

This newsletter is to inform you of recent changes & trends regarding health and safety.

The Turning Point is a monthly newsletter covering topics from various industries and sectors. The Turning Point will respond to your inquiries and inform you of current services and updates regarding

Raising the Standard Consulting Inc.



RAISING THE STANDARD CONSULTING

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CONSULTANT ARTICLE FEATURE

MICHAEL SOTO, CHST

I HAVE HAD THE PRIVILEGE OF WORKING IN OCCUPATIONAL ENVIRONMENTAL HEALTH AND SAFETY FOR TWO DECADES. I AM KEEN TO SHARE SOME VALUABLE INSIGHTS ON ENSURING THE SAFETY AND WELL-BEING OF OUR TEMPORARY TRAFFIC ZONES, WITH THE ULTIMATE GOAL OF ACHIEVING A ZERO-INCIDENT RECORD. MY EXTENSIVE EXPERIENCE IN THIS FIELD POSITIONS ME WELL TO ASSIST BOTH PERSONNEL AND BUSINESS OWNERS IN EFFECTIVELY NAVIGATING COMPLEX SAFETY REGULATIONS.

DURING MY TIME AT MILITARY FACILITIES IN THE BEAUTIFUL STATE OF HAWAII, I HAVE DEVELOPED A NUANCED UNDERSTANDING OF VARIOUS WORKPLACE HAZARDS AND CULTIVATED A PROACTIVE APPROACH TO ADDRESSING ENVIRONMENTAL HEALTH AND SAFETY CHALLENGES. I FIRMLY BELIEVE THAT, THROUGH COLLABORATION, WE CAN FOSTER INNOVATIVE SOLUTIONS THAT NOT ONLY ENHANCE SAFE WORKING ENVIRONMENTS BUT ALSO SIGNIFICANTLY MINIMIZE RISKS. ULTIMATELY, OUR SHARED GOAL IS TO ENSURE THAT EVERY EMPLOYEE RETURNS HOME SAFELY EACH DAY. LET US JOIN FORCES TO MAKE SAFETY A TANGIBLE DAILY REALITY.

OSHA 29 CFR 1926, MUTCD, & EM-385-1-1 & HIGH VISIBILITY SAFETY APPAREL (HVSA) SPECIFICATIONS IN EM-385-1-1-5-2.M.(1-5) (ANSI/ISEA 107-2020)

Temporary Traffic Control (TTC) zones are critical in ensuring the safety of workers and the public in construction areas. Properly designed and maintained TTC zones not only prevent accidents but also facilitate smooth traffic movement around work sites. The combination of regulatory standards and best

practices outlined in OSHA 29 CFR 1926, the MUTCD, and EM-385-1-1 provides a robust framework for achieving these objectives. These regulations emphasize hazard communication, visibility, and structured traffic flow, forming the backbone of construction

zone safety protocols. The following analysis delves deeper into the essential provisions and their implications for safety practices:



OSHA 29 CFR 1926 Compliance:

1. Subpart G (Signs, Signals, and Barricades):

This subpart mandates strict adherence to Part VI of the MUTCD, which outlines comprehensive guidelines for designing, installing, and maintaining TTC signage and devices. This includes the requirement for visible and legible accident prevention signs and tags (§1926.200) to communicate hazards effectively. Additionally, employers are required to implement signaling protocols for both vehicular and equipment operations to minimize risks associated with blind spots and movement around construction sites (§1926.201).

2. Subpart P (Excavations):

This section provides specific criteria for conducting excavations adjacent to active roadways. It emphasizes the necessity of cave-in protection systems, such as trench boxes, and established access and egress safety protocols to prevent falls and injuries when workers enter and exit excavation areas (§1926.650-652).

3. General Safety (Subparts C & E):

Employers must ensure that workers wear high-visibility apparel consistent with ANSI/ISEA 107 standards to enhance visibility in highway environments (§1926.28/§1926.95). Furthermore, specific training on struck-by hazards (§1926.21) is essential for all personnel, alongside the implementation of robust fall protection measures (§1926.501) to safeguard workers near traffic.

MUTCD Provisions: (11th. Edition, 2024)

1. TTC Framework: The guidelines prescribe the use of channelization

devices, like cones and barricades, to effectively guide traffic and promote reduced speed as vehicles approach work zones.

2. The MUTCD delineates the four main components of work zones:

- 1) Advanced Warning Area, which alerts road users to upcoming work.
- 2) Transition Area, where road users adjust to the changed conditions.
- 3) Activity Area, where the actual work is occurring.
- 4) Termination Area, where road users can safely re-enter normal traffic flow.

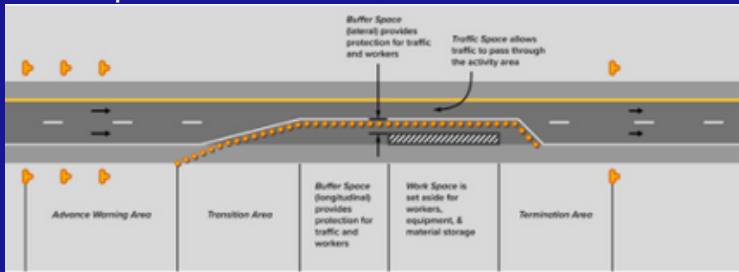
3. Updates (2023-2025):

Under Interim Approval IA-23 (2025), the MUTCD allows for the use of Residential Driveway Temporary Signals as an alternative to flagger operations in single-lane work zones, thus enhancing traffic management while ensuring safety. Moreover, the 2024 edition introduces upgraded design standards for regulatory and warning signs, with planned phased implementations extending through 2025, ensuring compliance and visibility on construction sites.

4. Worker Visibility Standards:

In the United States, nearly every 1 in 5 construction workplace fatalities is from a struck-by injury. A struck-by injury occurs when a worker is hit by a

piece of equipment or vehicle. Struck-by injuries and deaths, however, are preventable, and, with over 11 million construction workers in the United States, having high-visible safety apparel adhering to American National Standard Institute (ANSI) for High-Visibility Safety Apparel (HVSA) International Safety Equipment Association (ISEA)-107-2020 can better protect these workers.



The MUTCD aligns with 23 CFR 634, which imposes high-visibility clothing requirements for personnel engaged in federal-aid projects, underscoring the importance of visual recognition in preventing accidents.

The ANSI/ISEA 107-2020 standard updates requirements for high-visibility safety apparel (HVSA) to enhance worker visibility in hazardous environments. Here's a structured summary of key changes and features:

A. Classification Updates

Types: Retains three primary types but clarifies their applications:

- 1) Type O (Occupational): For workers "not" on public roadways (e.g., warehouses, airports).
- 2) Type R (Roadway): For roadways with traffic >25 mph, emphasizing retroreflective material.
- 3) Type P (Public Safety): For emergency responders, allowing customization (e.g., colors like red/blue).
- 4) Classes: Maintains Classes 1-3 (based on material area), with adjustments to minimum requirements for background and retroreflective materials.

B. Material and Design Enhancements

Retroreflective Material:

- 1) Updated specifications for performance in varying conditions, including stricter durability and colorfastness tests.
- 2) Fluorescent Background Fabrics**:
Expanded color options (e.g., red for Type P) and improved luminance requirements.
- 3) Ergonomic Design: Emphasis on fit, comfort, and mobility (e.g., gender-specific sizing, breathable fabrics).

C. New Testing Protocols

Durability:

- 1) Enhanced tests for color retention.
- 2) Retroreflectivity after laundering or abrasion.

Daylight/Nighttime Visibility:

- 1) Separate criteria for photometric performance in different lighting conditions.



D. Alignment with Global Standards:

Harmonization with ISO 20471 to facilitate international compliance, though differences remain (e.g., ANSI allows single-use garments, while ISO does not).

E. Sustainability Considerations:

Encourages recyclable materials and lifecycle guidelines for reduced environmental impact.

F. Technology Integration:

Machine-Readable Materials:

- 1) Indirect support for materials detectable by LiDAR/cameras, though not explicitly mandated.
- 2) Multi-Risk PPE: Guidance on

combining HVSA with flame-resistant or arc-rated clothing.

G. Labeling and Compliance:

Updated labeling requirements to indicate compliance with ANSI/ISEA 107-2020, including placement, and content.

1) Transition periods for phasing out older standards (e.g., ANSI/ISEA 107-2015).

H. Accessories and Complementary Gear:

Guidelines for integrating accessories (e.g., gloves, armbands) to meet visibility requirements without compromising safety.

Practical Implications:

- 1) Procurement: Buyers must verify compliance with the 2020 standard for workplace safety audits.
- 2) Design: Manufacturers should prioritize ergonomic features and material durability.
- 3) Training: Workers need education on proper use and maintenance to retain visibility properties.

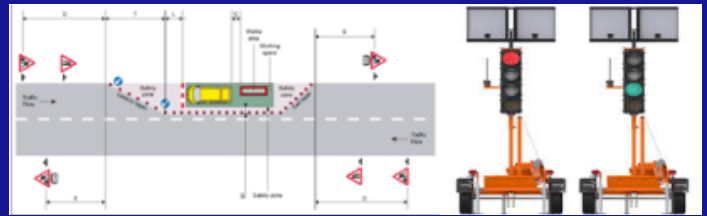
EM-385-1-1 (U.S. Army Corps of Engineers)

1. Enhanced Training Requirements:

EM-385-1-1 enhances OSHA and MUTCD provisions by imposing site-specific safety plans and rigorous training protocols for workers related to TTC operations beyond the standard OSHA requirements. This ensures that personnel are adequately prepared for the unique hazards presented by military and construction environments.

2. Internal Traffic Control Plans (ITCP):

The implementation of ITCP is crucial, as it mandates the segregation of construction vehicles from pedestrian workers, effectively reducing the likelihood of accidents in high-traffic situations and ensuring worker safety is prioritized.



3. Risk Assessments:

EM-385-1-1 necessitates thorough pre-work hazard analyses for high-risk scenarios, such as trenching and excavation activities near active roadways, to preemptively identify and mitigate potential dangers.

Risk Mitigation & Compliance Framework.

1. Hierarchy of Controls:

- 1) The hierarchy principle emphasizes the need for Engineering Controls, such as implementing MUTCD-compliant work zone layouts with buffer zones to separate workers from vehicular traffic.
- 2) Administrative Controls involve conducting daily safety briefings, deploying spotters to assist with equipment maneuvers, and strictly enforcing established speed limits within construction zones to further reduce accident risk.
- 3) The effective use of Personal Protective Equipment (PPE) is vital, necessitating Class two (2) or three (3) high-visibility apparel (as per ANSI 107) and hard hats for all personnel engaged in work zone activities.

2. Training Protocols:

- 1) OSHA prescribes a minimum of 40 hours of specialized training for safety officers, equipping them with the necessary knowledge to manage safety concerns effectively. Additionally,
- 2) EM-385-1-1 often mandates integration of military-specific directives, particularly for operations conducted by combat

engineers, to ensure comprehensive compliance and safety standards are met.

Enforcement & Citation Framework

1. OSHA ensures adherence to these safety protocols through enforcement mechanisms that include:

- 1) §1926 Subpart G, which addresses violations associated with inadequate compliance to MUTCD signage and maintenance, leading to potential hazards.
- 2) §5(a)(1) General Duty Clause, which allows for citations in cases where unaddressed hazards pose a significant risk, such as inadequate lighting during nighttime work activities.
- 3) States are required to adopt the updated MUTCD 11th Edition by January 2026, ensuring that all jurisdictions are aligned with current traffic control standards.

Comparative Overview of Key Requirements

Conclusion

- 1) In summary, a comprehensive understanding and application of OSHA, MUTCD, and EM-385-1-1 standards are essential for creating safe and effective Temporary Traffic Control zones in construction settings.
- 2) By adhering to these guidelines and implementing best practices, construction sites can significantly enhance worker safety while minimizing traffic disruptions.
- 3) This update reflects the evolving safety needs, technological advancements, and global harmonization efforts, ensuring high visual safety apparel (HVSA) remains effective in protecting workers. Always check compliance deadlines and specific industry requirements when adopting new gear.

Michael Soto, CHST

Comparative Overview of Key Requirements

Component	OSHA CFR 1926	MUTCD (11 th Ed.)	EM-385-1-1 (2024 Ed.)
• High-Vis PPE	Class 2+ as per ANSI 107	Class 2/3 compliance (23 CFR 634)	Class 3 for high-risk zones
• Training	Focus on struck-by/fatality risk	Certification in flagging	Military-specific protocols
• Signage	§1926.200 (MUTCD-based)	Detailed in Part 6	Exceeds MUTCD visibility
• Emerging Technology	Not Discussed	Introduction of IA-23 signals (2025)	Utilization of UAV for monitoring
• Excavation Safety	Subpart P + Appendix F	Provisions for work zone shielding	Enhanced collapse prevention strategies

Best Practices for Compliance

1. Pre-Work Coordination:

1) Harmonize MUTCD TTC plans with OSHA Job Hazard Analyses (JHA) to ensure that all potential risks are identified and addressed prior to the commencement of work.

2. Technology Integration:

1) Employ IA-23 signals for effective driveway management and utilize Intelligent Transportation Systems (ITS) for real-time traffic monitoring, enhancing situational awareness.

2) Record Keeping: Implement systematic documentation practices for daily inspections of TTC setups and maintain comprehensive records of worker training activities to ensure compliance and safety measures are continuously reinforced

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NISKU FIRM FINED FOR FATAL CARBON MONOXIDE EXPOSURE

An Alberta heavy equipment company has been fined \$330,000 following the death of a worker who succumbed to carbon monoxide poisoning while on the job.

NC Equipment Ltd., based in Nisku, Alta., pleaded guilty to a single violation of Alberta's Occupational Health and Safety Code in relation to the fatal incident, which occurred in February 2023. The company admitted to failing to ensure that equipment used by the worker would perform its intended function safely, CBC News reported.

Court documents show Jeffery Simmons died on Feb. 22, 2023, while conducting sandblasting work for the company in or near Edmonton. Investigators said Simmons had been using an air respirator with a supplied air system when he was exposed to lethal levels of carbon monoxide.

A co-worker later found him unresponsive at the site. He was transported to hospital in critical condition but died shortly afterward.

The court heard that Simmons had been operating a sandblasting system that included a portable air compressor, a Radex airline filter, a Nova blasting safety respirator, and a Mod-U-Blast sandblasting machine.

The risks linked to carbon monoxide exposure are well documented. The colourless, odourless gas can cause arrhythmia, seizures, or death when inhaled in high concentrations.

On July 14, NC Equipment Ltd. was convicted and ordered to pay the \$330,000 penalty, which includes a victim surcharge. While the company originally faced 22 charges, all but one were withdrawn.

According to its website, NC Equipment Ltd. is a family-run business specializing in heavy equipment rentals and sales.

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BRITISH COLUMBIA WORKER KILLED AFTER BEING HIT BY DUMP TRUCK: REPORT

A 48-year-old surveyor from Abbotsford, British Columbia, has died after being struck by a fully loaded dump truck, according to a report.

The incident happened on Tuesday while the man was conducting surveying work in the community of Hatzic.

Authorities reported that the driver of the dump truck stopped immediately and remained at the scene.

The report did not detail the names of the driver and the deceased.

There is no evidence to suggest the driver was impaired at the time of the collision, according to the CBC report. Police also noted that traffic control workers and advisory signs

were present on the road where the incident occurred.

Police are now investigating the incident. WorkSafeBC investigated the scene, according to the report.

Cpl. Harrison Mohr, of the Mission Royal Canadian Mounted Police (RCMP), said the crash is a reminder that roadside work is dangerous.

"If you are driving through a construction zone, or driving past a tow truck or emergency vehicle, please, slow down and move over," Mohr said, according to the CBC report.

"The extra few feet of space, and the extra few seconds of time will be appreciated more than you know."

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 **CCDC SEMINARS****UPDATES TO THE 2025 CCDC CONSTRUCTION MANAGEMENT CONTRACTS: WHAT YOU NEED TO KNOW**

The Canadian Construction Documents Committee (CCDC) has released significant updates to several of its suite of construction contracts in June 2025. This includes a new version of the standard form construction management contracts: the CCDC 5A “Construction Management Contract – For Services,” the CCDC 17 “Stipulated Price Contract Between Owner and Trade Contractor for Construction Management Projects,” and the frequently used CCDC 5B “Construction Management Contract for Services and Construction.” These revisions are designed to reflect evolving industry practices, recent legislative developments, and to harmonize with the changes previously introduced in the CCDC 2-2020 “Stipulated Price Contract.” Most notably, the contracts are updated to address prompt payment and adjudication regimes introduced in Ontario, Alberta, and other provinces.

This article briefly highlights some of the key changes but does not purport to cover all revisions made to the standard form

contracts. The changes described below apply broadly to the CCDC 5A, CCDC 17, and CCDC 5B, unless specified otherwise. Terms defined in the CCDC 5A, CCDC 17, and CCDC 5B are used in this article.

The new Ready-for-Takeover milestone

A cornerstone of the 2025 revisions is the introduction of the “Ready-for-Takeover” milestone, a concept first seen in CCDC 2-2020 and now extends to the construction management forms. This shift impacts how project handover is defined and managed.

Previously, “Substantial Performance of the Work” was the pivotal milestone for project handover, triggering occupancy, start of warranty, time limits for indemnification and insurance coverage obligations. However, the statutory definition of substantial performance varies across provinces, and in some jurisdictions, it does not

require the project to be ready for its intended use. Owners also often insert additional requirements on contractors and construction managers before a project is considered substantially complete, such as the delivery of as-built drawings and operating manuals. This has often led to a disconnect between the legal milestone and the owner's practical requirements for handover, frequently necessitating bespoke supplementary conditions, which often exceeded what was strictly necessary to achieve occupancy.

The 2025 editions retain "Substantial Performance" as a statutory milestone—still critical for the commencement of lien periods and the release of holdback which are governed by the applicable lien legislation—but overlay it with the new "Ready-for-Takeover" milestone. This new milestone is more closely aligned with the owner's operational needs and includes additional prerequisites such as:

- Compliance with all occupancy requirements and permits;
- Final cleaning and waste removal;
- Delivery of operations and maintenance manuals and as-built drawings;
- Ensuring the site is safe and secure for occupancy;
- Completion of demonstration and training for the owner's personnel.

Unlike substantial performance, which is certified by the consultant, "Ready-for-Takeover" is verified (not certified) by the consultant, reflecting a more practical, checklist-driven approach. In CCDC 17, only those trade contractors whose work impacts occupancy must meet the prerequisites to enable Ready-for-Takeover.

Early occupancy

The 2025 contracts also introduce the concept of "early occupancy," allowing the owner to take over a portion or the entirety of the Project before it has attained Ready-for-Takeover. Any portion handed over early is deemed to have attained Ready-for-Takeover, with implications for health and safety responsibilities, warranty periods and insurance coverage.

Where early occupancy is anticipated, parties should clarify how health and safety responsibilities are being transitioned for the occupied part of the site, and when is the commencement of warranty periods for the affected work.

Preconstruction services and fee structure

The 2025 editions of CCDC 5A and 5B provide a much clearer delineation of preconstruction services under the fee for services article (A-5). The fee structure for preconstruction services is now isolated from the construction phase, and can be structured as either a fixed or time-based fee. The CCDC 5A further allows for the separate pricing of fees associated with post-construction services.

This change reflects the reality of many fee structures which separate out the fee calculation for different phases of the project. It also brings greater transparency to compensation for preconstruction and post construction services and reinforces the intent that construction management contracts

should ideally commence during the design phase, enabling early input on constructability and budgeting.

The calculation of percentage-based fees is also clarified, with explicit guidance on how fees are to be determined at different project phases. This should reduce ambiguity and potential disputes regarding fee entitlements as the project progresses.

Payment obligations

Reflecting recent legislative changes in several provinces, the 2025 contracts introduce the concept of “Payment Legislation” to reflect the prompt payment legislation that has been introduced in Ontario, Alberta, Saskatchewan, Manitoba, Nova Scotia (not yet in force), New Brunswick (not yet in force), and even on federal projects. As was done with the CCDC 2 – 2020, the CCDC construction management contracts now require the construction manager and trade contractors (under CCDC 17) to submit monthly applications for payment. The owner is obliged to pay within 28 calendar days of receipt, aligning the contracts with prompt payment legislation and providing greater certainty and cash flow predictability for all parties.

Termination without cause (or for convenience) in CCDC 5A and 5B

A significant addition to the 2025 editions of CCDC 5A and 5B is the express provision for termination without cause (sometimes referred to as termination for convenience). If the Owner is unwilling or unable to proceed with the Project, the Owner may now suspend the Project or terminate the Contract even if

the construction manager is not in default, providing greater flexibility to address unforeseen circumstances or changes in project viability. This right is not extended to CCDC 17, as by the time trade contractors are engaged, the owner is expected to have confirmed its commitment to proceed.

Schedules in CCDC 5A and 5B now in editable format

A notable change introduced in the CCDC 5A and 5B contracts is the separation of Schedules describing the Services, Reimbursable Expenses, and Time-Based Rates from the standard form contract. Previously embedded directly following the signature page within the standard forms, these Schedules are now provided as standalone, editable Word documents. This shift offers users enhanced flexibility and customization of these Schedules, eliminating the need to amend them through supplementary conditions.

New appendices for pricing options in CCDC 5B

To address longstanding confusion regarding pricing models, the 2025 edition of the CCDC 5B moves the fee structure for the Stipulated Price, Guaranteed Maximum Price (GMP), and Cost Savings options from the Agreement Articles to respective standalone appendices for each option. Each appendix contains tailored amendments to the Agreement and General Conditions, offering clear

guidance for the administration of different pricing structures. The exercise of any of these options must be formalized by Change Order, ensuring transparency and proper documentation.

Parties considering using any of these alternative pricing options will need to clarify how their agreed supplementary conditions are to be adapted for the applicable standalone appendices for each option.

Updated definitions: Project Schedule, Construction Schedule, Construction Budget, and Construction Cost

The 2025 contracts introduce more precise definitions, including Project Schedule, Construction Schedule, Construction Budget, and Construction Cost, amongst others.

The contracts now distinguish between Project Schedule (the Owner's overall schedule for the Project which could include development and permitting activities) and Construction Schedule (the progress schedule prepared by the Construction Manager that must align with the Project Schedule but is focused on construction activities).

A distinction is also made between the Construction Budget, which is the anticipated cost that the Owner is prepared to incur on the Construction Cost, and the Construction Cost, which is the total cost to the Owner to

construct the Project, excluding the construction manager's fee for preconstruction services and construction services.

These distinctions are intended to improve clarity in project planning, budgeting, and administration, and to reduce the risk of misunderstandings regarding schedules and financial expectations.

Conclusion

The 2025 updates to the CCDC construction management contracts represent a significant evolution, aligning the documents with current industry standards, legislative requirements, and best practices. The changes provide greater clarity in contract language, delineate roles and responsibilities more precisely, and introduce new frameworks for project delivery and risk management. Stakeholders should familiarize themselves with these changes and consider their implications for project planning, procurement, and contract administration. As always, careful review and, where necessary, tailored supplementary conditions will be essential to ensure that the contract reflects the unique needs and risk profile of each project.

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Raising The Standard



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RTS Consulting offers compliance audits for clients who would like an understanding of where they stand in their health and safety program. Based on previous investigations, client-specific audits will be conducted in areas such as: Corporate policy compliance (Due Diligence). WSIB compliance. Occupational health and safety programs. Hazardous materials. Waste audits and waste reduction work-plans. Packaging audits. Recycling management. Construction Health & safety compliance audits. Legislation compliance. Environment, health and safety management system audits. Pre-Workwell audits

For more information please contact Hailey Mesner at hmesner@rtsconsulting.com

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With Aloha,

Stanford Brown, B.Sc., CSP, CSHP, CRSP, CHSC, Senior Consultant, President & CEO