QUICK BUILDS FOR COMPLETE STREETS

Keyport

COMPLETE STREETS PLAN

Report prepared for the North Jersey Transportation Planning Authority and the Borough of Keyport by:

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WHAT IS QUICK BUILD?

Curb extensions. Trail crossing enhancements. Parklets and dining decks. These are just a few of the projects communities large and small are implementing with the Quick Build methodology. At a time of increased competition for funding transportation improvements, the low cost nature of Quick Build projects are increasingly popular because they accelerate project delivery, provide a platform for experiential public engagement, and instigate a paradigm shift toward safer, more complete streets.

Quick Build projects capture the pilot and interim design durations along a spectrum of iterative implementation. They are intended to be evaluated and in the ground for a minimum of one month, up to five years, and are often tied to existing master plans. Whereas demonstration projects are primarily to expand public engagement, Quick Build projects offer more time for communities to experience infrastructure.

Quick Build projects are defined by the following three characteristics:

Timeline

Implemented within a faster project delivery timeline than typical capital design and reconstruction projects; typically a few months to two years.

Budget

Temporary enough to be completed on a small budget using interim, flexible materials, but durable enough to provide the time, political capital, and budget to evaluate and iterate upon the initial project design.

Process

Utilize a people-centric, holistic process to bridge the gap between successful ephemeral demonstration projects and capital reconstruction, which may be supported by scalable policy/program development.

Quick-Build

| DEMONSTRATION (1 day - 1 month · $) | PILOT (1 month - 1+ year · $$) | INTERIM DESIGN (1 year - 5+ years · $$$) | LONG-TERM/CAPITAL (20 yrs - 50+ yrs · $$$$) |
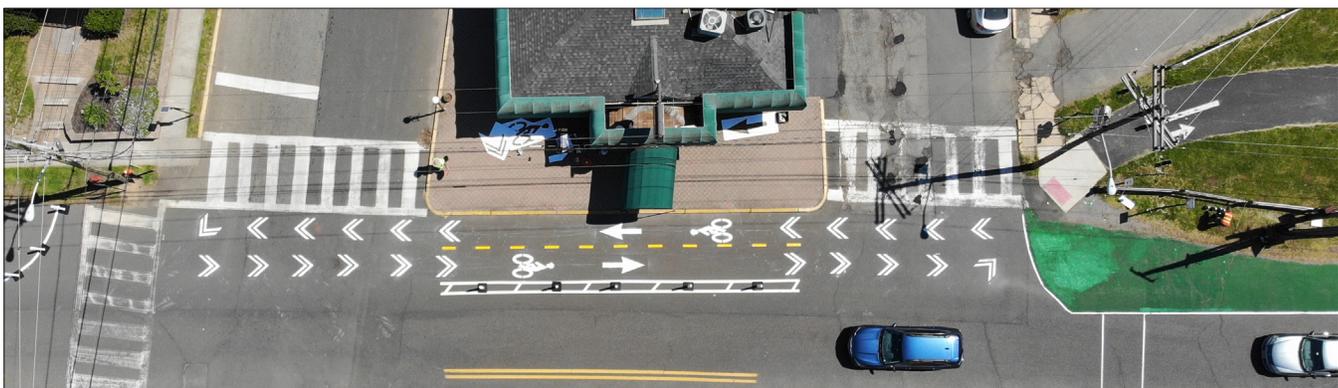
QUICK BUILD IN KEYPORT

In Keyport, the Quick Build methodology can be used to test out tools put forth in the Design Tools chapter. Whether it's a curb extension, parklet, or series of traffic calming interventions like chicanes, the Borough can use the Quick Build methodology to showcase new tools to the public in a relatively lower-risk context, and get familiar with the infrastructure's functionality before making changes permanent.

Full Complete Streets transformations all at once can be done incrementally and iteratively as budget and Borough resources allow.

Complete Streets benefits can be delivered on a faster timeline, putting the Complete Streets Guide to use almost immediately.

The below chart illustrates the progression of an iterative approach to project delivery. Though not all projects need to follow this exact model, it can be helpful to see how each project type builds towards the next, using incremental steps to deliver a capital project intended to create long-term change.

Quick-Build

| Project Type (time interval - relative cost)	DEMONSTRATION (1 day - 1 month · $)	PILOT (1 month- 1+ year · $$)	INTERIM DESIGN (1 year - 5+ years · $$$)	LONG-TERM/CAPITAL (20 yrs - 50+ yrs · $$$$)
Project Leaders	Anyone (municipality, non-profit, business owner, students etc.)	Government / organizational leadership + involvement required	Government / organizational leadership + involvement required	Government / organizational leadership + involvement required
Materials + Maintenance	Very low-cost, typically low-durability. May be borrowed, easily made, or purchased; no maintenance required	Relatively low-cost, but semi-durable materials to maximize design flexibility while minimizing maintenance needs	Low and moderate cost materials, designed to balance design flexibility, performance outcomes, and maintenance	High-cost, permanent materials that cannot be adjusted easily; maintenance needs vary tremendously
Public Involvement	Optional before project implementation, Recommended during brief project lifespan	Required, frequent before implementation and frequent during evaluation period	Recommended, frequent before implementation, required during initial evaluation period, optional thereafter	Required before implementation, recommended during implementation and initial evaluation period, optional thereafter
Flexibility of Design	High: organizers expect project to be adjusted and removed within a short timeline, typically one week or weekend	High: proponents expect project to be adjusted; it may be removed if it does not meet goals upon initial evaluation	Moderate: organizers expect project to be adjusted, but it is intended to remain in place until capital upgrades are possible	Low: project is considered a permanent capital upgrade that is unlikely to be adjusted significantly once installed
Data Collection / Evaluation	Qualitative: optional Quantitative: optional	Qualitative: required Quantitative: required	Qualitative: recommended Quantitative: required	Qualitative: optional Quantitative: recommended

A QUICK BUILD TRANSFORMATION
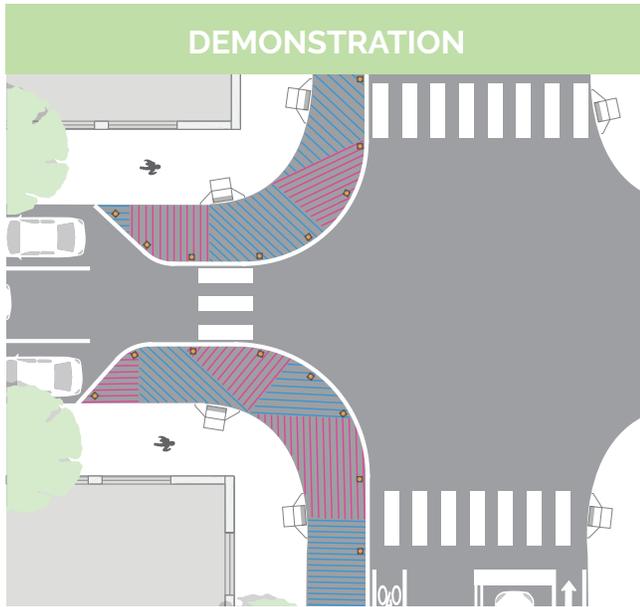
DEMONSTRATION

A curb extension built as a demonstration project would use materials that are completely removable, like colorful duct tape to create an artistic pattern, foil-backed tape for the edge line, and movable delineators with a weighted rubber base.
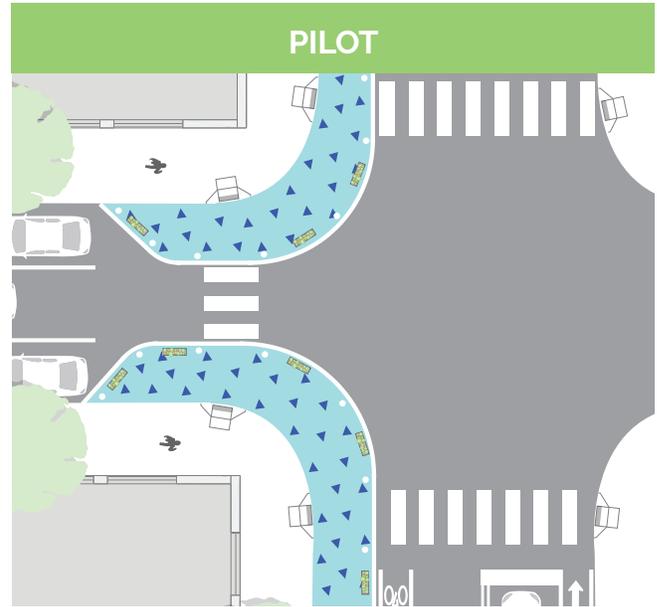
PILOT

As a pilot project, the curb extension could include longer-lasting and more complex asphalt art, applied with either acrylic household paint or Sherwin Williams Heavy Shield, for example. The outside line could be installed with traffic striping paint, or contractor-grade traffic tape, and planter boxes could replace the movable delineators to add more beautification to a more durable project.

INTERIM DESIGN
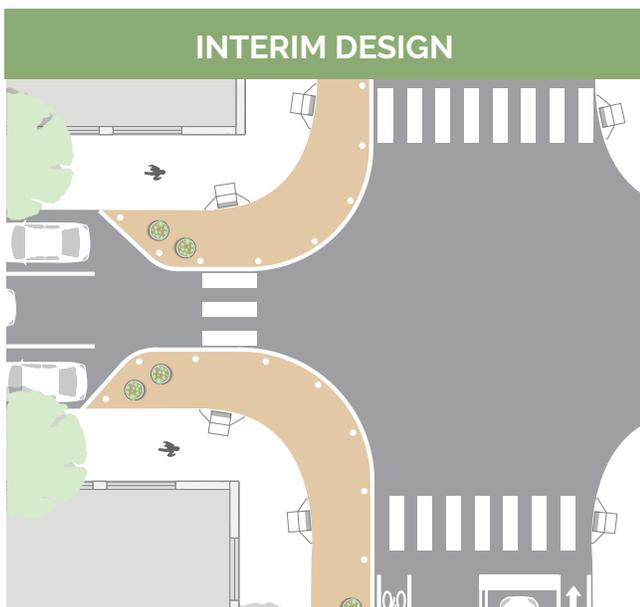
For a Quick Build curb extension that would last a couple years, for example, a solid color pavement coating (like Methyl Methacrylate, abbreviated MMA, or Ruby Lake Glass) would be applied. Planter boxes would be upgraded to durable, self-watering plastic (like Sybertech planters) or concrete planters.

CAPITAL
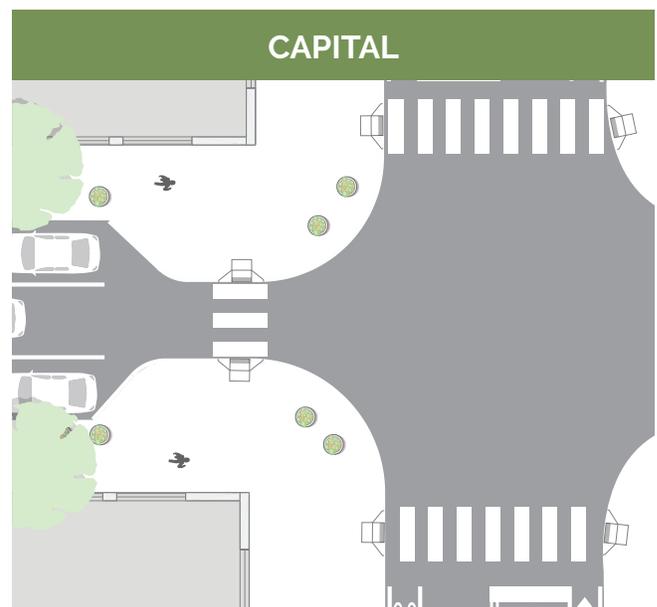
For the final version, concrete and curbs would replace any barrier elements, but the planters could remain along the edge for beautification and extra protection. The ADA ramps would be moved to the new the curb edge. Rain gardens can be incorporated if desired.

QUICK BUILD DESIGN TOOLS

Below are select tools from the Design Tools chapter that can be implemented using the Quick Build methodology. These tools are divided into two categories that describe their essential differences: Surface and Vertical.

In both categories, all of the Design Tools can follow the progression of the Quick Build methodology in material durability, intensity of evaluation, and/or complexity of installation.

On the following page are details on how each Design Tool progresses through the Quick Build methodology.
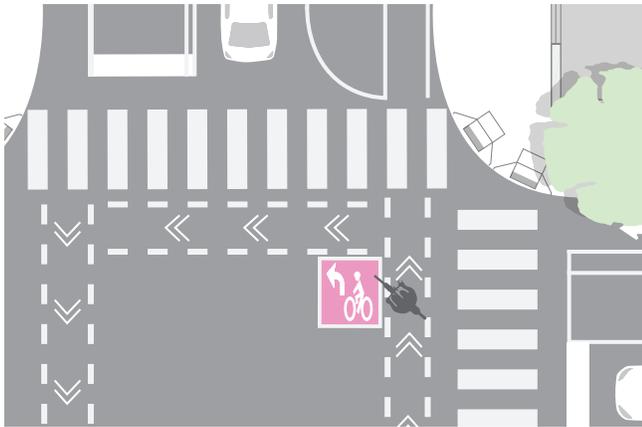
SURFACE

The below tools do not have any raised or vertical elements, and solely consist of paint, striping, and/or pavement markings.
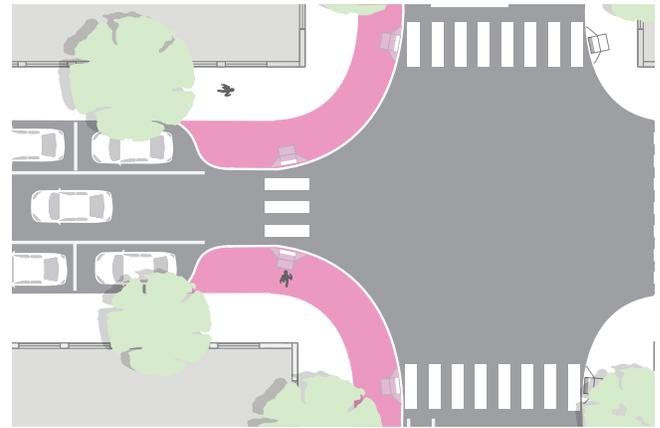
Loading Zones
Two-Stage Turn Queue Box

Bike Box
Crosswalk
Mid-Block Crosswalk
Bike Pavement Markings

Intersection / Crosswalk Art
Scramble

VERTICAL

The below tools are either barrier-protected, or contain physical, raised elements that are central to their functionality like posts, delineators, temporary curbs, planters, and signage. These tools are often combined with surface applications, like paint, striping, and pavement markings.

Bike Parking
Curb Ramp
Street Lights
Wayfinding Signage

Bike Corral
Bus Stop
Curb Extension
Chicane
Mid-Block Neckdown
Parklet / Dining Deck

Playspace
Speed Hump
Crossing Island

In-Street Pedestrian Sign
Neighborhood Traffic Circle

QUICK BUILD MATERIALS

Below is a list of materials for the various components of Quick Build projects, and the applicable phase of the methodology for each material.

Where materials are repeated in multiple phases, the difference is often the method of application. For example, delineator posts for a pilot project may be adhered with epoxy, but to make them more permanent for an interim design project, they'd be bolted down. Different aspects of Quick Build projects may also use materials for different durations.

Perhaps a bike lane interim design project includes an artistic asphalt component, but it's meant to fade over time, sooner than the rest of the project. For this interim design project, a less temporary surface treatment would be combined with more permanent materials for edge striping and barrier elements.

It is important to consider removal when selecting materials. For example, barrier elements bolted to the ground may have to be cut off, and durable surface treatments may have to be grinded off.

	DEMONSTRATION	PILOT	INTERIM DESIGN	CAPITAL
Barrier Elements				
Concrete Planters			●	●
Cones	●			
Delineator Posts		●	●	●
Movable Delineators w/ Bases	●			
K71 Bollards		●	●	●
Planter Boxes	●			
Saris Wave Delineators	●			
Sybertech Plastic Planters		●	●	
TuffCurb		●	●	●
Zicla Zebra Delineators		●	●	●
Pavement Markings & Surface Treatments				
Acrylic Exterior Household Paint		●		
Duct Tape	●			
Epoxy Gravel			●	
Methyl Methacrylate (MMA)			●	
Ruby Lake Glass			●	
SealMaster ColorPave HD		●		
Sherwin Williams Heavy Shield		●		
Spray Chalk	●			
GAF StreetBond 120/150		●	●	●
Tempera Paint	●			
Thermoplastic	●		●	●
Traffic Marking Paint		●	●	●
Striping/Edge Lines				
Acrylic Traffic Marking Paint		●		
Contractor-Grade Traffic Tape	●	●	●	
Duct Tape	●			
Field Marking Paint		●		
Foil-Backed Tape	●			
Spray Chalk	●			
Thermoplastic				

CASE STUDIES

BURLINGTON, VT

In Burlington, VT the City's Public Works Department has developed an internal Quick Build Program for the delivery of projects identified in its 2017 PlanBTV Walk/Bike Master Plan. The City's familiarization with the full spectrum of scalable projects, from demonstration projects to interim design, was due in large part to their use of demonstration projects during the public engagement phase of the Master Plan.

Pictured at right, the project team installed a days-long demonstration project of a protected bike lane along a corridor identified in the plan for permanent infrastructure. Within a year after the Plan's adoption, the City built an interim design version of the bike lane using a TuffCurb. This bike lane remains in the ground, and is one of many Quick Build projects the City has implemented since the Plan's adoption, including a prominent Neighborhood Greenway.

Where the Quick Build Program helps implement more durable, long-term projects, the City uses its Tactical Urbanism Policy to facilitate the implementation of short-term demonstration projects proposed directly by citizens. This policy was created alongside PlanBTV Walk/Bike, and provides a streamlined way for community members to initiate demonstration projects in their own neighborhoods.


KEYPORT , NJ

On May 14th, 2021, NJTPA, the Borough of Keyport, Monmouth County, and Street Plans installed a 7-day demonstration project at the intersection of Maple Place, Atlantic Street, and Church Street.

The project aimed to calm traffic, increase motorist visibility of pedestrians and bicyclists, and shorten and clarify pedestrian crossings, to improve the irregular geometry of the intersection and increase safe access to the nearby Henry Hudson Trail.

Large curb extensions, a protected on-street trail segment, and high-visibility crosswalk and trail crossings were installed using low-cost, reversible materials like traffic tape, movable delineators with rubber bases, and tempera paint.

Overall, the project was well received. Approximately 71 percent of survey respondents expressed that they "loved" the demonstration project, and a majority responded that the temporary changes made them feel "much safer" walking, biking, or driving in the area. It was also clear from observations that trail users would still like a more direct path of travel between the two off-street trail segments. As a result, a future design project should closely analyze these movements in order to more fully develop design responses that support pedestrian and bicyclist desire lines.
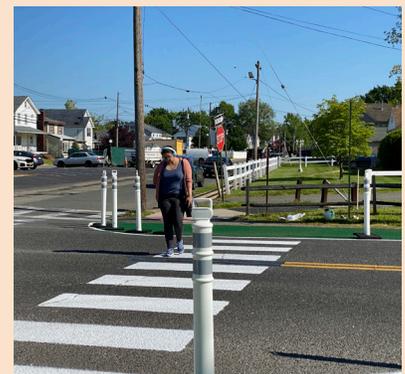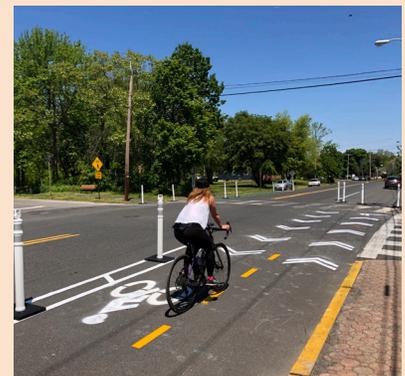
PROJECT PLANNING

From choosing a project site, to project design, materials selection, and budgeting, there are 10 core steps for developing and implementing a Complete Streets Quick Build project.

1 CHOOSE A PROJECT SITE + DEVELOP PROJECT CRITERIA

Depending on project goals and resources, candidate sites may include some length of a transportation corridor, one or more intersections, or even just a parking space, street corner, or bus stop in need of safety, functional, or placemaking improvements.

No matter the scale, start by determining project goals and considering need-based locations. What corridors or intersections in your community suffer from the most traffic crashes? Where is bicycle parking chronically oversubscribed? Where do the number of vehicular travel lanes exceed motorists' travel demand? Where has a crosswalk been requested by residents for years but never installed?

2 ASSEMBLE AN INCLUSIVE PROJECT TEAM

The design and delivery of Quick Build projects can be handled by municipal staff— planning, public works, engineering departments and the like— or be germinated from grassroots, community, or business group initiatives. But no matter who leads, building a team of collaborators with clear roles and responsibilities helps deliver a successful project. On the municipal side, finding a political or departmental staff champion will be crucial to project success; as will assembling a consortium of local stakeholders: residents, business owners, and community organizations who support the project. Depending on the project location, County staff may also be key members of the project team.

3 ENGAGE YOUR COMMUNITY

At the local level, public engagement needs will vary depending on the project type, location, and duration. Typical methods include design workshops, door-to-door outreach, intercept and public life surveys, etc. Where the public fears change, make sure to emphasize that Quick Build projects are meant to be tests for the purpose of implementing infrastructure quickly, but also evaluating them to make improvements over time, or in the case of major project shortcomings, removal.

All of that said, the largest opportunity for public engagement comes in the actual physical delivery of the project!

4 DEVELOP A COMMUNICATION + MARKETING PLAN

Quick Build projects are not an end unto themselves, but are often utilized to provide important feedback loops within a long-term planning process. That said, the iterative approach used for project delivery typically brings challenges from two sides:

- Not realizing that project design and materials are flexible, some people will worry the project is moving too fast, without adequate public input.
- Other people will worry that rapid implementation of projects with low-cost materials is an excuse for not investing in robust capital upgrades.

As such, it is important to create a plan for marketing and outreach that clearly communicates:

- What need or challenge the project aims to address;
- How long a project will be in place;
- How the project will be evaluated; and
- To what degree it can be adjusted (or removed) in response to community feedback.

Any good communications plan should be executed with support from stakeholder groups, local politicians, and nearby property owners (residents, business owners, etc.)

5 DETERMINE YOUR BUDGET

The scale and scope of any Quick Build project is determined by two primary factors: available financial and human capital. Resource accounting early in the process will help your project team understand how large the project can be and for how long it can last. Materials selection, the number of volunteers needed, partner roles, maintenance requirements etc. will then become more clear.

While it's true that Quick Build projects typically cost a fraction of more permanent infrastructure, most traditional government funding sources are not yet

aligned with this nimble approach to project delivery. So where will the money come from? Quick Build projects are often funded by a mix of existing government planning or engineering budgets and created partnerships with trusted non-profits, foundations, and community or business groups (such as special assessment districts or business improvement districts) to fund project design, build-out, and maintenance and stewardship.

6 DESIGN THE PROJECT + SELECT YOUR MATERIALS

Design

In the quest to make rapid Complete Streets improvements come to life, it's important to underscore the need for flexibility during the design process. Quick Build projects are great opportunities to test out of the box solutions that lead to viable new forms of community engagement, material use, and street design. As such, Quick Build projects should be designed in response to hyper-local conditions (physical, social, economic, etc.) and always meet or exceed basic life safety standards.

Typical Quick Build projects include two major design deliverables: a site plan and a materials plan. In other words, what are you doing and where, and what will it be made of? During the design process, proponents can expect at least 2-3 rounds of city revisions before the plan is finalized while also expecting that minor adjustments will be made in the field as you move your design work from pixel to pavement.

Materials

Selecting project materials will require ongoing collaboration between Borough staff and stakeholder agencies, neighborhood groups, business organizations, advocacy organizations, local artists, and fabricators. The collaborative process ensures both the design and materials are not only contextual, but in line with community capacity and feasible for the intended project duration.

7 ESTABLISH A MAINTENANCE + REMOVAL PLAN

Building a new project— any project— is more exciting than maintaining an existing one. But without a maintenance plan, a shiny new Quick Build project can become an eyesore and threaten community support for long-term change.

For longer-term projects (say three years in duration or more) communities should monitor the materials maintenance and performance costs so that project data informs when the use of capital budget funds and more permanent materials makes the most fiscal sense.

Not every project will require a detailed maintenance plan. But where applicable, project leaders should always consider the maintenance and stewardship costs by developing a clear plan and an agreement, known as a Memorandum of Understanding (MOU), outlining roles and responsibilities.

Finally, not all Quick Build projects are successful. While it's rare for a one to be removed entirely before the intended duration is met, some project elements may be deemed ineffective or lack political support. Thus, project leaders should develop a removal plan that includes clear steps for altering or removing the it, and include the cost of restoring the site to its previous condition.

8 CREATE A BUILD DAY PLAN

Upon completing the site and materials plan, there are multiple other steps, or small plans, that need to be advanced. Each aspect of what is often referred to as the build day plan is listed below:

- Permits
- Maintenance of traffic plan
- Site preparation plan
- Materials staging plan
- Project schedule/run-of-show
- Volunteer management plan
- Supportive programming plan
- Evaluation plan

9　EVALUATE YOUR PROJECT

Building on the goals outlined at the outset of the project and the evaluation plan, ongoing evaluation efforts will help track project performance. Expect that the project design, as well as the project evaluation methods, might need to be tweaked once installed— with flexible materials and evolving political realities, adjustments in the field are part of the design process! Most evaluation activities require a mixture of automated and analog approaches so it's critical that project partners know their role and conduct their evaluation work consistently.

10　SHARE PROJECT RESULTS!

Finally, any successes and lessons learned are crucial to share in building continued political and public support and momentum for the application of the Quick Build methodology to advance Complete Streets. Thus, project teams should set a timeline for completing the evaluation work and in what form and where those results will be shared. For most, infographics are the most digestible form, as most people will not dig into reams of spreadsheet data just to find the highlights. Finally, when sharing project results make sure to target local and regional news media, project partners, making clear what was evaluated and how it relates to project objectives and goals.