EFFECTS OF E X T E N D E D WORK TIME ON PRODUCTIVITY

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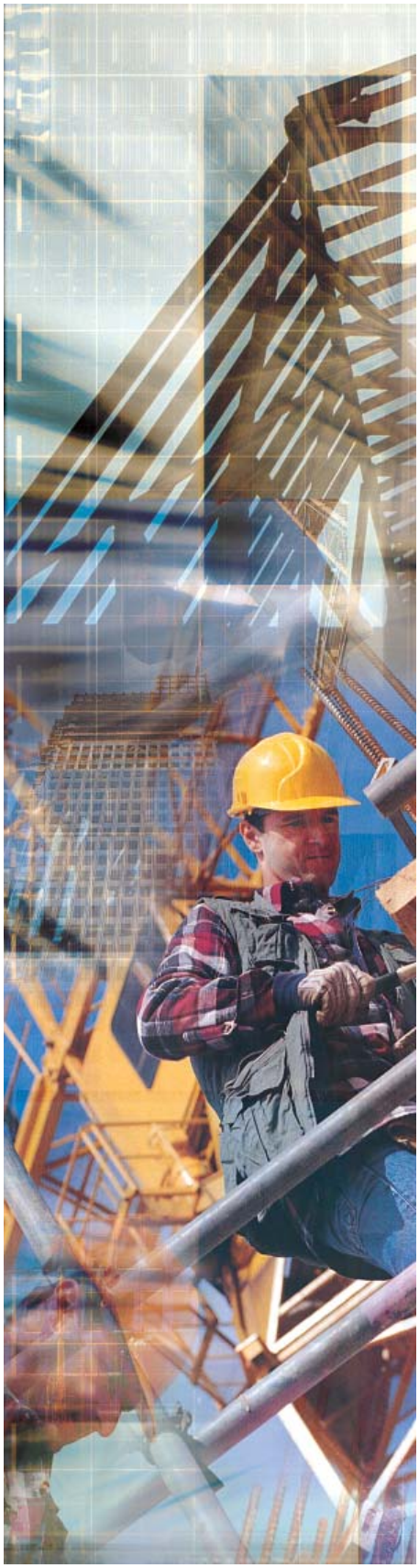
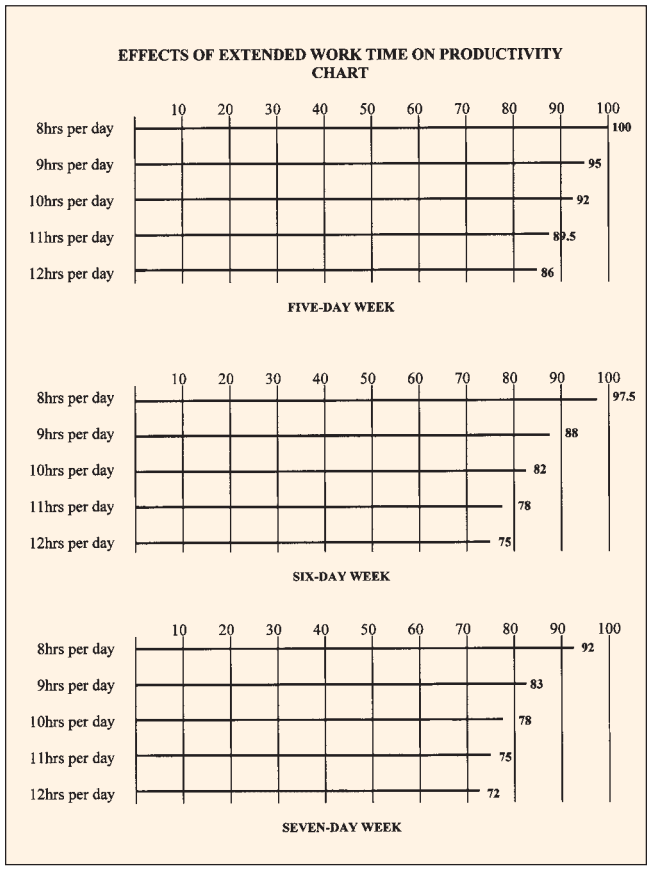


Overtime is a major variable that impacts labor units. The effects of work performed beyond the normal workday must take into consideration efficiency and fatigue. There are many interpretations of what is considered a 'normal' workweek. Most contractors abide by an eight-hour, five-day week. There are many combinations that range from thirty-two to forty work hours per week. A normal workweek exists only when construction progress meets all its milestones and does not require overtime hours.

The need to extend hours beyond the normal workweek can be required due to several factors including weather, improper management, other trades or even your own company's performance. Review the job's specifications that relate to overtime. Some projects may prohibit or even assess penalties if such overtime work is performed. Restricted access to the job site can impact overtime work and create added costs. You also need to keep in mind that changes to one work schedule may impact other projects. By reviewing the published job duration to your companies available labor resources and job cost records of typical type jobs the estimator can project when overtime may be needed.



Overtime pay is only one aspect of working extended hours. The estimator must take into consideration the effects of extended work hours to include a fatigue factor. By simply adding the increased labor rate to those hours above the normal workweek does not cover the loss of labor hours brought on by fatigue. Your estimate should be based on the reduced productivity from loss hours in addition to the premium rate to cover overtime.

On rare occasions overtime may increase work performance, as there will likely be less interference when other trades have left the job site. Studies, however, by both trade associations and the government clearly document that overtime typically reduces productivity. Accidents, absenteeism and mistakes increase. The problem of fatigue is directly proportional to the amount of overtime worked. These studies have found that no matter what the employee's incentive is, fatigue reduces productivity. Studies have also shown that the fatigue produced by overtime work affects work done on regular time as well. Requiring an individual to work seven days a week on a regular basis is foolish. The overall effect on performance is counterproductive.

Most contractors will attempt to avoid the excessive costs of overtime. Where permitted and when overtime is needed, an estimator should consider either a shift differential or placing more employees on a project. Also keep in mind that the larger the crew size the lower the production.

Your job as an estimator is to recognize that productivity is lower on overtime, and always adjust your estimate accordingly by factoring labor units to compensate for reduced performance. The above charts show the effects of extended work time on productivity.

In version 4.0 of IntelliBid (ConEst2000), we have added a **Labor Calculator** that automatically adjusts your estimate for lost labor hours caused by scheduled and unscheduled overtime.