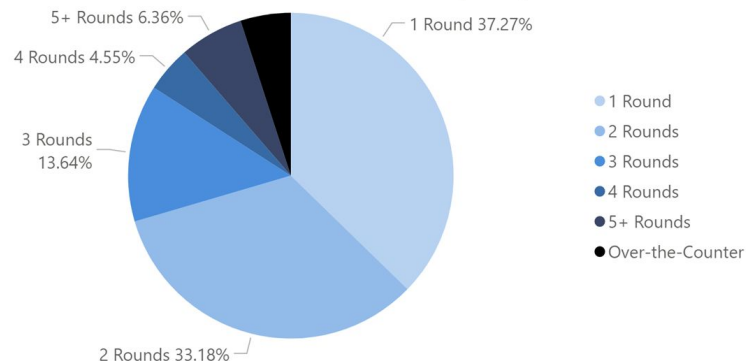
3 Submittals

4+ Submittals

Application

## Planning Permits

### Permits per Round



220  
Permits

35  
Average Work Days

2.04  
Average Rounds

Permit Type	Permits	Average Rounds	Average Work Days	Average Total Days
Design Review Commercial	52	2	38	125
Other	46	1	30	81
Use Permit Conditional	26	2	58	118
Use Permit Administrative	25	2	35	162
Design Review Residential	24	3	47	163
Design Review Other	16	2	46	107
Tree Removal Permit		3	56	302



# Project Steps

## Data Cleaning

1. Measure Permits
  - a. Walnut Creek
  - b. San Francisco
  - c. Berkeley
2. Locate Permits

## Academic Paper

1. Gather Spatial Comparisons
  - a. Census Tracts – Race, Income, Housing
  - b. Local Policy Data
2. Statistical Models
3. Spatial Models

## Metric Dashboard

1. ETL Pipeline of Data
2. Power BI Dashboard
3. Web Map of Permits

