Internal Traffic Control Plans for Work Zones

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An Internal Traffic Control Plan (ITCP) is a tool that project managers can use to coordinate and control the movement of workers, construction vehicles, and equipment in the activity area and to inform all parties operating within the activity area on the locations of others. The activity area is the section of the highway where the work activity takes place and is comprised of the work space, traffic space, and the buffer space. ITCPs intend to promote the safety of roadway construction personnel at a road work site by assessing and providing countermeasures for the various hazards within the work zone.

ITCP Components

The main components of an ITCP include: ITCP diagrams, ITCP legend, ITCP notes. The core of the ITCP is the diagram showing the layout of the work space and the movement of personnel and construction equipment within the work zone activity area. The ITCP will include the access and egress points for the work space and may also show portions of the overall work zone. While the diagram does not have to be to scale, it should be adequate to give those reviewing the plan a concept of how the safety features will function.

The ITCP legend explains the symbology used in the ITCP diagrams. Standard symbols for devices and vehicles can be based on those used in the Manual on Uniform Traffic Control Devices. Additional details on classes of personnel and vehicle types are needed in developing an ITCP. In many cases, simple hand drawn symbols are adequate such as those for bull dozers, spotters, and dump trucks.

The ITCP notes contain safety points, injury reduction measures, site-specific provisions, and duties of various contractor personnel. Safety points include pedestrian-free zones (civilian pedestrians), buffer areas around construction equipment, and designations of right-of-way between workers on foot, construction equipment, and other work vehicle traffic. Safety points may also highlight dangerous areas for workers on foot due to blind spots for specific construction equipment in use. Injury reduction measures specify when project safety meetings should be held, the use of the ITCP, communication needs, coordination of construction vehicle arrivals/departures, and references to general safety requirements such as 29 CFR.
Application of ITCPs

The main benefit of the ITCP is increased worker safety due to better management of worker-equipment interactions in the activity area. Important secondary benefits include enhancing a contractor’s ability to communicate protocols for safe movements in the activity area during pre-construction and project safety meetings as well as the possible optimization of efficiency in the activity area. Use of the ITCP in daily safety meetings is necessary to make all project personnel aware of how to perform their jobs safely.

The ITCP should be discussed at pre-construction meetings along with the overall safety plan. Common worker injuries and fatalities for construction operations should also be discussed, along with injury reduction measures contained in the ITCP notes. Critical parts of the ITCP, such as truck access points and staging areas, should be discussed and approved by the contracting agency. Signing within the activity area may complement and reinforce the traffic control elements outlined in the plan.

The safety officer and designated competent person for each shift should use the ITCP to illustrate the safety plan for the construction operations. If changes to the ITCP are necessary as the project progresses, then the assigned safety officers should be in charge of getting the changes approved and communicating the changed plans to all personnel. Safety officers should be also responsible for warning workers or vehicle operators of violating the ITCP. These violations could include workers that are out of position or working in pedestrian free zones, or truck drivers operating at speeds above the designated site speed limit.

Considerations When Using ITCPs

- ITCPs should promote worker safety based on the specific objectives listed in the contract documents and customized for the particular construction site.
- Seasonal and environmental conditions should be taken into account when developing or implementing an ITCP.
- The traffic pattern and on-site route diagrams in the ITCP should be based on construction phase sequences.
- Communication and coordination between workers regarding operations, position, and movement should be done before arrival to the construction site.
- Traffic flow around the work zone are not the primary concerns of the ITCP and should be incorporated within the Temporary Traffic Control Plan.
- The ITCP should comply with both Federal Highway Administration (FHWA) regulations and Occupational Safety and Health Administration (OSHA) regulations.

To learn more, contact:

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