

## Building a Bridge by Hand to Cross Buttermilk Channel on Foot

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*Nancy Nowacek*

August 19, 1900

**W**alt Whitman reports the *Barbarossa's* passage through Buttermilk Channel. It is a large German vessel with a draft of 28 feet. He writes an article for the *Brooklyn* titled, "It's really a Channel": "A few years ago moderate sized barks had an unhappy habit, in consort with their towboats, of going aground near the Atlantic Dock gap. There was much recrimination, a good deal of hard swearing, but there was no dispute that there was a [sand]bar in Buttermilk Channel." Whitman provides an antecedent about the Channel's name: "the title of Buttermilk Channel is derived from the days of the Revolution when a two gun battery swept the upper bay. The colonists were not over blessed with wealth or food and the farmers drove their cows across the [sand]bar that then led to Governor's Island. When the cows missed the low tide they had to swim home and as a result their lacteal processes resulted in sour milk. Hence Buttermilk Channel."<sup>1</sup>

1 *Brooklyn Eagle*, Aug 19, 1900, 5. Accessed via [http://eagle.brooklynpubliclibrary.org/Repository/getFiles.asp?Style=OliveXLib:LowLevelEntityToSaveGifMSIE\\_BEAGLE&Type=text/html&Locale=english-skin-custom&Path=BEG/1900/08/19&ChunkNum=-1&ID=Aro0506](http://eagle.brooklynpubliclibrary.org/Repository/getFiles.asp?Style=OliveXLib:LowLevelEntityToSaveGifMSIE_BEAGLE&Type=text/html&Locale=english-skin-custom&Path=BEG/1900/08/19&ChunkNum=-1&ID=Aro0506)

August 22, 2011

In studying the history of Buttermilk Channel and Governors Island, I discover the Whitman piece, and the fabled sandbar.

March 22, 2012

I leave home at 6:30 A.M., take the B61 bus to Borough Hall, and descend into multiple connecting hallways to find the R train to Whitehall Street. I travel one stop. I board the ferry at 7:30 with construction workers, engineers, high school teachers on bikes with thermoses of coffee, high school students in backpacks and baseball hats in the waiting room at the ferry terminal. The ferry docks on the northern pier of Governors Island. We disembark and climb upwards into the island. I move into my temporary studio on the island, and from that point on, I tell fellow artists, friends, professional colleagues, and any stranger who will listen, "I am building a bridge to Governors Island."

April 14, 2012

At 8:12 A.M., I ascend from the Whitehall station out into lowest Manhattan, walking against the waves of morning commuters swelling northward out of the Staten Island Ferry terminal. Picking my way through them, I board a nearly empty return boat. It is a slow trip, as the vessel lumbers and rolls through the harbor. Panicked for time and disoriented by the protocols of Staten Island, I find myself in a cab with a Mental Health worker, sharing a trip across the island to the US Coast Guard's Headquarters, and then the Mental Health facility. I am 30 minutes late, making apologetic phone calls to my host.

I lay down sketches of boats strung together, bamboo rafts lined with people, beach rafts sewn together and housed in a PVC pipe frame. The heads of Waterways Management, Marine Event Permitting (fireworks! Fleet Week!), and the Waterways Management Coordinator sit respectfully and gaze over them in silence as I stumble through my idea and my list of questions.

They offer the distant possibility that there *could* be some consideration of a future day where Buttermilk Channel (a major International Shipping thoroughfare) *could* be closed to boat traffic for a temporary floating pedestrian bridge. To be permitted as a Marine Event, Waterways Management would need to enter the event into the public record and allow 180 days for discussion. The clock is ticking: if I can create a workable design in 3 weeks' time, I stand a chance of getting permission to install the project in late August 2012.

A month later, I am no closer to a workable design, and have learned just enough to know that this project will take years longer than the six months I'd hoped.

June 4, 2012

The second apartment buzzer sounds at 5:05 A.M. It is the videographer. Once we review the details, the actor climbs into the cow costume, and we are off. Re-enacting Whitman's tale of farmers walking their cows to graze on the island, our modern version requires a quarter-mile walk to the F train, stairs, turnstiles, escalators to an R train, more stairs, more turnstiles, and several more blocks to a 6:30 A.M. ferry. In total, what should be a five-minute walk across a sandbar takes us 78 minutes.

June 15, 2012

I receive an apologetic call from my contact at the Coast Guard: "I'm so sorry to say that it seems your bridge...is really a bridge." She continues on to explain that I need to speak to the Bridge Branch division because, now that the project is on its radar, the division will require me to complete a bridge permit application. Her tone suggests an insurmountable challenge and an end to the project.

I phone the head of the Bridge Branch Division. He explains to me that my project fulfills the USCG's basic definition of a bridge: "Any structure that crosses a channel to transport goods, people, etc, in the USCG's eyes is a bridge; and even if temporary, every bridge must go through a nine-month (if not longer) review process, including public notice procedures...Bridges are, at their core, obstructions to marine navigation. The reason that boats put up with them is that they permit other kinds of transport to occur."

July 28 2012

After dozens of emails, false starts and weather cancellations, I final have a chance, with the Village Community Boathouse to join a rowing expedition in Buttermilk Channel. It is a cool grey morning. We meet at the navy yard, load an eight-man, 26-foot Whitehall gig into the water, and follow with safety vests and paddles. The launch is smooth, but once we enter Buttermilk Channel, everything changes. Although we are rowing with the current, it is some of the hardest physical work I have ever done. Every part of me is sweaty.

I think to myself, *This is the hard part*, until a 100-ft. barge barrels through on the shoulders of a tug. We are set into violent, unpredictable rolling by its wake. From that point on, every part of me is tense, and sweaty, and certain we are going to capsize. I think to myself, *But I love the water*, and myself answers, *This is not the water, this is a watery superhighway*.

I have never been so happy to see land as when we heave towards Valentino Pier. The boat feels unmovable as we drag it through the shallow tide onto shore. I am so grateful for the experience, and even more grateful that I will not have to continue on to Pier 40 in the Hudson. I hate that I am afraid of the water. My fear underscores the need for the bridge. I continue forward.

October 6, 2012

Three of us carry Citizen Bridge 1.0 to the shore at Valentino Pier. As soon as its PVC railing is rebuilt and ratchet straps tightened, two of us move it into the surf. We drag it out to a few feet's depth, and it begins bobbing with greater force. As I stabilize it, a friend attempts to mount the deck in order to stand. Before he can get a second knee on, a wave rises and flips both him and the piece over into the water, splintering the model into a dozen pieces. Version 1.0 lasted little more than three minutes, More R&D is needed, as well as consulting the tide tables before future tests.

Three weeks later, Hurricane Sandy strikes the city, shifting the waterfront's focus to recovery. Red Hook is devastated, and we all spend as much time as we can before night hits helping the neighborhood to clean up and rebuild.

## February–April 2013

I pursue meetings with all necessary agencies involved in the bridge permit application. Via phone calls and conference tables, I meet with the head of the Bridge Division to review in detail the requirements of the 42-page bridge permit application manual, the US Army Corps of Engineers, the Mayor's Office for Environmental Coordination, the Department of Environmental Conservation, the Port Authority via the manager of the Brooklyn Cruise Terminal, the head of waterfront development for the NYC EDC, the director of the Trust for Governors Island, and the director of waterfront development for the NYC Planning department.

Each of those agencies requires a permit, and all those permits are required as part of the Bridge Permit Application. After reviewing the requirements, it is abundantly clear that in order to complete any of the permits, a final workable design is necessary. So back to the drawing boards.

## June 26, 2013

Citizen Bridge 2.0 launches! With the support of a residency from Recess, a non-profits art space in SoHo and their partnership with Pioneer Works in Brooklyn, we—myself and three recent architecture graduates from Pratt Institute—have spent six weeks discussing, designing and building this second design.

Citizen Bridge 1.0 was 4'×3' of decking affixed to a piece of chain-link fence gate and a pair of 30 gallon drums, weighing 30 pounds. Version 2.0 was constructed of 4×8 sheets of ¾" plywood, 2×4s, threaded steel rods and 55 gal-

lon drums. Each unit of version 2.0 weighs approximately 300–400 pounds. A team of eight men of super-human strength and a scissor lift were necessary to move each piece from their second-floor build location to the street.

Launch day. Sixteen volunteers—good friends and strangers too curious to remain bystanders—roll the pieces over cobbled and pock-marked streets to Valentino Pier. Despite my years of summers at the pier, the low fence around the park's perimeter never registered. It takes all of us to lift each piece over the fence and over the rocky ground to the water.

In the surf, we are joined by an expert kayaker who helps direct the process as Brady (lead architect) and I drag the pieces towards one another to join them. It's a hot day and the the coolness of the water—despite my fears of its bacteria content—feels rejuvenating. As we drag the two lumbering units further out, I am directed—with great urgency—to move from in-between the two pieces so that I don't get crushed as they roll with the surf.

Once the pieces are joined, it's an easy hoist myself onto the structure—like getting out of the deep end of a pool. The bridge piece is big and heavy and takes the waves like a Cadillac. It's exhilarating to stand astride the join. Four others join me atop of the prototype. It is a triumphant moment. We are one step closer to reality.

Having taken on considerable water during the launch, each piece now weighs pver 400 pounds. They are formidable loads to walk from the shore to the edge of the park, and lift back over the fence to be rolled back through the streets. Too big, too heavy, too cumbersome: to build one hundred seventy-five of these an illogical path.

November 16, 2013

The wood has been delivered from the lumber yard on the Gowanus, and the barrels from the container warehouse in Bushwick. We assemble at 10 A.M. on Pier 40 at the Village Community Boathouse. Two architects, a journalism professor-slash-boat-builder, and professor of game design-slash-former-skate-ramp-builder. We have come together to build Citizen Bridge 3.0.

We assemble three frames from 2×4s, attach plywood decks, and fasten them to pairs of drums with ratchet straps. We discuss the pros and cons of decking made from furring strips versus plywood sheets, and at my insistence, we try one of each for comparison. We build a preliminary railing system, affixing it to the middle of the three modules. Once the modules are joined, the grouping is rigged with line, lifted by the pier's electric gantry, and lowered into the river 15 feet below. We don safety vests, and one by one, pick our way over the edge, down a rusty ladder onto the structure. The scale of the pier, the Hudson River, and the city skyline in the distance dwarf Citizens Bridge 3.0. It feels more like a Huck Finn raft than a bridge.

Faster, lighter, cheaper: 3.0 feels like a great step forward in construction but half a step back in sturdiness.

December 18, 2014

At the invitation of Captain John Doswell, Maritime producer, president of the Working Harbor Committee, member emeritus of the Hudson River Park Trust, and lead advisor to Citizen Bridge, I am drinking a beer in a bar on the edge of South Street Seaport to celebrate the holiday season with the Metropolitan Waterfront Alliance. John introduces

me to the former Executive Director of the Port Authority, the former Chief Operating Officer for Battery Park City, and Vice President of the Hudson River Park. Doswell is most connected and (in my estimations) the most beloved figure on the waterfront. Through him I've also met the former Executive Director of the Port Authority, the former CEO of the Circle Line, the Waterfront VP of the EDC, the owner of NYC Water Taxi, members of the Army Corps, the Sandy Hook Pilots, boat owners, boat captains, helicopter pilots, waterfront advocates, and many others who describe themselves as having salt water in their veins.

December 31, 2013

Before his retirement on January 3, 2014, the head of the USCG Bridge Branch Division offers to ignite the permitting process by circulating our proposal through the region. On New Year's Eve, I send him a letter outlining the project definition (a demonstration project), vision, needs it fulfills, as well as all developments to date. I send an identical letter to the head of the Trust for Governors Island.

February 1, 2014

I am laid off from my research position. Now unemployed, there is even more time to pursue the bridge.

February 12, 2014

John Doswell and I meet inside the Staten Island Ferry Terminal. He has been allowed by the Harbor Operations Steering Committee to accompany me to present Citizen

Bridge to what I come to learn is essentially the Harbor's League of Justice. We are escorted through an unmarked door, an elevator, and hallways to a conference room hidden in the top corner of the Staten Island Ferry building. There are over twenty people in the room. It is a respectful but tough crowd. After my presentation and discussion, the committee makes no ruling, but offers a series of advised next steps in order to further develop and define the project at greater level of detail.

### February 28, 2014

I am sitting in a conference room looking out over Brooklyn Bridge Park across a conference table from two leaders of the Brooklyn Bridge Park. After presenting the basics of the project with a request to situate a test model in the waters between their piers, they are warm, enthusiastic, and fully understand the mission and logic behind the project. Another relationship is born, another bridge built.

### March 4, 2014

The 8:35 LIRR to Glen Cove is quieter than I'd imagined. At the advice of the Steering Committee, I am traveling to the nation's premiere college for naval architecture and engineering, the Webb Institute, to present Citizen Bridge to its student body and faculty. The Institute is situated on the Long Island Sound in a traditional English Country Manor from the late nineteenth century. It's a beautiful place, filled with model ships of all size and type. The students are incredibly knowledgeable and excited. They fire a round of sophisticated questions my way, and a relationship is born.

April 2, 2014

To my confusion, the driver from the lumber yard pulls up to the sidewalk of the loading dock of my studio building in DUMBO, but not up to the loading dock. “Truck won’t fit.” As he unbuckles the tie-downs around my wood, he continues, “delivery means ‘to the loading dock.’ Hope you got someone to help you.” He drops each 75-lb. piece of plywood on the dock, several feet from the freight elevator. And then he dumps the dozens of 2×4s.

I don’t have anyone to help me.

April 4, 2014

With all the wood and barrels necessary, we—young architect, game design professor and I—begin building Citizen Bridge 3.1. The public has been invited to our studios so we are building another version of the November prototype. Within the first hour, our muscle memory kicks in and we move quickly assembling barrels to platforms with strapping. It takes several unplanned hours to improvise a first-generation railing system, an omission in past versions. The railing is completed with a prototype name plaque system to represent those who have contributed to the project.

June 6, 2014

In the past three months, Glen Cove transformed into a paradise on Long Island Sound. A dozen Webb Institute students and faculty have assembled to workshop Citizen Bridge 3.1. After briefing the students on the constraints and design of the project, they begin work. Some are writing equations, others are making sketches. At one point,

there is a question: “Does it have to be eight feet wide or could it be four feet?” As we unpack the implications, it’s clear that we’re on to another design revision.

July 11, 2014

After navigating from south Brooklyn from one traffic jam to another, we queue up the U-Haul at the base of Manhattan behind cement trucks and an ice cream truck. Fully loaded with 12 barrels, plywood, three dozen 2×4s, power tools, bagels and sandwiches, we are eventually waved on to the ferry to begin building Citizen Bridge 4.0 on Colonel’s Row to display at City of Water Day. As we build on the lawn, the city watches our progress from the north. The harbor is ecstatic with sailboats, taxis, ferries, tugs, and barges on this dazzling summer day.

This prototype bears uncanny resemblance to one of the first renderings in 2012, and in this way the process has come full circle. To advance, we need experienced engineers and designers to join us.

Over the past two years, Citizen Bridge has become not just a bridge but a network: experts and amateurs, coming together to fulfill a vision about reclaiming public access to the waterfront and reimagining the ways in which the water is public space. It’s not just about walking across a channel. Citizen Bridge aims to demonstrate to the power structures that govern our waterways new potential to collaborate in the forging of a public waterfront committed to reciprocity between a city, its commerce, and its people.

As a temporary installation, Citizen Bridge is an attempt to focus attention and amplify the harbor’s opportunities as a living, working public resource and

space. Citizen Bridge aims to activate public interest from the Bronx to the Battery, Newtown Creek and Red Hook to Sunset Park and the Verrezano, and beyond. Together, we will reinstate the power of citizens to engage the built environment, returning to the idea that urban space is the aggregate of such actions, and that cities are constructed by acts of imagination.