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NAC Executiv

Construction Productivity

Key Points

Productivity is a measure of the rate at which work is performed. The appropriate measurement of productivity has been an industry challenge for decades. Recent efforts by the U.S. Bureau of Labor Statistics (BLS) are promising with regard to how to appropriately measure productivity.

What A

Strategic Actions to Take to Improve Productivity

1. Labor

Minimize holiday work, which has added cost, lower productivity, and a lingering negative morale factor. Account for seasonal variation (temperature, dry/rain, seasonal light levels) in labor performance in resourcing levels and planned schedules.

Account for local or craft practices (breaks; customs, including religious) in planning.

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Align the project team (includes owner, contractor and others), the culture (open, transparent, bias to action, with safety focused on zero accidents), and project morale. Monitor and support labor morale and motivation. Create a climate for motivation Establish strong document flow and document management systems and practices early to minimize time waiting for information. Ensure crews and supervisors have wireless digital access to information they require to perform their work.

Provide supervisory staff with conflict resolution training.

Thoroughly review quality and completeness of engineering drawings prior to release to work crews.

Provide schedule buffer so work crew generated RFIs and field holds are minimized or eliminated.

Minimize manual and paper-based processes that may delay information flows or create unintended information gaps (the missing notes page for a drawing set).

Establish a data-centric management cultu9951 µ0630.21 612 792 renli5/TT0 11.04 Tf310.85 599.14 Td(.) TjETEMC Q/P &6(a (t 2

Seek to establish dates for scope and design freeze.

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Table 2 Productivity by Day of the Week (Ranked)

4. Means and Methods

Ensure workface is adequately lighted.

Ensure adequate protection of workers performing in operating plant areas; account for any special protective equipment required and any added time associated with access and egress.

Establish inspection and approval points and reflect on schedules.

Ensure acceptance or performance criteria are associated with discrete tasks and activities.

Clear performance responsibilities linked to crews or individuals. Monitor and track.

Use reusable formwork and standardized formwork sizes.

Continue expansion of mechanization wherever possible (power compaction; motorized screeds, power floating, and troweling; power tools (battery and compressed air)).

Use personnel lifts in lieu of scaffolding and ladders (improved safety, lower erection time).

Use electronic/laser leveling and transits. Use laser scanning to confirm as-built conditions as work progresses.

Use adhesives as substitute for certain mechanical fastenings.

Prefab repetitive, labor-intensive components (roof trusses; stud walls; concrete floor and deck slabs).

Use tablets to provide greater information at workface, including instructions, checklists, illustrations, and inspection/acceptance criteria; also query access to supervisor, engineer, or vendor.

Use pre-cut and pre-spooled cable.

Use pre-wired electrical modules.

Use skid mounted equipment, including spooled ele

Table 3 Select Factors Influencing Craft Labor Productivity ⁴						
Factor	Sub-factor	Influence A. Worst	B.	C. Average	D.	E. Ideal
Craft Availability	Local supply	Poor <40%	Fair <60%	Average		