

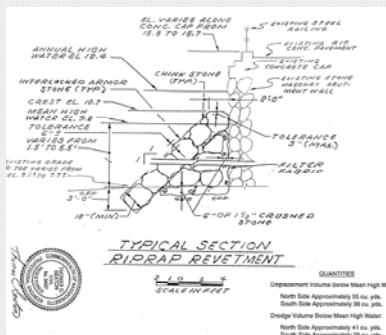
COASTAL FACILITIES

ENGINEERING SERVICES

Engineering of coastal facilities structures requires a thorough understanding of relevant regulatory requirements in order to expedite the permitting process. For coastal stabilization or dredging, study of littoral drift and benthic organisms may be needed to develop an effective and permissible solution. Public access projects must facilitate ease of recreational use with sensitivity to surrounding natural resources.



Haley and Ward is a municipal consulting firm that specializes in engineering services of water dependent services including planning, design, permitting, inspections, monitoring, modeling, regulatory compliance, construction services and start-up for coastal facilities.



Pilings

Ramps

Boat Ramps

Groins

Bulkheads

Piers

Mooring Plans

Docks

Jetties

Marinas

Floats

Dredging Plans

Harbor Management Plans

Revetments

Beach Nourishment

DESIGN

- Design and implementation of complete infrastructure inventory & management plans
- Review of existing structures for safety & stability
- Use of best technology matched to individual needs
- Design of structures relative to the need, resource areas, soil and groundwater conditions, and other site constraints
- Compliance with MDEM & MCZM performance standards
- Evaluation of existing structures
- Soil stabilization/sediment control plans
- Benthic Surveys and marine sampling
- Modeling of rivers and estuaries
- Facility inspection, operation and maintenance plans
- Harbor management plans
- Contract documents
- Construction services
- Permitting under Army Corps of Engineers, MassDEP, US Coast Guard, MA Executive Office of Environment Affairs, MA Office of Coastal Zone Management, MA Division of Fisheries & Wildlife, and local conservation commission.
- Opinions of probable construction cost

MANAGEMENT: REGULATORY COMPLIANCE, INVENTORY, PLANNING, INSPECTIONS & MONITORING

- Review of hydraulic, structural and capacity adequacy
- Review for conformance to local, state and federal standards
- Review of infrastructure adequacy, needs & inventory
- Preparation of prioritized improvement plan

MODELING

- Models developed to fit each situation
- Structural, hydraulic, wave run-up, stability, flow-net leakage and littoral drift analyses

CONSTRUCTION ADMINISTRATION SERVICES



Haley and Ward, Inc.