

p⁴ Performance Measures

A Project of the Pittsburgh p4 Initiative

October 2016



City of
Pittsburgh
“America’s
Most Livable
City”

Office of Mayor
William Peduto

Friends,

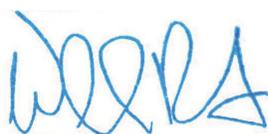
Since taking office in January of 2014, we have seen an incredible level of interest from new developers seeking to come to our city and from those who have been working here for years. We’re seeing new housing, commercial developments, and office spaces going up in the Golden Triangle and in neighborhoods to the North, South, East, and West. With all of the good that comes from this development boom we’re also seeing some real challenges that we must rise to the occasion to meet: our low and moderate income residents are facing housing pressure, some of our small businesses are struggling to keep up with rents, and some neighborhoods that are starting to feel out of reach to large parts of our population.

We are poised for growth but cannot succeed unless we have a place for everyone. That’s one of the reasons why we created the p4 initiative – to ensure that this new growth benefits **people**, enhances a sense of **place**, contributes to a healthier **planet**, and achieves the highest levels of financial and social **performance**. Through this lens, one year ago we convened the p4 Performance Measures Committee and challenged them to create a transparent, quantifiable system of metrics that would inform and improve public investments in development projects in the City of Pittsburgh. The Committee, in consultation with over 100 experts and community leaders, prioritized and framed twelve focus areas (Measures) that can be directly addressed – and improved – by development decisions. Each Measure includes a system of metrics to guide and evaluate public, private, and non-profit investment and align the priorities of development with the priorities of our community in support of **people, place, planet, and performance**. The widespread and common use of these Measures by the City of Pittsburgh and our partners will help shape a future for our city that is sustainable, innovative, and inclusive.

The successful use of the Measures is dependent on solid and efficient review, approval, and accountability systems which I am committed to improving or establishing, where needed, as we work to implement this new approach for evaluating projects for public investment.

I am grateful to everyone who participated in the development of the p4 Performance Measures. The Measures will help us reach higher to achieve maximum returns from every public dollar invested in development so we can build a city that works for all of our residents; because if it’s not for all, it’s not for us.

Sincerely,



William Peduto

Mayor, City of Pittsburgh



Acknowledgements

The **p4 Performance Measures Project** is extremely grateful to the over 100 individuals that were directly engaged in the development of the p4 Performance Measures (“the Measures”). Some participants provided direct support to the project through their technical expertise on the Measure writing teams, while others participated through focus group meetings or technical calls to share their thoughts and expertise. The following summarizes the organizational structure, the various groups, and the individuals that contributed to this project. All chairs and team leads are denoted with an asterisk (*).

p4 PERFORMANCE MEASURES COMMITTEE

The p4 Performance Measures Committee (“the PMC”) is an advisory committee that was formed by the Mayor’s Office and The Heinz Endowments to help guide the development of the Measures. The PMC reflects a diverse group of persons from private, public, and non-government sectors who have direct experience working on projects and with programs across Pittsburgh. The PMC met in-person seven times from January through September 2016. Appendix A provides a more complete summary of the meetings that were held and purpose of each, and the overall process. All PMC members were vital to the project, serving in both an advisory capacity and directly contributing to the development of the Measures.

The PMC

Kevin Acklin* City of Pittsburgh
Andrew McElwaine* The Heinz Endowments
Malik Bankston Kingsley Association
Marteen Garay Urban Innovation 21
Ray Gastil Department of City Planning
Presley Gillespie Neighborhood Allies
Court Gould Sustainable Pittsburgh
Robert Gradeck University of Pittsburgh
Steven Guy Oxford Development Group
Debra Lam City of Pittsburgh
Majestic Lane City of Pittsburgh *formerly of the Pittsburgh Community Reinvestment Group*
Mark Minnerly Mosites
Christine Mondor EvolveEA Architects
Ivette Mongalo-Winston Mongalo-Winston Consulting
Rich Overmoyer Fourth Economy
Aurora Sharrard Green Building Alliance
Lou Stempkowski PNC Bank
Craig Stevenson James Construction
Sam Williamson SEIU 32BJ

METRICS WORKING GROUP

Formed as a subset of the PMC, the Metrics Working Group (“the MWG”) provided deeper technical support to the development of the Measures. Many MWG members were also PMC members and Technical Team leads, facilitating direct linkages between the technical development of the Measures and the advisory role of the PMC.

TECHNICAL TEAMS

The 12 Measures were developed by 12 Measure-specific Technical Teams that provided subject matter expertise and ensured alignment with any current initiatives and programs occurring in the city. It should be noted that some Measures that were highly related had overlapping team members to better integrate their development and strategy.

The Technical Team

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Pete Jefferson ME Group
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Anne Swager AIA Pittsburgh
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Damon Weiss Ethos Collaborative
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Jason Wirick Phipps Conservatory
Bobby Zapalla Thrill Mill
Megan Zeigler Pittsburgh Water & Sewer Authority

DEVELOPER GROUP

The following non-profit and private sector developers participated in one of two “Developer Roundtables.” These Developer Roundtables informed the Measures, and identified needs and potential approaches to implementation of the Measures.

**Developer
Group**

Domenic Dozzi Jendoco Real Estate
Steven Guy* Oxford Development Group
Linda Metropulos ACTION Housing
Mark Minnerly* Mosites
Michael Polite Ralph Falbo, Inc.
Caren Rubinoff The Rubinoff Company
Rick Schwartz Bloomfield Garfield CDC
Ernie Sota Sota Construction
Sonya Tilghman Hazelwood Initiative
Tisha Germany KBK Enterprises
Kendall Pelling ELDI
Damilola Onakomaiya ELDI

STAKEHOLDERS

The Stakeholder group totaled over **140 persons**, and included all PMC and Technical Team members, along with local developers and other interested parties. As the project progressed, the group of stakeholders grew through ongoing informational meetings, participation in webinars, and outreach to other relevant groups such as potential project and community investment organizations, as well as leaders of local community-based initiatives. The PMC and other Stakeholders were provided with presentation materials and encouraged to inform and engage their constituents throughout the process. All stakeholders were invited to comment on the draft document through an on-line survey prior to finalization.

ALIGNMENT WITH EXISTING CITY INITIATIVES

A large part of the project process included actively aligning and integrating the Measures with a number of relevant and complementary work of other initiatives in the city. Key initiatives included efforts by the following groups:

- » Resilient Pittsburgh
- » The Affordable Housing Task Force
- » The Land Recycling Working Group
- » The Market Value Analysis (MVA) Steering Committee
- » The Equitable Development study by Policy Link, Neighborhood Allies, and Urban Innovation 21
- » Pittsburgh Principles for Design & Planning

PROJECT TEAM

The p4 Performance Measures Project Team provided facilitation, technical expertise, communications, and overall project management support to the project. The overall project managed by ReMake Group, LLC.

The Project Team

Rebecca Flora ReMake Group, Project Manager

Matthew Barron The Heinz Endowments

Katrina Flora ReMake Group

Jacob Pawlak Urban Redevelopment Authority

Table of Contents

Purpose & Use	1
p4 Initiative	1
p4 Performance Measures Project	1
Use of the Measures	2
Accountability	7
p4 Performance Measures	11
Community	12
Opportunity	14
Economy	18
Housing	20
Land	23
Public	25
Connect	27
Rainwater	30
Air	33
Energy	37
Innovation	40
Design	42
Appendix A: Process Summary	45
Appendix B: Summary of References & Standards	48
Appendix C: Summary of Definitions	50
Appendix D: Additional Resources & Links	54

Purpose & Use

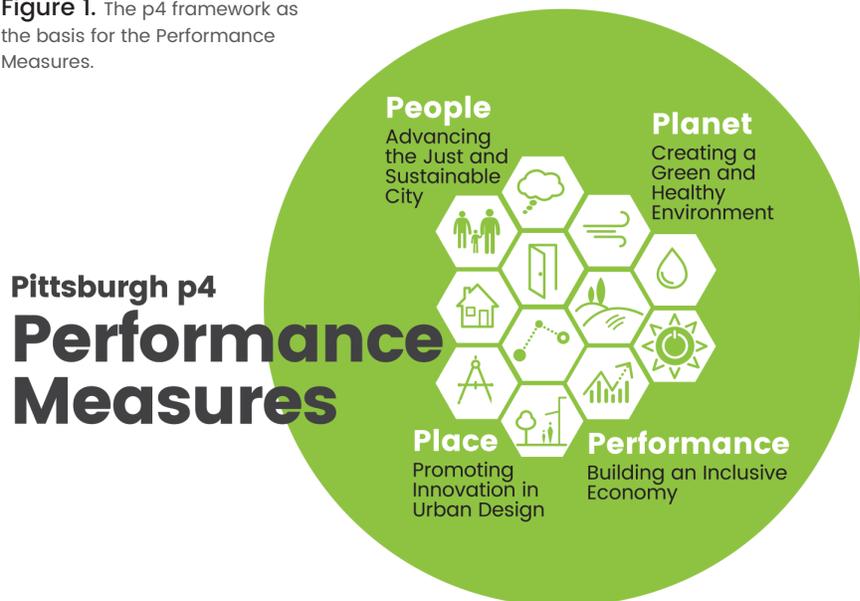
p4 INITIATIVE

The **p4 initiative** is based on a central unifying framework: **People, Planet, Place, and Performance**. Launched in 2015 to create a new sustainable, innovative, and inclusive model for development and design, p4 aims to establish Pittsburgh as a “city of the future.” In the past couple of decades, Pittsburgh has not only recovered, but transformed dramatically since the steel industry’s collapse. This transformation will continue through a major new wave of development, representing approximately 500 acres across the urban core. This development potential and the manner in which it is guided, will influence Pittsburgh’s built and natural environments, and communities for generations to come.

p4 PERFORMANCE MEASURES PROJECT

The **p4 Performance Measures Project** (“the Project”) is one of several p4 projects that advance the p4 initiative’s vision through the p4 framework, refer to **Figure 1**. The Project was launched in November 2015 through the formation of the Performance Measures Committee (“the PMC”) by the Mayor’s Office and The Heinz Endowments to serve as the Project’s advisory group. The directive from Mayor Peduto at the start of the Project was to **“create a quantifiable system of metrics that would inform and improve decision-making on public investments in development projects.”** As an outcome to this directive, the Project was developed around 12 priority focus areas for improvement – the 12 Performance Measures (“the Measures”). Each Measure contains a set of metrics that together, provide a comprehensive evaluation tool for the consistent assessment of real estate development projects in the city of Pittsburgh to advance **sustainable** and **equitable development** practices.

Figure 1. The p4 framework as the basis for the Performance Measures.



Sustainable development.

Sustainable development recognizes that growth must be both inclusive and environmentally sound to reduce poverty and build shared prosperity for today's population and to continue to meet the needs of future generations. It must be efficient with resources and carefully planned to deliver immediate and long-term benefits for people, planet, and prosperity.

source: *The World Bank*

Equitable development.

Equitable development is a positive development strategy that ensures everyone participates in and benefits from the region's economic transformation—especially low-income residents, communities of color, immigrants, and others at risk of being left behind. It requires an intentional focus on eliminating racial inequities and barriers, and making accountable and catalytic investments to assure that lower-wealth residents:

- » live in healthy, safe, opportunity-rich neighborhoods that reflect their culture (and are not displaced from them);
- » connect to economic and ownership opportunities; and
- » have voice and influence in the decisions that shape their neighborhoods.

source: *Equitable Development: The Path to an All-In Pittsburgh.*

The 12 focus areas reflected by the Measures were identified through an extensive prioritization process that included the PMC and multiple sub-team discussions. While there are many pressing issues in the city, these focus areas are intended to encompass those that a real estate development project has the ability to directly influence. The objective, or intent of each Measure is summarized in *Figure 2*.

Key to the development of the Measures was a collaborative, inclusive, and transparent process that leveraged the expertise of over 100 Pittsburghers.

Appendix A provides a complete summary of the key activities that occurred over the one-year timespan of the project. Throughout the process, the Project strived to find a balance between setting a high bar that could inspire innovation and the use of best practices, while also recognizing the current challenges of existing local market conditions and development practice. Consistent and comprehensive use of the Measures throughout the city has the potential to generate lasting benefit to the People and add value to the Places of Pittsburgh, while also contributing to the well-being of the Planet and shifting market Performance expectations.

The Measures reflect a first step toward transformational change in how we plan and develop for the benefit of all. Implementation will require changes in policy, behavior, and practice that occurs over time. As a result, the Measures are not considered to be the final word or a prescriptive solution to the great challenges faced by Pittsburgh and many other urban areas. They are intended to stimulate a dialog around a common framework or language and to guide users toward better and multiple outcomes that can be accounted for through common metrics. The Measures will evolve and be updated at regular intervals as issues shift and practice improves. The collaborative process that created this first edition of the Measures should continue as we all learn through implementation and work together to balance competing objectives.

USE OF THE MEASURES

The Measures were created for use by multiple parties engaged in real estate development in the city of Pittsburgh. Each Measure contains quantifiable metrics or alternative methods for evaluating the degree of project benefit and impact. While the primary purpose of the Measures is to provide an evaluation tool for public investment, they may also be utilized in a variety of manners, depending on the user and their needs, as summarized below.

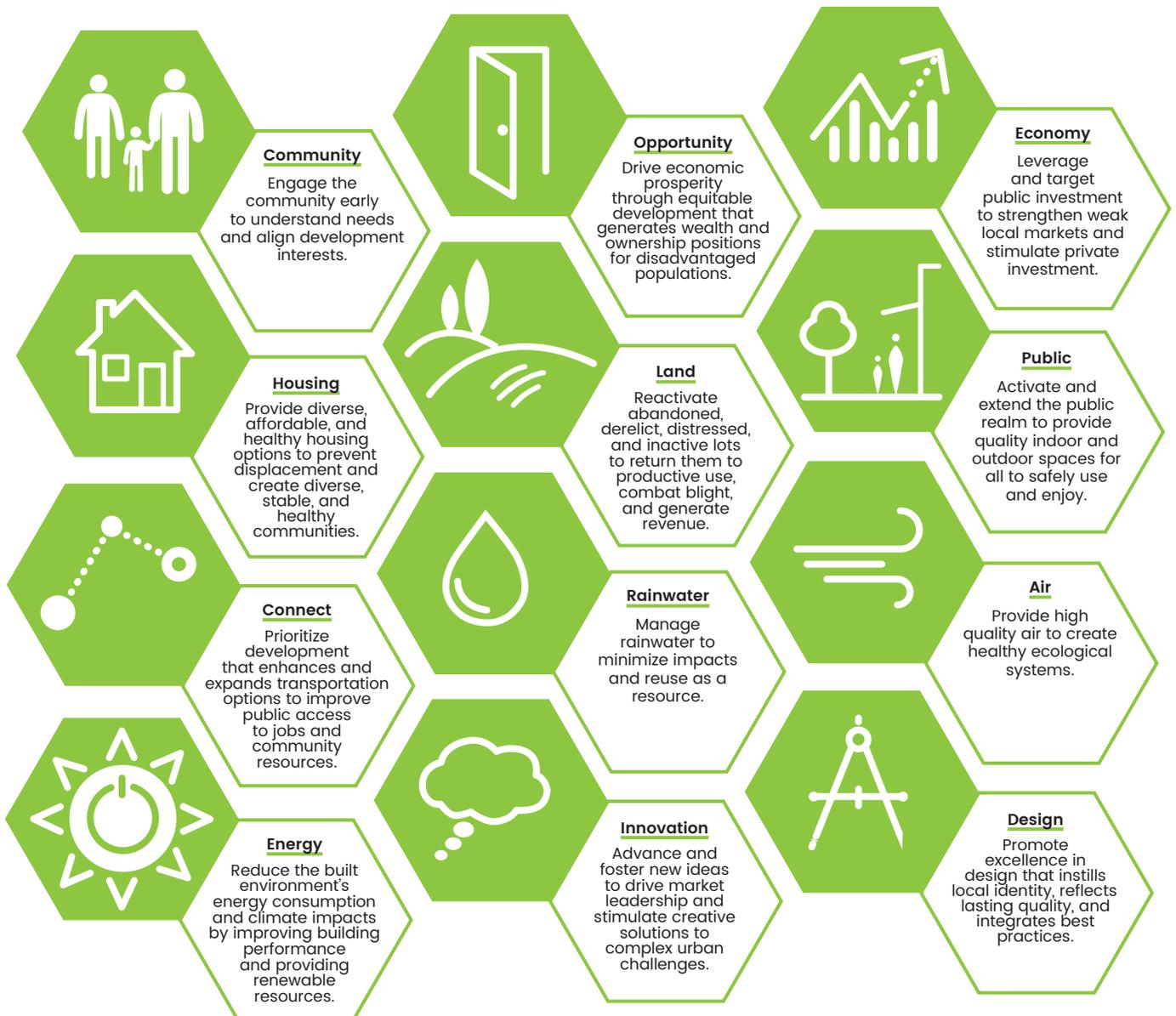
- » **Project Owners/Teams.** Private and non-profit developers, and their project teams, should use the Measures to undertake an early self-assessment to determine whether their specific project will meet targeted performance levels or improve current company practices overall. Project owners may also find the Measures a useful tool for project team selection. Finally, the Measures provide a common language and framework for developers and stakeholders to discuss areas of priority and of highest concern in the community where the project is proposed.
- » **Evaluators:**
 - **Public Agencies.** The Measures should be utilized in Request for Proposals (RFP), funding criteria, and public reviews to create a common method for evaluation that is transparent, equitable, and consistent.
 - **Funding Entities.** Use of the Measures by multiple funding entities and investors would result in a consistent method for the evaluation and prioritization of project investments throughout Pittsburgh.

- **Stakeholders.** Other entities with a vested interest in projects may include: community organizations, business enterprises, and other public and non-profit agencies. These stakeholders would benefit from a common method for communicating and measuring development impact on neighborhoods and the city overall.

» **Practitioners.** Project teams, investors, and other stakeholders may use the Measures to expand their understanding of the critical issues facing Pittsburgh, and voluntarily include new or enhanced approaches in their practice and projects.

It should also be noted that not all Measures are pertinent to every stage of a project (i.e. pre-development, design, construction, and post-construction). For example, while the Innovation Measure is relevant throughout the project stages, the Economy Measure is primarily pertinent during the pre-development and design stages.

Figure 2. The 12 p4 Performance Measures, and their intents.



Measure Components

Each Measure is composed of several components designed to inform users about the purpose and benefit of each Measure, and to provide specific direction on how to address the metrics of each Measure. The following provides a brief summary of these components.

- » **Intent.** The primary objective of the Measure.
- » **p4 Benefits.** Summary of why the Measure is important and how it contributes to p4.
- » **Metrics.** The specific actions that are expected to be taken by the project team. Individual Measures often begin with a base requirement, or adherence to an existing standard, that must be met before achieving points toward a score for the project. Metrics within each Measure either follow an assignment of points for achievement of each quantifiable action; or, identify where the previous action should incrementally build on the next. Additionally, some Measures also have Alternative Compliance Paths for meeting the intent in instances where the site or project limitations preclude a direct response within the boundaries or scope of the project. Finally, a few Measures contain more qualitative methods for measurement due to the nature of the focus area.
- » **Metric Methodology.** A specific formula, approach, or reference is provided to ensure that calculations and methods for assessment are done consistently, where appropriate.
- » **Documentation.** The format for submission of proof that the metrics have been met. Wherever possible, requested documents align with existing formats and data requests from the City, the Urban Redevelopment Authority of Pittsburgh (URA), or other related agency submissions.
- » **Existing References & Standards.** Any existing standard that is referenced in or as a basis for a metric. A summary of all is provided in *Appendix B*.
- » **Example Strategies.** Within the local context, strategy examples or existing projects (when local or regional examples are relevant) are provided for further guidance as an example only, not necessarily absolute duplication, as all projects have different context. These examples are expected to grow as projects use the measures and more examples are available that are easily replicable by others.
- » **Definitions.** Detailed description of any technical words that may require further explanation. A summary of definitions is also provided in *Appendix C*.

Scoring

The Measures employ sets of metrics to create a scoring system that assigns points based on level of complexity and/or priority. For some Measures, achieving a high score and meeting most or all of the assigned metrics is a highly aspirational goal, intended to pull the market higher over time to achieve bigger and multiple outcomes. Whereas some of the metrics are designed as a beginner's step, just above what is already required through code or other regulatory mechanisms. The following describes the approach to each aspect of the scoring system.

- » **Metrics.** Each Measure is allocated ten points. The point distribution across metrics within each Measure is based on recommendations collaboratively developed by the Technical Teams. In some cases, the point allocation is progressive, while in others the criteria in the metrics reflect a set of options to achieving points. The more qualitative metrics provide specific methods for achieving points. The point distribution within each Measure is intended to be flexible, so that the metrics in each Measure can be adapted or reassigned by evaluating entities based on their priorities and context. However, consistency amongst users (or user types) is recommended to create a common city-wide system.
- » **Weighting.** With ten points each, all 12 Measures are given an equal level of importance. While the weighting of each Measure could be customized for specific funding agencies and their priorities (i.e. reassign total points allocated to each Measure), a bonus approach for areas of emphasis or exemplary performance is recommended in those instances to ensure consistency in weighting across the system of users.
- » **Baseline.** None of the Measures are intended to be individually required – they are all optional. Thus, a project may submit an application with multiple Measures not addressed or score low in some Measures. The baseline requirements included in the Measures are expected to be addressed only if that particular Measure is being pursued for points. Users should specify in their guidelines whether a particular base score for each Measure is required individually or overall as part of their evaluation and scoring criteria.

The evaluation process and scoring system are intended to inform, not create an absolute outcome. Many other factors such as underwriting and specific funding source requirements will often determine a final decision about the project. Every effort should be made to streamline systems and standardize submittal documents city-wide to improve efficiency and reduce any additional or undue burden to project owners and the evaluation teams.

Variations in Projects

The Measures have been created to respond to any project type or location. The following provides further guidance on how to utilize the Measures within varying situations.

- » **Location.** Metrics within some Measures utilize a tool – Market Value Analysis (MVA) – that was created for Pittsburgh by The Reinvestment Fund (refer to **Appendix D** for further information). With the inclusion of the MVA, relevant metrics build into the scoring an ability to place higher value on areas of higher need for reinvestment. The use of the MVA tool provides a mechanism for balancing the field to ensure investment is appropriately weighted for areas most in need.
- » **Scale.** Metrics with the Measures can be applied to a project of any scale. However, it is recognized that economies of scale will make some strategies more affordable and easier to implement. Projects should be evaluated individually or against projects of similar scale and type to balance out these differences.
- » **Typology.** As with differences of scale, types of projects will also vary both in terms of land use (i.e. housing versus commercial) and market (i.e. market rate versus subsidized). Therefore, grouping for evaluation and comparison by project typology is also recommended.

Project documentation and review will be facilitated through the use of a consistent definition of the project's geographic boundary included on a Project Map. The Project Map should clearly show the project site area directly controlled by the project owner and the immediately surrounding areas that are referenced in any approach to the Measures. All references to the "project" should include activity within the project boundary that is within direct control of the project owner, or person/entity directly responsible for the project.

Application & Review Process

The Measures serve as a tool to guide, inform, and prioritize decisions for investment in Pittsburgh development projects. General guidance for the application and review process by any potential user should include the following considerations.

- » **Self-Assessment.** Project teams should be encouraged to conduct their own preliminary evaluation to understand the project's strengths and areas in need of improvement, and provide an opportunity to ensure that the appropriate documentation is being generated early.
- » **Consultation.** The reviewing agency staff or consultants retained to support the review process should participate in an early consultation with the project team to understand the project and either validate the self-assessment or jointly seek opportunities for improvement.
- » **Submission of Documentation.** When a project is ready to be evaluated, the project team should submit the required documentation to the assigned reviewer.
- » **Review and Response.** The review process should be documented and reported to the project team. Due to the variety of topics included in the Measures it is expected that a team of reviewers from various internal departments will be utilized, or contracted with, to conduct an objective review that is quantified using the metric- or method-based point system in the Measures.
- » **Advisory Panel Review.** Projects of a certain size or type may require a panel review to provide specialized subject matter expertise and peer discussion of topics that are cross-disciplinary and/or to create an added layer of objectivity in the review process.
- » **Implementation Approach to Agreed-upon Commitments.** Depending on the type of assistance sought and the stage of the project at the time of application, some aspects of the Measures may not be concretely documentable at the time of the project evaluation and therefore, may take the form of commitments on the part of the project owner. In such cases, the reviewing agency should determine the appropriate mechanisms for memorializing commitments in the agreements and contracts established pursuant to approval of funding.
- » **Reporting Requirements.** All projects should embed reporting requirements in the contracting mechanisms to ensure commitments are being met and consequences or rewards are clear.

The URA plans to begin utilizing the Measures in 2017 on a pilot basis. As the first user of the Measures, the URA will integrate the Measures into existing loan and grant products either as a requirement or for guidance, depending on the funding source and any restrictions that may exist regarding use of funds. As such, the URA will develop specific guidelines for applicants through a URA User Guide(s) that will include templates for submittal documents and other materials to ease the implementation and use of the Measures. The process for review and evaluation will be documented and communicated to project teams as part of the URA User Guide(s). The URA process may also provide a model for other organizations or agencies in developing their own user guides for implementing the Measures.

ACCOUNTABILITY

Success of the Measures will depend on the inclusion of methods that hold projects accountable for their commitments and for evaluating system-wide impact and progress. Multiple levels of assessment are summarized below to guide future plans for an expanded use and improved value of the Measures.

Project Accountability

A project that commits to meeting requirements within the Measures should be required to report outcomes at project completion, and be evaluated to ensure commitments have been made, or are in process if there are post-construction activities included. Rewards for meeting all commitments may include lowered interest rates or other performance bonuses. Alternatively, the consequences of not meeting the commitments should be clearly stipulated in the commitment agreements and subsequently enforced.

Investor Portfolio Performance

An assessment of the collective portfolio of a funding entity will provide a holistic understanding of whether the entire investment pool is acting as an equalizer to collectively address all Measures. Since not all projects will address all of the Measures, this holistic assessment will determine if the funding goals are being met as it relates to priority Measures. This type of assessment and reporting should occur on a regular basis every two to three years, and in the case of public agencies, be publically reported.

System-wide Impact

A longer view for system-wide impact and evaluation should also be adopted at various levels to understand the effectiveness of the Measures over time and the overall, accrued improvements within the focus areas. Opportunities to either tie the metrics contained within the Measures to other data initiatives or create new systems to assess impact over time should be established at the following scales.

- » **Neighborhood Impact Analysis.** Public investment is intended to create public benefit that goes beyond the scope of one project and may take time to realize beyond the project construction schedule. A longer, broader view is necessary when assessing a project that is serving as a market stimulator, which will take time to fully realize and effect the neighborhood. Both primary and secondary data collection and evaluation should be considered to assess long-term neighborhood impact in focus areas such as Community, Opportunity, and Housing, among others.

- » **City-wide Improvement.** The Measures are intended to improve conditions in the city through the collective benefit of mindful development projects. A baseline of key data points should be collected and targets should be established for projected achievement in the focus areas on a city-wide basis. Once this is done, progress can be evaluated overtime toward meeting the targets.
- » **Regional Impact Analysis.** Similar to city-wide improvement, the entire region or watershed may benefit from Measures such as: Air, Rainwater, Connect, Economy, and potentially others. The broader impacts in these areas may be assessed through other regional data collection efforts that utilize metrics common with those included within these Measures.
- » **Global.** As a participant in the 2030 Challenge, and Climate Action and Resiliency planning, Pittsburgh is doing its share to address global issues. Several Measures (Connect, Air, and Energy) contribute directly to global concerns. The ability of the Pittsburgh region to become more resilient and adaptive is addressed through the Measures that directly reduce systemic stresses, these include: Community, Opportunity, Housing, and Air. Measures that reduce the impacts of sudden shocks and improve the ability of an impacted community to to recover more quickly include: Energy, Rainwater, Connect, and Public. These are just a few examples of how the Measures respond to broader issues of both local and global concern and will serve to further Pittsburgh's leadership in equitable and sustainable development practices.

p4

Performance Measures

Community	12
Opportunity	14
Economy	18
Housing	20
Land	23
Public	25
Connect	27
Rainwater	30
Air	33
Energy	37
Innovation	40
Design	42

p4 Performance Measures

Figure 3. Overview summary of the p4 Performance Measures, and their metrics.

The p4 Performance Measures are detailed in the following pages to provide guidance for users of all types. **Figure 3** provides a list of all 12 Measures and a high level summary of the various metrics that are included within each Measure.



Community Metrics

- CM.1 Active Outreach & Engagement up to 4 pts
- CM.2 Community Participation & Partnerships up to 6 pts



Opportunity Metrics

- O.1 Construction Opportunities Created up to 4 pts
- O.2 Permanent Opportunities Created up to 6 pts
- O.2A Alternative Compliance: Owner Commitment



Economy Metrics

- EC.1 Non-public Financing up to 7 pts
- EC.2 Housing Age & Condition 1 pt
- EC.3 MVA Cluster 1 pt
- EC.4 Housing Inclusion 1 pt



Housing Metrics

- H.1 Affordable Housing up to 6 pts
- H.2 Housing Unit Type 1 pt
- H.3 Uniform Federal Accessibility Standard 1 pt
- H.4 Equity 1 pt
- H.5 Visitability 1 pt
- H.A Alternative Compliance: Payments-in-Lieu



Land Metrics

- L.1 Overall Distress up to 6 pts
- L.2 Certified Redevelopment Area 1 pt
- L.3 Privately-owned 1 pt
- L.4 Encumbrances 1 pt
- L.5 Blight Elimination 1 pt
- L.A Alternative Compliance: Payments-in-Lieu



Public Metrics

- P.1 Urban Open Space up to 2 pts
- P.2 Active Ground Use 1 pt
- P.3 Ground Floor Transparency up to 2 pts
- P.4 Pedestrian Safety & Accessibility 1 pt
- P.5 Pedestrian Experience 1 pt
- P.6 Public Art up to 3 pts



Connect Metrics

- CT.1 Transit Proximity up to 2 pts
- CT.2 Amenities up to 2 pts
- CT.3 Last Mile up to 2 pts
- CT.4 Key Corridor 1 pt
- CT.5 Bike Share 1 pt
- CT.6 Proximity to Business District 1 pt
- CT.7 Proximity to Car Sharing 1 pt



Rainwater Metrics

- R.1 On-site Retention 1 pt
- R.2 Green Infrastructure up to 4 pts
- R.3 Capture & Reuse up to 3 pts
- R.4 Native Plants 1 pt
- R.5 Monitoring 1 pt
- R.A Alternative Compliance: Payments-in-Lieu



Air Metrics

- A.1 Maximum Pollutant Levels up to 2 pts
- A.2 Filtration up to 2 pts
- A.3 VOC Reduction 1 pt
- A.4 Air Leakage 1 pt
- A.5 Enhanced Commissioning 1 pt
- A.6 Monitoring 1 pt
- A.7 GHG up to 2 pts



Energy Metrics

- EN.1 On-site Energy Consumption up to 6 pts
- EN.2 On-site Renewable Energy Generation up to 4 pts



Innovation Metrics

- I.1 Creativity up to 2 pts
- I.2 Leadership up to 2 pts
- I.3 Transformative Change up to 2 pts
- I.4 Synergistic Connections up to 2 pts
- I.5 Inclusive Innovation up to 2 pts



Design Metrics

- D.1 Context & Cultural Expression up to 5 pts
- D.2 Materials & Details up to 5 pts



Engage the community early to understand needs and align development interests.

Community

p4 BENEFITS

The Community Measure focuses on addressing two of the p4 goals: **People** and **Place**. Early and genuine engagement between the developer and the community ensures that community values, history, context, and needs are considered through all stages of a project. The developer has the responsibility to listen and be open-minded to working with the **community** to address concerns through their approach to the project. The community also has a responsibility to be well-organized and clear in their vision for the community. By working together, the people of the community will directly benefit and the surrounding place will be improved for all.

METRICS

Projects should progressively address each level of community engagement summarized below and document the process and outcomes. The metrics for this Measure reflect incremental steps from the joint development of a **Community Outreach Strategy** (1 point) to a robust partnership with an appropriate community organization(s) (10 points). Scoring will be based on the degree to which each increment is documented to illustrate a serious commitment from the project owner and team to include the voice of the community in the shaping of development plans for their neighborhood.

CM.1 Active Outreach & Engagement up to 4 points

- » Has a Community Outreach Strategy been developed in collaboration with **Recognized Community Organization(s)** (RCO) and/or other established community organizations?
- » Has the project team held open public meetings to seek early input on the design and implementation of the project?
- » Has the project received a formal endorsement from a RCO, and/or interim equivalent that is widely acknowledged by the community?
- » Is the project plan in alignment with an **Accepted Community Plan**, or an interim alternative that has been supported by the community?

CM.2 Community Participation & Partnerships up to 6 points

- » Does the project include employment or business opportunities for members from the local community? Or, has the project received at least 2 points in the Opportunity Measure?
- » Do RCOs and/or other established community organizations have a **community equity investment partnership** position in the project or other mechanism to create shared risk and returns?
- » Is there a long-term community investment plan, or **Community Benefits Agreement** that the project owner has entered into with the community?

Community. A social group of any size whose members reside, and/or conduct business, in a specific geographic area, and often have a common cultural and historical heritage, or other rooted connection to that locality.

Community Outreach Strategy. A clearly documented approach for community outreach with a timeline and responsibilities for how the immediately impacted community will be engaged in a meaningful manner. The Strategy should also include a clearly defined approach for reaching vulnerable populations that difficulty or uncomfortable to participate.

METRIC METHODOLOGY refer to *Documentation* section

Recognized Community Organization (RCO).

The Department of City Planning is developing definitions and standards for Recognized Community Organizations (RCOs) that will be adopted for use within the Measures when complete.

Accepted Community Plan.

A community plan prepared by the RCO and accepted by the Department of City Planning and City Planning Commission.

Community Equity Investment Partnership.

An agreement between the developer and local CBO/CDC that results in a long-term investment in the community for broader social returns.

Community Benefits Agreement (CBA).

A project-specific agreement (contract) between community groups and a real estate developer/project owner that details the project's contributions to the community, and helps ensure community support for the project. CBA's can require that the developer provide specific amenities and/or mitigations to the local community or neighborhood, such as creating opportunities for local workers and communities.

Community Based Organization (CBO).

The acknowledged public or private nonprofit (including a church or religious entity) that is representative of a community or a significant segment of a community, and is engaged in meeting human, educational, environmental, or public safety community needs.

Community Development Corporation (CDC).

The acknowledged nonprofit, community-based organization focused on revitalizing the built environment of the area in which they are located, typically low-income, underserved neighborhoods that have experienced significant disinvestment.

DOCUMENTATION

Provide the materials listed below as they relate to the metrics pursued.

- » Copy of the Community Outreach Strategy developed jointly with the RCO and/or alternative community organization.
- » Letters of Support from the RCO and/or alternative **Community Based Organizations** (CBO).
- » Letter of Support from the steward of the Accepted Community Plan and/or alternative supported plan. The steward may include established CBO, a **Community Development Corporation** (CDC), and/or Department of City Planning (DCP) testament to alignment with an Accepted Community Plan or supported alternative plan.
- » Proof of Partnership Agreement.
- » Proof of Community Benefit Agreement.
- » Provide a narrative summary, tables, and other materials to document the following, as applicable.
 - How the project specifically responds to the Accepted Community Plan, or a supported alternative plan.
 - List of community organizations and leaders that participated.
 - List of community meetings, summary of meetings, methods of notification, and list of attendees.
 - Summary of the process that was undertaken with the community to seek alignment of the project with the Community Plan, or an accepted alternative plan.

EXISTING REFERENCES & STANDARDS refer to *Definitions*

EXAMPLE STRATEGIES

- » Hold interactive public meetings and charrette style workshops early in the design and planning process.
- » Create virtual and physical spaces for community conversation or forums.
- » Identify roles and opportunities for community integration, such as: activated public space, lower-rent space for community organizations, shared space for community meetings and events, shared parking, and/or other facilities.
- » Execute a formal CBA that is collaboratively developed.
- » Create opportunity for community equity investment partnerships or community investment strategies.
- » Target points in the Opportunity Measure that also reflect community benefit.
- » For the community:
 - Work with existing agencies and intermediaries to develop and expand the capacity needed to actively engage in above activities.
 - Collaboratively prepare a community vision and plan prior to development interest.
 - Identify the appropriate community organization that will represent the interests and vision of the community.



Drive economic prosperity through equitable development that generates wealth and ownership positions for disadvantaged populations.

Opportunity

p4 BENEFITS

The Opportunity Measure targets three of the p4 goals: **People, Place, and Performance**. The Measure aims to address the underlying systemic issues required to build long-term opportunity and prosperity for **disadvantaged populations**. The creation of quality full-time jobs for all working age populations serves to stabilize neighborhoods, reduce family stress, increase educational achievement, drive reinvestment in the local economy, and build hope for the future. Developers that recognize these community needs and work to improve the condition of the surrounding area also benefit in multiple ways through expansion of the talent pool, stabilized property values, and enhanced community amenities for use by both their employees and the community.

METRICS

The Opportunity Measure is a hybrid of both quantifiable metrics and qualitative documentation of methods that demonstrate a commitment to participation in the creation of lasting, quality opportunities. Evaluation of the qualitative areas will be based on the degree of documented commitment to the method that is provided, and the overall track record of the project team members and owner that demonstrate proven past results that the project will build on.

Baseline Requirement: all projects should meet existing **Disadvantaged Business Enterprises** (DBE) related standards applicable to the reviewing agency.

0.1 Construction Opportunities Created up to 4 points

The construction opportunity metrics include activities that create jobs, income, and wealth through the advancement of lasting career opportunities, living wages, and entrepreneurial growth that is directed toward disadvantaged populations, small businesses, and **locally manufactured products**. The following methods for construction opportunity are worth up to 4 points collectively, or up to 4 points total for an individual method based on exemplary performance in the specific area.

- a. **Expand access to apprenticeship and other training opportunities.**
How has the project owner and team engaged with and participated in workforce training programs and organizations well in advance of the project start-up? What activities are being undertaken to work with contractors, vendors and other construction related entities that demonstrate a commitment to creating long-term employment opportunities for disadvantaged persons?
- b. **Project Labor Agreement.** Has the project owner/construction manager entered into a labor agreement that makes specific commitments regarding local hiring of disadvantaged persons, apprenticeships and other mechanisms to create career paths in the construction industry.

Disadvantaged Populations.

Disadvantaged populations are persons who are a member of groups that are considered disadvantaged due to racial, gender, age, physical, or other social or economic circumstances that have resulted in disproportionately low incomes and high rates of unemployment.

Disadvantage Business Enterprises.

DBEs are small businesses that are majority owned and controlled by racial, cultural, gender-based, social, or economically disadvantaged individuals that have been certified through a Federal or State program.

Locally Manufactured Products.

Products that are manufactured, crafted, or primarily assembled within the Pittsburgh MSA (Metropolitan Statistical Area) using local labor.

Quality Job. Given that the specific elements of a quality job vary by industry, business size, job function, and employee demographics, a flexible definition of a quality job includes the following key elements.

- » A living wage sufficient to support a decent standard of living or, at minimum, exceeds the median wage offered within the employer's industry.
- » Basic benefits that increase economic security, improve health, and promote work-life balance among workers. These include paid leave, health insurance, and a retirement savings plan.
- » Career-building opportunities that help employees develop the skills, networks, and experiences necessary to launch a career or advance along a career path. These opportunities can include training and mentorship (both formal and informal), and avenues for advancement within the company.
- » Wealth-building opportunities that enable and incentivize an employee to build the assets they need to manage financial emergencies and achieve long-term financial security for themselves and their families.
- » A fair and engaging workplace that balances the priorities and well-being of employees with the needs of the business. Examples include: offering flexible and predictable schedules, treating all staff with respect and dignity, actively soliciting employees' ideas to improve the business, and helping staff understand how their work contributes to the business's success.

- c. **Use of DBE** that are certified by a third party, during the construction process, such as vendors, supply chains, etc. Has the project owner and team gone beyond the existing DBE standards and requirements to expand participation in the project? What additional accommodations have been made to facilitate use of DBE?
- d. **Use of Locally Manufactured Products.** What proportion of specified building products (based on cost of total) are manufactured locally? Additional consideration will be given for local materials that also meet the Air Measure metrics for indoor materials, proportion produced by DBE owned companies, and/or use of green materials certified by a third-party.

O.2 Permanent Opportunities Created up to 6 points

Project owners are well positioned to influence, negotiate, and in some instances, require that quality work conditions exist for users of their property. The owners and tenants of a development project have the ability to generate long-term local benefit through their procurement and hiring practices. These post-construction Opportunity metrics go beyond traditional job creation quantity numbers to add the creation of **Quality Jobs** that will improve the work conditions and lives of all employees. The following methods to advance lasting opportunity may be used in combination, or individually, for a total of six points in this metric.

- a. **DBE Contracts.** Building owner and/or tenant commitment to contract with Disadvantaged Business Enterprises (DBE certified by a third party) for at least 30% of all outsourced services and vendor products required on-site based on contract amounts. One point will be awarded for each increment of 5% above the base threshold for a total of no more than six points total for O.2.
- b. **Quality Jobs.** Building owner and/or tenant commitment to creating Quality Jobs for at least 30% of all non-exempt permanent jobs. One point will be awarded for each increment of 5% above the base threshold for a total of no more than six points for O.2.
- c. **Labor Agreements.** Building owner and/or tenant has entered into at least one Labor Peace Agreement or Collective Bargaining Agreement for service industries operating on the project site. Each additional agreement with an industry type is worth one point, for up to six points total for O.2. The quantity and scale of jobs included within each industry type may influence the number of points received for each agreement type.

O.2A Alternative Compliance: Owner Commitment up to 6 points

This alternative compliance path is for use in situations where the data is not available to the project owner to commit and verify compliance by tenants or future property owners due to privacy or timing issues. Those instances would first be documented by the project owner with clear justification for use of the alternative compliance path. If accepted, the project owner would then be allowed to pursue the alternative compliance path for the Permanent Opportunity (O.2.) metric by meeting the threshold levels for contracts they directly control for the project's building(s)/site operations and maintenance, and their direct occupancy. Consideration for additional points beyond the threshold level of one point for each method achieved will be based on proportion of the owner controlled jobs and/or contracts to the whole of the development.

METRIC METHODOLOGY refer to *Documentation* section

DOCUMENTATION

The Opportunity Measure will include a combination of narrative describing the methods used and quantifiable metrics to document compliance for achieving points under this Measure. Each type of documentation is described below followed by references and definitions that will guide the documentation of this measure.

» Construction Opportunities Created. Jobs

- Provide a narrative that addresses the questions prescribed above in the metrics.
- Provide additional exhibits such as testimonials or commitment letters with training and apprenticeship partners.
- Identify the number of disadvantaged persons hired by group type and their address (if possible).
- Document company-wide commitments demonstrated through past and current project experiences within the past 5 years and provide specific case examples about the approach. Any adjustments made to overcome barriers and ensure success for the new project, along with providing metric-based outcomes, should also be included in the narrative.

» Construction Opportunities Created. Products

- Provide in table form, organized by eligible Construction Specifications Institute (CSI) Division codes, materials being used, name and location of manufacturer, and the cost of that product as a proportion of total eligible product costs.
- Any eligible materials that would also be considered green based on a widely recognized third-party label, or produced by a DBE business should also be noted and documented for additional point consideration.
- The intent of this aspect of Construction Opportunities is to increase use of locally designed, crafted and manufactured materials that support growth of small- to mid-size local building product businesses. Documentation that supports this intent will also be accepted.

» Permanent Opportunities Created. An early commitment letter from the project owner indicating those aspects of this measure to be pursued, targets, and how this commitment will be undertaken should be submitted at the time of application. Additional documentation using table-based forms provided by the reviewing agency and other methods described below will be expected as the project progresses, and before project completion and closeout.

- **DBE Contracts.** Provide documentation that indicates the 30% threshold has been met for all outsourced services and vendor products based on projected contract types and amounts for the first three years of operation.

Community Development Financial Institutions (CDFI).

CDFIs are financial institutions that provide credit and financial service to underserved markets and population, with a commitment to building community wealth and social mobility. Certified by the Community Development Financial Institutions Fund (CDFI Fund) at the U.S. Department of the Treasury, CDFIs may be a community development bank, a community development credit union, a community development loan fund, a community development venture capital fund, a microenterprise development loan fund, or a community development corporation.

- **Quality Jobs.** Using the **Community Development Finance Institutions'** (CDFI) definition and indicators outlined in the Definitions section, provide documentation that indicates the 30% threshold of quality jobs for non-exempt positions has been met. A narrative description of how the chosen minimum of three indicators have been addressed should be included, along with completion of a metrics table provided by the reviewing agency. Indicators chosen may vary between employers.
- **Labor Agreements.** Provide a copy of the pertinent sections of the signed Agreement to document the terms and parties involved.

EXISTING REFERENCES & STANDARDS

- » **Pittsburgh Code of Ordinances.** Relevant City Ordinances and requirements.
 - §161.38 City of Pittsburgh Service Worker Prevailing Wage Ordinance.
 - **URA Minority Business Enterprise** (MBE) current requirements.
- » **Moving Beyond Job Creation: Defining and Measuring the Creation of Quality Jobs.** August 2016. Insight at Pacific Community Ventures. This paper identifies characteristics of a quality job as defined further below, as well as methods for measuring job quality.

EXAMPLE STRATEGIES

- » Engage early with training programs to develop a pipeline of candidates for anticipated jobs.
- » Recruit tenants and users that will commit to pay living wages and provide quality jobs.
- » Sign a Labor Peace Agreement.
- » Provide alternative contracting mechanisms and approaches, such as payment terms and advances to ease participation by DBE.
- » Work with local artisans and product manufacturers to identify opportunities for use of their products in the project.



Economy

Leverage and target public investment to strengthen weak local markets and stimulate private investment.

p4 BENEFITS

The Economy Measure primarily addresses three of the p4 goals: **People, Place,** and **Performance.** The Measure encourages investment in marginal and/or weak market areas to strengthen local economies and neighborhoods, as well as the creation of opportunities for employment, wealth creation, and access to services and amenities. Furthermore, this Measure targets public investment to ensure that the opportunities created by economic growth are available and equitable throughout Pittsburgh.

METRICS

The Economy metrics leans heavily on the Market Value Analysis (MVA) tool to provide both an incremental increase for up to seven points, along with additional points for specific actions related to housing and overlays.

Baseline Requirement: projects must derive a minimum of 60% of their financing from non-public sources.

EC.1 Non-public Financing up to 7 points

Projects meeting or exceeding the minimum **non-public financing** standard will be awarded up to 7 points based on the level of non-public funding secured and the project site's associated Market Value Analysis (MVA) cluster. Points will be awarded as illustrated in *Table 1.*

EC.2 Housing Age and Condition 1 point

Project is located in a census block with a score of 0.75 or greater in the MVA Index of Housing Age and Condition overlay.

Table 1. Point allocation for EC.1 Non-public Financing, based on MVA.

		Share of Total Project Financing from Non-public Sources							
		60 to 64.9%	65 to 69.9%	70 to 74.9%	75 to 79.9%	80 to 84.9%	85 to 89.9%	90 to 94.9%	95 to 99.9%
MVA Cluster	A	1	1	1	1	1	2	3	4
	B	1	1	1	1	2	3	4	5
	C	1	1	1	2	3	4	5	6
	D	1	1	2	3	4	5	6	7
	E	1	1	3	4	5	6	7	7
	F	1	2	4	5	6	7	7	7
	G	3	4	5	6	7	7	7	7
	H	5	6	7	7	7	7	7	7
	I	7	7	7	7	7	7	7	7

Non-public financing. Project financing secured from sources other than **public subsidy**, including but not limited to: private equity, bank loans, venture capital, philanthropic support, etc. For the purposes of this calculation, private equity investments made in connection with a Low Income Housing Tax Credit (LIHTC) allocation will be considered nonpublic financing.

Public subsidy. Project financing sought or secured from public entities, including departments, agencies, or authorities of the City of Pittsburgh, Allegheny County, the Commonwealth of Pennsylvania, or the United States Federal Government. Low Income Housing Tax Credit (LIHTC) allocations shall not be included in the calculation of public subsidy.

Area Median Income (AMI). Every fiscal year, the U.S. Department of Housing and Urban Development (HUD) establishes income limits (and therefore eligibility) for assisted housing based on income levels determined by the AMI of the metropolitan area (MSA) or Non-Metropolitan areas (counties). These income limits (available by family size) are defined below.

- » "Extremely low income" is 30% of AMI.
- » "Very low income" is 50% of AMI.
- » "Low-income" is 80% of AMI.

EC.3 MVA Cluster 1 point

Project is located in a census block that is both:

- » In the MVA F, G, H, or I cluster; AND,
- » In the MVA High Variance/High Permitting overlay.

EC.4 Housing Inclusion 1 point

If the project includes housing units,

- » The project is located in a census block in which 40% or more of renters are cost burdened according to the MVA Renters Cost Burdened overlay; AND,
- » At least 5% of units are affordable to households with income equal to or less than 50% of **Area Median Income (AMI)**.

METRIC METHODOLOGY

The following formula can be used to calculate the share of total project financing from non-public sources, and should be expressed as a percentage.

$$\text{non-public share} = \frac{[\text{non-public financing sources}]}{[\text{total anticipated project cost}]}$$

DOCUMENTATION

The applicant is required to provide a Sources and Uses table that allows for calculation of the total project costs and public finance value.

EXISTING REFERENCES & STANDARDS

- » **Market Value Analysis (MVA).** Prepared for the City of Pittsburgh (and its authorities) by The Reinvestment Fund, the Market Value Analysis (MVA) is an analytic tool. Pittsburgh is one of 30 cities to use the MVA tool. For this Measure, point allocations for a given non-public financing level vary based on the URA Market Value Analysis cluster assigned to the geographic area in which a project is located. For the most current MVA map and cluster table, please refer to the City's website.
- » **Non-public funding.** The standard for a minimum of 60% of non-public funding is a requirement in several URA programs, and is also common in other funding programs.

EXAMPLE STRATEGIES

- » Invest in underserved markets to create stability and catalyze growth.
- » Target border areas between growing and underserved markets to expand opportunity outward.



Housing

Provide diverse, affordable, and healthy housing options to prevent displacement and create diverse, stable, and healthy communities.

p4 BENEFITS

The Housing Measure primarily addresses three of the p4 goals: **People, Place, and Performance**. The Housing Measure seeks to build community culture and stability by retaining long-time, local residents that may be threatened by displacement due to gentrification or other influences of development. Additionally, by encouraging a mix of housing types, sizes, and affordability levels, the Measure seeks to encourage inclusive neighborhoods that are diverse and stable by attracting households of various sizes, needs, and income levels in all stages of life. Furthermore, the Measure aims to balance the proportion of housing that is **affordable** in order to create a diverse mix of income that is key to the attraction of local businesses and amenities important to overall neighborhood health and viability.

METRICS

The metrics used in the Housing Measure address some of the most pressing issues facing Pittsburgh residents and align with the recent work of the Affordable Housing Task Force. Incremental improvement related to percent of affordable housing is included in the scoring system along with points for specific additional actions.

Baseline Requirement: All projects pursuing Housing Measure points must:

- » Score at least 1 point in the Energy Measure;
- » Demonstrate through third-party verification that Radon levels are less than 2.7 pCi/L in the lowest occupied level of all building units in the project prior to occupancy; AND,
- » Score at least 1 point in the Connect Measure.

H.1 Affordable Housing up to 6 points

Projects consisting of 25 or more units will be awarded points as illustrated in **Table 2**, based on the percentage of for-sale units that are priced at a level that is affordable to households with incomes equal to or less than 80% of **Area Median Income (AMI)**; or, for-rent units affordable to households with incomes equal to or less than 50% of AMI.

- » Note. If a project includes units in more than 1 of the AMI ranges listed in **Table 2**, it will be scored based on the total percentage of affordable units and the lowest AMI range to apply to at least 5% of all units.

Table 2. Point allocation for H.1 Affordable Housing, based on AMI.

Area Median Income (AMI)	Percent of Units Affordable				
	5 to 14.9%	15 to 19.9%	20 to 24.9%	25 to 29.9%	30% & greater
AMI: 80% (sale)	1	2	3	4	5
AMI: 50% (rent)	1	2	3	4	5
AMI: 30% (rent)	2	3	4	5	6

Affordable. In general, housing for which the occupant(s) is/are paying no more than 30% of his or her income for gross housing costs, including utilities, is considered “affordable.”

Source: U.S. Department of Housing and Urban Redevelopment.

Area Median Income (AMI).

Every fiscal year, the U.S. Department of Housing and Urban Development (HUD) establishes income limits (and therefore eligibility) for assisted housing based on income levels determined by the AMI of the metropolitan area (MSA) or Non-Metropolitan areas (counties). These income limits (available by family size) are defined below.

- » “Extremely low income” is 30% of AMI.
- » “Very low income” is 50% of AMI.
- » “Low-income is 80% of AMI.

Housing Unit Types. Housing unit types generally include: single-family detached, duplex, townhome/rowhome, and multi-unit structure, it can also refer to a mix of renter/owner-occupied, and affordable/market-rate housing.

Visitability. Visitability is an approach to design that integrates basic accessibility features into newly built homes, including a stepless entrance, wider doorways and at least a half bathroom on the main floor. Visitability also promotes affordable, sustainable and inclusive design solutions. An **initiative** was founded in the belief that basic architectural access features in all new homes is a civil and human right that improves livability for all.

H.2 Housing Unit Type 1 point

Project includes three or more **housing unit types.**

H.3 Uniform Federal Accessibility Standards 1 point

At least 14% of units meet Uniform Federal Accessibility Standards (UFAS): 10% accessible to individuals with mobility impairments and 4% accessible to individuals with sensory impairments.

H.4 Equity 1 point

In multi-unit structures, where:

- » All units have access to all building entrances, lobbies, and amenities; AND,
- » All units are equipped with an equivalent range of appliances.

H.5 Visitability 1 point

- » All new single-family and owner occupied units are designed to accommodate visitation by individuals with mobility or sensory impairments.

H.A Alternative Compliance: Payments-in-lieu of Contributions up to 3 points

Points may be awarded to projects that do not contain a housing component, based on a payment-in-lieu of contributions to an Affordable Housing Trust Fund or equivalent. This option will not be available until the Fund or alternative is established by the City, or local recognized entity.

METRIC METHODOLOGY described in the individual metrics

DOCUMENTATION

- » Provide a matrix that documents the unit count and includes AMI.
- » Provide floor plans that identify housing unit types, location of amenities, entrances and lobbies and those with American Disabilities Act (ADA) accessibility.
- » Provide floor plans that identify units meeting the three core requirements of **visitability.**
- » Provide an Accessibility Statement and Floor Plans to demonstrate compliance with the UFAS.
- » Enter into a Payment-in-lieu of Contributions agreement as per the alternative compliance path.

EXISTING REFERENCES & STANDARDS

- » [Affordable Housing Task Force Recommendations: Findings and Recommendations to Mayor William Peduto and the Pittsburgh City Council](#). May 2016. Affordable Housing Task Force. An effort to assess the current, and project future, landscape of housing affordability in the city of Pittsburgh, evaluate current programs and initiatives to produce new affordable units and preserve existing ones, and present a set of recommendations.
- » [Uniform Federal Accessibility Standards \(UFAS\)](#). United States Access Board. One of two standards (along with the ADA standards for Accessible Design) for new construction and alterations under the ADA for state and local government facilities. In addition to being incorporated into local building codes, these standards are also a good source for universal design concept in the building and remodeling of private homes.

EXAMPLE STRATEGIES

- » Increase existing resident homeownership opportunities through buyer education and equity programs.
- » Add a mix of housing types to attract various household sizes and affordability levels.
- » Conduct a housing impact statement.
- » Understand the current mix and work to fill gaps to create a proportion balance. For example, add moderate to primarily low income or add affordable to primarily moderate income levels to create a range of opportunities and growth.



Provide diverse, affordable, and healthy housing options to prevent displacement and create diverse, stable, and healthy communities.

MVA Land Table.

Re-use. Categorization of the suitability of a parcel's re-use in the next five years, based on current conditions. This categorization must be updated on a regular basis, to reflect changes.

- » **Develop.** Parcel is suitable and more-easily positioned for development.
- » **Hold.** Unclear re-use. As markets shift and development/revitalization occurs, the categorization of hold parcels may shift.

Market. Relative strength of parcel, as part of a block-group analysis.

- » **High:** MVA Categories A, B, & C.
- » **Mid:** MVA Categories D, E, & F.
- » **Lower:** MVA Categories G, H, & I.

Tax Debt. The age of real property tax delinquency of the parcel, based on City and PPC tax bills.

- » **Current:** File is >2 years tax delinquent, considered collectible.
- » **Short:** File is 2-4 years tax delinquent.
- » **Long:** File is 5+ years tax delinquent, considered likely unrecoverable.

Land

p4 BENEFITS

Addressing three of the p4 goals – **Place, Performance, and Planet** – the Land Measure focuses on reinvestment in blighted and underutilized land to remove blight and associated issues of crime, dumping, and negative neighborhood perceptions. Furthermore, the Measure encourages the use of existing infrastructure to reduce development costs, as well as employing infill development to reduce the impacts of sprawl and increase the tax base.

METRICS

Projects involving **abandoned, derelict, distressed,** and/or **inactive** parcels will be awarded points based on the following metrics that include both incremental points for increasing performance along with activity specific points.

L.1 Overall Distress up to 6 points

Projects will be awarded points based on the MVA, land recycling priority use categorization, and the concentration of tax delinquency. Points will be awarded as illustrated in **Table 3**. Refer to the **Definitions** section for additional information regarding the table's categories.

L.2 Certified Redevelopment Area 1 point

The parcel being redeveloped (or a majority of parcels in the case of a multi-parcel project) is located within a **Certified Redevelopment Area**, and/or **Priority Neighborhood**.

L.3 Privately-owned 1 point

The parcel being redeveloped (or at least 25% of parcels in the case of a multi-parcel project) is privately-owned.

Table 3. Point allocation for L.1 Certified Redevelopment Area, based on MVA categories.

MVA Categories	Tax Status: Current		Tax Status: Short		Tax Status: Long	
	Re-use: Develop	Re-use: Hold	Re-use: Develop	Re-use: Hold	Re-use: Develop	Re-use: Hold
MVA: HIGH	0	1	2	2	2	3
MVA: MID	1	3	3	4	5	6
MVA: LOWER	3	4	5	5	6	6

Abandoned Property. As defined by Pittsburgh Code of Ordinance §671.02(a), “property that has exhibited evidence of abandonment as defined in [Section] 671.02(c) for thirty (30) days or more and meets any of the criteria listed below.

- » Provides a location for loitering, vagrancy, unauthorized entry or other criminal activity.
- » Has one (1) or more broken windows, or two (2) or more windows boarded up for more than thirty (30) days.
- » Has utilities disconnected or not in use.
- » Is not maintained in compliance with City Code, including without limitation, Pittsburgh Building and Fire Prevention Codes.
- » Has taxes in arrears for a period of time exceeding three hundred sixty-five (365) days.
- » Is only partially completed, is not fit for human occupancy and there are no active building permits on the property that will result in restoration of the premises to a safe and habitable condition.”

Derelict. A derelict property is a property in very poor condition as a result of disuse and neglect.

Vacant and Distressed Parcels. As defined by Pittsburgh Code of Ordinance §174A.02(v). “All of those parcels of real property that do not have a structure, or have a condemned structure, or are more than one–full–year tax delinquent or are titled in the name of the city and not intended for city open space like parks and greenways and city operations like facilities and yards for the sole purpose of determining council districts with the greatest number of vacant and distressed parcels of real property ordinance.”

Inactive. An inactive property is one that is not in use or is inoperative.

Certified Redevelopment Area (CRA). Under the State’s Urban Redevelopment Act (Act 385 of 1945, as amended) a community is authorized to designate Redevelopment Areas. A Certified Redevelopment Area (CRA) is any area of the community that the City of Pittsburgh Planning Commission designates or certifies as an area for redevelopment.

Priority Community. A neighborhood designated by the Priority Communities Selection Committee pursuant to Title I, Section 135.03 of the Pittsburgh Code of Ordinances.

L.4 Encumbrances 1 point

The title of the parcel being redeveloped (or at least 25% of parcels in the case of a multi–parcel project) contains liens, levies, claims, or other encumbrances that the applicant proposes to clear in the course of acquisition (or that the applicant has already cleared in the event that acquisition has already occurred).

L.5 Blight Elimination 1 point

The parcel being redeveloped (or at least 25% of parcels in the case of a multi–parcel project) includes one or more blighted structures that will be eliminated as a part of the project, and/or includes one or more non–blighted structures that will be preserved as a part of the project.

L.A Alternative Compliance: Payments–in–Lieu up to 3 points

Projects that do not involve vacant or underutilized parcels may be awarded points if they make payments to the Open Space Trust Fund based on acreage/ square feet of development. This option will not be available until the Fund is established by the City.

METRIC METHODOLOGY refer to *Table 3*, and the MVA resources found in *Appendix D*.

DOCUMENTATION

- » Provide project address, MVA Maps, and Land Recycling Formula.
- » Provide Certified Redevelopment Area maps and Priority Neighborhood List.
- » Submit Tax Records that document ownership, and any liens, levies, claims, or other encumbrances on the title.
- » To demonstrate that the project includes blighted structures to be eliminated and/or non–blighted to be preserved, submit a Parcel Condition Report.
- » For the alternative compliance path, show Payment–in–Lieu of Contributions agreement

EXISTING REFERENCES & STANDARDS

- » **Market Value Analysis (MVA).** Prepared for the City of Pittsburgh (and its authorities) by The Reinvestment Fund, the Market Value Analysis (MVA) is an analytic tool. Pittsburgh is one of 30 cities to use the MVA tool. For this Measure, point allocations for a given non–public financing level vary based on the URA Market Value Analysis cluster assigned to the geographic area in which a project is located. For the most current MVA map and cluster table, please refer to the City’s website.

EXAMPLE STRATEGIES

- » Redevelop on vacant and underutilized lots.
- » Reuse or repurpose existing infrastructure.
- » For lots that are undevelopable provide usable green space such as community gardens to support local agriculture and community building.



Activate and extend the public realm to provide quality indoor and outdoor spaces for all to safely use and enjoy.

Public

p4 BENEFITS

The Public Measure addresses all four of the p4 goals – **People, Place, Performance, and Planet**. Activated and accessible public spaces create vitality, foster community, increase public safety, and create direct societal and economic returns. A sense of place is created when public spaces are designed to foster a strong local identity and character that is welcoming to all users. Public spaces that integrate native landscapes and soft treatments may also provide additional benefits to the planet.

METRICS

The Public metrics reference the Pittsburgh Zoning Code along with other widely accepted standards and definitions. The activities associated with each metric are independent of each other and as a whole contribute to the creation of quality public spaces.

P.1 Urban Open Space up to 2 points

The project must exceed the baseline Zoning Code requirement by 10% (1 point) or 20% (2 points) in Zoning Districts where **Urban Open Space** is required. In Zoning Districts where Urban Open Space is not required, provide 10% (1 point) or 20% (2 points) percent of lot as Urban Open Space as per the definitions further below, where public open space would be desirable and useful. Payments-in-lieu may be paid where additional open public open space would have limited usefulness as per 910.C.2.

P.2 Active Ground Use 1 point

The ground floor of the building(s) contains an **active use** accessible from a public sidewalk.

P.3 Ground Floor Transparency up to 2 points

A significant portion of the building(s) windows and doors are along a sidewalk. In Zoning Districts with ground floor transparency requirements, provide 70% transparency between 3 and 10 feet along the sidewalk. In Zoning Districts where there are no ground floor transparency requirements, no more than 50% (1 point) or 25% (2 points) of the length of a façade facing a sidewalk is blank (i.e. without doors or windows).

P.4 Safety & Accessibility 1 point

At-grade crossings with driveways account for no more than 10% of the length of sidewalks within the project, and all sidewalks meet ADA Standards for Accessible Design.

Urban Open Space. Designed to facilitate pedestrian circulation or provide passive recreation space, Urban Open Space adheres to the attributes listed below.

- » Designed to facilitate pedestrian circulation or relieve pedestrian congestion, Urban Open Space shall: be at the same level as abutting public sidewalks, provide a clear path or area for movement, and be accessible to persons with disabilities throughout the entire area.
- » Designed to provide passive recreation space or informal activity areas, Urban Open Space shall abut and be accessible from a public sidewalk. A plaza or park may be located above or below the level of the abutting sidewalk or open space provided it is accessible to the handicapped. A plaza or park shall contain seating, permanent landscaping, and lighting for night time illumination.
- » With signage indicating as such, Urban Open Space shall be open, without restriction, to the general public, at least during business hours normal to the area in which it is located and during periods of heavy pedestrian movement in the area.
- » When a development site is adjacent to a bus stop or transit station, the required Urban Open Space shall be designed to provide access to it and the waiting areas for transit riders.

Active Uses. Within a development, active uses include, but are not limited to, the following: amusement, arts and culture, healthcare, food and/or drink, nonprofit, neighborhood serving business, retail, sales or service, education, library, walk-up service or retail, and public common space.

P.5 Pedestrian Experience 1 point

Functional entrances to the project building(s) occur at an average of 75 feet or less along nonresidential or mixed-use buildings or blocks. (**LEED ND credit**)

P.6 Public Art up to 3 points

At least 2% (1 point), 3% (2 points), or 4% (3 points) of the total project cost is applied directly to the creation and maintenance of public art as defined by the URA's **Public Art Resource Guide for Developers**.

METRIC METHODOLOGY

Refer to the *Existing References & Standards* section for commonly accepted methods for measuring the requirements.

DOCUMENTATION

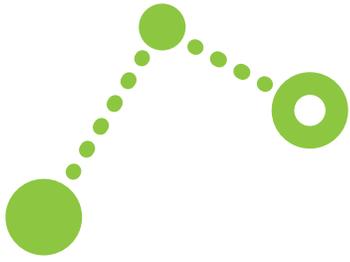
- » Provide Construction Design Documents and Statement of Compliance from the Department of City Planning.
- » Provide Construction Design Documents that demonstrate specifications of the building(s)'s programming, accessibility, ground floor uses, transparency of façade, at-grade crossings, and functional entrances.
- » Provide construction budget with Sources & Uses table that illustrates total cost and that applied to the creation and maintenance of public art.

EXISTING REFERENCES & STANDARDS

- » **Pittsburgh Code of Ordinance.** §909.02.C.2 Site Development Standards.
- » **LEED ND Walkable Streets.** U.S. Green Building Council. This credit is intended to promote transportation efficiency, including reduced vehicle distance traveled. To promote walking by providing safe, appealing, and comfortable street environments that support public health by reducing pedestrian injuries and encouraging daily physical activity.
- » **Add Value-Add Art: A Public Art Resource Guide for Development. 2010.** Urban Redevelopment Authority. A resource guide to give developers information and tools to commission works of art. It features examples of different project types, discusses best practices, and outlines local and national resources for public art.
- » **2010 ADA Standards for Accessible Design.** September 2010. Department of Justice.

EXAMPLE STRATEGIES

- » First floor neighborhood serving retail.
- » Dedicated space for NGO use.
- » Inclusion of seating and amenities that make it a welcoming space.



Prioritize development that enhances and expands transportation options to improve public access to jobs and community resources.

Connect

p4 BENEFITS

The Connect Measure incorporates all four p4 goals – **People, Place, Performance, and Planet**. The Measure targets the expansion of transportation options that improve human access to employment centers and community services. Providing mobility options, such as walking and biking, also encourages health benefiting physical exercise. This Measure also reduces greenhouse gas (GHG) emissions through expansion of transport options that avoid the use of single-occupancy vehicles (SOVs). Furthermore, parking demand is reduced, which in turn can decrease overall project costs.

METRICS

The Connect metrics include multiple independent activities that utilize industry standards for distances and amenities that are proven to encourage the use of alternative transportation options and improve access for all.

Baseline: Document the projected reduction in parking demand that results from an enhanced use of alternative modes of transportation to access the project site.

CT.1 Transit Proximity up to 2 points

Entrances to development are located within ½ mile of existing bus rapid transit (BRT) stop, a light rail transit (LRT) stop, and/or other frequent transit service routes; and/or entrances to development are located within ¼ mile of an existing bus stop.

CT.2 Amenities up to 2 points

Development is directly financially responsible for the creation of new or improved transportation amenities, or the provision of significant incentives to increase transit use and improve accessibility, such as the activities listed below.

- » Bus stop and LRT/BRT improvements.
- » Installation of bike share station(s).
- » Installation of approved bicycle racks and 24-hour covered bike storage.
- » Provision of free or subsidized transit/bike share passes or incentives for walking to work.
- » Improvements to crosswalks and/or intersections to improve safety and accessibility.

Last Mile Connection. The “last-mile” or “first and last-mile” connection describes the beginning or end of an individual trip made primarily by public transportation. In many cases, people will walk to transit if it is close enough. However, on either end of a public transit trip, the origin or destination may be difficult or impossible to access by a short walk. This gap from public transit to destination is generally termed a “last mile connection” and is intended to include either end of the trip.

CT.3 Last Mile up to 2 points

Last mile connections and amenities are provided for employees that improve the connectivity of people located in underserved areas (where bus routing is limited) to a job site that may be at a transit-oriented location. Activities to achieve these points may include both activity prior to project completion and extending beyond occupancy, such as the activities listed below.

- » Creation of safe, separated walking and bike paths between the transit stop(s) and the development.
- » Wayfinding signage to mark the route.
- » Escort services during hours with less frequent service.
- » Van pools or shuttles to/from park and ride lots or community center to locations with frequent bus routing.

CT.4 Key Corridor 1 point

Primary entrance to development is located within ¼ mile of a Rapid or Key Corridor bus route, as defined by the [Port Authority of Allegheny County’s 2015 Service Guidelines](#).

CT.5 Bike Share 1 point

A bike share station(s) is located within ¼ mile of an entrance to a development.

CT.6 Proximity to Business District 1 point

Entrances to development are located within ½ mile of a neighborhood-serving business district.

CT.7 Proximity to Car Sharing 1 point

Entrance to a development is located within ¼ mile of a designated car-sharing pickup location.

METRIC METHODOLOGY

This Measure is based upon the proximity methodology employed by standards utilized in the [LEED ND Access to Quality Transit credit](#).

DOCUMENTATION

- » Provide location context map depicting: transit, bike share stations, and car-sharing locations.
- » Provide Construction Design documents that indicate the design and specifications for the identified strategies.
- » Provide narrative that clearly describes any qualitative commitments in CT.2 and CT.3, with a defined approach, and method for documenting outcomes.

EXISTING REFERENCES & STANDARDS

- » Pittsburgh Code of Ordinances.
 - §914.05 Bike Parking
 - §914.11 Exceptions to Off-Street Parking, Loading and Access Standards.
- » Transit Service Guidelines. Draft, May 2015. Port Authority of Allegheny County, Department of Service Planning & Evaluation. For Allegheny County (and over 61 million rides annually), this guideline is designed to: set service goals, design service and determine appropriate service levels, establish minimum service performance, evaluate service performance, and prioritize future service changes and plans.

EXAMPLE STRATEGIES

- » Provide bike lockers.
- » Provide showers for employees.
- » Design planted and safe connections from site to transit stops or bike/walkways.
- » Provide transit shelters.
- » Provide shuttles to transportation nodes.
- » Incentivize car pools and rideshare.
- » Reduced commuting requirements.



Manage
rainwater
to minimize
impacts and
reuse as a
resource.

1.5" of rainfall in a 24 hour period

is based on recent PWSA analysis of events that have caused local flooding. It was determined that rainwater equal to 1.5" of rainfall in a 24-hour period, including a peak of 1.05" in 15 minutes is a standard that should be considered a baseline for future projects in the City. The ongoing uncertainty of changing climate makes this approach potentially more locally relevant than traditionally used percent of rainfall events.

95th Percentile Rainfall Event.

A precipitation amount of which 95th percent of all rainfall events for the period of record do not exceed. In more technical terms, the 95th percentile rainfall event is defined as the measured precipitation depth accumulated over a 24-hour period for the period of record that ranks as the 95th percentile rainfall depth based on the range of all daily event occurrences during this period.

Rainwater

p4 BENEFITS

The Rainwater Measure focuses on two p4 goals: Performance and Planet. The Measure has two distinct, but related types of benefits: mitigating impacts from heavy rainfall events and the use of rainwater as valuable resource. As such, the Measure aims to encourage vegetated spaces to filter polluted rainwater runoff and increase potential for groundwater replenishment. Additionally, vegetation creates a cooling effect on the surrounding area, improves air quality, promotes biodiversity, helps to prevent combined sewer overflows (CSO), and reduces the potential for flooding. Vegetation that includes local food production improves nutrition and community wellness. Finally, connecting humans to the natural environment through vegetation can also improve mental and physical health.

METRICS

The following metrics provide points that incrementally increase with the level of performance along with specific additional actions. Actions required in specialized stormwater/water quality districts should also be addressed, where applicable.

Baseline: As a baseline, a development must provide a Comprehensive Rainwater Management Plan designed to retain, infiltrate, or reuse a total volume of rainwater equal to **1.5" of rainfall in a 24 hour period**, including a peak of 1.05" in 15 minutes, or a **95th percentile rain event** on-site, whichever is greater.

R.1 On-site Retention 1 point

If the plan will retain, infiltrate, or reuse a total volume of rainwater greater than 1.5" of rainfall in a 24-hour period, including a peak of 1.05" in 15 minutes, or a 95th percentile rain event on-site, whichever is greater.

R.2 Green Infrastructure up to 4 points

At least 50% (1 point), 75% (2 points), 100% (3 points) or over 110% (4 points) of 1.5" of rainfall in a 24 hour period, including a peak of 1.05" in 15 minutes, or a 95th percentile rain event on-site, whichever is greater, can be captured using **green infrastructure** installations.

R.3 Capture & Reuse up to 3 points

At least 15% (1 point), 30% (2 points), or 45% (3 points) of total volume of rainfall in a 24-hour period, including peak of 1.05 in 15 minutes, or a 95th percentile rain event on-site, whichever is greater, can be captured and reused on-site.

R.4 Native Plants 1 point

The plan shows use of at least 50% **native plantings**, as recognized by a locally recognized authority, for any green infrastructure solution contained in that plan.

Green Infrastructure. Green infrastructure is a strategic network of vegetated areas and water retention techniques intended to mitigate stormwater problems. Examples of green infrastructure include: greenways, rain gardens, bioswales, green roofs, rain barrels, etc. For more information and techniques for planning and designing for green infrastructure on a property, refer to **3 Rivers Wet Weather RainWays.**

Native Plants. Native plants are plants indigenous to a given area in geologic time. This includes plants that have developed, occur naturally, or existed for many years in an area (trees, flowers, grasses, and other plants).

R.5 Monitoring 1 point

The plan employs technology to monitor the rainwater captured for volume, water quality, impact on downstream CSO and other factors defined in PWSA's Monitoring Protocol (currently in final draft form); and, the data is collected and disseminated in an open, machine-readable format.

R.A Alternative Compliance: Payments-in-Lieu up to 3 points

If in the event that on-site retention, infiltration, or reuse strategies are not possible beyond 50% of total volume of rainwater required, a payment-in-lieu of \$3.50 per gallon per year is provided to the Stormwater Trust Fund for use in promoting and installing green infrastructure in the city, on an annual basis through the life of the development. Equal equal levels of mitigation accomplished through the installation of green infrastructure strategies by the project owner on immediately adjacent sites dedicated for public open space may be considered in unique situations where higher on-site density is widely supported and adjacent sites would be enhanced through green infrastructure improvements.

METRIC METHODOLOGY

This metric is based upon the methodology employed by **LEED ND Stormwater Management Credit** as well as standards set forth in Pittsburgh City Code.

DOCUMENTATION

- » Provide a copy of the project's Comprehensive Stormwater Management Plan.
- » Identify districts with specialized stormwater/quality requirements and how priority actions have been addressed.
- » Provide the Payment-in-lieu Agreement.

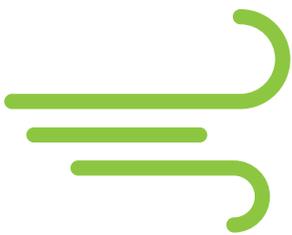
EXISTING REFERENCES & STANDARDS

- » **Pittsburgh Code of Ordinances.**
 - §915 Environmental Performance Standards.
 - §918 Landscaping and Screening Standards.
 - §906.07. -SM-O, Stormwater Management Overlay District.
 - §906.02. - FP-O, Floodplain overlay district (recently updated).
 - §906.03. - RF-O, Riverfront Overlay District.
 - §1003. - Stormwater Management Code. Land Operations Control and Stormwater Management
- » **Pittsburgh Water and Sewer Authority's City-Wide Green Infrastructure Assessment**
- » **Pittsburgh Water and Sewer Authority's Monitoring Protocol** (currently in final draft)

- » **LEED ND: Plan | v3 – LEED 2009 Stormwater Management, GIBC8.** U.S. Green Building Council. This credit is intended to reduce pollution and hydrologic instability from stormwater, reduce flooding, promote aquifer recharge, and improve water quality by emulating natural hydrologic conditions.
- » **Summary of In-Lieu Fee Calculation.** Washington, D.C. Department of Energy & Environment. The \$3.50 per gallon per year fee is based on the calculation that Washington, D.C. uses for their payment-in-lieu fee.

EXAMPLE STRATEGIES

- » Create vegetated rain gardens and filtration strips.
- » Plant native and edible landscapes.
- » Plant trees.
- » Provide underground or covered parking that increases space for vegetation.
- » Increase building density to create more site area for vegetation.
- » Include green roofs.
- » Create pocket parks.



Provide high quality air to create healthy ecological systems.

Air

p4 BENEFITS

The Air Measure addresses three of the p4 goals: **People, Performance, and Planet**. Mitigating human exposure to air pollution can materially enhance the quality of health and well-being of people in Pittsburgh especially vulnerable populations such as infants and children, the elderly, and those with chronic medical conditions. A healthier community is also a more productive community, with reduced worker sick days and improvements in school test scores. This measure includes, but is not limited to, **Criteria Air Pollutants (CAPs)** and **greenhouse gas** emissions.

METRICS

The Air metrics lean heavily on existing standards and performance requirements proven by third-party entities to be critical areas of measurement to assure healthy air quality. Air is just one aspect of human health that was identified to be the area most directly attributable to development practices. Greenhouse gases are impacted by several Measures and are included within the the Air Measure for inventory purposes.

Baseline: As a baseline level of performance the project must achieve all of the activities listed below for all development associated with the project.

- » Provide a comprehensive plan detailing compliance with City of Pittsburgh's Clean Construction Diesel Operations Ordinance and LEED BD+C: Clean Construction Credit, SSpC75. Compliance is required, regardless of development size (monetary or acreage).
- » Comply with WELL Building Air, 07, Construction Pollution Management and 13, Air Flush.
- » Include passive radon construction systems and/or radon resistant construction in building design in order to provide the minimization of radon and other soil gas entry, and mitigation if it is deemed necessary.
- » Document how the building mitigates water damage by managing moisture. Design process will comply with WELL section 12 Moisture Management.
- » Fundamental Commissioning and Verification, based on LEED v4.

Once these baseline levels of performance have been established, the project may pursue points in the following areas.

A.1 Maximum Pollutant Levels up to 2 points

All buildings that are part of the project demonstrate a commitment to the criteria below during design that is followed by field testing and reporting after occupancy by an independent assessor (air testing procedures should follow LEED v4 or the latest version of LEED Indoor Air Quality Assessment Option 2., Air Testing):

- » Formaldehyde levels less than 10 ppb.
- » Total **volatile organic compounds (VOCs)** less than 500 µg/m³.

Criteria Air Pollutants (CAPs).

These commonly found air pollutants (also known as "criteria pollutants") are found all over the United States. They are particle pollution (often referred to as particulate matter), photochemical oxidants and ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead.

Greenhouse gases. A greenhouse gas (GHG) is a gas in an atmosphere that absorbs and emits radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. The primary greenhouse gases in Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Volatiles organic

compounds (VOCs). VOCs are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by a wide array of products numbering in the thousands.

PM (particulate matters). PM (also called particle pollution) is the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope.

MERV (Minimum Efficiency Reporting Value). MERV is a standard that rates the overall effectiveness of air filters. Higher value MERV rating equates to finer filtration, meaning fewer dust particles and other airborne contaminants can pass through the filter

Air leakage. Air leakage is the term for uncontrolled air movement into and out of buildings via the building envelope. Limiting and controlling air leakage is important for a number of reasons including reducing heating and cooling energy requirements and costs.

Enhanced commissioning. Intended to further support the design, construction, and eventual operation of a project that meets the owner's project requirements for energy, water, indoor environmental quality, and durability, as defined by **USGBC, LEED BD+C v.4**, or most current version.

- » **PM_{2.5}** less than 15 µg/m³ (24-hour mean).
- » **PM₁₀** less than 50 µg/m³ (24-hour mean).
- » Ozone less than 10 ppb.
- » Radon less than 2.7 pCi/L in the lowest occupied level of the project.
- » Indoor carbon monoxide (CO) should be equal to or less than outdoor CO levels, to confirm no major indoor sources are present, and that absolute value of indoor CO should not exceed WHO guidelines.

A.2 Filtration up to 2 points

All buildings use **MERV 13** (or higher) media filters in the ventilation systems and forced air space conditioning systems, and the project demonstrates an air filtration maintenance program. Design and test air distribution systems to perform at a maximum of 0.3 watts/CFM. Verification of performance shall be done with filters in place. If it's an existing system, use highest MERV filter that the HVAC system will allow.

A.3 VOC Reduction 1 point

All buildings comply with WELL Air Quality Standards for VOC Reduction, Section 4.

A.4 Air Leakage 1 point

After substantial completion and prior to occupancy, all buildings exhibit airtightness to ensure minimal **air leakage** through envelope commissioning ASHRAE Guideline 0-2005 and the National Institute of Building Sciences (NIBS) Guideline 3-2012, WELL Section 14a.

A.5 Enhanced Commissioning 1 point

All buildings, or an entire development, pursue **enhanced commissioning**, based on LEED v4.

A.6 Monitoring 1 point

All buildings comply with WELL Air Quality Monitoring and Feedback, Section 18.

A.7 GHG up to 2 points

All buildings/companies, or entire development, as appropriate, complete a baseline greenhouse gas (GHG) inventory for Scope 1 and 2 emissions.

METRIC METHODOLOGY

Recognized industry standards referenced in the *Existing References & Standards* section will be applied, as appropriate.

DOCUMENTATION

Follow the requirements of the recognized standards that are referenced.

EXISTING REFERENCES & STANDARDS

- » **Athena Sustainable Materials Institute.** Athena is a non-profit research collaborative that aims to bring life cycle assessment (the science behind environmental footprinting) to the construction sector.
- » **Carbon Disclosure Project (CDP).** For over the past 15 years, CDP has acted as a not-for-profit that runs the global disclosure system for investor, companies, cities, states, and regions to manage their environmental impacts.
- » **Greenhouse Gas (GHG) Protocol.** Developed by the World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD), the GHG Protocol sets the global standard for how to measure, manage, and report greenhouse gas emissions.
- » **ICLEI's Greenhouse Gas Protocols.** Developed by the ICLEI through extensive stakeholder consultation and partnership with other leading GHG emissions experts, the ICLEI's GHG Protocols provide authoritative guidance for communities to account for carbon pollution accurately and consistently; they are the national standards for local-scale accounting of emissions that contribute to climate change.
- » **LEED BD+C: Clean Construction Credit, SSpc75.** U.S. Green Building Council. This pilot credit aims to minimize the health and climate impacts to local communities from diesel engine emissions associated with construction activities.
- » **Pittsburgh Code of Ordinances.**
 - § 161.42 – Clean Construction Diesel Operations.
- » **Portfolio Manager Technical Reference: Greenhouse Gas Emissions.** Produced by Energy Star, this technical document helps businesses and organizations assess the emissions footprint associated with their energy consumption. Through the incorporation of a number of metrics to quantify these emissions and provide an understanding of they are generated.
- » **The WELL Building Standard.** Supports human health and well-being by harnessing the built environment through best practices in design and construction with evidence-based medical and scientific research.

EXAMPLE STRATEGIES

- » **Avoid or minimize major emission sources of outdoor and indoor pollution.** Reducing emissions through the control of air pollution sources recognizes the first order need to prevent or limit air emissions before they enter the ambient environment. This priority consideration addresses the basic environmental protection principle of limiting exposure in the most efficient and effective way possible.
- » **Eliminate or isolate indoor pollution sources.** In order to minimize the effect of indoor pollution sources on overall indoor air quality, eliminate or isolate in separate rooms or exhaust cabinets. Reduce impact of exhaust on ambient environment & adjacent structures (adopted from WELL17 direct source ventilation).

- » **Design and operate buildings to reliably prevent or minimize intrusion of outdoor pollutants.** Where source control measures are insufficient, efforts should focus on reducing outdoor pollutant exposure inside buildings.
 - Set buildings back from roadways and other major sources of pollutants, odor, and noise.
 - Locate air intake of building ventilation systems to (up wind and distance from traffic and parking, at least four stories above ground).
 - Reduce air leakage of the building shell and ductwork.
 - Install high efficiency air filters and low efficiency pre-filters.
 - Prevent excessive depressurization between the building and the outdoors and between adjoining tenants or residential units.
 - Follow best practices for indoor cleaning to reduce track-in and indoor pollutant emissions.
 - Verify actual building performance and train operators before occupancy, and periodically afterward to achieve design objectives for energy efficiency, comfort, and indoor air quality.
- » **Conduct a vulnerability assessment and consider resilient design** (see LEED pilot credit) for thermal comfort in future climate and power outages.
- » **Prepare buildings for climate adaptations.**
- » **Consider passive design** (external shading, thermal mass, etc.) using dynamic thermal models.



Reduce the built environment's energy consumption and climate impacts by improving building performance and providing renewable resources.

Major Renovation vs. Existing Building.

A "major renovation" is the renovation of a building where (a) the total cost of the renovation related to the building envelope or the technical building systems is higher than 25 % of the value of the building (excluding the value of the land upon which the building is situated); or (b) more than 25 % of the surface of the building envelope undergoes renovation.

Site Energy Use Intensity (EUI). EUI measures the total, annual building energy use normalized by its gross square footage. Site energy is the amount of energy consumed by a building or development on site, usually reflected on utility bills, but including heat and power generated and used on site (i.e., no "bill"). Thus, site EUI is a building's total annual on-site energy usage in kBtu/ft².

Energy

p4 BENEFITS

The Energy Measure addresses three p4 goals: **Performance, Planet, and People**. The benefits to building users include lower operating costs and increased resiliency. Additionally, reduced emissions help mitigate the impacts of climate change and improve overall air quality, key for addressing human health risks.

METRICS

This Measure employs the EPA's Target Finder calculator to assess building energy performance using Energy Use Intensity (EUI) as the primary metric, while also aligning with the building energy goals of the 2030 Challenge for the Energy Consumption metric.

EN.1 On-Site Energy Consumption up to 6 points

Projects are eligible for 1 to 6 points for reducing on-site energy consumption, in line with the following performance goals determined by new construction and **major renovations, versus existing buildings**.

» New Construction & Major Renovations

- **1 Point:** Meets leading market measures, below national median for **Site Energy Use Intensity** (EUI). (meets 2030 Challenge Goals currently being achieved)
- **2 Points:** 70% below national median Site EUI (meets 2030 Challenge Goals, Year 2015).
- **3 Points:** 80% below national median Site EUI (meets 2030 Challenge Goals, Year 2020).
- **4 Points:** 90% below national median Site EUI (meets 2030 Challenge Goals, Year 2025).
- **5 Points:** Carbon neutral. (meets 2030 Challenge Goals, Year 2030).
- **6 Points:** Site EUI reaching Passive House standards of 14 kBtu/ft²/year.

» Existing Buildings

- **2 Points:** 20% below national median Site EUI (meet 2030 Challenge Goals, Year 2020).
- **3 Points:** 35% below national median Site EUI (meet 2030 Challenge Goals, Year 2025).
- **4 Points:** 50% below national median Site EUI (meet 2030 Challenge Goals, Year 2030).
- **5 Points:** 60% below national median Site EUI (set performance goals beyond 2030 Challenge goals, median Site EUI Year 2030 measures).
- **6 Points:** Site EUI reaches Passive House standards of 20 kBtu/ft²/year.

On-Site Renewable Energy.

On-site renewable energy includes renewable sources, such as wind, solar, and co-generation, that are generated on the project site, thereby relieving reliance on the grid and providing alternative sources of electricity.

Distributed Energy.

Refers to a range of smaller-scale technologies designed to provide electricity and thermal energy close(r) to consumers. These approaches include both fossil and renewable energy technologies, microgrids, on-site energy storage, and combined heat and power systems. Supporting City of Pittsburgh and U.S. Department of Energy collaboration to enhance existing and future distributed energy systems locally, these systems offer solutions to local air quality challenges, local resiliency preparation, energy security concerns, power quality issues, and energy cost control. Sample technologies could include: existing district energy facilities combined heat and power systems, microgrids, fuel cells, and batteries.

Zero Energy Buildings.

A low energy use building which offsets its energy use through on-site renewable sources.

EN.2 On-Site Renewable Energy Generation up to 4 points

Once projects achieve at least 1 point under EN.1, they are eligible for 1 to 4 points for **on-site renewable energy** generation, with 1 point available for connectivity to existing or future distributed energy resource systems.

- » **1 Point:** 25% energy use generated from on-site renewable sources or connectivity to existing or future **distributed energy** resource systems.
- » **2 Points:** 50% energy use generated from on-site renewable sources.
- » **3 Points:** 75% energy use generated from on-site renewable sources.
- » **4 Points:** 100% energy use generated from on-site renewable sources (**zero energy building**, parcel, site, etc.).

METRIC METHODOLOGY

Use the [U.S. Environmental Protection Agency's Target Finder](#) calculator. The Target Finder is EPA's online calculator to aid in the assessment of energy performance of commercial building designs and existing buildings.

DOCUMENTATION

Verification of this measure includes submissions at each stage of a project as outlined below:

- » **Application and predesign phase.** Written declaration for On-Site Energy Consumption and On-Site Renewable Energy Generation goals, with whole building energy models, if existent.
- » **Design completion and prior to construction.** Basis of design narrative, construction documents and whole building energy model reports.
- » **Construction completion & building occupancy.** Final performance-based commissioning report.
- » **Following first-year operations completion.** Whole building energy consumption, verified with utility invoices or digital meter data for energy consumed and produced. Applicant is required to furnish annual energy consumption reports and/or voluntarily comply with citywide building performance benchmarking requirements.
- » **3rd Party Assessment and Certification** (LEED, Passive House, etc.). Confirms EUI measurements and performance may be considered in lieu of the above project stages following the initial written declaration.
- » **Documentation of Plans.** Plans for installation and/or connection to an on-site renewable energy source or district energy plan.

EXISTING REFERENCES & STANDARDS

- » **2030 Challenge Baselines** are based on national median Site EUI. The international 2030 Challenge baseline is the national median Site EUI by use type, as determined by 2003 Commercial Building Energy Consumption Survey (CBECS) data. Interpretation of this information for Pittsburgh is captured in the Pittsburgh 2030 District energy baseline.
- » **Passive House** is a building for which thermal comfort can be achieved solely by decoupling heating and cooling from ventilation, thus achieving sufficient indoor air quality conditions without the need for additional air recirculation. Buildings that meet this standard can use up to 80% less energy, while providing better indoor air quality and thermal comfort than those designed to conventional codes.
- » Whole Building Energy Models allow designers to assess whole building energy, assessing passive efficiency strategies (such as daylighting), reductions in cooling/heating loads, equipment requirements, and combinations of measures. Energy model software programs includes but are not limited to: EnergyPlus, eQuest, IES VE, Passive House PHPP Energy Model.

EXAMPLE STRATEGIES

- » Participate in the Downtown and Oakland 2030 Districts, as appropriate.
- » Utilization of the Passive House, LEED, Living Building Challenge and other standards that establish clear requirements and guidance to achieve energy performance.
- » Require commissioning to ensure buildings perform as designed.
- » Follow measurement and verification protocols and install monitors for ongoing assessment of performance.



Advance and foster new ideas to drive market leadership and stimulate creative solutions to complex urban challenges.

Innovation

p4 BENEFITS

The Innovation Measure acknowledges the possibility of undiscovered new and creative solutions yet to be explored and tested. Project innovations could address all four p4 goals: **People, Place, Planet, and Performance** depending on the strategy proposed. Innovators must often take higher risks and remove policy and other barriers that are based on traditional solutions.

METRICS

Projects that receive innovation points must advance new models and systems for development that are replicable, grow knowledge, and/or create the potential for a high degree of long term impact in Pittsburgh and beyond. Any project that pursues this measure must first identify the scale(s) of impact that is being addressed based on the following areas:

- » **Process:** entire systems and approaches required for development.
- » **Building:** the systems within building envelope and its immediate site area.
- » **District or Neighborhood:** adjacent area beyond the project site boundary.
- » **City or Ecosystem:** the entire city and/or an ecosystem that extends beyond political boundaries.
- » **New Markets:** new products, supply chains, or markets that generate new business opportunity for the Pittsburgh region.

Baseline: All projects pursuing points in the Innovation Measure must first agree to support the potential duplication of their innovation(s) through documentation that is made publicly available. Achievement of this baseline requirement will at a minimum include the activity below.

- » Report on quantifiable performance outcomes for the area of innovation over a period of 3 years; AND,
- » Document the “story” of how the area of innovation was accomplished with lessons learned for public use that will inspire others to duplicate.

Points will be qualitatively assessed based on documentation that clearly demonstrates project innovation and quantifies the direct impact that will be created. To achieve innovation points the project must successfully address at least three of the first four innovation metrics below (I.1 through I.4).

I.1 Creativity up to 2 points

What new idea or novel approach has been invented to address a challenging Pittsburgh issue(s)? Has this idea/approach ever been attempted in Pittsburgh and if so, what is different now that will cause it to succeed? Does this idea have the potential to put Pittsburgh on the global map?

I.2 Leadership up to 2 points

How does the project exemplify thought and/or practice leadership? How will others be inspired to follow this model and duplicate it?

I.3 Transformative Change up to 2 points

How will the project generate “leap frog” positive change in Pittsburgh development systems or methods? What has the project done to remove barriers that will make it easier for others to duplicate? How can this model be scaled?

I.4 Synergistic Connections up to 2 points

Does the project advance cross-cutting connections, strategies, and disciplines to create greater combined impact?

I.5 Inclusive Innovation up to 2 points

Achieve at least 3 points from the above innovation categories and demonstrate how your project responds to one of the Focus Areas within the Pittsburgh Roadmap for Inclusive Innovation.

METRIC METHODOLOGY

Metrics and methods will be collaboratively identified between the project owner and the reviewing agency for reporting based on proposed innovation approach.

DOCUMENTATION

The project may document its contribution to the Innovation Measure through multiple methods that will vary depending on the scale and type of innovation. At a minimum, a clear narrative case with supplemental materials, as appropriate, for demonstrating the innovation aspects based on the above areas of scope and innovation point categories for their project. Creative forms of documentation are also encouraged to demonstrate how the project is innovative.

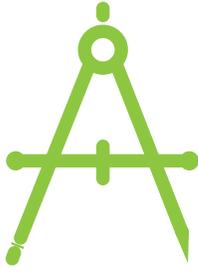
EXISTING REFERENCES & STANDARDS

This measure is expected to push beyond existing standards and references to drive new methods.

- » Pittsburgh Roadmap for Inclusive Innovation. Inclusive innovation provides equal access to services with new technologies, ideas, personnel and inventions to meet complex challenges and higher standards.

EXAMPLE STRATEGIES

- » Triple bottom line accounting and financing strategies.
- » Application and testing of applied research through collaborations with institutions of higher learning.
- » Creating a living laboratory for performance testing and evolution of methods and products.
- » Effecting change to existing codes or policies that remove barriers to new approaches.
- » Developing a Pittsburgh “first” that serves as a global model.
- » Innovative or precedent-setting design solutions.
- » Innovative methods of documentation may include: videos, web sites, demonstrations, social media application.



Promote excellence in design that instills local identity, reflects lasting quality, and integrates best practices.

Design

p4 BENEFITS

The Design Measure addresses all four p4 goals: **People, Place, Planet, and Performance**. Site specific design responds to the existing physical, ecological, and social context that make it unique, providing a sense of place. People care for and love places that reflect beauty, interest, and local elements that are recognizable and welcoming. Durability and high performance design elements ensure that investments are highly leveraged and natural resources are valued.

METRICS

Design is a foundational element that is woven through many of the p4 Measures. The assessment of this Measure is qualitative and will be conducted through the Contextual Design Advisory Panel (CDAP) review process, or similar methods established by reviewing agencies. To meet the requirements of the Design Measure, the following areas must be clearly illustrated and specified in the design documents at the appropriate stages of design. Other aspects of design excellence that are considered exemplary by a widely recognized, independent review panel will also be considered.

D.1 Context and Cultural Expression up to 5 points

One point may be attributed to each topic area below that is included in the design and/or exemplary performance may result in multiple points assigned to individual areas up to a total of 5 points.

- » Restoration or reuse of historical building(s), sites, or features of neighborhood importance into the project design.
- » Building use or form that positively contributes to the identity of the neighborhood or city.
- » Meaningful inclusion of **local artisan products** (also relates to the Opportunity Measure).
- » Creating facilities for publicly accessible cultural and art uses and functions (also relates to the Public Measure).
- » Creating and developing implementation plan for an Arts Master Plan. (also relates to the Public Measure).

D.2 Materials & Detail up to 5 points

Projects that meet or exceed the following criteria. One point may be attributed to each area that is included in the design and/or exemplary performance may result in multiple points assigned to individual areas up to a total of 5 points.

- » **Durable**, high quality building materials.
- » Materials that are innovative or reflect Pittsburgh's identity/heritage.
- » Attention to architectural design elements and details.

Local Artisan Products. Products that are hand crafted primarily by skilled trades workers (current or historic) that contain raw materials primarily sourced within the Pittsburgh MSA (Metropolitan Statistical Area) and reflect the context of the neighborhood or region.

Durable Building Materials. For the purposes of the Design Measure durable materials include those that have a long life-cycle with appropriate maintenance. This includes materials that hold up well to natural elements, pollutants and active use by occupants. Durable materials will also include elements of high quality that have minimal impact on the environment and humans through their production and use, and are generally considered aesthetically pleasing, based on the other criteria included in the Design Measure.

- » Revealing or showcasing the operation of a building's high-performance and/or otherwise creative building or site system, structure, or assembly.
- » Roof design that is integrated into the overall building design, taking into account the views onto the roof from nearby vantage points or overlooks.

METRIC METHODOLOGY refer to *Documentation* section

DOCUMENTATION

To support a presentation to the CDAP, provide (as appropriate):

- » Design documents
- » Building(s) specifications
- » Narrative descriptions

Furthermore, an in-person or virtual presentation must be provided at the Schematic Design stage, and again at completion of Design Development stage or prior to development of Construction Drawings.

EXISTING REFERENCES & STANDARDS

- » Arts Master Plan (planned)
- » Pittsburgh Principles for Design & Planning (in development)

EXAMPLE STRATEGIES

- » Refer to examples provided in the Pittsburgh Principles for Design & Planning (in development).

Appendices

Appendix A: Process Summary	45
Appendix B: Summary of References & Standards	48
Appendix C: Summary of Definitions	50
Appendix D: Additional Resources & Links	54

Appendix A:

Process Summary

The following provides a summary of the development process for the Pittsburgh p4 Performance Measures, which included: meetings, webinars, and key milestones. This summary does not fully reflect the extensive level of engagement and time contributed by over 100 persons who directly participated in the Measures development over a nine-month period.

OVERVIEW

- » **November:** Invited and confirmed PMC members.
- » **December:** Interviewed 19 PMC members and researched existing systems.
- » **January:** Confirmed purpose, process and structure, and reviewed existing systems.
- » **February:** Identified and prioritized 38 P-based metrics, synthesized into 10 (later 12) Measures.
- » **March:** Established a process and template for development of Measures.
- » **April:** Formed technical teams and began Measure development.
- » **May:** Gained PMC support for draft Measures, formed Design Team.
- » **June:** Finalized draft measures by technical teams, and added Air Team.
- » **July:** Prepared draft Measures document, and met with Mayor Peduto for review and validation.
- » **August:** Tested and validated Measures.
- » **September:** Conducted Developer Roundtables and provided opportunities for stakeholder input through an on-line survey tool and webinar.
- » **October:** Finalized the Measures document.
- » **November – December:** Prepare Implementation Recommendations and Workplan (planned)
- » **January 2017:** Begin use of the Measures by the URA (planned)

JANUARY

» January 6, Webinar:

- Presented project overview & boundaries.
- Reviewed project timeframe & process.
- Reviewed inventory of existing rating systems relevant to the project.

» January 13, PMC Meeting:

- Created a common language: Discussed outcomes from the PMC interviews.
- Defined Success: What we have heard to-date from interviews?
- Established sphere of influence: What are the boundaries that P4 PM can influence?
- Identified and discussed priority indicators.
- Utilized worksheets for input on each P area.

» January 14, MWG Meeting:

- Discussed and resolved PMC input.
- Identified preliminary indicators for each “P” area.
- Identified “P” team leads and other potential participants.

» “P” Area Team Calls:

- Formed groups for each “P” area.
- Developed indicators and metrics for each “P” area.
- Identified 12 categories and 38 metrics for prioritization by the PMC.

FEBRUARY

» February 10, Webinar: Indicators & Metric Development

- Presented preliminary outcomes of each of the 4 – “P” groups.

» February 17, PMC Meeting

- World Café Discussion – table discussions were facilitated for each of the 4 P areas.
- PMC prioritized metrics both within each P area (top 3) and across all. (top 5) – served as the basis for framing the selected Measures.
- Identified and discussed cross-cutting issues.

» February 18, MWG Meeting

- Discussed outcome of the prioritization process, examined any gaps/overlaps/skewing/grouping and validated final set of Measures to pursue.

- Discussed typologies and stages of a project that may influence approach to Measures development.
- Finalized team co-leads and potential participants for each of the 10 Measure Technical Teams.

MARCH

» March 9, Webinar

- Reviewed prioritization process used by the PMC to transition from 38 metrics within P areas to 10 cross-cutting measures for development.
- Shared the preliminary example metrics identified for each of the Measures.
- Provided overview of URA potential use of measures within applicable program/product areas.

» March 16, PMC Meeting

- Discussed Measure development process.
- Reviewed draft framework/metric examples for each Measure created and solicited input.
- Discussed where the “Bar” should be set for metrics.
- Reviewed outlines for the Measures document and future implementation recommendations.

» March 17, MWG Meeting

- Reviewed Measure development process and timetable.
- Established staging of Measures – which ones could move forward more quickly and be presented in more detail in April

APRIL

» March to April

- No April webinar
- Established Technical Teams and held calls/ meetings to develop first drafts for each of the 10 Measures.
- Developed Measures template for use by the Technical Teams.
- Identified the Innovation Measure as important element to address in the process.
- Identified Design Excellence as an additional area to be addressed separately rather than integrated through all Measures.
- Identified health as a cross-cutting issue that required further consideration.

» April 13, PMC Meeting

- Reviewed draft Measures in detail for input.
- Group 1: Economy, Community, Connect, Rainwater, Climate – closest to being complete and reviewed in deeper detail.
- Group 2: Opportunity, Public, Land, Innovation, Design Excellence – required more time for development.
- Reviewed next steps and project timeline.

MAY

» May 3, MWG Meeting

- Peer reviewed and vetted draft measures.
- Identified issues and gaps.
- Examined full set of measures for overlap and areas of connectivity.

» May 4, Webinar

- Reviewed process to-date.
- Reviewed in detail each measure presented by co-leads of each Technical Team.

» May 11, PMC Meeting – 3 hours

- Reviewed what success looks like from interviews presented at the first PMC meeting.
- Reviewed in detail all 10 Measures presented by co-leads from each team.
- Process oriented: Community, Design, Innovation, Opportunity (hybrid).
- Metric oriented: Economic, Housing, Land, Public, Connect, Rainwater, Energy.
- Identified any areas of Significant Concern (approval by Consent process) – no major concerns stated.

» May 12, MWG

- Reviewed PMC input and provided direction to team leads and staff support to address comments.
- Established timetable to finish all draft Measures by the end of May.
- Innovation & Design – initiated new teams for completion by mid-June.
- Discussed testing on projects and Developer Roundtable review as a necessary part of the validation process.

JUNE

» May – June

- No PMC meeting held in June.
- Held Innovation Team meeting and completed preliminary draft.
- Established Air Team as the most relevant aspect of health to be addressed through development practices and held first team call.
- Formed Design team formed and held meetings.
- Received draft Measures from 9 teams in mid-June.
- Completed Measures document v.1.

JULY

» July 7, Meeting with the Mayor and Heinz Leadership

- Reviewed process to-date.
- Validated outcomes to-date.
- Agreed on next steps and timetable toward implementation.

» July 13, Webinar

- Reviewed development process.
- Provided overview of all 12 measures.
- Reviewed plans for validation.

» » July 20, PMC Meeting

- Provided an update on final development of Measures and identified any significant issues or changes since agreement in May.
- Provided v.2 draft document for review and comment.
- Reviewed the planned validation and testing process
- Discussed areas to be addressed/considered in implementation.

AUGUST

- » No PMC meeting or webinar held.
- » Tested Measures with existing projects through a day-long intensive review and scoring process.
- » Completed outstanding Measures.
- » Prepared v.3a draft Measures document for review.

SEPTEMBER

» September 8–9, held two Developer Roundtables

- Reviewed the Measures.
- Solicited input on Implementation.

» September 14, PMC Meeting

- Provided v.3.b document for early PMC comment.
- Reviewed outcomes from Project Testing and Developer Roundtables.
- Reviewed status of implementation systems development.
- Provided input to recommendations for future consideration.

» September 21, Webinar for Stakeholders

- Presented final Measures and update on implementation plans.
- Provided final draft v.3.c document directly via email and posted on-line for comments from all stakeholders through on-line survey process.

» Finalized comment process and initiated development of final Measures document

OCTOBER

» Produced final Measures document for public distribution and use.

» Held October 18–19, p4 Summit

- Presented the Measures to the public.
- Held break-out session at the Summit on purpose and use of the Measures in a workshop format.

NOVEMBER – planned

- » Produce Implementation Recommendations.
- » Develop workplan for implementation requirements.
- » Identify areas for future consideration that could not be included in the current set of Measures.

2017 – planned

- » Begin use of the Pittsburgh p4 Performance Measures by URA.
- » Develop implementation systems.
- » Encourage use of Measures by multiple entities.

Appendix B:

Summary of Existing Standards & References

2010 ADA Standards for Accessible Design. September 2010. Department of Justice.

2030 Challenge Baselines are based on national median Site EUI. The international 2030 Challenge baseline is the national median Site EUI by use type, as determined by 2003 Commercial Building Energy Consumption Survey (CBECS) data. Interpretation of this information for Pittsburgh is captured in the Pittsburgh 2030 District energy baseline.

Add Value-Add Art: A Public Art Resource Guide for Development. 2010. Urban Redevelopment Authority. A resource guide to give developers information and tools to commission works of art. It features examples of different project types, discusses best practices, and outlines local and national resources for public art.

Affordable Housing Task Force Recommendations: Findings and Recommendations to Mayor William Peduto and the Pittsburgh City Council. May 2016. Affordable Housing Task Force. An effort to assess the current, and project future, landscape of housing affordability in the city of Pittsburgh, evaluate current programs and initiatives to produce new affordable units and preserve existing ones, and present a set of recommendations.

Arts Master Plan (planned)

Athena Sustainable Materials Institute. Athena is a non-profit research collaborative that aims to bring life cycle assessment (the science behind environmental footprinting) to the construction sector.

Carbon Disclosure Project (CDP). For over the past 15 years, CDP has acted as a not-for-profit that runs the global disclosure system for investor, companies, cities, states, and regions to manage their environmental impacts.

Greenhouse Gas (GHG) Protocol. Developed by the World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD), the GHG Protocol sets the global standard for how to measure, manage, and report greenhouse gas emissions.

ICLEI's Greenhouse Gas Protocols. Developed by the ICLEI through extensive stakeholder consultation and partnership with other leading GHG emissions experts, the ICLEI's GHG Protocols provide authoritative guidance for communities to account for carbon pollution accurately and consistently; they are the national standards for local-scale accounting of emissions that contribute to climate change.

LEED BD+C: Clean Construction Credit, SSpc75. U.S. Green Building Council. This pilot credit aims to minimize the health and climate impacts to local communities from diesel engine emissions associated with construction activities.

LEED ND: Plan | v3 – LEED 2009 Stormwater Management, GIBC8. U.S. Green Building Council. This credit is intended to reduce pollution and hydrologic instability from stormwater, reduce flooding, promote aquifer recharge, and improve water quality by emulating natural hydrologic conditions.

LEED ND Walkable Streets. U.S. Green Building Council. This credit is intended to promote transportation efficiency, including reduced vehicle distance traveled. To promote walking by providing safe, appealing, and comfortable street environments that support public health by reducing pedestrian injuries and encouraging daily physical activity.

Market Value Analysis (MVA). Prepared for the City of Pittsburgh (and its authorities) by The Reinvestment Fund, the Market Value Analysis (MVA) is an analytic tool. Pittsburgh is one of 30 cities to use the MVA tool. For this Measure, point allocations for a given non-public financing level vary based on the URA Market Value Analysis cluster assigned to the geographic area in which a project is located. For the most current MVA map and cluster table, please refer to the City's website.

Moving Beyond Job Creation: Defining and Measuring the Creation of Quality Jobs. August 2016. Insight at Pacific Community Ventures. This paper identifies characteristics of a quality job as defined further below, as well as methods for measuring job quality.

Non-public funding. The standard for a minimum of 60% of non-public funding is a requirement in several URA programs, and is also common in other funding programs.

Passive House is a building for which thermal comfort can be achieved solely by decoupling heating and cooling from ventilation, thus achieving sufficient indoor air quality conditions without the need for additional air recirculation. Buildings that meet this standard can use up to 80% less energy, while providing better indoor air quality and thermal comfort than those designed to conventional codes.

Pittsburgh Code of Ordinances.

- » §161.38 City of Pittsburgh Service Worker Prevailing Wage Ordinance.
- » § 161.42 – Clean Construction Diesel Operations.
- » §906.02. – FP-O, Floodplain overlay district (recently updated).
- » §906.03. – RF-O, Riverfront Overlay District.
- » §906.07. –SM-O, Stormwater Management Overlay District.
- » §909.02.C.2 Site Development Standards.
- » §914.05 Bike Parking.
- » §914.11 Exceptions to Off-Street Parking, Loading and Access Standards.
- » §915 Environmental Performance Standards.
- » §918 Landscaping and Screening Standards.
- » §1003. – Stormwater Management Code. Land Operations Control and Stormwater Management
- » **URA Minority Business Enterprise (MBE) current requirements.**

Pittsburgh Principles for Design & Planning (in development)

Pittsburgh Roadmap for Inclusive Innovation. Inclusive innovation provides equal access to services with new technologies, ideas, personnel and inventions to meet complex challenges and higher standards.

Pittsburgh Water and Sewer Authority’s City-Wide Green Infrastructure Assessment

Pittsburgh Water and Sewer Authority’s Monitoring Protocol (currently in final draft)

Portfolio Manager Technical Reference: Greenhouse Gas Emissions. Produced by Energy Star, this technical document helps businesses and organizations assess the emissions footprint associated with their energy consumption. Through the incorporation of a number of metrics to quantify these emissions and provide an understanding of they are generated.

Summary of In-Lieu Fee Calculation. Washington, D.C. Department of Energy & Environment. The \$3.50 per gallon per year fee is based on the calculation that Washington, D.C. uses for their payment-in-lieu fee.

The WELL Building Standard. Supports human health and well-being by harnessing the built environment through best practices in design and construction with evidence-based medical and scientific research.

Transit Service Guidelines. Draft, May 2015. Port Authority of Allegheny County, Department of Service Planning & Evaluation. For Allegheny County (and over 61 million rides annually), this guideline is designed to: set service goals, design service and determine appropriate service levels, establish minimum service performance, evaluate service performance, and prioritize future service changes and plans.

Uniform Federal Accessibility Standards (UFAS). United States Access Board. One of two standards (along with the ADA standards for Accessible Design) for new construction and alterations under the ADA for state and local government facilities. In addition to being incorporated into local building codes, these standards are also a good source for universal design concept in the building and remodeling of private homes.

Whole Building Energy Models allow designers to assess whole building energy, assessing passive efficiency strategies (such as daylighting), reductions in cooling/heating loads, equipment requirements, and combinations of measures. Energy model software programs includes but are not limited to: EnergyPlus, eQuest, IES VE, Passive House PHPP Energy Model.

Appendix C:

Summary of Definitions

1.5" of rainfall in a 24 hour period is based on recent PWSA analysis of events that have caused local flooding. It was determined that rainwater equal to 1.5" of rainfall in a 24-hour period, including a peak of 1.05" in 15 minutes is a standard that should be considered a baseline for future projects in the City. The ongoing uncertainty of changing climate makes this approach potentially more locally relevant than traditionally used percent of rainfall events.

95th Percentile Rainfall Event. A precipitation amount of which 95th percent of all rainfall events for the period of record do not exceed. In more technical terms, the 95th percentile rainfall event is defined as the measured precipitation depth accumulated over a 24-hour period for the period of record that ranks as the 95th percentile rainfall depth based on the range of all daily event occurrences during this period.

Abandoned Property. As defined by Pittsburgh Code of Ordinance §671.02(a), "property that has exhibited evidence of abandonment as defined in [Section] 671.02(c) for thirty (30) days or more and meets any of the criteria listed below.

- » Provides a location for loitering, vagrancy, unauthorized entry or other criminal activity.
- » Has one (1) or more broken windows, or two (2) or more windows boarded up for more than thirty (30) days.
- » Has utilities disconnected or not in use.
- » Is not maintained in compliance with City Code, including without limitation, Pittsburgh Building and Fire Prevention Codes.
- » Has taxes in arrears for a period of time exceeding three hundred sixty-five (365) days.
- » Is only partially completed, is not fit for human occupancy and there are no active building permits on the property that will result in restoration of the premises to a safe and habitable condition."

Accepted Community Plan. A community plan prepared by the RCO and accepted by the Department of City Planning and City Planning Commission.

Active Uses. Within a development, active uses include, but are not limited to, the following: amusement, arts and culture, healthcare, food and/or drink, nonprofit, neighborhood serving business, retail, sales or service, education, library, walk-up service or retail, and public common space.

Affordable. In general, housing for which the occupant(s) is/are paying no more than 30% of his or her income for gross housing costs, including utilities, is considered "affordable."

Source: Department of Housing and Urban Redevelopment.

Air leakage. Air leakage is the term for uncontrolled air movement into and out of buildings via the building envelope. Limiting and controlling air leakage is important for a number of reasons including reducing heating and cooling energy requirements and costs.

Area Median Income (AMI). Every fiscal year, the U.S. Department of Housing and Urban Development (HUD) establishes income limits (and therefore eligibility) for assisted housing based on income levels determined by the AMI of the metropolitan area (MSA) or Non-Metropolitan areas (counties). These income limits (available by family size) are defined below.

- » "Extremely low income" is 30% of AMI.
- » "Very low income" is 50% of AMI.
- » "Low-income" is 80% of AMI.

Certified Redevelopment Area (CRA). Under the State's Urban Redevelopment Act (Act 385 of 1945, as amended) a community is authorized to designate Redevelopment Areas. A Certified Redevelopment Area (CRA) is any area of the community that the City of Pittsburgh Planning Commission designates or certifies as an area for redevelopment.

Community. A social group of any size whose members reside, and/or conduct business, in a specific geographic area, and often have a common cultural and historical heritage, or other rooted connection to that locality.

Community Based Organization (CBO). The acknowledged public or private nonprofit (including a church or religious entity) that is representative of a community or a significant segment of a community, and is engaged in meeting human, educational, environmental, or public safety community needs.

Community Benefits Agreement (CBA). A project-specific agreement (contract) between community groups and a real estate developer/project owner that details the project's contributions to the community, and helps ensure community support for the project. CBA's can require that the developer provide specific amenities and/or mitigations to the local community or neighborhood, such as creating opportunities for local workers and communities.

Community Development Corporation (CDC). The acknowledged nonprofit, community-based organization focused on revitalizing the built environment of the area in which they are located, typically low-income, underserved neighborhoods that have experienced significant disinvestment.

Community Development Financial Institutions (CDFI). CDFIs are financial institutions that provide credit and financial service to underserved markets and population, with a commitment to building community wealth and social mobility. Certified by the Community Development Financial Institutions Fund (CDFI Fund) at the U.S. Department of the Treasury, CDFIs may be a community development bank, a community development credit union, a community development loan fund, a community development venture capital fund, a microenterprise development loan fund, or a community development corporation.

Community Equity Investment Partnership. An agreement between the developer and local CBO/CDC that results in a long-term investment in the community for broader social returns.

Community Outreach Strategy. A clearly documented approach for community outreach with a timeline and responsibilities for how the immediately impacted community will be engaged in a meaningful manner. The Strategy should also include a clearly defined approach for reaching vulnerable populations that have difficulty or uncomfortable to participate.

Criteria Air Pollutants (CAPs). These commonly found air pollutants (also known as “criteria pollutants”) are found all over the United States. They are particle pollution (often referred to as particulate matter), photochemical oxidants and ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead.

Derelict. A derelict property is a property in very poor condition as a result of disuse and neglect.

Disadvantage Business Enterprises. DBEs are small businesses that are majority owned and controlled by racial, cultural, gender-based, social, or economically disadvantaged individuals that have been certified through a Federal or State program.

Disadvantaged Populations. Disadvantaged populations are persons who are a member of groups that are considered disadvantaged due to racial, gender, age, physical, or other social or economic circumstances that have resulted in disproportionately low incomes and high rates of unemployment.

Distributed Energy. Refers to a range of smaller-scale technologies designed to provide electricity and thermal energy close(r) to consumers. These approaches include both fossil and renewable energy technologies, microgrids, on-site energy storage, and combined heat and power systems. Supporting City of Pittsburgh and U.S. Department of Energy collaboration to enhance existing and future distributed energy systems locally, these systems offer solutions to local air quality challenges, local resiliency preparation, energy security concerns, power quality issues, and energy cost control. Sample technologies could include: existing district energy facilities combined heat and power systems, microgrids, fuel cells, and batteries.

Durable Building Materials. For the purposes of the Design Measure durable materials include those that have a long life-cycle with appropriate maintenance. This includes materials that hold up well to natural elements, pollutants and active use by occupants. Durable materials will also include elements of high quality that have minimal impact on the environment and humans through their production and use, and are generally considered aesthetically pleasing, based on the other criteria included in the Design Measure.

Enhanced commissioning. Intended to further support the design, construction, and eventual operation of a project that meets the owner’s project requirements for energy, water, indoor environmental quality, and durability, as defined by **USGBC, LEED BD+C v.4**, or most current version.

Equitable development. Equitable development is a positive development strategy that ensures everyone participates in and benefits from the region’s economic transformation—especially low-income residents, communities of color, immigrants, and others at risk of being left behind. It requires an intentional focus on eliminating racial inequities and barriers, and making accountable and catalytic investments to assure that lower-wealth residents:

- » live in healthy, safe, opportunity-rich neighborhoods that reflect their culture (and are not displaced from them);
- » connect to economic and ownership opportunities; and
- » have voice and influence in the decisions that shape their neighborhoods.

source: Equitable Development: The Path to an All-In Pittsburgh.

Green Infrastructure. Green infrastructure is a strategic network of vegetated areas and water retention techniques intended to mitigate stormwater problems. Examples of green infrastructure include: greenways, rain gardens, bioswales, green roofs, rain barrels, etc. For more information and techniques for planning and designing for green infrastructure on a property, refer to **3 Rivers Wet Weather RainWays**.

Greenhouse gases. A greenhouse gas (GHG) is a gas in an atmosphere that absorbs and emits radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. The primary greenhouse gases in Earth’s atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Housing Unit Types. Housing unit types generally include: single-family detached, duplex, townhome/rowhome, and multi-unit structure, it can also refer to a mix of renter/owner-occupied, and affordable/market-rate housing.

Inactive. An inactive property is one that is not in use or is inoperative.

Last Mile Connection. The “last-mile” or “first and last-mile” connection describes the beginning or end of an individual trip made primarily by public transportation. In many cases, people will walk to transit if it is close enough. However, on either end of a public transit trip, the origin or destination may be difficult or impossible to access by a short walk. This gap from public transit to destination is generally termed a “last mile connection” and is intended to include either end of the trip.

Local Artisan Products. Products that are hand crafted primarily by skilled trades workers (current or historic) that contain raw materials primarily sourced within the Pittsburgh MSA (Metropolitan Statistical Area) and reflect the context of the neighborhood or region.

Locally Manufactured Products. Products that are manufactured, crafted, or primarily assembled within the Pittsburgh MSA (Metropolitan Statistical Area) using local labor.

Major Renovation vs. Existing Building. A “major renovation” is the renovation of a building where (a) the total cost of the renovation related to the building envelope or the technical building systems is higher than 25 % of the value of the building (excluding the value of the land upon which the building is situated); or (b) more than 25 % of the surface of the building envelope undergoes renovation.

MERV (Minimum Efficiency Reporting Value). MERV is a standard that rates the overall effectiveness of air filters. Higher value MERV rating equates to finer filtration, meaning fewer dust particles and other airborne contaminants can pass through the filter

MVA Land Table.

Re-use. Categorization of the suitability of a parcel's re-use in the next five years, based on current conditions. This categorization must be updated on a regular basis, to reflect changes.

- » **Develop.** Parcel is suitable and more-easily positioned for development.
- » **Hold.** Unclear re-use. As markets shift and development/revitalization occurs, the categorization of hold parcels may shift.

Market. Relative strength of parcel, as part of a block-group analysis.

- » **High:** MVA Categories A, B, & C.
- » **Mid:** MVA Categories D, E, & F.
- » **Lower:** MVA Categories G, H, & I.

Tax Debt. The Age of real property tax delinquency of the parcel, based on City and PPC tax bills.

- » **Current:** File is >2 years tax delinquent, considered collectible.
- » **Short:** File is 2-4 years tax delinquent.
- » **Long:** File is 5+ years tax delinquent, considered likely unrecoverable.

Native Plants. Native plants are plants indigenous to a given area in geologic time. This includes plants that have developed, occur naturally, or existed for many years in an area (trees, flowers, grasses, and other plants).

Non-public financing. Project financing secured from sources other than public subsidy, including but not limited to: private equity, bank loans, venture capital, philanthropic support, etc. For the purposes of this calculation, private equity investments made in connection with a Low Income Housing Tax Credit (LIHTC) allocation will be considered nonpublic financing.

On-Site Renewable Energy. On-site renewable energy includes renewable sources, such as wind, solar, and co-generation, that are generated on the project site, thereby relieving reliance on the grid and providing alternative sources of electricity.

PM (particulate matters). PM (also called particle pollution) is the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope.

Priority Community. A neighborhood designated by the Priority Communities Selection Committee pursuant to Title I, Section 135.03 of the Pittsburgh Code of Ordinances.

Public subsidy. Project financing sought or secured from public entities, including departments, agencies, or authorities of the City of Pittsburgh, Allegheny County, the Commonwealth of Pennsylvania, or the United States Federal Government. Low Income Housing Tax Credit (LIHTC) allocations shall not be included in the calculation of public subsidy.

Quality Job. Given that the specific elements of a quality job vary by industry, business size, job function, and employee demographics, a flexible definition of a quality job includes the following key elements.

- » A living wage sufficient to support a decent standard of living or, at minimum, exceeds the median wage offered within the employer's industry.
- » Basic benefits that increase economic security, improve health, and promote work-life balance among workers. These include paid leave, health insurance, and a retirement savings plan.
- » Career-building opportunities that help employees develop the skills, networks, and experiences necessary to launch a career or advance along a career path. These opportunities can include training and mentorship (both formal and informal), and avenues for advancement within the company.
- » Wealth-building opportunities that enable and incentivize an employee to build the assets they need to manage financial emergencies and achieve long-term financial security for themselves and their families.

- » A fair and engaging workplace that balances the priorities and well-being of employees with the needs of the business. Examples include: offering flexible and predictable schedules, treating all staff with respect and dignity, actively soliciting employees' ideas to improve the business, and helping staff understand how their work contributes to the business's success.

Recognized Community Organization (RCO). The Department of City Planning is developing definitions and standards for Recognized Community Organizations (RCOs) that will be adopted for use within the Measures when complete.

Site Energy Use Intensity (EUI). EUI measures the total, annual building energy use normalized by its gross square footage. Site energy is the amount of energy consumed by a building or development on site, usually reflected on utility bills, but including heat and power generated and used on site (i.e., no "bill"). Thus, site EUI is a building's total annual on-site energy usage in kBtu/ft².

Sustainable development. Sustainable development recognizes that growth must be both inclusive and environmentally sound to reduce poverty and build shared prosperity for today's population and to continue to meet the needs of future generations. It must be efficient with resources and carefully planned to deliver immediate and long-term benefits for people, planet, and prosperity.

source: *The World Bank*

Urban Open Space. Designed to facilitate pedestrian circulation or provide passive recreation space, Urban Open Space adheres to the attributes listed below.

- » Designed to facilitate pedestrian circulation or relieve pedestrian congestion, Urban Open Space shall: be at the same level as abutting public sidewalks, provide a clear path or area for movement, and be accessible to persons with disabilities throughout the entire area.
- » Designed to provide passive recreation space or informal activity areas, Urban Open Space shall abut and be accessible from a public sidewalk. A plaza or park may be located above or below the level of the abutting sidewalk or open space provided it is accessible to the handicapped. A plaza or park shall contain seating, permanent landscaping, and lighting for night time illumination.
- » With signage indicating as such, Urban Open Space shall be open, without restriction, to the general public, at least during business hours normal to the area in which it is located and during periods of heavy pedestrian movement in the area.
- » When a development site is adjacent to a bus stop or transit station, the required Urban Open Space shall be designed to provide access to it and the waiting areas for transit riders.

Vacant and Distressed Parcels. As defined by Pittsburgh Code of Ordinance §174A.02(v). "All of those parcels of real property that do not have a structure, or have a condemned structure, or are more than one-full-year tax delinquent or are titled in the name of the city and not intended for city open space like parks and greenways and city operations like facilities and yards for the sole purpose of determining council districts with the greatest number of vacant and distressed parcels of real property ordinance."

Voltaic organic compounds (VOCs). VOC are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by a wide array of products numbering in the thousands.

Visitability. Visitability is an approach to design that integrates basic accessibility features into newly built homes, including a stepless entrance, wider doorways and at least a half bathroom on the main floor. Visitability also promotes affordable, sustainable and inclusive design solutions. An **initiative** was founded in the belief that basic architectural access features in all new homes is a civil and human right that improves livability for all.

Zero Energy Buildings. A low energy use building which offsets its energy use through on-site renewable sources.

Appendix D: Additional Resources & Links

2015 Enterprise Green Communities Criteria. Enterprise Community Partners, Inc. 2015.

A Pittsburgh That Works for Working People. Satya Rhodes-Conway, Laura Dresser, Mel Meder, and Mary Ebeling. COWS. May 23, 2016.

Designing Healthy Cities. “...Life in towns and cities can grind you down, but putting health and wellbeing at the centre of new housing and infrastructure developments could make for happier, healthier citizens...”

Equitable Development: The Path to an All-in Pittsburgh. PolicyLink, Neighborhood Allies, and Urban Innovation 21. September 2016.

Health Risk Tradeoffs of Biking & Walking. Tainio et al. 2016. Cambridge University.

The Initiative for a Competitive Inner City (ICIC). ICIC is a national nonprofit research and advisory organization, whose mission is to drive economic prosperity in America’s inner cities through private sector investment to create jobs, income, and wealth for local residents.

Innovating for the Future of Cities. Discussion of future demographics, smart buildings, active transportation, etc.

LEED 2009 ND Global ACP Reference Guide Supplement. U.S. Green Building Council. This document provides a description of credits with eligible alternative compliance paths for LEED for Neighborhood Development.

LEED V4 For Building Design & Construction. U.S. Green Building Council. Updated with addenda on April 5, 2016.

LEED V4 For Neighborhood Development. U.S. Green Building Council. Updated with addenda on April 5, 2016.

Living Community Challenge 1.0: A Visionary Path to a Regenerative Future. International Living Future Institute. 2014.

NYC Active Design Guidelines. The Center for Active Design. 2010. <https://centerforactivedesign.org/guidelines/>

Philadelphia’s Changing Neighborhoods: Gentrification and Other Shifts Since 2000. The Pew Charitable Trusts. May 2016.

The Market Value Assessment. Pittsburgh hired the Reinvestment Fund (TRF) to complete a Market Value Assessment (MVA) for the city. The MVA is a statistical tool that uses market data to classify geographic areas and produce a map of the varying market types within the City. Draft MVA maps are below, further information can be on the website, which is to be updated in the coming year.

The WELL Building Standard. DELOS. Supports human health and well-being by harnessing the built environment through best practices in design and construction with evidence-based medical and scientific research.

