

# Construction Site Management

## BEST MANAGEMENT PRACTICES

### TECHNICAL GUIDELINE

Prepared by:

Planning and Development

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# Section 1 - Objectives

## Section 1.1 – Background

A strong economy often correlates with increased development and construction activity. Roads, schools, buildings, and infrastructure development all contribute to a high quality of life and vibrant economy. However, construction activities can potentially cause significant inconvenience and hazardous conditions to those who live, work, and enjoy certain facilities in the immediate vicinity of a construction site. From dust, noise and debris, to closed sidewalks, streets and detours; many aspects of a community can be negatively impacted by activities during the construction phase of a project.



Figure 1 – Construction debris on unprotected sidewalks and streets.

With increased urban densification, development, and construction related activities observed in Halifax and surrounding areas, it is important to provide consistent practices and protocols that guide the physical elements of the construction activities and their impact on surrounding infrastructure and communities.

Construction activities result from development, work carried out by utilities such as power, gas, and water, or from work carried out by the Municipality. This guideline has been prepared to provide a consistent set of best management practices that aim to mitigate the potential negative impacts the construction activities may have on surrounding properties as well as pedestrian and vehicular traffic patterns.

## Section 1.2 – Functional Objectives

The purpose of this document is to provide a consistent framework for construction activity and site management and to outline the minimum standards for work within or immediately adjacent to the public Right-of-Way (ROW) or public facilities. The objective of these Guidelines is to minimize potential problems and to ensure a safe and positive public experience with development related construction activities.

The standards contained in this document cannot anticipate all situations. They are intended to set a minimum standard as a core list of items to be considered when developing a Construction Management Plan (CMP). They are not intended to replace competent work by design and construction professionals.

### **Section 1.3 – Application and Administration**

The objectives outlined in this document are related to all elements of an excavation, construction, demolition, renovation, or development process. It is intended that they apply to both public and private work and shall apply to, and a CMP shall be submitted for, all construction activity, demolition, or renovation projects in which work is expected to occur within 5m of the street or is expected to create an obstruction within the street. All permit applications will be reviewed for their scale and complexity and may be exempt from certain requirements, subject to the review of the Municipality.

Any proposed departure from this manual will be evaluated on a site specific basis to ensure an adequate CMP is developed for the user, the surrounding community, and the Municipality over the duration of the project.

If the project changes ownership or contracting services, the Municipality must be notified, and the new parties must agree to comply with an approved CMP in writing. Notwithstanding unforeseen or unexpected short duration circumstances (less than 24 hours as defined by the Nova Scotia Temporary Workplace Traffic Control Manual), any significant departure from the approved CMP must be submitted in writing and must be approved by the Municipality a minimum of 10 business days prior to executing the departure. The approved construction management plan must be kept onsite at all times.

## **Section 2 – Definitions**

In this manual:

- a) “Best Management Practices (BMP’s)” – Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the potential negative impact of the construction activities on the surrounding community
- b) “Construction Site” means the immediate work area and all streets impacted by the construction project;
- c) “Construction Management Plan (CMP)” – A Construction Management Plan is a combination of diagrams, documents, drawings, and specifications that clearly define the steps that will be taken to demonstrate how the impacts to the community will be minimized. How the impacts associated with any construction project will be managed. Herein described as “Plan” throughout the remainder of this policy.

- d) "Engineer" means the Engineer of the Halifax Regional Municipality (HRM) and includes a person acting under the supervision and direction of the Engineer;
- e) "Responsible Contractor" means a person who contracts to perform work within the street right-of-way on a project for an owner, or who undertakes work within the street right-of-way on a project as an owner;
- f) "Temporary Workplace Signer" means a person qualified and accredited by the Provincial Traffic Authority to assess conditions prepare, implement, and review traffic control plans for construction, maintenance, and utility temporary workplaces; they are responsible for ongoing compliance with the Temporary Workplace Traffic Control Manual and for ensuring the safe regulation of traffic and safe passage of pedestrians at temporary workplaces.

## Section 3 – Relevant Regulations & Guidelines

### Section 3.1 – Occupational Health and Safety Regulations

The primary objective of this manual is to ensure safety of all people in/around a construction site. This manual is intended to be read in conjunction with all applicable Provincial and Federal Occupational Health and Safety Regulations. Without limiting the generality of the foregoing, the following regulations shall be considered in the preparation of a CMP:

- a) National Building Code of Canada, as adopted and modified under the Building Code Act and the Nova Scotia Building Code Regulations made under that Act.
- b) Nova Scotia Occupational Health and Safety Act, and the Nova Scotia Occupational Safety General Regulations made under that Act.
- c) The Transportation Association of Canada (TAC)'s Manual of Uniform Traffic Control Devices for Canada (MUTCDC)
- d) Nova Scotia Temporary Workplace Traffic Control Manual (NSTCM)

In the case of a conflict with any of these documents, the more stringent standard for the item in question shall apply.

### Section 3.2 – Municipal Regulations & Guidelines

In addition to Provincial and Federal standards referenced above, the following Municipal by-laws shall also be considered when developing a CMP:

- |                         |                    |
|-------------------------|--------------------|
| a) S-300; Streets       | c) B-201; Building |
| b) E-200; Encroachments | d) N-200; Noise    |

- e) T-600; Trees
- f) S-900; Controlled Access Streets
- g) T-400; Truck Routes
- h) B-600; Blasting
- i) HRM TCM Supplement

## Section 4 – Vehicle & Pedestrian Management

### Section 4.1 – Vehicular Traffic Control

Vehicular traffic control in a dense urban environment can often pose unique challenges and hazards. Narrowed travelled lanes, restricted sight lines, and heavy construction vehicles further complicate potential hazards of construction sites. This manual has been developed to outline minimum measures and key factors that need to be considered when preparing a CMP to protect workers on the site, pedestrians near the site, as well as all vehicles travelling in the vicinity of the construction activity.



Figure 2 – Traffic Control in a dense urban environment.

#### Section 4.1.1 – TAC MUTCDC, NSTWTM, & HRM TCM Supplement

All CMP's must include a Traffic Control Plan (TCP) that has been prepared in strict accordance with the minimum standards defined in the TAC Manual of Uniform Traffic Control Devices, the NSTIR Temporary Workplace Traffic Control Manual, and the HRM Traffic Control Manual Supplement.

All construction projects that require street closures, lane closures, sidewalk closures, or any other types of physical encroachment into the public ROW are subject to review and approval by the Municipality. The Responsible Contractor or Owner must:

- a) Submit a TCP, prepared by a qualified Temporary Workplace Signer TWS, that meets all applicable regulatory requirements to address and control the safe passage of all traffic that enters or exits the site along with traffic that travels the streets impacted by the construction project. In addition to all regulatory requirements, the CMP shall also consider and outline the following:
  - i. Haul Routes: project haul routes shall be oriented to minimize traffic congestion and maximize pedestrian safety.

- ii. Delivery Requirements: special consideration shall be given to, and additional traffic control details may be required for, loading and unloading equipment, materials, etc.
  - iii. Pedestrian Protection: pedestrian traffic must be separated from vehicular traffic by a physical barrier.
- b) Pay all applicable fees in accordance with AO15 and obtain all necessary permits from the authority having jurisdiction for any planned lane and street closures. Lane and street closure applications will be reviewed, and responded to, by the Municipality within 5 business days of their application date.
  - c) Conduct a hazard assessment for vehicle/pedestrian traffic for all that enter/exit the site as well as all those that travel the streets impacted by the construction project.
  - d) The TCP must be prepared by a qualified Temporary Workplace Signer (TWS), and must be implemented and monitored by qualified Traffic Control Personnel. The TCP must include contact information for the TWS.
  - e) Provide all necessary traffic signage, barricades, and delineators, and qualified personnel at strategic locations that warn motorists and pedestrians of changes to traffic patterns.
  - f) Ensure notification has been distributed, a minimum of 5 business days in advance of the closure, to the impacted area in accordance with Section 8 of this manual and the HRM TCM Supplement.
  - g) Ensure regular inspection and maintenance of traffic control elements as required.
  - h) Contact the Municipality for approval of any changes or modifications to the approved TCP that may be required to accommodate unforeseen events.
  - i) Maintain emergency vehicle access on and around the site.

#### Section 4.1.2 – Parking

Congestion from construction activities can often lead to lost parking stalls and illegal parking. Businesses in the impacted area may rely on the street stalls for patron use, and construction workers on the site may need to rely on the stalls for daily use.

Parking is an important consideration in the preparation of a CMP. The responsible Contractor or Owner must:

- a) Indicate on the proposed CMP the number and location of parking stalls that will be removed, as well as the duration the stalls will be unavailable.
- b) Pay applicable fees at the rate established by Council from time to time for all parking meters that will be unavailable during construction.
- c) Appropriately delineate any relocated temporary parking.
- d) Developers and Contractors should make every effort, wherever possible, to have their temporary construction encroachment activities to result in a net zero loss of parking. The CMP should indicate strategies to reduce/negate parking losses, such as shuttle services for workers, temporary parking relocation, etc.

Encroachment areas for construction sites are intended to facilitate the construction activities, loading and unloading of equipment and materials, as well as deliveries; encroachments are not intended to be used as convenient parking for construction workers.





Figure 3 – Parking within encroachments.

The Municipality may stipulate that any parking stalls that have been displaced by temporary construction activities be temporarily relocated and the location shall be included in the approved CMP. If clear justification and assessment can be provided in the CMP, the Municipality may consider relaxation of parking restrictions on nearby streets on a case-by-case basis to fulfill displaced parking.

## Section 4.2 – Pedestrian Management

Pedestrian management must be a foremost consideration in the preparation of a CMP. Pedestrian traffic is an integral part of a vibrant dense urban environment and is vital to the urban economy and lifestyle. Clear and safe pedestrian passage must be accommodated in all dense urban construction project CMP's.



Figure 4 – Without appropriate site controls in place pedestrians are forced to cross streets at unsafe locations or pass directly through an unprotected work area and even underneath active equipment.

### Section 4.2.1 – Passageway Safety & Clarity

All construction projects that require sidewalk closures, any type of physical encroachment into the public ROW, or works on private property within 2m of a public space or passageway, must submit, as part of the CMP, a detailed Pedestrian Management Plan (PMP) for review and approval by the Municipality. The Responsible Contractor or Owner must:

- a) Submit a PMP, prepared by a qualified TWS, that meets all applicable regulatory requirements, including those listed in Section 3 of this manual, to address and control the safe passage of all pedestrian traffic that enters or exits the site along with pedestrian traffic that travels the streets impacted by the construction project.
- b) The PMP shall indicate, at minimum:
  - i. All impacted sidewalk areas;

- ii. Location of impacted bus stops and proposed bus stop relocation areas, complete with pedestrian routes to/from the relocated stop;
  - iii. Proposed pedestrian routes and detours;
  - iv. Nearest controlled/marked crosswalks;
  - v. Location of proposed sidewalk closure signage;
  - vi. Proposed delineation for temporary sidewalks, complete with temporary sidewalk, ramp, and barricade construction details;
  - vii. Contact information for the TWS;
  - viii. Proposed location of appropriate wayfinding signage, as required.
- c) Pay all applicable fees in accordance with AO15 and obtain all necessary permits from the authority having jurisdiction for any planned lane and street closures. Lane and street closure applications will be reviewed, and responded to, by the Municipality within 5 business days of their application date.
  - d) Conduct a hazard assessment for vehicle/pedestrian traffic for all that enter/exit the site as well as all those that travel the streets impacted by the construction project.
  - e) At all construction sites and/or maintenance locations, wherever a clear pedestrian route of 1.5 m is not achievable via the normal route, alternative safe, stable, and accessible pedestrian routes should be provided with suitable protection from vehicular traffic.
  - f) The PMP must be prepared by a qualified Temporary Workplace Signer (TWS), and must be implemented and monitored by qualified Traffic Control Personnel.
  - g) Ensure notification has been distributed, a minimum of 5 business days in advance of the closure, to the impacted area in accordance with Section 8 of this manual and the HRM TCM Supplement.
  - h) Maintain traffic control elements as required to ensure their operation in compliance with the PMP.
  - i) Contact the Municipality for approval of any changes or modifications to the approved PMP that may be required to accommodate unforeseen events.

#### Section 4.2.2 – Visually Impaired Persons

Warning signage alone is insufficient to protect all pedestrians. Visually impaired pedestrians rely on other physical indicators for navigation and to identify hazards.

The submitted PMP must include measures which can help to improve the safety and convenience of visually impaired pedestrians, such as:

- a) Improved definition of safe places to walk, wait, and cross, by way of edge lines, contrasting colours, and contrasting textures.
- b) Installation of devices that give pedestrians right of way and control traffic or help them navigate safely, e.g. temporary crossing markings, traffic signals, and audio and/or textured tactile elements.
- c) Reducing the potential complexity of situations, e.g. through the addition of a central refuge for multilane streets so that pedestrians only cross one direction of traffic, accounting for pedestrian crossing time.

- d) Visual cues to highlight to pedestrians the most direct route across the road – sometimes these cues are road marking of the crossing itself or in other cases the alignment of the footpath, hand rails, or the tactile ground surface indicators are positioned in such a way as to ‘launch’ the pedestrian in the right direction.
- e) Provision of a clear path of travel which is free from obstacles and surface irregularities.
- f) Measures to reduce vehicle speeds and to increase driver awareness of pedestrians.

### Section 4.2.3 – Accessibility

Pedestrian passage through/around construction activities must be safe and accessible for all pedestrians. Public pedestrian routes should be designed and maintained to ensure comfort and safety of all persons, regardless of age or ability. Generally, such routes must be:

- a) Easily identifiable,
- b) Clearly separated from vehicular routes,
- c) Free of obstacles at all times of the year, including snow and debris.

The submitted PMP must ensure:

- a) Walkways for pedestrians and persons using mobility aids are constructed of firm, stable, and non-slip materials, and are accessible grades.
- b) Wherever possible, roadway crossings should be at controlled crosswalks and should be located such that the sidewalk and the crosswalk are perpendicular to one another.
- c) All pedestrian routes should be free of obstacles, such as light standards, traffic signal supports, posts, overhanging signs, branches, or catch basins as well as temporary objects such as equipment, boxes and garbage containers, etc.
- d) Curb ramps should be provided wherever there is a level difference between the sidewalk, or pedestrian pathway, and the intended travelled surface.

## Section 5 – Construction Site Protection & Hoarding

### Section 5.1 – Site Protection and Hoarding Materials

Construction site protection is required to meet minimum applicable building code standards. The National Building Code of Canada (NBCC) requires that construction activities within 2m of a public way be protected with a strongly constructed fence or barricade.



Figure 5 – Solid construction hoarding provides pedestrian protection from vehicles, overhead objects, and provides physical separation from the site activities. Lighting for covered ways is an important consideration.

The submitted CMP must include details for the proposed hoarding or protection arrangement, such that:

- a) Public ways are physically separated from all active construction sites with an adequate safety barrier. For sites where the building footprint or excavation lies within 2m of the public ROW, this barrier must be constructed of solid (opaque) hoarding material, minimum 2.4m high;
- b) Covered ways must provide minimum clear width of 1.5m;
- c) Covered ways must be illuminated;
- d) All hoarding must be designed to sustain loads that it is likely to be subjected to such as wind and snow loads, as well as falling debris.
- e) Allow for sufficient clear width to accommodate snow removal equipment with space for snow storage.
- f) Be constructed so as to not impede vehicular traffic sight lines ('daylight triangles') at intersections.
- g) Consider having viewing cut-outs in solid fencing, complete with protection, to allow for public viewing. Viewing ports should be located in safe areas where public congestion will not pose a safety hazard.

## Section 5.2 – Site Protection Aesthetics

Opaque construction hoarding and solid construction site protection is not typically designed to be aesthetically pleasing. The definition of 'attractive' is subjective and not easily defined for a broad audience. However, construction site protection mechanisms often create a 'blank canvas' that provides an opportunity for beautification.

The submitted CMP is encouraged to include details of how to make the site protection systems more aesthetically pleasing. Certain elements that would be considered to beautify a hoarding or fencing system include:

- |                                 |   |
|---------------------------------|---|
| a) Project renderings;          | d) Local advertising for businesses in the affected area;             |
| b) Sales/Marketing information; | e) Rigidly attached project banners of high quality durable material. |
| c) Community murals;            |   |

Projects that incorporate one or more of the above techniques to help improve the aesthetics of their site protection measures and mask the site to improve the public experience and mitigate negative impacts from the construction activities will be eligible for **50% reduction** in encroachment fees for the areas implementing the beautification.



Figure 6 – Hoarding beautification using community mural.

Beautification measures must be regularly monitored and maintained by the owner to ensure the measures remain in a state of good repair and clean from graffiti or other unapproved posters or debris for the duration of the project.

## Section 5.3 – Signage

Signage is an integral part of site controls and notification. It provides vital information about the project, contact information, as well as safety and navigational information. Signage located at the construction site can act as a way to inform and guide the public and provide key contact information

### Section 5.3.1 – Project Information and Contacts

Appropriate signage can help to mitigate public concern by providing the following minimum information:

- a) Project description,
- b) Project timelines,
- c) Developer contact information,
- d) Project manager contact information.

The sign is to be legible and include a clearly identifiable company name, phone number and e-mail address for those responsible for the construction site.

Project information signage should be placed on site after a permit has been issued or a minimum of 10 days before construction begins to ensure the public has adequate time to adjust their travel patterns and usage of the street(s).

### Section 5.3.2 – Pedestrian Detour Way-Finding

Pedestrian detour wayfinding signs should be used to efficiently and seamlessly direct pedestrians and cyclists as they navigate the detour route. A typical sign for a temporary pedestrian detour should include:

- a) Information on the duration that the walkway will be in place,
- b) Restrictions (beginning and/or end dates),
- c) Project contact number for questions or complaints,
- d) Way-finding guidance of temporary routes,
- e) Pedestrian way-finding information may also include specific directions to certain facilities or business that may be impacted by the detour routes.



Figure 7 – Pedestrian detour signage and wayfinding map.



## Section 6 – Lifting, Hoisting, and Crane Operations

### Section 6.1 – Navigation Canada & Transport Canada Regulatory Approvals

Cranes, either mobile or stationary tower, have the potential to impact flight patterns in sensitive areas close to airports or helipads. As such, the location and height of crane erection may be subject to Transport Canada regulatory approval and Nav Canada notification.

Transport Canada is the regulatory body for structures that may affect flight paths. They employ specific land use and zoning criteria, such as height and location, for designated zones within close proximity to registered aerodromes. There are 2 registered aerodromes in the HRM region:

- a) Canadian Forces Base, Shearwater Airfield,
- b) Halifax International Airport

Full details of these regulations may be found at the following link:

[Aeronautics Act \(R.S., 1985, c. A-2\) - Transport Canada](#)

Nav Canada is a private company that owns and operates Canada's civil air navigation service. They provide air traffic control, airport advisory and flight information, as well as aeronautical information. As such, they have an interest in maintaining active records of any possible aeronautical obstructions; for all registered aerodromes, non-registered helipads (for example, hospitals), and all air navigation infrastructure.

Full details on Nav Canada's notification process and land use submission forms are available at the following link:

[NAV CANADA: Products and Services - Land Use Program](#)

All CMP's must include a geospatial plan indicating the proposed location of all cranes, mobile or stationary tower cranes. The CMP must assess the location in relation to potential flight paths, and must determine whether Transport Canada regulatory approval or Nav Canada notification is required.

### Section 6.2 – Operations Above the Public Realm

Lifting operations, such as tower cranes, mobile cranes, telehandlers, forklifts, and small lifts, are a crucial and important piece of equipment for many construction sites throughout the Municipality. However, their presence brings about a level of risk that must be considered. Although lifting heavy loads over highways, railways, or public space should generally be avoided, there are times when such a lift is necessary. The submitted CMP must include the following provisions for proposed crane operations or lifting of heavy loads over the public realm:

- a) Notwithstanding level-luffing cranes, tower cranes must be sited so that there is at least 3m clearance between the end of the boom and the nearest obstacle or building and as

much as possible, tower cranes should be sited to avoid loads being handled over occupied areas;

- b) Measures for ensuring that people are not placed at risk from the operation of the crane;
- c) No loads should be moved or suspended over people;
- d) At no time should a load be left suspended over the public realm;
- e) Routines for requiring continuous and thorough checks for area specific hazards;
- f) If loads must be transferred over a public space or ROW, the area must be closed to access (in accordance with short duration traffic control protocols as specified by NSTCM) during the move; and
- g) When loads have to be handled in the vicinity of persons, extreme care should be exercised and adequate clearances allowed.

## **Section 7 – On-Site Conditions**

### **Section 7.1 – Site Safety and Security**

Safety, for workers and the general public, is the foremost concern. The objective of these guidelines is to ensure a safe environment both on site and within the impacted vicinity.

The CMP must identify on-site safety protocols and consider at minimum, but not limited to, the following information:

- a) Access gates must be clearly marked as per the traffic management plan;
- b) Signage must be placed outside the hoarding, which warns of hazards that may exist, in accordance with applicable Occupational Health and Safety regulations;
- c) Gates must be locked and the perimeter fencing or hoarding secured to provide security against public access during off work hours and monitored in high traffic areas during operation;
- d) Hoarding must be marked clearly “No Trespassing – Construction Personnel Only”, and personal protective equipment requirements clearly marked (e.g., “Hard Hats and Safety Footwear Must Be Worn Beyond This Point”);
- e) The Responsible Contractor or Owner must conduct regular inspections, as required, of hoarding for general condition and have a scheduled inspection procedure in place;
- f) Emergency contact information, as required by the jurisdiction having authority, must be prominently posted.

### **Section 7.2 – Material Handling, Loading/Unloading, Delivery, and Vehicle Staging**

How materials are delivered to site, loaded and unloaded, or handled and stored on site can have an impact on the safety of the overall site and affected areas. To safe guard construction workers and the public from falling materials, equipment, tools and debris from a construction project, the CMP must consider such factors and the Responsible Contractor or Owner must:

- a) Conduct a pre-project hazard assessment;
- b) Identify appropriate material storage/lay-down areas that may be located within 5m of the public ROW;

- c) Identify dedicated material delivery routes and loading/unloading locations;
- d) Identify vehicle staging (e.g. concrete delivery) areas and queueing strategy;
- e) All materials must be secured and protected against environmental factors, such as rain causing contaminated runoff, or wind blowing around loose objects, etc.

Delivery times and peak hours of operations for surrounding businesses must be determined and taken into consideration when developing the CMP.

## **Section 7.3 – Environmental Controls**

Although construction sites in a dense urban setting may not expose or disturb a large area at one time (relative to suburban land development or construction), the sites are often more compact with less space available for environmental control measures, such as sediment retention ponds, or snow storage. With limited available space, urban sites often create challenges for environmental containment.

### **Section 7.3.1 – Street and ROW Cleaning**

The public ROW is intended for the use and enjoyment for all. Passageway cleanliness has a major impact on accessibility and safety. The public travelled way, including pedestrian travelled ways are to be kept free of dirt, debris, snow, and ice, etc. at all times during construction. Site access locations and staging areas are to be monitored on a continual basis and cleaned with street sweepers, brooms, or by any means necessary to ensure the public ROW is clean and safe. The Responsible Contractor or Owner must immediately act upon an order from the Municipality when directed to clean the public ROW.

Snow removal and snow storage are important considerations when managing constrained sites. The Responsible Contractor or Owner must maintain all encroachment areas. All temporary sidewalks must be plowed/cleared and maintained free of snow and ice at all times.

### **Section 7.3.2 – Stormwater Management and Runoff Pollution**

Construction must adhere to the approved storm drainage plan and the Nova Scotia Department of Transportation and Infrastructure Renewal (NSTIR) Erosion and Sedimentation Control Manual. The main objective of the storm water management plan shall be to identify Best Management Practices, which will minimize erosion and sediment transport. The stormwater management plan (or sediment and erosion control plan, or environmental protection plan) must clearly indicate drainage patterns and must consider:

- a) Surface drainage patterns;
- b) Catchbasin locations;
- c) Material storage locations and protection measures;
- d) Construction phasing;
- e) Site entrance/exit locations;
- f) Runoff quantity and quality control measures; both during construction and upon project completion.

### **Section 7.3.3 – Noise and Dust Pollution**

Construction sites must adhere to the HRM Noise By-Law. The CMP must outline hours of operation that are consistent with the Noise By-Law, including holiday and weekend restrictions. Portable loud equipment, such as generators, compressors, mixers, etc., must be located away



from adjacent properties and the Municipality may require noise barriers to be erected/installed in sensitive areas, such as near schools or hospitals.

When construction activity is located within a strictly business setting, or in the center of an industrial park, or similar locations where people are generally not present after normal operating hours, it may be viable and reasonable to consider 'night work' or 'after hours' construction activity. However this argument may be less substantive in a residential setting where after hours construction activity can result in a loss of enjoyment of adjacent residents. The Noise By-Law does allow for a Grant of Exemption by Council. If an exemption is to be sought, the submitted CMP must outline the following minimum considerations:

- a) Proposed hours of operations;
- b) Details of the equipment and activities to be performed during the exemption;
- c) Details of any noise buffering or mitigation measures that will be implemented during the proposed exemption;
- d) An assessment of the surrounding community (e.g. strictly business district; industrial park; or residential setting), including any potential sensitive areas, such as schools or hospitals.

Noise By-Law exemption requests will be processed according to the procedure outlined in Section 6 of the Noise By-Law, N-200.

The CMP must also consider dust control measures. The plan shall include details regarding construction phasing and sequencing, on-site measures to reduce dust from escaping the site, as well as cleaning and mitigation measures in the immediately impacted areas. The Responsible Contractor or Owner must have immediate access to a watering truck, or equivalent, to proactively control dust during dry conditions. The Municipality may direct the Responsible Contractor or Owner to water the site or to use water for cleaning in the ROW as necessary.

Dust control measures must be considered for more than just the ground floor. Dust from higher elevations or upper storeys can escape and deposit onto the street level or adjacent rooftops and patios, etc, and therefore must be considered in the CMP. The measures to prevent dust from escaping from the site must also be implemented as building construction progresses. The CMP must indicate proposed dust and debris mitigation techniques for upper floors and at all elevations, as well as the ground level where dust/debris may escape.

#### **Section 7.3.4 – Emissions Control**

Emissions from combustion engines (diesel or gasoline) must strictly meet the applicable regulations and manufacturer specifications. All vehicles and equipment used on site must be properly maintained such that engines will function according to manufacturer specifications. The CMP must consider appropriate locations for vehicle or equipment engine exhausts within the site, as well as vehicle staging areas (e.g. concrete delivery) such that exhaust emissions are reasonably minimized (ie. proximity to nearby intake louvres, vents, or public spaces). Vehicle staging should be queued such that vehicles are not permitted to idle outside of designated loading/unloading zones or the active work area for more than 25 minutes.

# Section 8 – Permit and Notification Requirements

## Section 8.1 – Submission Requirements

In addition to all building code and building by-law submission requirements, all building permit applications must be accompanied by:

- a) Detailed building drawings, including engineering and architectural plans;
- b) Applicable Fees;
- c) Detailed Construction Management Plan (CMP);
- d) Encroachment application, complete with fees and site plan

These items will all be reviewed in conjunction with applicable by-laws and may need to be revised as necessary. Detailed CMP's and encroachment applications must be submitted in advance of anticipated construction and will be evaluated by the Municipality as part of the building permit review process.

With the exception of emergency situations, no work may commence on any HRM street without first obtaining a permit as required by the provisions of the HRM Street By-Law (S-300). Construction must not start before the permit is issued.

## Section 8.2 – Construction Management Plan

The considerations discussed in this manual are intended to form the basis of a detailed Construction Management Plan (CMP). The scale and complexity of the site specific CMP will be directly proportional to the scale and complexity of the project, the site, and the surrounding conditions. As a minimum, a CMP must include:

- a) Project description;
- b) Project contact information (Owner and/or Responsible Contractor);
- c) Construction schedule;
- d) Hours of operation;
- e) Site plan;
- f) Traffic Control Plan(s) (TCP);
- g) Haul routes and staging areas;
- h) Pedestrian Management Plan(s) (PMP);
- i) Site protection and hoarding details;
- j) Hoarding aesthetics details, if applicable;
- k) Signage details;
- l) Safety protocols;
- m) Overhead crane lifting operation details and locations;
- n) Stormwater management plan;
- o) Description of noise, dust, and emissions controls.

### **Section 8.3 – Pre-Construction Meeting**

For any work to which these guidelines apply, it may be necessary to have a pre-construction meeting to discuss the scope of work, review the CMP, and establish an effective communication plan. Stakeholders invited to attend may include (but is not limited to) the owner/developer, contractor(s), inspector(s), Transit, Utilities, Traffic Services, and Development Services.

In addition to representatives of the developer, contractor, and municipal agencies, the CMP must also assess the needs of surrounding businesses and institutions, including such considerations as local deliveries, special events, or other specific criteria that may impact their operations. If deemed appropriate during the review of the CMP the Municipality may require a representative from the local business district, surrounding community group, and/or institution to be invited to the pre-construction meeting, if applicable.

The need for a pre-construction meeting, the timing, and complexity of the meeting will be dependent on the scale and complexity of the project, the site, and the surrounding community as determined by the Municipality during the review of the CMP. Generally, a pre-construction meeting should be held a minimum of 10 days prior to the start of any construction activity.

### **Section 8.4 – Notification Requirements**

While the fundamental objective of the CMP is to minimize disturbance to the surrounding community, the nature of construction activity may require certain periodic street closures, or utility disruptions. Since all construction work within the HRM Right-of-Way is subject to the notification requirements specified in the HRM TCM Supplement, the CMP must assess the impacts of these street closures and disruptions on the surrounding community. The Responsible Contractor or Owner is responsible to distribute notification to all affected property owners regarding the planned disruption. Initial notices must be hand delivered to all property owners or businesses within the closed area and must contain the following:

- a) The name of the person or company responsible for the closure, including a contact person and telephone number
- b) The intended date and time the closure or disruption will commence
- c) The expected duration of the closure or disruption
- d) The location of the closure or disruption and affected area

Notices of closures or planned disruptions to utility services must be delivered a minimum of 5 business days in advance of street closures or utility disruptions. This notification can occur concurrently with the review by the Municipality. After the initial hand-delivered notification, the contractor must provide confirmation to HRM that the notices were delivered, including a list of all the civic addresses included in the distribution. An example of closure notices and an example confirmation letter is provided in Appendix A. In addition to the notification process above, HRM shall issue a Public Service Announcement in advance of the closure of any street on the list found in Schedule A of the HRM TCM Supplement.

During pre-construction consultation with the surrounding community, the Owner and/or Responsible Contractor may choose to supplement the initial hand delivered notice with additional communication methods such as:

- a) Email
- b) Social media group
- c) Website links
- d) Telephone
- e) Regular community engagement meetings (at an interval and time to be determined by the developer)

While these measures may help to supplement communications, considering that not all residents and property owners have access to the same level of technology, the first notification must be hand delivered. The CMP may assess additional supplemental communication strategies if deemed to be more effective and efficient.

Understanding the complex logistics of the construction industry, unforeseen conditions or weather can often cause delays or may necessitate unexpected closures or disruptions. In such situations, subject to the discretion of the Municipality, the closure or disruption may be postponed or extended with additional notification redistributed to the affected area.

## **Section 9 – Regulation and Enforcement**

### **Section 9.1 – Inspection and Monitoring**

Successful implementation of a detailed CMP depends on regular inspection, maintenance, and adjustment of approved control measures and the expected plan. Continual monitoring of hoarding systems, walkways, barriers, signage, etc., is a key element to ensure control measures are performing effectively. The Responsible Contractor or Owner must inspect the implementation of the CMP on a daily basis at minimum and keep a detailed inspection/maintenance log. The Municipality may direct maintenance or adjustment of certain elements as required, and may request to view the inspection log.

### **Section 9.2 – Violation and Penalty**

An approved CMP, prepared in accordance with these guidelines, will form part of the permit package, and as such, failing to comply with the approved CMP signifies noncompliance with specific permit conditions. Any Owner or Responsible Contractor found to be in violation of these guidelines or failing to implement the approved CMP may be guilty of an offence and subject to the penalties of the respective by-laws.

## Appendix A – Sample Notification Letters

# ABC Construction Limited

---

153 Starfield Drive  
Halifax, Nova Scotia  
A1B 2C4

Bus: 902-123-4567  
Fax: 902-891-2345  
Email: [frank.master@abcconstruction.com](mailto:frank.master@abcconstruction.com)

2-March-2015

---

## CONFIRMATION

---

This letter is to confirm that ABC Construction Limited has hand delivered notices to all residents and or businesses within a 500m radius in all directions of the Smith Street closure.

The following addresses have received notification letters on 2-March-2015:

- 58-355 Stanley Street, Inclusive
- 22-50 Juniper Street, Inclusive
- 64-551 Sample Street, Inclusive

### CONTACT INFORMATION:

**Contractor:** Frank Master - ABC Construction Limited

902-123-4567

Our company has been retained by the developer XYZ Holdings Limited to complete work and the associated street closure. Should any questions arise throughout construction please feel free to contact the undersigned.

Thank you.

Yours Truly,

ABC Construction Limited

Frank Master  
Project Manager

# ABC Construction Limited

---

153 Starfield Drive  
Halifax, Nova Scotia  
A1B 2C4

Bus: 902-123-4567  
Fax: 902-891-2345  
Email: [frank.master@abcconstruction.com](mailto:frank.master@abcconstruction.com)

2-March-2015

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## **NOTIFICATION OF STREET CLOSURE (and/or UTILITY DISRUPTION) – SMITH STREET**

---

This is to inform you that to facilitate construction operations in your area Smith Street will be closed on or about 25-March-2015 with an anticipated duration of approximately 2 weeks. The street will be open during the evenings in weekend. During the street closure process local traffic will be permitted to enter underground parking garages as needed.

Should you have any questions or concerns please feel free to contact the below.

### **CONTACT INFORMATION:**

**Contractor:** Frank Master - ABC Construction Limited

902-123-4567

Our company has been retained by the developer XYZ Holdings Limited to complete work and the associated street closure. Should any questions arise throughout construction please feel free to contact the undersigned.

Thank you.

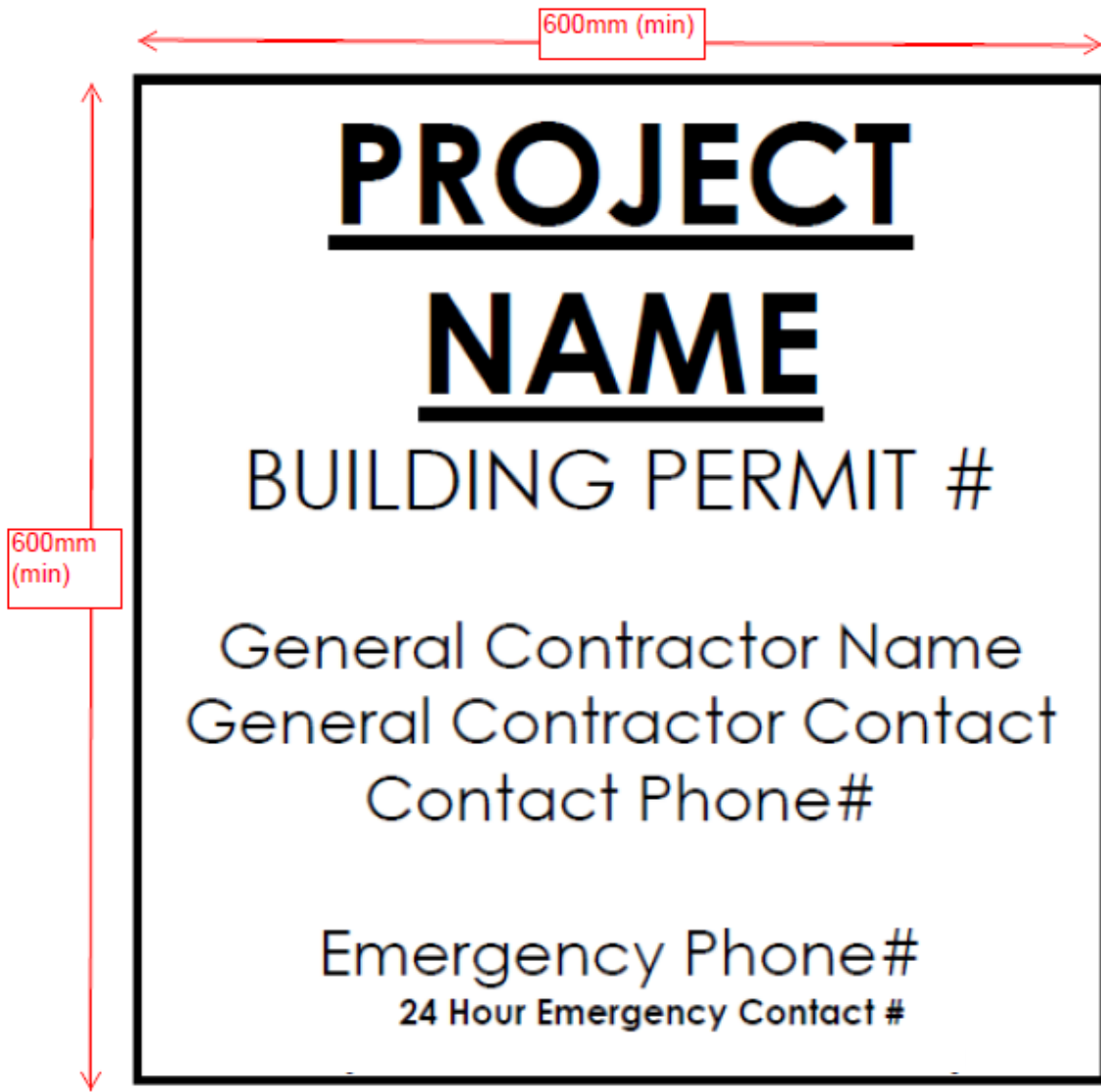
Yours Truly,

ABC Construction Limited

Frank Master  
Project Manager

## Appendix B – Sample Site Info Sign





Note: Completed project renderings are also encouraged to be included on the contact information signage

## Appendix C – CMP Checklist & Sample CMP

## Construction Management Plan - Checklist

### General Site:

ITEM	Y/N or N/A	COMMENTS
<ul style="list-style-type: none"> <li>Construction Start/End Dates indicated?</li> </ul>		
<ul style="list-style-type: none"> <li>Project contact information provided?</li> </ul>		Phone #'s: (Contractor and/or Developer)
<ul style="list-style-type: none"> <li>Is an Encroachment required?</li> </ul>		Have all options to perform the work within the private boundaries been considered? Is this encroachment absolutely necessary? Is it necessary for the entire project duration, or can there be a 'phased' approach?

### Vehicle Management:

ITEM	Y/N or N/A	COMMENTS
<ul style="list-style-type: none"> <li>Has the Traffic Control Plan (TCP) been prepared by qualified TWS?</li> </ul>		
<ul style="list-style-type: none"> <li>TWS contact information provided?</li> </ul>		Phone #: Email:
<ul style="list-style-type: none"> <li>Haul Routes indicated?</li> </ul>		Haul routes should be planned to utilize the most practical direct route to the site, but minimize risk to pedestrians.
<ul style="list-style-type: none"> <li>Is there a specific Delivery/Loading Zone required?</li> </ul>		Designated delivery/loading zone should be provided (on-site if possible; if not possible on site, an encroachment will be required)

<ul style="list-style-type: none"> <li>Is there sufficient Parking available? Or will any existing parking be displaced during construction?</li> </ul>		Are there any temporary parking displacements/relocation options?
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**Pedestrian Management:**

ITEM	Y/N or N/A	COMMENTS
<ul style="list-style-type: none"> <li>Has the Pedestrian Management Plan (TCP) been prepared by qualified TWS?</li> </ul>		(This can form part of the TCP provided the combined plan is clear and legible)
<ul style="list-style-type: none"> <li>TWS contact information provided?</li> </ul>		Phone #:  Email:
<ul style="list-style-type: none"> <li>Will a temporary protected sidewalk be provided?</li> </ul>		
<ul style="list-style-type: none"> <li>Will a covered hoarding system be required?</li> </ul>		
<ul style="list-style-type: none"> <li>Will a sidewalk be closed or rendered not usable?</li> </ul>		
<ul style="list-style-type: none"> <li>Will the sidewalk (or any temporary pedestrian measures) be maintained and accessible for all pedestrians at all times (ie. mobility and visual impairments)?</li> </ul>		

<ul style="list-style-type: none"> <li>Is there an accessible alternative sidewalk and/or crosswalk available nearby?</li> </ul>		
<ul style="list-style-type: none"> <li>Are temporary pedestrian crossings or other control measures required?</li> </ul>		
<ul style="list-style-type: none"> <li>Are there any bus stops impacted?</li> </ul>		
<ul style="list-style-type: none"> <li>Will there be sufficient detour and way-finding information signage?</li> </ul>		

**Site Protection:**

ITEM	Y/N or N/A	COMMENTS
<ul style="list-style-type: none"> <li>Will there be construction activity within 2m of the public ROW?</li> </ul>		
<ul style="list-style-type: none"> <li>Is the building footprint or excavation within 2m of the public ROW?</li> </ul>		(If yes, solid/opaque hoarding will be required.)
<ul style="list-style-type: none"> <li>Will there be any beautification elements implemented?</li> </ul>		(if yes, please list general measures)

**Lifting Operations - Cranes:**

ITEM	Y/N or N/A	COMMENTS
<ul style="list-style-type: none"> <li>Is a Tower Crane Required?</li> </ul>		

### Environmental Controls:

ITEM	Y/N or N/A	COMMENTS
<ul style="list-style-type: none"><li>Is there a site specific sedimentation and erosion control plan or stormwater management plan?</li></ul>		
<ul style="list-style-type: none"><li>Have noise, dust/debris, and emissions been considered?</li></ul>		

### Notifications:

ITEM	Y/N or N/A	COMMENTS
<ul style="list-style-type: none"><li>Is a pre-construction meeting required?</li></ul>		
<ul style="list-style-type: none"><li>Is there any preliminary community consultation necessary regarding the construction activities?</li></ul>		Consider the area demographics and project setting. Is this a strictly business/commercial/industrial setting? Or residential?

# Sample Construction Management Plan



Image Source: <http://districtsource.com/2014/07/10-story-124-unit-building-approved-mt-vernon-triangle/>

## 10 Storey Mixed Use Building 1234 Street A Halifax, Nova Scotia

### Prepared by:

XYZ Development Group

February, 2016

Note: The information presented in this document is for a fictional project and is intended for graphic representation purposes only. Any similarities to real projects are strictly coincidental.

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## Section 1 – Project Description

The proposed development at 1234 Street A, Halifax, consists of a new 10 Storey, 152 unit residential building with ground floor commercial space, underground parking, and rooftop amenity space.

XYZ Development Group, together with ABC Contracting Ltd., have prepared this Construction Management Plan (CMP) in an effort to reduce potential negative impacts on the surrounding community. This CMP is intended to be an evolving, dynamic document to help guide the project team to mitigate impacts to the adjacent community before they arise and to address any unforeseen issues.

## Section 2 – Project Contact Information

The project team for the proposed development consists of:

**Developer:** XYZ Development Group

987 Street Z, Suite 333

Halifax, NS

(902) 456-7890

Developer Project Manager: John Smith – (902) 123-4567 (cell)

**Contractor:** ABC Contracting Ltd.

789 Street y, Suite 222

Halifax, NS

(902) 654-9876

Contractor Project Manager: Jane Doe – (902) 987-6543 (cell)

Contractor Site Superintendent: Joe Blow – (902) 963-8521 (cell)

**24 Hour Emergency Contact:** ABC Contracting Ltd.

Wally Bell – (902) 369-2587

## Section 3 – Construction Schedule & Logistics

For a detailed Construction Schedule, please refer Appendix A. The following is a brief summary of anticipated major project milestones:

- a) Construction Start: February, 2041
- b) Substructure Substantially Completed and Backfilled: May, 2041
- c) Superstructure Substantially Complete (sidewalks partially opened): November, 2041
- d) Building Façade Complete (sidewalks fully opened): December, 2041
- e) Building Complete: April, 2042

In addition to the above noted milestones, periodic utility disruptions (water, power, etc.) to adjacent properties may be required. Every effort will be made to ensure this work can be completed outside of normal operating hours of the affected businesses, such as weekends or evenings; however, the contractor must abide by the necessary Noise by-law requirements.

In an effort to expedite the construction activities within the public ROW and to mitigate potential impacts to the adjacent businesses, in accordance with Section 6 of the Noise By-Law, XYZ Development Group intends to apply to Council for a site specific Noise By-Law exemption with the following considerations:

- The construction site is located in a strictly business community and, therefore, the general public are not present in the area outside of business operating hours;
- Through preliminary consultation with local business groups, considering that the reduced utility disruptions and street closures during normal operating hours, the general consensus is that night work will have less negative impact on their operations and customers;
- No local businesses consulted in the affected area had any special events, or deliveries planned within the proposed timeframe of the proposed night work

All affected businesses will be notified a minimum of 10 days prior to any scheduled closures or utility disruptions.

## Section 4 – Vehicle & Pedestrian Management

Prior to any construction activity on site, temporary workplace traffic control devices and signage will be erected in accordance with NSTIR Temporary Workplace Traffic Control Manual, as well as HRM Traffic Control Manual Supplement. Detailed Traffic Control and Pedestrian Management Plans can be found in Appendix C & D respectively.

With the approval of HRM Development Approvals and Traffic Authority, the existing parking lane along a portion of Street B will be barricaded to delineate a protected vehicle staging, delivery, and materials handling area to be used for the duration of the project.

This temporary encroachment will occupy 6 metered parking stalls. Upon completion of the project, all parking will be reinstated to pre-construction conditions or in accordance with the approved site development plans. It is understood that the construction is located within an urban environment with limited parking. Therefore, during construction, the contractor will endeavour to secure parking in surrounding lots for the workers so as to leave any remaining on-street parking for nearby businesses. In addition, the following alternative public parking venues may be utilized:

- On-street stalls,
- Parkade at 123 W Ave,
- Parking lot at 456 X Street,
- etc

In addition to the above noted public parking facilities, there is an existing 'No Parking – Loading Zone' along the Eastern boundary of the site, along Street C. This loading zone was used by the former occupant of the building that is to be demolished as part of this project. As such, this loading zone will not be required until the project is complete. During construction, this former loading zone will be converted to temporary on-street parking to facilitate the stalls that have been displaced on other affected streets.

Deliveries of construction materials will increase the amount of truck traffic on the surrounding streets. Depending on the construction activities, this increased traffic will vary both in size and frequency of vehicles entering and leaving the site. The most significant activities include: hauling of excavated earth, concrete pours, structural framing, and crane deliveries. Deliveries, vehicle staging, and crane pick-ups will be limited to the delineated staging area indicated on the proposed site plan.

Due to an existing active construction site across the street currently occupying that sidewalk, the northern boundary of the site, bordered by Street A, it is impossible to direct pedestrians to the other side of the street around the proposed site. As such, a temporary protected sidewalk will be established within the vehicle travelled lane. This encroachment will be delineated by concrete F-shape barriers and fencing for pedestrian safety and will remain operational throughout the duration of the project. Pedestrian movement on the sidewalk bordered by Street C will be protected via a walk-through scaffolding arrangement. Sidewalks will not be closed along Street C. All pedestrian walkways will be clearly delineated and accessible throughout the project duration.

These encroachments will be necessary to facilitate construction activities, such as excavation, deliveries, materials storage, staging, cladding, etc.. The temporary systems will be monitored regularly and adjusted as required or as directed by the Municipality.

In addition to the required notification criteria established in the HRM TCM Supplement, the Contractor will engage local businesses a minimum of 10 days prior to construction to coordinate any special requirements for deliveries or expected special events that are planned throughout the duration of the project. The contractor will endeavour to facilitate local deliveries and will work with local businesses to accommodate their needs, including such measures as temporary short duration traffic control for delivery vehicles if needed.

Both vehicular and pedestrian traffic will be managed effectively to ensure access to each surrounding business is not negatively impacted. The contractor will coordinate temporary street closures or detours with a minimum of 10 days' notice to the Municipality and the surrounding community, and will endeavour to clearly identify vehicular and pedestrian access routes throughout the duration of the project.

## Section 5 – Construction Site Protection & Hoarding

In an effort to minimize noise, dust, and other debris from leaving the site, and to keep unauthorized personnel from entering the site, the entire perimeter of the work area will be delineated with chain-link mesh fencing anchored to concrete F-shape barriers.

The chain-link fencing will be covered with a combination of project advertising banners as well as opaque plywood areas that will be dedicated to local business signage and wayfinding information to further emphasize clarity. The developer will also engage local community groups to paint murals to help make the hoarding system more aesthetically pleasing and appealing. Protected viewing holes may also be constructed in strategic locations to allow public viewing into the active site through protected openings.

The following images depict the proposed encroachment layout and protection measures to be implemented on each impacted street:

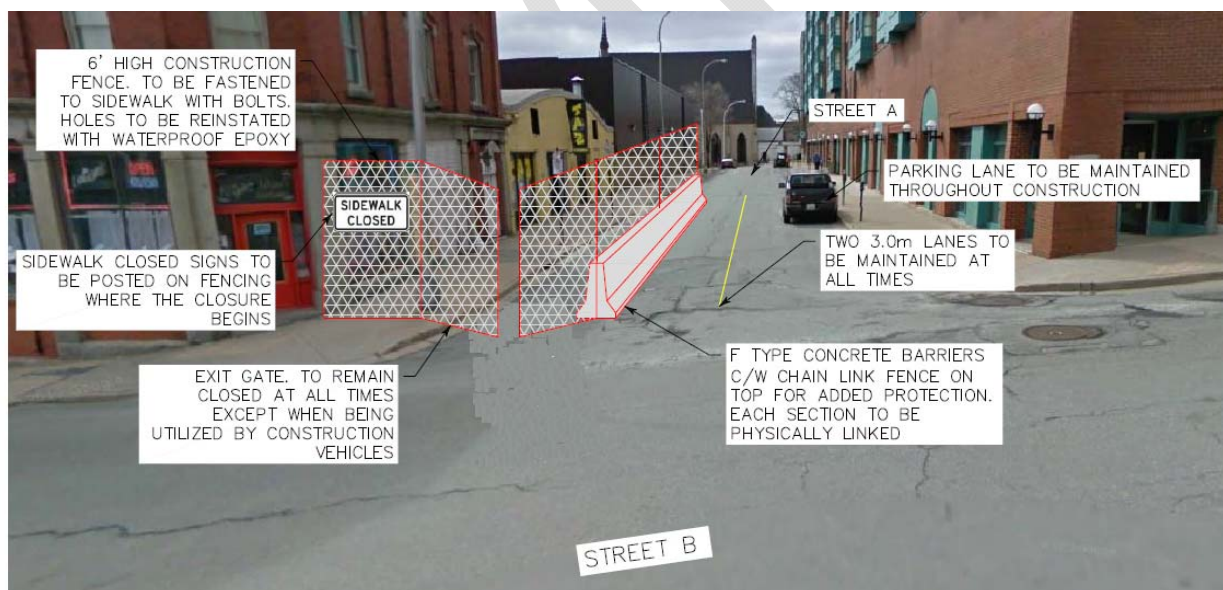


Figure 1 – Proposed delineated vehicle staging and delivery area; Street A. The Sidewalk is to be closed along this portion of the site; pedestrians must use the sidewalk on the other side of Street A.





Figure 2 – Proposed protected walkway; Street B. Due to the active construction site on opposite side of Street B, therefore there is no sidewalk on the other side of the street to which direct pedestrians.

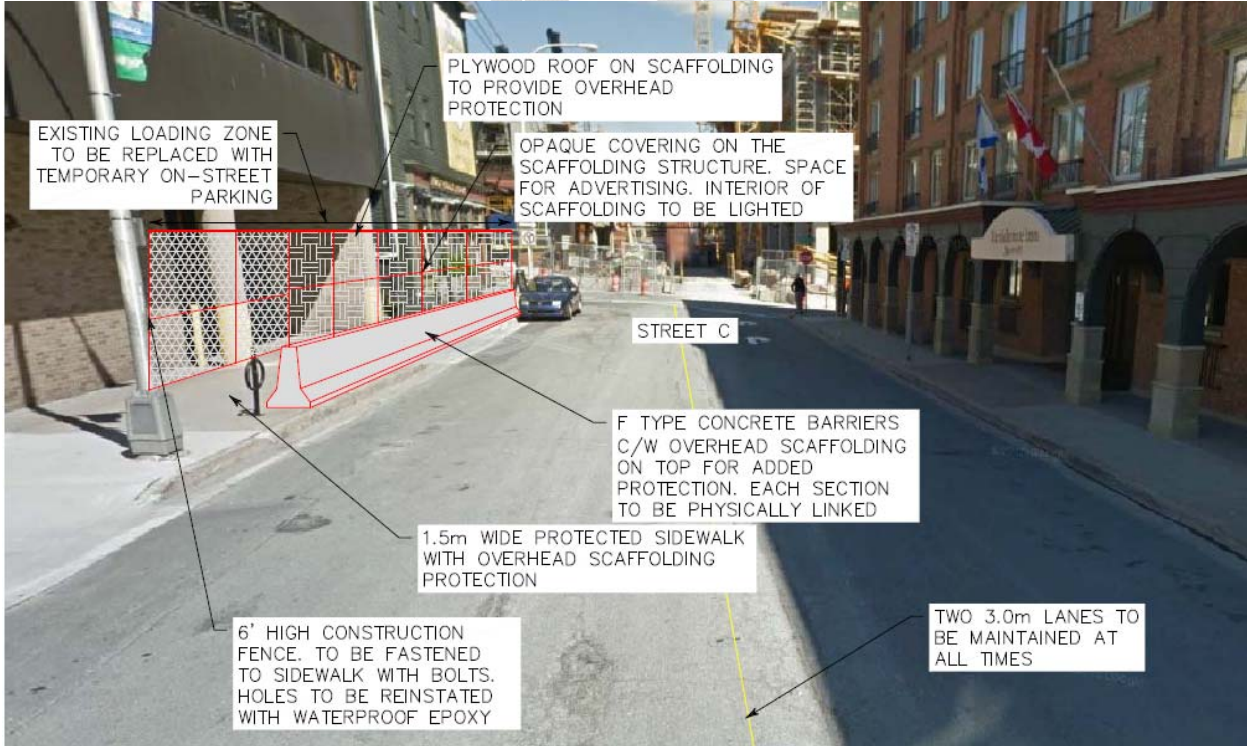


Figure 3 – Proposed walk-through scaffolding; Street C. This sidewalk will remain untouched during construction, however considering the proximity to the active work site, it will be necessary to include the walk-through scaffolding for added pedestrian protection.

In addition to opaque hoarding and fence coverings, the following measures will be implemented on site to remove dirt/dust/debris:

- a) Dirt and dust on site will be removed via street sweepers equipped with vacuum mechanisms;
- b) The loading/unloading area will be lined with coarse material such as gravel, or riprap, or asphalt to reduce mud from tracking into the adjacent street;
- c) Tarps and/or temporary enclosures will be erected around dust producing activities (ie. sweeping of floor slabs at higher elevations).

## Section 6 – Lifting, Hoisting, and Crane Operations

This project will require a tower crane at the following coordinates:

XX° N,

YY° E,

Crane height: Zm

Transport Canada clearance approval has been obtained and Nav Canada has been notified. There have been no aerodromes identified within the required boundaries and the crane is not expected to impact any flight patterns or navigation equipment.

Temporary mobile cranes will be required periodically to erect and disassemble the tower crane, as well as temporary lifting during the cladding of the building superstructure. Temporary street and/or sidewalk closures may be required to facilitate erection/disassembly of the stationary tower crane. The contractor will coordinate temporary street closures or detours with a minimum of 10 days' notice to the Municipality and the surrounding community.

Although the tower crane swing radius identified on the site plan (refer to Appendix B) does extend over the public ROW, no loads will be moved or suspended over the travelling public. However, it is expected that intermittent short duration traffic or pedestrian stoppages may be required when loads are required to swing over the public realm.

## Section 7 – On-Site Safety and Security

Both ABC Contracting Ltd and XYZ Development Group are registered members in good standing with the Nova Scotia Construction Safety Association and are committed to upholding the safety of their workers and the public paramount.

In addition to ensuring strict compliance with all applicable safety codes and regulations, the following safety protocols will be implemented to further enhance the site safety and security:

- a) Contractor and Sub-trade workers will all be required to attend a mandatory site safety orientation training session;
- b) Personal protective equipment (PPE) will be required for all personnel on site;
- c) Adequate signage will be placed outside the hoarding, which warns of all hazards that may exist;
- d) Gates will be locked and the perimeter fencing secured to provide security against public access during off work hours and monitored in high traffic areas during operation;
- e) Hoarding will be marked clearly “No Trespassing – Construction Personnel Only”, and personal protective equipment requirements clearly marked (e.g., “Hard Hats and Safety Footwear Must Be Worn Beyond This Point”);
- f) Regular safety inspections will be conducted to ensure suitability of hoarding and other safety devices;
- g) Emergency contact information will be prominently posted.

## Section 8 – Pre-Construction Consultation & Meeting

XYZ Development Group are committed to positive public engagement through our design and construction processes. In preparation of this CMP, we have engaged all local businesses within the affected area to determine any special considerations or potential conflicts that may arise throughout the construction phase of this project. Through our preliminary consultations, we were able to determine specific information for each affected business:

- a) Business #1:
  - Retail shop;
  - Normal operating hours: 9:00am – 5:00 pm;
  - Local deliveries every 2 weeks; Wednesday afternoons; approximately 2:00pm;
  - Typically have sidewalk displays during summer months and doors left open. Special care will be given to dust control in this vicinity.
- b) Business #2:
  - Office space;
  - Normal operating hours: 9:00am – 5:00pm;
  - Rely heavily on water/utilities. Utility disruptions force workers to go home. Special consideration/coordination of utility disruptions will be required.
- c) Business #3:
  - Restaurant;
  - Normal operating hours: 11:00am – 10:00pm;
  - Rely heavily on water/utilities. Utility disruptions force closure. Special consideration/coordination of utility disruptions will be required;
  - Local deliveries every 2 weeks; Monday mornings; approximately 11:00am; deliveries are from an 18-wheel tractor trailer, which may require temporary traffic control if loading zones are blocked.
- d) Business #4:
  - Retail shop;
  - Normal operating hours: 11:00am – 10:00pm;

- Local deliveries every 2 weeks; Tuesday mornings; approximately 11:00am; deliveries are from an 18-wheel tractor trailer, which may require temporary traffic control if loading zones are blocked;
- Special 20 year anniversary sale/celebration planned for week 25; there are no planned utility disruptions or extraordinary/significant construction activities expected for that period, however, any unforeseen activities that may interfere with this event will be coordinated with the local business as soon as they become know.

In addition to our preliminary consultation with local businesses within the affected area, it is expected that a Pre-Construction meeting will be held a minimum of 10 days prior to the start of any construction activity on site. The following is a brief, non-comprehensive agenda for the pre-construction meeting:

- Project description
- Project schedule
- Utility connections/disruptions
- Encroachment requirements; traffic control setup; and pedestrian management
- Site Safety and protective hoardings
- Site logistics/loading/unloading/deliveries

It is expected that the following representatives would attend the pre-construction meeting:

- Municipality
- Contractor
- Developer
- Utilities (Power, Water, Gas, etc.)
- NS Department of Labour
- Affected Businesses (the it may be prudent to include a representative from the local business community within the affected area, however, based on our preliminary consultations with the local businesses, this may not be necessary since no items of immediate concern have been identified).



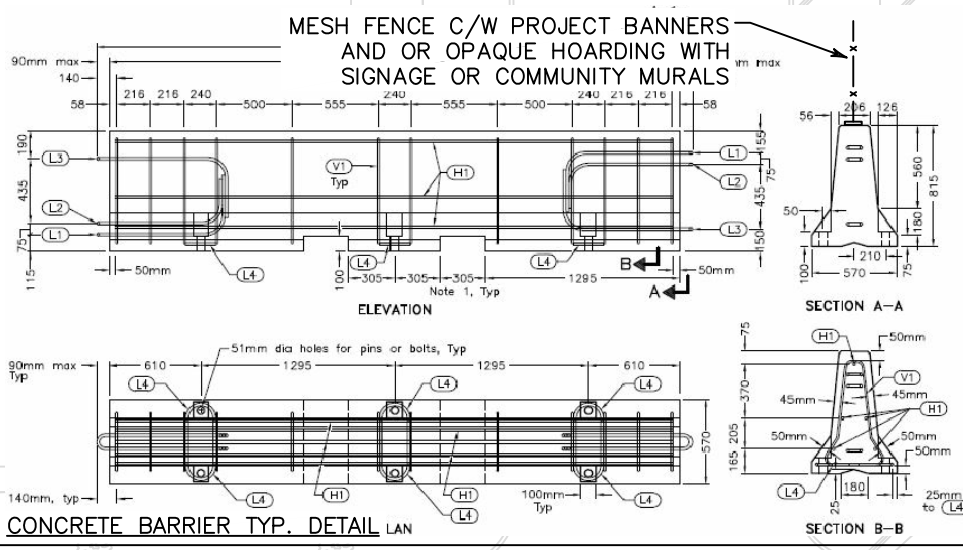
## Appendix A – Construction Schedule

SAMPLE

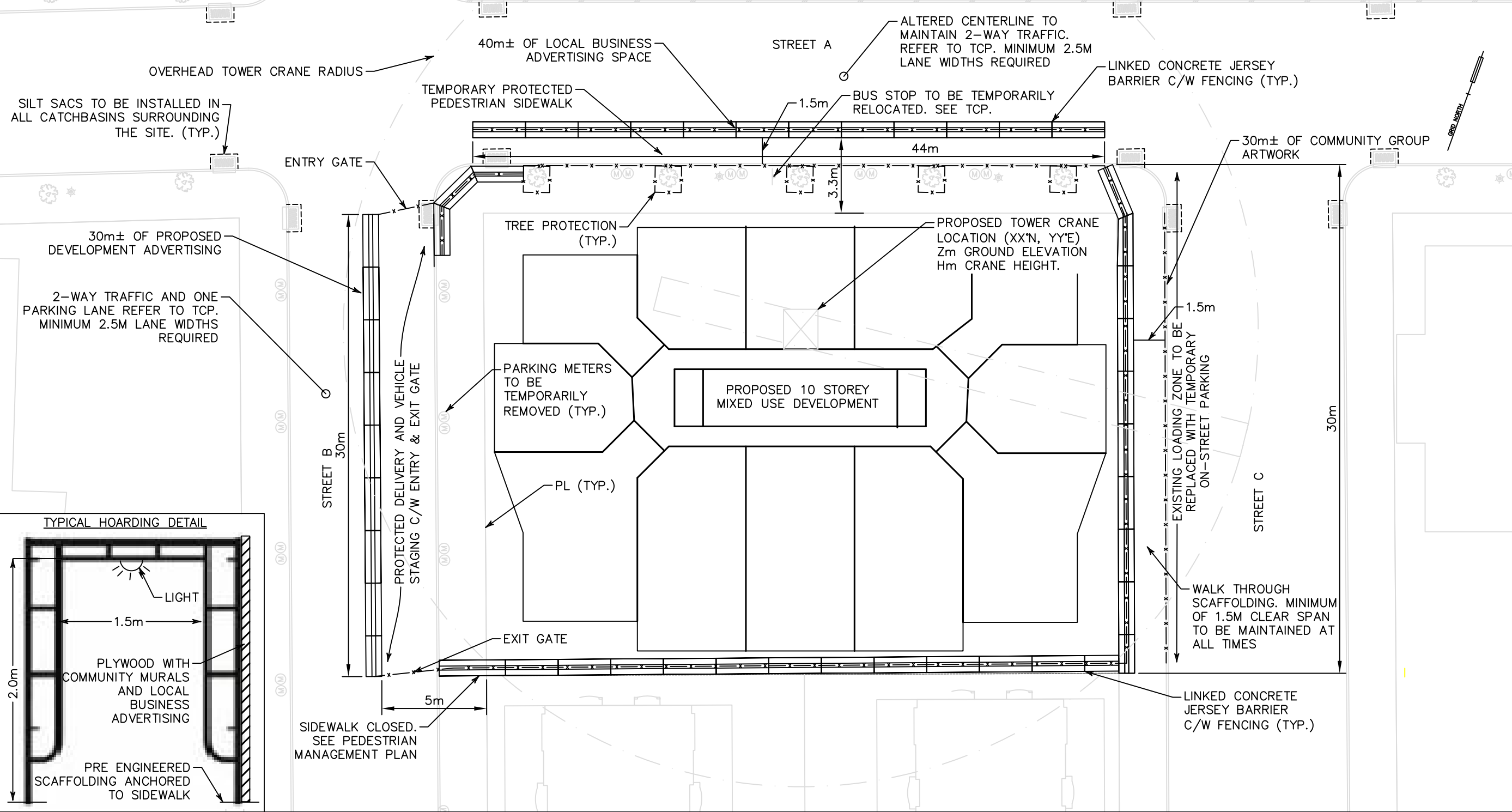


## Appendix B – Site Plan

SAMPLE



EXISTING		PLAN LEGEND		PROPOSED	
△	PT NO	△	SURVEY CONTROL POINT	○	WATERVALVE
●	FIRE HYDRANT	○	UTILITY POLE AND GUY WIRE	○	SIGN POST/BASE
—	FENCE	—	RETAINING WALL	—	CONCRETE CURB
—	CONCRETE CURB	—	PROPERTY LINE	—	BASELINE
□	SEWER MANHOLES	□	CATCHBASIN	□	GAS MAIN
—	CONCRETE SURFACE	—	ASPHALT SURFACE	—	EDGE OF GRAVEL SURFACE
—	WATERMAIN	—	TREE	—	DETECTOR LOOP
—	PEDESTRIAN RAMP	—	BUS STOP AND/OR SHELTER	—	



No.	Date	Revision	Description	App'd
1			SAMPLE	

COMPANY LOGO

STREET NAME  
LIMITS  
COMMUNITY

PROPOSED ENCROACHMENT PLAN

Date	Drawn	Tender No.
N/A	N/A	08-000
Scale	Checked	Sheet
Horz. N/A		1 Of 1
Vert. N/A	Survey No.	Drawing No.
		08000000

# Appendix C – Traffic Control Plan

SAMPLE

TRAFFIC CONTROL SIGNS TO BE PLACED AS PER THE TEMPORARY WORKPLACE TRAFFIC CONTROL SIGN MANUAL



EXISTING CONSTRUCTION SITE

2.5M MINIMUM LANE WIDTH. 1 LANE IN EACH DIRECTION

1.5M WIDE PROTECTED SIDEWALK

STREET B

TRAFFIC CONTROL SIGNS TO BE PLACED AS PER THE TEMPORARY WORKPLACE TRAFFIC CONTROL SIGN MANUAL



EXISTING		PLAN		LEGEND		PROPOSED	
△	PT NO	△	SURVEY CONTROL POINT	○		○	
●	FIRE HYDRANT	○	WATERVALVE	○		○	
○	UTILITY POLE AND GUY WIRE	○	FENCE	○		○	
○	SIGN POST/BASE	○	RETAINING WALL	○		○	
○	CONCRETE CURB	○	CONCRETE CURB	○		○	
○	PROPERTY LINE	○	BASELINE	○		○	
○	SEWER MANHOLES	○	SEWER MANHOLES	○		○	
○	CATCHBASIN	○	GAS MAIN	○		○	
○	CONCRETE SURFACE	○	ASPHALT SURFACE	○		○	
○	EDGE OF CHANNEL SURFACE	○	WATERMAIN	○		○	
○	TREE	○	DETECTOR LOOP	○		○	
○	PEDESTRIAN RAMP	○	BUS STOP AND/OR SHELTER	○		○	

TRAFFIC CONTROL SIGNS TO BE PLACED AS PER THE TEMPORARY WORKPLACE TRAFFIC CONTROL SIGN MANUAL



2.5M MINIMUM LANE WIDTH. 1 LANE IN EACH DIRECTION

DELIVERY AND VEHICLE STAGING AREA

STREET A



TRAFFIC CONTROL SIGNS TO BE PLACED AS PER THE TEMPORARY WORKPLACE TRAFFIC CONTROL SIGN MANUAL



PROPOSED 10 STOREY MIXED USE DEVELOPMENT

WALK THROUGH SCAFFOLDING

BUS STOP TEMPORARILY RELOCATED HERE

STREET C



PROJECT CONTACT INFORMATION:

CONTRACTOR CONTACT: \_\_\_\_\_ Date \_\_\_\_\_

CERTIFIED TRAFFIC CONTROL SIGNER CONTACT: \_\_\_\_\_ Date \_\_\_\_\_

REVIEWED AND APPROVED FOR TRAFFIC SIGNALS AND PAVEMENT MARKINGS

App'd \_\_\_\_\_ Date \_\_\_\_\_

for TRAFFIC AUTHORITY

No.	Date	Revision	Description	App'd
1			SAMPLE	

COMPANY LOGO

STREET NAME  
LIMITS  
COMMUNITY

TRAFFIC CONTROL PLAN

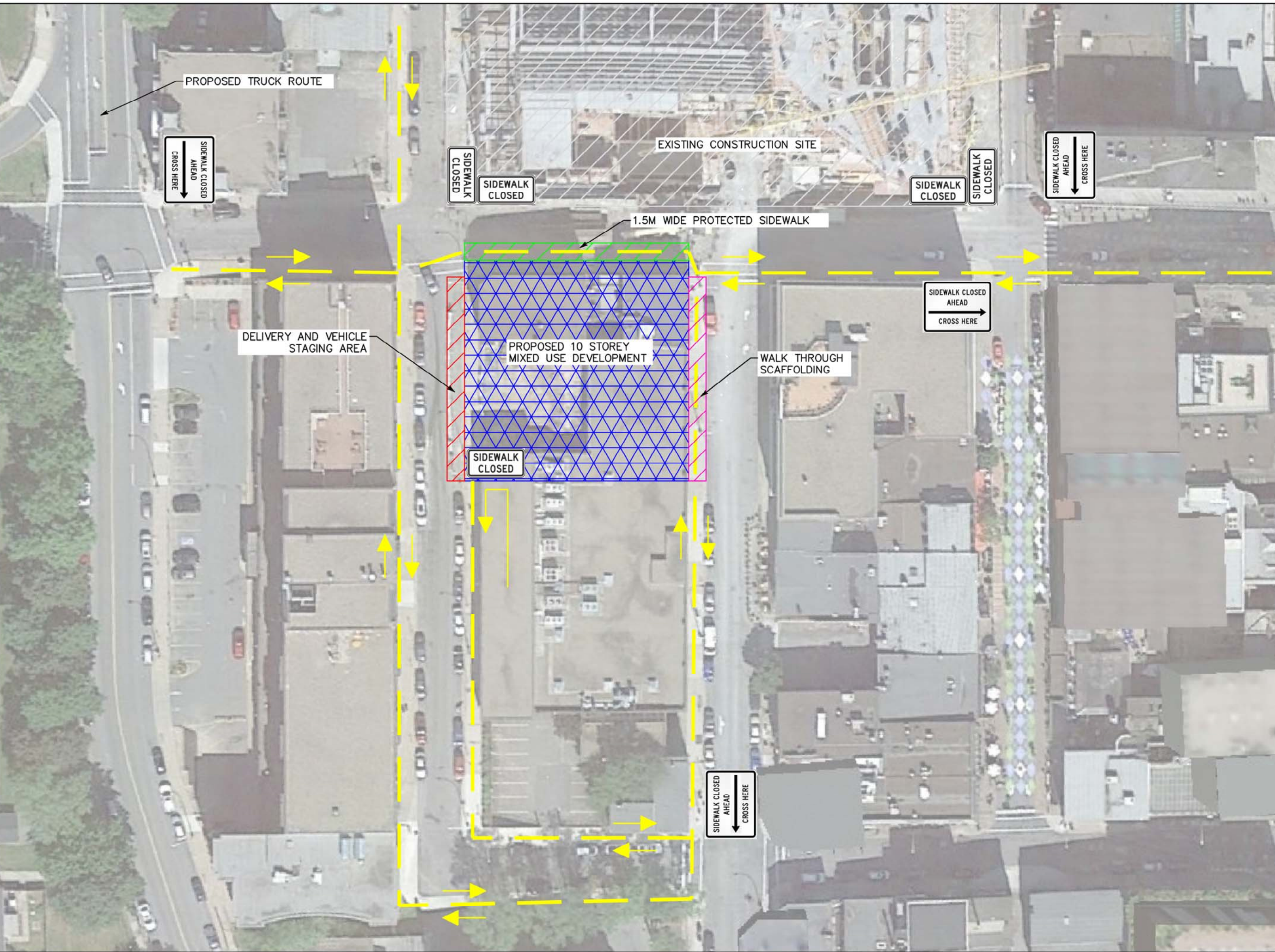
Date	M/D/Y	Drawn	N/A	Tender No.	08-000
Scale	Horz: N/A Vert: N/A	Checked		Sheet	1 Of 1
Reference	Survey No.			Drawing No.	08000000

## Appendix D – Pedestrian Management Plan

SAMPLE



EXISTING		PROPOSED	
△ PT NO	SURVEY CONTROL POINT	●	
○	WATERVALVE	○	
●	FIRE HYDRANT	●	
○	UTILITY POLE AND GUY WIRE	○	
●	SIGN POST/BASE	●	
—	FENCE	—	
—	RETAINING WALL	—	
—	CONCRETE CURB	—	
—	PROPERTY LINE	—	
—	BASELINE	—	
□	SEWER MANHOLES	■	
□	CATCHBASIN	■	
□	GAS MAIN	■	
—	CONCRETE SURFACE	—	
—	ASPHALT SURFACE	—	
—	EDGE OF GRAVEL SURFACE	—	
—	WATERMAIN	—	
○	TREE	○	
○	DETECTOR LOOP	○	
○	PEDESTRIAN RAMP	○	
■	BUS STOP AND/OR SHELTER	■	



PROJECT CONTACT INFORMATION:

CONTRACTOR CONTACT: \_\_\_\_\_ Date \_\_\_\_\_

CERTIFIED TRAFFIC CONTROL SIGNER CONTACT: \_\_\_\_\_ Date \_\_\_\_\_

REVIEWED AND APPROVED FOR TRAFFIC SIGNALS AND PAVEMENT MARKINGS

App'd \_\_\_\_\_ Date \_\_\_\_\_

for TRAFFIC AUTHORITY

No.	Date	Revision	Description	App'd
1			SAMPLE	

COMPANY LOGO

STREET NAME  
LIMITS  
COMMUNITY

PEDESTRIAN MANAGEMENT PLAN

Date	4/10/17	Drawn	N/A	Tender No.	08-000
Scale	Horz: N/A Vert: N/A	Checked		Sheet	1 Of 1
Reference		Survey No.		Drawing No.	08000000



## Appendix E – Haul Route and Vehicle Staging Plan

SAMPLE

EXISTING	PLAN	LEGEND	PROPOSED
△ PT NO		SURVEY CONTROL POINT	○
●		WATERVALVE	●
⊕		FIRE HYDRANT	⊕
○		UTILITY POLE AND GUY WIRE	○
○		SIGN POST/BASE	○
---		FENCE	---
---		RETAINING WALL	---
---		CONCRETE CURB	---
---		PROPERTY LINE	---
---		BASELINE	---
□		SEWER MANHOLES	□
□		CATCHBASIN	□
---		GAS MAIN	---
---		CONCRETE SURFACE	---
---		ASPHALT SURFACE	---
---		EDGE OF GRAVEL SURFACE	---
---		WATERMAIN	---
○		TREE	○
○		DETECTOR LOOP	○
---		PEDESTRIAN RAMP	---
---		BUS STOP AND/OR SHELTER	---

PROJECT CONTACT INFORMATION:

CONTRACTOR CONTACT: \_\_\_\_\_ Date \_\_\_\_\_

CERTIFIED TRAFFIC CONTROL SIGNER CONTACT: \_\_\_\_\_ Date \_\_\_\_\_

REVIEWED AND APPROVED FOR TRAFFIC SIGNALS AND PAVEMENT MARKINGS

App'd \_\_\_\_\_ Date \_\_\_\_\_

for TRAFFIC AUTHORITY

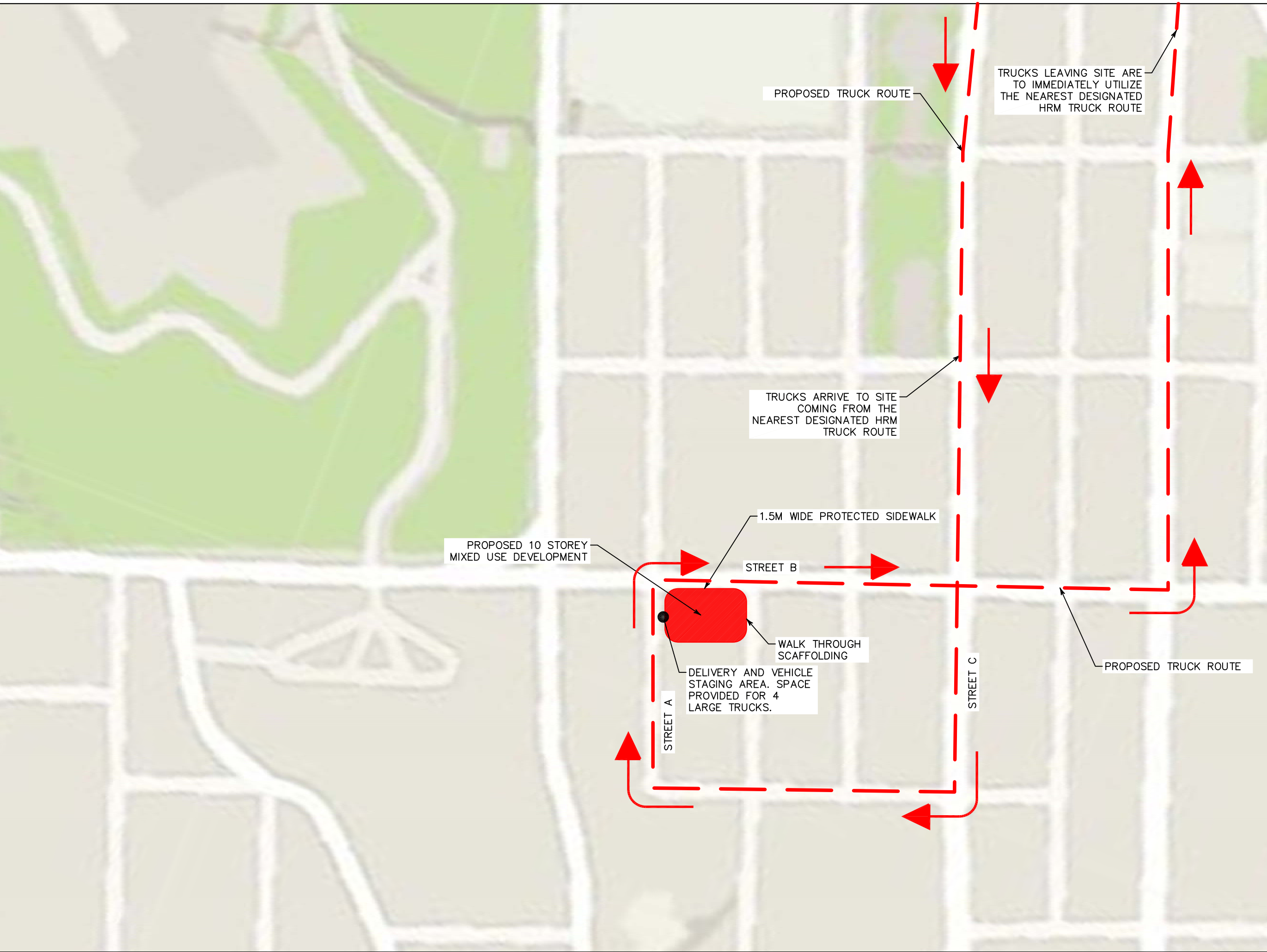
No.	Date	Revision	Description	App'd
1			SAMPLE	



STREET NAME  
LIMITS  
COMMUNITY

PROPOSED TRUCK ROUTE PLAN

Date	Drawn	Tender No.
M/D/Y	N/A	08-000
Scale	Checked	Sheet
Horz: N/A		1 Of 1
Vert: N/A	Survey No.	Drawing No.
Reference		08000000



## Appendix F – Site Information & Wayfinding Signage

SAMPLE

# DEVELOPMENT INFORMATION BOARD



10 STOREY MIXED USE BUILDING  
1234 STREET A  
HALIFAX, NS

DEVELOPER:

XYZ DEVELOPMENT GROUP  
987 STREETZ, SUITE 333  
HALIFAX, NS  
902-456-7890

DEVELOPER PROJECT MANAGER:  
JOHN SMITH - 902-123-4567 (CELL)

CONTRACTOR:

ABC CONSTRUCTION LTD.  
789 STREET Y, SUITE 222  
HALIFAX, NS  
902-654-9876

CONTRACTOR PROJECT MANAGER: JANE DOE - 902-987-6543 (CELL)

CONTRACTOR SITE SUPERINTENDENT:  
JOE BLOW - 902-963-8521 (CELL)

24 HOUR EMERGENCY CONTACT:

ABC CONTRACTING LTD. - WALLY BELL - 902-369-2587



# LOCAL BUSINESSES OPEN AHEAD

**bookina**  
BOOKING APP

PROCESSEUR DE  
**groops - de**

**THREE LEAF TECH**  
SOFTWARE DEVELOPMENT

**henne**  
CATERING

AN INTERNATIONAL  
**HEADLINERS**  
EVENT MANAGEMENT

**JARED ROUSSEL**  
WEB DEVELOPMENT

**la fabrique**  
PLANT & CONCRETE SOLUTIONS

**hungift**  
GIFT DELIVERY

**FOCLIFTER**  
FOOD & BEVERAGE

**SUN 706**  
WINE & SPIRITS

**WASSERS**  
WATER SOLUTIONS

**sinapps**  
SOFTWARE DEVELOPMENT

**sleep talk! inc**  
SLEEP TALKING

**aspect**  
PROPERTY MANAGEMENT

**high mom!**  
MOMMY & BABY

**COCOON MILK**  
BABY PRODUCTS

**RK Films**  
FILM PRODUCTION

PROJECTS  
**uay**  
CONSTRUCTION

**HIT RADIO**  
24/7 on the free music channel  
55.4 FM

**rainbow**  
SNOWBOARDS  
RENTALS