

## Attachment 2

### Technical Advisory Committee Presentation to BILD

# Sustainability Metrics Update Project

Development Industry Meeting #2

December 2, 2020



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## Agenda

- Introductions
- Brief overview of program
- Summary of metric updates
- Response to feedback given by industry
- Next steps
- Q & A



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## Introduction



Audience will be muted throughout the session



Webinar is being recorded



Use the Chat function to post any questions



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## Overview of the Program



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## Why Have Sustainability Metrics?

- Encourage design that is environmentally, socially, and economically sustainable
- Implementation tool to help achieve Provincial Planning and Official Plan objectives
- Facilitate creating healthy, complete, and sustainable communities that:
  - Offer high-quality of life for residents
  - Reducing GHG emissions from new buildings and transportation
  - Using municipal infrastructure more efficiently
  - Supporting local economic opportunities
  - Improving health and wellness for residents
  - Enhancing the local building stock
  - Increasing resilience
  - Creating diverse communities
  - Offering cost efficiencies



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## Sustainability Metrics Program: History

- Originally launched in 2014
- Partnership between Cities of Richmond Hill, Vaughan and Brampton
- Partially funded through support from FCM's Green Municipal Fund, and Province's Places to Grow Implementation Fund
- Extensive consultation with building and development industry
- BILD Peel Chapter provided letter of support
- Award winning program:
  - Research & New Direction, Excellence in Planning Award = Ontario Professional Planners Institute
  - Award of Excellence in Sustainability = American Planning Association



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## Sustainability Metrics Program: What is it?

- Sustainability metrics quantify or score the sustainability performance of development proposals
- Organized into four categories:
  - 1) Built environment
  - 2) Mobility
  - 3) Natural Environment
  - 4) Green Infrastructure & Building



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## Sustainability Metrics

- Menu of ~50 metrics applicants can choose from
- “Choose your own adventure!” approach
- **Not required to achieve every metric**
- Each metric has different levels of achievement with associated point values
- Combination of metrics selected results in a total/final point score
- Applicant can choose any combination of metrics to achieve a required minimum final score
- Enables applicant to select the metrics that best suits their property, project, and level of sustainability aspiration



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## Sustainability Thresholds

- Final score will fall within one of three sustainability thresholds: Bronze, Silver, or Gold
- Richmond Hill and Brampton = requires applicants to achieve at least a Bronze score
- Vaughan and Markham = will be requiring applicants to achieve at least a Bronze score
- **Reminder: Applicant gets to choose what metrics they will use to achieve the minimum Bronze score from the menu of metric options; applicant is not required to achieve every metric.**

Example of Thresholds: City of Brampton

	Site Plan	Plan of Subdivision	Block Plan
Bronze	35	29	30
Silver	53	40	39
Gold	70	51	49



## Sustainability Metric Update Project



## Sustainability Metric Update Project: Purpose

- Partnership between Brampton, Vaughan, Richmond Hill, and Markham
- Update existing metrics in response to changes in legislation, policy, and best practices since original metrics were approved
- Investigate adding new metrics, especially those that facilitate GHG emission reduction and energy conservation
- Morrison Hershfield retained as consultant
- Partially funded through Federation of Canadian Municipalities (FCM) Green Municipal Fund



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## Sustainability Metric Update Project: Process

Stage 1	Stage 2	Stage 3	Stage 4
Background analysis	Internal stakeholder workshop	External stakeholder workshops	Draft Sustainability Metrics Report updated based on external comments
Background memo	Draft metrics updates	Targeted Consultation with:	Internal stakeholder consultation
	Internal stakeholder revisions to draft metric updates	- BILD	Draft metric updated further refined
	Draft Sustainability Metrics Update Report prepared	- Consultants and Local Developers	<b>External stakeholder consultation</b>
		- Clean Air Partnership, Atmospheric Fund, Canada Green Building Association	Final revisions to metrics updates
		- York and Peel Regions, CAC, TRCA	Present final metric update to Council



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## Sustainability Metric Update Project: Best Practice

- Informed by variety of frameworks, including but not limited to:
  - LEED v4 Building Design and Construction
  - LEED v4 for Neighborhood Development
  - Living Building Challenge (LBC) v3.1
  - Living Community Challenge (LCC) v1.2
  - Toronto Green Standard v3
  - Community Wellbeing Framework



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## Sustainability Metric Update Project: Consultation

- Iterative process
- Consultation with municipal staff and external stakeholders
- Builders, developers, industry consultants, conservation authorities, Regional governments, non-for-profit organizations, etc.



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## Sustainability Metric Update Project: the Updates

Sustainability Metrics Update includes:

- Metrics to be Removed
- Metrics with Minor Changes
- Metrics with Major Changes
- New Metrics to be Added
- Updates to format, nomenclature, metrics program guidebook



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## Metrics Proposed for Removal

Metric
Floor Area Ratio/Floor Space Index
Persons and Jobs per Hectare
Urban Tree Diversity
Water Conserving Fixtures
Parking Garage Lighting
Energy Conserving Lighting
Proximity to School
Tree Canopy Enhancements
Material Reuse and recycled content
Recycled/Reclaimed Materials
Surface Parking

- Redundant (already covered as requirements in OP, ZBL, or OBC)
- No longer necessary (captured in another metric), difficult to verify/enforce, or industry taking different approach



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## Metrics Proposed for Minor Revisions

Metric
Surface Parking Footprint
Access to public parks
Greywater Reuse
Multi-purpose stormwater management
Distance to Public Transit
Implementing trails and bike paths
Traffic Calming
Stormwater quality
School Proximity to Transit Routes and Bikeways
Intersection Density
Passive Solar Alignment

- Rename to align more accurately with metric intent and benefits
- Improve clarity of metric intent and requirements
- Adjustments to point allocations based on feedback, uptake, and desire to incentivize specific metrics



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## Metrics Proposed for Major Revisions

Metric	Metric
Buildings designed/certified under accredited 'Green' rating system	Promote Walkable Streets
Universal Design	Pedestrian Amenities
Universally Accessible Points of Entry	Proximity to Active Transportation Network
NHS Enhancements	Stormwater Quantity
Preserve existing healthy trees	Stormwater Quality
Soil quantity and quality for new trees	Solar Readiness
Enhancing urban tree canopy and shaded walkways and sidewalks	Dedicate Land for Private Fruit and Vegetable Garden Space
Proximity to basic amenities/lifestyle amenities	Healthy Soils
Design for Life Cycle Housing	Solid Waste
Bicycle Parking	Reduce Light Pollution
Carshare & Carpool Parking	Reduce Potable Water Use
Connection to Natural Heritage	Energy Management
Cultural Heritage Conservation	Bird Friendly Design
Block Perimeter and Length	Building Energy Efficiency and Emissions
	Reduce Heat Island – Non-Roof
	Reduce Heat Island - Roof

- Address shifts in the building and development industry, and green development frameworks (e.g. LEED, LBC, etc)
- Reflect past uptake by adjusting the targets and/or point allocations for metrics that had a low or high uptake
- Past high uptake → update to a more challenging target
- Past low update → update to an easier targets



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## New Metrics Proposed

Metric
Embodied Carbon of Building Materials – Supplementary Cementitious Materials
Embodied Carbon of Building Materials – Life Cycle Assessments
Embodied Carbon of Building Materials – Material Efficient Framing
Supporting Pollinators
Salt Management
Sub Metering of Thermal Energy and Water
Back-up Power
Extreme Wind Protection
Controlling Solar Gain
Providing Mixed-Use Development
Electric Vehicle (EV) Charging Stations
Innovation
Community and Neighbourhood Scale (*new to RH*)
Intersection Density (*new to RH*)

- Reflect best practice in green development
- Growing awareness of importance of carbon associated with building materials
- Focus on climate change adaptation
- Based on provincial, municipal, and consumer trends



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## New Metric Added: Embodied Carbon of Building Materials

- Embodied carbon is the lifetime GHG emissions associated with building materials
- Encourage retention and reuse of building materials while also addressing GHGs
- The 3 new metrics related to embodied carbon replaced previous metrics related to recycling/reusing materials perceived as outdated
- Implemented by using certain building materials (e.g. Supplementary Cementitious Materials) and efficient framing (e.g. wood), and completing Lifecycle Assessment



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## New Metrics Added: Climate Change

### Electric Vehicle (EV) charging stations

- Encourages use of EVs, which can help reduce GHGs and air pollution
- Providing charging stations to serve 10% to 50%+ of the parking spaces.



### Extreme Wind Protection, Back-up Power, Thermal Energy, and Controlling solar gain

- Encourages more resilient construction for extreme weather events and reduces energy use



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## New Metric Added: Innovation

- Encourage applicants to achieve innovative performance that is significantly better than standard practice
- Applicant would need to:
  - identify or establish a baseline of standard performance
  - compare that benchmark with the final design
  - provide a high-level concept of the proposed metric to be reviewed by the City
- Up to a maximum of 10 points
- Points will only be granted for strategies not already identified in the menu of metric options or if the technology aids in the achievement of an existing metric
- City would need to review proposal before accepting proposed innovation metric



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## Updates to Guide, Format and Nomenclature



	Original Number	Metric Name	New Metric Number
Built Environment	1.B.1/ 1.B.2	Proximity to Amenities	BE-1
	New	Providing Mixed-Use Development	BE-2
	1.F.1	Design for Life Cycle Housing	BE-3
	N/A	Community Neighbourhood Scale	BE-4
	1.J.2	Cultural Heritage Conservation	BE-5
	1.C.4	Enhancing Urban Tree Canopy and Shaded Walkways and Sidewalks	BE-6
	New	Salt Management	BE-7
	1.H.4	Carpooling Parking	BE-8
	1.H.2	Surface Parking Footprint	BE-9
	New	Electric Vehicle Charging Stations	BE-10
Mobility	2.B.1	Block Perimeter Length	M-1
	1.I.2	School Proximity to transit routes and bikeways	M-2
	2.B.2	Intersection Density	M-3
	2.E.1	Promote walkable streets	M-4
	2.A.1	Pedestrian Amenities	M-5
	1.H.1	Bicycle Parking	M-6

- Re-numbered the metrics to correspond to the 5 categories (Built Environment, Mobility, Natural Environment & Open Space, Infrastructure & Buildings, and Innovation)
- Some Metrics moved to other categories to better match the intent
- Guidebook look and layout will also be updated



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## Renaming of Metric Levels

### Old Language

- Metric Target
- Mandatory (required by City policy/standard, and did not provide points) ← removed
- Minimum
- Aspirational

### New Language (all provide points now)

- Metric level
- Good = baseline sustainability performance
- Great = enhanced performance
- Excellent = best in class performance



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## Development Industry Feedback



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### BILD Feedback: General

- Letter provided by BILD dated February 2020
- Comments outlined constructive feedback
- Matters raised by BILD include the following:
  - Metrics that go beyond mandated requirements of the OBC should be based on a standard of voluntary participation for the development industry
  - Effective sustainability programs include those that incentivize sustainable development practices, use less prescriptive terms, and allows proponents barrier-free access to deliver sustainability performance that is most appropriate for their individual sites
  - A one-size fits all approach is unrealistic
  - Costs associated with employing additional sustainable development is passed onto purchaser



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## BILD Feedback: Detailed Comments

*Q1) Are the metrics standard across all of the respective municipalities? If so, can the success of each metric be replicated across these different jurisdictions equally? If not, how is the industry supposed to know which are most sustainable, cost effective and best for that particular community? Please provide examples.*

- Yes, metrics will be standard across all partner municipalities
- Ensures “equal and level playing field”, clarity, and predictability
- Metrics provided as a menu of options applicant can select from; "choose your own adventure" approach
- **Applicant can tailor the sustainable design features to the site by choosing which metrics to pursue**



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## BILD Feedback: Detailed Comments

*Q2) Are the respective municipalities looking into financial incentives for the development industry in order to enhance the use of this metric? If not, will the municipalities be providing access to financing or regulatory support to the industry?*

- Yes, financial incentives are being explored, as well as non-financial incentives
- City of Richmond Hill has explored incentives in more detail, and will be bringing forward recommendations to Council for consideration alongside the updated metrics
- Cities of Brampton, Vaughan, and Markham will be exploring opportunities for incentives at a later time based on their unique local contexts and municipal objectives



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## BILD Feedback: Detailed Comments

*Q3) Will the development industry be penalized if they are unable to implement or scale-up metrics?*

- No, the Sustainability Metrics program is not punitive
- Metrics provided as a menu of options applicant can select from; "choose your own adventure" approach
- Applicant is free to choose from a menu of ~50 metrics and select the metrics they want to implement based on what they are comfortable with and can commit to
- However, total score achieved from the culmination of all selected metrics must meet a minimum score threshold (Bronze)



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## BILD Feedback: Detailed Comments

*Q4) Is the planning rationale for this program in line with engineering and legal standards for each municipality participating in this metric?*

- The program is a tool that aligns with and supports the implementation of Provincial and Municipal objectives regarding complete communities, climate change mitigation and adaptation, transit-oriented development, efficient use of land and infrastructure, natural and cultural heritage conservation, etc.
- Each metric, including metric intent and respective requirements, have received input from and reviewed by subject matter experts in each municipality, including Engineering, Development and Policy Planning, Cultural Heritage Planning, Parks Planning, Environmental Planning, and Building staff



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## BILD Feedback: Detailed Comments

*Q5) Where there are contradictions or conflicts between points, which will take precedence? Will they be weighted in a manner that illustrates which is valued more?*

- Metric Update project included a review of any potential conflicts between metrics and points
- Attempted to structure point allocations based on, among other considerations, the complexity of the metric requirements/implementation and the resulting sustainability benefit provided
- Metrics and their associated point allocations were designed to complement each other; selecting one metric will not eliminate the opportunity to choose another
- As a reminder, the metrics are provided as a menu that an applicant can choose from; there is no requirement that all metrics be achieved



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## BILD Feedback: Detailed Comments

*Q6) What the rationale is of each metric?*

- Each metric includes a “Metric Intent” statement that provides high-level rationale for the metric and the sustainability benefit results from implementing it
- Reflects best practice in sustainable design and development
- Many of the metrics also align with internationally recognized green development frameworks, including LEED ND, LEED BD+C, PassiveHouse, Living Building Challenge, Wellbeing, Toronto Green Development Standards



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## BILD Feedback: Detailed Comments

### *Q7) Who will be defining the metrics and who will be measuring them?*

- Each metric includes a metric intent which generally outlines the rationale behind the metric requirements and the sustainability benefit that comes with the implementation of the metric
- The metrics to be achieved by the applicant are noted through the Sustainability Assessment Tool (i.e. online or manual form)
- City staff have been identified as “verifiers” for each metric
- Responsible for verifying whether metrics applicant has stated they’ve achieved in their development proposal is actually met according to metric requirements



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## BILD Feedback: Detailed Comments

### *Q8) Will approval timelines be effected? Which departments will be reviewing development applications against the metrics?*

- Approval timelines are not expected to be negatively affected
- Implementation of the metrics have been in process since 2014
- Since that time, municipal staff continue to work collaboratively with applicants/industry to educate them on the metrics, requirements, tool, and implementation
- Suite of metrics include requirements that touch upon a range of sustainability matters
- City staff within each municipality have been identified as “verifiers”
- Responsible for verifying whether metrics applicant has stated they’ve achieved in their development proposal is actually met according to metric requirements



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## BILD Feedback: Detailed Comments

*Q9) How does the point system relate to the value of each chosen metric as a priority? How have aspirational targets been determined?*

- Implementation of the metrics are based on the approach of a point-based rewards system that has been in place since 2014
- More complex metrics have higher point values
- “Aspirational” metric level now referred to as “Excellent”
- Point allocations for each metric have been reviewed comprehensively through the 2020 update to account for various factors, including but not limited to, the general complexity of metric requirements/implementation, ability of municipality to confirm implementation, and sustainability benefit



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## Additional Stakeholder Feedback: Key Themes

Key Feedback Themes	How Comment is Addressed Through Update Project
• Incorporating new metrics	→ Resulted in several new metrics
• Need for flexibility	→ Maintained program flexibility (Choose Your Own Adventure approach)
• Point allocation and score thresholds	→ Reviewed and revised; thresholds also being refined
• Clarification on program	→ Program guidebook updated to improve clarity; future training and info materials
• Remove of metrics out of applicant's control	→ Reviewed and metrics revised, as needed
• Technical comments on standards	→ Reviewed and changes made, as needed



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## Additional Stakeholder Feedback: Key Themes

Key Feedback Themes	How Comment is Addressed Through Update Project
• Metric organization and nomenclature	→ Reviewed and revised as part update project
• Incentives	→ Municipalities exploring opportunities for variety of incentives
• Verifying metric compliance and internal processes	→ Improved clarity and ease of verification; also working to improve internal processes
• Streamlining of program/submission materials	→ Streamlined and reduced submissions materials wherever possible
• Consistency between municipalities	→ Will continue to have consistent metrics across partner municipalities
• Applicability to scales and types of developments	→ Reviewed and revised as part of this update project
• Strengthening metrics	→ Included review of metrics and elevated certain metrics requirements where appropriate



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## Next Steps



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## Next Step

- Refine metrics based on input from this meeting
- Prepare final metric guidebook
- Draft recommendation report
- Present recommendation reports to each Planning Committee/Council in Q1 of 2021
- Update thresholds
- Conduct education and outreach regarding updated Sustainability Metrics



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## Q & A



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## Thank you



Brian DeFreitas  
City of Richmond Hill



Christine Lee  
City of Richmond Hill



Ruth Rendon  
City of Vaughan



Ash Faulkner  
City of Vaughan



Matt Meere  
City of Markham



Halley Patel  
City of Markham



Stav Kassaris  
City of Brampton

