

HOWARD I. SHAPIRO & A S S O C I A T E S C O N S U L T I N G E N G I N E E R S , P.C.

#### **Tower Crane Services**

- Tower crane type and model selection and logistics planning
- Design of simple or complex tower crane foundations and support systems
  - Design of climbing systems and basket climbing/support systems
  - Design of "diving board" support frames cantilevered from building structures
- Development of climbing schedules
- Erection & dismantling plans utilizing mobile cranes or derricks
- Peer review of tower crane foundation, tie design and logistics
- Accident investigation & recovery
- NYC Expertise:
  - Crane Notice (CN) engineering & filing with NYC DOB Cranes & Derricks Division
  - o CN Amendment engineering & filing
  - Filing tower crane plans with all agencies in the Tri-State Area, including NYC Transit Authority, Amtrak, LIRR, Port Authority, FAA
  - o Filings for variances, renewals and all permits related to tower cranes with NYC DOB
  - o Prototype filing with NYC DOB Cranes & Derricks Division
  - o CD registration with NYC DOB Cranes & Derricks Division

#### **Mobile Crane Services**

- Mobile Crane installation engineering
  - Advise on crane selection
  - o Design of crane support on simple or complex conditions such as building floors
  - o Engineering of tandem picks
  - o Engineering crane installations for demolition or dismantling of structures
  - Tower crane erection and dismantling
  - Post-accident recovery of cranes
- Mobile crane logistics planning
  - Crane Configuration selection for difficult hoisting geometry
  - o Crane location selection for difficult or constricted sites
- Peer review of mobile crane installations and usage plans





- NYC Expertise:
  - Crane Notice (CN) Engineering, filing and controlled inspections with NYC DOB Cranes
    Derricks Division
  - o CN Amendment engineering & filing
  - Filing mobile crane plans with all agencies in the Tri-State Area, including NYC Transit Authority, Amtrak, LIRR, Port Authority, FAA
  - Filings for variances, renewals and all permits related to use of mobile cranes with NYC
    DOB
  - Preparation and filing of applications for NYC Prototype Approval of Mobile Cranes, Pile Drivers, Articulating Boom Cranes
  - Prototype filing with NYC DOB Cranes
    & Derricks Division
  - CD registration with NYC DOB Cranes & Derricks Division

## **Derrick Installation Design**

- Logistics planning for derrick installation & operation for building construction, façade replacement, HVAC or generator hoisting, tower crane dismantling
- NYC Expertise: Crane Notice (CN) engineering and filing with NYC DOB Cranes & Derricks



### **Logistics & DOT Permitting**

- Logistics plans for all types of construction: new buildings, major alterations, demolition and crane usage in NYC
- NYC Expertise:
  - NYC DOT New Building Logistics Planning and Approval
  - o Filing for new and renewal of DOT permits for construction work
  - o DOT approval of relocation of parking meters, bus stops, agency parking
  - o Release of agency holds on DOT permits
  - o DOT OCMC Meetings
- NY State DOT logistics & approvals



#### **Site Safety Plans**

- SSP to be filed with NYC DOB
- SSP not requiring filing with NYC DOB
- Amendments to approved SSP
- Resolution of Stop Work Orders

### **Demolition Engineering**

- Engineering for full or partial demolition of buildings and other structures
  - o Evaluation of demolition equipment loading on floors/ structure being demolished
  - Stabilization and engineered demolition of partially collapsed structures
- NYC Expertise: engineering for full demolition and alteration plans to be filed with NYC DOB

#### **Means & Methods Engineering**

- Bracing design
- Shoring design
- Temporary structure design
- Work platform design

# Rigging & Special Lifting

- Design of custom lifting solutions
- Engineering for rigging plans

## Forensic Engineering

- Construction accident investigation
- Expert testimony



