GREEN INFRASTRUCTURE DESIGN CHARRETTE

Making the Case for Green Infrastructure Investment in Your Community
Who is Green Infrastructure Foundation?

The **Green Infrastructure Foundation** (GIF) was founded in 2007 to respond to the need for greater awareness and resources to promote green infrastructure in local communities. GIF is a tax-exempt, charitable organization affiliated with Green Roofs for Healthy Cities (GRHC), a membership based industry association and the leading entity for promoting the Green Roof and Wall industry in the U.S. and Canada.

The Green Infrastructure Foundation works with Green Roofs for Healthy Cities to deepen and broaden public awareness of the multiple benefits of green roofs, green walls and urban forests as part of the built environment.

Why a green infrastructure design charrette?

We need to be able to envision a greener and healthier future for our communities and understand the cost and benefits of implementation. The Green Infrastructure Design Charrette is designed to help community leaders to examine how living green infrastructure investment might work on the streets, roofs and walls of their own communities. Living green infrastructure is all too often taken for granted, or not even factored in to the development and redevelopment of communities.

The program consists of the following elements:

• Organizing a one day Green Infrastructure Design Charrette with multi-disciplinary volunteers to redesign specific neighbourhoods in need, with fifteen generic types of green infrastructure as their tools.

• Customization of a Cost-Benefit Matrix of values to be tailored to your community and to be used to generate aggregate level financial analysis of the proposed designs emerging from the charrette process.

• Production of a final report that combines images of the redesigned neighbourhoods with customized cost-benefit valuations in order to encourage policy and program changes that will lead to better implementation.

The program works to achieve the aforementioned elements, while educating participants about the benefits of green infrastructure. The program allows for a lively discussion about city building and solving complex issues regarding the urban fabric through green infrastructure, while forcing participants to leave their professional ‘silos’.
What do we do before the design charrette?

In the weeks leading up to the design charrette, participants will be briefed on the fifteen generic types of green infrastructure, their design applicability and their respective attributes. This will be done in the form of a webinar, that all participants are required to attend. The webinar will also provide details of the charrette logistics, processes, goals, and objectives for the day. The brief in advance of the design charrette allows for optimal use of the single day charrette format.
OPENING REMARKS, ORGANIZATIONAL + PROJECT OVERVIEW
9:15am – 10:00am (45min)

WARM-UP EXERCISE: ‘WHAT IS YOUR FAVOURITE PLACE? WHY?’
10:00am – 10:10am (10min)

SITE INTRODUCTIONS AND MASTER PLAN OVERVIEW
10:10am – 10:40am (30min)

VISIONING POST-UP EXERCISE
10:40am – 11:00am (20min)

APPLICATION OF POST-UP EXERCISE TO SITE CONTEXT
11:00am – 11:30pm (30min)

DEVELOP KEY OPTIONS AT SKETCHING AND PLAN-VIEW PERSPECTIVES
11:30am – 1:00pm (90min)

KEY OPTIONS AND PLAN-VIEW VISION MATRIX EVALUATION EXERCISE
1:00pm – 2:00pm (60min)

DEVELOPMENT OF FINAL SITE PLAN AND PRESENTATION
2:00pm – 3:30pm (90min)

REUNITE WHOLE GROUP FOR PRESENTATION DESIGNS AND TAKE AWAY
3:30pm – 4:15pm (45min)

CLOSING SESSION AND REMARKS
4:15pm – 4:30pm (15min)

*charrette structure is customizable.
What do we do after the design charrette?

For each type of green infrastructure utilized, the design teams are required to measure, using maps to scale, the total area in square feet of each type of green infrastructure. Some teams will have utilized all fifteen, while others will choose fewer, depending on site opportunities and constraints.

At the end of the day, the teams will have produced a written description of their site redesign, the ideas they developed, the square footage of each type of green infrastructure, as well as a variety of drawings and sketches to illustrate their work. This data forms the body of our final report to you. The information on total area of each form of green infrastructure is then applied to a customized version of the Cost-Benefit Matrix to provide the aggregate cost-benefit analysis for each site.

What is the cost-benefit matrix?

One of the challenges facing the greater utilization of green infrastructure is that we do not properly value the many benefits they provide. Green infrastructure is not even considered a capital asset in how we conduct our financial analysis of local government. Senior levels of government do not invest in green infrastructure as a component of infrastructure spending programs.

The Cost-Benefit Matrix was developed to help policy makers and community leaders better understand the many costs and benefits associated with various levels of green infrastructure investment in their communities, at an aggregate scale. It also provides a financial context for the design work emerging from the charrettes.

The Cost-Benefit Matrix is a tool in the form of an Excel spreadsheet that provides approximate values (in dollar per square foot) for the design work carried out in the Green Infrastructure Design Charrette. The values that the Green Infrastructure Cost-Benefit Matrix uses are averages, reflecting large-scale implementation, rather than project specific values one may be accustomed to. One of the reasons why we do not properly value the benefits of green infrastructure in our communities has to do with complexity. This complexity takes many forms. Conducting the cost-benefit analysis at an aggregate level, and focusing on the dollars per square foot provides additional latitude in dealing with the challenge of monetizing the benefits of green infrastructure. The cost-benefit analysis aims to help spur and facilitate a conversation with political leaders, community leaders and civil servants in communities around the valuation of green infrastructure investments and your future policy directions.

The Cost-Benefit Matrix begins an important conversation around big picture investment in green infrastructure and what benefits will be seen in return.
What do we provide?

We work with community leaders to select two sites for the design charrette and encourage you to pick areas that need more green infrastructure, and that had diverse land uses. For each area of roughly four to ten city blocks background information needs to be provided by city officials on land use, types of buildings, utility corridors, characteristics of the community etc. These form the basis of the site’s opportunities and constraints.

We believe that local knowledge rules! We ask that you suggest participants from different disciplines in your community (planning, landscape architecture, architecture, engineering, academia) as well as community representatives to participate in the one-day event. Once the participants are suggested to us, we will work to invite them to the charrette.

Once confirmed, participants will be briefed on the fifteen generic types of green infrastructure, their design applicability and their respective attributes. This will be done in the form of a webinar, that all participants are required to attend. We will offer the webinar at two separate times, to help accommodate the schedules of participants. The webinar will also provide details of the charrette logistics, processes, goals, and objectives for the day. The brief in advance of the design charrette allows for optimal use of the single day charrette format.

We will consult with your community to help prepare appropriate print materials and manage event-planning logistics leading up to the charrette. On the charrette day, we will curate the room as required and facilitate the day of the design charrette in the form of the structure outlined on page 4. At the end of the day we will gather all materials and begin working on our final report for your community.

Following the completion of the Green Infrastructure Design Charrette we work with you to customize the Cost-Benefit Matrix to the conditions of your community. This customization is done through a series of questions that work to inform our calculations and ultimately better reflects the realities of your community.

We prepare a final report in digital format that includes the design concepts, goals, objectives, costs and benefits associated with the redesigns of your community using living green infrastructure. The report acts as an expression of community interests, problems and solutions that are navigated through designing with green infrastructure. The summary report creates a compelling case for green infrastructure use with the combination of visual and financial justifications.

What do we need from you?

Deliverables required from your community can be summarized as follows:

• List of potential participants from both public and private sector (planners, landscape architects, architects, engineers, academics, community members, etc.)

• A location to hold the design charrette (in your community, 30 - 50 people)

• Selection of two sites for redesign and supporting background materials (Strengths, weaknesses, opportunities, threats, zoning / land use, socio-economic information, site photos, planned development, previously identified goals and objectives)

• Production and printing of minimum one site map per site. (Arch D size, aerial - satellite layer, map must be to scale, scale to be determined on a case by case basis.)

Design Charrette Cost: ~$25,000 USD per charrette.*
Minimum Charrette Lead-time: 2 Months prior to desired charrette date.

*customized packages are available, prices subject to change based on project scope and charrette location.
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