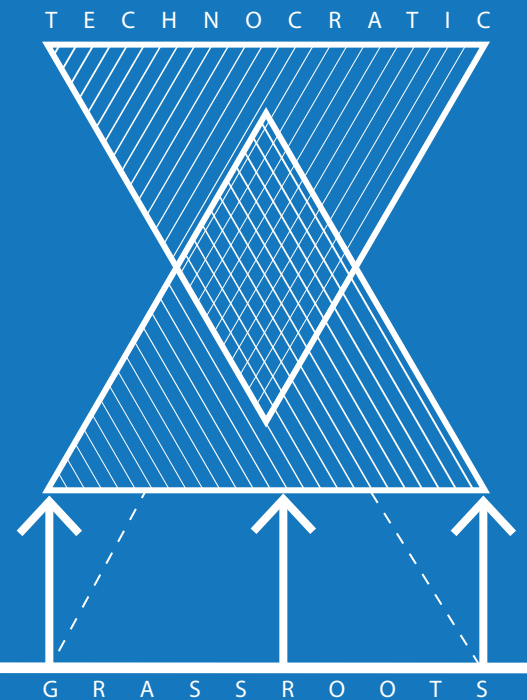


Up to the TASC

Incorporating Data into
CEQR and Comprehensive Planning



MARCH 2021

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Introduction

New York City's Environmental Quality Review (CEQR) process is intended to disclose the environmental impacts of City discretionary land use decisions, such as rezonings. CEQR uses the Reasonable Worst Case Development Scenario (RWCDs), a representation of the full extent of expected development over a specific period of time as the framework for evaluating the significance of impacts. However, deficiencies in RWCDs methodology can lead to unreliable forecasts and flawed findings in Environmental Impact Statements (EISs) and other environmental review documents. Moreover, current CEQR methodology lacks the nuance to effectively disclose potential displacement of residents and small businesses.¹ As a result, low-income residents can be at risk of displacement and neighborhoods can be left with unmitigated long-term adverse consequences such as insufficient infrastructure to accommodate new growth, overburdened transit and parks, overcapacity public schools, and traffic congestion.² Faulty evaluations can also be challenged in the courts, which, depending on the outcome, can delay or halt projects, resulting in costly work for City agencies, overruns for private entities, and planning fatigue for communities.

Unreliable development projections can be partially attributed to limitations in methodology for determining the RWCDs and evaluating development of "soft sites" in the *CEQR Technical Manual*, the guidance document for CEQR evaluations. Soft sites are those where developments in a rezoned area may

not be planned, but may be fostered by the rezoning after the evaluation period. Without a reliable future development framework, significant development can occur on sites that were not addressed in a CEQR evaluation.

The devastating public health and economic impacts of the COVID-19 pandemic have made improving CEQR methodology, particularly the assessment of residential displacement, all the more important. In the absence of meaningful community-based or comprehensive planning, CEQR is also vehicle for public engagement. Vulnerable New York City residents and businesses are facing an unprecedented threat. Evictions are on the rise, with a massive wave anticipated after COVID-19 federal and state moratoriums expire. The housing market does not deliver sufficient housing for low-income families. Small businesses are in peril. The social and built environment factors that affect development are often interrelated and compounded,³ creating varying levels of vulnerability and displacement risk.⁴ The need for better forecasting of future development and demographic changes has only intensified with the recent bill introduced by the New York City Council in support of a comprehensive planning framework. As development pressures increase citywide, CEQR needs flexible, adaptable tools to sufficiently measure social vulnerability, displacement, and other environmental factors.

Background

CEQR Reform Coalition

Through a grant from the New York Community Trust (NYCT), the CEQR Reform Coalition, composed of the Municipal Art Society of New York (MAS), Regional Plan Association (RPA), and the New York University Guarini Center on Environmental, Energy and Land Use Law (NYU), seeks to strengthen CEQR methodology to better identify displacement risks, forecast future development and demographic changes, and update CEQR mitigation requirements. To improve RWCDs and soft site analyses, the Coalition has developed a nuanced, quantifiable methodology and land use mapping tool that incorporates a comprehensive array of built environmental and social vulnerability factors. The mapping tool and the initiative supporting it, named Technical Advancement and Support of Comprehensive Planning and CEQR Reform (TASC), will also support the City Council's proposal for city-wide comprehensive planning and assist community planning in some of the city's most vulnerable neighborhoods by democratizing the availability, accessibility, and usability of advanced planning tools. The Coalition has also developed recommendations for improving CEQR mitigation requirements.

Improving the CEQR Mitigation Process

For the first step of the initiative, NYU conducted extensive research to set the groundwork for reforming the CEQR mitigation process, including interviews with experts in the fields of environmental law and planning and an evaluation of a wide array of environmental review case studies. NYU's work sought to 1) increase the comprehensiveness of the impacts analyzed and mitigation measures surveyed to better identify impacts and expand the range of mitigation options; 2) improve the effectiveness of measures designed to mitigate impacts; 3) improve accountability for the implementation of mitigation measures including improving transparency; and 4) increase the efficiency of the review process in order to contain costs and avoid unduly burdening beneficial development.

NYU surveyed environmental review procedures from federal, state, and local jurisdictions including California, Massachusetts, Minnesota, New York, and Washington to see what best practices could be adopted to improve CEQR. NYU's recommendations were presented at two roundtables attended by planning practitioners, educators, elected officials, civic group leaders, and representatives from the New York City Mayor's Office of Environmental Coordination (MOEC) in December 2019 and February 2020 at the Guarini Center.

NYU's work was detailed in the report *Reforming CEQR: Improving Mitigation under the City Environmental Quality Review Process*, released in February 2020.⁵ The report included the following primary recommendations:

- Establish a centralized unit with authority to coordinate and review agency mitigation strategies;
- Improve the Generic Environmental Impact Statement and expand its use;
- Adopt a public mechanism for tracking and monitoring mitigation commitments;
- Adopt a public process for the retrospective evaluation of mitigation measures; and
- Require regular periodic reviews of the *CEQR Technical Manual*. WSW

Meeting in the Middle: Application of TASC

Neither CEQR nor the City's public Uniform Land Use Review Procedure (ULURP) are working well from an equity or good governance standpoint. Mistrust of the validity of analysis, inability to impact the scope of work, and under-mitigated impacts leave people out of the process and key issues unaddressed. The technocratic process puts power in the hands of those who have the data. A shift is needed to empower local voices, rebalancing the partnership between planning and the community who will be directly impacted by changes in land use and zoning.

Over the past eighteen months, New York has experienced an increasing level of push-back in the CEQR and the ULURP processes. Recently, a community group from Inwood presented a legal challenge to the validity of an EIS for a City-sponsored neighborhood rezoning proposal on the grounds that local concerns were not incorporated into the analysis. While their lawsuit was unsuccessful in the end, it did highlight concerns about changes in intensity, type, and scale of use that comes with zoning changes. The City has abandoned rezoning efforts along Southern Boulevard and Industry City amid community fears over gentrification, displacement, and unmitigated impacts. In the case of the Special Flushing Water-front District (SFWD) proposal, strong community opposition did not sway the City Council from approving the project. The SFWD was not subject to a full environmental review process which hindered the community's ability to impact the project, scope

of analysis, or mitigation of impacts. The City recently began the CEQR process for the SoHo/NoHo Neighborhood Plan in a bid to foster residential development and introduce more affordable housing into a high-cost, high-amenity area. All of these projects would benefit from a more balanced, comprehensive planning approach for neighbors, applicants, and the City to meet in the middle.

Meeting in the Middle: Application of TASC

Calls for Reform

Recently, several elected officials have called for new studies about race and housing impacts to better inform land use decisions. In 2019, New York City Public Advocate Jumaane Williams, Council Member Rafael Salamanca, Jr., and Council Member Antonio Reynoso introduced legislation (Intro 1572) that would require a racial impact analysis for land use actions subject to CEQR. The bill would require EISs to analyze racial and ethnic impacts and evaluate whether a proposed action aligns with the Fair Housing Act. Since introduction of the bill, 16 additional Council Members have joined as sponsors.

This year, the New York City Council held several public hearings to discuss inequity in social and built environment factors for the provision of parks, transportation alternatives, and health outcomes. In those forums, members of the public called for data-informed decision-making to more equitably distribute resources for meeting diverse needs across New York's neighborhoods.

In December 2020, Speaker Johnson and the New York City Council released a report, *Planning Together*, inventorying NYC's legacy of fragmented planning and land use decisions and introduced legislation (Intro 2186) detailing a citywide comprehensive planning framework that aims to support equitable planning through a data-driven needs assessment, adoption of citywide goals and policies, consistent community engagement, and consideration of community-based plans.⁶

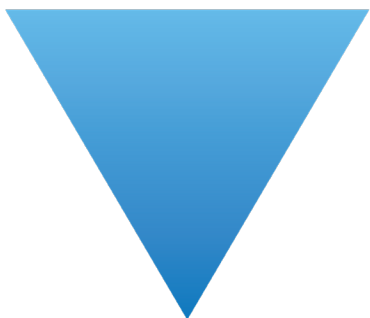
Integrating data on social demographics, health factors, neighborhood conditions, and the regulatory landscape has applications beyond CEQR. TASC can improve the design and delivery of planning initiatives and decision-making processes. With access to data, communities can identify needs, opportunities, and risks, and thus more equitable outcomes, increased community buy-in, and greater clarity on tradeoffs between alternatives are possible.

What is TASC?

TASC is poised to better integrate the top-down, technocratic City process and the bottom-up, community-based planning and organizing efforts. From the bottom up, TASC is a tool designed to equip impacted communities with data to help them ask and answer critical questions, and allow for independent analysis of social and built environment factors. From the top down, TASC looks to update methodologies in the *CEQR Technical Manual* and increase the scope and range of applicable analysis to more explicitly address displacement risk, account for underlying health factors, and improve the assessment of areas that may experience development. TASC can also be used to conduct citywide analyses to inform comprehensive planning goals and to establish benchmarks for meeting those goals.

TASC combines social and built environment indicators to create a database of key planning, development, and health information to assess underlying characteristics on every lot throughout New York City. This critical first step democratizes data that has proven to be elusive for communities responding to development applications. While data is neutral, the

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Meeting in the Middle: Application of TASC

interpretation of the analysis is always accompanied by the value set of the user. While a development group may identify a neighborhood whose underlying indicators point to an area ripe for new residential growth, a tenant organizer may look at the same set of criteria and identify an area where real estate speculation could lead to harassment, gentrification, and displacement of vulnerable communities. A shared data analysis tool supports discussion, deliberation, and decision-making across a variety of user groups. These data have the potential to increase compromise, authorship, and trust within the evaluation of projects.

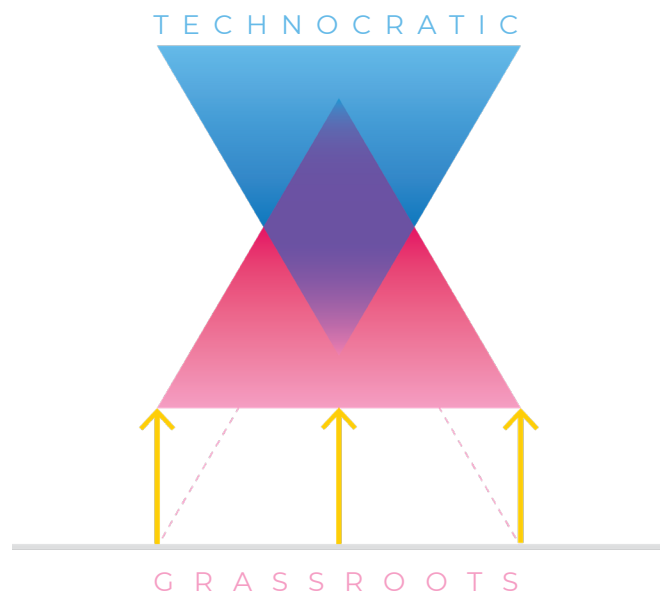
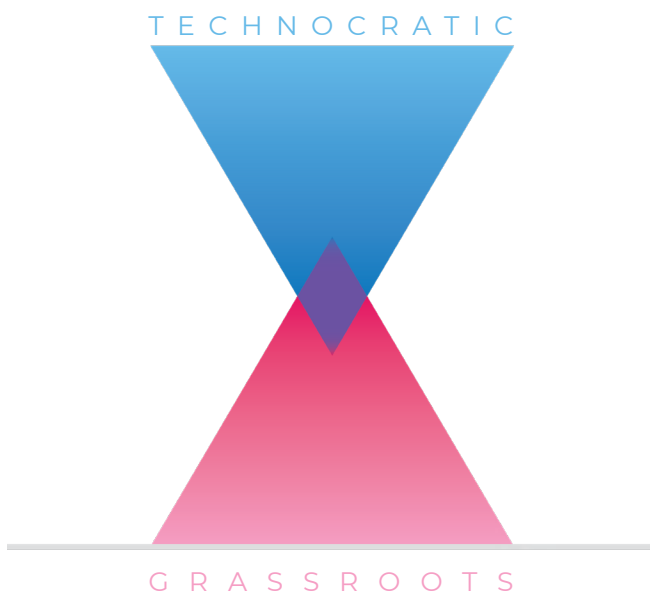
Why Combine Social and Built Environment Factors?

Urban planning reveals a complex relationship between people, place, and process. Social and environmental factors, such as opportunities for education, employment, transportation, and housing choice, have long been established as determinants of health. For example, prevalence of some chronic illnesses can be linked to nearby sites in need of environmental remediation or substandard housing maintenance resulting in exposure to high levels of mold, asbestos, and lead. A lack of secure housing, access to public transit or an increased risk of environmental threats like flooding may exacerbate existing stresses for low-income and housing-cost-burdened families. The COVID-19 pandemic has underscored the impact of these and other threats like overcrowding. While a uniform process can help streamline the questions asked of proposed changes, this routine can unintentionally omit the level of nuance needed to adequately understand hyper-localized conditions

and how they may change block-to-block or neighborhood-to-neighborhood.

TASC allows for the consideration of multiple factors to better identify key places of interest based on their underlying social and built environment factors. Social factors help describe underlying vulnerability, or level of susceptibility to threats, while built environment factors generally map risk, or level of anticipated change as a result of development. Perceptions of vulnerability and risk exist on a spectrum, which supports a tailored application to undertake critical assessments in a variety of neighborhood conditions and population characteristics (see page 6). By combining these factors, data can be used to disrupt the impulse to dismiss localized concerns and instead validate community expertise and experience with a map, table, or chart. TASC provides a framework to quantify community observations and encourage more complex conversations about risk and opportunity.

Through TASC, analysis can start from a people-focused or place-focused inquiry. The ability to layer information provides for site-specific analysis combining more than 30 indicators. With respect to CEQR, comprehensive planning, and community-based planning, there are four key relationships to highlight around livability, health equity, development potential, and gentrification and displacement. Taken together, these assessments can support the development of community-based plans, facilitate the ability to identify impacts through environmental review, and aid community discussion during public land use review processes.



Meeting in the Middle: Application of TASC

Livability

To evaluate equitable access to opportunity it is important to assess neighborhood conditions such as populations over 65 and single parents, along with key components of livability like building age, overcrowding, and access to parks and transit. Livability provides a framework for level of service that can illuminate neighborhood characteristics into consideration of needs. This allows for comparison across similarly situated geographies to account for measurable differences identified by income, race, or geography.

Health Equity

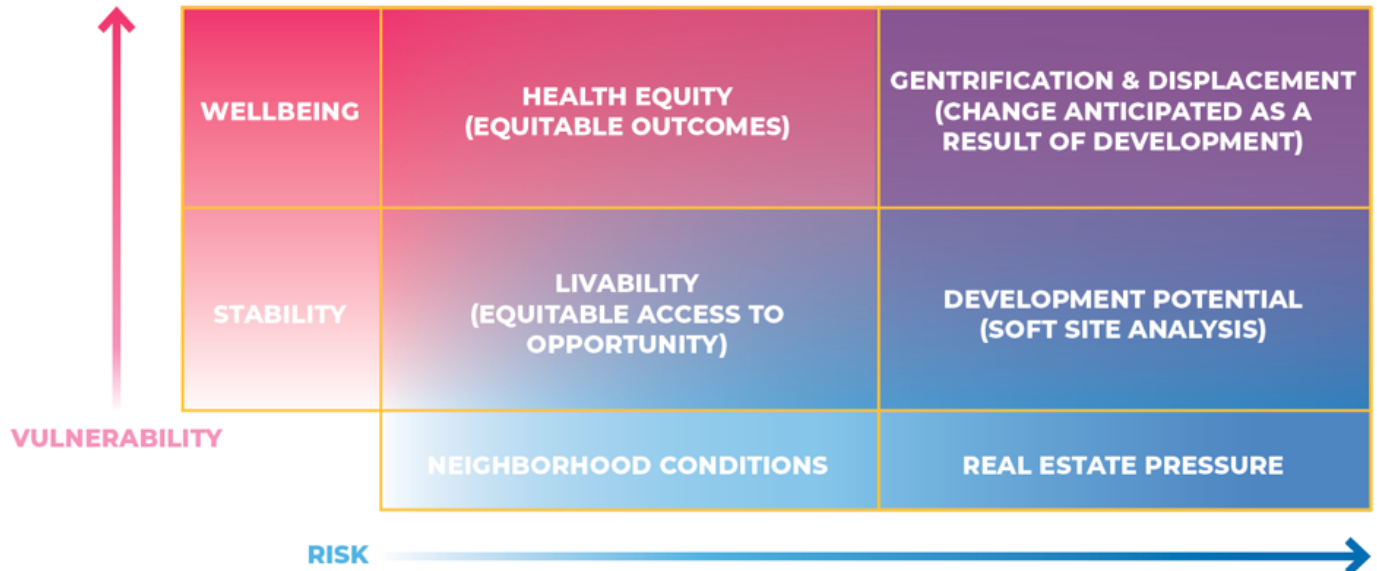
To evaluate equitable outcomes, it is important to look at social determinants of health which build upon physical characteristics such as the availability of healthy foods alongside higher rates of disease, access to health insurance, and cost-burdened households. Health equity provides a lens to evaluate how disparities in outcomes relate to underlying neighborhood conditions that can place greater risk on vulnerable populations.

Development Potential

In undertaking soft site analyses, it is critical to assess factors that favor development, including site conditions like access to amenities, factors such as unused development rights, and government programs like the ability to access financing and other tools to incentivize development. A soft site analysis identifies areas that may experience change in the form of consolidation, reinvestment, or redevelopment. An accurate inventory of these sites informs identification of development related impacts and can articulate a more realistic RWCDs.

Gentrification and Displacement

To evaluate change anticipated as a result of development, it is vital to think of both physical changes and social changes that may be spurred by redevelopment. New buildings can displace existing buildings, vulnerable people, and businesses in direct ways and indirect ways like introducing new residents, businesses, and market demand that can lead to increased rents, speculative development, tenant harassment, and cultural changes. Gentrification and displacement analysis help articulate the risk to neighborhood stability when real estate pressure is combined with vulnerable populations and places.



Meeting in the Middle: Application of TASC

Who Will Benefit from Using the TASC Tool?

TASC supports research and analysis, advocacy and communication, the development of alternative scenarios, and community engagement. The same data allows users to advocate for their community, client, or issue in an environment where there is increased transparency and shared power in the generation and evaluation of proposals. TASC is an opportunity to build a new tool that can house technocratic and community-based analysis.

Key Users

TASC has a broad range of users and applications. While this list is by no means exhaustive, the CEQR Reform Coalition has identified the following key users for the tool.

Everyday New Yorkers

General users include individual members of the public who have a wide range of land use and environmental experience and expertise. Some users will be familiar with navigating interaction between datasets while others benefit from guides and description of planning issues and relationship to vulnerability, access, and development.

Community Boards

Community Boards, especially their Environmental and Land Use Committees, have the opportunity to use the tool as a group. This group experiences turnover as a result of term-limits. Group process allows for more specialization amongst individual members of the Board.

Non-profit Organizations

Non-profit organizations may be focused around a set of key issues or a focused geography. These groups may engage a variety of users within their staff, including policy advisors, community organizers, and communication specialists. The relationship between these users and the community served can reinforce and interpret community-identified concerns and opportunities to meaningfully engage in proactive planning and environmental review processes, including supporting scoping, public testimony, and advocacy campaigns.

Academic Institutions & Students

Students of today are the planners and advocates of tomorrow. Incorporating this tool into planning, real estate, and community organizing programs (including but not limited to Columbia University, Cornell University AAP NYC, Hunter College, New York University, Pratt Institute, and CUNY's School of Labor and Urban Studies) allows for student research, analysis, and writing to be strengthened. Planning studios may use the tool to analyze practical real-world projects with community partners.

The Private Sector

As professionals, planning practitioners, consultants and developers are also advocates for the review process, their clients, or their investors. These users are responsible for generating meaningful community engagement on proposals and can utilize the tool to better communicate complex planning relationships, identify risks and opportunities, and welcome additional nuance to neighborhood-specific considerations and the development of alternative proposals.

Elected Officials (City Council Members, Borough Presidents, and Public Advocate) & Staff

Elected officials and their staff are critical to the land use and environmental review processes. Given the variety of issues under consideration by these users, not every office is equipped with land use planning expertise. Data from this tool can provide these officials with information to present in oversight hearings for departmental factors (e.g. access to parks, transit, etc.), introduce key questions during the project scoping phase, frame key considerations during public hearings, and ultimately help make decisions to support or oppose a project.

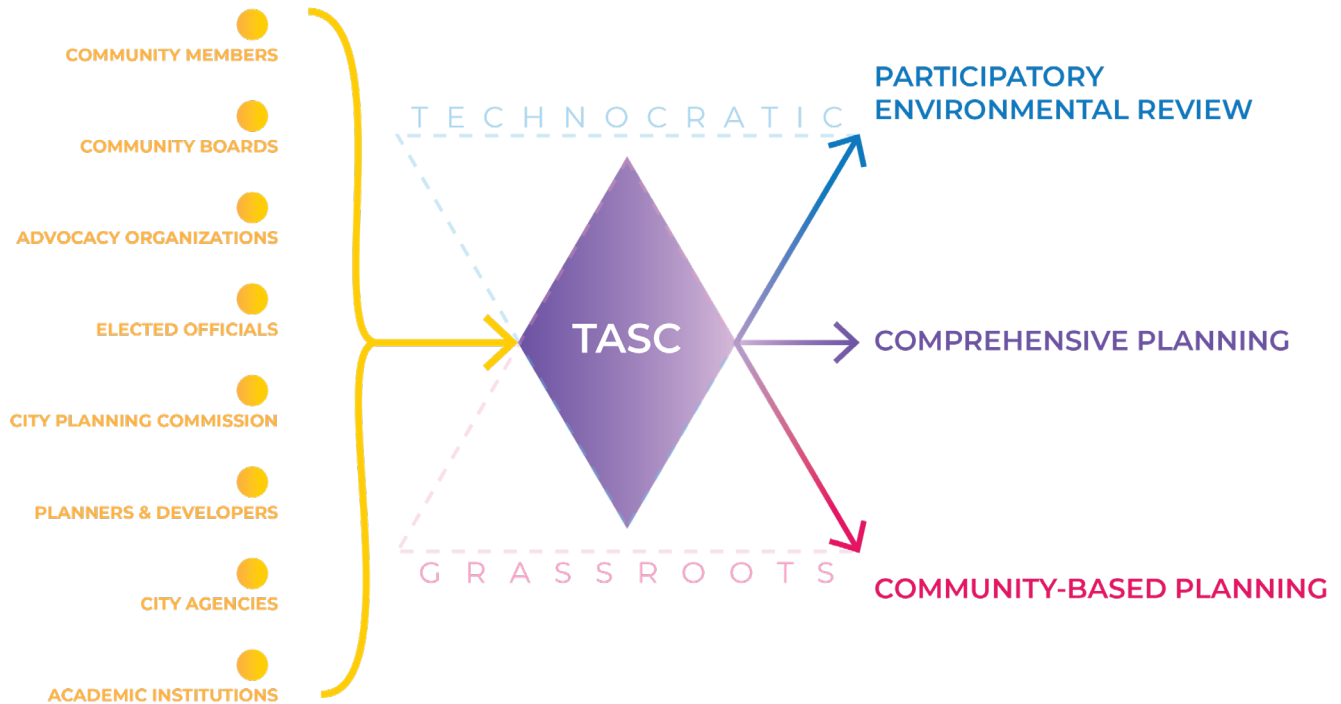
City Planning Commission (CPC)

CPC serves as an administrative body in the land use review process. This tool would offer support by better integrating critical indicators, especially those focused on health and equity, into their decision-making. This tool could also be the basis for discussion at a public hearing, where the Commissioners could use the tool to deliberate on questions about a proposal.

City Agencies & Departments

The Mayor's Office of Environmental Coordination and Department of City Planning, with assistance from many City agencies, are responsible for updating, interpreting, and implementing the guidelines in the *CEQR Technical Manual*. The data presented in this tool can be incorporated more fully into the instructions or serve as guidance for items that are often deemed 'out of scope' by presenting methodologies and criteria to address community concerns. While this tool supports CEQR, it also stands to be used in a variety of planning applications to evaluate levels of service, budget priorities, and consideration of alternative approaches to meet City-identified and community-based goals.

Meeting in the Middle: Application of TASC



What Processes Will Benefit from Using the TASC Tool?

City Environmental Quality Review (CEQR)

TASC provides defensible, detailed methodologies to support *CEQR Technical Manual* revisions and reform, allowing more users to access and understand this information. In this way, the tool can provide technical assistance to a broad range of users at all levels. The additional data available at the tax lot level allows for greater consideration of indicators and a stronger assessment of developable sites. During the scoping phase of a project, this tool can be used to assess issues that may warrant additional analysis in the environmental review process by being able to quickly ask and answer questions. The result of these preliminary questions could outline additional analysis to be included in the Final Scope of Work for a project or consideration of an additional alternative that could advance the project goals. During the Draft Environmental Impact Statement (DEIS) phase, the tool provides the ability to evaluate the proposal's analysis against what is available within the index. This supports better identification of impacts and discussion of potential mitigation measures.

Comprehensive Planning

TASC provides a scalable analysis that can evaluate multiple scenarios against underlying social and built environment factors at the site, neighborhood, borough, and citywide levels. This application also

allows for simultaneous evaluation across and between neighborhoods that could better illuminate shared opportunities and risks presented by different alternatives. By evaluating underlying conditions, neighbors, and the development community, the City can better inform growth proposals that maximize shared outcomes for increasing neighborhood stability, supporting new growth and infrastructure investment, and protecting areas at risk. At the borough or citywide scale, the tool can be used to identify priority areas for infrastructure like parks, transit, and schools. By combining social factors to identify under-served areas, more equitable investment strategies can be created.

Community-based Planning

True community-based planning equips a neighborhood as a partner in the process. The tool, when partnered with training on land use review processes, can increase the planning literacy of the public. The tool supports scenario building by analyzing risks and opportunities presented by different growth strategies. This can inform community-based alternatives that form the basis for 197-a plans, as well as planning frameworks for City-initiated or private applications for land use changes. The index is also useful for the City's annual budget process in its ability to present clear information about built environment factors. This information could be used to support community districts' needs assessments by highlighting gaps in service and expanding the ability to compare across neighborhood, borough, and citywide geographies.

TASC in Action

As mentioned previously, TASC seeks to improve CEQR methodology to better address the causes and effects of changes in the built environment on multiple scales, from the physical attributes of a neighborhood to the people who live there. As a mapping tool created from an index of social vulnerability and built environment indicators, TASC will allow users to visualize the effects of changes to the built environment and the impacts these changes have on New Yorkers, particularly those most vulnerable.

By building the index to identify indicators at the lot level, TASC can be used to understand needs at a variety of scales, combining localized and citywide analysis in one tool. In the absence of meaningful community-based or comprehensive planning, TASC allows for data-driven community involvement in the planning process and democratizes access to public spatial data. Communities and City officials alike can use the tool for comprehensive planning by creating queries and comparing needs and development conditions at variable scales.

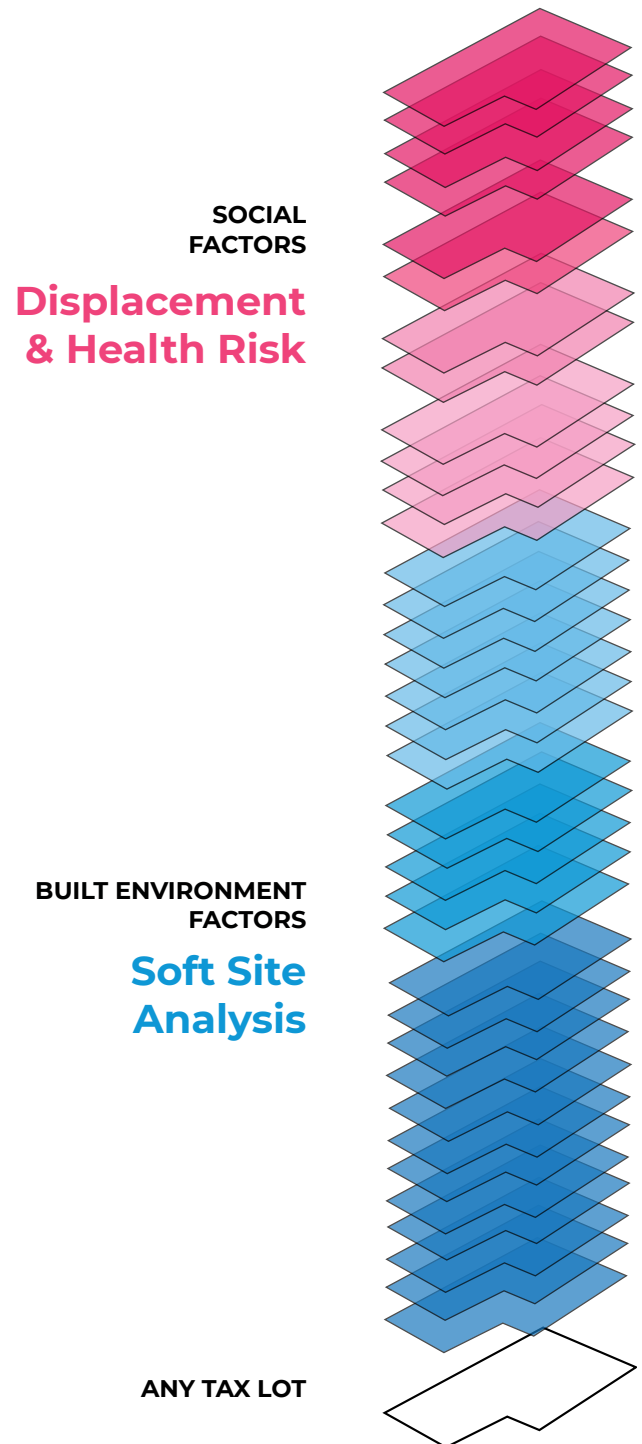
TASC in Action

Development of TASC

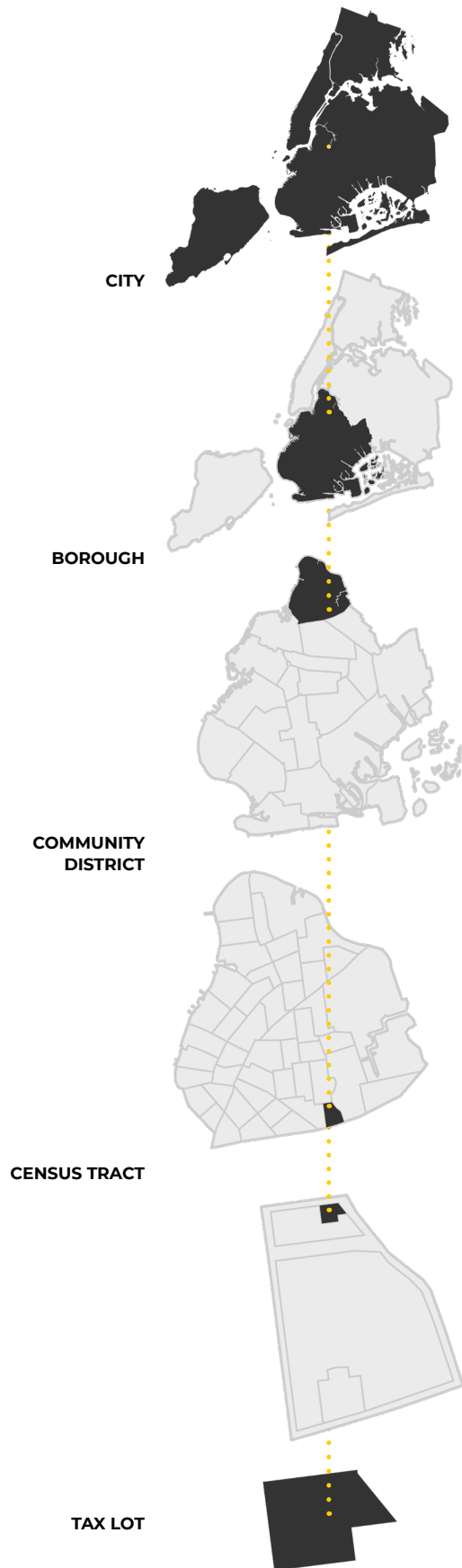
The TASC mapping tool is based on a selection of indicators that cover social and built environment factors, and compiled into a citywide dataset or index. The TASC index was developed through multiple iterations of research and discussions with peer organizations to better define the conditions that may induce new development. The Coalition referenced the *CEQR Technical Manual* to establish baseline factors for identifying soft sites, such as lots with available development rights, landmark designations, and recently built buildings. New indicators were added based on surveys of existing proprietary tools, academic research, and frameworks used in other cities (see Appendix A). The Coalition also identified social factors for displacement risk evaluation using the Centers for Disease Control and Prevention (CDC)'s Social Vulnerability Index. Coalition members then proposed methodologies for each indicator based on surveyed materials and previous experience.

The initial index was peer-reviewed by independent planners and practitioners from partner organizations, including the Association for Neighborhood & Housing Development (ANHD), BFJ Planning, George M. Janes & Associates, the Spatial Analysis and Visualization Initiative at Pratt Institute (Pratt SAVI), the Pratt Center for Community Development, and Pratt Institute's Graduate Center for Planning and the Environment (GCPE). These indicators were further reviewed by the MAS Planning Committee and attendees at the roundtables held by NYU. Through this process, proposed methodologies were revised, new indicators were added, and preliminary indicators were reinforced or eliminated. In the spring of 2020, the Coalition added several health-related metrics to reflect communities severely affected by the COVID-19 pandemic. In total, the index consists of 45 discrete indicators of built environment and social factors at the tax lot level.

Through this interdisciplinary collaboration, the TASC tool was refined to provide users with a better understanding of the relationship between built environment and social factors. The ability to select various conditions at once allows a user to visualize the confluence of those factors, which together may indicate heightened development potential and underlying vulnerability of the study area. Communities will be able to use the tool to create their own queries based on specific needs and conditions that affect development in a given area. The tool can also be used to identify citywide needs and development conditions, and balance those needs across neighborhoods.



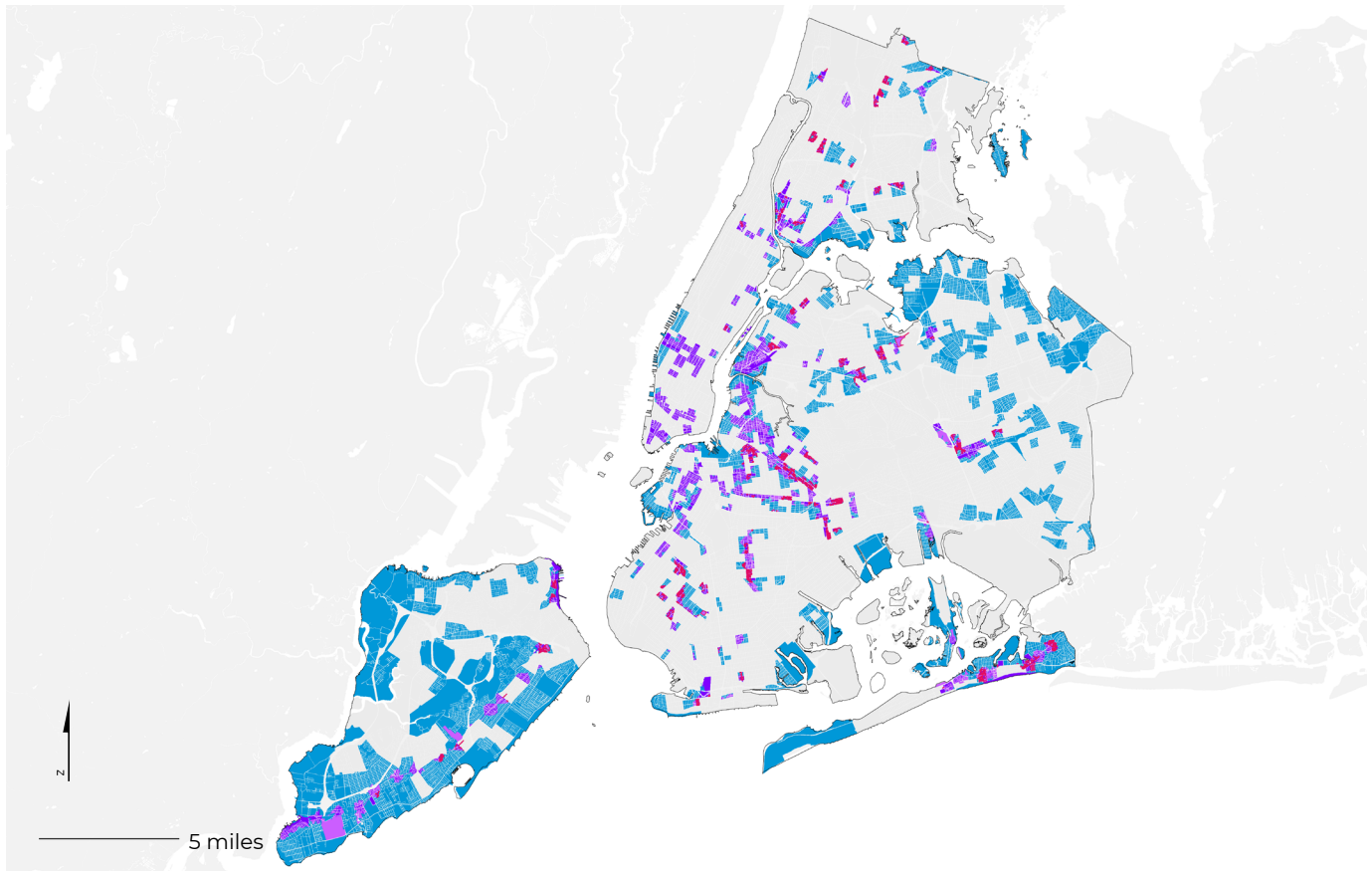
TASC in Action



Scaling Analysis

To create a scalable index, the most granular data available for each indicator was compiled. For all indicators, most data is available at either the lot level or the census tract level. For TASC, each tax lot is recorded with all indicators, which can describe either specific conditions at the lot level, such as landmark status, or if the lot is located in a census tract with certain features. These census tracts represent an average value from all respondents within the census tract. Further detail is provided in “Building a Mapping Tool”, beginning on page 19. By using the smallest geographic units of analysis available for each indicator, indicators can be combined to understand data points at increasing geographic extents, from the tax lot to census tract to community district to borough to citywide levels.

TASC in Action



Exploring the City

To illustrate how TASC can be used to examine development scenarios, the Coalition identified three potential development indicators and one social vulnerability indicator: census tracts with a high number of permits issued for new buildings, lots within a five-minute walk to the subway, lots with a large amount of development rights available, and census tracts with a high population of housing-cost-burdened owners and renters (see Appendix B for more detail). These indicators were chosen based on discussions with community organizations and particular vulnerabilities identified in past rezoning proposals.

On the map, lots located in areas with a total number of new building permits issued within the last year that is much higher than the city median are shown in blue. These areas are likely to continue to see new development. The lots within these active development areas located within a five-minute walk to a subway entrance are shown in purple. These lots are more likely to be developed because they provide nearby access to workplaces and other destinations in the city. Of these, several lots have more than 50 percent of their development rights available, shown in mauve. Taken together, the mauve lots have the highest likelihood of being redeveloped based upon the selection criteria.

- Parcel in census tract with many new building permits
- Parcel in census tract with many new building permits + within a five-minute walk to the subway
- Parcel in census tract with many new building permits + within a five-minute walk to the subway + with more than 50% available development rights
- Parcel meets all built environment criteria + in census tract with many housing-cost-burdened renters or homeowners.

Adding the social vulnerability indicator identifies sites with high development potential that are also in areas with a concentration of housing-cost-burdened renters and homeowners, who may not be able to weather expense increases and are more likely to be displaced. Lots with high populations of cost-burdened renters or homeowners, meaning those who spend more than 30 percent of their income on rent, mortgages, or other housing costs, are highlighted in hot pink to indicate high social vulnerability.

Areas with the highest development potential and high social vulnerability are located in all boroughs, from Bushwick to Elmhurst to the North Shore to West Harlem to Williamsbridge.

TASC in Action

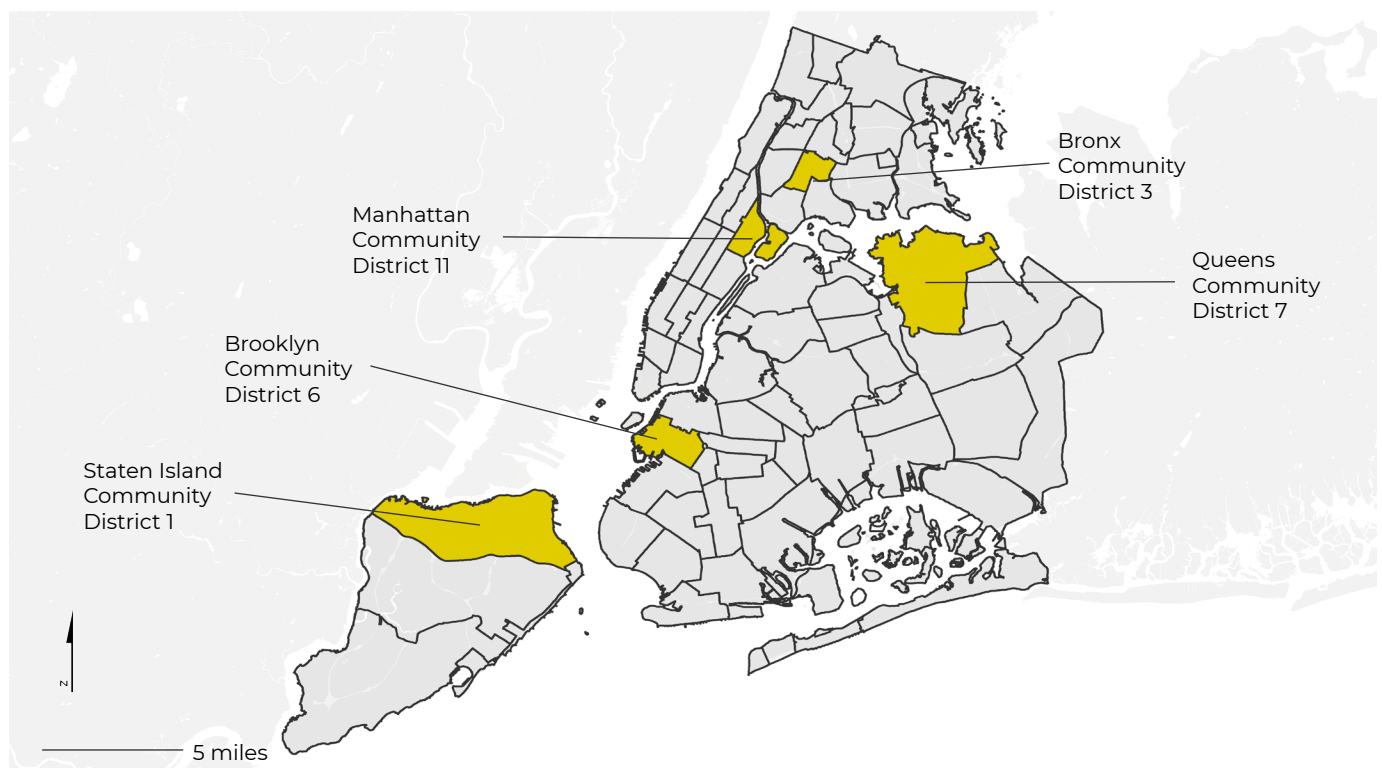
Exploring Five Geographies

To represent TASC's application on a local level, the Coalition selected a sample of five geographies: Bronx Community District 3, Brooklyn Community District 6, Manhattan Community District 11, Queens Community District 7, and Staten Island Community District 1. These are community districts in each borough where Coalition members have previously worked with community-based organizations or in which members reviewed proposed or certified rezonings. The selected districts include the 2017 East Harlem neighborhood rezoning, the 2019 Bay Street Corridor rezoning, and the 2020 Special Flushing Waterfront District, as well as the proposed rezonings of Southern Boulevard and Gowanus.

The following community district profiles use the same selections as the preceding citywide map, with active development areas shown in blue, lots in these areas within a five-minute walk to a subway entrance shown in purple, and these lots with more than 50 percent of their development rights available shown in mauve. In addition, the social indicator of high populations of cost-burdened renters or homeowners is outlined in hot pink.

Using the same built environment and social vulnerability indicators across the five community districts demonstrates the unique development potential of each area. Areas with high frequency of new building permits in the last year were not as concentrated along the waterfront in upper Manhattan as they were in the community districts in Brooklyn, Staten

Island, and Queens. The search criteria identified areas of high development potential within the boundaries of the 2017 East Harlem rezoning area in Manhattan Community District 11, the proposed Southern Boulevard rezoning area in Bronx Community District 3, and the 2019 Bay Street Corridor rezoning area in Staten Island Community District 1. Lots with high development potential in the Brooklyn and Queens community districts are located near to, but not within, the proposed Gowanus rezoning area and recently approved SFWD, respectively. The areas of high development potential closely align with rezoning areas and often impact high housing-cost-burdened households, underscoring the need for clear and thorough evaluation of vulnerability and displacement in all rezonings.







TASC in Action

Bronx Community District 3

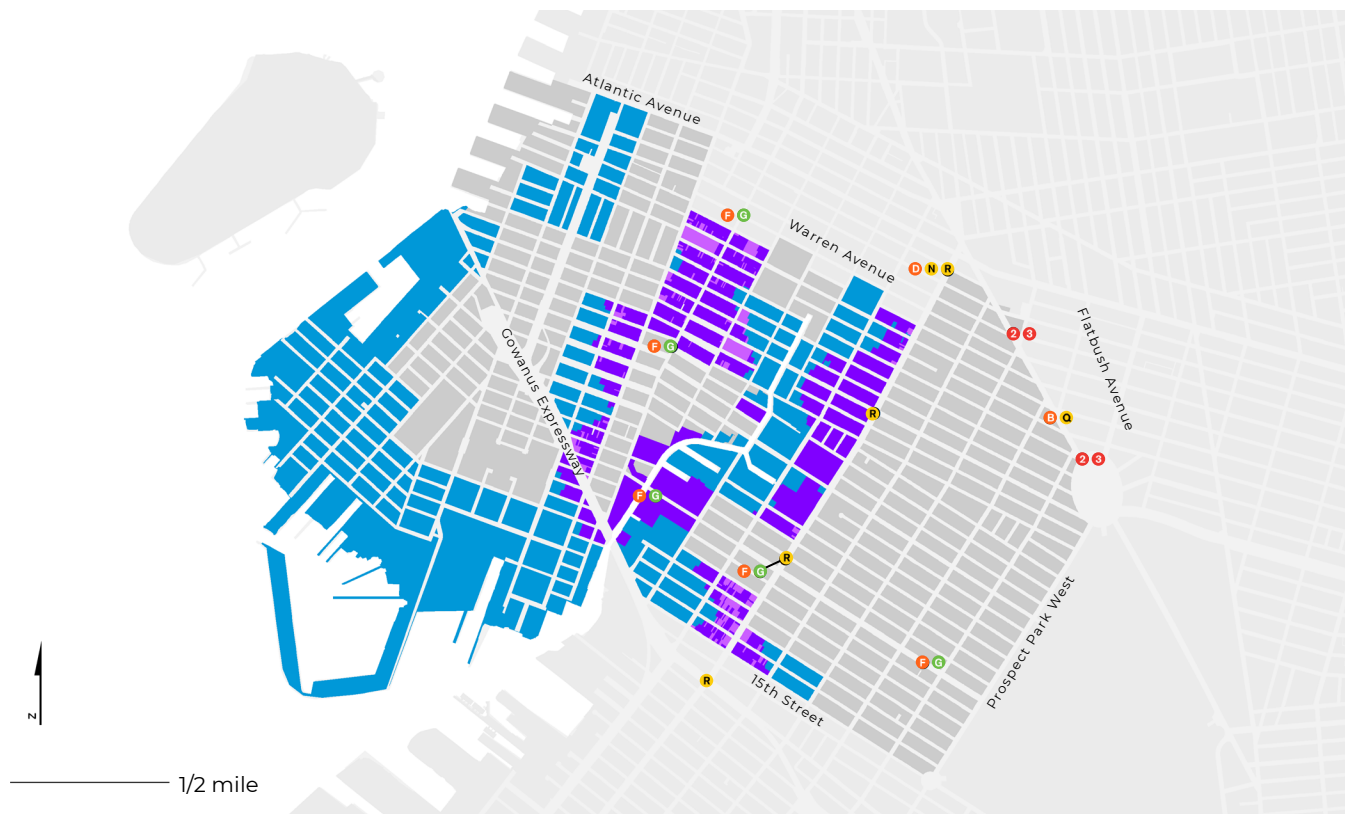


According to these indicators, 6 percent of all lots in Bronx Community District 3, are identified as having high development potential. These lots are large and irregularly shaped, and are clustered along Southern Boulevard and Freeman Street. While most of these are centered around the Freeman Street subway station (2, 5 trains), there are many lots a block away which are located in a census tract with high housing-cost-burdened renters and owners.




-  Parcel in census tract with many new building permits
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway + with more than 50% available development rights
-  Parcel meets all built environment criteria + in census tract with many housing-cost-burdened renters or homeowners.

TASC in Action

Brooklyn Community District 6

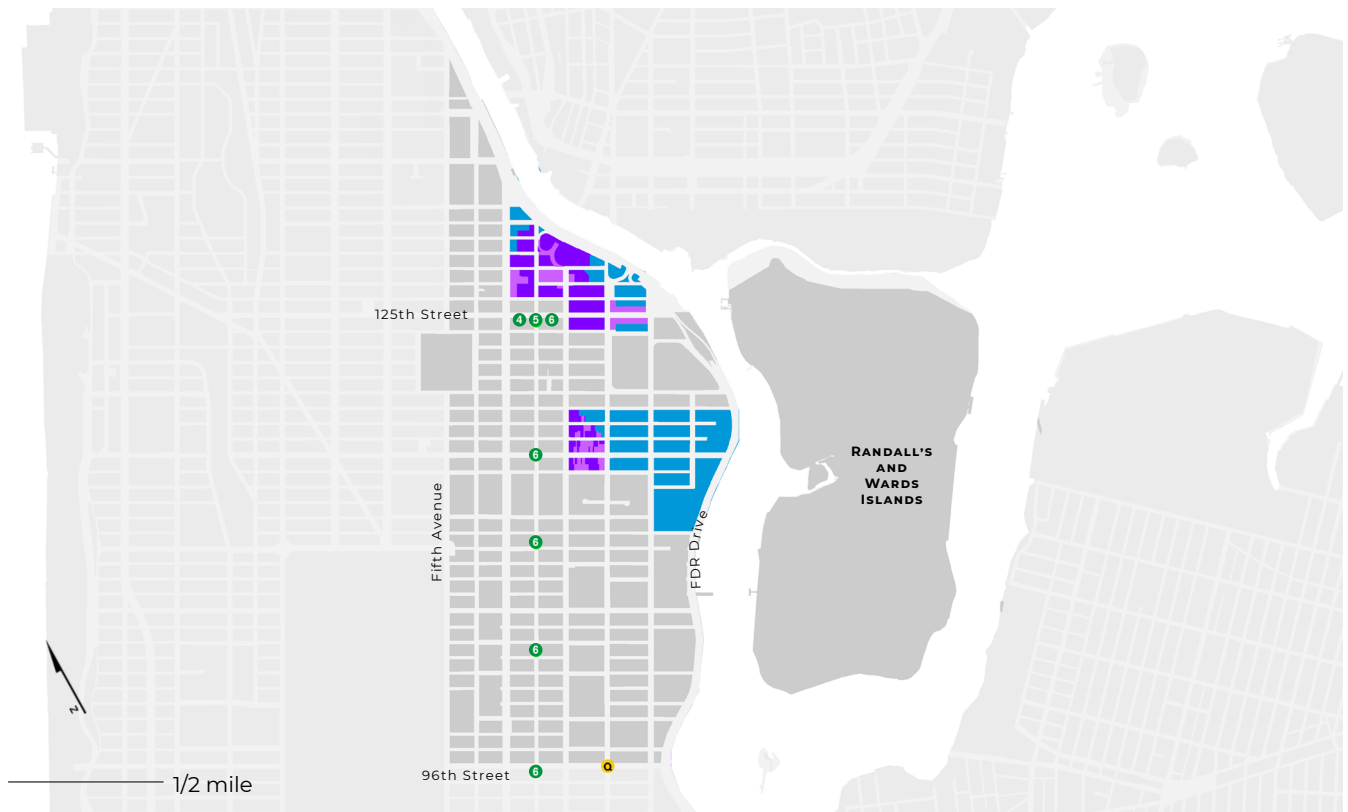


In Brooklyn Community District 6, 225 lots, or 1.6 percent of total lots in the community district, show high development potential. These lots are fairly dispersed throughout Carroll Gardens to the west of the Gowanus Canal, with a cluster located near the Prospect Avenue subway station (R train) in the southeast. Many of these lots are smaller than potentially developable lots in other community districts and would be more likely to see infill development. None of the lots with high development potential are located in census tracts with high housing-cost-burdened households.




-  Parcel in census tract with many new building permits
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway + with more than 50% available development rights

TASC in Action

Manhattan Community District 11

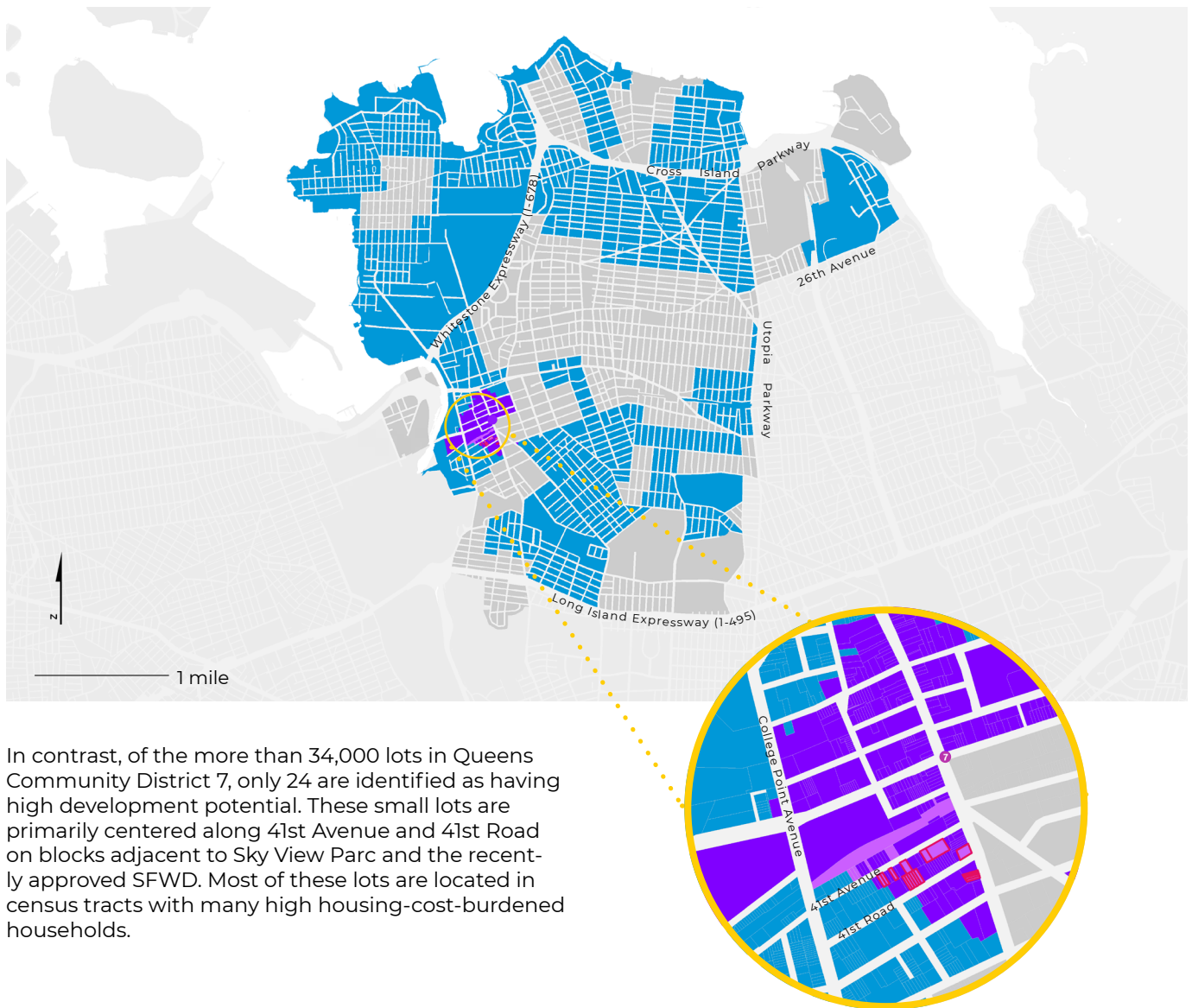


In Manhattan Community District 11, the census tracts with the highest frequency of new building permits are located near the Harlem River waterfront. Identifying lots within walking distance to a subway line and with more than 50 percent available development rights centers the lots with high development potential within near the 116th Street station (6 train) and the 125th Street (4, 5, and 6 trains) and Metro-North stations. Using this search criteria, 83 lots have high development potential. As in Brooklyn Community District 6, none of the lots with the highest development potential are located in high housing-cost-burdened census tracts.

-  Parcel in census tract with many new building permits
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway + with more than 50% available development rights

TASC in Action

Queens Community District 7

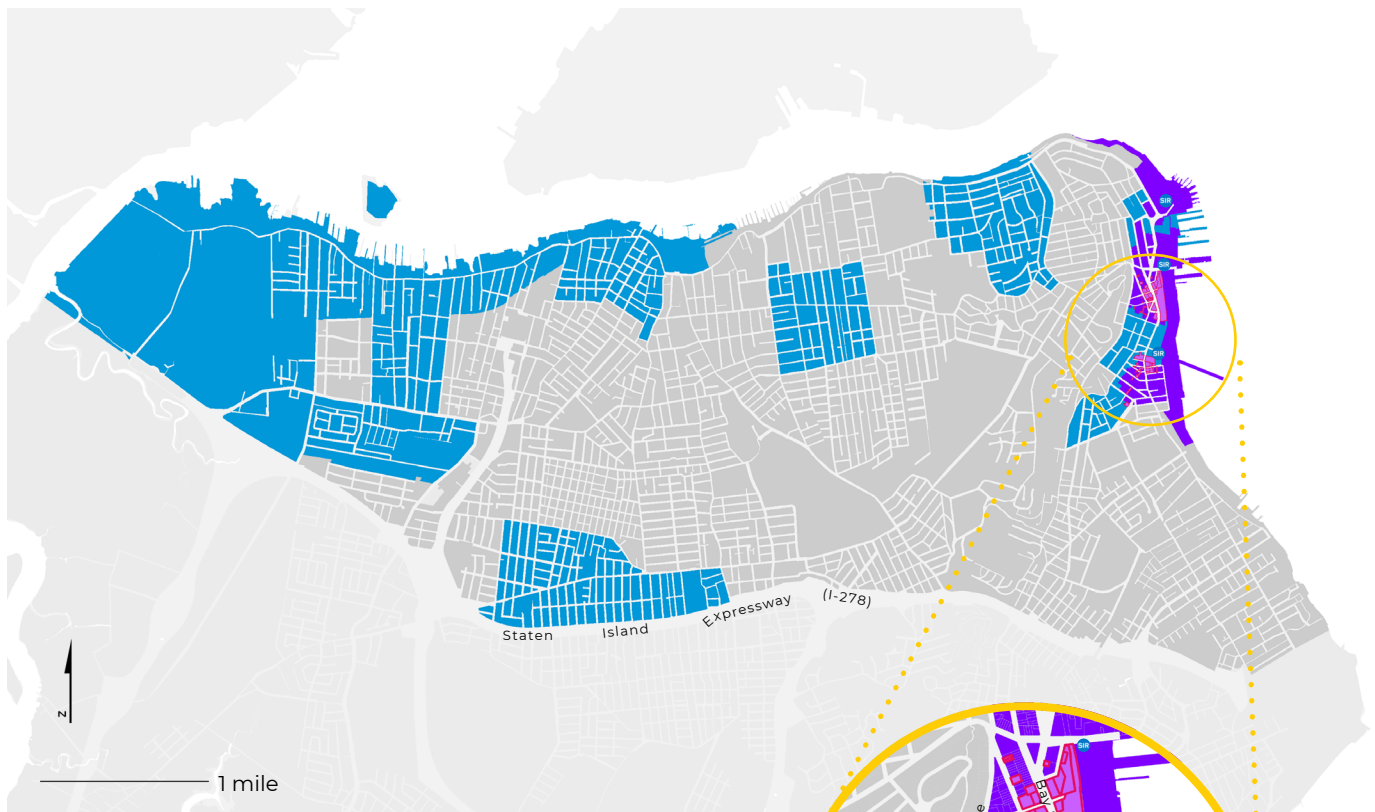


In contrast, of the more than 34,000 lots in Queens Community District 7, only 24 are identified as having high development potential. These small lots are primarily centered along 41st Avenue and 41st Road on blocks adjacent to Sky View Parc and the recently approved SFWD. Most of these lots are located in census tracts with many high housing-cost-burdened households.

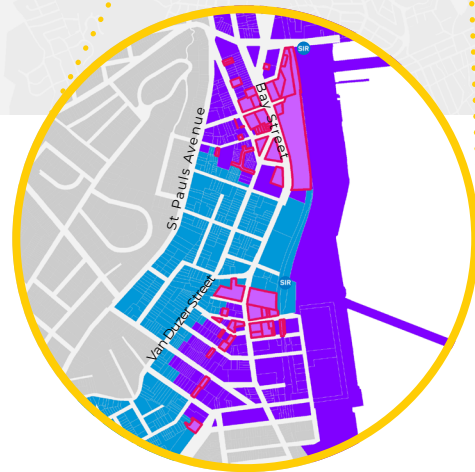
- Parcel in census tract with many new building permits
- Parcel in census tract with many new building permits + within a five-minute walk to the subway
- Parcel in census tract with many new building permits + within a five-minute walk to the subway + with more than 50% available development rights
- Parcel meets all built environment criteria + in census tract with many housing-cost-burdened renters or homeowners.





TASC in Action

Staten Island Community District 1



In Staten Island Community District 1, many of the census tracts showing the highest frequency of new building permits are located along or near the waterfront. If a user narrows the analysis to areas within walking distance to the subway (Staten Island Railway), the tool highlights areas in the St. George, Tompkinsville, and Stapleton Heights neighborhoods. After adding a layer for lots with more than 50 percent available development rights, 54 lots are identified as having high development potential, centered around the Tompkinsville and Stapleton stations. All lots are located in high housing-cost-burdened census tracts.



-  Parcel in census tract with many new building permits
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway
-  Parcel in census tract with many new building permits + within a five-minute walk to the subway + with more than 50% available development rights
-  Parcel meets all built environment criteria + in census tract with many housing-cost-burdened renters or homeowners.

Building the Mapping Tool

As a mapping tool, TASC incorporates an array of built environment and social factors at the city tax lot level that can be used to understand reasons for development. The analysis of five geographies above uses only four of the indicators from TASC's extensive index. The mapping tool can also be used to identify and compare citywide and localized trends, categorize neighborhood typologies, support community-based planning, and evaluate development conditions for lots, neighborhoods, boroughs, and the city as a whole.

TASC reflects risks at the lot level to align with CEQR soft site reporting and to allow communities to draw their own variable geographies for rezoning or neighborhood analysis. Typical public-facing vulnerability maps are released at the community district level. However, with TASC, communities can visualize more detailed data without advanced geospatial analysis tools. To achieve this, TASC uses the largest-scale geospatial data available for each indicator, but not all of these datasets use the same areal units or scale. Because of this, it is impossible to disaggregate census data to the lot level or to link all datasets to the same spatial scale without losing information. Since TASC combines these datasets of various scales and coverage areas, TASC describes the characteristics that are likely to exist at a given lot, rather than the exact characteristics of the lot.⁷

Building the Mapping Tool

Data Sources

The TASC tool is compiled from open data sourced from 15 different local, state, and federal agencies. The Coalition collected 27 datasets to best represent lot-level and neighborhood-level conditions across New York City, from parks and transit entrance points, to census tracts with housing-cost-burdened renters and owners, to areas eligible for local and federal investment incentives. In total, TASC is made up of 45 indicators which package and streamline analysis of development-related data for each of the over 856,000 tax lots in the city (see Appendix B).

Methodology

TASC uses the Department of City Planning's (DCP's) PLUTO dataset, which is composed of 90 fields describing the current zoning, buildings, and regulations affecting each lot in the city, created with data from the DCP, Department of Finance, Landmarks Preservation Commission, and Department of Information Telecommunications & Technology. Using the MapPLUTO dataset, existing indicators such as residential, community facility, commercial, park, public school, and institutional uses; individual or interior landmark status; presence in a historic district; and lot area in square feet were incorporated into TASC's index.

Most supplementary indicators were created from added sources, which required additional calculations. The use of each method was discussed among Coalition members and with peer reviewers to most accurately and precisely define all indicators of development potential and social vulnerability. Drawing from zoning definitions and peer-reviewed suggestions, several indicators were created using MapPLUTO attributes. These include land-improvement ratios, calculated from the assessed land value and assessed total value to indicate lots with underutilized buildings or lots which may be difficult to develop to its maximum allowable potential, as well as lot compactness, which employs a formula typically used to evaluate gerrymandered voting districts to identify highly compact lot shapes.

In addition, TASC uses data from the US Census Bureau's American Community Survey and other federal-level sources to identify social factor analysis. Most of the data for topics on health, income, occupation, race, and English fluency was collected by the US Census and CDC through sampling. Datasets are released at the census tract level to protect the identities of survey respondents. The impacts of the COVID-19 pandemic have re-emphasized the links between physical and social characteristics, particularly housing insecurity.⁹ As a result, indicators for housing-cost-burden and overcrowding were added to the list of indicators collected from the CDC and American Community Survey. In compiling the index, the Coalition linked these datasets to the underlying lots below by common census tract codes to create

all social vulnerability indicators.

Combining other datasets from city, state, and federal resources was primarily conducted through spatial joins, meaning that the data were ascribed to lots based on a common location. Most datasets completely overlapped lot lines and required no further processing, while others required additional research and consultation with peer reviewers. For example, lots which were only partially rezoned were marked as completely rezoned, since a new building constructed on the lot would have to conform to each zoning district. Some indicators, such as number of rent-stabilized units and transfers of development rights (TDRs), are not publicly recorded in machine readable formats. To create an indicator showing TDR potential, special TDR districts were used to show all lots which may be involved in a TDR process, regardless of their presence in sending or receiving subdistricts. To estimate rent-stabilized units, the Coalition used data from Whither Rent Regulation instead of the current CEQR estimation method to include new buildings with rent-stabilization tax incentives.⁹ Finally, the methods for creating the Opportunity Zone indicator were finalized in December 2019 following the release of the Final Regulations by the US Treasury Department and Internal Revenue Service.¹⁰ The clarified regulations state that lots split between qualified Opportunity Zone census tracts and non-applicable census tracts must have either a significant amount of square footage or significant amount of unadjusted property cost within the Opportunity Zone census tract. Since it is not possible to determine the unadjusted cost of a portion of a lot through desktop analysis, split lots were recorded separately.

Other major geospatial analysis included creating walksheds, or areas within walking distance to a destination such as subway entrances, park entrances, ferry terminals, and Select Bus Service (SBS) stops. Using the *Federal Highway Administration's Pedestrian Safety Guide for Transit Agencies*, a five-minute walk is measured as a quarter-mile distance; this metric does not reflect the travel speeds of children, seniors, or people with disabilities. In addition, because the city's sidewalk dataset does not include crosswalks, the centerlines of pedestrian-accessible streets were used as a proxy. Each network analysis used entrance points or stop points to increase precision of the estimate. Each lot was scored by the minimum distance to reach a given destination, within a five-minute, ten-minute, fifteen-minute, twenty-minute, and more than twenty-minute walk.

Some indicators, such as landmark designations or land uses, can stand alone, while others, like new building permit frequency, need to be contextualized to add meaning. The characteristics of these indicators were compared to their citywide averages, which were then flagged if the counts were in the highest quartile (over 75 percent) or lowest quartile (under 25 percent) depending on the indicator.

Next Steps for TASC

In 2021, the Coalition is well-positioned to continue to build momentum, help reform CEQR, and inform citywide comprehensive planning efforts. MOEC has indicated updates to the *CEQR Technical Manual* are pending for the fall. Citywide elections will bring changes to key City offices including the Mayor, Comptroller, Borough Presidents, and City Council. The Coalition can take advantage of opportunities to push reform with existing elected officials and cultivate relationships with incoming officials and their staff to provide training, briefings, and material support.

By working in partnership with multiple coalitions (including Thriving Communities Coalition, Racial Impact Statement Coalition, and the Housing Data Coalition), the CEQR Reform Coalition can continue to expand the reach of the platform to base-building, technical assistance, and neighborhood advocacy organizations. Each of these groups holds power to push on City Council, the Mayor's Office, and City agencies to incorporate needed reforms.

Next Steps for TASC

Refining an Accessible Advocacy Tool

In the next year, TASC will be further refined into a dynamic web-based mapping tool with an integrated user interface designed to meet the needs of different key users. MAS's Livable Neighborhoods Program (LNP) will support the development of an advocacy tool by building capacity and soliciting feedback to ensure that it is accessible to a wide audience.

Through a user-focused design process, LNP will train New Yorkers to engage in public review processes and provide the opportunity to host focus groups to tailor the tool to different community-identified research, design, and advocacy applications. Care will be taken to balance the analytical power and complexity of the tool with an interface that feels empowering and easy to navigate.

To support a successful rollout of the tool, training materials (including FAQs, methodology summaries, and glossaries) will be embedded and available in digital formats. Community partners will expand public use by hosting training and information sessions.

Building a Predictive Model

The Coalition ultimately seeks to advance TASC from a functional index and mapping tool into a predictive model that would fine-tune development forecasts at the lot level. This shift will be accomplished through an iterative process of spatial statistical analysis methods.

Currently, TASC identifies a wide range of factors that influence development. However, as a predictive tool, TASC will be able to draw from development trends to isolate specific potential development factors and statistical correlations between the built environment, regulatory actions, and social indicators. This approach would bring nuance and greater insight in forecasting development potential and anticipating demographic changes than current CEQR methodology allows. The predictive model will also support the Coalition's CEQR reform advocacy and inform comprehensive planning by improving current CEQR criteria and highlighting key market shifts, trends, and performance indicators.

Overall, as a predictive model, TASC will help define predictor variables, inform development scenarios, and determine specific outcomes with greater reliability.¹¹ With the predictive model, a TASC user will be better able to understand ways in which specific planning indicators combine to increase or decrease the development potential of a certain lot, a given neighborhood, or the city as a whole.



Developing an index

**Refining an accessible
advocacy tool**

**Releasing an interactive
web map**

**Developing a
predictive model**

**Refining an accessible
advocacy tool**

**Releasing an interactive
modeling tool**

Endnotes

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- 4 Barry E. Flanagan et al., "A Social Vulnerability Index for Disaster Management," *Journal of Homeland Security and Emergency Management* 8, no. 1 (2011): 1-22, https://www.atsdr.cdc.gov/placeandhealth/svi/img/pdf/Flanagan_2011_SVIforDisasterManagement-508.pdf.
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- 7 This is referred to as the modifiable areal unit problem (MAUP), which concerns both the scale and the grouping of data, and is the result of drawing boundaries to describe continuous conditions on the ground.
- 8 Zef Egan, Zbigniew Grabowski, and Veronica Olivotto, "COVID-19 and Housing Precarity? From Systemic Failure Towards a Just Recovery," *Resilience*, May 2020, Medium, <https://medium.com/resilience/covid-19-and-housing-precarity-from-systemic-failure-towards-a-just-recovery-4083b48535a5>.
- 9 John Krauss, "Whither Rent Regulation," data.BetaNYC Showcase, July 2015, <https://data.beta.nyc/showcase/whither-rent-regulation>.
- 10 Investing in Qualified Opportunity Funds, 85 Fed. Reg. 1866 (January 13, 2020), <https://www.federalregister.gov/d/2019-27846/p-514>.
- 11 Correlations between variables can be identified through coefficient of determination analysis, defined as the proportion of the variance in the dependent variable that is predictable from the independent variable(s). This can be used in the context of statistical models to either predict future outcomes or test hypotheses, on the basis of other related information.

Appendix A:

Inventory of Digital Mapping Tools

Appendix A: Inventory of Digital Mapping Tools

The development of new web-based data platforms, maps, and indexes continue to increase the transparency and accessibility of critical information to the general public, issue-based advocates, and researchers.

Survey of Tools

New York City Planning Labs Tools: Expanding Reach of Publicly Available Land Use Data

[Automated City Register Information System \(ACRIS\)](#)

The Automated City Register Information System (ACRIS) allows users to search property records and view relevant documents images for tax lots within Manhattan, Queens, Bronx, and Brooklyn from 1966 to the present.

[CEQR App](#)

CEQR App, currently in beta, aims to reduce the time involved in conducting and reviewing analysis for environmental review by combining City, state, and federal datasets into one platform and allow for automation of analysis processes.

[Zoning and Land Use Map \(ZoLa\)](#)

ZoLa provides a simple way to research zoning regulations. Find the zoning for a property, discover new proposals for a neighborhood, and learn where City Planning initiatives are happening throughout the city.

[Zoning Application Portal \(ZAP\)](#)

ZAP offers easy searches for land use applications, including pending applications, with a variety of useful search filters. It includes over 30,000 projects, dating back to 1970 when DCP began digitizing project application data.

Neighborhood Data Portals: Centralizing Access to Key Community Indicators

[Pratt Center for Community Development's Neighborhood Data Portal \(NDP\)](#)

The Neighborhood Data Portal (NDP) is a free online mapping application that integrates nearly three dozen vital datasets to assess New York City's communities by the numbers. Users can access demographic, land use, and other data at the neighborhood level to create customized maps.

[NYU Furman Center's Core Data](#)

The interactive data and mapping tool standardizes over 20 datasets from a variety of city, state, and federal sources to present over 100 indicators on New York City's housing and neighborhoods. It includes both property-level housing subsidy information, as well as neighborhood-level information on housing markets, home affordability, land use, demographics, and neighborhood conditions.

Storytelling and Advocacy: Leveraging Data into Action

[Regional Plan Association, Pushed Out: Housing Displacement in an Unaffordable Region.](#)

[Report and Displacement Index](#)

RPA conducted a detailed analysis of the metropolitan region to determine which neighborhoods that are likely to experience gentrification and displacement pressures in the future and how those places overlap with vulnerable communities.

[The Municipal Art Society of New York's Accidental Skyline: Air Rights Map](#)

The interactive Air Rights Map shows where new development could occur and discloses how many unused development rights might be available on a given property. This map was produced in support of [Accidental Skyline](#), a report by The Municipal Art Society of New York that addresses the issues surrounding out-of-scale buildings citywide, as well as zoning and environmental regulations.

[Association of Neighborhood and Housing Development's Displacement Alert Project Portal \(DAP\)](#)

The Displacement Alert Project (DAP) Portal is a dynamic and powerful data tool that helps users understand a New York City neighborhood's housing landscape, where tenants and homeowners are at heightened risk of displacement, and what is happening in buildings where tenants or homeowners are having problems.

Appendix A: Inventory of Digital Mapping Tools

Health Risk Assessments: Visualizing Health Outcomes & Conditions

New York City Department of Health and Mental Hygiene's [New York City Neighborhood Health Atlas](#)

The New York City Neighborhood Health Atlas provides data on about 100 measures related to health and social factors for 188 neighborhoods. The data provide a comprehensive and granular view of neighborhood health and its potential determinants, serving as a useful resource for the promotion of health and health equity in our neighborhoods.

Centers for Disease Control and Prevention's [Social Vulnerability Index](#)

Social vulnerability refers to the resilience of communities when confronted by external stresses on human health, such as natural or human-caused disasters, or disease outbreaks. The Social Vulnerability Index uses U.S. Census variables at census tract level to help local officials identify communities that may need support in preparing for hazards or recovering from disaster.

Soft-Site Analysis: Identifying Areas of Change

City of Portland's [Buildable Lands Inventory](#)

The Buildable Lands Inventory (BLI) is an assessment of the capacity of land within the city of Portland, Oregon to accommodate forecasted housing and employment needs through the year 2035.

California Department of Housing and Community Development's [Site Inventory and Analysis](#)

The site inventory and analysis methodology identifies specific sites that are suitable for residential development in order to compare the local government's regional housing needs allocation (RHNA) with its residential development capacity. A thorough sites inventory and analysis assists localities in determining whether planning actions must be adopted to "make sites available" with appropriate zoning, development standards, and infrastructure capacity to accommodate the new construction needed.

Scenario Mapping: Evaluating Potential Impacts and Tradeoffs

[Urban Footprint](#)

As a licensed scenario mapping tool, UrbanFootprint helps planners and companies to quickly evaluate existing conditions, explore urban markets, analyze the impacts of future scenarios, and support transparent communication with easy-to-understand maps and reports.

[Envision Tomorrow](#)

Envision Tomorrow is an open-access scenario planning package that allows users to analyze how their community's current growth pattern and future decisions impacting growth will affect a range of measures such as public health, fiscal resiliency, and environmental sustainability.

Appendix A: Inventory of Digital Mapping Tools

Key Takeaways

TASC intends to incorporate the lessons learned from the survey of digital tools for use in environmental and land use review, community-based planning, and comprehensive planning efforts. TASC should fit into the local landscape of critical tools and take advantage of exceptional examples from across the country.

Build a Functional Index

- Target multiple geographies (including the tax lot, neighborhood, census tract, community district, electoral geographies, borough, and citywide)
- Run queries to isolate indicator overlap

Align User Functionality with Community-Based Advocacy

- Prioritize user testing and training
- Provide context for information to democratize planning ideas
 - Why are these indicators included?
 - What do these indicators suggest when combined?

Facilitate Complex Analysis for All Users

- Allow for data to be exported for additional analysis
- Provide flexibility for data thresholds for multiple research goals
- Create alternative scenarios and synthesize key analysis and attributes

Refine the Tool Through Periodic Updates

- Release new functions over time
- Invest in back-end updates for efficiency
- Advocate for additional data to be made publicly available

Appendix B:

TASC Index

	Indicator	Rationale	Current Role in CEQR	Source	Methods
REGULATORY	Available Development Rights	Parcels that are not built to their full development potential can be maximized.	Expressly included in CEQR: “buildings built to substantially less than the maximum allowable FAR under the existing zoning are considered ‘soft’ enough such that there would likely be sufficient incentive to develop in the future.” “Substantially less” is defined differently by project, but most set the threshold at 50% unused or available FAR.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, subtract the built FAR from the maximum available FAR permissible under zoning. Additional flag for those with more than 50% FAR available.
	Non-Contextual Zoning	Parcels in non-contextual zoning districts generally allow buildings with more floor area.	Not considered in CEQR soft site analysis.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select non-contextual zoning, all zoning other than those that end in A, B, D, or X or those that are R3-1, R4-1, parks, or Battery Park City zones.
	Medium- to High-Density Zoning	Parcels in medium- to high-density zoning districts generally allow buildings with more floor area.	Not considered in CEQR soft site analysis.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels in C (commercial) zones and all parcels in zones R6 and above.
	Residential Use	Parcels with heavy manufacturing uses may be harder to convert to other uses, while parcels with mixed uses may be easier to find tenants or owners.	Not considered in CEQR soft site analysis.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels in R1 through R10 districts, C1 through C6 districts, and all MX districts (i.e. M1-4/R6B).
	Community Facility Use	Parcels with heavy manufacturing uses may be harder to convert to other uses, while parcels with mixed uses may be easier to find tenants or owners.	Not considered in CEQR soft site analysis.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels in R1 through R10 districts, C1 through C6 districts, and all M1 districts.
	Commercial Use	Parcels with heavy manufacturing uses may be harder to convert to other uses, while parcels with mixed uses may be easier to find tenants or owners.	Not considered in CEQR soft site analysis.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels in C1 through C8, M1 through M3, and all MX districts.
	Recently Rezoned	Parcels that have been rezoned recently have been redeveloped or have experienced heightened development interest.	CEQR considers recent real estate trends, recent as-of-right development in the area, and government policies as impacting development potential in soft site analysis, but does not specify recently rezoned areas.	NYC Zoning Map Amendments (New York City Department of City Planning)	Select all parcels that intersect areas rezoned during the de Blasio administration (starting January 1, 2014).
	Mandatory Inclusionary Housing (MIH) Areas	Parcels with MIH designations are recently rezoned.	CEQR considers government policies as impacting development potential in soft site analysis, but does not specify MIH/density policies.	Mandatory Inclusionary Housing areas (New York City Department of City Planning)	Select all parcels that intersect MIH boundaries.

	Indicator	Rationale	Current Role in CEQR	Source	Methods
REGULATORY	Opportunity Zones	Parcels in Opportunity Zones are more likely to receive investment than those outside of these areas.	Not considered in CEQR soft site analysis.	2010 Census Tract areas (US Census Bureau, compiled by New York City Department of City Planning), Opportunity Zone designations (US Department of the Treasury, compiled by the Urban Institute).	Spatial join parcels to census tracts with Opportunity Zone (OZ) attribute data (denoted as low-income community (LIC) tracts, non-LIC contiguous tracts, and non-OZ tracts). For parcels located in multiple census tracts, create additional field to denote 'split' status and which types of tracts the parcel is located in; the Treasury Department's square footage and unadjusted cost tests are not feasible in desktop analysis.
	En-Zones	Parcels undergoing remediation are more likely to redevelop, and sites in need of environmental cleanup are less likely to redevelop.	Not expressly considered in CEQR soft site analysis. CEQR does generally consider site-specific issues as affecting development potential.	NYS En-Zone Boundaries (New York Department of Environmental Conservation)	Select all parcels that intersect Environmental Zone (En-Zone) boundaries.
	Brownfield Opportunity Areas (BOAs)	Parcels undergoing remediation are more likely to redevelop, and sites in need of environmental cleanup are less likely to redevelop.	Not expressly considered in CEQR soft site analysis. CEQR does generally consider site-specific issues as affecting development potential.	BOA Designations as Polygons (New York Department of State)	Select all parcels that intersect Brownfield Opportunity Area (BOA) boundaries.
	E-Designations	Parcels undergoing remediation are more likely to redevelop, and sites in need of environmental cleanup are less likely to redevelop.	Not expressly considered in CEQR soft site analysis. CEQR does generally consider site-specific issues as affecting development potential.	(E) Designations (New York City Department of City Planning)	Select all parcels that intersect with E-Designation points.
	Special TDR District	Parcels in TDR districts are more likely to redevelop because they can acquire development rights from non-contiguous under-built parcels to develop greater densities.	Not considered in CEQR soft site analysis.	NYC Special Purpose Districts and NYC Special Purpose Districts With Subdistricts (New York City Department of City Planning)	Select all parcels that intersect with the boundaries of areas where TDR is permissible. These are the East Midtown, Theater, and South Street Seaport Subdistricts, as well as the Coney Island, Hudson River Park, Hudson Yards, Manhattanville, Sheepshead Bay, United Nations, and West Chelsea Districts.
	FEMA Flood Insurance	Parcels located in flood zones may be less likely to redevelop due to high construction and insurance costs.	Not expressly considered in CEQR soft site analysis. CEQR does generally consider site-specific issues as affecting development potential.	2015 Preliminary Flood Insurance Rate Maps (FIRMs) (New York Department of City Planning)	Select all parcels that intersect with the 100-year floodplain (Zone AE).
	Rent-Regulated Units	Buildings with rent-regulated units are typically more difficult to legally demolish.	CEQR expressly excludes "residential buildings with six (6) or more units constructed before 1974. These buildings are likely to be rent-stabilized and difficult to legally demolish due to tenant re-location requirements."	Whither Rent Regulation (John Krauss)	Using the Whither Rent Regulation method, join property tax data to parcels, then find the difference between total residential units and property tax bill reports to identify the parcels with rent-regulated units remaining.

	Indicator	Rationale	Current Role in CEQR	Source	Methods
REGULATORY	Institutional Uses	Parcels with institutional uses may be more difficult to purchase and redevelop due to alienation and decommissioning procedures.	CEQR expressly excludes "long-standing institutional uses with no known development plans."	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels with land use code 8.
	Public School Use	Parcels with schools are more difficult to purchase and redevelop due to alienation and decommissioning procedures.	CEQR expressly excludes "long-standing institutional uses with no known development plans."	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels in zoning district PARK.
	Park Use	Parcels with parks are more difficult to purchase and redevelop due to alienation and decommissioning procedures.	CEQR expressly excludes "long-standing institutional uses with no known development plans."	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels with building class W1 (Public Schools).
	Historic Districts	Parcels in historic districts are more difficult to alter or legally demolish.	CEQR considers "government policies or plans, such as a building on site being identified for a landmark designation, that may affect development potential of a site or sites."	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels with named historic districts.
	Landmarks	Parcels with landmark status are more difficult to alter or legally demolish.	CEQR considers "government policies or plans, such as a building on site being identified for a landmark designation, that may affect development potential of a site or sites."	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels with interior (identified as Interior or Individual and Interior) or exterior (identified as Individual or Individual and Interior) landmarks.
	Non-Landmarked Religious Use	Parcels with non-landmarked religious uses are easier to redevelop.	Not considered in CEQR soft site analysis.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select all parcels with no landmark status and with religious uses (building class begins with M).

	Indicator	Rationale	Current Role in CEQR	Source	Methods
REAL ESTATE	Improvement to Land Value Ratio (ILR)	Parcels with low improvement to land value ratios may be considered underutilized and more likely to redevelop.	Not considered in CEQR soft site analysis.	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, divide the total assessed property value (with improvements) by the assessed land value (without improvements). Flag if the land-improvement ratio is less than or equal to 1.5 to indicate parcels with assessed building values less than half the value of the lot.
	New Building Permits	High concentration of new building permits in a neighborhood may indicate a development trend.	CEQR considers “amount and type of recent as-of-right development,” “recent real estate trends in the area,” and “recent and expected future changes in residential population and employment,” but does not specify new building permits.	DOB Permits Issuance (New York City Department of Buildings)	Isolate new building permits (initial and renewed) and use BBLs to join to MapPLUTO data. Record permit frequency by census tract by spatial join, and compare to the citywide average. Flag if the frequency is higher than the city median (highest quartile).
	Building Age and Alterations	Parcels with recent alterations or development are less likely to be soft sites.	CEQR expressly excludes “full block and newly constructed buildings with utility uses” from analysis, but does not provide a definition of “newly constructed buildings.”	MapPLUTO (New York City Department of City Planning)	Using existing parcel attribute data, select the most recent date from major alteration years or build years. Flag if the year is lower than the city median (lowest quartile) to identify oldest buildings.
	Lot Size	Larger parcels are more likely to redevelop than smaller parcels since they allow for more building design options.	CEQR considers lot size and establishes 5,000 square feet as a threshold for eliminating most small parcels from soft site analysis.	MapPLUTO (New York City Department of City Planning)	Existing field in MapPLUTO.
	Lot Compactness	Parcels with a compact shape are more likely to redevelop than irregularly shaped parcels since they can yield a more predictable shape under zoning.	CEQR considers “site specific conditions that make development difficult,” but does not specify parcel shape (irregular or compact).	MapPLUTO (New York City Department of City Planning)	Using the Polsby-Popper formula, calculate the compactness as the parcel area in square feet divided by the square of the perimeter, then multiply by 4π . Flag the most compact parcels (highest quartile) as compared to the citywide median.

	Indicator	Rationale	Current Role in CEQR	Source	Methods
NEIGHBORHOOD CONDITIONS AND ACCESS	Access to Subway	Parcels located closer to subway stations are more likely to be redeveloped, since potential tenants/ buyers are more willing to pay for units closer to transit.	Not considered in CEQR soft site analysis.	Subway Entrances (Metropolitan Transportation Authority (MTA)), LION Single Line Street Base Map (New York City Department of City Planning)	Isolate pedestrian-accessible roads and paths for use as the walkable network. Using FHA approximations of a five-minute walk as ¼ mile, calculate service areas of ¼ mile, ½ mile, ¾ mile, 1 mile, or beyond 1 mile walk to a subway entrance. Assign values as the minimum travel distance or time from each parcel. Create separate flag for parcels located within a five-minute walk from a subway entrance.
	Access to Parks	Parcels located closer to parks are more likely have units with higher asking rents or prices due to potential views, recreation access, and health benefits.	Not considered in CEQR soft site analysis.	Park Entrances (New York City Department of Parks and Recreation), LION Single Line Street Base Map (New York City Department of City Planning)	Isolate pedestrian-accessible roads and paths for use as the walkable network. Using FHA approximations of a five-minute walk as ¼ mile, calculate service areas of ¼ mile, ½ mile, ¾ mile, 1 mile, or beyond 1 mile walk to a park entrance. Assign values as the minimum travel distance or time from each parcel. Create separate flag for parcels located within a five-minute walk from a park entrance.
	Access to Ferry Landings	Parcels in areas with ferry access provide otherwise transit-poor areas with access to other parts of the city, increasing the development potential of previously unattractive parcels.	Not considered in CEQR soft site analysis.	Ferry Stops (NYC Ferry GTFS), LION Single Line Street Base Map (New York City Department of City Planning)	Isolate pedestrian-accessible roads and paths for use as the walkable network. Using FHA approximations of a five-minute walk as ¼ mile, calculate service areas of ¼ mile, ½ mile, ¾ mile, 1 mile, or beyond 1 mile walk to a ferry terminal. Assign values as the minimum travel distance or time from each parcel. Create separate flag for parcels located within a five-minute walk from a ferry landing.
	Access to Select Bus Service Stops	Parcels in areas with select bus service (SBS) access provide otherwise transit-poor areas with access to other parts of the city, increasing the development potential of previously unattractive parcels.	Not considered in CEQR soft site analysis.	Provided by the Metropolitan Transit Authority (MTA), LION Single Line Street Base Map (New York City Department of City Planning)	Isolate pedestrian-accessible roads and paths for use as the walkable network. Using FHA approximations of a five-minute walk as ¼ mile, calculate service areas of ¼ mile, ½ mile, ¾ mile, 1 mile, or beyond 1 mile walk to a SBS stop. Assign values as the minimum travel distance or time from each parcel. Create separate flag for parcels located within a five-minute walk from a SBS stop.
	FRESH Zone	Parcels in FRESH zones may be more likely to redevelop using the FRESH program for tax or zoning incentives.	Not considered in CEQR soft site analysis.	FRESH Food Stores Zoning Boundaries (New York City Department of City Planning)	Select parcels that intersect FRESH boundaries.

	Indicator	Rationale	Current Role in CEQR	Source	Methods
SOCIOECONOMIC	Households Below Poverty Line	Low-income households are more vulnerable to direct and indirect displacement.	The socioeconomic conditions chapter requires a detailed assessment whenever the average income of displaced population is markedly lower than the average income of the study area population. Even though further consultation with DCP may establish a specific methodology, there is no definition or threshold for “markedly lower income.”	Selected Economic Characteristics American Community Survey 2018, 5 Year Estimates - Table DP03 (US Census Bureau)	Join ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Housing-Cost-Burdened Households (Renter)	Households that are rent-burdened are more vulnerable to direct and indirect displacement.	CEQR socioeconomic conditions assessments consider displacement of the residential population. An indirect displacement analysis is typically conducted when a project may have an impact on renters in units not protected by “rent-stabilization, rent control,” or other rent-restricting government regulations, or whose incomes indicate that they may not support substantial rent increases.	Selected Housing Characteristics American Community Survey 2018, 5 Year Estimates - Table DP04 (US Census Bureau)	Identify households with renters who pay 30% or more of their household income in rent using ACS data. Join the ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Housing-Cost-Burdened Households (Owner)	Households that are housing-cost-burdened are more vulnerable to direct and indirect displacement.	CEQR socioeconomic conditions assessments consider displacement of the residential population, but housing costs for homeowners are not specified (as with renter costs).	Selected Housing Characteristics American Community Survey 2018, 5 Year Estimates - Table DP04 (US Census Bureau)	Identify households with owners who pay 30% or more of their household income in maintenance and mortgage costs using ACS data. Join the ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Share of Labor Force in Service Occupations	As a result of COVID-19, people with service occupations are identified as essential workers. These industries may have higher degrees of flexibility in income and job security. Unemployed individuals are at a higher risk of displacement.	CEQR socioeconomic conditions assessments consider displacement of businesses or industries, which are specified by the lead agency.	Selected Economic Characteristics American Community Survey 2018, 5 Year Estimates - Table DP03 (US Census Bureau)	Identify census tract-level estimates for the civilian employed population 16 years and older in service occupations (healthcare, protective, food preparation and serving, building grounds and maintenance, personal care, and other service occupations). Join the ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).

	Indicator	Rationale	Current Role in CEQR	Source	Methods
SOCIOECONOMIC	Share of Labor Force in Vulnerable Industry	As a result of COVID-19, several industries experienced widespread layoffs. Unemployed individuals are at a higher risk of displacement.	CEQR socioeconomic conditions assessments consider displacement of businesses or industries which are specified by the lead agency.	Selected Economic Characteristics American Community Survey 2018, 5 Year Estimates - Table DP03 (US Census Bureau), COVID-19 Economic Vulnerability Index (Chmura)	Identify census tract-level estimates for labor force employed by COVID-19 vulnerable industries according to economic analysis by Chmura. These industries include arts, entertainment, recreation, accommodation, food services, retail trade, wholesale trade, transportation, and warehousing. Join the ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Households with Persons aged 65 and Older	Seniors are more likely to have fixed incomes, and thus may be more vulnerable to displacement.	CEQR socioeconomic conditions assessments consider residential and population displacement, but seniors are not expressly included in displacement analysis.	Selected Social Characteristics American Community Survey 2018, 5 Year Estimates - Table DP02 (US Census Bureau)	Join ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
HOUSEHOLD COMPOSITION	Overcrowded Households	Potential land use changes can affect more than the expected number of people in areas with many overcrowded households. In addition, people in overcrowded households may live there due to reduced income or housing choice, making them more vulnerable to displacement. Relatedly, COVID-19 cases and deaths are often correlated with areas with many overcrowded households.	CEQR socioeconomic conditions assessments consider residential and population displacement, but overcrowded households are not expressly included in displacement analysis.	Selected Housing Characteristics American Community Survey 2018, 5 Year Estimates - Table DP04 (US Census Bureau)	Define overcrowded households as those with less than one room per resident. Join ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Single-Parent Households	Since single parent households rely on the income of one adult to support two or more people, they can be more vulnerable to displacement.	CEQR socioeconomic conditions assessments consider residential and population displacement, but single-parent households are not expressly included in displacement analysis.	Selected Social Characteristics American Community Survey 2018, 5 Year Estimates - Table DP02 (US Census Bureau)	Join ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).

	Indicator	Rationale	Current Role in CEQR	Source	Methods
MINORITY STATUS/ LANGUAGE	People of Color	Several recent land use actions have spurred calls for CEQR to include a Racial Impact Statement.	Not included in CEQR displacement analysis.	Selected Demographic Characteristics American Community Survey 2018, 5 Year Estimates - Table DP05 (US Census Bureau)	People of Color is defined as the total population minus the white (non-Hispanic) population. Join ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Population With Limited English	People with limited English skills may have more limited choices in housing or job opportunities, and more limited opportunities to engage in planning, compared to fluent English populations.	Not included in CEQR displacement analysis.	Selected Social Characteristics American Community Survey 2018, 5 Year Estimates - Table DP02 (US Census Bureau)	Join ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
HEALTH	Population without Health Insurance	Populations without health insurance are more likely to be low-income. Access to health insurance is also often associated with access to other basic services.	Not included in CEQR displacement analysis, though impacts on low-income households are assessed.	ACS 2018 - 5 Year Estimates Health Insurance Characteristics. Table S2701 (US Census Bureau)	Join ACS table to census tracts, then spatial join to parcel layer using centroids. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Population with Diagnosed Diabetes	Populations with diagnosed diabetes may be more likely to experience other health effects, and areas with high prevalences of chronic illnesses are often co-located with other indicators of social vulnerability.	While CEQR does evaluate public health impacts, the analysis is not connected to socioeconomic conditions or displacement assessments. This does not reflect long-established research on social and environmental conditions as determinants of health.	Centers for Disease Control and Prevention (CDC), Division of Population Health, Epidemiology and Surveillance Branch & Robert Wood Johnson Foundation 500 Cities Project	Multiply the prevalence of diagnosed diabetes per census tract by the total adult population of the census tract from the 2018 ACS 5-year estimates. Join the resulting table to the parcel layer's attribute table. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Population with Asthma	Populations with asthma are at higher risk from potential new air pollution sources or other environmental health risks. Areas with high prevalences of chronic illnesses are often co-located with other indicators of social vulnerability.	While CEQR does evaluate public health impacts, the analysis is not connected to socioeconomic conditions or displacement assessments. This does not reflect long-established research on social and environmental conditions as determinants of health.	Centers for Disease Control and Prevention (CDC), Division of Population Health, Epidemiology and Surveillance Branch & Robert Wood Johnson Foundation 500 Cities Project	Multiply the prevalence of asthma per census tract by the total adult population of the census tract from the 2018 ACS 5-year estimates. Join the resulting table to the parcel layer's attribute table. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).
	Population with Pulmonary Disease	Populations with pulmonary disease are at higher risk from potential new air pollution sources or other environmental health risks. Areas with high prevalences of chronic illnesses are often co-located with other indicators of social vulnerability.	While CEQR does evaluate public health impacts, the analysis is not connected to socioeconomic conditions or displacement assessments. This does not reflect long-established research on social and environmental conditions as determinants of health.	Centers for Disease Control and Prevention (CDC), Division of Population Health, Epidemiology and Surveillance Branch & Robert Wood Johnson Foundation 500 Cities Project	Multiply the prevalence of pulmonary disease per census tract by the total adult population of the census tract from the 2018 ACS 5-year estimates. Join the resulting table to the parcel layer's attribute table. Flag parcels in census tracts with estimates much higher than the city median (highest quartile).

Project Team



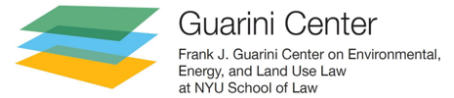
For over 125 years, the Municipal Art Society of New York (MAS) has worked to educate and inspire New Yorkers to engage in the betterment of our city. As a non-profit advocacy organization, MAS mobilizes diverse allies to focus on issues that affect our city from sidewalk to skyline. Through three core campaign areas, MAS protects New York's legacy spaces, encourages thoughtful planning and urban design, and fosters inclusive neighborhoods across the five boroughs.

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Regional Plan Association is an independent, not-for-profit civic organization that develops and promotes ideas to improve the economic health, environmental resiliency and quality of life of the New York metropolitan area. RPA conducts research on transportation, land use, housing, good governance and the environment. RPA advises cities, communities and public agencies. And RPA advocates for change that will contribute to the prosperity of all residents of the region.

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The Frank J. Guarini Center on Environmental, Energy, and Land Use Law at New York University School of Law focuses on environmental and energy challenges that range from global climate change to local energy policy. The Center's work is rooted in a belief that with appropriate market-oriented strategies, regulatory policies can simultaneously achieve environmental and economic objectives. The Center endeavors to advance such strategies. Specifically, through policy-relevant research and multi-stakeholder dialogues with professionals in government, business, law, and the NGO community, the Center identifies legal and policy solutions for tackling environmental and energy challenges.

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