

Assess and Improve Pre-Task Planning (PTP) Using CPWR's Checklist

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CPWR – The Center for Construction Research and Training

January 26th, 2023

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THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

CPWR's Project Team

CPWR – The Center for Construction Research and Training



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Project & AIMS

Project: CPWR’s “Prevention through Augmented Pre-Task Planning” funded by NIOSH.

AIMS: Enhance the quality of Pre-Task Planning (PTP) in construction.

- Identify gaps and shortcomings in current PTP practices
- Explore effective strategies to fill the gaps
- Develop an applied tool to help practitioners assess and improve their PTP process

FACILITIES SERVICES MAINTENANCE OF FIRE ALARMS, PANELS, AND SENSORS		
TASK	HAZARDS	CONTROLS
1. Preparing work area	Injury to passersby and bystanders False alarm response; client anxiety/embarrassment; alteration of campus business	Isolate work area with barricades, caution tape, and/or an aisle marker. Phone UO/D and notify building clients; schedule work appropriately
2. Using ladders and lifts	Falls, slips, tripping hazards Muscle strain, repetitive stress injuries	Refer to ladder safety and sense HAZ/LS. Checklist, frequent breaks, adequate hydration, alternate tasks with team partner
3. Working in sub-voltage, cramped spaces, overhead cables, machine rooms	Head stress Head and/or eye injuries from falling or flying debris, dust inhalation Hand and finger injuries from pinch points Slip/trip/fall from dirt and obstruction	Frequent breaks, adequate hydration, alternate tasks with team partner Protect head and eyes with hard hat and safety glasses, wear dust mask Protect hands with gloves, avoid pinch points and moving machinery parts Wear safety glasses and long-sleeved shirt
4. Repairing, replacing, or maintaining fire alarms, panels, or sensors	Electrical shock	Practice careful troubleshooting; maintain awareness of location of equipment and tools. Access environment for wet or damaged wiring/connection before starting work; isolate condition(s) of building and consult with procedures (if available) to department for that building before starting work
5. Testing horns	Hearing damage to self and others	Wear ear plugs, notify building clients and UO/D prior to tests

CHECKLIST (Check and Discuss applicable items prior to task)		CHECKLIST (Check and Discuss applicable items prior to task)	
GENERAL SAFETY		ELECTRICAL	
<input type="checkbox"/> YES	<input type="checkbox"/> SITE SPECIFIC SAFETY ORIENTATION	<input type="checkbox"/> YES	<input type="checkbox"/> GFCI IN USE
<input type="checkbox"/>	<input type="checkbox"/> EVACUATION PLAN/WALL POINT	<input type="checkbox"/>	<input type="checkbox"/> EST CODES - USER INSPECTED
<input type="checkbox"/>	<input type="checkbox"/> SDS REVIEWED (HAZCOM)	<input type="checkbox"/>	<input type="checkbox"/> EXPOSED CONDUCTORS
<input type="checkbox"/>	<input type="checkbox"/> ACCESS/EGRESS	<input type="checkbox"/>	<input type="checkbox"/> LOCKOUT/TAGOUT AUTHORIZED PERSONS
<input type="checkbox"/>	<input type="checkbox"/> MATERIAL STORAGE	<input type="checkbox"/>	<input type="checkbox"/> ARC FLASH TRAINED
<input type="checkbox"/>	<input type="checkbox"/> EQUIPMENT, MACHINE & TOOL INSPECTION	<input type="checkbox"/>	<input type="checkbox"/> TRAINED/AUTHORIZED PERSONS
<input type="checkbox"/>	<input type="checkbox"/> MACHINE & TOOL GUARDS	<input type="checkbox"/>	<input type="checkbox"/> WIRE / CABLE PULL - SETUP
<input type="checkbox"/>	<input type="checkbox"/> BARRICADES, SIGNS, TAGS	<input type="checkbox"/>	<input type="checkbox"/> WIRE / CABLE PULL - EQUIPMENT INSPECTION
<input type="checkbox"/>	<input type="checkbox"/> TRIP, TRIP OFF	<input type="checkbox"/>	<input type="checkbox"/> WIRE / CABLE PULL - TENSIONING
<input type="checkbox"/>	<input type="checkbox"/> WEATHER HAZARDS	<input type="checkbox"/>	<input type="checkbox"/> YES - CRANE CAPACITY/LOGGING
<input type="checkbox"/>	<input type="checkbox"/> LOCKOUT/TAGOUT VERIFICATION	<input type="checkbox"/>	<input type="checkbox"/> OPERATOR DAILY INSPECTION
<input type="checkbox"/>	<input type="checkbox"/> ADEQUATE LIGHTING	<input type="checkbox"/>	<input type="checkbox"/> ANNUAL INSPECTION CURRENT
<input type="checkbox"/>	<input type="checkbox"/> NEAREST FIRE EXTINGUISHER	<input type="checkbox"/>	<input type="checkbox"/> TAG LINES USED
<input type="checkbox"/>	<input type="checkbox"/> FALL PROTECTION	<input type="checkbox"/>	<input type="checkbox"/> PROPER SETUP
<input type="checkbox"/>	<input type="checkbox"/> USER INSPECTED EQUIP	<input type="checkbox"/>	<input type="checkbox"/> RIGGING EQUIP - USER INSPECTED
<input type="checkbox"/>	<input type="checkbox"/> PROPER ANCHOR POINT USED	<input type="checkbox"/>	<input type="checkbox"/> OPERATOR TRAINING/CERTIFICATION VERIFIED
<input type="checkbox"/>	<input type="checkbox"/> FALL CLEARANCE DETERMINED	<input type="checkbox"/>	<input type="checkbox"/> RIGGER TRAINING/CERTIFICATION VERIFIED
<input type="checkbox"/>	<input type="checkbox"/> HARNESSES PROPER FIT	<input type="checkbox"/>	<input type="checkbox"/> YES - WIREWORK
<input type="checkbox"/>	<input type="checkbox"/> YES - LADDERING	<input type="checkbox"/>	<input type="checkbox"/> FORK/LIFT - DAILY INSPECTION
<input type="checkbox"/>	<input type="checkbox"/> PROPER FOOTING / ANGLE	<input type="checkbox"/>	<input type="checkbox"/> OPERATOR TRAINING / CERTIFICATION VERIFIED
<input type="checkbox"/>	<input type="checkbox"/> EXT. LADDER SECURED	<input type="checkbox"/>	<input type="checkbox"/> SEAT BELT USED
<input type="checkbox"/>	<input type="checkbox"/> EXTENDS 3 FT ABOVE LANDING	<input type="checkbox"/>	<input type="checkbox"/> LOAD CHART - FULL
<input type="checkbox"/>	<input type="checkbox"/> STEPLADDER - OPEN/LOCKED	<input type="checkbox"/>	<input type="checkbox"/> MANUAL LIFTING - PROPER BODY POSITION
<input type="checkbox"/>	<input type="checkbox"/> LEVEL/STABLE	<input type="checkbox"/>	<input type="checkbox"/> PROPER LIFTING HEIGHT
<input type="checkbox"/>	<input type="checkbox"/> PROPER USE	<input type="checkbox"/>	<input type="checkbox"/> MECHANICAL LIFTING DEVICES NEEDED
<input type="checkbox"/>	<input type="checkbox"/> FALL PROTECTION NEAR OPENING	<input type="checkbox"/>	<input type="checkbox"/> ADEQUATE MANPOWER/SPOTTER

PERSON WHO DOES JOB:	SUPERVISOR:	DATE:	NEW <input type="checkbox"/>
			REVISED <input type="checkbox"/>
	DEPARTMENT:	ANALYSIS PERFORMED BY:	
		REVIEWED BY:	
SEQUENCE OF JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE	
1.			
2.			
3.			

Why Pre-Task Planning?

- Research findings suggest that most work-related injuries could be prevented by:
 - Proactively identifying hazards and unsafe conditions associated with each task, tools/equipment, materials, work methods, and jobsite
 - Properly addressing hazards using effective controls before work begins
- When and how to recognize and address hazards?
- **Pre-Task Planning (PTP)** is a process performed before each task starts to discuss the steps of work, the hazards, and available controls. This process may also be known as JHA, JSA, morning huddle, etc.

“... when we’ve done something a thousand times before, we begin to overlook things. We assume that the next time will be just like the last.

We are so used to doing what we’ve always done that we don’t stop to question whether it’s the right thing to do at all.”

James Clear – Atomic Habits: An easy & proven way to build good habits & break bad ones

Methods

Are current PTP practices functional? What's missing?

- Interviewed 28 construction managers and safety & health professionals
- Interviewed 93 construction workers
- Observed onsite Pre-Task Planning and morning huddles
- Reviewed sample Pre-Task Planning forms and documents
- Reviewed findings with our Industry Advisory Group

Pre-task Planning; Challenges and Gaps

The gap in the process:

- Lack of comprehensive guidelines
- Inconsistent style
- Inconsistent terminology (JHA, JSA, PTP, AHA ...)
- Confusion and conflicts on jobsites
- Mainly from a compliance perspective
- Minimal opportunity for workers' input
- Lack of workers' engagement in site safety planning
- Lack of task-specific content
- Inconsistency between content and task requirements

FACILITIES SERVICES MAINTENANCE OF FIRE ALARMS, PANELS, AND SENSORS		
TASK	HAZARDS	CONTROLS
1. Preparing work area	Injuries to passersby and bystanders False alarm response, client anxiety/distraction; disruption of campus business	Isolate work area with barricades, caution tape, and/or on-site assistant Phone UICP and notify building clients; schedule work appropriately
2. Using ladders and lifts	Falls, slips, electrical hazards	Refer to ladder safety and aerial lift JSA's
3. Working in sub-closets, cramped spaces, outdoor closets, machine rooms	Muscle strain, repetitive stress injuries Heat stress Head and/or eye injuries from falling or flying debris, dust inhalation Hand and finger injuries from pinch points Skin/eye irritation from dirt and chemicals Tripping hazards from cables and extension cords	Stretching, frequent breaks, adequate hydration, alternate tasks with team partner Frequent breaks, adequate hydration, alternate tasks with team partner Protect head and eyes with hard hat and safety glasses, wear dust mask Protect hands with gloves, avoid pinch points and moving machine parts Wear safety glasses and long-sleeved shirt Practice careful housekeeping, maintain awareness of location of equipment and tools
4. Repairing, replacing, or maintaining fire alarms, panels, or sensors	Electrical shock	Assess environment for wet or damaged wiring/connectors before starting work, evaluate condition of building and consult written procedures (confidential to department) for that building before starting work Wear ear plugs, notify building clients and UICP prior to work
5. Testing horns	Hearing damage to self and others	

CHECKLIST (Check and Discuss applicable items prior to task)	CHECKLIST (Check and Discuss applicable items prior to task)
GENERAL SAFETY	ELECTRICAL
<input type="checkbox"/> SITE SPECIFIC SAFETY ORIENTATION <input type="checkbox"/> EVACUATION PLAN/RALLY POINT <input type="checkbox"/> SDS REVIEWED (HAZCOM) <input type="checkbox"/> ACCESS/EGRESS <input type="checkbox"/> MATERIAL STORAGE <input type="checkbox"/> EQUIPMENT, MACHINE & TOOL INSPECTION <input type="checkbox"/> MACHINE & TOOL GUARDS <input type="checkbox"/> BARRICADES, SIGNS, TAGS <input type="checkbox"/> HWS TIE-OFF <input type="checkbox"/> WEATHER HAZARDS <input type="checkbox"/> LOCKOUT-TAGOUT VERIFICATION <input type="checkbox"/> ADEQUATE LIGHTING <input type="checkbox"/> NEAREST FIRE EXTINGUISHER	<input type="checkbox"/> GFCI IN USE <input type="checkbox"/> EXposed CONDUCTORS <input type="checkbox"/> EXposed CONDUCTORS <input type="checkbox"/> LOCKOUT / TAGOUT AUTHORIZED PERSONS <input type="checkbox"/> ARC FLASH TRAINED <input type="checkbox"/> TRAINED / AUTHORIZED PERSONS <input type="checkbox"/> WIRE / CABLE PULL - SETUP <input type="checkbox"/> WIRE / CABLE PULL - EQUIPMENT INSPECTION <input type="checkbox"/> WIRE / CABLE PULL - TENSIONING
FALL PROTECTION	CRANE OPERATIONS / RIGGING
<input type="checkbox"/> USER INSPECTED EQUIP <input type="checkbox"/> PROPER ANCHOR POINT USED <input type="checkbox"/> FALL CLEARANCE DETERMINED <input type="checkbox"/> HARNESS/PROPER FIT	<input type="checkbox"/> OPERATOR DAILY INSPECTION <input type="checkbox"/> ANNUAL INSPECTION CURRENT <input type="checkbox"/> TAG LINES USED <input type="checkbox"/> PROPER SETUP <input type="checkbox"/> RIGGING EQUIP - USER INSPECTED <input type="checkbox"/> OPERATOR TRAINING/CERTIFICATION VERIFIED <input type="checkbox"/> RIGGER TRAINING/CERTIFICATION VERIFIED
LADDERS	MATERIAL HANDLING
<input type="checkbox"/> PROPER FOOTING / ANGLE <input type="checkbox"/> EXT. LADDER SECURED <input type="checkbox"/> EXTENDS 3 FT ABOVE LANDING <input type="checkbox"/> STEPLADDER - OPENED/LOCKED <input type="checkbox"/> LEVEL/STABLE <input type="checkbox"/> PROPER USE <input type="checkbox"/> FALL PROTECTION NEAR OPENING	<input type="checkbox"/> FORK LIFT - DAILY INSPECTION <input type="checkbox"/> OPERATOR TRAINING / CERTIFICATION VERIFIED <input type="checkbox"/> SEAT BELT USED <input type="checkbox"/> LOAD CHART - LULL <input type="checkbox"/> MANUAL LIFTING - PROPER BODY POSITION <input type="checkbox"/> PROPER LIFTING METHODS <input type="checkbox"/> MECHANICAL LIFTING DEVICES NEEDED <input type="checkbox"/> ADEQUATE MANPOWER/SPOTTER

DATE:	NEW	<input type="checkbox"/>
	REVISED	<input type="checkbox"/>
PERSON WHO DOES JOB:	SUPERVISOR:	ANALYSIS PERFORMED BY:
DEPARTMENT:		REVIEWED BY:
SEQUENCE OF JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
1.		
2.		
3.		

Preliminary Findings

Optimizing content

Challenges	Recommendations & Strategies
<ul style="list-style-type: none">▪ Long and wordy documents▪ Inconsistency between content and task requirements▪ Lack of management presence on jobsites▪ Minimal opportunity for workers' input▪ Lack of supplemental information on topics besides S&H	<ul style="list-style-type: none">▪ Provide task-specific information▪ Use one-page summaries▪ Replace text with visual aids when possible (photos, videos)▪ Frequent site visits by management▪ Provide additional information – tools, materials, schedule, other crews, etc.▪ Recognize hazards from adjacent crews

Preliminary Findings

Lack of Buy-in

Challenges	Recommendations & Strategies
<ul style="list-style-type: none">▪ Pencil-whipping▪ Resistance to change▪ Repetitive/Redundant	<ul style="list-style-type: none">▪ Personalize the process▪ Make it more interactive▪ Incorporate real-life incidents and near-misses▪ Get workers directly involved▪ Designate workers to serve as liaisons with management▪ Actively solicit and incorporate workers' feedback

Stop mindlessly slipping into an ineffective routine.

Today's task IS NOT the same as yesterday!

Preliminary Findings

Communication & Coordination

Challenges	Recommendations & Strategies
<ul style="list-style-type: none">▪ Lack of consistency in communicating jobsite changes▪ Poor presentation skills▪ Lack of mentorship▪ Language barrier▪ Absenteeism	<ul style="list-style-type: none">▪ Perform site audits regularly▪ Engage all stakeholders equally in site safety planning▪ Train workers and crew leaders on how to conduct PTP meetings▪ Pair non-English speaking workers with bilingual coworkers▪ Brief workers who were absent on current site condition▪ Perform post-job review/debrief


From Research to Practice: An Applied Tool

- Translated research findings into an easy-to-use, one-page assessment checklist
- Helps field supervisors assess their PTP process and identify areas for improvement
- Each “No” answer indicates an area for improvement
- Reviewed and tested by 25 construction safety and health professionals in an iterative process
- The checklist is currently available in a [fillable PDF format](#)
- Let’s have a walkthrough to see how to use it ...

NOTE: This checklist IS NOT an exhaustive list of best practices. These are some good practices to help change old, ineffective routines in conducting PTP.

PRE-TASK PLANNING (PTP) ASSESSMENT CHECKLIST

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Please use the QR code above or go to <http://bit.ly/3Fv4eMn> if you have any feedback or questions.

Pre-Task Planning (PTP) is a process performed before each task starts to discuss the steps of work, the hazards, and available controls. This process may also be known as JHA, JSA, morning huddle, etc.

This checklist has been developed based on research findings and input from industry experts to help construction practitioners evaluate and improve their PTP process. Each “No” answer indicates an area for improvement. **Please note** that this checklist is not a replacement for your PTP.

- Do you conduct PTP before each task starts? Yes No
- Do you conduct daily walkthroughs to get a better understanding of the current site conditions?
→ If you answered **NO**, please skip to **question 3**
 - Are workers involved in daily walkthroughs? Yes No
- Do you update PTP content when conditions change?
→ If you answered **NO**, please skip to **question 4**
 - Do you communicate these changes with workers immediately? Yes No
- Does your PTP break the task up into manageable steps or sub-tasks? Yes No
- Does your PTP specify hazards associated with each step of the task? Yes No
- Does your PTP discuss ways to control each hazard?
→ If you answered **NO**, please skip to **question 7**
 - Does your PTP identify who is responsible for implementing the controls? Yes No
- Does your PTP discuss hazards posed by other crews working close by? Yes No
- Do you provide any formal training to conduct or lead the PTP meeting? Yes No
- In addition to the crew supervisor, do workers have the opportunity to lead the PTP meeting? Yes No
- Do you gather workers’ feedback on PTP content and delivery?
→ If you answered **NO**, please skip to **question 11**
 - Do you incorporate their feedback? Yes No
- Does your PTP use photos or other visual aids instead of text where possible? Yes No
- Do you use educational aids like a whiteboard or live demonstration in your PTP process? Yes No
- Does your PTP include supplemental information such as:
 - Site layout? Yes No
 - Medical facility location and contact information? Yes No
 - Evacuation plan and muster point for emergencies? Yes No
 - Work schedule? Yes No
 - Tools? Yes No
 - Equipment? Yes No
 - Materials? Yes No
 - Specific types of PPE? Yes No
- Do you conduct end-of-shift review with your crew to discuss what went well and what didn’t? Yes No
- Is PTP information easily accessible to workers after the meeting is completed? Yes No

Testimonials

“It is clear and simple. Straight to the point.”

-Corporate Safety Director

“Good checklist with good questions.”

-Operations Manager

“It only took me a minute to fill out, but it made me think for hours about why we aren’t doing some of these things.”

-Senior Vice President

“I like the way this was put together and I feel this will help us with the way we use our PTP.”

-Anonymous

“The checklist is thorough and asks the ‘right’ PTP assessment questions.”

-Anonymous

Contributing Companies and Organizations



Thanks!

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