TOP 10 FACTORS FOR LOGISTICS PLANNING
White Paper
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INTRODUCTION

“Logistics Planning” is a commonly used phrase in today’s construction industry. Understanding what to plan for, however, is a challenge that many contractors realize far too late. Having an in-depth understanding of your project’s logistical hurdles will strengthen your team’s ability to manage successfully.

Below is a detailed list of items to consider when planning for logistics on your next project.

1. Safety – Onsite and Public

Contractors at the highest level will consider the safety of both project and public as their #1 concern. As such, many safety items should be considered as they can impact cost, schedule and the overall success of the project. Examples of safety considerations include the following:

a. Perimeter Fencing and Containment - It is key that the activities of the site do not boil over into the public ROW, and vice-versa. All loose material and debris should have a plan in place to keep it onsite.

b. Overall Fall Protection – Personnel AND objects. Preplanning is critical to ensure that the project is outfitted with the proper fall protection and perimeter edge containment (consider full height snow fencing, debris netting, etc.).

c. Street and Sidewalk Closures - While expensive, often the best method for directing the public away from the project site.

d. Covered Walkways - Key for those high traffic areas that cannot be closed but are in direct contact with the site boundaries.

e. Flag Personnel and Signage. Many times flaggers and signage are overlooked in the overall cost of a project but can lead to a large expense for a project with many activities.
2. Site Challenges

Every site, whether urban or in a field surrounded by fields, presents a challenge. The following factors should be considered:

   a. Levelness of site
   b. Condition of soils
   c. Storm runoff and erosion control
   d. Presence of groundwater
   e. Onsite laydown and stockpiling
   f. Subterranean concerns (old foundations, USTs, mine shafts etc.)
   g. Staging and laydown availability - tight sights
      often require just in time deliveries or off-site staging

3. Access

Getting to and from the site with deliveries, equipment, and personnel should be carefully considered. Many times, there are not endless ways to get to a site and non-communication of these challenges can lead to delays and costs later.

4. Excavation and Hauling

Take time to consider the surroundings of the project and what the intended haul routes will be. Perhaps there are constraints that may present challenges, such as:

   a. Schools with heavy student and pick up/drop off traffic
   b. Tight roadways and street parking creating tight hauling conflicts
   c. High profile buildings or neighborhoods on the path of travel
   d. One way roads that present hauling challenges

5. Hoisting

1. It is wise to get your key subcontractors, as well as your crane supplier, in a room to discuss hoisting options. By doing so, the hoisting plan can be refined to include the following:

   WHETHER A DEEP HOLE IN THE GROUND, OR SIMPLY AN ON GRADE PROJECT, THERE WILL ALWAYS BE THE INITIAL EARTHWORK ACTIVITIES THAT REQUIRE MATERIAL IN / OUT AND A PATH FOR HAULING.

   OFTEN TIMES THE PROJECT’S SUCCESS (OR FAILURE) DEPENDS ON A WELL THOUGHT OUT HOISTING PLAN.
a. Most Efficient Location of Cranes - Avoid areas through mechanical or electrical rooms and, when possible, keep the hoisting outside the footprint of the project so it doesn’t become a fixture within the project.

b. Crane Foundations - A well thought out crane plan can allow crane foundations to be drawn into the permitted project plans, creating a long term record of the construction.

c. Crane(s) Mobilization Dates - not too early / late.

d. Road Street Closures - Required for crane mobilization and de-mobilization.

e. Appropriate Size of Equipment - Consider what will be hoisted such as formwork weights, concrete buckets, mechanical/electrical equipment, another crane etc.

f. Number of Cranes - Consider reach / radius, underground obstructions, overhead or adjacent obstructions, etc.

g. Air Rights - Be sure to have a thorough understanding of air right laws and who will be responsible for the resulting financial impacts.

6. **Movement of Manpower and Material**

A Man / Material hoist can be a key addition to a project’s successful logistics plan. For smaller projects, a man / material hoist may not be required. However, even on smaller projects, having a prepared plan of how to get manpower and material to the floors, and spread across the floors, is critical.

On larger projects, having a man / material hoist can be an efficient way to move manpower and material vertically. Below are some key considerations when preparing for your manpower and material moving:

a. How many project personnel will be onsite over the course of the project?

   Understanding man counts can help determine how many hoist cars are needed.

b. Where is the man / material hoist located on the project? Consider that a crane must be utilized to install the hoist. Also consider that the hoist will complicate the completion of the building in that general area which can be challenging when trying to close an exterior or with significant weather concerns.

c. Power constraints affecting your hoist size and capability.

d. Be considerate of OSHA laws and, if applicable, local union labor rules.
7. **Concrete Conveyance and Placement**

Items to consider with concrete conveyance and placement are as follows:

- Truck access to site / placement (or pump) location
- Staging of trucks offsite (large pours)
- Neighborhood noise constraints
- Conveyance type (i.e. convention pump, placing boom, bucket with crane, tailgate)
- Traffic constraints
- Weather (hot and cold)
- Washout and track out

**NO MATTER THE SIZE OF THE PROJECT, CONCRETE CONVEYANCE NEEDS TO BE THOROUGHLY CONTEMPLATED.**

8. **Dry-in and Exterior Closure**

Factors to consider when planning for dry-in and exterior closure are as follows:

- How will workers access the work? Scaffold, lifts, hoists etc. These systems can absorb a large amount of space and planning for them will be key.
- Planning for weather is always a good approach when contemplating the exterior closure.
- Location of tower cranes, man hoists etc., as they relate to the exterior closure can make or break your dry-in plan. Always try to locate in a place that has the least impact to your project closure. These items can also be a challenge when trying to close in systems directly below.

**THE DRY-IN PROCESS CAN BE A VERY CUMBERSOME PIECE TO THE OVERALL PROJECT COMPLETION.**

9. **Project Phasing**

Below are items to consider when working with a client to determine project phasing:

- Can the remaining work be competed in a safe manner for both the public and the remaining trades on the project?
- Is the public safe in using the project in a partially complete state?
- Impacts on remaining work efficiency
- Parking or use by public during completion of remaining scope
- Fire department approval and what work items are a pre-requisite to early turnover

**MANY PROJECT OWNERS ARE INTERESTED IN WHEN THEY WILL RECEIVE THEIR PROJECT AND IF PHASING IS AN OPTION.**
f. Temporary provisions affecting cost or completion of overall project (temp walls, additional fencing, additional staff etc.)
g. Projects with phased openings will likely require full life safety systems to be in place, inspected, and functioning. Be sure to coordinate with all authorities having jurisdiction.

10. Demobilization

Demobilization and closeout plans are often overlooked. Yet they can be very cumbersome when trying to meet a deadline. Items to consider are as follows:

a. How to demobilize trades once complete in a manner that allows others to start. This will affect onsite laydown space and trade flow.

b. Often times a jobsite trailer will need to be removed prior to the project completion. Having a plan in place for temporary office provisions will streamline this critical stage of project completion.

CONCLUSION

During Milender White’s nearly two decades of experience in construction, we’ve learned that well thought-out logistics plans ultimately lead to more efficient construction projects. Coordinated tasks reduce surprises and demonstrate to your client that your team has fully contemplated every detail of their unique project. Milender White executives are available to discuss how we build a thorough logistics plan to ensure success.

Learn more about Milender White

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