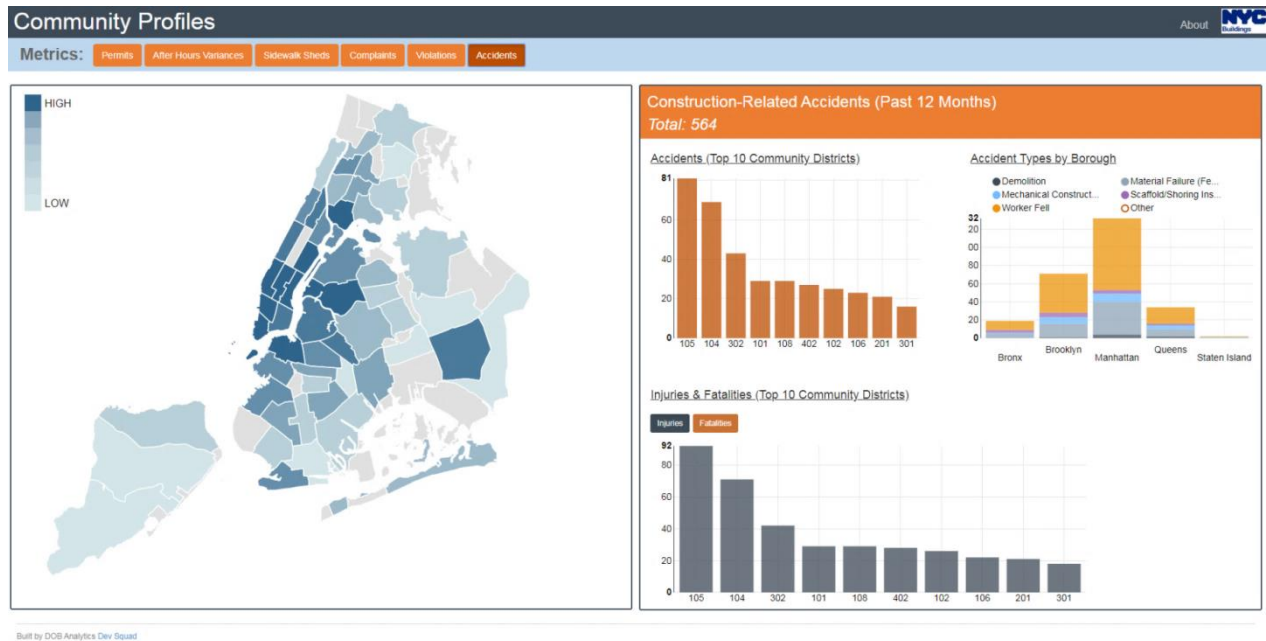


Community Profiles



About Community Profiles

- **Combine choropleth map and charts**
- **Select Metrics**
 - **Permits**
 - **After Hours Variances**
 - **Sidewalk Sheds**
 - **Complaints**
 - **Violations**
 - **Accidents**
- **Citywide and Community District at-a-glance**

Tools

- **Java**
- **JavaScript**
- **D3.js** **Data access, manipulation, svg rendering**
- **NVD3** **Highly customizable charts and graphs (nvd3.org)**
- **jQuery** **JavaScript-based DOM manipulation, styling...**
- **Bootstrap** **CSS framework**

Considerations/Challenges

- **Open Source**
- **Multiple Data Sources**
- **Development Time Frame**

Considerations/Challenges

Problem: Outlier Values

Metrics:

Permits

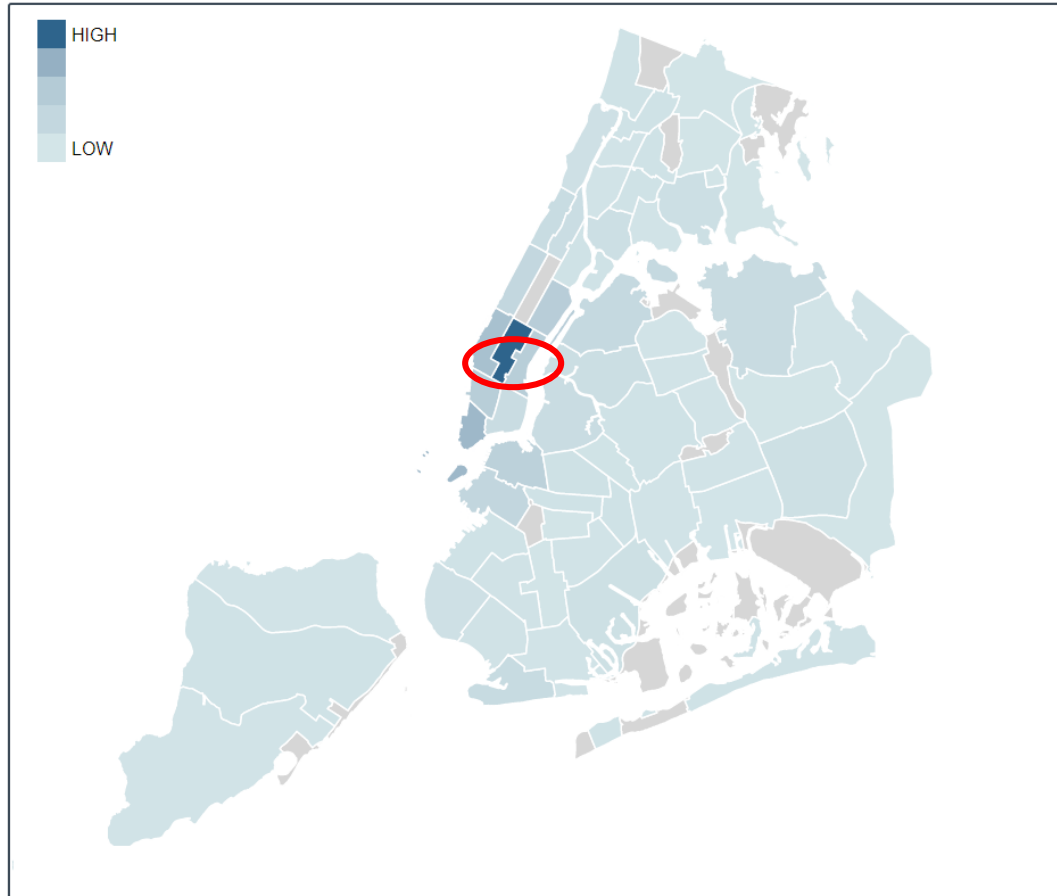
After Hours Variances

Sidewalk Sheds

Complaints

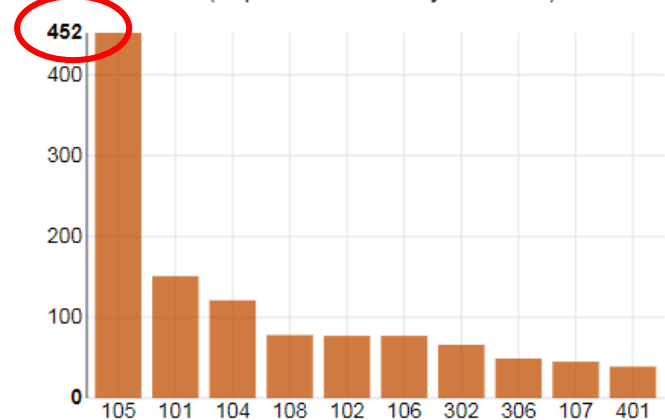
Violations

Injuries



Active After Hours Variances (AHVs)
Total: 1721

Active AHVs (Top 10 Community Districts)



Considerations/Challenges

Solution: Calculate Percentiles vs Library built-in Scale

Metrics:

Permits

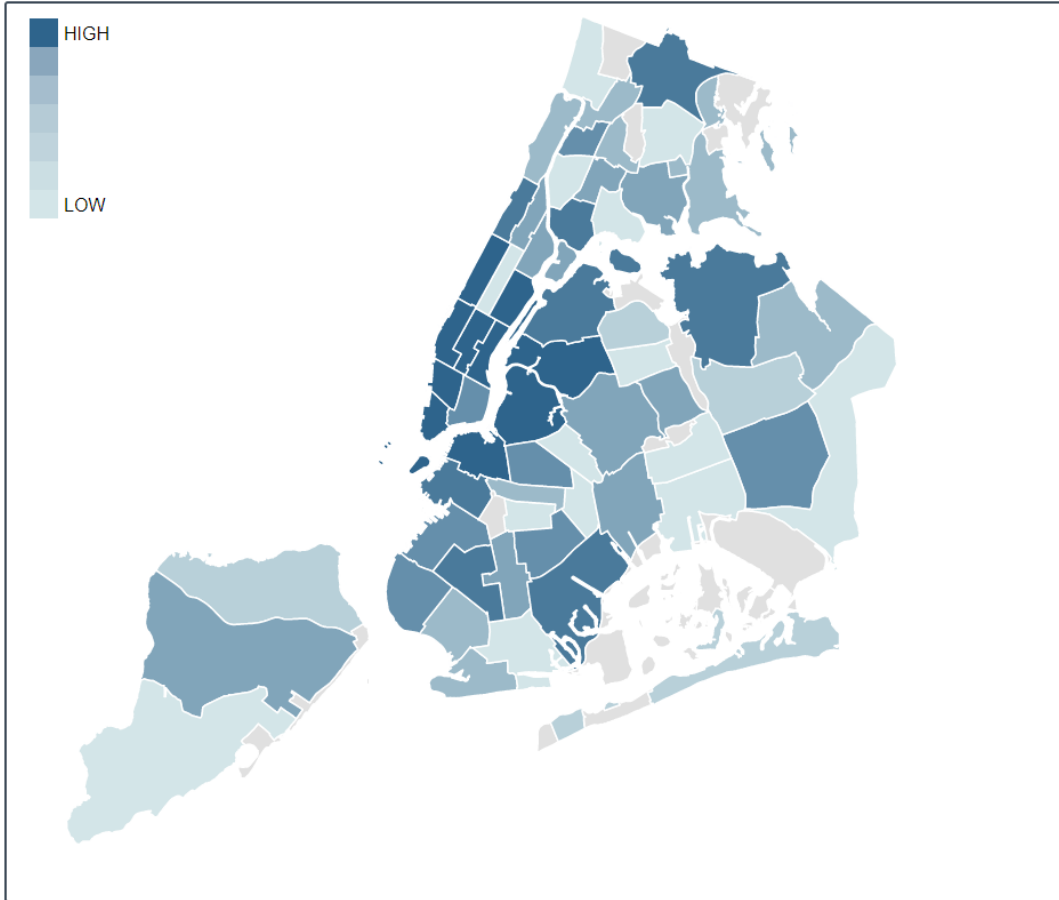
After Hours Variances

Sidewalk Sheds

Complaints

Violations

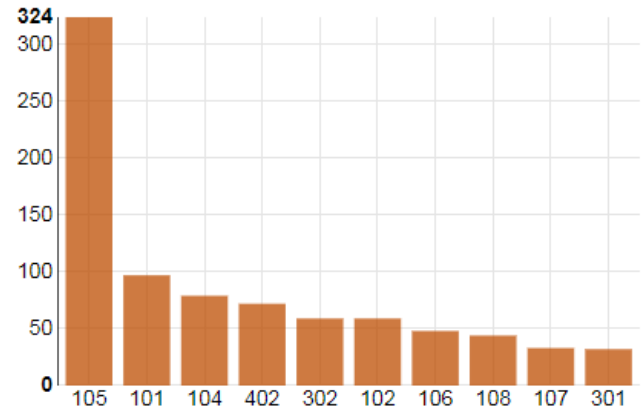
Accidents



Active After Hours Variances (AHVs)

Total: 1390

Active AHVs (Top 10 Community Districts)



Considerations/Challenges

Solution: Calculate Percentiles vs Library built-in Scale

```
function getPercentiles(dataArray, measureColumn)    {
  let retval = [];
  let varname="";
  let numPercentiles=7;
  let percentileNames=[];
  let percentileRange = Math.floor(100/numPercentiles);

  //filter() to remove 0s from sorted array
  let sortedData = dataArray.sort(function(a,b){return a[measureColumn] - b[measureColumn]})
    .map(    (el) => { return el[measureColumn]}    ).filter( function(val) { return val >0}    )

  for (let myctr=percentileRange; myctr <= 100; myctr+=percentileRange) {
    percentileNum = Math.floor(myctr);
    varname="percentile"+percentileNum;
    percentileNames.push(varname)
    this[varname] = d3.quantile(sortedData,    percentileNum/100);
    retval.push(this[varname]);
  }

  retval[ retval.length-1 ]=parseFloat(sortedData[sortedData.length-1])
  dataArray.forEach( function(dataRow) {
    dataRow["Percentile"] = function () {
      let percentile=0;
      let foundPercentile=false;
      for (let myctr=0; myctr < percentileNames.length-1; myctr++) {
        if ( dataRow[measureColumn] <= this[percentileNames[myctr]]    )    {
          percentile = parseInt(percentileNames[myctr].substring(10));
          foundPercentile=true;
          break;
        }
      }
      return (foundPercentile)?percentile: 100;
    }()
  })
  return retval;
}
```

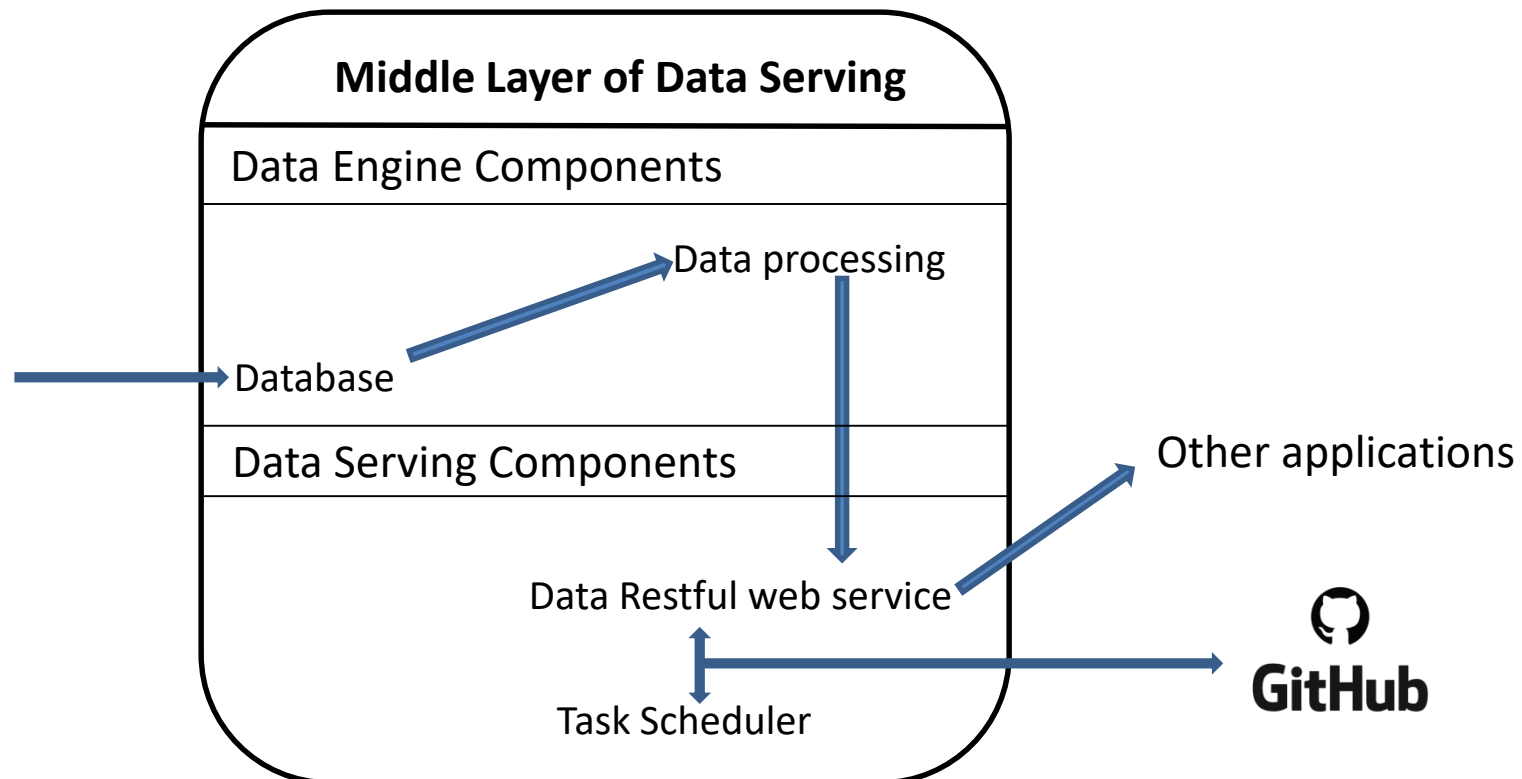
DATA Flow Engineering

Considerations:

1. Decoupled and modular data service
2. Multiple depending end applications →
3. Automation evolved for real time
4. Security

Current Model:

Add middle layer of data service server to distribute data through RESTful web service



Community Profiles Application

https://nycdob.github.io/CommunityProfiles_v2/

Metrics:

Permits

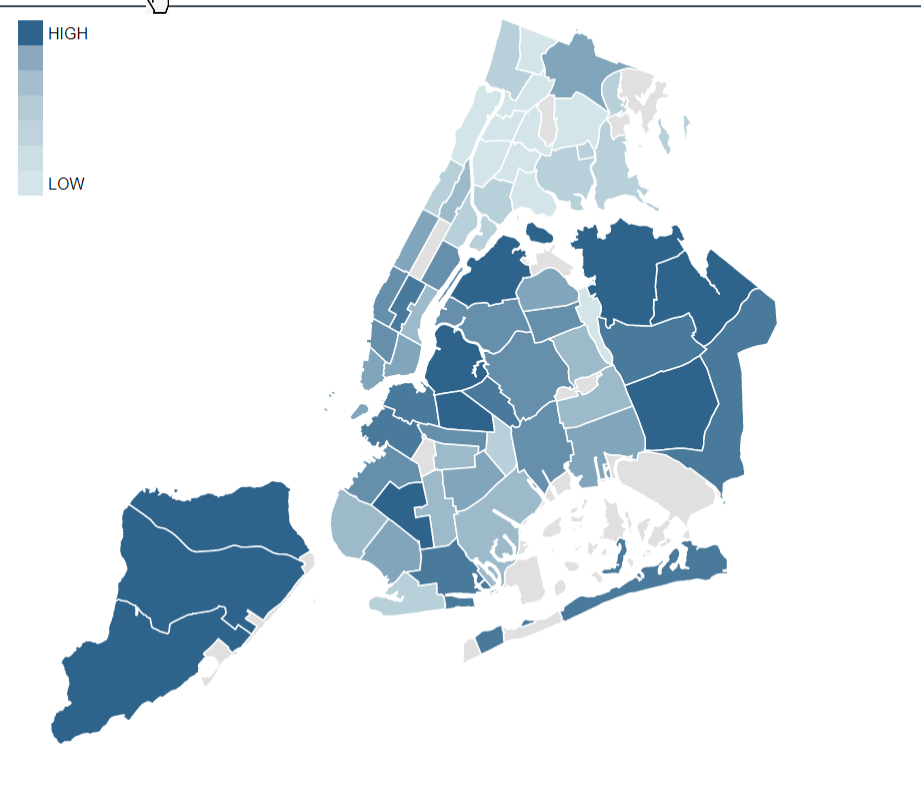
After Hours Variances

Sidewalk Sheds

Complaints

Violations

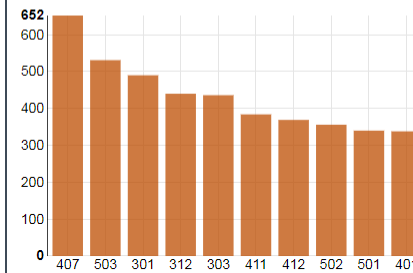
Accidents



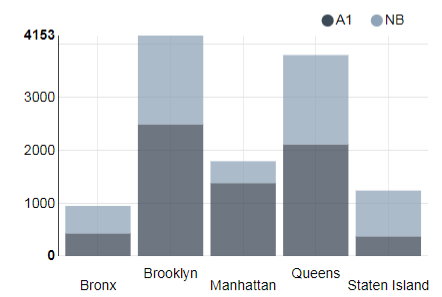
Active Permits: New Buildings (NB) and Major Alterations (A1)

Total: 11860

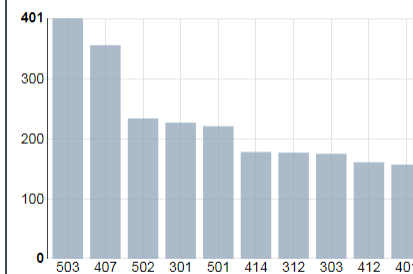
Active NB/A1 Permits (Top 10 Community Districts)



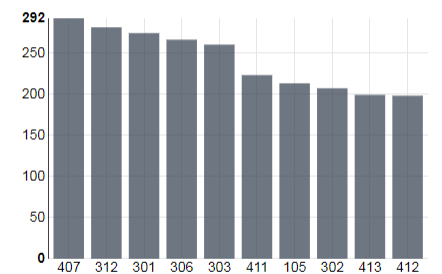
Active NB/A1 Permits by Borough



Active NB Permits (Top 10 Community Districts)



Active A1 Permits (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Community Profiles App

- Interactive application
 - Choropleth map
 - Associated graphs
 - Metrics

Metrics:

Permits

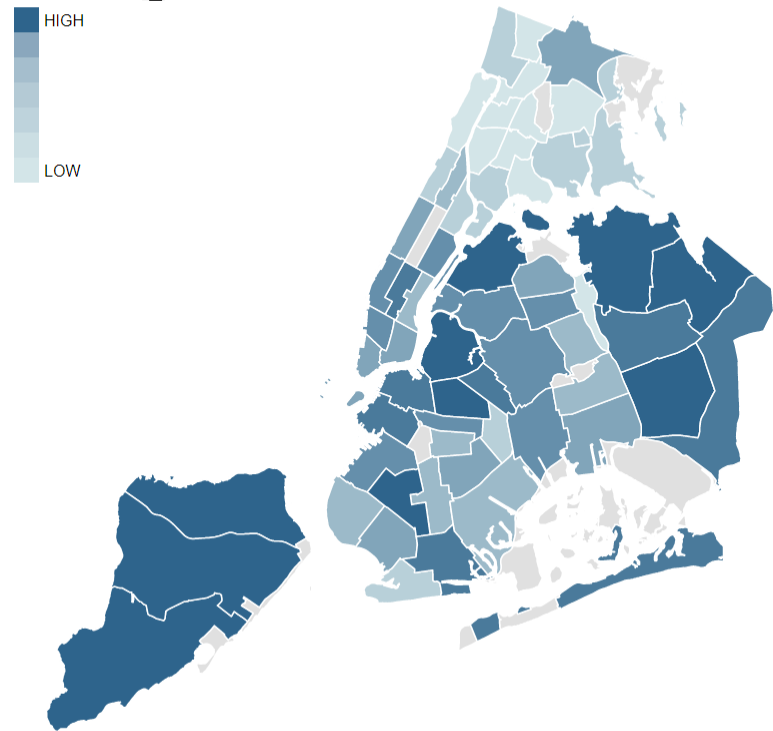
After Hours Variances

Sidewalk Sheds

Complaints

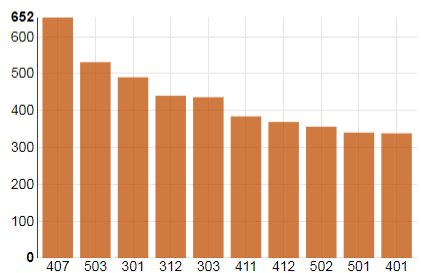
Violations

Accidents

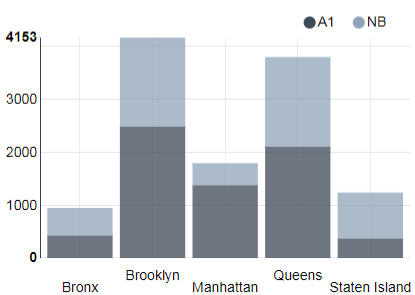


Active Permits: New Buildings (NB) and Major Alterations (A1)
Total: 11860

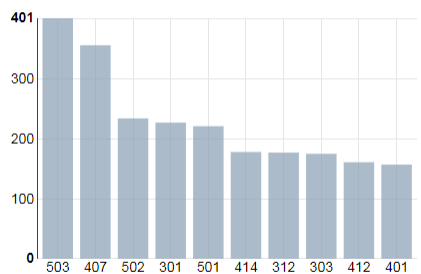
Active NB/A1 Permits (Top 10 Community Districts)



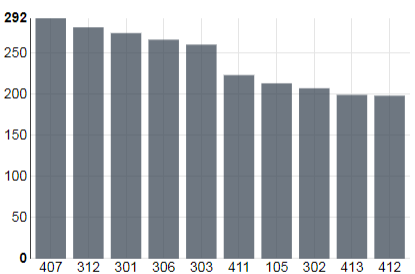
Active NB/A1 Permits by Borough



Active NB Permits (Top 10 Community Districts)



Active A1 Permits (Top 10 Community Districts)



Community Profiles App

- Permits

Metrics:

Permits

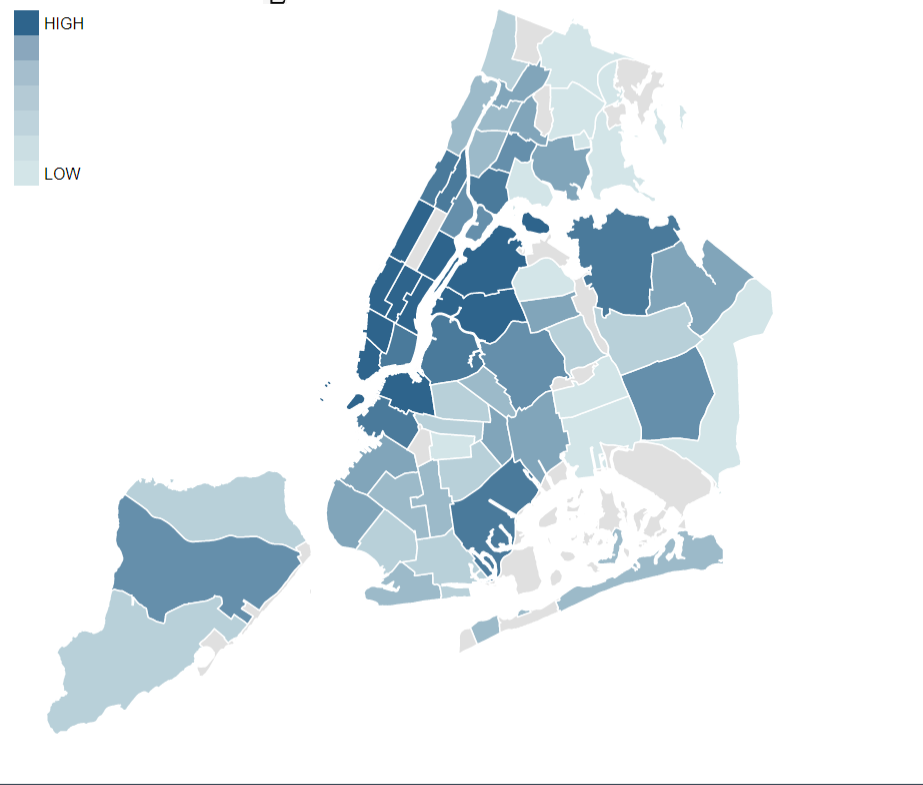
After Hours Variances

Sidewalk Sheds

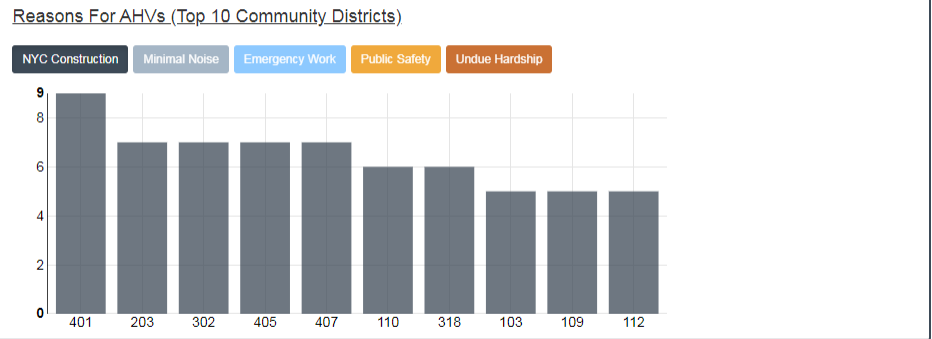
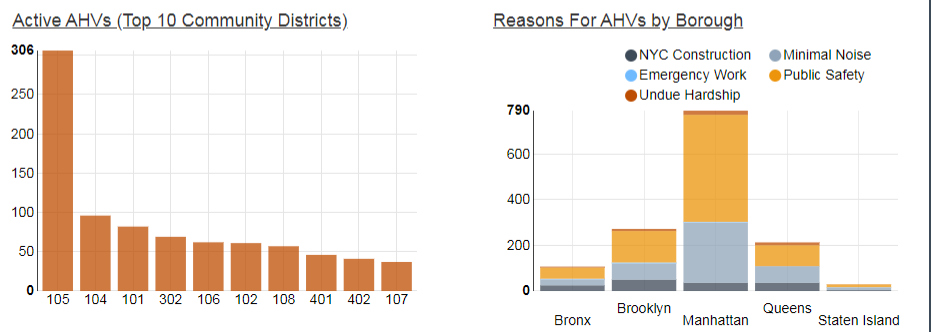
Complaints

Violations

Accidents



Active After Hours Variances (AHVs) Total: 1406



Community Profiles App

- Permits
- After Hours Variances

Metrics:

Permits

After Hours Variances

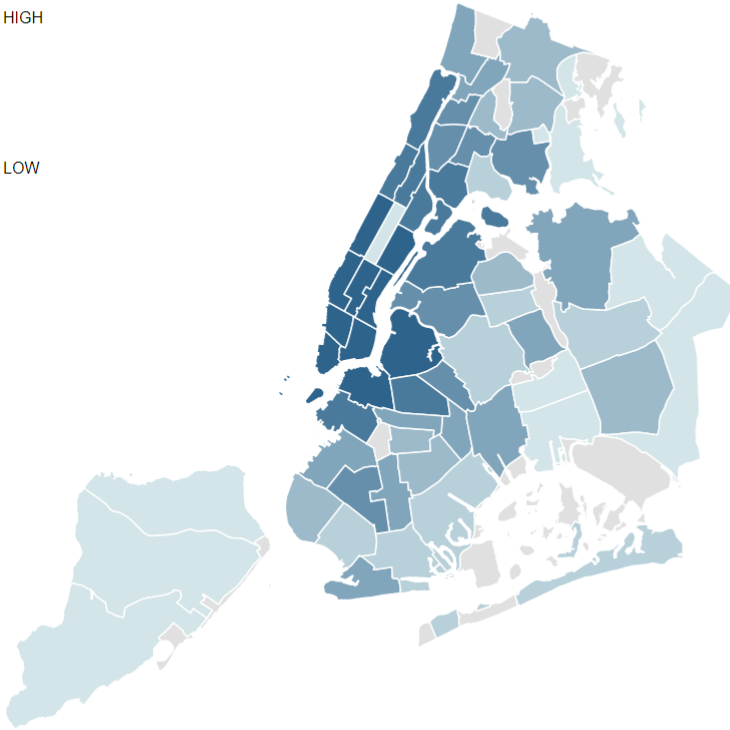
Sidewalk Sheds

Complaints

Violations

Accidents

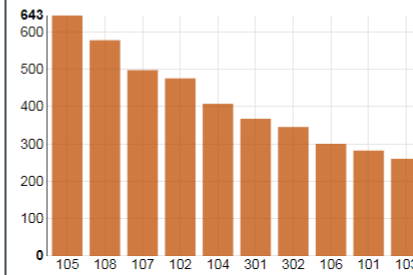
HIGH
LOW



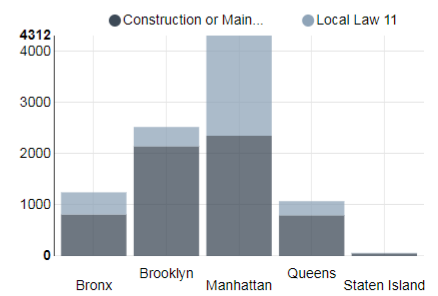
Active Sidewalk Sheds

Total: 9210

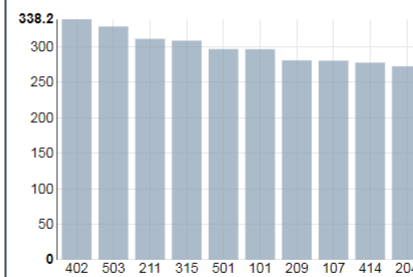
Active Sidewalk Sheds (Top 10 Community Districts)



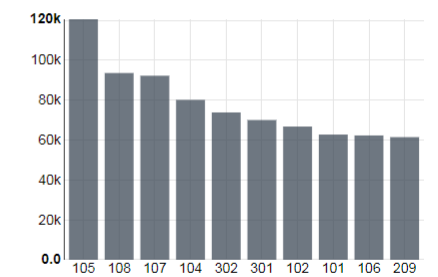
Active Sidewalk Sheds by Borough



Average Age in Days (Top 10 Community Districts)



Total Linear Feet (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Community Profiles App

- Permits
- After Hours Variances
- Sidewalk Sheds

Metrics:

Permits

After Hours Variances

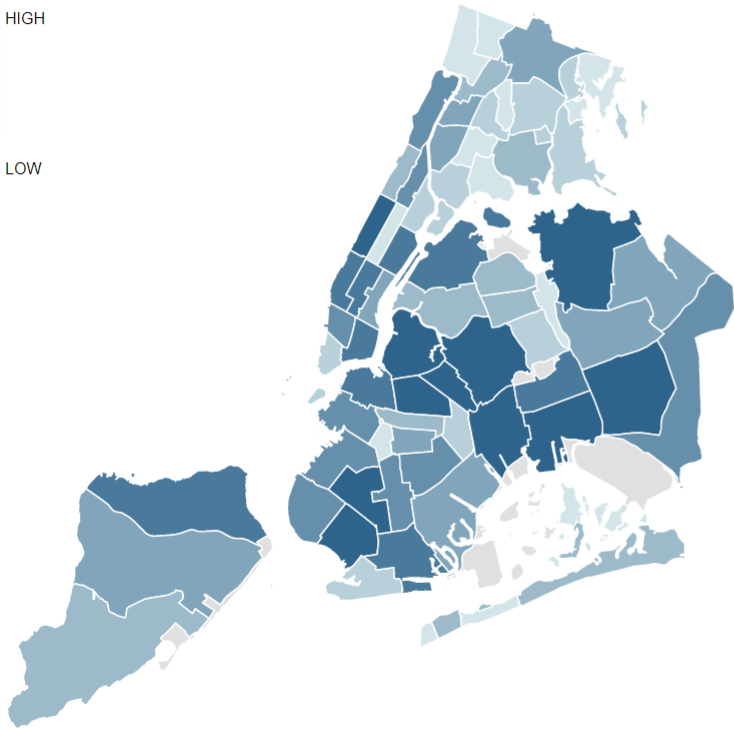
Sidewalk Sheds

Complaints

Violations

Accidents

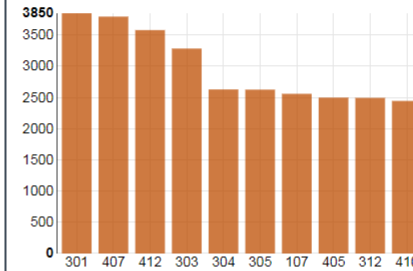
HIGH
LOW



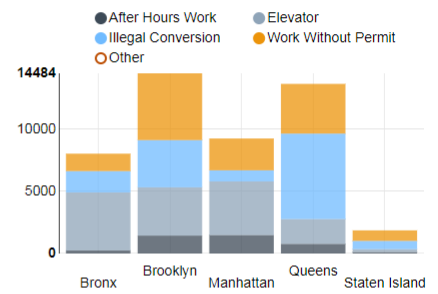
Complaints (Past 12 Months)

Total: 115787

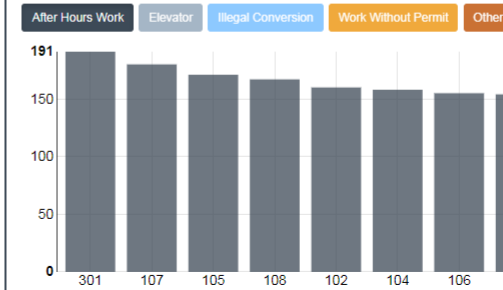
Complaints (Top 10 Community Districts)



Complaint Types by Borough



Complaint Types (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Community Profiles App

- Permits
- After Hours Variances
- Sidewalk Sheds
- Complaints

Metrics:

Permits

After Hours Variances

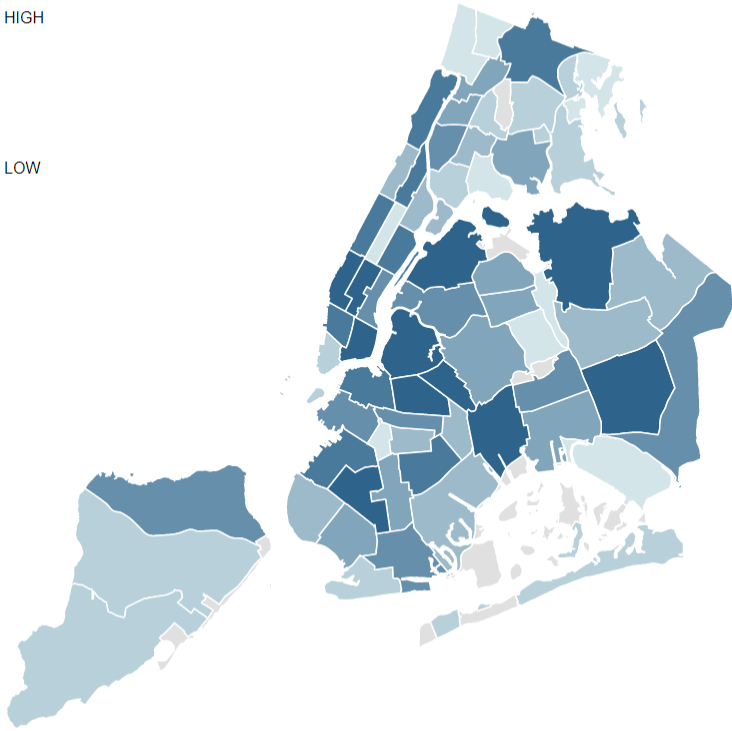
Sidewalk Sheds

Complaints

Violations

Accidents

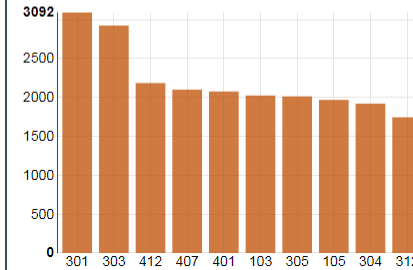
HIGH
LOW



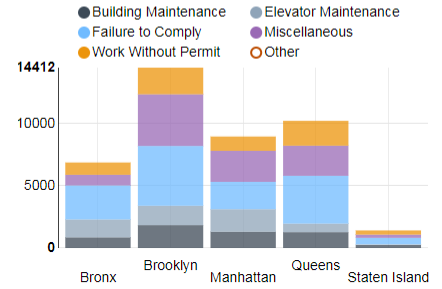
Violations (Past 12 Months)

Total: 75861

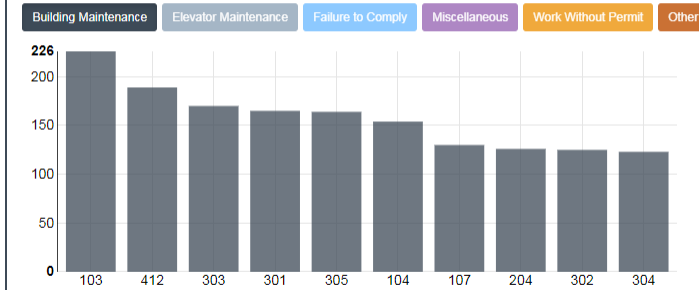
Violations (Top 10 Community Districts)



Violation Types by Borough



Violation Types (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Community Profiles App

- Permits
- After Hours Variances
- Sidewalk Sheds
- Complaints
- Violations

Metrics:

Permits

After Hours Variances

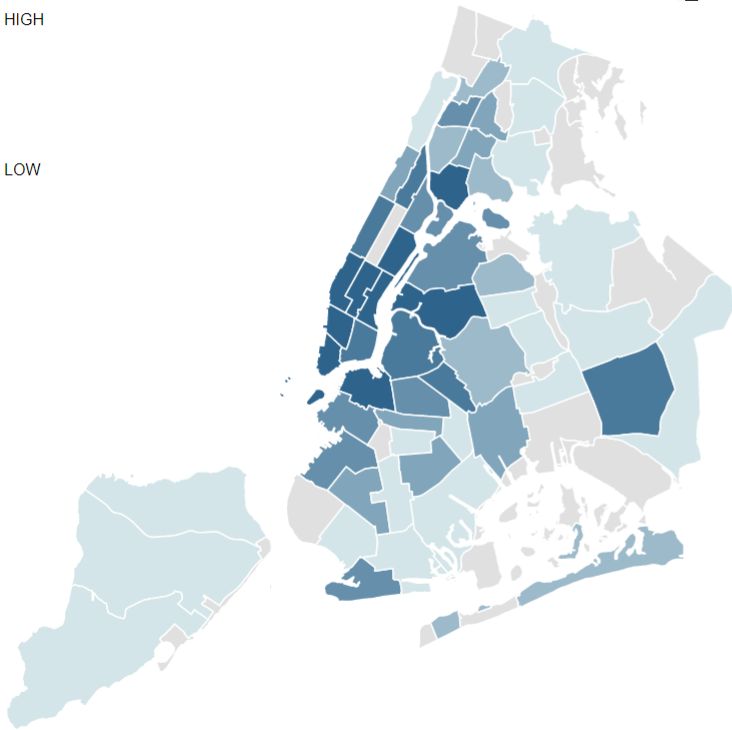
Sidewalk Sheds

Complaints

Violations

Accidents

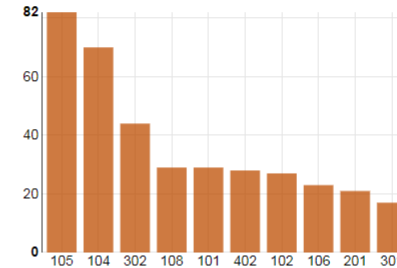
HIGH
LOW



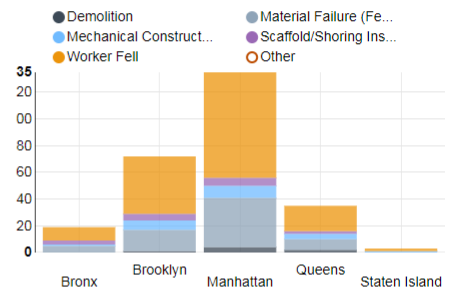
Construction-Related Accidents (Past 12 Months)

Total: 571

Accidents (Top 10 Community Districts)



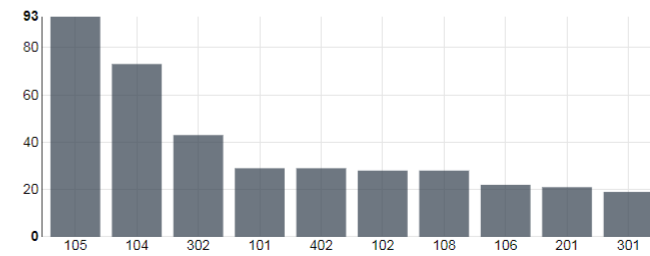
Accident Types by Borough



Injuries & Fatalities (Top 10 Community Districts)

Injuries

Fatalities



Built by DOB Analytics Dev Squad

Community Profiles App

- Permits
- After Hours Variances
- Sidewalk Sheds
- Complaints
- Violations
- Accidents

Metrics:

Permits

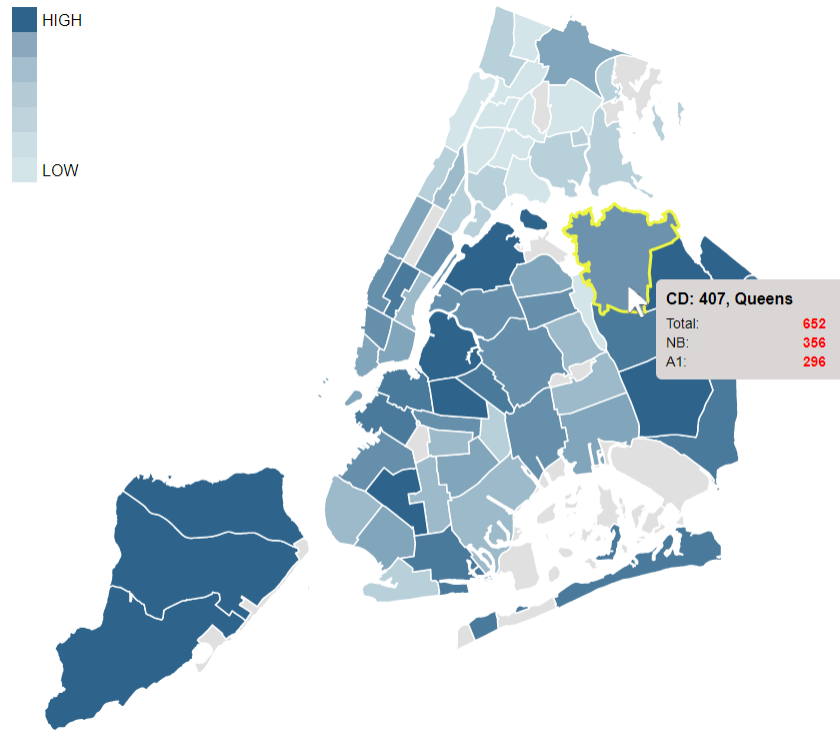
After Hours Variances

Sidewalk Sheds

Complaints

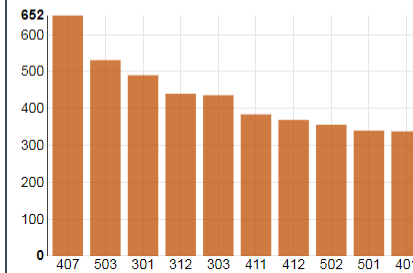
Violations

Accidents

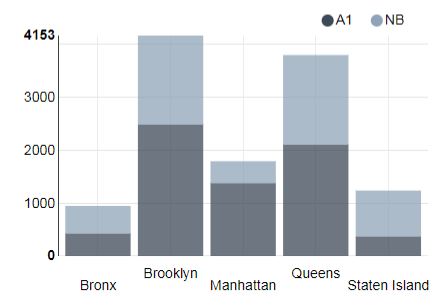


Active Permits: New Buildings (NB) and Major Alterations (A1) Total: 11860

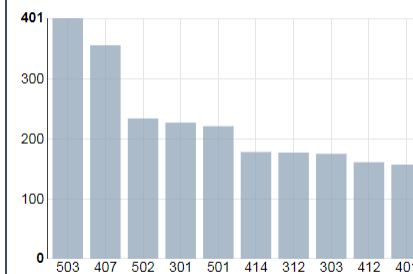
Active NB/A1 Permits (Top 10 Community Districts)



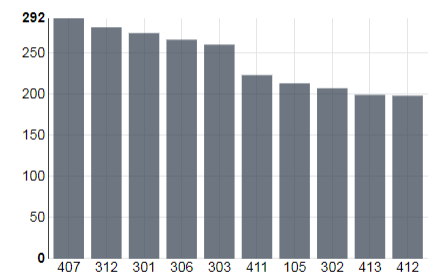
Active NB/A1 Permits by Borough



Active NB Permits (Top 10 Community Districts)



Active A1 Permits (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Community Profiles App

- Map tooltip
 - Total Value per Community District
 - Breakdown Values per Community District

Metrics:

Permits

After Hours Variances

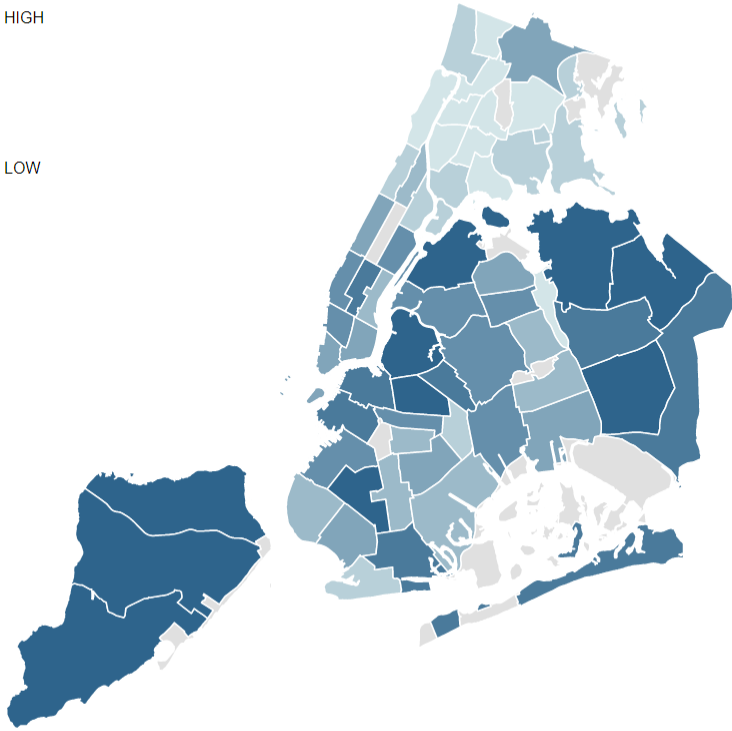
Sidewalk Sheds

Complaints

Violations

Accidents

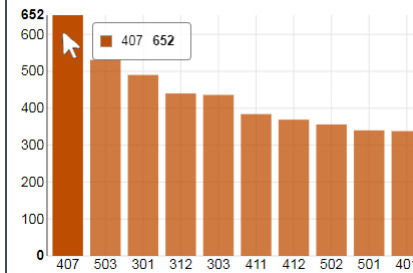
HIGH
LOW



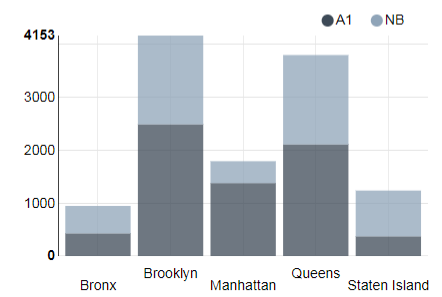
Active Permits: New Buildings (NB) and Major Alterations (A1)

Total: 11860

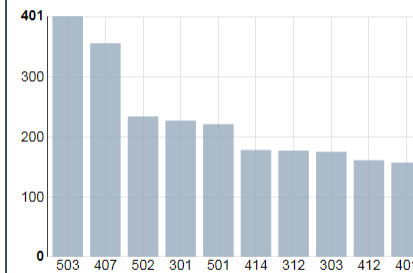
Active NB/A1 Permits (Top 10 Community Districts)



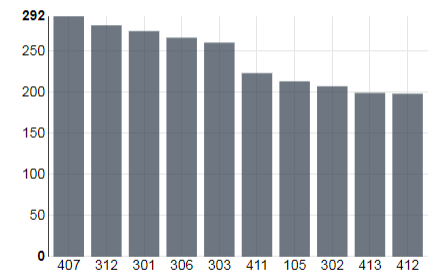
Active NB/A1 Permits by Borough



Active NB Permits (Top 10 Community Districts)



Active A1 Permits (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Community Profiles App

- Map tooltip
 - Total Value per Community District
 - Breakdown Values per Community District
- Chart tooltip

Metrics:

Permits

After Hours Variances

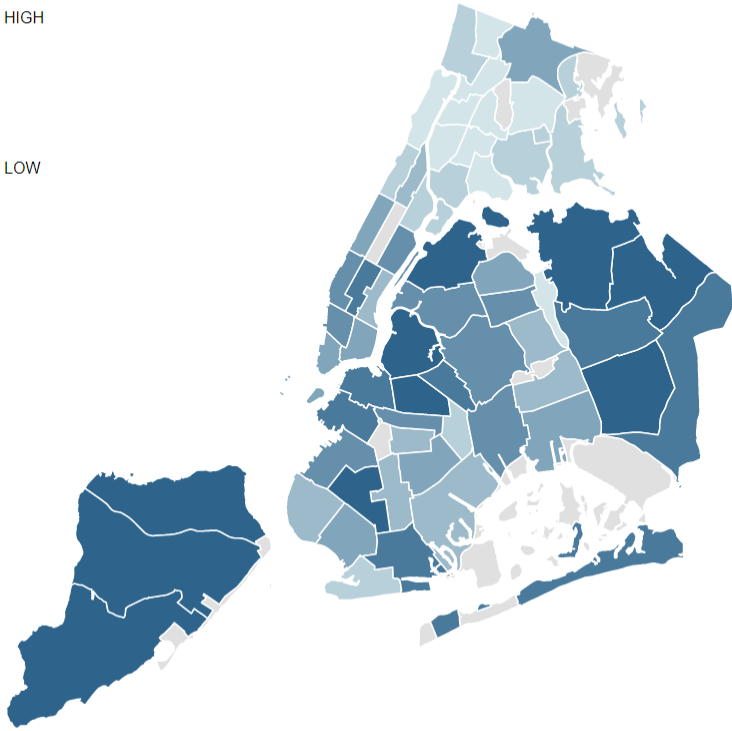
Sidewalk Sheds

Complaints

Violations

Accidents

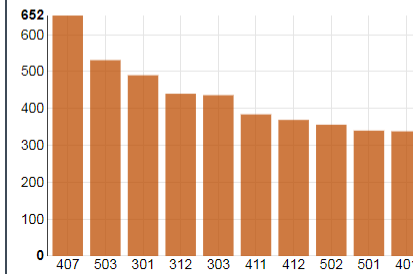
HIGH
LOW



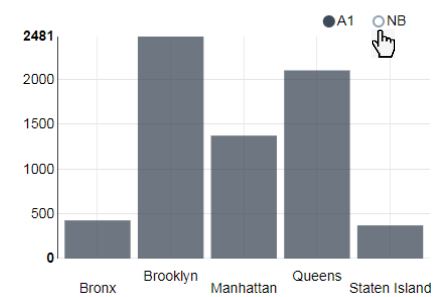
Active Permits: New Buildings (NB) and Major Alterations (A1)

Total: 11860

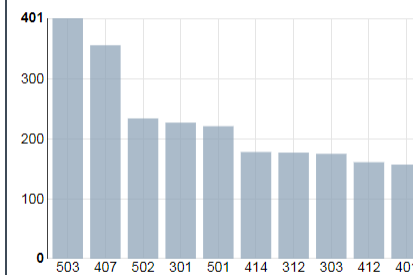
Active NB/A1 Permits (Top 10 Community Districts)



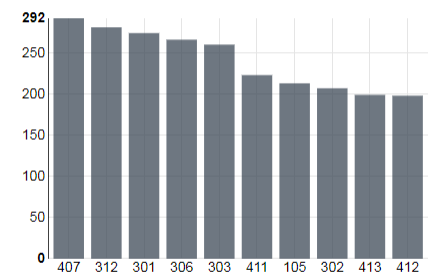
Active NB/A1 Permits by Borough



Active NB Permits (Top 10 Community Districts)



Active A1 Permits (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Community Profiles App

- Stacked bar charts have on/off toggles for each value

Metrics:

Permits

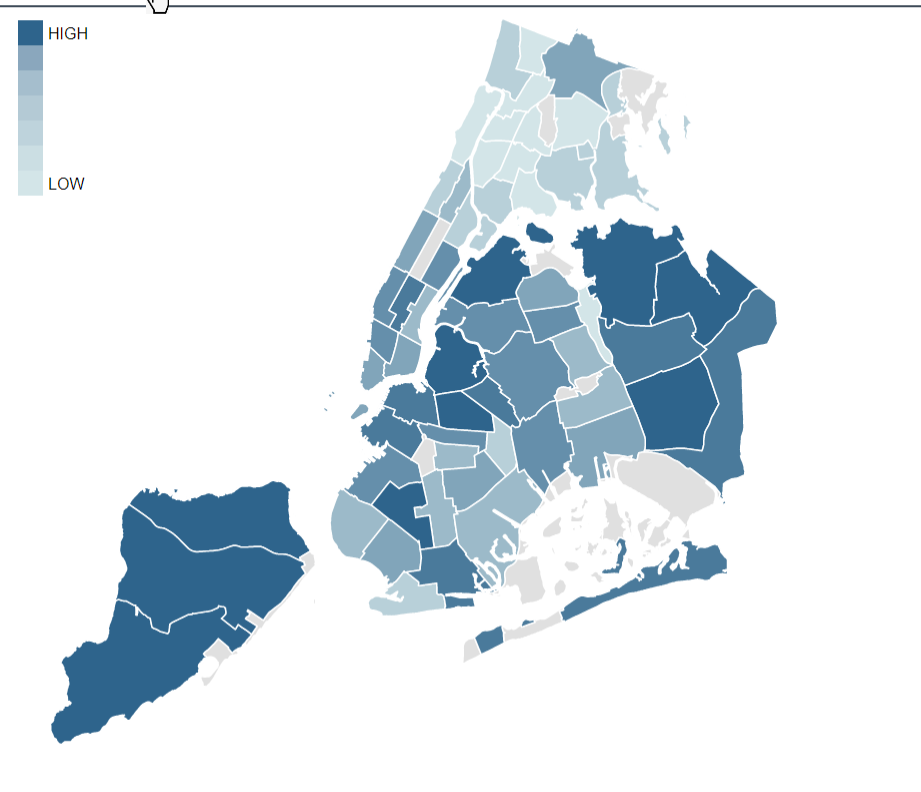
After Hours Variances

Sidewalk Sheds

Complaints

Violations

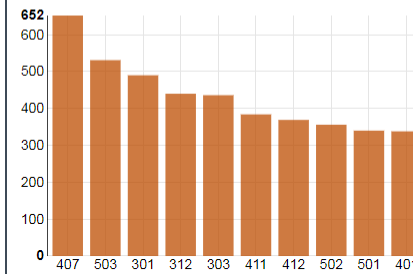
Accidents



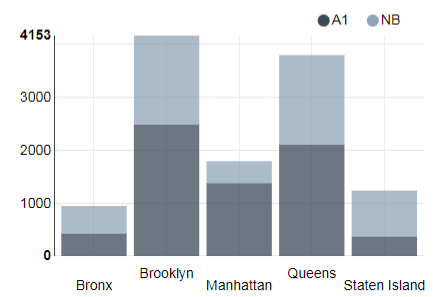
Active Permits: New Buildings (NB) and Major Alterations (A1)

Total: 11860

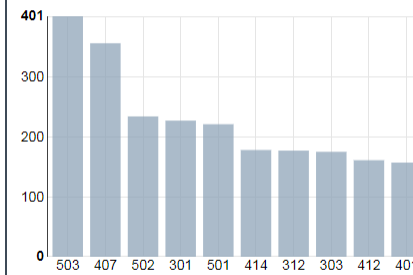
Active NB/A1 Permits (Top 10 Community Districts)



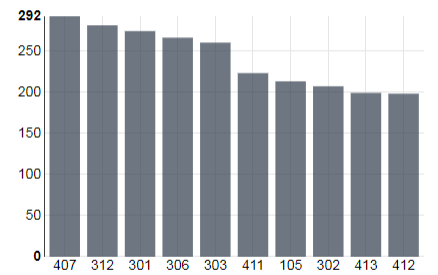
Active NB/A1 Permits by Borough



Active NB Permits (Top 10 Community Districts)



Active A1 Permits (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Active Permits

- NB: New Building
- A1: Major Alterations

Metrics:

Permits

After Hours Variances

Sidewalk Sheds

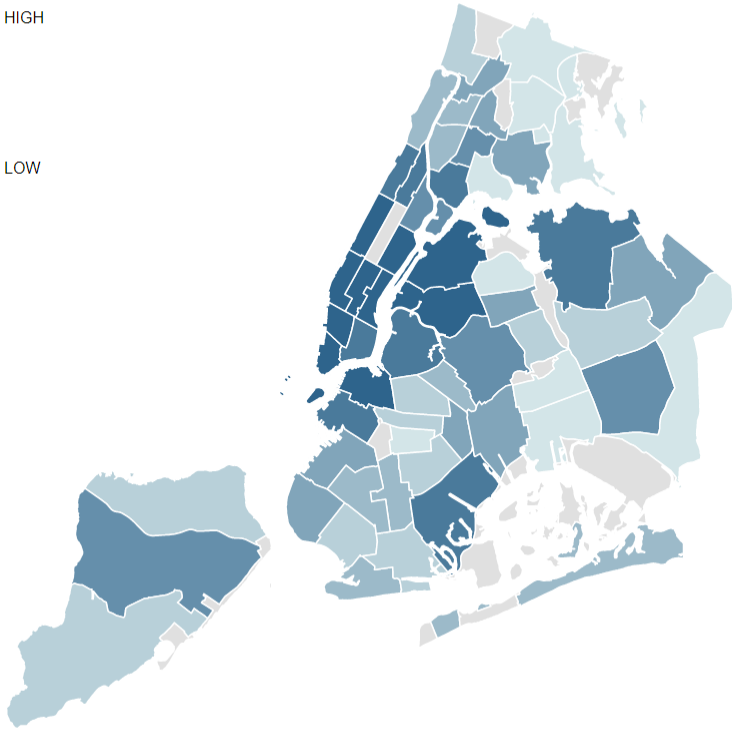
Complaints

Violations

Accidents



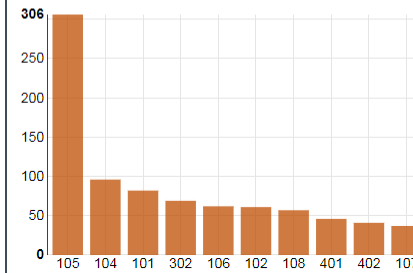
HIGH
LOW



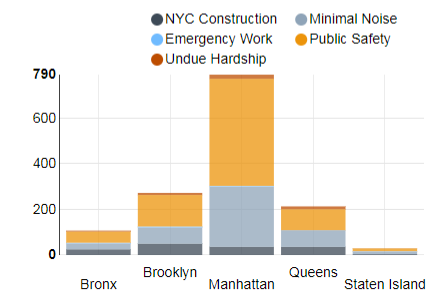
Active After Hours Variances (AHVs)

Total: 1406

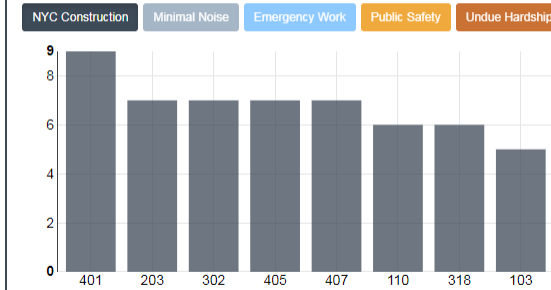
Active AHVs (Top 10 Community Districts)



Reasons For AHVs by Borough



Reasons For AHVs (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Active After Hours Variances (AHVs)

- Reasons for AHVs
 - NYC Construction

Metrics:

Permits

After Hours Variances

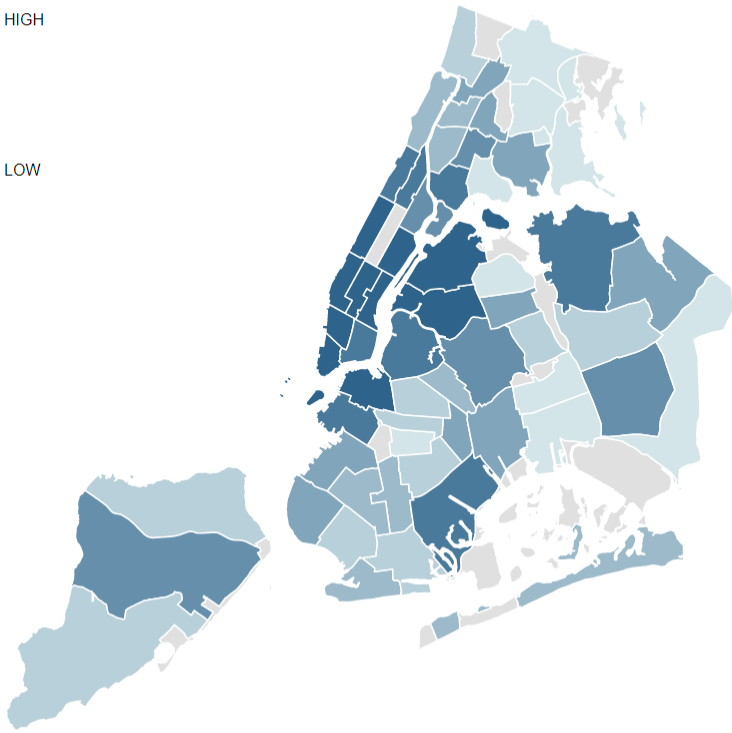
Sidewalk Sheds

Complaints

Violations

Accidents

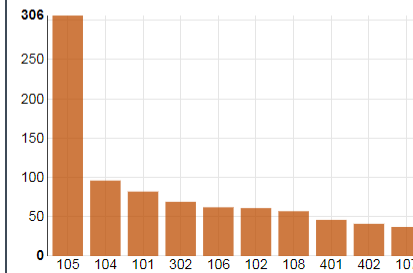
HIGH
LOW



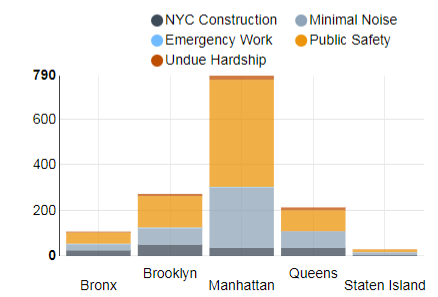
Active After Hours Variances (AHVs)

Total: 1406

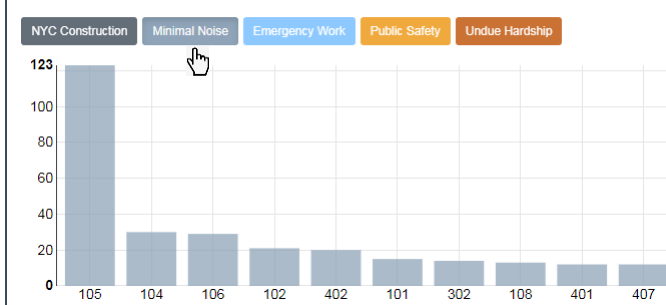
Active AHVs (Top 10 Community Districts)



Reasons For AHVs by Borough



Reasons For AHVs (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Active After Hours Variances (AHVs)

- Reasons for AHVs
 - NYC Construction
 - Minimal Noise

Metrics:

Permits

After Hours Variances

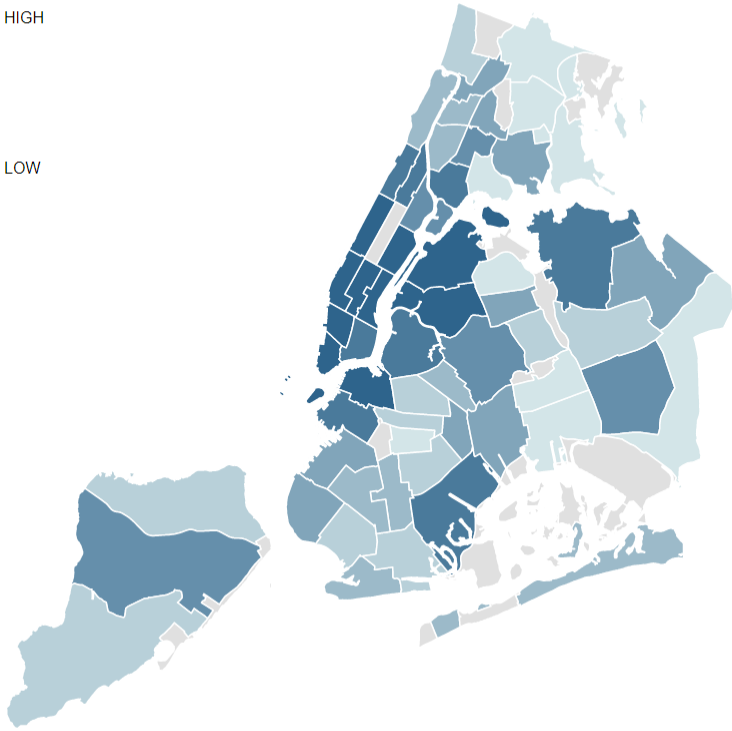
Sidewalk Sheds

Complaints

Violations

Accidents

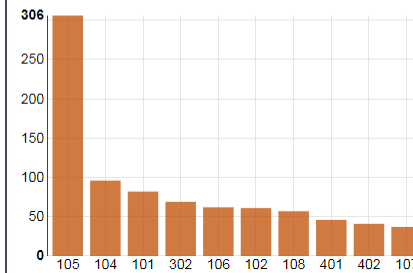
HIGH
LOW



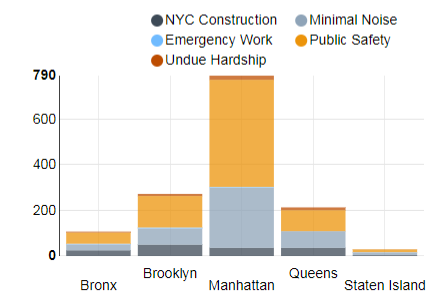
Active After Hours Variances (AHVs)

Total: 1406

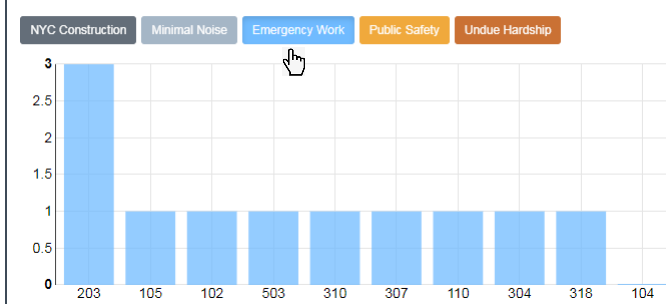
Active AHVs (Top 10 Community Districts)



Reasons For AHVs by Borough



Reasons For AHVs (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Active After Hours Variances (AHVs)

- Reasons for AHVs
 - NYC Construction
 - Minimal Noise
 - Emergency Work

Metrics:

Permits

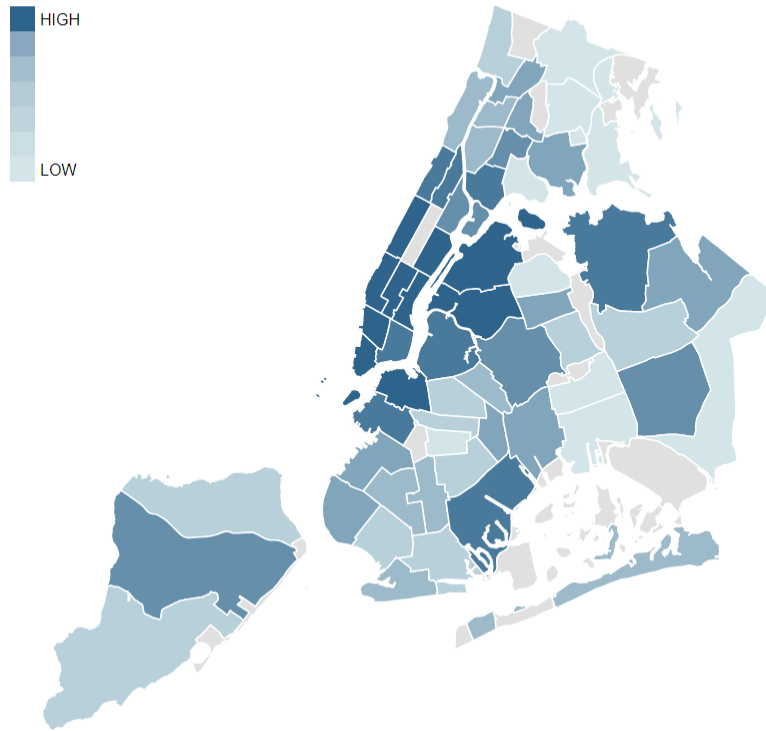
After Hours Variances

Sidewalk Sheds

Complaints

Violations

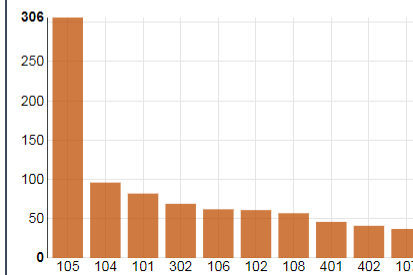
Accidents



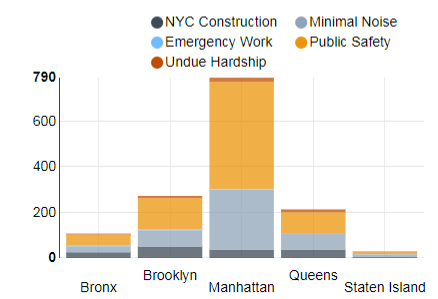
Active After Hours Variances (AHVs)

Total: 1406

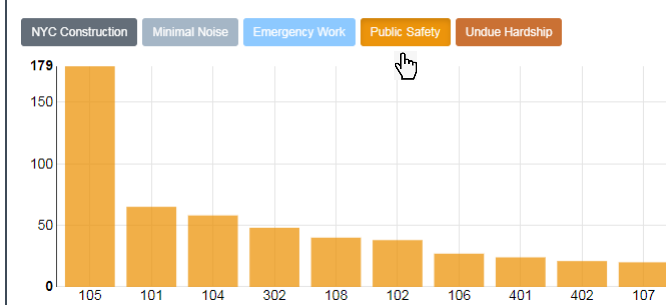
Active AHVs (Top 10 Community Districts)



Reasons For AHVs by Borough



Reasons For AHVs (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Active After Hours Variances (AHVs)

- Reasons for AHVs
 - NYC Construction
 - Minimal Noise
 - Emergency Work
 - Public Safety

Metrics:

Permits

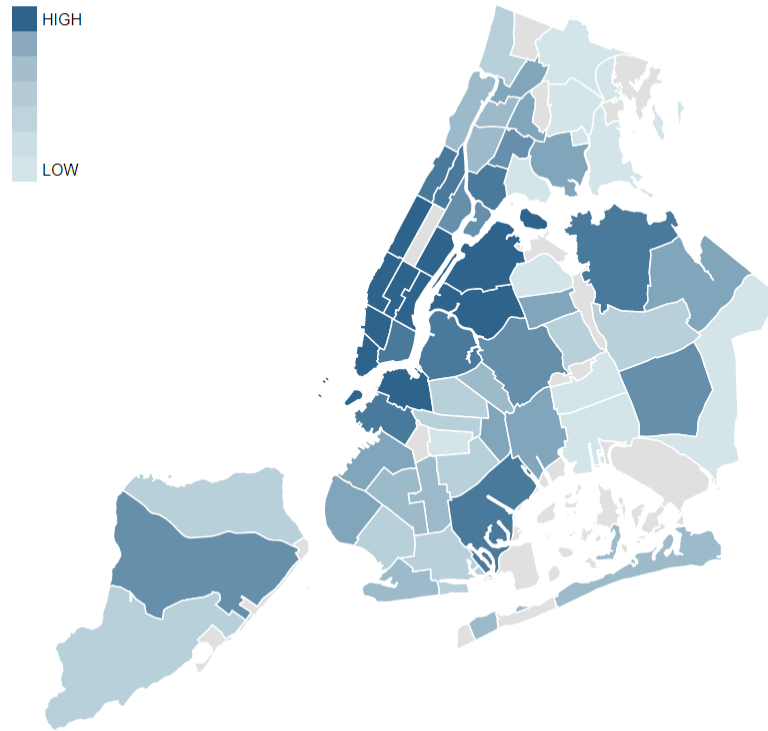
After Hours Variances

Sidewalk Sheds

Complaints

Violations

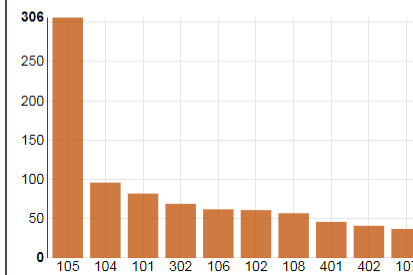
Accidents



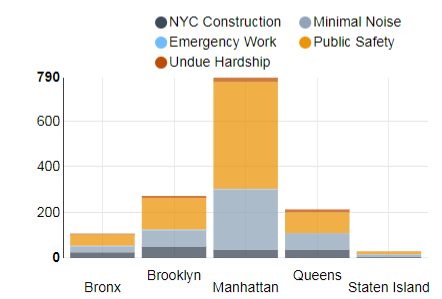
Active After Hours Variances (AHVs)

Total: 1406

Active AHVs (Top 10 Community Districts)

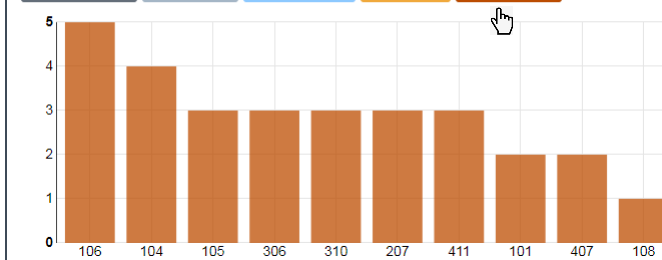


Reasons For AHVs by Borough



Reasons For AHVs (Top 10 Community Districts)

NYC Construction Minimal Noise Emergency Work Public Safety Undue Hardship



Built by DOB Analytics Dev Squad

Active After Hours Variances (AHVs)

- Reasons for AHVs
 - NYC Construction
 - Minimal Noise
 - Emergency Work
 - Public Safety
 - Undue Hardship

Metrics:

Permits

After Hours Variances

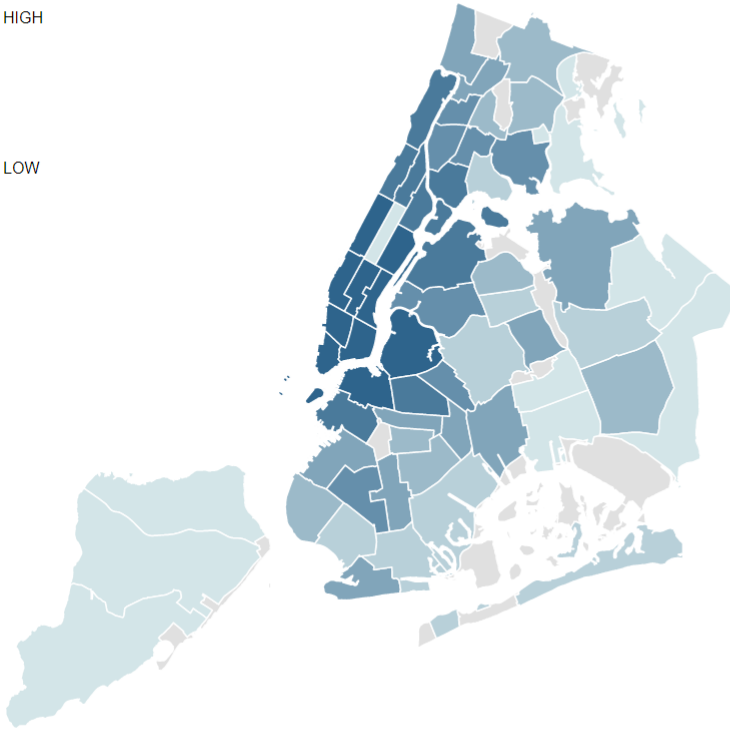
Sidewalk Sheds

Complaints

Violations

Accidents

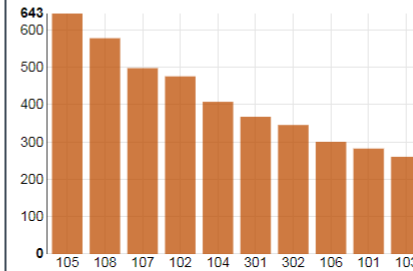
HIGH
LOW



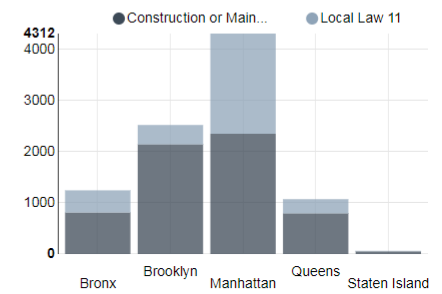
Active Sidewalk Sheds

Total: 9210

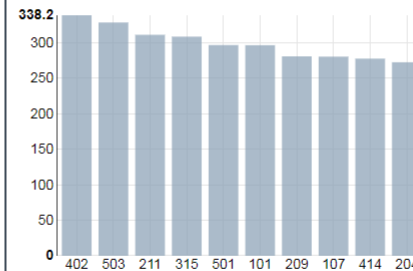
Active Sidewalk Sheds (Top 10 Community Districts)



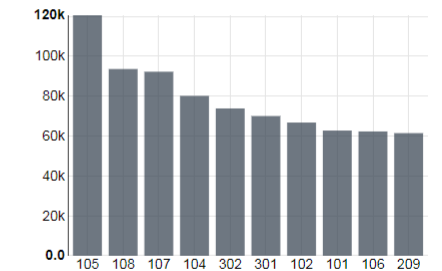
Active Sidewalk Sheds by Borough



Average Age in Days (Top 10 Community Districts)



Total Linear Feet (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Active Sidewalk Sheds

- Construction or Maintenance
- Local Law 11
- Average Age
- Total Linear Feet

Metrics:

Permits

After Hours Variances

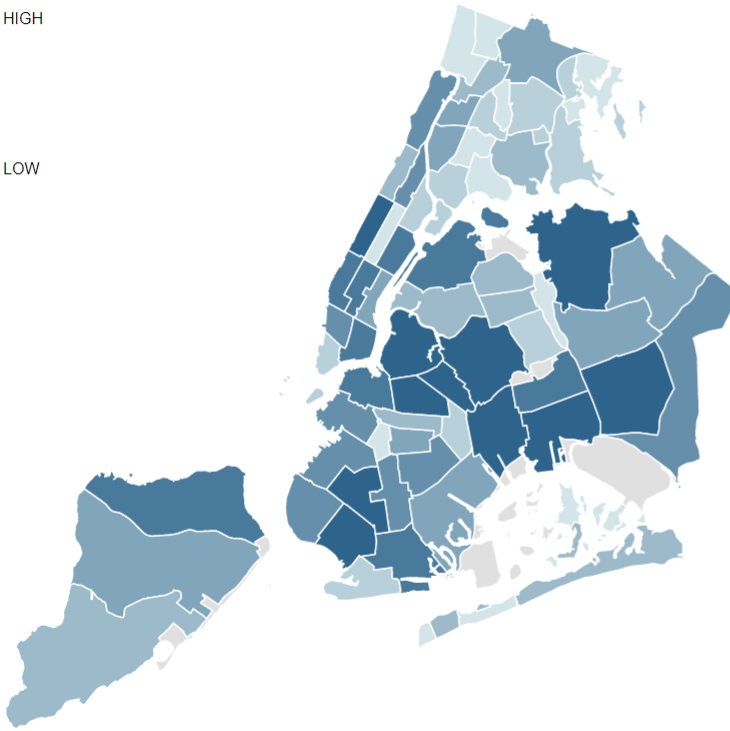
Sidewalk Sheds

Complaints

Violations

Accidents

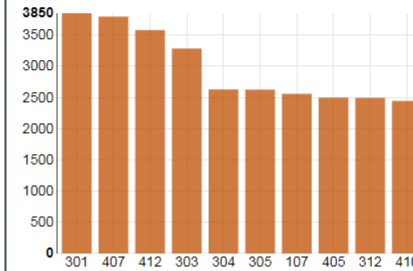
HIGH
LOW



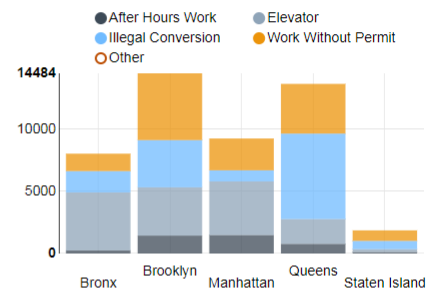
Complaints (Past 12 Months)

Total: 115787

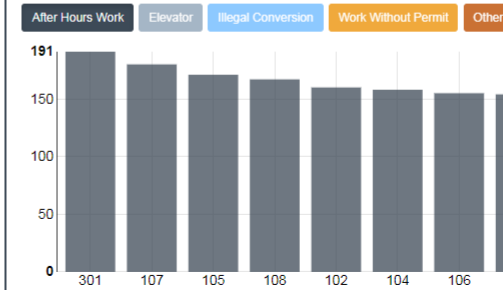
Complaints (Top 10 Community Districts)



Complaint Types by Borough



Complaint Types (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Complaints (Past 12 Months)

- After Hours Work

Metrics:

Permits

After Hours Variances

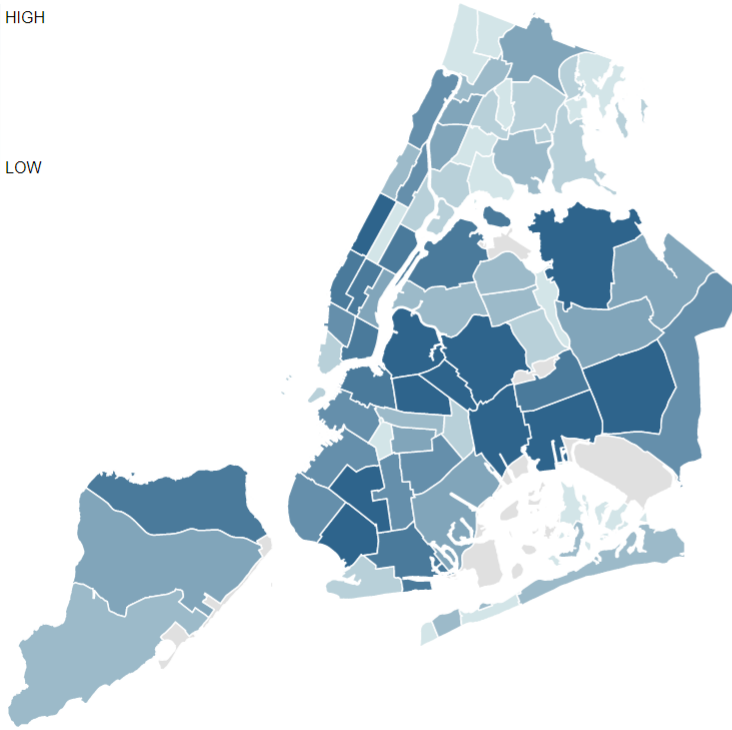
Sidewalk Sheds

Complaints

Violations

Accidents

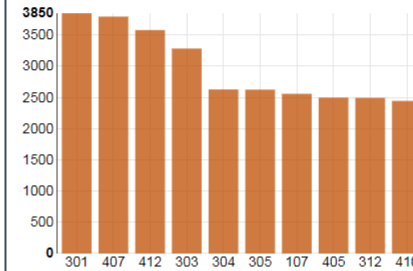
HIGH
LOW



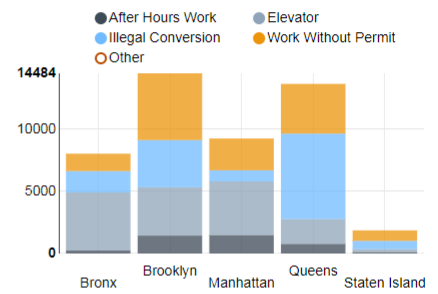
Complaints (Past 12 Months)

Total: 115787

Complaints (Top 10 Community Districts)

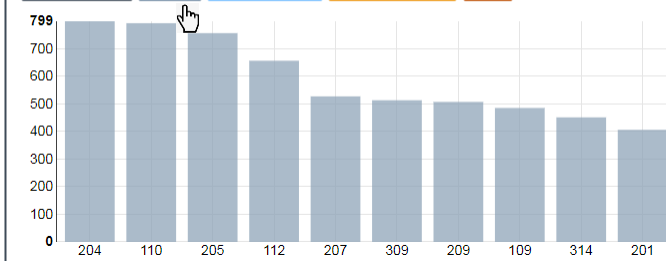


Complaint Types by Borough



Complaint Types (Top 10 Community Districts)

After Hours Work Elevator Illegal Conversion Work Without Permit Other



Built by DOB Analytics Dev Squad

Complaints (Past 12 Months)

- After Hours Work
- Elevator

Metrics:

Permits

After Hours Variances

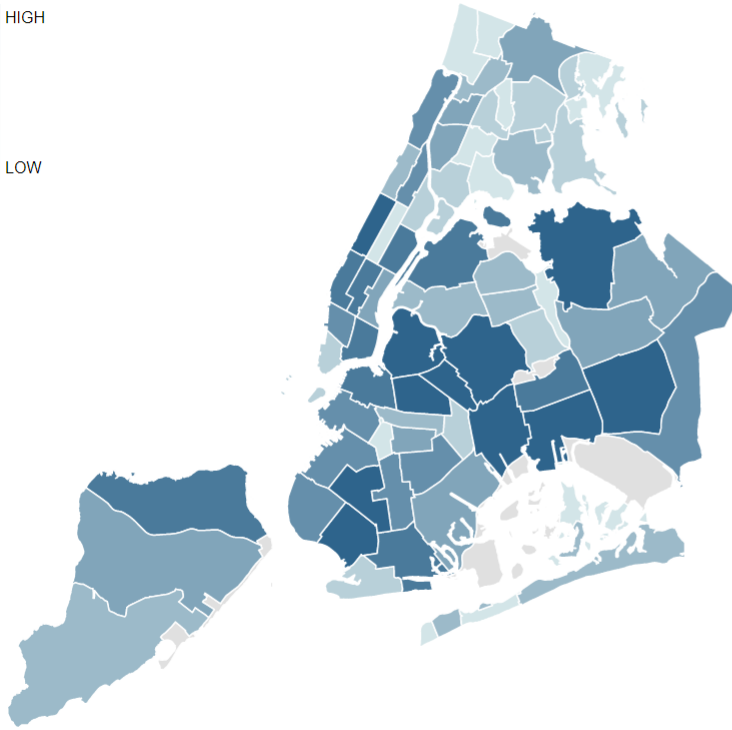
Sidewalk Sheds

Complaints

Violations

Accidents

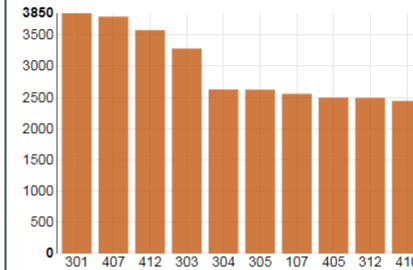
HIGH
LOW



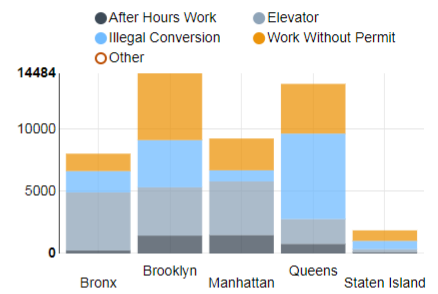
Complaints (Past 12 Months)

Total: 115787

Complaints (Top 10 Community Districts)

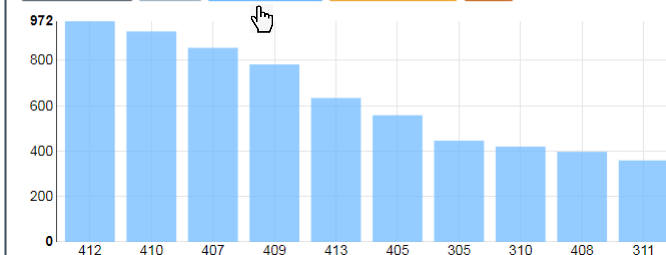


Complaint Types by Borough



Complaint Types (Top 10 Community Districts)

After Hours Work Elevator Illegal Conversion Work Without Permit Other



Built by DOB Analytics Dev Squad

Complaints (Past 12 Months)

- After Hours Work
- Elevator
- Illegal Conversion

Metrics:

Permits

After Hours Variances

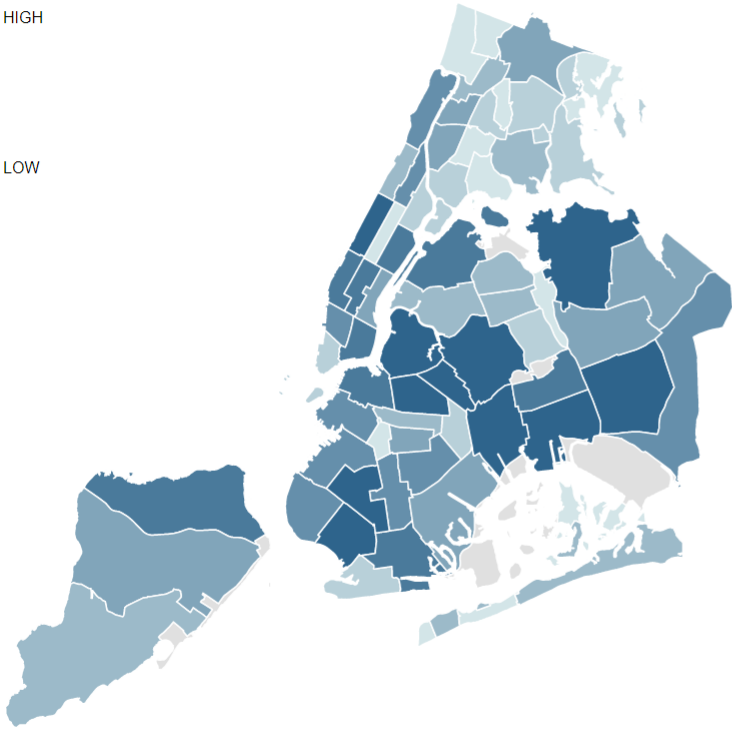
Sidewalk Sheds

Complaints

Violations

Accidents

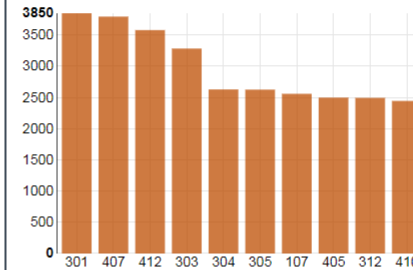
HIGH
LOW



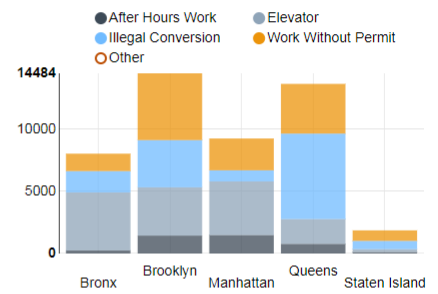
Complaints (Past 12 Months)

Total: 115787

Complaints (Top 10 Community Districts)

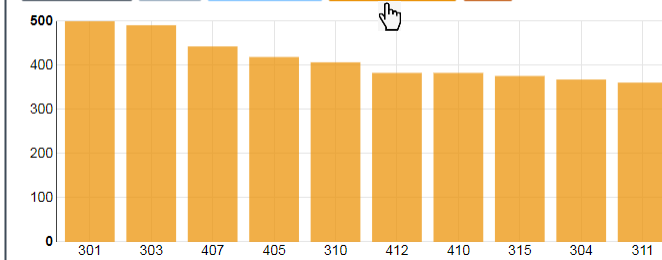


Complaint Types by Borough



Complaint Types (Top 10 Community Districts)

After Hours Work Elevator Illegal Conversion Work Without Permit Other



Built by DOB Analytics Dev Squad

Complaints (Past 12 Months)

- After Hours Work
- Elevator
- Illegal Conversion
- Work Without a Permit

Metrics:

Permits

After Hours Variances

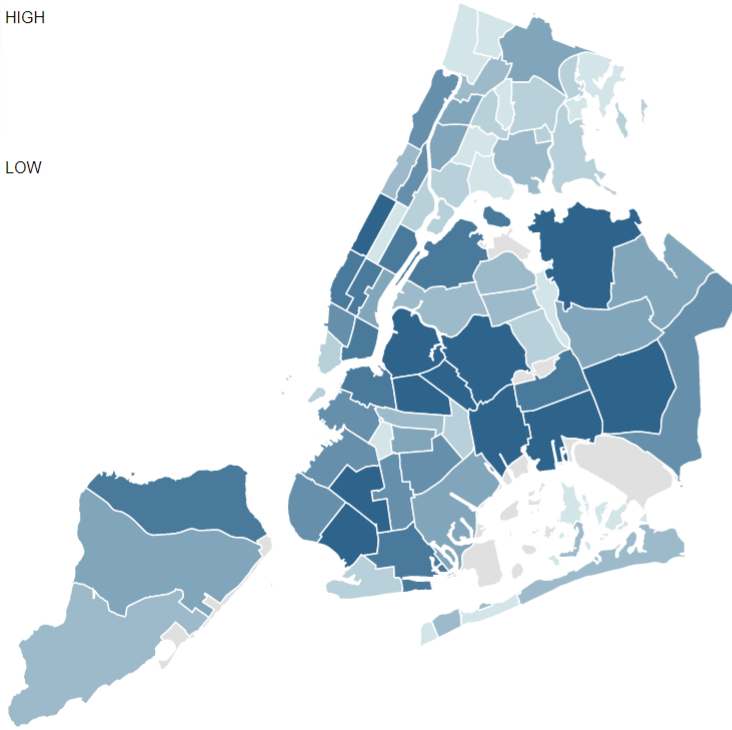
Sidewalk Sheds

Complaints

Violations

Accidents

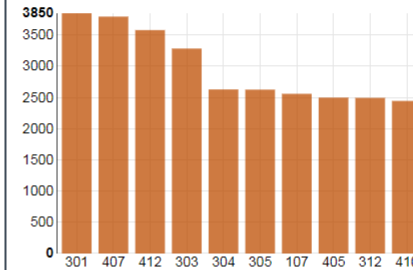
HIGH
LOW



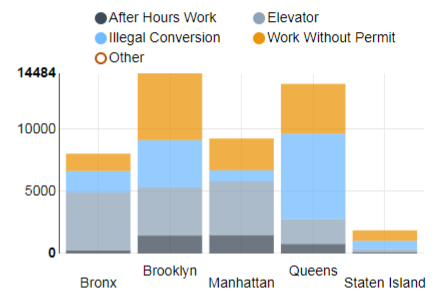
Complaints (Past 12 Months)

Total: 115787

Complaints (Top 10 Community Districts)

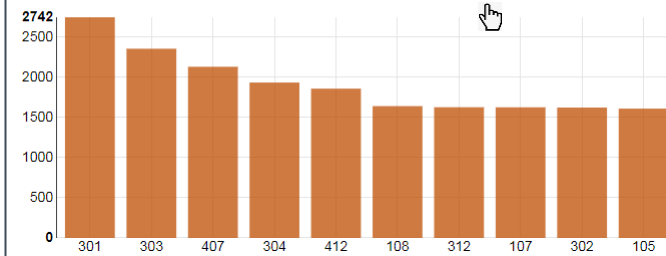


Complaint Types by Borough



Complaint Types (Top 10 Community Districts)

After Hours Work Elevator Illegal Conversion Work Without Permit Other



Built by DOB Analytics Dev Squad

Complaints (Past 12 Months)

- After Hours Work
- Elevator
- Illegal Conversion
- Work Without a Permit
- Other

Metrics:

Permits

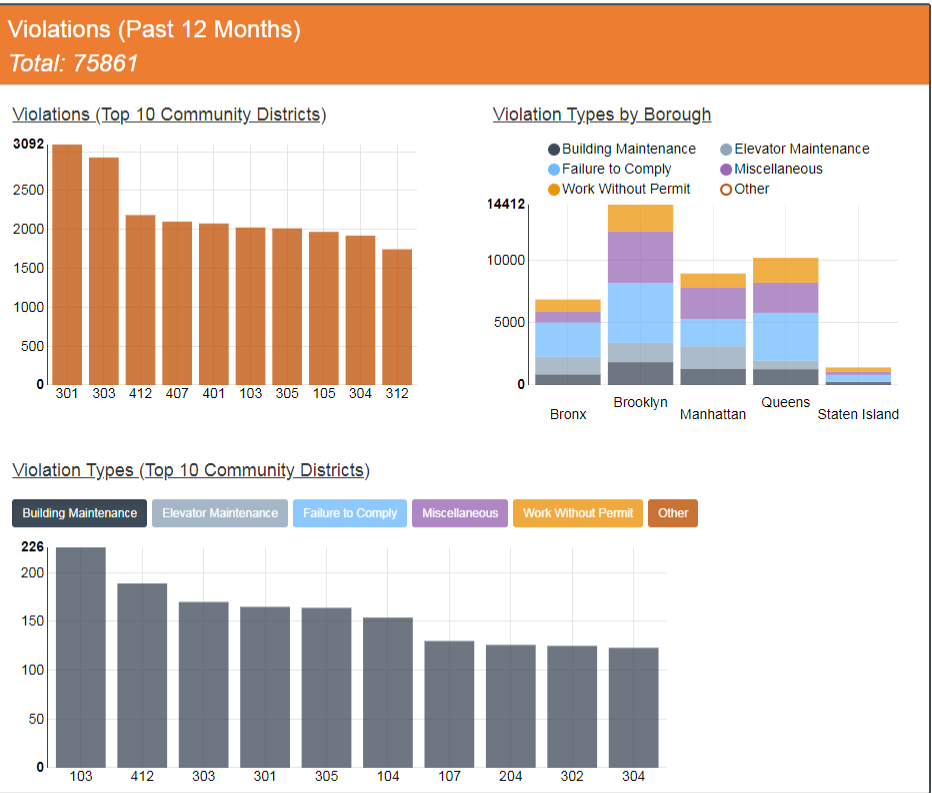
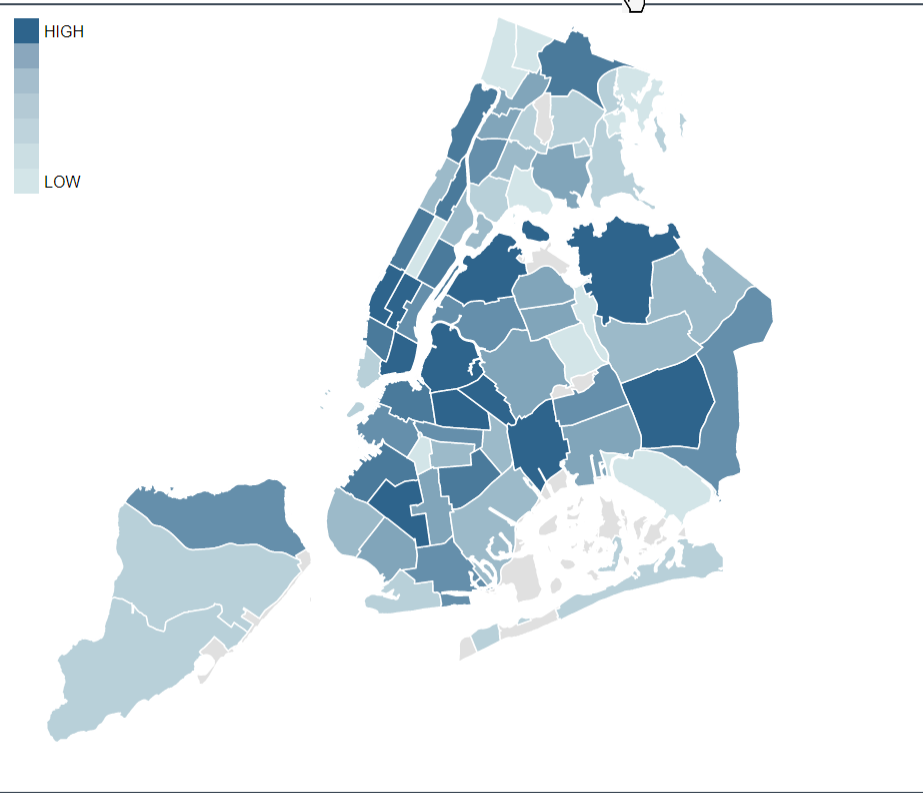
After Hours Variances

Sidewalk Sheds

Complaints

Violations

Accidents



- ## Violations (Past 12 Months)
- Building Maintenance

Metrics:

Permits

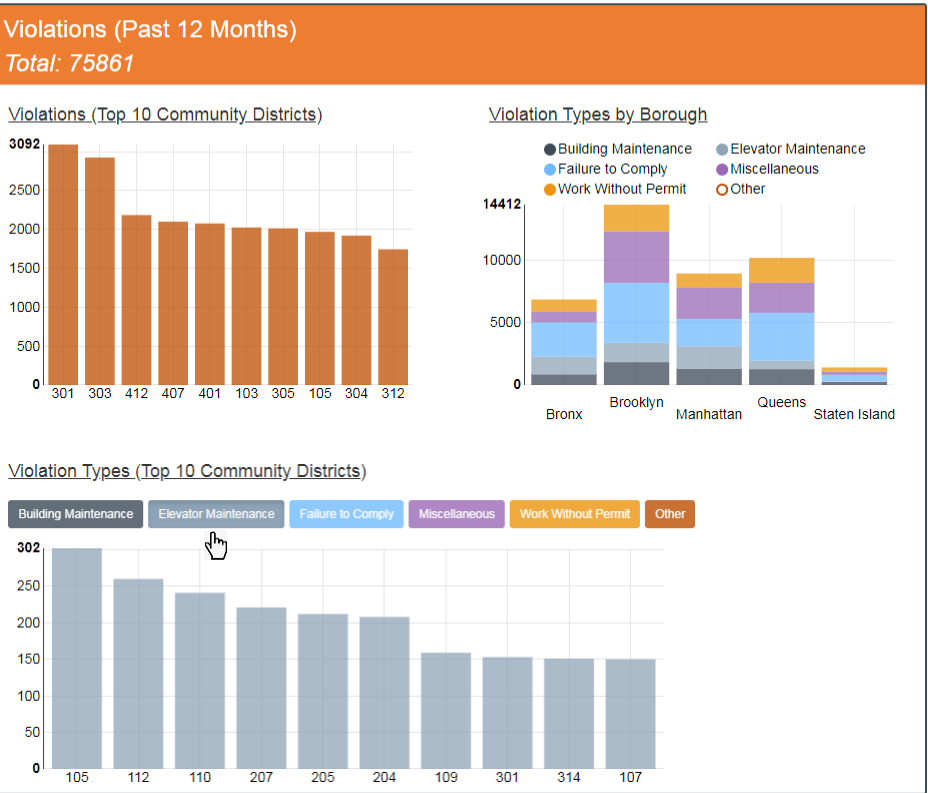
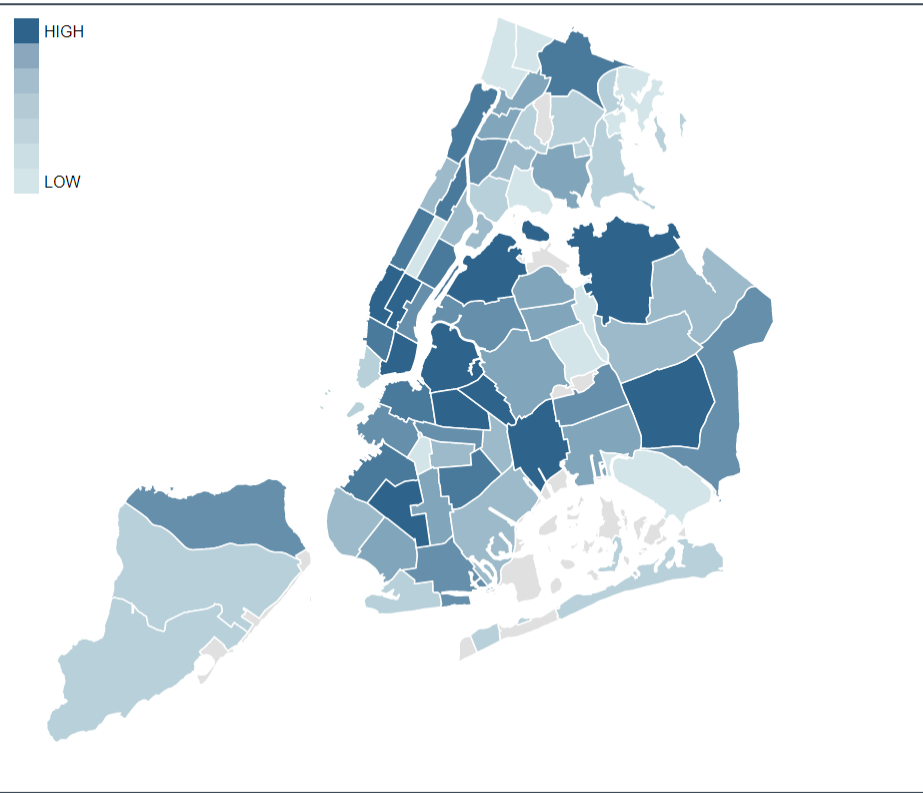
After Hours Variances

Sidewalk Sheds

Complaints

Violations

Accidents



Violations (Past 12 Months)

- Building Maintenance
- Elevator Maintenance

Metrics:

Permits

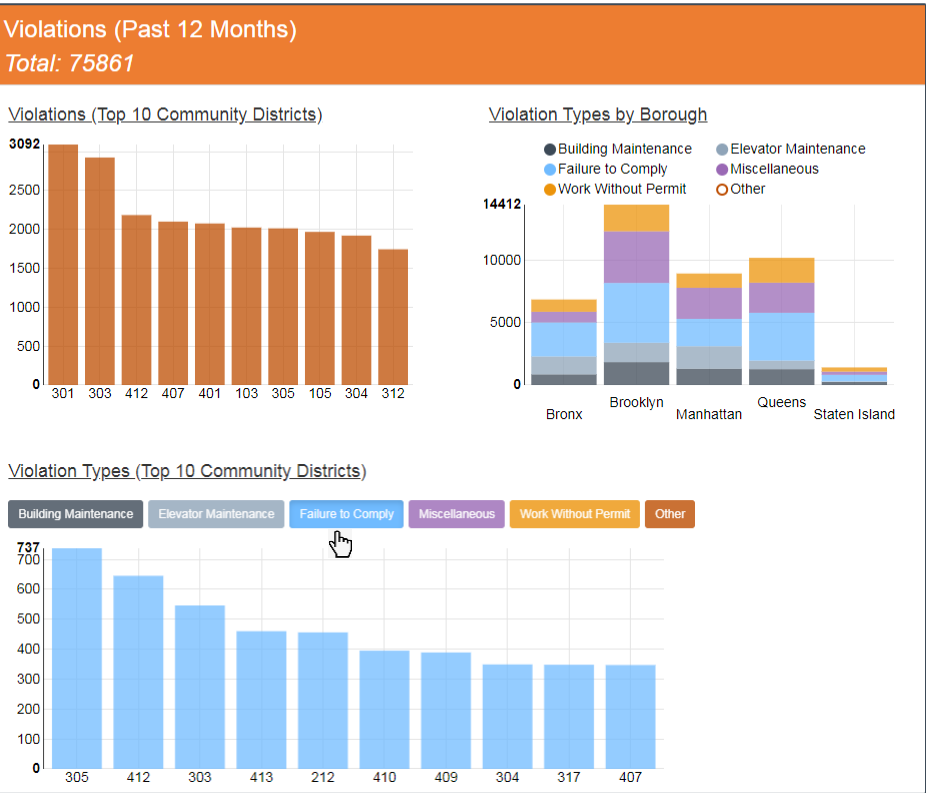
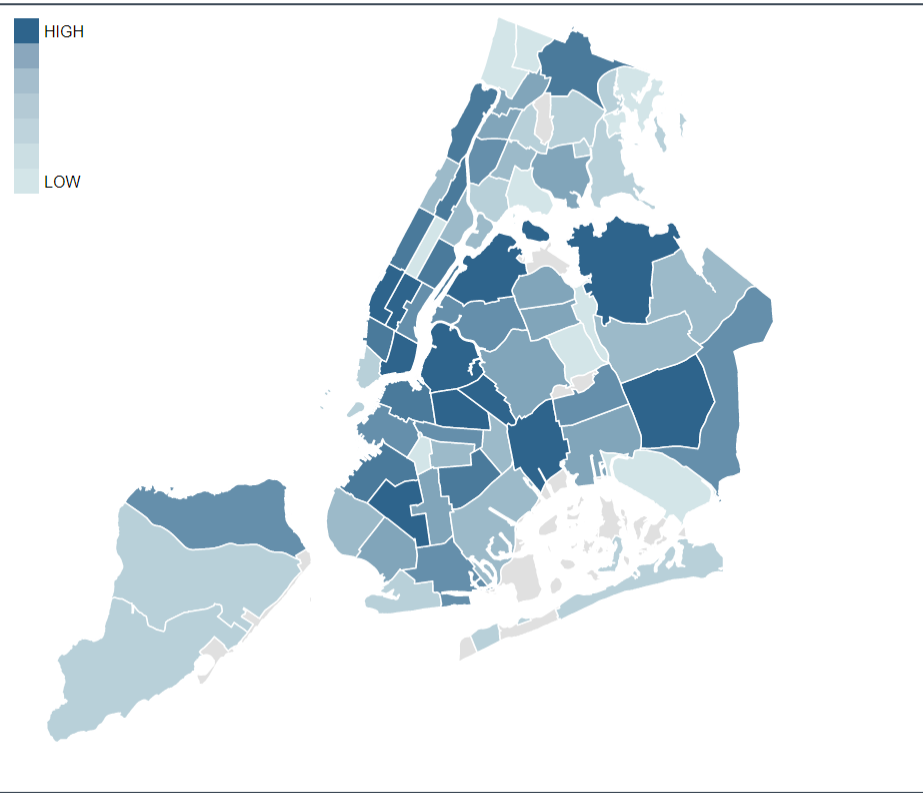
After Hours Variances

Sidewalk Sheds

Complaints

Violations

Accidents



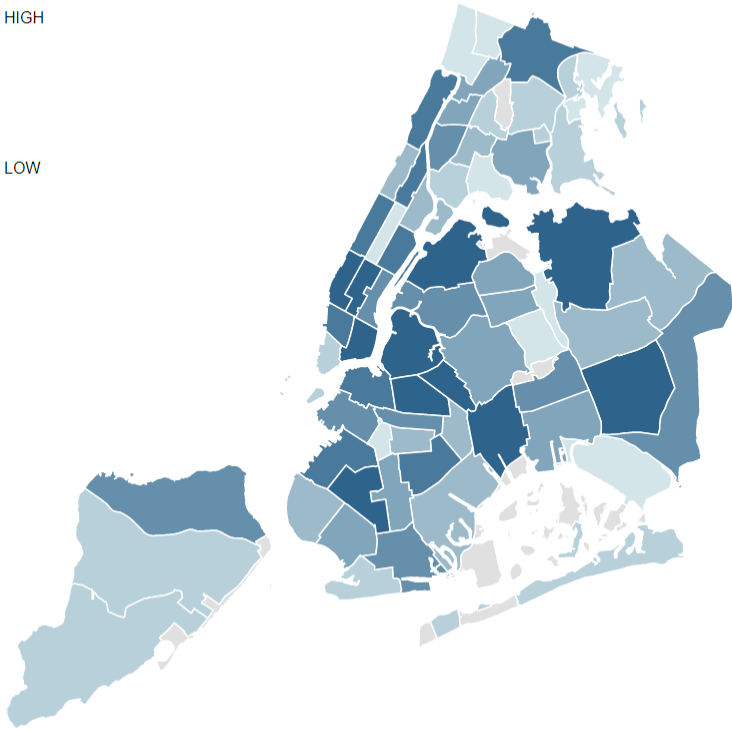
Violations (Past 12 Months)

- Building Maintenance
- Elevator Maintenance
- Failure to Comply

Metrics:

[Permits](#)
[After Hours Variances](#)
[Sidewalk Sheds](#)
[Complaints](#)
[Violations](#)
[Accidents](#)

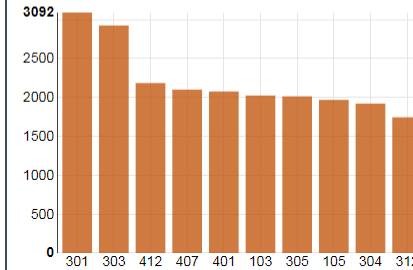
HIGH
LOW



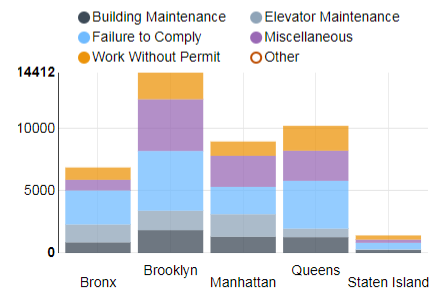
Violations (Past 12 Months)

Total: 75861

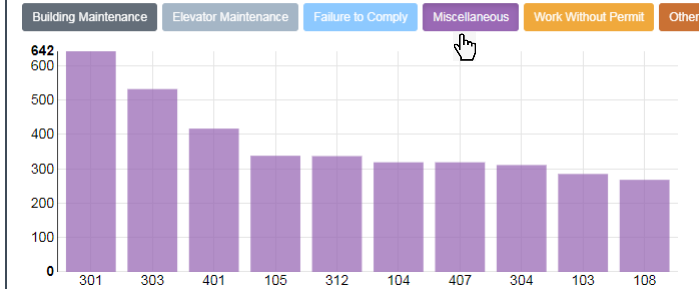
Violations (Top 10 Community Districts)



Violation Types by Borough



Violation Types (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Violations (Past 12 Months)

- Building Maintenance
- Elevator Maintenance
- Failure to Comply
- Miscellaneous

Metrics:

Permits

After Hours Variances

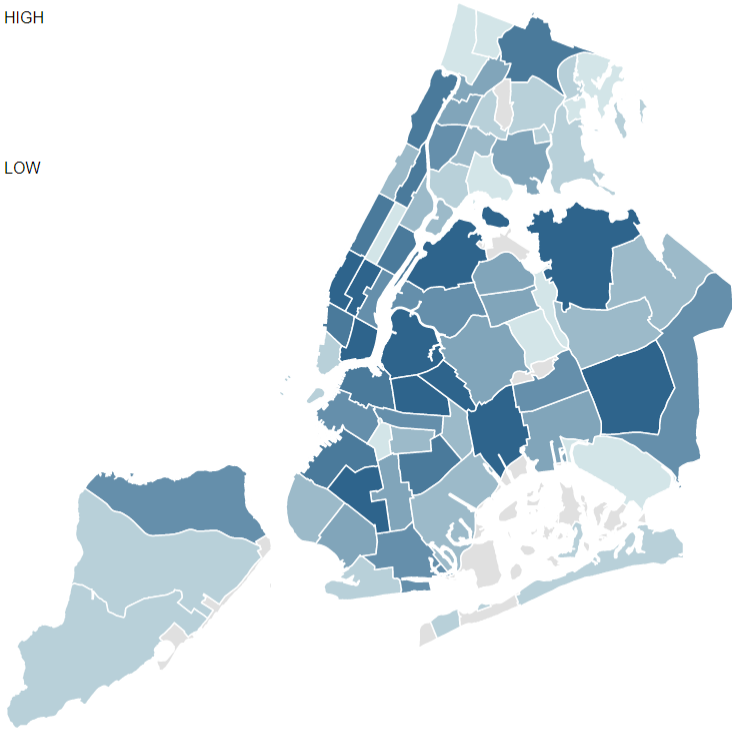
Sidewalk Sheds

Complaints

Violations

Accidents

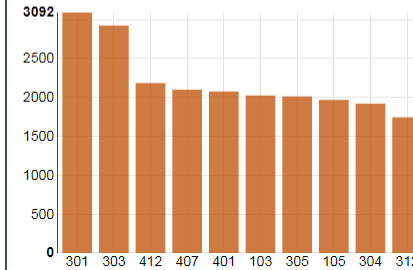
HIGH
LOW



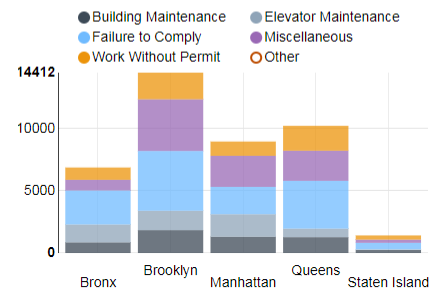
Violations (Past 12 Months)

Total: 75861

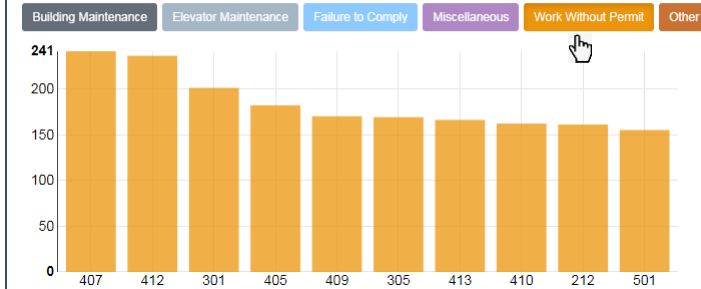
Violations (Top 10 Community Districts)



Violation Types by Borough



Violation Types (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Violations (Past 12 Months)

- Building Maintenance
- Elevator Maintenance
- Failure to Comply
- Miscellaneous
- Work Without a Permit

Metrics:

Permits

After Hours Variances

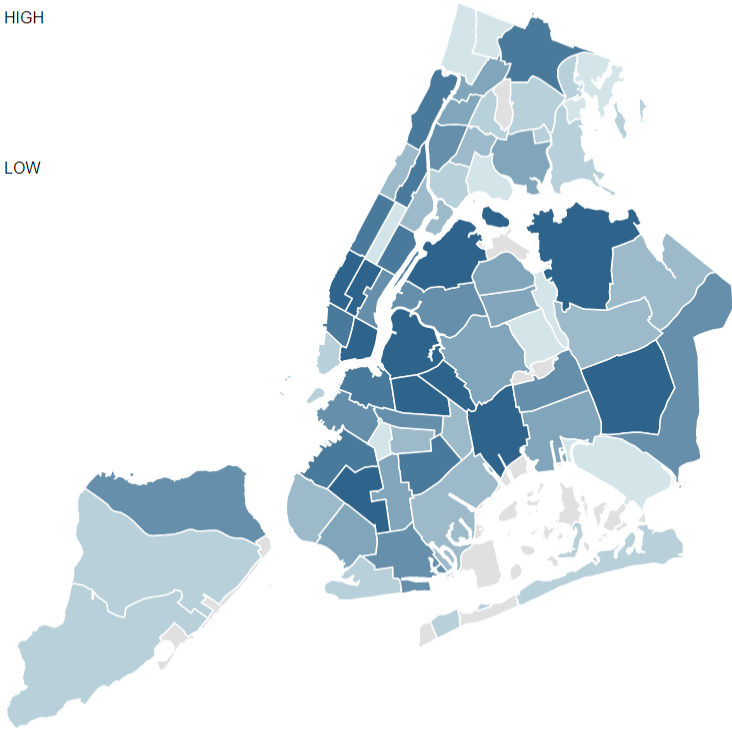
Sidewalk Sheds

Complaints

Violations

Accidents

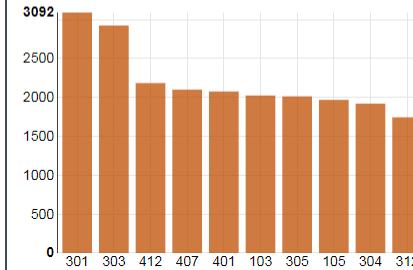
HIGH
LOW



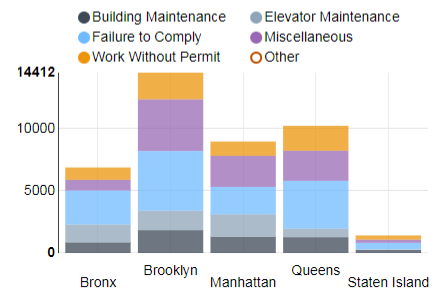
Violations (Past 12 Months)

Total: 75861

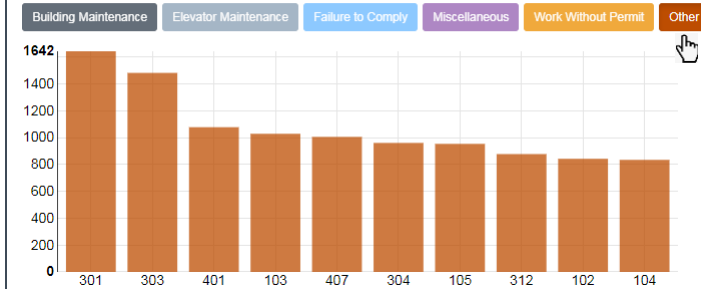
Violations (Top 10 Community Districts)



Violation Types by Borough



Violation Types (Top 10 Community Districts)



Built by DOB Analytics Dev Squad

Violations (Past 12 Months)

- Building Maintenance
- Elevator Maintenance
- Failure to Comply
- Miscellaneous
- Work Without a Permit
- Other

Metrics:

Permits

After Hours Variances

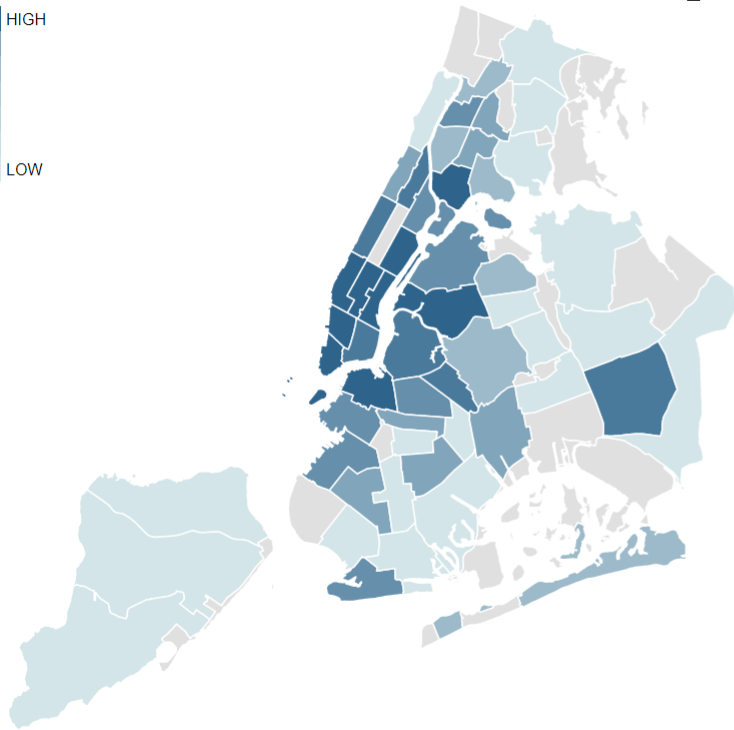
Sidewalk Sheds

Complaints

Violations

Accidents

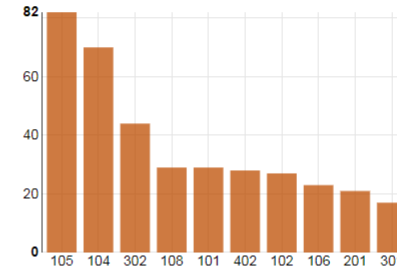
HIGH
LOW



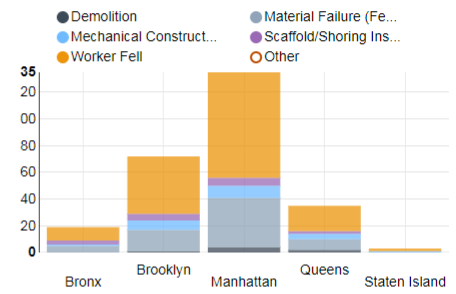
Construction-Related Accidents (Past 12 Months)

Total: 571

Accidents (Top 10 Community Districts)

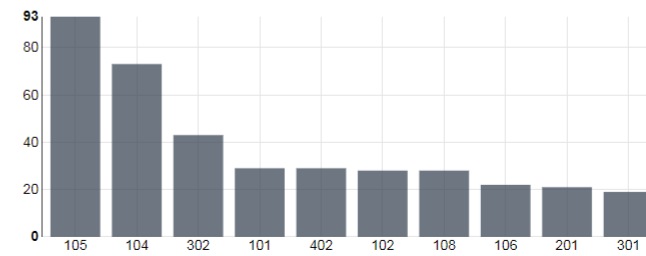


Accident Types by Borough



Injuries & Fatalities (Top 10 Community Districts)

Injuries Fatalities



Built by DOB Analytics Dev Squad

Construction-Related Accidents (Past 12 Months)

- Accident Types
 - Demolition
 - Material Failure
 - Mechanical Construction Equipment
 - Scaffold/Shoring Installations
 - Worker Fell
 - Other

Metrics:

Permits

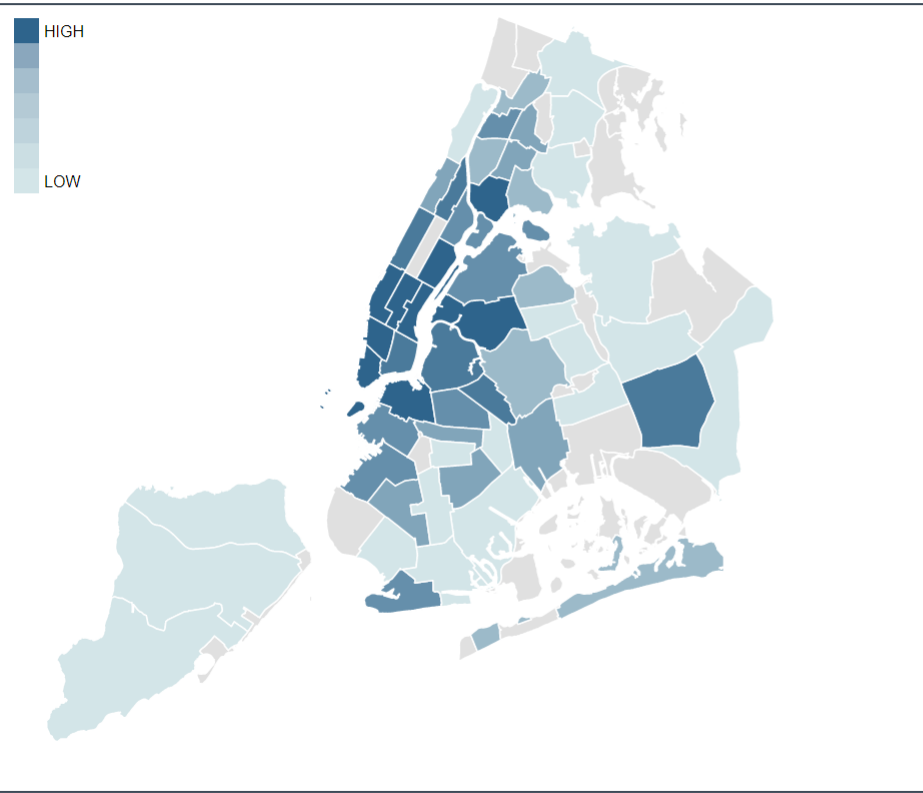
After Hours Variances

Sidewalk Sheds

Complaints

Violations

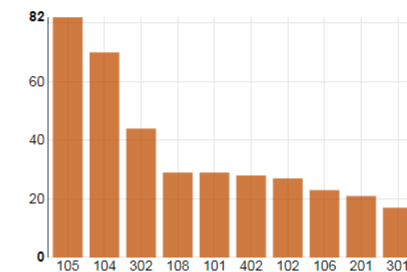
Accidents



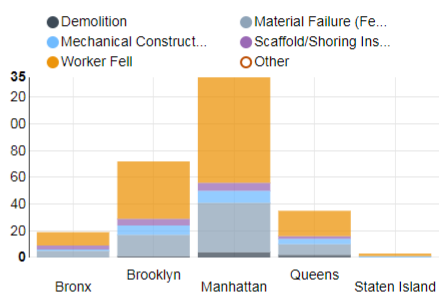
Construction-Related Accidents (Past 12 Months)

Total: 571

Accidents (Top 10 Community Districts)

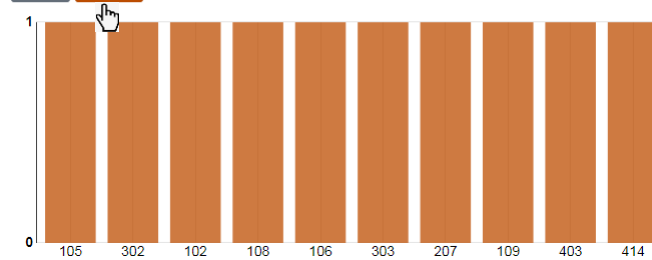


Accident Types by Borough



Injuries & Fatalities (Top 10 Community Districts)

Injuries Fatalities



Construction-Related Accidents (Past 12 Months)

- Injuries
- Fatalities