

# 10 Tips to Improve Job Site Productivity



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## 10 Tips to Improve Job Site Productivity

A major concern for contractors and property owners at construction sites is worker productivity. Second to this major concern is how to improve productivity at job sites. In technical terms, productivity is based on worker output on construction tasks per hour worked. Employers want to maximize this ratio as much as possible with minimum costs.

Generally, it is a good practice to develop a system that measures job site productivity. Innovative methods that are relative to the construction industry may improve work performance. This can reduce issues involving management and the labor force.

Analyzing the current construction process and making necessary changes is conducive to having a productive work site. An understanding of the characteristics that can affect job site productivity is another effective tool. Overall, each construction site should consider aspects specific to the project demands and goals to find ways to increase productivity.

This white paper presents an overview of the dynamics affecting job site productivity with 10 ways that employers can improve activity at the site.

### Introduction

Construction projects can experience significant savings when resources are managed properly. Generally, construction is a labor-intensive industry and relies on productivity to determine the profitability of investing in and completing a project. Factors that affect productivity include labor characteristics, conditions at a job site and nonproductive job site activities.

Issues related to these factors should be given careful consideration for the best approach to making improvements. While there is not a standard definition for

productivity, there are common things that a job site can initiate to make improvements. This white paper presents a list of the necessary steps that not only improves worker productivity, but also positively impacts project performance.

## **Factors That Affect Productivity**

There are several primary factors that can affect job site productivity. These include labor characteristics, job site conditions and nonproductive activities.

### **Labor Characteristics**

Generally, labor characteristics encompass contributions of the skill and experience from workers and management. Characteristics of workers may include age, caliber of work and job knowledge. For management, these characteristics might include the ability to motivate the workforce, make sound decisions and utilize resources wisely.

### **Job Site Conditions**

Job site conditions that affect productivity can be measured by contractors and property owners over a period of time. The influence of these factors is usually estimated before a project begins. For instance, job site productivity tends to decrease as the complexity of tasks increase on large construction projects. This occurs due to a learning curve for workers before they can successfully perform certain tasks.

Another factor related to job site conditions is accessibility. This is related to possible traffic delays or local weather conditions. Equipment required for completing a construction project also impacts job site conditions and worker productivity.

### **Nonproductive Job Site Activities**

Nonproductive job site activities can consume labor resources that should be used for the construction project. A typical activity that falls into this category is rework that is necessary when unsatisfactory work is completed. Other factors may include work stoppage when there is a shortage in material, time-off, absenteeism and worker strikes.

## 10 Ways to Improve Worker Productivity in Job Sites

Despite the challenges at some job sites, there are ways to improve worker productivity that is profitable for employers and positive for workers. The following information lists 10 things that can impact how well productivity can impact the cost of a construction project.

### 1. Perform Detailed Analysis of Construction Process

Factors such as the percentage of time spent on productive and nonproductive activities are observed. Comparing factors at similar work sites may also illuminate ways to improve job site productivity. Productivity may decrease, for example, when workers use a specific piece of equipment. One solution could be to find ways that make efficient use of the equipment such as adequate training for workers.

### 2. Provide Training for Supervisors and Crew

Training is essential on job sites for supervisors and the work crew. The knowledge and skill of job site supervisors can have a direct impact on how well – or poorly – workers perform. Training is an area where the benefits are measured immediately. If a worker knows how to operate a piece of equipment, his or her productivity is positively impacted.

Additionally, supervisor training involves having an understanding of how the construction process should flow. Rather than evaluating a construction project daily, supervisors should know how to identify key steps that are completed over an extended period of time.

There are other factors to consider for successful supervisor and worker training. Part of employee training should include an explanation of productivity expectations. Any changes that can result in increased productivity should be communicated to everyone to ensure workers understand the reason and necessity of changes.

### 3. Ensure Workers Follow Job Site Instructions Properly

A common mistake made by some contractors at job sites is failing to follow the

instructions from engineering drawings. Overlooking setup instructions regarding proper assembly may cause worker accidents. Cutting corners to save time may actually increase the labor costs of a construction project. Accidents lead to avoidable downtime and an increase in the possibility of unsafe working conditions.

#### 4. Communicate

Effective communication involves utilizing the time it takes to explain the construction process to every worker. Worker attitude is poorly affected when the work site crew is in the dark about expectations. Poor communication habits can negatively affect worker attitudes when work has to be redone.

Supervisors should explain the process and expectations before work begins. Ongoing communications regarding worker progress is also helpful towards improving job site productivity. In addition to tasks expectations, supervisors may want to also communicate the project budget, including project completion milestones.

Basically, there are two types of communication that are crucial to having a productive job site. Oral communication involves listening to worker concerns and keeping them informed about job expectations. Written communication habits may include factors such as job site reports and timecard.

Generally, oral communication is most effective and productive on job sites when supervisors engage workers. This involves keeping workers informed, asking about ideas for improvement and listening to worker concerns. In some situations, workers may have better insight on the best placement for steel than the supervisor. Failing to recognize this knowledge will not only lead to a missed opportunity for efficiency, but this can also have an adverse affect on worker attitude.

The construction industry has long held the reputation for inadequate written communication practices. Issues related to timecard inaccuracies, late reports or documents that become misplaced or lost run rampant on most construction sites. Since written communication is usually created at a job site, cycled through the main office and finally communicated to workers, untimely reports may occur.

Ways to improve this cycle involve three key rules. First, individuals should receive clear instructions for completing forms necessary for the construction project process. Second, individuals should receive an example of how the data on the form is used. Finally, individuals should receive feedback on how the data is incorporated at the job site.

Posting a flowchart that demonstrates the communication process in a prominent area is also helpful to written communications.

An open communication process involves asking for worker input whether through oral or written means. Construction site employers should let workers know that their suggestions are encouraged and welcomed. Perhaps offering a reward system when workers make suggestions that improve productivity will foster more involvement. With shared responsibility in the outcome, workers will look for ways to make progress rather than simply point out what is wrong.

## 5. Inspire Worker Pride in Finished Product

Ultimately, the success of any construction process depends on the work of the crew. This is essential because of worker skill and direct labor costs. Exceeding labor budget costs will also affect other cost components such as equipment and materials. The dependence on labor efforts is complex when workers view their role on a construction site as a specific job rather than a construction firm.

In other words, a construction worker may work for different contractors throughout the year. This presents a view that the worker is only obligated to the current job and not the firm. Unlike a receptionist or retail store clerk who identifies with one workplace constantly, the construction worker might limit his or her commitment to the job from start to finish.

Nevertheless, both the site supervisor and construction firm are dependent on the construction worker's attitude during the project. This can mean the difference between a productive worker who is profitable for the job site and one who is nonproductive. Having a connection with the construction firm may increase productivity. For example, the worker might look for opportunities to do more work once an assigned task is completed. Noncommittal workers may simply stand idle until a supervisor

assigns more work.

Management and leadership efforts of the site supervisor are important to inspiring worker pride in the final product and employment with the construction firm. Employee recognition can directly impact worker pride in the finished product. Often, a pat on the back or compliment is enough to inspire worker motivation. This is an inexpensive way of encouraging workers to do a good job. However, workers will place a high value on these seemingly small gestures.

There are other ways that site supervisors can inspire worker pride. Some actions might be constrained by short-term jobs or insurance issues. However, failing to establish some type of worker recognition system can lead to negative results at a job site.

## 6. Plan Better

Better planning of construction projects will lead to better results in job site productivity. While a magic solution does not exist to prevent untimely issues, planning will put supervisors and workers in a stronger position to overcome challenges. Long periods of downtime can occur when materials are not ordered in advance, for example. This directly impacts worker productivity since they have to wait for the material to arrive.

Planning should also include measurements to determine if the process is right for a particular project. Additionally, planning is an opportunity to identify benchmarks for improvement. It is easier to resolve mistakes on paper than after the process begins.

## 7. Safety First

Every construction site should give adequate attention to maintaining a safe work environment for workers. Many studies have shown that worker accident rates excel at construction sites. Difficulty of tasks and work site conditions contribute to workplace accidents on construction sites. Since this industry has one of the highest incident rates based on worker hours, every precaution should be taken to minimize these risks. Otherwise, job site productivity will suffer tremendously. Alternately, a safe job site is a productive job site.

The reasons for high accident rates in the construction industry notwithstanding, excessive job site accidents can have an adverse effect on worker morale and insurance premiums. Workers who are nonproductive can get injured just as easily as one who is performing tasks.

With an effective safety program onsite, supervisors can reduce, if not eliminate, accident-prone situations. A good safety program will comply with safety regulations for construction sites. Reinforcing safety behaviors with workers is also essential to make sure everyone knows how to maintain a safe work environment and report deficiencies.

## 8. Organize Tasks at the Job Site

Organizing tasks at the job site is very important to maintaining productivity. However, this is often overlooked for various reasons. Supervisors might be in a hurry for the work to begin and fail to lay out tasks and other crucial elements in an organized manner. Included in organizing tasks is a process to communicate what is important and the reasons why to all workers.

Typically, workers need to know where trailers for general contractors and subcontractors belong. Access to materials and equipment stored onsite should not be hampered, which will cause unnecessary delays. Additionally, storage locations when said materials and equipment are not in use should be part of the organization plan.

In some cases, the supervisor may not look at alternative methods for an organization process. Rather, the supervisor might leave a subcontractor trailer at one location while storage space for materials is in another location. Assigned locations for these support components can cause confusion in the communications, damage worker satisfaction and hurt productivity at the job site.

Regardless of the construction site, there is usually only one way to optimize an organizational layout. Planning based on a different layout reduces the work environment and job site productivity. An example of this is when workers are forced to stop working and walk long distances to the materials storage location.

Likewise, storing materials away from the place where they are ultimately

manufactured for the construction project will lead to unnecessary double lifting.

When heavy equipment is stored in the pathway of workers, incidents of injury may increase. High incidents of theft may occur when materials are stored openly near entrances and exits.

Organizing tasks may also include locations for lunch and break areas, lavatory facilities and construction site signs. With a structured approach to organizing the job site layout, supervisors can reduce nonproductive time.

## 9. Utilize New Construction Technologies

Utilizing new construction technologies can also yield better job site productivity. Advances in scheduling software and construction equipment provide a return on investment that site owners will see almost immediately. Research and development is possibly the lowest line item for the construction industry. Typically, large construction firms are more likely to exploit technology advances.

Mistakes made in other industries can help small, medium and large construction firms when implementing new technologies. Sometimes, a company attempts to execute new technology systems overnight. A lack of planning will lead to a deluge of changes with ill-prepared employees. As a result, employees become discouraged because they were not properly trained and productivity suffers. Taking a gradual approach to making technology advances will help job site productivity.

Adding new technology without careful consideration for its benefits will also hurt productivity. Just because new software is available does not automatically mean it is suitable for a specific construction project. Along with proper planning and training, construction firms should determine whether the software will actually improve productivity. If the process is not broken, adding new technology is counterproductive.

When the technology is needed and evaluated in terms of improvements to productivity, all workers should receive adequate training. In general, proper training outlines how to use the technology. The training will also demonstrate worker and job site benefits.

## 10. Utilize Project Reports for Quality Assurance

Finally, improving job site productivity is linked to the utilization of project reports. If the supervisor does not know a problem exists, he or she cannot implement strategies to make necessary changes. Job cost reports are an essential tool on construction sites. Untimely or inaccurate reports results in faulty information.

When worker productivity exceeds budget costs, a project report can identify key areas. Doing so will empower supervisors to address the problems and make adjustments before the work is completed. It is easier to change poor worker habits during early stages.

Generally, the job site supervisor should have a cost-accounting system for timely reporting. This system will help to identify the percentage of worker effort versus equipment or labor effort for each work task.

Let's assume, for example, that the cost-accounting report show a percentage of labor hours expended exceeds the percentage of work that is left to complete. Several reasons may cause this discrepancy such as an inaccurate initial estimate, unexpected conditions at the job site or inaccuracy in field reporting.

Either one of these reasons are correctable problems when they are properly identified on the project report. Essentially, job site reports expose areas of mismatched work performance and the amount of labor exhausted. The supervisor can take this information and correct the issues, whether it is lack of worker knowledge or an ineffective site crew. The proper time to make corrections in productivity issues is before the work is completed.

## Conclusion

In the current construction environment, many contractors and property owners might have difficulty finding ways to remain competitive. Generally, labor, material and equipment costs are basically the same regardless of the geographical location. The difference is often noticeable in the impact job site productivity has on profit margins.

There are several benefits to increasing job site productivity:

- Turnaround time for completion is quicker
- Lower project costs
- Increased opportunities for more lucrative bids
- Overall project profits

Typically, workers can be unproductive for up to 50 percent of their time at a job site. The longer the wait, the more time is delegated to the unproductive column. This negatively impacts a job site schedule and construction firm profits.

Fortunately, most of the unproductive time periods are under management control. Improvements to management and leadership practices will help the construction firm reduce unproductive man hours. A million dollar construction project will quickly run over budget when labor is unproductive during half of the time allotted on the work schedule. A drain on worker productivity is usually caused by poor management of materials, waste and theft.

Time is utilized best when constructive planning occurs before work begins. Training workers and site supervisors on equipment usage and technology will help to improve productivity. In some cases, a construction project may finish under budget and before the deadline.

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