

# Parking Lot D Reconstruction



**PROJECT:** City of Traverse City Parking Lot D

**CHALLENGE:** Changing conditions including contaminated soils and short sheet piling

**SOLUTION:** Address contaminated soils and short sheet piling with flexibility and value engineering for City of TC

**OWNER:** City of Traverse City

**CONTRACT AMOUNT:** \$462,744.39

**DESIGN ENGINEER:** Tim Lodge, P.E.

**ENGINEER CONTACT:** (231) 922-4455

**LOCATION:** Traverse City, Michigan

**DATE STARTED:** Fall 2016

**DATE COMPLETED:** Fall 2017

**SELF-PERFORMED:** 89%

**PARTNERS:** Traverse Outdoor, Bella Concrete

The Boardman River, which runs through downtown Traverse City, connecting to Grand Traverse Bay and Lake Michigan, has always been a fishing destination. After many long years of use, the City of Traverse City Parking Lot D and Boat Launch were in need of repairs. After several redesigns, City Engineer Tim Lodge and his staff were able to gain City commission support for the project. Plans moved forward on reconstruction of the boat launch area and parking lot to install an accessible kayak and canoe launch. Team Elmer's also helped install storm water filtration devices, pedestrian bump outs, new concrete curb and gutter, paving, striping, and overall aesthetic improvements to the parking lot.

Team Elmer's was selected as low bid contractor for the project. Contaminated soil and a narrow construction site created planning challenges. Contaminated site soil was required to be balanced on-site and capped by the new parking area in accordance with environmental regulations. This required continual movement of stockpiles that remained for future use while the site was constructed and balanced with on-site soils. After

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the contaminated soils were properly handled, new storm water structures were installed in the form of tree boxes that allowed storm water runoff to filter through the root system, allowing sediment to settle prior to any storm water entering the Boardman River system. Meanwhile, new curb and gutter was installed and the lot was then capped with new asphalt.

There were several schedule challenges with changing conditions on the site. The original plan called for replacing the existing boat ramp system. This required removing and installing new sheeting and removing the existing boat ramp concrete structure. Once started, it was discovered that the existing sheet piling acting as a retaining wall for Grandview Parkway north of the boat ramp area was shorter than typical structures. Excavation for the boat ramp would have collapsed the MDOT road shoulder. This created a need for engineers to redesign and install a new foundation structure to hold the road in place prior to removal and construction of the boat ramp. Team Elmer's was flexible in their time line and able to provide additional resources to keep installation of the project moving forward.

Unless you are a fish, it's not every day you work underwater without a wet suit or scuba tank. That was the case for Team Elmer's sheet piling crew when they were installing the new boat ramp and boardwalk foundations. Sheet piling and dewatering equipment was installed to keep the Boardman River out of the construction area. Crews worked with their heads below the water level of the Boardman River to complete the boat ramp foundation and concrete installation.

The redesign and reconstruction created an opportunity to showcase a vibrant downtown that welcomes diverse access to shopping while fully utilizing the City's natural resources. The local businesses certainly agree. Any opportunity to increase the responsible use of the area's natural resources, as well as highlighting downtown business services, is a positive. "If you didn't catch a fish, you could catch a sale at one of the downtown shops," stated one local resident.

The much needed redesigns and project delays were understandable given the changing conditions. Team Elmer's value added process kept crews working toward a solution and completing what work could be done while waiting for engineer changes that required time to be redesigned. Patience and persistence does pay off. Ask any good fisherman or fisherwoman!



## Parking Lot D By The Numbers

- HMA Base Crush and Shape: **3,200 square yards**
- Non Hazardous Contaminated Soil: **200 ton**
- Turbidity Curtain: **221 feet**
- Parking Meters: **27**
- Erosion Control Silt Fence: **788 feet**
- Conduit: **2,644 feet**
- Permanent Sheet Piling: **752 square feet**
- Salvaged Brick Paver: **2606 square feet**
- Hot Mix Asphalt: **466 tons**
- Curb and Gutter: **1,495 square feet**
- Concrete Sidewalk/ADA Ramps: **2,450 square feet**
- Slope Restoration: **1,610 square yards**

