JOEWEST Apartments

3291-3297 Westerwald Street

Demolition, Excavation & Building Construction

Prepared by Geoff MacLean, P.Eng.

Job No. 38941

CONSTRUCTION MANAGEMENT PLAN

1	FEB 2025	ISSUED FOR PERMIT
0	JAN 2025	ISSUED FOR PERMIT
REVISION #	DATE	DESCRIPTION

36 Oland Crescent
Bayers Lake Business Park
Halifax, Nova Scotia B3S 1C6
www.sdmm.ca

t: 902 455-1537
f: 902-455-8479
c: 902-789-6374
e: gmaclean@sdmm.ca

Revisions Summary

Revision 1 – Sections; 1.1, 2.2, 3.2, 4.1, 4.5, 5, 5.1, 6, 8.1 & 8.2; Appendies A, P & Q

Table of Contents

Prepared by

G.K. MacLean, P. Eng.

In consultation with the developer, contractor,

traffic control company and HRM.

Section 1: Introduction

1.1: Project Description and Objectives

The developer is planning to construct an apartment building within their lands on Westerwald Street in Halifax. In preparation for this development, one of the existing buildings were demolished allowing lots to be consolidated forming one parcel. The planned development will include 89 residential units within a 9-storey building having 2 levels of underground parking accessed from Westerwald Street. This CMP has been prepared to address demolition, excavation, services and building construction.

The new residential building is planned to have 2 levels of underground parking, deep excavations (+/-20ft) fronting the HRM Right of Way (ROW) along Westerwald Street will be required for the project. Where the building foundation will be setback +/-0.36m (1.2ft) from ROW, we are proposing to close the HRM sidewalk adjacent to the project to provide room for excavation limits and workers. Additionally, they are planning to hoard the adjacent land owned by the Department of Public Works to accommodate concrete and material deliveries, while leaving the sidewalk open along the onramp to Highway No. 102; a temporary asphalt sidewalk will be installed to maintain access to Westerwald Street from Joseph Howe Drive. A protected on-street pedestrian route will link from this sidewalk in front of the site to the existing Westerwald sidewalk.

A row of chain link fencing will be installed along the front of sidewalk behind the tree protection zones fronting Westerwald Street with chain link fencing installed along the back of sidewalk adjacent to the on ramp of Highway No. 102 around the hoarded area. The Westerwald encroachment will close the sidewalk in front of the project redirecting pedestrian traffic to a protected on-street pedestrian route around the encroachment to the new temporary asphalt sidewalk at the end of the cul-de-sac and close parking on both sides of the street. Concrete deliveries will be stationed off street within private property and the hoarded area, while material deliveries will be stationed within the hoarded area. Two-way vehicle traffic will be maintained on Westerwald Street throughout construction. With the except being for service work, driveway installations and crane assembly where we anticipate short term temporary lane drops.

The project borders a residential property along its northern property line, to the east it borders the former CNR parcel now used as an active transportation corridor, while across Joseph Howe Drive are residential properties, along its southern the property abuts the on ramp to Highway No.102 and to the west across Westerwald Street are residential and commercial properties that house the Seasons Inn Halifax. All neighbouring properties will remain undisturbed throughout construction and all neighbours will be notified and updated on construction ahead of time.

This CMP document is intended to be an evolving document to help guide the project team to mitigate impacts to the adjacent community before they arise and to address unforeseen issues. SDMM, together with the developer, contractor, and traffic control company, have prepared this Construction Management Plan (CMP) following HRM's CMP (2020) guidelines and administrative order (2018-005-ADM) in an effort to reduce potential negative impacts on the surrounding community, due to construction activities for this project.

The most up-to-date version of this document will be kept on-site at all times during construction. Should ownership or contracting services change throughout the course of this project, HRM will be notified immediately, and new parties will be required to comply with the approved CMP in writing.

1.2: Project Contact Information

The project team for the proposed development consists of:

Role	Name	Contact	Address	Phone
Owner/ Developer	Terracotta Developments	Simon Saleh	16 Laurentian Drive, Halifax, NS, B3M3G3	(902) 414-5844 24 Hour Emergency Contact
Site Contractor	Atlantic Road Construction and Paving	Greg MacDonald	6 Belmont Avenue, P.O. Box 89 Eastern Passage, NS, B3G 1M7	(902) 835-8205
Traffic Control Company	Frontline Traffic Services	Tyler Hayman	6 Belmont Avenue, P.O. Box 89 Eastern Passage, NS, B3G 1M7	(902) 818-5548
Rodent Control Company	Rentokil Pest Control	Main Office	11 Glendale Avenue, Unit #5, Lower Sackville, NS, B4C 3P2	(902) 812-0375

Section 2: Project Schedule and Logistics

The following is a brief summary of anticipated major project milestones broken down by phase:

2.1: Schedule

Project Phase	Start Date		End Date	Time Period
Rodent Control Program	Feb 15, 2025	-	May 31, 2025	3.5 months
Demolition	Mar 1, 2025	-	Mar 15, 2025	2 weeks
Site Excavation	Mar 1, 2025	-	May 31, 2025	3 months
Substructure	Jun 1, 2025	-	Jul 31, 2025	2 Months
Superstructure	Aug 1, 2025	-	Feb 28, 2027	19 Months
Service Abandonments	Jul 2025	-	Jul 2025	1 weekend
Service installs	Jul 2025	-	Jul 2025	2 weekends
HRM Right of Way Flat Works	Aug 1, 2026	-	Sep 30, 2026	2 months
Site Flat Works	Oct 1, 2026	-	Nov 30, 2026	1 month

2.2: Key Dates

- Install encroachment — March 1, 2025
  - Sidewalk closure (Westerwald Street)
  - Street lane closure (Westerwald Street)
- Finish encroachment — February 28, 2027
- Duration of encroachment — 24 months
- Temporary lane/road closures:
  - Westerwald Street service abandonments — June 7-8, 2025
  - Westerwald Street sewer service install — June 21-22, 2025
  - Westerwald Street water service install — June 28-29, 2025

The encroachment areas are shown in the appendix for reference.

2.3: Hours of Work

Work will generally take place during normal working hours as outlined in HRM's Noise By-Law and Traffic Control Manual Supplement; these are noted below.

- Monday to Friday: 7:00 a.m. – 8:00 p.m.
- Saturdays: 8:00 a.m. – 7:00 p.m.
- Sundays & Statutory Holidays: 9:00 a.m. – 7:00 p.m.
- Servicing Work: Noted Above

Although work is not expected to be required outside of the times listed above, if, for any reason, work is anticipated to be required outside of these hours, the contractor will apply to HRM for approval 5 business days (minimum) in advance of such work and obtain approval prior to proceeding. It is noted that HRM's Noise By-Law cannot be altered without HRM council approval; work must adhere to the Noise By-Law. Note that construction noise exemptions may be granted where construction noise is planned to take place during prohibited hours of the N-200 By-law. The developer to apply for this separately under the Construction Noise Exemption process.

Section 3 – Relevant Regulations & Guidelines

3.1: Occupational Health & Safety Regulations

This CMP shall be utilized in agreement with all applicable Provincial and Federal Occupational Health and Safety Regulations. At a minimum, construction activities must at all times meet the standards of:

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); and
d) Nova Scotia Temporary Workplace Traffic Control Manual (NSTCM).

3.2: Municipal Regulations & Guidelines

In addition to the Provincial and Federal standards referenced in Section 3.1, this CMP shall be utilized in agreement with and meet, at a minimum, the standards of all relevant municipal by-laws including, but not limited to, the following:

a) HRM Design Guidelines;
b) HRM Standard Details;
c) S-300 Streets;
d) E-200 Encroachments;
e) B-201 Building;
f) N-200 Noise;
g) T-600 Trees;
h) S-900 Controlled Access Streets;
i) T-400 Truck Routes;
j) B-600 Blasting;
k) HRM TCM Supplement;
l) G-200 Grade Alteration and Stormwater management;
m) Admin Order 2018-005-ADM regarding encroachments; and
n) Admin Order 2020-010-OP regarding stormwater management standards for development activities.

Section 4: Vehicle Management

Prior to any construction activity, all temporary workplace traffic control devices and signage will be in place as per the Nova Scotia Temporary Workplace Traffic Control Manual (latest edition). The traffic control company will install the signage and ensure that they are maintained throughout the project. This project's Traffic Control Plans (TCPs) are listed in the Appendix.

4.1: Vehicular Traffic Control

A Traffic Control Plan (TCP) has been prepared by the traffic control company and is provided in the Appendix.

We are proposing an on-street pedestrian route, that will also close parking on both sides of Westerwald Street in front of the project. We are anticipating two-way traffic on Westerwald to be maintained throughout the project. Only during service work and driveway installation do we anticipate short term temporary lane closures. It is anticipated that tower crane assembly and disassembly will be stationed within the private property and/ or within the hoarded area. Please refer to the appendices for required encroachment plan and traffic control plans.

4.2: Haul Route and Staging Areas

The truck Haul Route Plan has been prepared by the traffic control company and is provided in the appendix.

The selected route is intended to minimize traffic congestion and maximize pedestrian safety. During all construction phases vehicles will enter and exit the site at the gate location(s) which will be clearly marked for function. During construction activities concrete and material deliveries shall be contained within private property and hoarded area. We anticipate these deliveries entering and exiting the gate station off Westerwald Street at the end of the cul-de-sac. Refer to appendix for concrete delivery schematic.

4.3: Vehicular Traffic Notifications

Should any traffic disruptions be required, notifications will be distributed to properties in the impacted area a minimum of five (5) days in advance of vehicular traffic closures. Refer to sample notification letter in the appendix.

4.4: Emergency Vehicles

In the event of unforeseen emergency situations, the site will remain accessible to emergency vehicles at all times.

4.5: Parking

Un-metered on street parking is permitted in front of the project on the project side of Westerwald Street. Parking in front of the project site will be closed on both sides of the street to accommodate the on-street pedestrian route. On street parking will be affected by this project. It is noted that passenger vehicles are not permitted to park within any encroachment areas. To minimize parking requirements in adjacent neighbourhoods, site workers will utilize private property, and workers will be encouraged to carpool or rely on public transit.

4.6: Bus Stops

Bus service should not be affected by this project.

4.7: Hazard Assessment

A vehicular and pedestrian hazard assessment is provided in the appendix. Any additional site hazards identified or encountered after work has commenced will be added to this list. All personnel on-site will be required to review this list and encouraged to identify additional potential hazards and hazard mitigation methods.

Section 5: Pedestrian Management

A Pedestrian Management Plan (PMP) has been prepared by the traffic control company and is provided in the appendix.

Throughout construction, the project will close the sidewalk in front of the development along Westerwald and provide an on-street pedestrian route to the temporary sidewalk at the end of the cul-de-sac maintaining pedestrian traffic between Westerwald Street and Joseph Howe Drive. This is to ensure construction and deliveries are kept a safe distance from pedestrians.

5.1: Pedestrian Protection

Pedestrians will be protected by physically distancing them from the project. A combination of chain link fencing anchored to the ground and F-type concrete barriers will delineate the encroachment. All fencing will be covered with opaque covering and will extend a minimum 3m from the public right-of-way, to block view of the site. Refer to the appendix for examples of the barriers and fencing.

5.2: Pedestrian Safety

Pedestrian safety will be maintained by implementing appropriate signage as shown on the PMP. All navigation and safety signage indicating alternative sidewalks and potential hazards will be inspected and maintained regularly.

5.3: Pedestrian Traffic Notifications

Notifications will be distributed to properties in the impacted area a minimum of five (5) days in advance of pedestrian traffic impacts. A sample traffic notification letter can be found in the appendix. HRM must be notified prior to issuing the notification to neighbours.

5.4: Visually Impaired Persons

In keeping with CNIB requirements and as outlined on their 'Clearing Our Path' website; various items will be incorporated into the pedestrian management signage and barriers. Such as, high visibility contrasting colours with appropriate font types (mix of upper and lower-case lettering), font sizes (between 16mm to 51mm) and sign colours (orange background with black lettering or white background with black lettering).

The contractor will use bright orange sawhorse barricades complete with bold-font signage to identify sidewalk termination points. Sawhorse barriers will incorporate lower cross members, painted and marked consistent with the rest of the sawhorse, these added cross members will be placed near the ground to aid visually impaired persons using a cane. Reflective tape will also be placed on the ends of fencing, hoarding, sawhorse barricades, and concrete barriers to help delineate pedestrian routes and disruptions. Signage and tape colours will vary but will comply with the colour/brightness contrast as outlined by the CNIB website; examples are black/white, orange/black or dark red/white combinations.

5.5: Accessibility

High visibility signage will be used to assist pedestrians to easily navigate around all project related blocked sidewalks.

5.6: Hazard Assessment

A vehicular and pedestrian hazard assessment is provided in the appendix. Any additional site hazards identified or encountered after work has commenced will be added to this list. All personnel on-site will be required to review this list and encouraged to identify additional potential hazards and hazard mitigation methods.

5.7: Pedestrian Management Plans Rendering (PMPR) Signage

The need for a rendered map displayed for pedestrians showing the detoured pedestrian routes is not anticipated.

5.8: Pedestrian Detour Wayfinding Signage

The need for pedestrian wayfinding signage directing pedestrians to adjacent businesses is not anticipated.

Section 6: Encroachments & Disruptions

During construction, we are anticipating the project encroachment area will incorporate the public sidewalk on Westerwald Street. The street width will be narrowed to accommodate a temporary 1.5m on-street pedestrian route to access the cul-de-sac, close parking in front of the project and maintain pedestrian traffic between Westerwald Street and Joseph Howe Drive. This encroachment is to keep the public away from the excavation zone of influence as well as provide additional space for site workers and deliveries within the encroachment area.

These encroachments are planned to be delineated with a combination of chain link fencing and interlocking F-type concrete barriers on the street side of the protected on-street sidewalk route.

Should any utility or traffic disruptions be required, the contractor will first apply to HRM for approval, a minimum of five (5) business days in advance of such work and will then notify neighbours of these disruptions in a timely fashion.

6.1: Demolition

The existing building at civic 3297 Westerwald Street will be demolished prior to site excavation and new building construction.

6.2: Site Excavation

This includes deep excavation and removal of common site material. The development is planned to have 2 levels of underground parking below street grade on Westerwald Street. If bedrock is found, the contractor will apply for a blasting permit and adhere to the HRM blasting by-law and conditions of the blasting permit. Alternatively, if a blasting permit can not be obtained the site's bedrock will be broken by a series of rock breakers to reach footing elevation.

6.3: Site Services Connection

This includes installation of new water and sewer laterals to their respective mains, as well as decommissioning existing laterals which will be abandoned. The service installs will require modifications to the encroachment with temporary workplace signage incorporated (refer to the Service Installation Traffic Control Plans (TCP) in the appendix). HRM requires that this service work be limited to weekends only to minimize traffic disruptions. The target dates for this work are provided in the "Key Dates" section above with time of installations adhering to the Noise By-Laws noted above. The intent will be to complete this servicing work and reinstate the street as quickly as possible in order to minimize disruptions to the public.

Before scheduling site services connections, the contractor will notify all neighbouring properties, of the intended timeline for this work. A sample notification letter is included in the appendix.

The contractor intends to reinstate the street cut during the season of work. It is noted that street cuts cannot be left gravel or open. HRM reinstatement specifications must be met, and the travel way must be hard surfaced prior to reopening to the public. Asphalt, concrete curb and sidewalk reinstatement must be completed within 72 hours of

disturbance and will be considered temporary if reinstated after October 31st or prior to May 1 in which case permanent reinstatement will be completed by June 15.

6.4: Construction Management Plan Element Inspection and Maintenance

Construction management plan elements will be inspected daily to ensure continued adherence to this CMP. Any deficiencies identified will be reinstated immediately. A CMP's TCP & PMP inspection report summary will be completed for the project, including information on what maintenance activities were conducted. This report must be kept on site at all times and be available to HRM upon request.

6.5: Changes to the Construction Management Plan

All departures from the CMP regardless of the significance must be submitted to the Municipality 10 days in advance for review and approval. Any required changes or modifications to the approved CMP will be submitted to HRM for review and approval prior to implementation.

Section 7: Environmental Factors

7.1: Damage to HRM Infrastructure

Existing HRM infrastructure will be reinstated within the encroachment area and/or be completely replaced. This includes reinstatement of the HRM sidewalk, curb and gutter and topsoil and sod post construction. It is anticipated that sidewalks across the street will not be impacted by excavation or other construction activities. However, while efforts will be made to avoid damage, it is anticipated that additional portions of existing curbs, gutters, and sidewalks may become damaged during the construction process which would require repairs or replacement. Pending HRM's review prior to and after construction and subject to damage due to construction activities, the developer acknowledges that items may require to be fully replaced rather than repaired. The developer also acknowledges that any costs incurred to repair or replace this public infrastructure are the responsibility of the owner. For reinstatement timeline requirements, it is noted that asphalt, concrete curb and sidewalk reinstatement must be completed within 72 hours of disturbance and will be considered temporary if reinstated after October 31st or prior to May 1 in which case permanent reinstatement will be completed by June 15 of the following construction season.

7.2: Protection of Trees

There are four (4) HRM street trees within the Right-of-Way fronting the project site along Westerwald Street. It is noted that HRM street trees shall not be touched prior to approval and/or compensation agreements between the developer and HRM Urban Forestry are in place. Adjacent street trees are to be protected during construction in accordance with the HRM Tree Bylaw (T-600). Refer to HRM tree protection detail in the appendix.

Due to the planned driveway and service locations, we anticipate the removal of two (2) HRM street trees within the public right-of-way directly in front of the project on Westerwald Street. A compensation agreement between the ownership and HRM is required.

7.3: Line Painting and Temporary Crosswalks

Temporary line painting such as altered centreline or temporary crosswalk are not anticipated for this project.

7.4: Street and Right-of-Way Cleaning

The portion of public street adjacent to the project will be cleaned daily of any debris from trucks and silt, dirt, or rock that migrates beyond the encroachments. A sweeper truck will be utilized as required. Rock pads will be installed and

maintained at all site entrances behind the curb line to knock dirt free from truck tires with aim to reduce off tracking of site soils.

Where the developer plans to utilize the public sidewalk for their encroachment the developer is responsible to clear snow from the street side of these jersey barriers and gates on Westerwald and from the back of sidewalk fencing adjacent from the on ramp to Highway No. 102.

7.5: Protection from Inclement Weather

To protect the public from construction debris during inclement weather, the project site will be enclosed by fencing complete with dust control covering, the site will be regularly reviewed and cleaned, with loose items secured when not in use.

7.6: Storm Water Management

During construction, nearby catch basins may be fitted with silt bags and/or filter fabric to prevent debris from entering the storm system and maintained until final reinstatement is complete. Stormwater collected inside the project site will be directed to temporary stormwater settling ponds situated within the building footprint to allow clean water to be pumped into the existing public sewer systems. Excavation dewatering to municipal systems requires a permit, obtained from Halifax Water via p2@halifaxwater.ca, and follow the strict adherence to Halifax Water regulations. The contractor must prevent erosion or siltation of surface runoff from leaving the construction site through the use of erosion and sedimentation controls (See NSECC Erosion and sedimentation control handbook for construction sites). Sediment ponds may be shifted and positioned as desired by the site contractor during mass excavation however will generally be placed in localized low points within the building excavation.

7.7: Noise, Dust and Emission Control

The contractor will at all times adhere to the HRM Noise Bylaw (N-200). unless approved under HRM exemption process No work will take place on the project site outside those hours identified in section 2 of this report, unless HRM grants an exception.

Dust mitigation for this project will be achieved using rock pads for trucks exiting the site. A water truck and sweeper truck will also be utilized to help prevent dust from becoming airborne and, when required, calcium may need to be used to mitigate dust migration. Additionally, mesh on the inside of the fencing will help to contain any airborne dust inside the site.

Breaking of rock may occur and rock faces cleared to form a wall. Mesh will be used on the inside of all construction fencing to mitigate dust control.

All construction vehicles will be required to use the loading area for parking and idling to keep exhaust emissions within the construction zone. Vehicles will be staged so that idling will not occur for more than 3 minutes at a time.

As indicated above, all work shall be completed in accordance with the HRM Noise By-Law.

7.8: Rodent Control

Rodent movement increases during construction activities. The owner has engaged a rodent control company, to utilize the established Rodent Control Plan (RCP) to help mitigate rodent movement prior to and during site demolition, excavation and building construction. The RCP applies to all project phases with the goal of preventing movement of rodents off-site. The RCP will consist of a baiting and monitoring program. Bait stations (traps) will be placed as outlined in the NPMA Pest Management Standards for Food Processing & Handling Facilities.

The RCP was engaged two weeks prior to the commencement of site demolition help to lower the number of active rodents in the project area. Bait stations positioned along existing buildings and fence lines prior to excavation. Bait stations positioned along the edges of the project and secured in place using wooden stakes (for open sodded and dirt locations), weighted patio stones (behind walls and on paved areas), and zip-ties (fixed to fences) as per typical industry standards.

Refer to the appendix for a copy of the Rodent Control Plan.

Section 8: Site Protection & Hoarding

8.1: Barriers & Fences

Throughout the phases of construction activities, the project compound or encroachment will be delineated using a combination of chain link fencing total height (fencing and concrete barrier and fencing structure) shall be 1.8m or 6ft as per the noted administrative order and interlocking F-type concrete jersey barriers demarking the on-street pedestrian route. This fencing will be open chain link fence or covered with an opaque dust control mesh of high quality which will extend a minimum 3m from the public right-of-way. This screening is described in the appendix and will block passersby or tourists view of the construction site. Throughout the project, fencing will be situated to not obstruct vehicle sight lines. In addition, the adjacent HRM street trees on Westerwald Street fronting civic 3303-3305 and directly fronting the project site will be protected as per HRM's tree protection details with orange snow fencing delineating the existing tree lawn between the sidewalk and street curb.

Along the private sidelines where non-vehicular traffic is present, the hoarding will be delineated by weighted modular 1.8m (6ft) high fencing or existing fencing where it is at least 1.8m tall. All fencing will have opaque dust control mesh and must be anchored down to prevent unintentional movement or overturning due to snow or wind loads.

The F-type barriers and fencing that define the encroachment will adhere to the Encroachment Plan which is to scale includes dimensions and can be found in the appendix. These areas can be measured for the administering of applicable fees. Encroachment areas and fees will be based on the areas within the public right-of-way enclosed by the barriers and fencing.

Installation of F-Type concrete barriers, fencing and covering will take place during regular working hours as noted above. This work will be scheduled by the contractor after the HRM's pre-construction meeting has been held. HRM will coordinate this pre-construction meeting; the developer, contractor and traffic control company will attend this site meeting. During the process of erecting and tearing down the traffic barriers, fencing and opaque covering defining the encroachment, traffic control elements will be implemented as per the Traffic Control Plan(s) in the appendix. All work and any traffic interruptions will be coordinated by the contractor who will notify HRM a minimum of 5 business days before work is scheduled to begin.

It is noted that surplus fencing must be stored and installed from private property when relocated for deliveries and be routinely re-established to keep the site secure. Surplus fencing cannot be stored within HRM's right-of-way.

8.2: Snow removal

The developer will be responsible to remove snow and ice as required to ensure that emergency access is maintain to the project site, this includes fire hydrants. The contractor will not dump snow or ice onto adjacent property and will truck snow off site as required to prevent the unsafe build-up of snow piles.

The developer will clear snow from outside the jersey barriers to keep the edge of the vehicle travel lane and on-street sidewalk, and gate clear of snow and ice build up on Westerwald Street and sidewalk fencing along the hoarded area.

8.3: Gate Access and Egress

The site will be accessible through gates. These gates are the only locations that will receive equipment/materials during construction, gates will remain closed and will be locked at all times after work hours. In cases of emergencies, on-site workers will exit the project site through these gates. These gates will remain unlocked at all times when workers are on site in case of emergency allowing unrestricted emergency response units access to the site.

Construction traffic will utilize the proposed access gate stationed at the proposed hoarded area on Westerwald Street to facilitate deliveries. Gates are to swing into site, remain closed when not in use and locked after hours.

Any existing fire hydrants located adjacent to the site will remain protected from construction activities. These fire hydrants, along with the existing fire department connections will be accessible to firefighters throughout all phases of the project. Adjacent existing hydrants and fire department connections are not anticipated to be affected by construction.

8.4: Hoarding Aesthetics

The site hoarding will resemble that shown in the appendix; encroachment fee reductions are not anticipated.

8.5: Sight Lines

Rigid fencing and signage will be installed as per the CMP drawings such that vehicle sight lines are maintained around corners, particularly at driveway access points and existing intersections.

8.6: Project Information and Contacts

To encourage communication between the project team and the public, contact information will be provided on Project Information Boards; these will be posted prominently around the project site on the fencing; refer to the appendix for a copy of the Project Information Board and the Encroachment Plan for the planned locations. Refer to the signage specification within the appendix describing the required size, materials, mounting hardware, etc. of these signs.

Section 9: Lifting, Hoisting, and Crane Operations

9.1: Crane Use Overview

This project will incorporate a tower crane, the crane will be stationed within the project site and will be operated under the direct supervision of a licensed crane operator employed by the formwork contractor. The approximate location of the site's tower crane is shown in the appendix.

It is anticipated that the crane assembly and disassembly will be stationed on private property and/or within the hoarded area.

The crane swing will extend over neighbouring properties as shown in the Crane Swing Diagrams included in the appendix. The developer will notify adjacent property owners prior to extending the crane over their properties. Refer to the appendix for crane information.

During construction concrete trucks will be stationed within the private property or the hoarded area during concrete operations and material deliveries will be stationed within hoarded area. (See concrete delivery schematic within the appendix).

If lifting operations are required over the public realm, this area will be closed to access. In all cases of lifting, extreme care will be used to ensure public and worker safety.

9.2: Transport Canada and Nav Canada Regulations

There are two registered aerodromes in the Halifax region; Halifax International Airport and Canadian Forces Base Shearwater Airfield. According to Transport Canada regulations, the project site is outside of the lands to which regulations for these two aerodromes apply.

9.3: Aerodromes

There are several heliport approaches in the Halifax region; both Emergency Hospitals (QEII and IWK) as well as Point Pleasant Park. Given the location of the project site relative to these various approaches we understand Transport Canada notice does not apply.

Section 10: On-Site Safety and Security

10.1: Site Safety and Security Overview

The contractor will adhere to all Occupational Health & Safety requirements throughout the completion of this project. At a minimum, the following safety protocols will be utilized to further enhance site safety and security:

a) All workers will be required to have proof of up-to-date safety training;
a) Personal protective equipment (PPE) will be required for all personnel on site;
b) Adequate signage will be placed outside the hoarding, which will warn of hazards that may exist;
c) Gates will be locked and the perimeter fencing secured to provide security against public access during off work hours and will be monitored during operation;
d) Hoarding will clearly state “No Trespassing – Construction Personnel Only” & PPE requirements will be clearly identified (e.g., “Hard Hats and Safety Footwear Must Be Worn Beyond This Point”);
e) Regular safety inspections will be conducted to ensure suitability of hoarding and other safety devices;
f) Emergency contact information to be prominently posted as per the Project Information Board.

10.2: Material Handling: Loading, Unloading, Delivery and Storage

The contractor will adhere to the procedures stipulated in the Haul Route Plan for delivery of materials. Delivery vehicles will use the designated gates for entry and exit. Timing of deliveries will be coordinated to have the least possible negative impact on regular traffic The staging and delivery area will be coordinated by the delivery companies and site personnel, concrete and material delivery trucks will be housed within encroachment area or private property accessed from Westerwald Street.

10.3: Emergency Access & Egress

The site will be accessible through gates to facilitate construction vehicle access. In cases of emergencies, on-site workers will exit the project site through these gates. These gates will remain closed but unlocked at all times when workers are on site in case of emergency allowing unrestricted emergency response units access to the site. Gates will be locked and secured afterhours to provide security against public access during off work hour. Emergency contact information will be posted on project information boards surrounding the site, refer to the CMP plan for details.

Gates are to remain closed at all times unless being used for deliveries to maintain a controlled access site preventing access by the general public to the construction site.

10.4: Security Site Lighting
Security site lighting is not anticipated for this project.

10.5: Smoking Areas
On site smoking areas will not be provided as this will be a smoke-free site.

10.6: Fire Suppression Systems
There is one (1) existing fire hydrants near the project site in front of civic 3315 Westerwald Street, that remain outside the project area and will be protected from construction activities. These fire hydrants, along with any existing fire department connections will be accessible to firefighters throughout all phases of the project.

The proposed fire department connection and fire hydrant are not available for fire department use until after the water supply lines have been installed, tested and commissioned by the water commission, similar with the fire suppression system. This system will not be active until after the building is near complete and the encroachment fencing has been removed.

Section 11: Pre-Construction Consultation & Meeting

11.1: Pre-CMP Community Consultation
Due to the current pandemic, the developer will forego the community consultation meeting. A construction notification letter will be delivered to the properties neighbouring the construction site as well as HRM staff, notifying them of the expected work with contact information for questions and feedback. As part of this notification the surrounding community and businesses will be offered to sign up for a monthly construction project notification from the development. It is understood, HRM requires a confirmation letter from the applicant confirming delivery of notification letters to affected residents. A map indicating these properties has been included in the appendix.

11.2: Project Information and Contacts
To encourage communication between the project team and the public, contact information will be provided on Project Information Boards; these will be posted prominently around the project site on the fencing; refer to the appendix for a copy of the Project Information Board and the CMP Plan for the planned locations. Information on signage size and materials is outlined in the appendix.

11.3: Preconstruction Meeting
Prior to construction the developer, contractor and traffic control company will attend a pre-construction meeting with HRM staff to review the CMP document on site. HRM's engineering technician will confirm the date and time of this meeting; and may wise to waive the requirement.

11.4: Construction Notification
Approximately five (5) business days prior to the encroachment, an additional notification will be circulated to the neighbouring properties, notifying them that work is starting on site.

Section 12: Summary

This construction management plan was prepared with the goal to minimize negative impacts to the community, pedestrians, and traffic throughout the scope of this project. This plan will be used as a minimum standard and any further safety protection required or methods to provide a more positive environment will be used throughout construction work as necessary.

Should you have any questions or comments related to this document, please contact SDMM. For all construction-related inquiries, please contact the developer, contractor, or traffic control service provider.

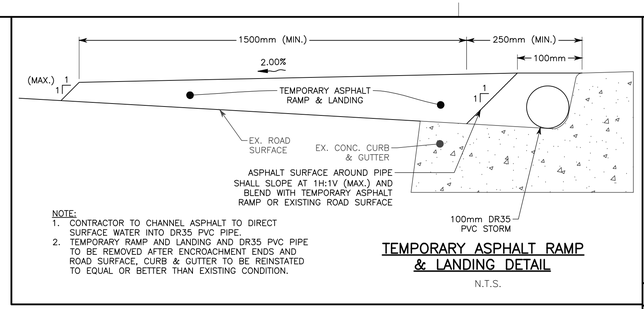
Regards,

Servant, Dunbrack, McKenzie & MacDonald Ltd.

Geoff MacLean, P.Eng.
Project Engineer
Z:\SDMM\38000-38999\38900\38941\CMP\Rev 1\3291-3297 Westerwald - CMP (Rev1) - 38941..docx

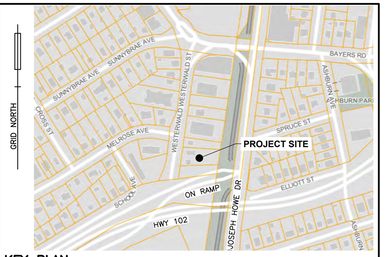
APPENDIX

Appendix A – Encroachment Plan



TEMPORARY ASPHALT RAMP & LANDING DETAIL

N.T.S.



KEY PLAN

LEGEND

EXISTING		PROPOSED
25.0	CONTOUR LINE	25.0
⊗/⊗BF	CURB STOP/GATE/BUTTERFLY VALVE	⊗/⊗BF
	FIRE HYDRANT	
	CONCRETE THRUST BLOCK	
	SIAMESE CONNECTION	
	CATCH BASIN/PIT	
	CULVERT	
RD	ROCK LINING/DAM	RD
RW	ROCK WALL/RETAINING WALL	RW
	POWER POLE & ANCHOR/LIGHT STANDARD	
	TREE	
	STREET SIGN/PARKING METER	
× 131.82	ELEVATION/GRADE	125.00 × / ± 125.00
	TEST PIT	
S	DRAINAGE/SWALE FLOW DIRECTION	S
W	WATER MAIN/SERVICE	W
SAN	SANITARY MANHOLE & PIPE	SAN
STM	STORM MANHOLE & PIPE	STM
SAN/STM	COMBINED PIPE	SAN/STM
GAS	GAS LINE	GAS
FL	100YR. FLOOD LIMIT	FL
	GUARD RAIL	
C	UNDERGROUND CONDUIT	C
	OVERHEAD WIRES	
	PROPERTY LINE/BOUNDARY	
	FENCE	
	BUILDING	
	TOP OF SLOPE	
	TOE OF SLOPE	
	TREELINE	
	LIMITS OF DISTURBANCE	
	TACTILE PEDESTRIAN PLATES	
	PROJECT SAFETY SIGNAGE	
	ORANGE SAWHORSE BARRICADE	

NOTES

1. THIS PLAN IS IN METRIC.
2. EXISTING WATER SERVICE LATERAL. REFER TO CIVIL PLANS FOR ABANDONMENT DETAILS.
3. REFER TO THE LATEST CIVIL PLANS FOR SERVICE CONNECTION DETAILS
4. NEW DRIVEWAY TO BE INSTALLED AS PER CIVIL PLANS & HRM DESIGN GUIDELINES.
5. EXISTING DRIVEWAY CURB & RAMP TO BE REMOVED & REINSTATED WITH HIGH BACK CONCRETE CURB & GUTTER AND TOPSOIL & SOD AS PER HRM DESIGN GUIDELINES.
6. EXISTING CONDITIONS WITH APPROXIMATE LOCATIONS ARE BASED ON GOOGLE AERIAL IMAGERY AS SITE HAS NOT BEEN FIELD SURVEYED; DIMENSIONS MAY VARY AND SHALL BE CONFIRMED BY CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.

No.	YY/MM/DD	Revision Description	Appr'd
1	25/02/26	REVISED AS PER HRM COMMENTS	
0	25/01/06	ISSUED FOR PERMIT	

REGISTERED PROFESSIONAL ENGINEER — G. K. MacLean — 8978 — PROVINCE OF NOVA SCOTIA

SDMM
Servant, Dunbrack, McKenzie & MacDonald Ltd.
NOVA SCOTIA LAND SURVEYORS & CONSULTING ENGINEERS
36 OLAND CRESCENT
BAYERS LAKE BUSINESS PARK
HALIFAX, NS B3S 1C6
PHONE: (902) 455-1537
FAX: (902) 455-8479
WEB: www.sdmm.co

JOEWEST APARTMENT BUILDING

3291–3297 WESTERWALD STREET
HALIFAX, NOVA SCOTIA

ENCROACHMENT PLAN

Date: JANUARY 6, 2025	Drawn: D. ANDERSON	Project No.: FILE NO. 1-1-370 (38941)
Scale: 1:200	Engineer: G. MACLEAN	Plan No.:
Reference: --	Approved: G. MACLEAN	Drawing Name: R1
Surveyed: SDMM	Sheet:	

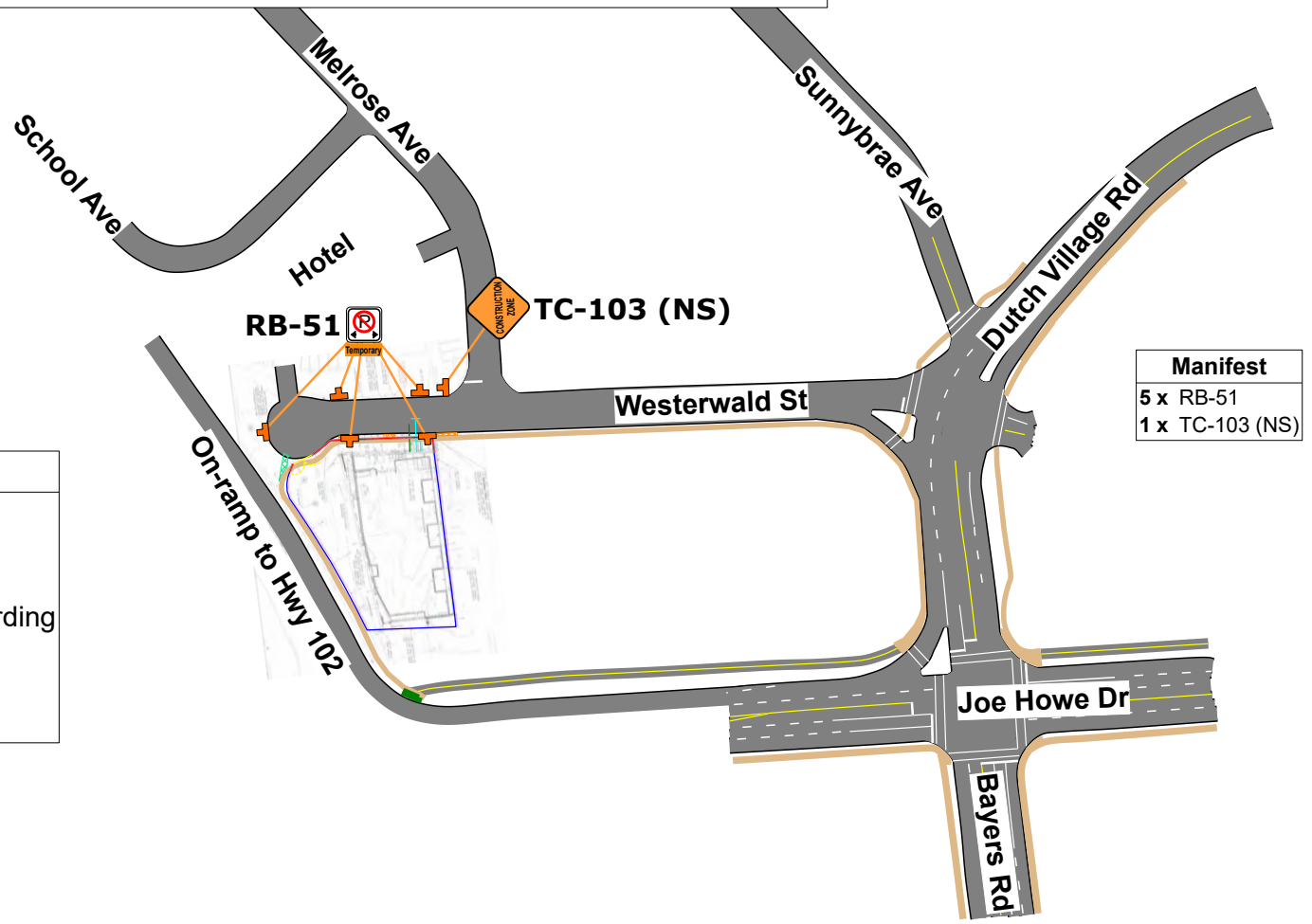
0m 5 10 15 20m

Appendix B – Traffic Control Plans TCP

Encroachment Signage Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Encroachment Signage Plan
Off-shoulder Work Area requires no Temporary Condition Signage, However, Placing the TC-103 Construction Zone Sign at Westerwald and Melrose is advisable. Also suggest that RB51 with temporary parking restriction signs be installed from corner to the bulb
See Pedestrian Management Plan for sidewalk closure details



Legend

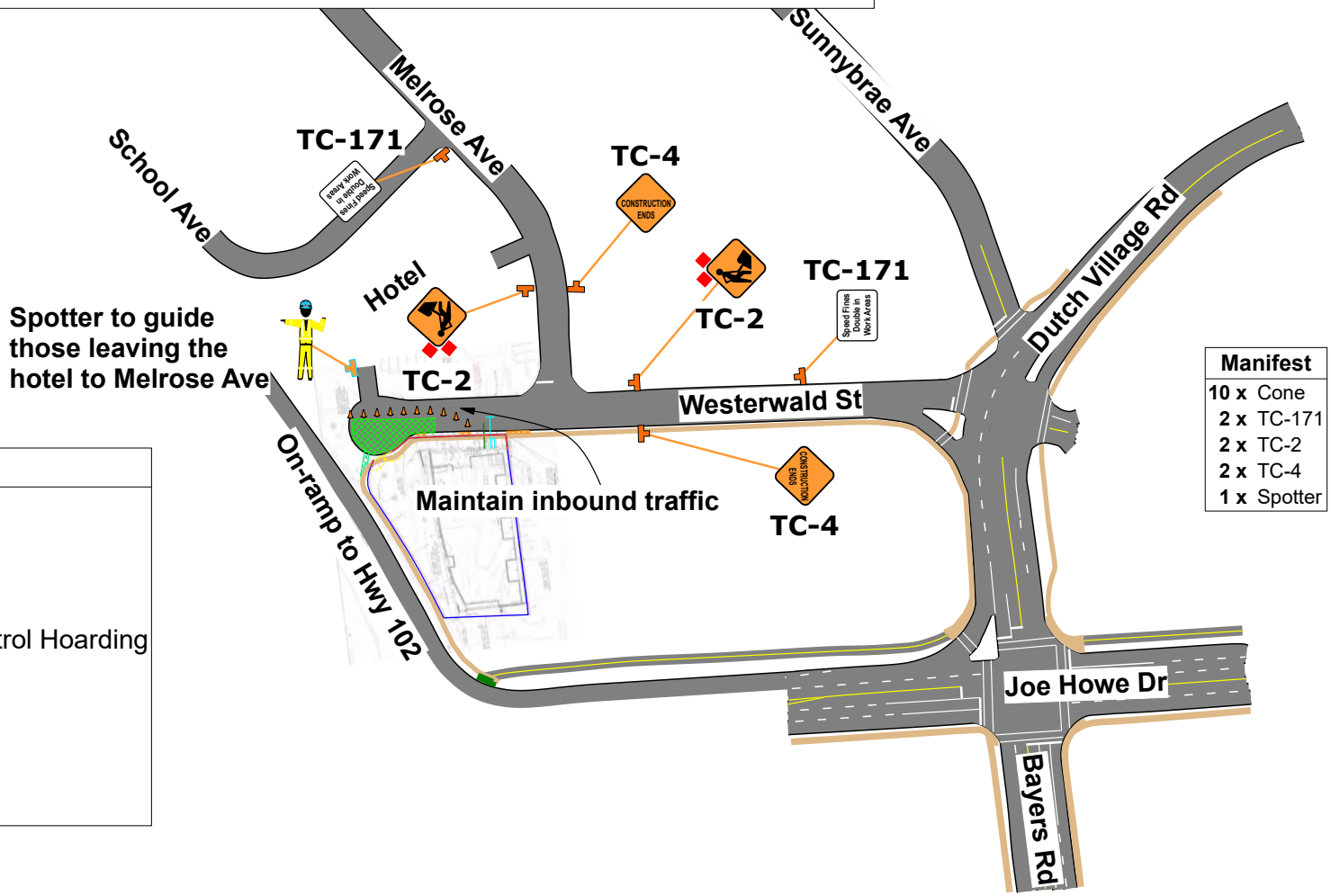
- F-type Barrier
- Gate
- Sanitary Lateral
- Site Fencing with Dust Control Hoarding
- Temporary Sidewalk
- Tree Protection
- Water Lateral

Manifest	
5 x	RB-51
1 x	TC-103 (NS)

Temporary Sidewalk Installation and Removal Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Application Guide C12
Temporary Sidewalk Installation Plan
Sidewalk to remain open.
This work must be done prior to installation of encroachment



Legend

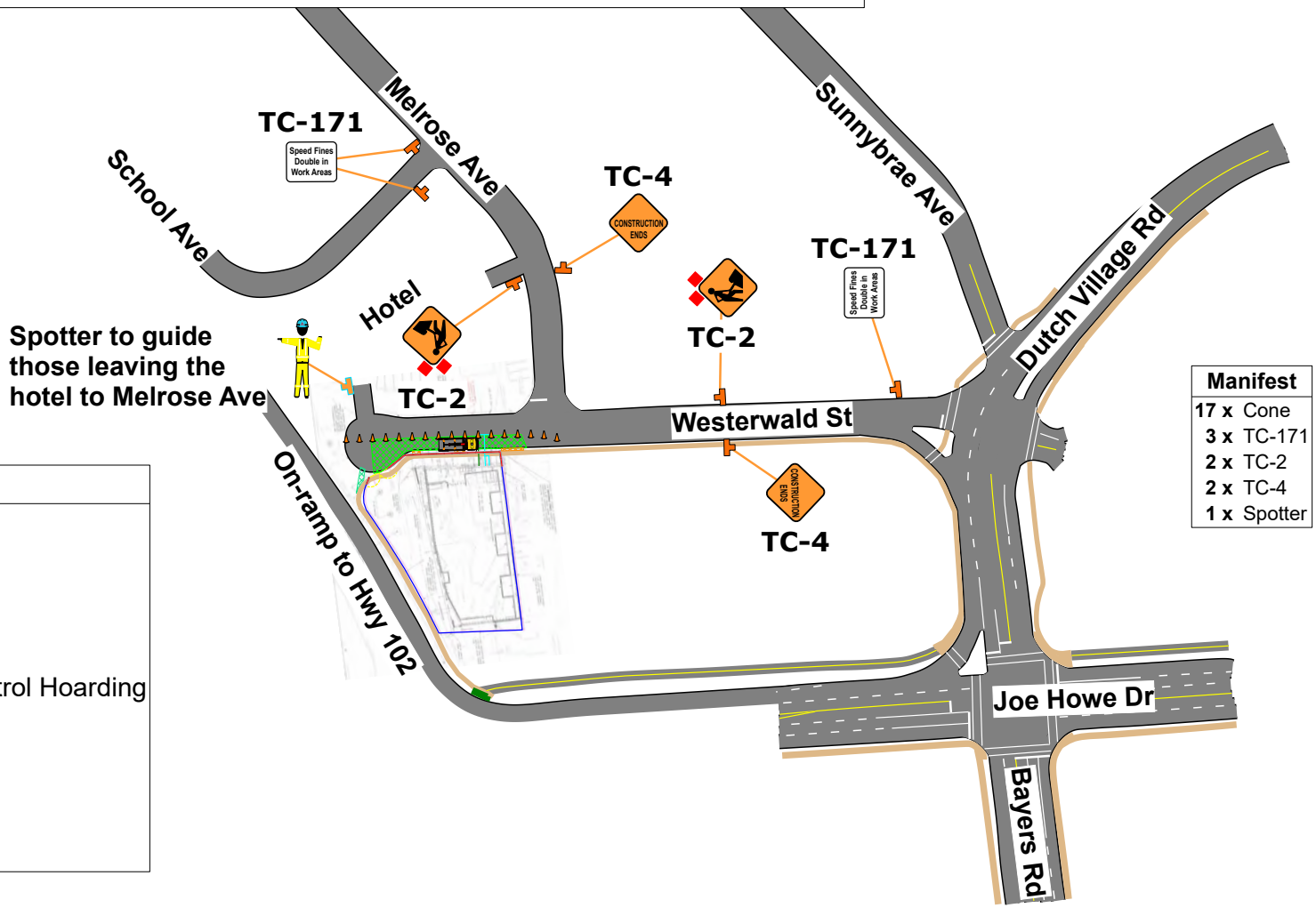
- Cone
- F-type Barrier
- Gate
- Sanitary Lateral
- Site Fencing with Dust Control Hoarding
- Spotter
- Temporary Sidewalk
- Tree Protection
- Water Lateral
- Work Area

Manifest	
10 x	Cone
2 x	TC-171
2 x	TC-2
2 x	TC-4
1 x	Spotter

Barrier Installation and Removal Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Application Guide C12
Barrier Installation and Removal Plan
See Pedestrian Management Plan for sidewalk closure details



Manifest

17 x	Cone
3 x	TC-171
2 x	TC-2
2 x	TC-4
1 x	Spotter

Legend

- Boom Truck
- Cone
- F-type Barrier
- Gate
- Sanitary Lateral
- Site Fencing with Dust Control Hoarding
- Spotter
- Temporary Sidewalk
- Tree Protection
- Water Lateral
- Work Area

Crane Installation and Removal Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Application Guide C12
Crane Installation and Removal Plan
See Pedestrian Management Plan for sidewalk closure details
*****Contractor to Coordinate with hotel to ensure no disruption to major deliveries.

Manifest

9 x	Barrel
3 x	TC-171
2 x	TC-2
2 x	TC-4

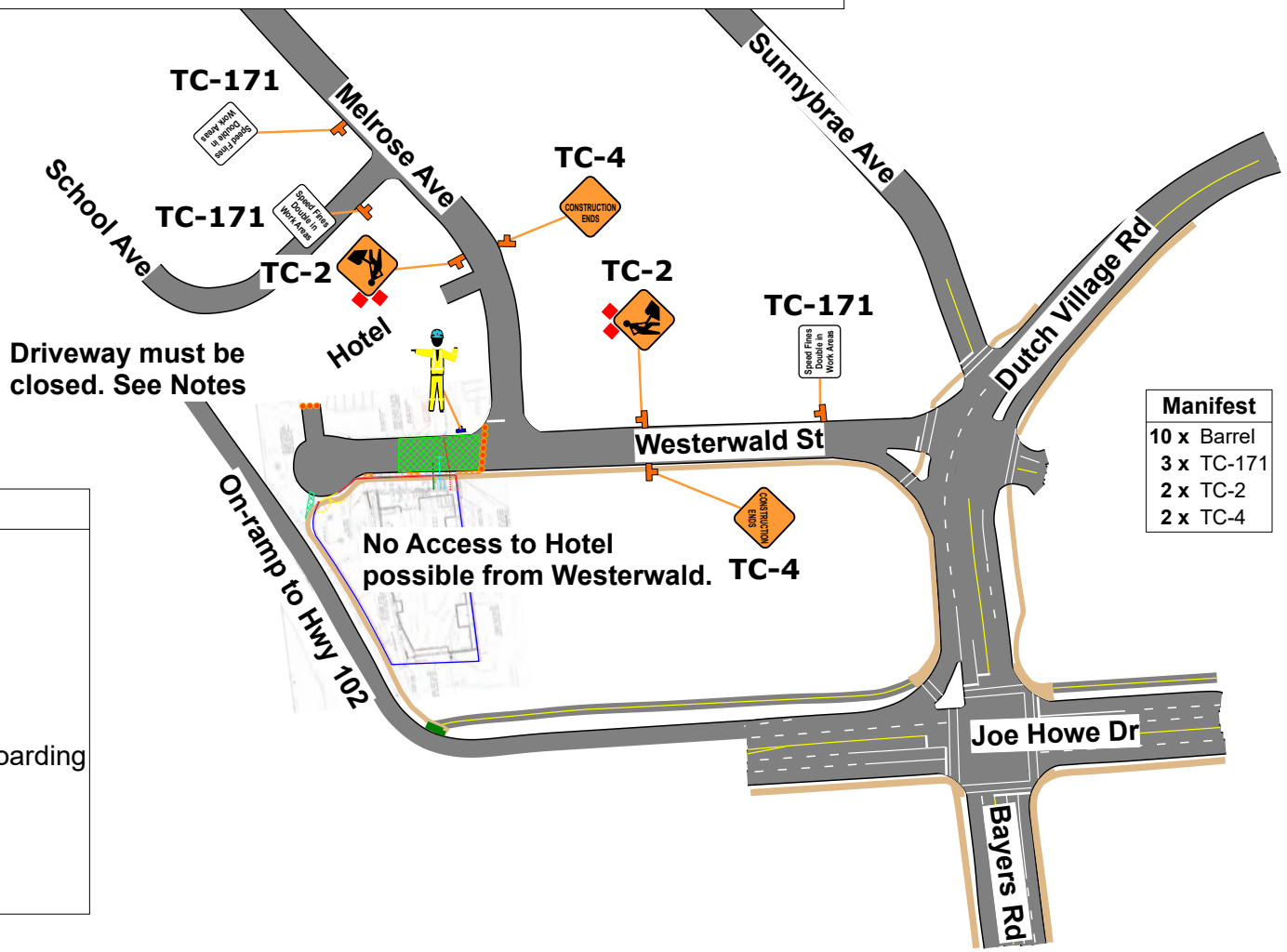
Legend

- Barrel
- Barricade Supervisor
- F-type Barrier
- Gate
- Mobile Crane
- Sanitary Lateral
- Site Fencing with Dust Control Hoarding
- Temporary Sidewalk
- Tractor-trailer
- Tree Protection
- Water Lateral
- Work Area

Power Conduit Installation Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Application Guide C15
Power Conduit Installation Plan
See Pedestrian Management Plan for sidewalk closure details
Contractor to Coordinate with hotel to ensure no disruption to major deliveries.



Manifest

10 x	Barrel
3 x	TC-171
2 x	TC-2
2 x	TC-4

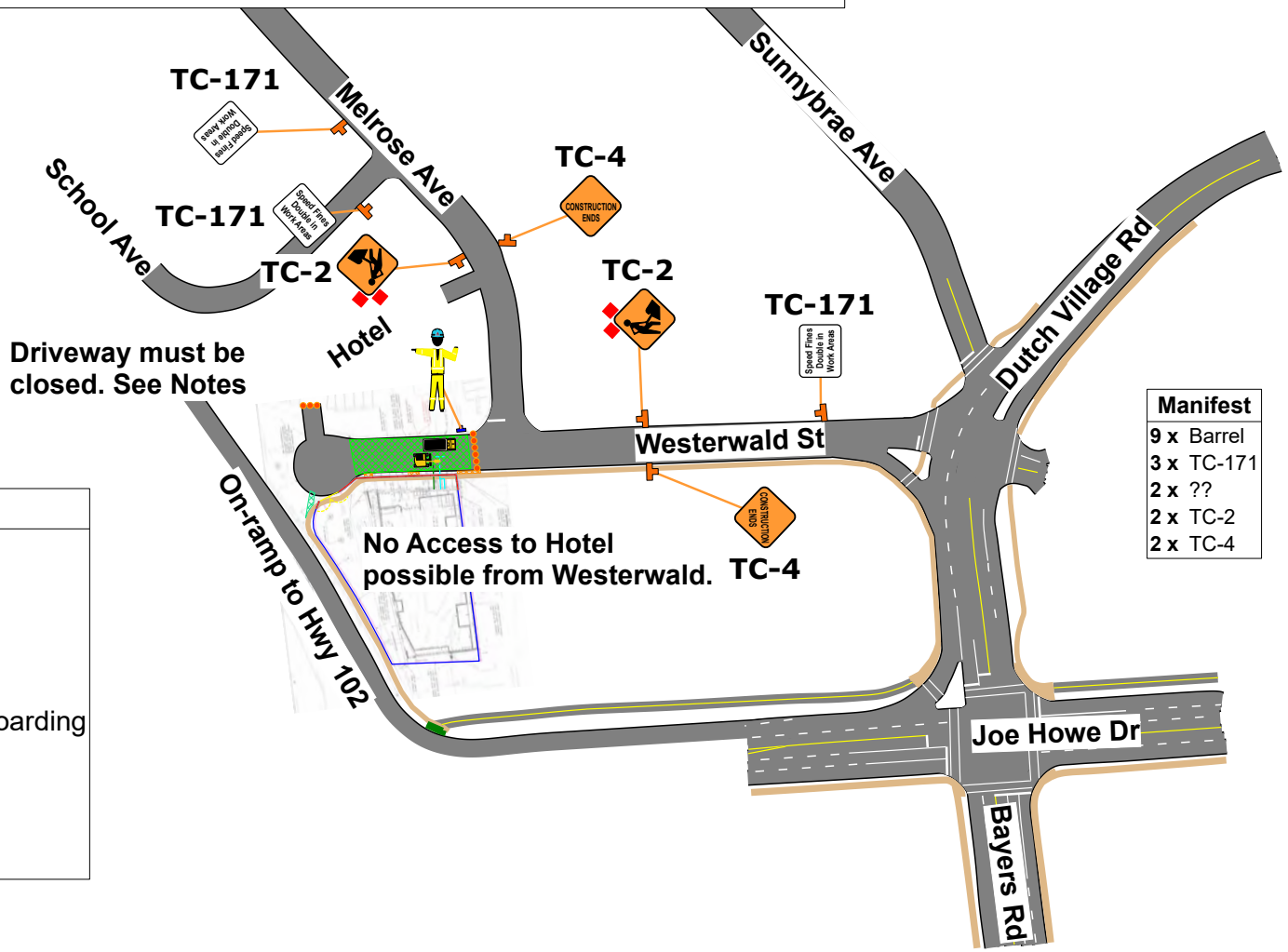
Legend

- Barrel
- Barricade Supervisor
- Conduit
- F-type Barrier
- Gate
- Sanitary Lateral
- Site Fencing with Dust Control Hoarding
- Temporary Sidewalk
- Tree Protection
- Water Lateral
- Work Area

Service Laterals Installation and Decommissioning Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Application Guide C15
Service Laterals Installation and Decommissioning Plan
See Pedestrian Management Plan for sidewalk closure details
Contractor to Coordinate with hotel to ensure no disruption to major deliveries.



Manifest	
9 x	Barrel
3 x	TC-171
2 x	??
2 x	TC-2
2 x	TC-4

Legend

- Barrel
- Barricade Supervisor
- F-type Barrier
- Gate
- Sanitary Lateral
- Site Fencing with Dust Control Hoarding
- Temporary Sidewalk
- Tree Protection
- Water Lateral
- Work Area

Appendix C – Haul Route Plan

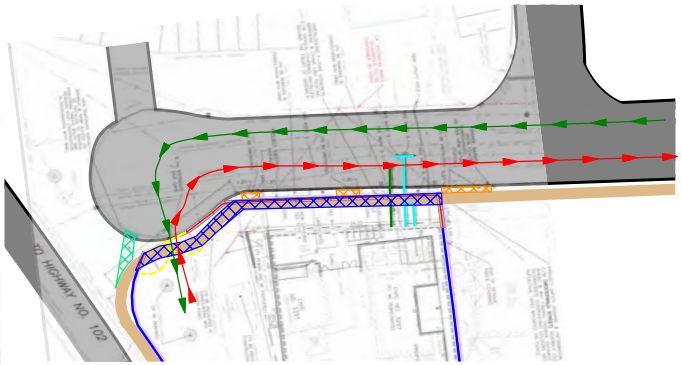
Haul Route Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Haul Route Plan
Inbound via Hwy 102 to Joseph Howe Dr to Dutch Village Rd to Westerwald St to Site
Outbound via Weterwald St to Dutch Village Rd to Joseph Howe Dr to Hwy 102

Legend

- F-type Barrier
- Gate
- Haul Route Inbound
- Haul Route Outbound
- Sanitary Lateral
- Sidewalk Closed
- Site Fencing with Dust Control Hoarding
- Temporary Sidewalk
- Tree Protection
- Water Lateral

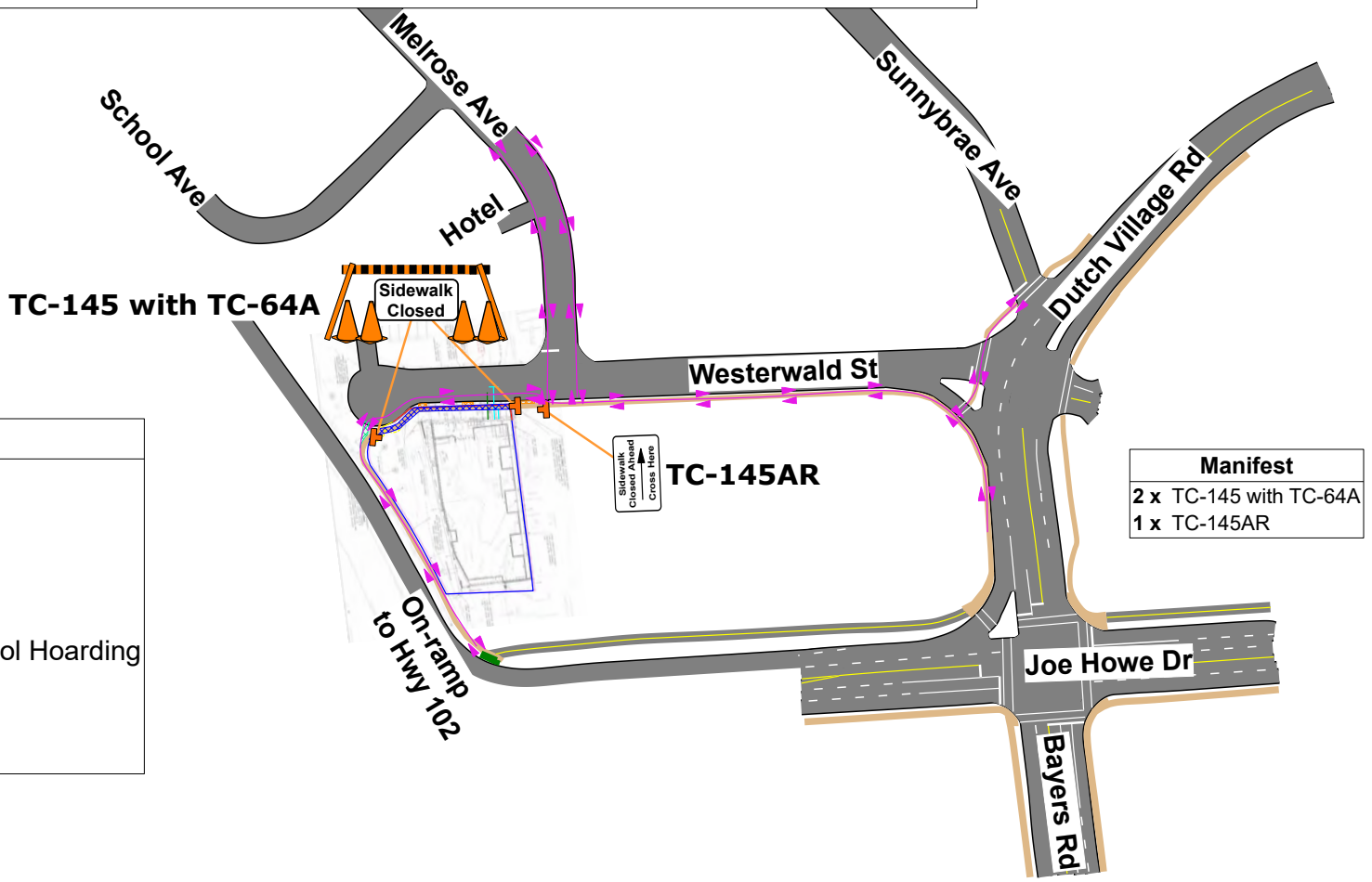


Appendix D – Pedestrian Management Plan (PMP)

Pedestrian Management Plan

Date: 2025-01-15 **Author:** Norman Bussmann, TWS, 902-817-3364 **Project:** Joewest Apartment Bldg, 3291-97 Westerwald St
Contractor: SDMM **Contact:** Geoff MacLean, 902-789-6374

Comments:
Not to Scale
Pedestrian Management Plan
For the Long Duration closure of sidewalk adjacent to 3291 and 3297 Westerwald Ave
Temporary Sidewalk must be installed prior to sidewalk closure. See Temporary Sidewalk Plan
There is no opposing sidewalk here. As it is a dead end with no parking, traffic volume should be very low. Pedestrians should be able to self regulate themselves past the encroachment.
NOTE: When Construction Activities of any kind are underway, there should be a spotter to assist those who need it

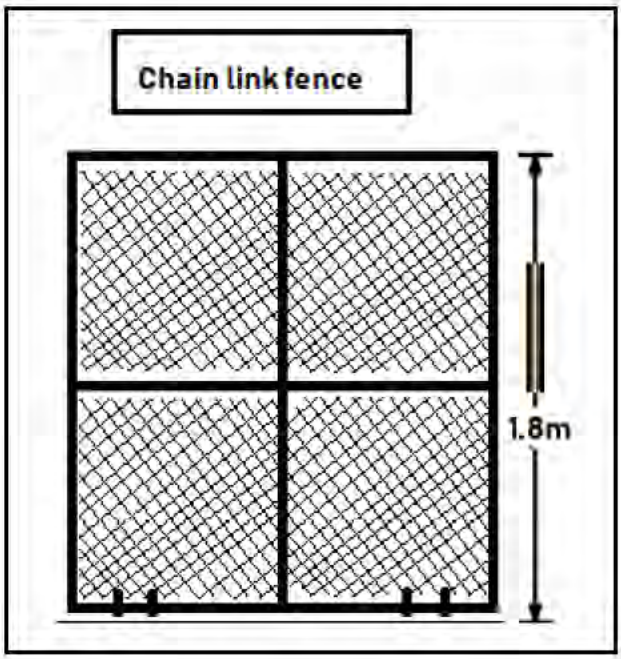


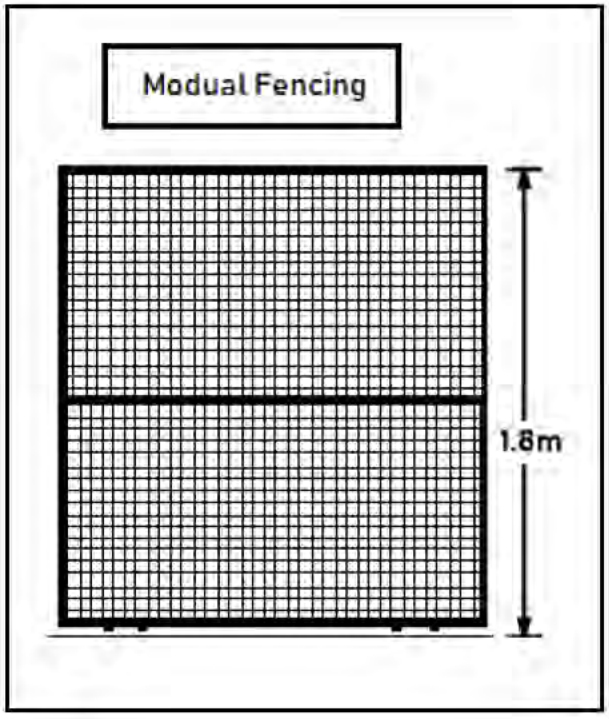
Legend

- F-type Barrier
- Gate
- Pedestrian Pathway
- Sanitary Lateral
- Sidewalk Closed
- Site Fencing with Dust Control Hoarding
- Temporary Sidewalk
- Tree Protection
- Water Lateral

Manifest	
2 x	TC-145 with TC-64A
1 x	TC-145AR

Appendix E – Barrier, Fence & Gates Information


Chain link fence
1.8m


Modual Fencing
1.8m

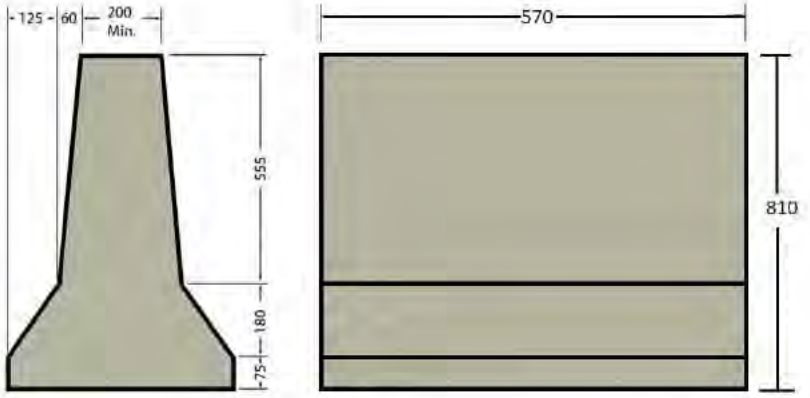
Sample Barrier & Fence Details

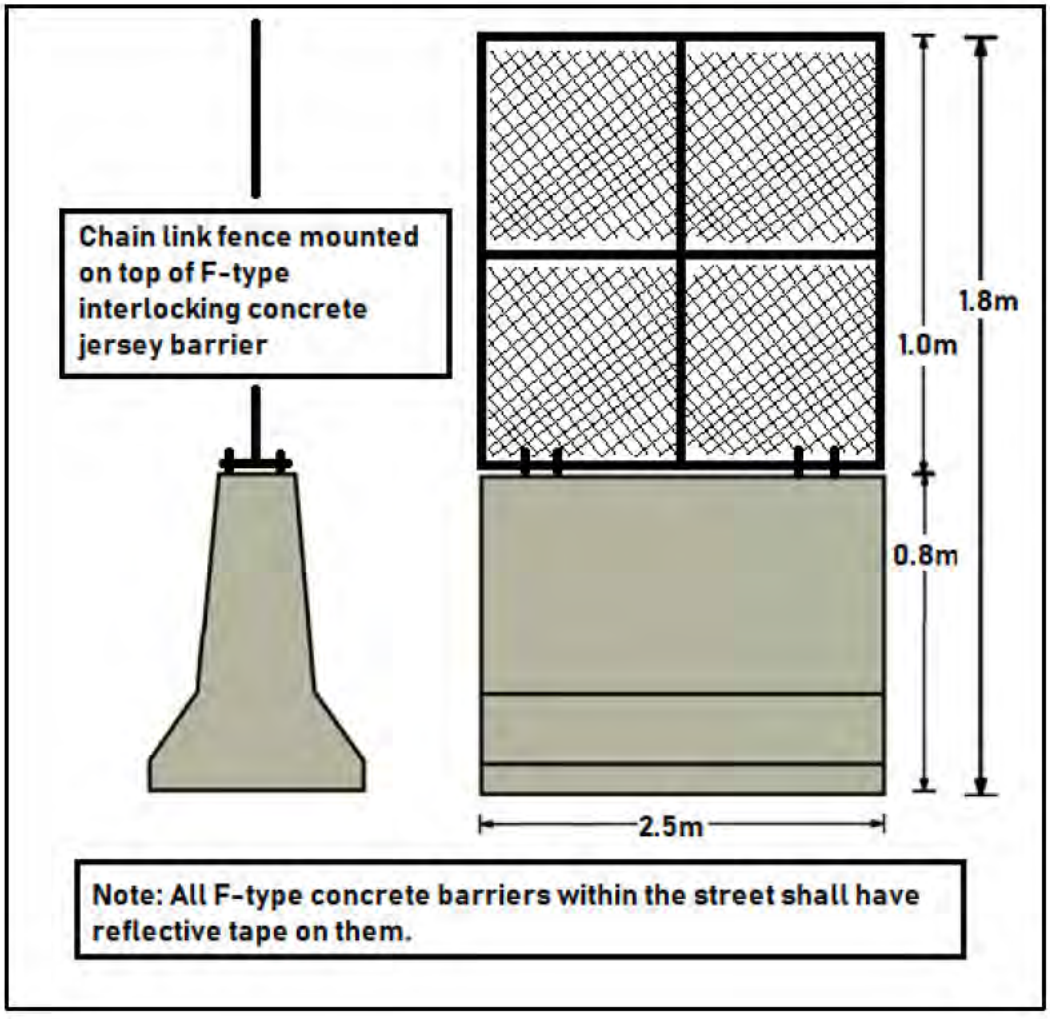
F-shape Barrier

Approved Barrier Designs

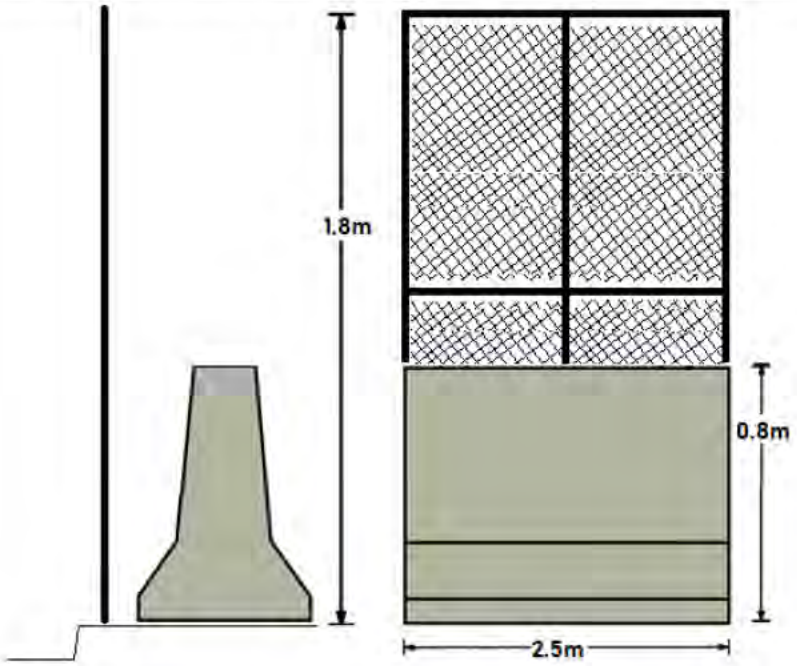
The only pre-approved portable anti-intrusion barrier in Nova Scotia is the Portland Cement Concrete F-shape Barrier. F-shape Barriers with designs approved before 2011.01.01 must be constructed and installed copying a design certified as meeting Test Level 3 of the NCHRP Report 350 (NCHRP 350), or if the design was approved after 2011.01.01, Test Level 3 standards of the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH).

Dimensions are in mm

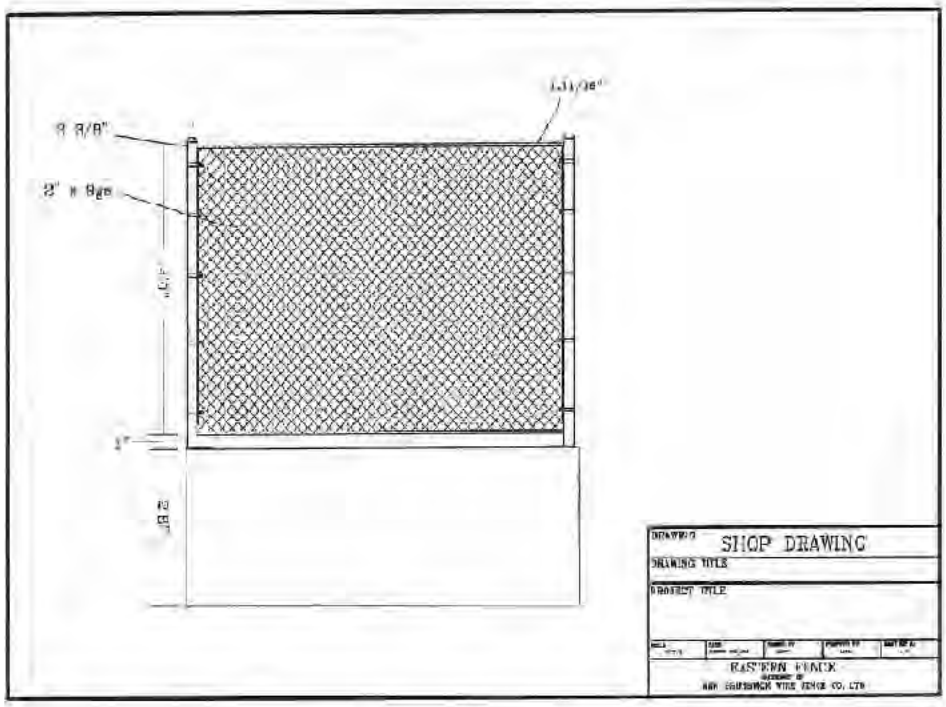




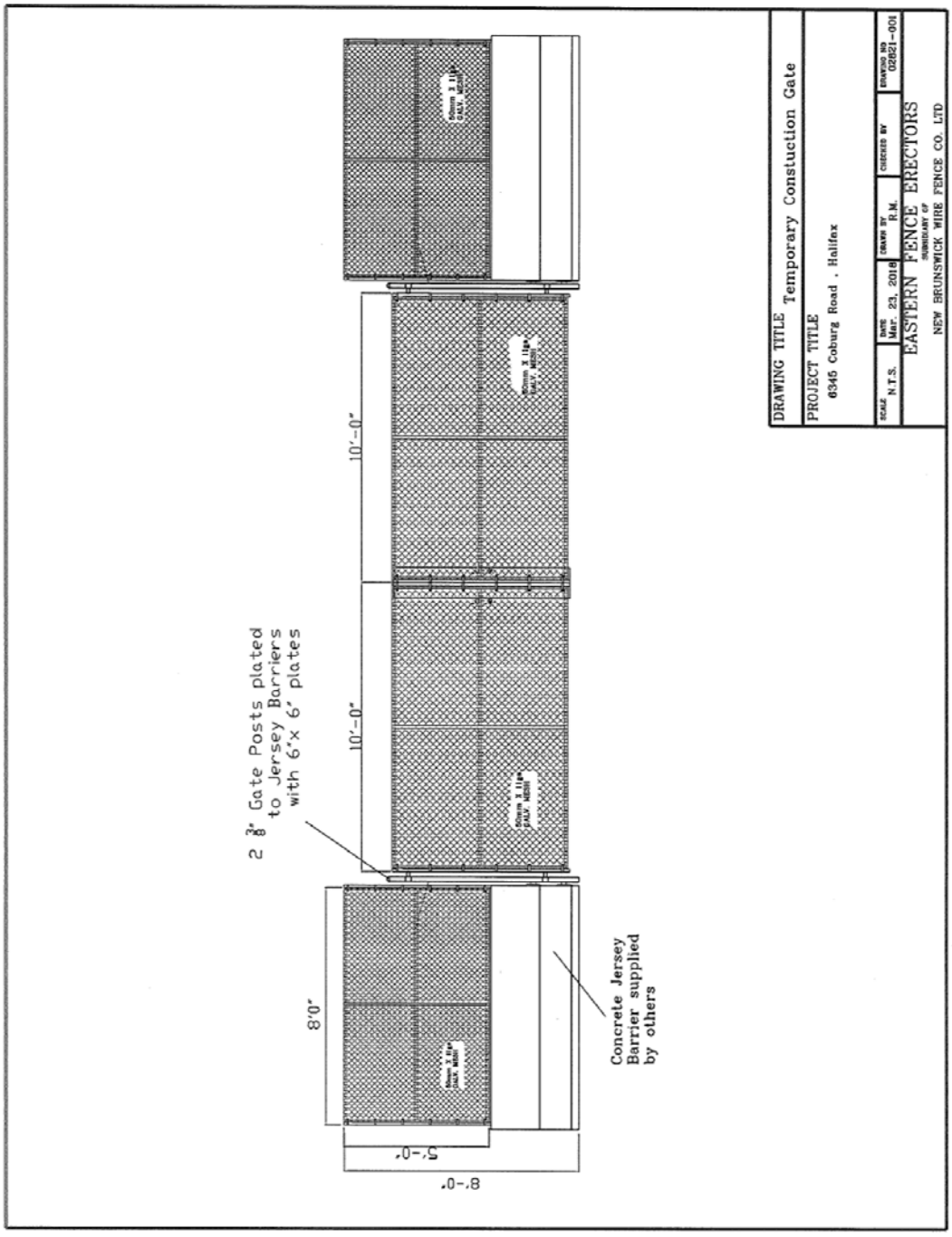
Fence mounted to curb with interlocking F-type concrete jersey barriers set beside



Note: All F-type concrete barriers within the street shall have reflective tape on them.



Sample Gate Detail



Appendix F – Hoarding Information

Opaque construction hoarding material shall covering and be adequately secured to the rigid fencing that outlines the encroachment area. This covering shall be continuous such that it prevents passersby or tourist from seeing through the fencing and gates to the active construction site.

UltraMesh® Eclipse® if a 7.96 oz. which is a polyester, black-backed mesh that is used where complete opacity is required.

UltraMesh Eclipse is UV printable for project renderings and is typically used for building and fence graphic wraps. The product is available in widths of 126” and 196”.

Product example is shown below with the technical data sheet on the following page.

Tarp Option

Print Banner Option

ULTRAFLEX SYSTEMS INCORPORATED

Technical Data Sheet

UltraMesh® Eclipse ®

UltraMesh Eclipse is a 7.96 oz. polyester, black-backed mesh. The material is ideal for applications where complete opacity is required. UltraMesh Eclipse is UV printable and may be used for building wraps and fence graphics. Available in widths of 126 and 196 .

Material Details

CHARACTERISTICS	TEST METHOD	METRIC	ENGLISH
Base Fabric	100% PES	1000D×1000D	
Construction		12×12	
Total Weight	DIN53352 BS3424 Method5A	270 +/- 20 gsm/m²	7.96 oz/yd²
Width		Up to 500cm	
Tensile Strength	DIN53352 BS3424	Warp 1250 n/5cm Weft 1100 n/5cm	142.75 x 130.19 lb/in
Tear Strength	DIN53356 BS3424	Warp 235 N Weft 225 N	52.8 x 50.5 lbf
Air Permeability	GB/T 2410-2008	2649 mm/s	
Light Transmission	GB/T 5453-1997	37%	
Temperature Resistance	DIN53357 BS3425 Method 10	-20°C 70°C	

Applications

	Back-lit	Banner	Billboard	Block-out	Building Wrap	Fence Graphics	Truckside
Applications		■		■	■	■	

Ink Printability

Solvent	Eco Solvent	UV	Latex	Screen Printing	Dye Transfer	Dye Direct
		■				

Available Sizes

Metric (m)	English (inches)
3.20, 5.00	126 , 196

The information on physical and chemical characteristics is based upon tests believed to be reliable. The values are intended only as a source of information. A legally binding guarantee of specific properties is not to be inferred from our specifications. They are given without guaranty and do not constitute a warranty. A weight variance of +1/-2 is acceptable. The purchaser should independently determine, prior to use, the suitability of this material for his/her specific purpose. (Data represents averages and is not intended for use as a specification.)

ULTRAFLEX
www.ultraflexFX.com
updated: 12/2018

Ultraflex Systems Inc.
Headquarters
203 Kelsey Lane, Suite E
Tampa, FL 33619
P: (973)627-6606
Email: sales@Ultraflex.com

Ultraflex Systems Inc.
1578 Sussex Turnpike, Bldg. 4
Randolph, NJ 07869
P: (973)627-8606
F: (973)627-8506
Email: sales@ultraflex.com

Ultraflex Europe
Unit 1 Handwick Road Industrial Park
Great Gransden Bedfordshire
England SG19 3BJ
Phone: (44) 1767-677-100
Email: sales@ultraflexeurope.com

Ultraflex México
Azafrán No. 112, Col. Granjas México
Del. Iztacalco, C.P. 08400, México D.F.
Tel: (55)31623632.3182 3658
01 800 822 52 31
Email: sales.mx@ultraflex.com

Ultraflex Guadalajara
Av. Patria No. 2804
Loma Bonita Sur,
Zapopan, Jalisco CP45086
Mexico
Tel: (55)3312-049-857

Appendix G – Project Information Board

PROPOSED MULTI-UNIT BUILDING
JOEWEST Apartments

9 Storey – Residential Building

89 Residential Units on 9 Levels

1- & 2-Bedroom Residential Units

2 Levels of Underground Parking

Barrier Free Entrance

Exterior Bicycle Parking and Storage

March 2025 – February 2027

Developer:
Terracotta Developments
16 Laurentian Drive, Halifax, NS, B3M3G3
24 Hour Emergency Contact:
Simon Saleh – (902) 414-5844

Site Contractor:
Atlantic Road Construction and Paving
6 Belmont Avenue, P.O. Box 89
Eastern Passage, NS, B3G 1M7
Contact:
Greg MacDonald - (902) 830-6411

Traffic Control:
Frontline Traffic Services
6 Belmont Avenue, P.O. Box 89, Eastern Passage, NS, B3G 1M7
Contact:
Tyler Hayman - (902) 818-5548

Rodent Control Company:
Rentokil Pest Control
11 Glendale Avenue, Unit #5, Lower Sackville, NS, B4C 3P2
Contact:
Main Office – (902) 812-0375

Appendix H – Project Safety Signage

Sample Safety Signage


RESTRICTED
AREA
CONSTRUCTION
WORK IN
PROGRESS

Appendix I – Project Signage Specifications

Signage Specifications: Project Signage shall;

- Be constructed of weatherproof material (corrugated plastic)
- Have high visibility contrasting colours (dark letters on white background)
- Incorporate appropriate font types (mix of upper and lower-case lettering)
- Incorporate appropriate font sizes (16mm – 51mm) such that the signage is readable from a distance (16-20m)
- Size of signage will be poster size (600mm x 900mm) or larger; to allow community members to see and read the information from a distance
- Signage may incorporate plastic grommets positioned every 300mm around the perimeter of the signage to ensure a secure signage installation
- Signage will be installed/anchored to project fencing using plastic zip-ties
- Signage will be positioned along the project site as per the encroachment plan
- Signage shall not impede traffic of pedestrian sight lines
- **Signage shall be placed on site 10days prior to the start of the noted construction activity to ensure the passing public has had adequate time to review, adjust their travel patterns, usage of streets and or cab be considered 'informed'.**

Samples

Appendix J – Sample Traffic Notification Letter

Proposed Multi-Unit Residential Building

DRAFT NOTIFICATION LETTER

TO WHOM IT MAY CONCERN
Date

NOTIFICATION OF TRAFFIC DISRUPTION: Street Name, HALIFAX, NOVA SCOTIA

This is to inform you that the to facilitate operations in association with the Multi-Unit Residential building construction work, traffic disruptions will occur on or about **DATE** with an anticipated duration of approximately **TIME**. The street will be **reduced(?)** to one lane of vehicular traffic during this time.

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

CONTACT INFORMATION

General Contractor:

Atlantic Road Construction and Paving
6 Belmont Avenue, P.O. Box 89
Eastern Passage, NS
B3G 1M7
Phone: (902) 830-6411

Should any questions arise, please feel free to contact the undersigned.

Yours Truly,

Greg MacDonald

Atlantic Road Construction and Paving

Appendix K – Vehicular and Pedestrian Hazard Assessment

Project Date: Location:

VEHICULAR & PEDESTRIAN HAZARD ASSESSMENT

No.	Hazard:	Project Phase:	Vehicular Impacts:	Mitigation Methods:	Pedestrian Impacts:	Mitigation Methods:
1	Building Demolition	Demolition	Debris may fall off building, damaging vehicles.	Spotters to be present to ensure vehicles temporarily do not park adajcent to site during front wall tear down.	Debris may fall off building, injuring pedestrians.	Temporarily close sidewalks adjacent to site, moving pedestrians to opposite side of street.
2	Excavation	Excavation	Vehicles may enter project site and fall down excavation.	Place concrete barriers along travel ways. Concrete barriers and existing curbs to prevent vehicle entry.	Pedestrians may enter project site and fall down excavation.	Place concrete barriers/rigid fencing around entire project site.
			Vehicle weight may surcharge excavation, causing excavation wall failure.	Close sidewalks & driveways adjacent to project site, moving vehicles farther away from excavation.		
3	Rock Blasting	Excavation	Blasted rock projectiles may strike vehicles.	Close sidewalks & driveways adjacent to site, moving vehicles farther away from blasted rock.	Blasted rock projectiles may strike pedestrians.	Install solid plywood hoarding along rigid fence adjacent to blasting zone.
4	Construction Waste	All Phases	Vehicles may be struck by construction waste.	The contractor shall keep the project site and surrounding areas clean and free of construction debris.	Pedestrians may be struck by construction waste.	The contractor shall keep the project site and surrounding areas clean and free of construction debris.
5	Vehicular & Pedestrian Activities	All Phases	Drivers and pedestrians may become confused or impatient with construction activities. Pedestrians may walk in unmarked crosswalks or in vehicular travel areas. Drivers may fail to obey traffic signage.	Vehicular and pedestrian signage will be posted prominently around the project site to facilitate pedestrian movement. Notification will be sent prior to all traffic interruptions.	Drivers and pedestrians may become confused or impatient with construction activities. Pedestrians may walk in unmarked crosswalks or in vehicular travel areas. Drivers may fail to obey traffic signage.	Vehicular and pedestrian signage will be posted prominently around the project site to facilitate pedestrian movement. Notification will be sent prior to all traffic interruptions.
6	Heavy Machinery Operation	All Phases	Heavy machinery or vehicles may break down or overturn, damaging other vehicles.	The contractor shall maintain safe distances between vehicles and heavy machinery on-site.Concrete barriers will be installed to separate construction vehicles from public traffic.	Heavy machinery or vehicles may break down or overturn, injuring pedestrians.	The contractor shall maintain safe distances between pedestrians, vehicles, and heavy machinery. Rigid fences will be installed to separate construction vehicles from pedestrians.
			Heavy machinery or vehicles may overturn due to uneven terrain, damaging other vehicles.	The contractor shall maintain safe distances between vehicles and heavy machinery on-site and ensure travel routes are kept flat.	Heavy machinery or vehicles may overturn due to uneven terrain, injuring pedestrians. Pedestrians may walk on uneven terrain causing them to twist their ankles or fall.	The contractor shall maintain safe distances between pedestrians, vehicles, and heavy machinery and ensure travel routes are kept flat.
7	Construction Signage	All Phases	Construction signage may strike vehicular traffic.	Construction signage will be securely fixed to existing poles, temporary concrete sign bases, or rigid fences.	Pedestrians may walk into construction signage, including traffic signage, wayfinding signs, etc. may.	Signage will be angled in line with pedestrian routes and/or be placed at heights such that they do not pose a risk to pedestrians.
					Construction signage may strike pedestrians.	Construction signage will be securely fixed to existing poles, temporary concrete sign bases, or rigid fences.
8	Dangerous Materials	All Phases	Flammable, explosive, & hot materials may damage vehicles if not properly maintained & stored.	The contractor will use and store dangerous materials properly as per manufacturers' specifications.	Flammable, explosive, & hot materials may injure pedestrians if not properly maintained & stored.	The contractor will use and store dangerous materials properly as per manufacturers' specifications.
9	Hoisting Operations	Superstructure	Precast concrete panels and other items hoisted may fall from heights and damage vehicles.	Proper hoisting and lifting techniques will be used to ensure that materials do not fall from heights. F-Type concrete barriers will be installed such that loads are never suspended above the public realm.	Precast concrete panels and other items hoisted may fall from heights and injure pedestrians.	Proper hoisting and lifting techniques will be used to ensure that materials do not fall from heights. Pedestrians will be moved to opposite sides of street from the project site or onto temporary sidewalks such that loads are never suspended above the public realm.
10	Reinstatement of Public Infrastructure & Service Installation	Superstructure	Heavy equipment and hot concrete used during public infrastructure reinstatement and service installation may cause damage to vehicles.	The contractor shall maintain safe distances between vehicles and heavy machinery on-site. Concrete barriers will be installed to separate construction vehicles from public traffic during public infrastructure reinstatement and service installation.	Heavy equipment and hot concrete used during public infrastructure reinstatement may injure pedestrians.	The contractor shall maintain safe distances between pedestrians, vehicles, and heavy machinery.
11	Fallen debris	Superstructure	Debris may fall from upper stories of the new building causing damage to vehicles.	F-Type concrete barriers will be installed such that a safe distance is maintained between the building envelope and vehicular traffic.	Debris may fall from upper stories of the new building injuring pedestrians.	Construction of upper building levels will be set back from the property line/rigid fencing, this separating pedestrians from potential fallen debris.

Appendix L – Community Consultation Records

COMMUNITY CONSULTATION MAP OVERVIEW

Project – JOEWEST Apartments

Notification Letter

Date: *******

Terracotta Developments – Building Construction Information Meeting

Dear Neighbour,

As you may be aware, we are planning an apartment building construction project located at 3291-3297 Westerwald Street, Halifax.

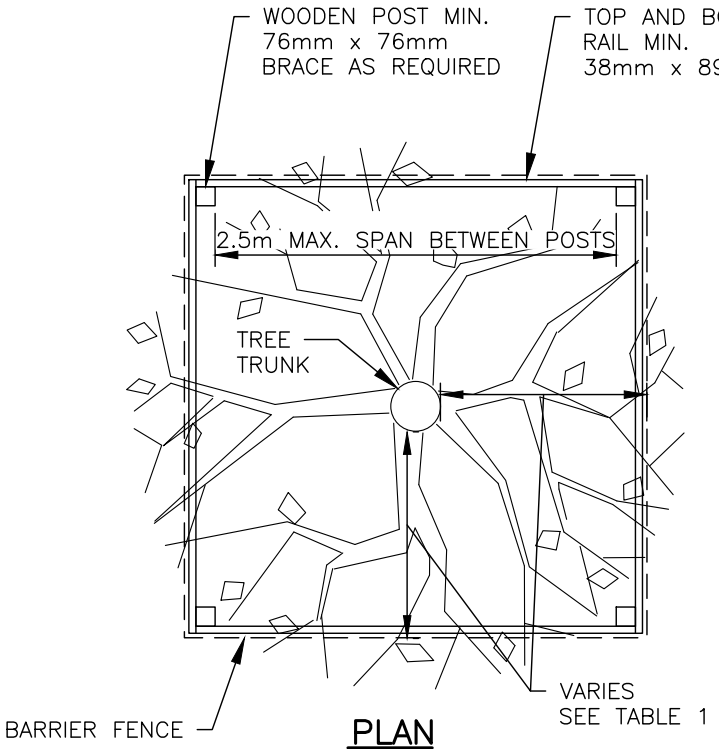
If you are interested in receiving more information about our construction plans, practices, schedule and to go over any questions you may have regarding construction of our new project please contact us to discuss. We would be happy to meet with you to discuss.

Thank you.

Simon Saleh

Cell: (902) 414-5844

Appendix M – HRM Tree Detail

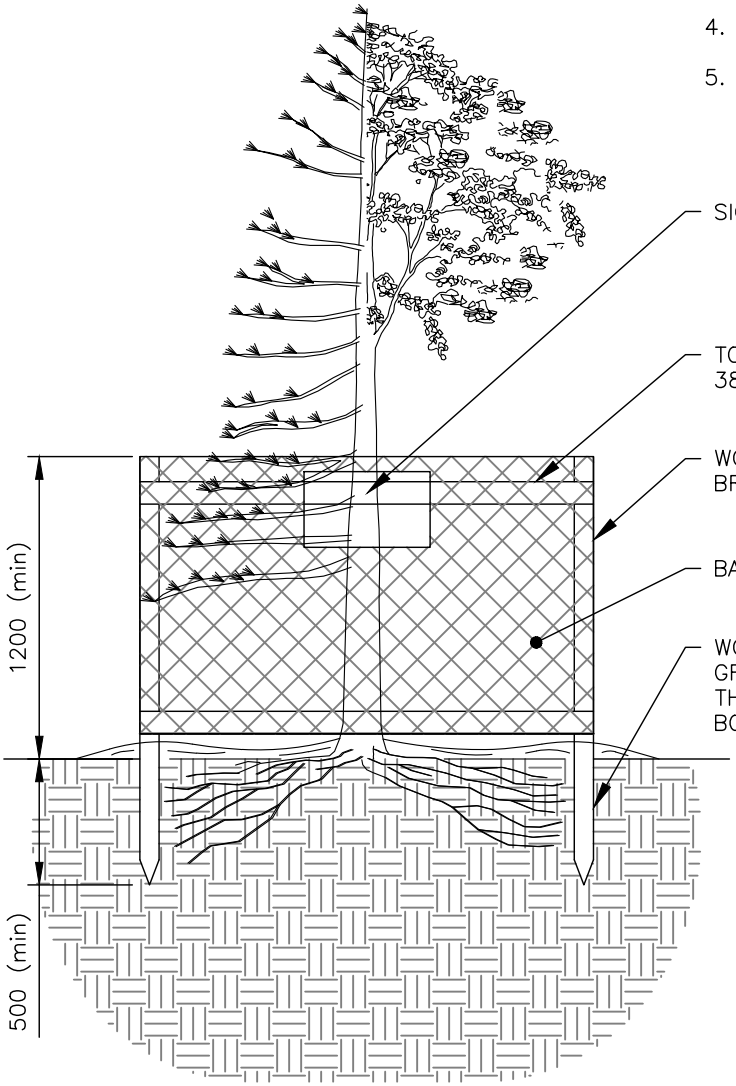


PLAN

TABLE 1

TREE PROTECTION ZONE CALCULATION TABLE	
TRUNK DIAMETER (DBH)	MINIMUM PROTECTION DISTANCE REQUIRED (MEASURE FROM THE OUTSIDE EDGE OF TREE TRUNK)
10 CM & UNDER	1.2 METERS
11 – 30 CM	2.0 METERS
31 – 40 CM	3.4 METERS
41 – 50 CM	4.6 METERS
51 – 60 CM	6.0 METERS
61 – 70 CM	7.0 METERS
71 – 80 CM	8.0 METERS
>80 CM	9.0 METERS

NOTES:
1. WOOD POST: (MIN. 76mm WIDTH) INSTALLED TO A DEPTH OF 500mm. TOP AND BOTTOM RAIL: (MIN. 38 x 89mm CONSTRUCTION, MAX. SPAN 2.5m), CROSS BRACING AS REQUIRED.
2. NO GROUND DISTURBANCE WITHIN 1.2 METER OF THE TREE TRUNK (I.E. POST INSTALLATION)
3. POSTS SET BACK FROM SIDEWALK AND CURB: MIN 300mm
4. FENCE MATERIAL: MINIMUM ORANGE BARRIER FENCE OR METAL CHAIN LINK FENCE
5. ATTACH A SIGN ON TWO SIDES OF THE TREE "PROTECTION ZONE DO NOT REMOVE FENCE DURING CONSTRUCTION"



PROFILE

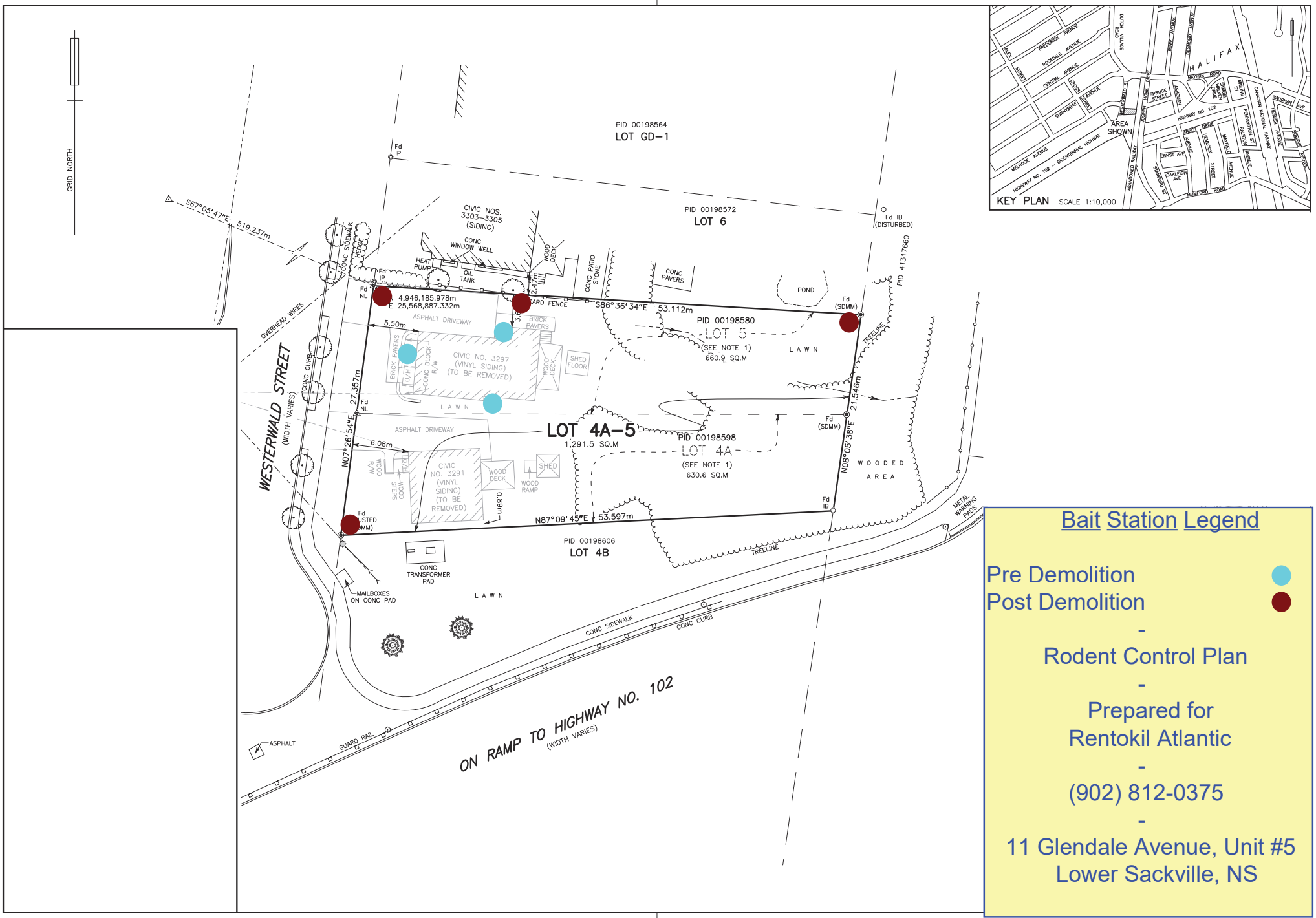
HALIFAX

STANDARD DETAIL

TREE PROTECTION ZONE & BARRIER

DATE: 2021	REFERENCE	APPROVED
SCALE: NTS		FIG No.: HRM 140

Appendix N – Rodent Control Plan



Bait Station Legend

Pre Demolition

Post Demolition

-

Rodent Control Plan

-

Prepared for
Rentokil Atlantic

-

(902) 812-0375

-

11 Glendale Avenue, Unit #5
Lower Sackville, NS

Protecta® EVO® AMBUSH™

PATENT PENDING

THE MOST ADVANCED LOW-PROFILE BAIT STATION

PRODUCT FEATURES:

- Single locking mechanism for quick servicing
- Removable tray for easy cleaning
- Locking bait rods won't fall out during cleaning
- Dog & child tamper-resistant
- Can hold:
  4 - 1 oz. bait BLOX on 4 vertical rods
  - or -
  T-Rex™ rat trap or Mini-Rex™ mouse trap
- Compatible with Sidekick® Load-N-Lock™ system

PRODUCT	CODE	DIMENSIONS (in)	CASE QTY
Protecta Evo Ambush	EA2000	8 1/2 x 10 1/4 x 4 1/4	6 Stations

Bell LABORATORIES, INC More Than Meets The Eye

Madison, Wisconsin 53704 USA | Ph: (608) 241-0202 | Fax: (608) 241-9631

www.belllabs.com

ALL-WEATHER
BLOX™

Bell LABORATORIES, INC.

CONTRAC®

ALL-WEATHER BLOX™

NET WT:
18 lbs (8.2 kg)

KILLS RATS, MICE & MEADOW VOLES*

Kills Warfarin Resistant Norway Rats

KEEP OUT OF REACH OF CHILDREN

CAUTION

See back panels for First Aid and additional precautionary statements.

ACTIVE INGREDIENT:	
Bromadiolone (CAS #28772-56-7):	0.005%
OTHER INGREDIENTS†:	99.995%
†Contains Denatonium Benzoate TOTAL	100.000%

***Not permitted for use against the following species in California: Cotton rat, Eastern harvest mouse, Golden mouse, Polynesian rat, Meadow vole, White-throated woodrat, Southern plains woodrat, and Mexican woodrat.**

FIRST AID

HAVE LABEL WITH YOU WHEN OBTAINING TREATMENT ADVICE

IF SWALLOWED:

- Call a poison control center, doctor, or 1-877-854-2494, or 1-800-858-7378** immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes.
- Call a poison control center or doctor for treatment advice.

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15–20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center, doctor, or 1-877-854-2494 immediately for treatment advice.

** Also call this number for information on health concerns and pesticide incidents.

NOTE TO PHYSICIAN

If swallowed or absorbed through the skin, this material may reduce the clotting ability of the blood and cause bleeding. If ingested, administer Vitamin K_1 intramuscularly or orally. Repeat as necessary based on monitoring of prothrombin times.

TREATMENT FOR PET POISONING

If animal eats bait, call veterinarian at once.

NOTE TO VETERINARIAN

Anticoagulant Bromadiolone: For animals ingesting bait and/or showing poisoning signs (bleeding or elevated prothrombin times), give Vitamin K_1. If needed, check prothrombin times every 3 days until values return to normal (up to 30 days). In severe cases, blood transfusions may be needed.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ THIS LABEL: Read this entire label and follow all use directions and use precautions. Use only for sites, pests, and application methods described on this label.

IMPORTANT: Do not expose children, pets, or nontarget animals to rodenticides. To help to prevent exposure:

1. Store unused product out of reach of children and pets.
2. Apply bait in locations out of reach of children, pets, domestic animals and nontarget wildlife, or in tamper-resistant bait stations. These stations must be resistant to destruction by dogs and by children under six years of age, and must be used in a manner that prevents such children from reaching into bait compartments and obtaining bait. If bait can be shaken from bait stations when they are lifted, units must be secured or otherwise immobilized. Stronger bait stations are needed in areas open to hoofed livestock, raccoons, bears, or other potentially destructive animals, or in areas prone to vandalism.
3. Dispose of product container and unused, spoiled, or unconsumed bait as specified on this label.

Bait stations are mandatory for outdoor, above-ground use. Tamper-resistant bait stations must be used wherever children, pets, non-target mammals, or birds may have access to the bait placement location.

USE RESTRICTIONS: This product may only be used to control the following rodent pests in and around man-made structures: House mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), Roof rat (*Rattus rattus*), Cotton mouse (*Peromyscus gossypinus*), Cotton rat* (*Sigmodon hispidus*), Deer mouse (*Peromyscus maniculatus*), Eastern harvest mouse* (*Reithrodontomys humuli*), Golden mouse* (*Ochrotomys nuttalli*), Polynesian rat* (*Rattus exulans*), Meadow vole* (*Microtus pennsylvanicus*), White-footed mouse (*Peromyscus leucopus*), White-throated woodrat* (*Neotoma albigula*), Southern plains woodrat* (*Neotoma micropus*), and Mexican woodrat* (*Neotoma mexicana*). This product must be used in and within 100 feet of man-made structures constructed in a manner so as to be vulnerable to commensal rodent invasions and/or to harboring or attracting rodent infestations. Examples of such structures include homes and other permanent or temporary residences, food processing facilities, industrial and commercial buildings, trash receptacles, agricultural and public buildings, transport vehicles (ships, trains, aircraft), docks and port or terminal buildings and related structures around and associated with these sites. Fence and perimeter baiting, beyond 100 feet from a structure as defined above, is prohibited. This product must not be applied directly to food or feed crops.

587CB-9

CONTRAC®

ALL-WEATHER BLOX™

KILLS RATS, MICE, AND MEADOW VOLES*

Kills Warfarin Resistant Norway Rats

Norway rats, roof rats, and house mice may consume a lethal dose in one night's feeding with first dead rodents appearing four or five days after feeding begins.

ACTIVE INGREDIENT:	
Bromadiolone (CAS #28772-56-7):	0.005%
OTHER INGREDIENTS†:	99.995%
†Contains Denatonium Benzoate TOTAL	100.000%

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panels for First Aid and additional precautionary statements.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store only in original container in a cool, dry place inaccessible to children and pets. Keep containers closed and away from other chemicals.

Pesticide Disposal: Wastes resulting from the use of this product may be placed in trash or delivered to an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. **[Plastic:]** Offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill; or by incineration. In most states, burning is not allowed.

WARRANTY: To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

NET WEIGHT: 18 lbs (8.2 kg)

EPA REG. NO. 12455-79

EPA EST. NO. 12455-WI-1

Manufactured by:

Bell LABORATORIES, INC.
3699 Kinsman Blvd.
Madison, WI 53704 U.S.A.
www.belllabs.com

MADE IN USA

DIRECTIONS FOR USE (Continued from other panel)

Burrow baiting with Contrac All-Weather Blox is prohibited.

Do not place near or inside ventilation duct openings. Do not contaminate water, food, feedstuffs, food or feed handling equipment, or milk or meat handling equipment or surfaces that come into direct contact with food. When used in USDA inspected facilities, this product must be applied in tamper-resistant bait stations. Do not broadcast bait. Do not use this product in sewers.

Do not sell this product in individual containers holding less than 16 pounds of bait.

SELECTION OF TREATMENT AREAS: Determine areas where rats, mice, or meadow voles* will most likely find and consume the bait. Generally, these areas are along walls, by gnawed openings, in corners and concealed places, between floors and walls, or in locations where rats, mice, or meadow voles*, or their signs have been seen. Protect bait from rain and snow. Remove as much alternative food as possible.

APPLICATION DIRECTIONS:

RATS: Place 3 to 16 bait blocks (at intervals of 15 to 30 feet) per placement in infested areas. Maintain an uninterrupted supply of fresh bait for at least 10 days or until signs of rat activity cease.

MICE AND MEADOW VOLES*: Place 1 block per placement. Space placements at 8- to 12-foot intervals in infested areas. Two blocks may be needed at points of very high activity. Maintain an uninterrupted supply of fresh bait for at least 15 days or until signs of mouse or meadow vole* activity cease.

FOLLOW-UP: Replace contaminated or spoiled bait immediately. Wearing gloves, collect and dispose of all dead, exposed animals and leftover bait. To prevent reinfestation, limit sources of rodent food, water, and harborage as much as possible. If reinfestation does occur, repeat treatment. Where a continuous source of infestation is present, establish permanent bait stations and replenish as needed.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or absorbed through the skin. Keep away from children, domestic animals and pets. Do not get in eyes, on skin or on clothing.

All handlers (including applicators) must wear: shoes plus socks, and waterproof gloves. Any person who retrieves carcasses or unused bait following application of this product must wear gloves.

User Safety Requirements

Follow manufacturer's instruction for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish, birds and other wildlife. Dogs and predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten this bait. Do not apply this product directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff also may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash water or rinsate.

***Not permitted for use against the following species in California: Cotton rat, Eastern harvest mouse, Golden mouse, Polynesian rat, Meadow vole, White-throated woodrat, Southern plains woodrat, and Mexican woodrat.**

Product Code: CB4051

090415/09-15

DETEX®BLOX with LUMITRACK

SAFETY DATA SHEET	ACCORDING TO REGULATION: OSHA Hazard Communication Standard 29 CFR 1910.1200	DATE OF ISSUE: January 2016	PREPARED BY: CAR

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: DETEX® BLOX with LUMITRACK
EPA Registration Number: NA
Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Activity Monitoring - Ready to use
Uses advised against: Use only for the purpose described above

MANUFACTURER/SUPPLIER:
Bell Laboratories, Inc.
3699 Kinsman Blvd.
Madison, WI 53704, USA
Email: sds@belllabs.com
Phone: 608-241-0202
Medical or Vet Emergency: 877-854-2494 or 952-852-4636
Spill or Transportation Emergency: 800-424-9300 (CHEMTREC)

SECTION 2. HAZARDS IDENTIFICATION

Classification according to Regulation OSHA 1910.1200(d): Not classified
Signal Word: None
See Section 15 for information on FIFRA applicable safety, health, and environmental classifications.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	% By weight
Inert and Non-Hazardous Ingredients (Unlisted components are non-hazardous)	Proprietary	100.00%

SECTION 4. FIRST AID MEASURES

Description of first aid measures
Ingestion: Non-Toxic
Inhalation: Not applicable.
Eye contact: Non-Toxic
Skin contact: Non-Toxic
Most important symptoms and effects, both acute and delayed
Non-Toxic
Advice to physician: Non-Toxic
Advice to Veterinarian: Non-Toxic

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media
Suitable Extinguishing Media: water, foam or inert gas.
Unsuitable Extinguishing Media: None known.
Special hazards arising from the mixture: High temperature decomposition or burning in air can result in the formation of toxic gases, which may include carbon monoxide.
Advice for firefighters: Wear protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: None. Non-Toxic
Environmental precautions: None. Non-Toxic
Methods and materials for containment and cleaning up
For Containment: None. Non-Toxic
For Cleaning Up: None. Non-Toxic
Reference to other sections: Refer to Sections 7, 8 & 13 for further details of personal precautions, personal protective equipment and disposal considerations.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling: Do not use near heat sources, open flame, or hot surfaces. Non-Toxic.
Conditions for safe storage, including any incompatibilities: None. Non-Toxic

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Established Limits

Component	OSHA	ACGIH	Other Limits
None	Not Established	Not Established	Not Established

Appropriate Engineering Controls: None. Non-Toxic
Occupational exposure limits: None. Non-Toxic
Personal Protective Equipment:
Respiratory protection: Not required
Eye protection: Not required
Skin protection: None. Non-Toxic
Hygiene recommendations: None. Non-Toxic

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance/Color:	Tan wax block
Odor:	Sweet grain-like
Odor Threshold:	Not applicable, odor not associated with a hazardous material.
pH:	Not applicable, is not dispersible with water.
Melting point:	Not applicable
Boiling point:	Not applicable
Flash point:	Not applicable, does not contain components classified as flammable.
Evaporation rate:	Not applicable, is a solid.
Flammability:	Not applicable, is a solid.
Upper/lower flammability or explosive limits:	Not applicable, does not contain components classified as flammable or explosive.
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable, is a solid
Relative Density:	1.13 g/mL @ 20°C
Solubility (water):	Not water soluble
Solubility (solvents):	Not applicable
Partition coefficient: n-octanol/water:	Not applicable
Auto-ignition temperature:	Not applicable, does not contain components classified as flammable.
Decomposition temperature:	Not applicable
Viscosity:	Not applicable, is not a liquid.

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not Applicable
Chemical stability: Not Applicable
Possibility of hazardous reactions: Refer to Hazardous decomposition products
Conditions to avoid: Avoid extreme temperatures (below 0°C or above 40°C).
Incompatible materials: Not Applicable
Hazardous decomposition products: Not Applicable

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute Toxicity
LD50, oral (ingestion): Not Toxic
LD50, dermal (skin contact): Not Toxic
LC50, inhalation: Not Toxic
Skin corrosion/irritation: Not Toxic
Serious eye damage/Irritation: Not Toxic.
Respiratory or skin sensitization: Not Toxic
Germ cell mutagenicity: Not Toxic
Carcinogenicity: Not Toxic

Components	NTP	IARC	OSHA
None	NA	NA	NA

Reproductive Toxicity: Not Toxic
Aspiration Hazard: Not Toxic
Target Organ Effects: Not Toxic

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity Effects: Not Toxic
Persistence and degradability: Not Toxic
Bioaccumulative potential: Not Toxic
Mobility in Soil: Not Toxic.
Other adverse effects: None.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal: Wastes resulting from the use of this product may be placed in trash, on-site, or at an approved waste disposal facility. Dispose of all wastes in accordance with all Federal, state and local regulations.

SECTION 14. TRANSPORT INFORMATION

UN number: Not regulated
UN proper shipping name: Not regulated
Transport hazard class(es): Not regulated
Packing group : Not regulated
Environmental Hazards
DOT Road/Rail: Not considered hazardous for transportation via road/rail.
DOT Maritime: Not considered hazardous for transportation by vessel.
DOT Air: Not considered hazardous for transportation by air.
Freight Classification: LTL Class 60
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not applicable
Special precautions for user: None

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture: Not applicable
Signal Word: None
Precautionary Statements: None
Potential Health Effects:
Eye Contact: May cause irritation
Skin Contact: Non-irritating to the skin
Ingestion: Not harmful if swallowed

TSCA: All components are listed on the TSCA Inventory or are not subject to TSCA requirements
CERCLA/SARA 313: Not Toxic
CERCLA/SARA 302: Not Toxic

SECTION 16. OTHER INFORMATION

For additional information, please contact the manufacturer noted in Section 1.

NFPA	Health: 0 (Not Toxic)	Flammability: 1 (slight)	Reactivity: 0 (stable)	Specific Hazard: None
HMIS	Health: 0 (Not Toxic)	Flammability: 1 (slight)	Reactivity: 0 (minimal)	Protective Equipment: None

Disclaimer: The information provided in this Safety Data Sheet has been obtained from sources believed to be reliable. Bell Laboratories, Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your consideration and investigation. The user is responsible to ensure that they have all current data, including the approved product label, relevant to their particular use.

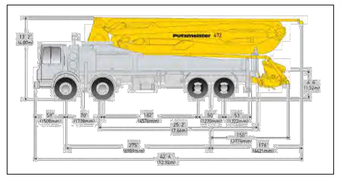
Appendix O – CMP's TCP & PMP Inspection Records

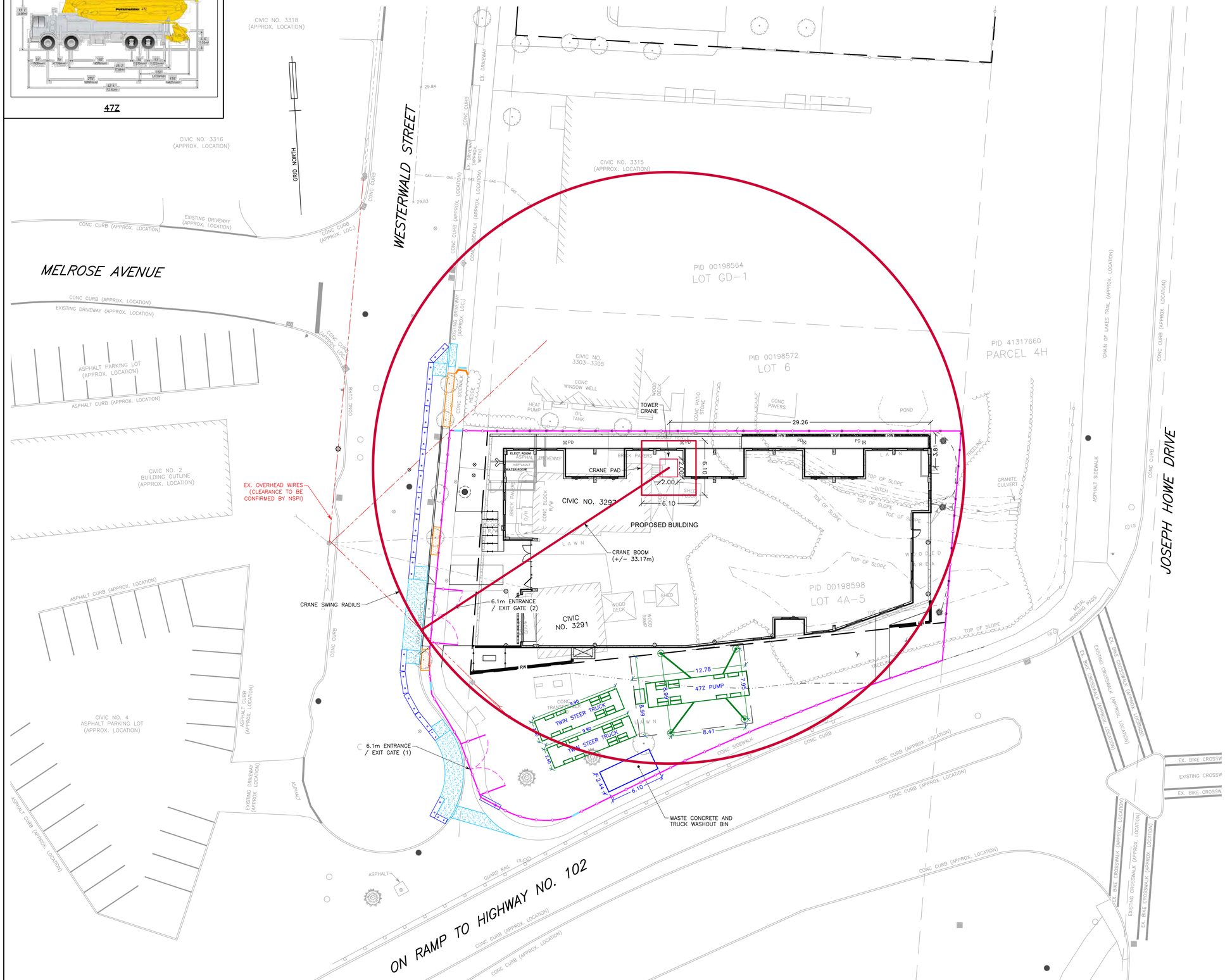
Project: ________________ Location: ____________ Phase: ___________ Date: ___________ Inspector: ___________

CONSTRUCTION MANAGEMENT PLAN - INSPECTION CHECKLIST

CMP Element	Set-up per PMP?			Condition?		Action Required	Action Completed	Comments
	Yes	No	N/A	Good	Bad			

Appendix P – Concrete Delivery Schematic





KEY PLAN

LEGEND

EXISTING		PROPOSED
25.0	CONTOUR LINE	25.0
⊗/⊗BF	CURB STOP/GATE/BUTTERFLY VALVE	⊗/⊗BF
◎	FIRE HYDRANT	◎
◁	CONCRETE THRUST BLOCK	◁
≺	SIAMESE CONNECTION	≺
▦/▨/●/□	CATCH BASIN/PIT	▦/▨/●
⊢ — — — — ⊣	CULVERT	⊢ — — — — ⊣
✿ / RD	ROCK LINING/DAM	✿ / RD
○○○○ / ▬ RW ▬	ROCK WALL/RETAINING WALL	○○○○ / ▬ RW ▬
≫——⊕/⬡	POWER POLE & ANCHOR/LIGHT STANDARD	≫——⊕/⬡
✺/○	TREE	✺/○
▾/⊙	STREET SIGN/PARKING METER	▾/⊙
× 131.82	ELEVATION/GRADE	125.00 × / + 125.00
▚	TEST PIT	
→/ ~S→	DRAINAGE/SWALE FLOW DIRECTION	→/ ~S→
— W —⊗—	WATER MAIN/SERVICE	— W —⊗—
—●— SAN —	SANITARY MANHOLE & PIPE	—●— SAN —
—○— STM —	STORM MANHOLE & PIPE	—○— STM —
— SAN/STM —	COMBINED PIPE	— SAN/STM —
— GAS —	GAS LINE	— GAS —
— FL —	100YR. FLOOD LIMIT	— FL —
—▫—▫—▫—	GUARD RAIL	—▫—▫—▫—
—○— C —	UNDERGROUND CONDUIT	—○— C —
—— – – – ——	OVERHEAD WIRES	—— – – – ——
—— ——	PROPERTY LINE/BOUNDARY	—— ——
—○—○—○—	FENCE	—○—○—○—
▨	BUILDING	▭
— ·· — ·· —	TOP OF SLOPE	— ·· — ·· —
— · — · —	TOE OF SLOPE	— · — · —
⌒⌒⌒	TREELINE	⌒⌒⌒
	LIMITS OF DISTURBANCE	— — — —
	TACTILE PEDESTRIAN PLATES	▦
	PROJECT SAFETY SIGNAGE	▬
	ORANGE SAWHORSE BARRICADE	⊓

NOTES

1. THIS PLAN IS IN METRIC.
2. EXISTING CONDITIONS WITH APPROXIMATE LOCATIONS ARE BASED ON GOOGLE AERIAL IMAGERY AS SITE HAS NOT BEEN FIELD SURVEYED; DIMENSIONS MAY VARY AND SHALL BE CONFIRMED BY CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.

No.	YY/MM/DD	Revision Description	Appr'd
1	25/02/26	REVISED AS PER HRM COMMENTS	
0	25/01/06	ISSUED FOR PERMIT	

Date:
G. K. MacLean
8978

SDMM
Servant, Dunbrack, McKenzie & MacDonald Ltd.
NOVA SCOTIA LAND SURVEYORS & CONSULTING ENGINEERS

36 OLAND CRESCENT
BAYERS LAKE BUSINESS PARK
HALIFAX, NS B3S 1C6

PHONE: (902) 455-1537
FAX: (902) 455-8479
WEB: www.sdmm.ca

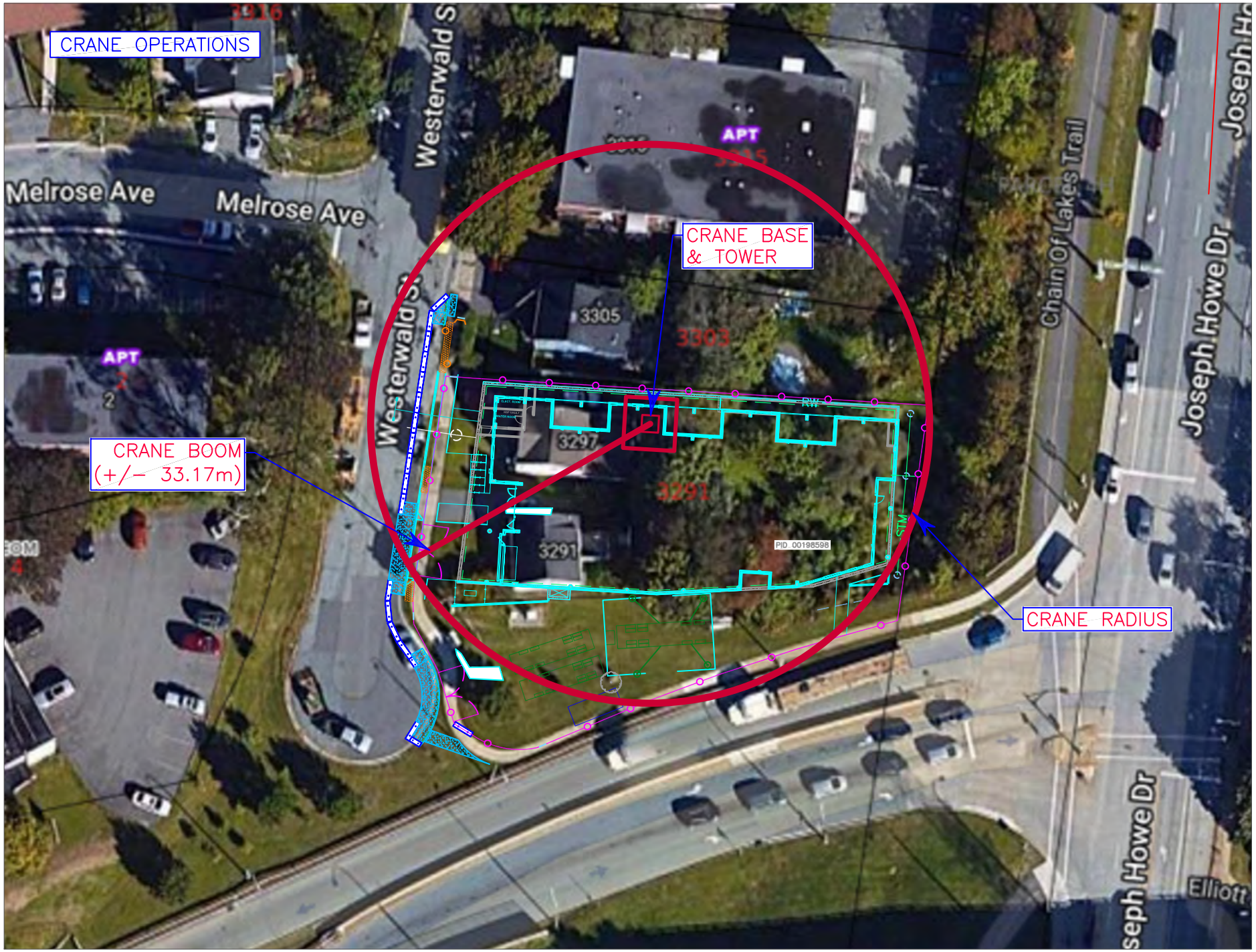
JOEWEST APARTMENT BUILDING
3291-3297 WESTERWALD STREET
HALIFAX, NOVA SCOTIA

CONCRETE DELIVERY SCHEMATIC

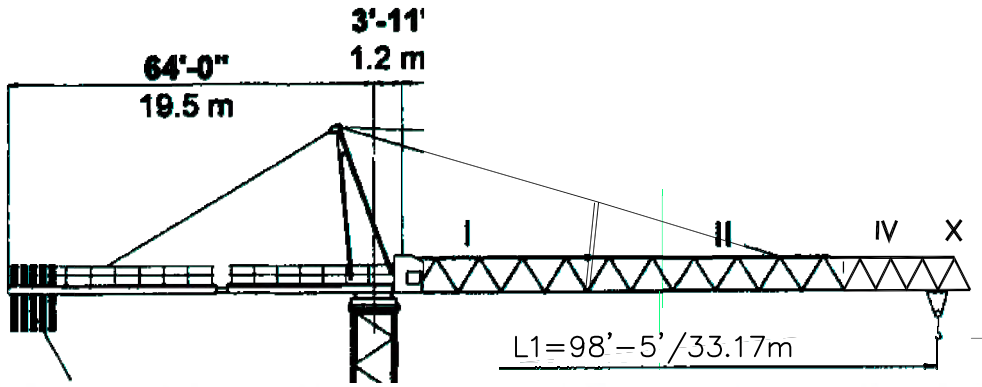
Date JANUARY 6, 2025	Drawn D. ANDERSON	Project No. FILE NO. 1-1-370 (38941)
Scale 1:200	Engineer G. MACLEAN	Plan No.
Reference --	Approved G. MACLEAN	Drawing Name R2
Surveyed SDMM	Sheet	

0m 5 10 15 20m

Appendix Q – Crane Information


CRANE OPERATIONS
CRANE BASE & TOWER
CRANE BOOM (+/- 33.17m)
CRANE RADIUS
Melrose Ave
Melrose Ave
Westerwald S
Chain Of Lakes Trail
Joseph Howe Dr
Joseph Howe Dr
APT
3305
3303
3297
3291
3291
PID 00198598
Elliott

CRANE OPERATIONS

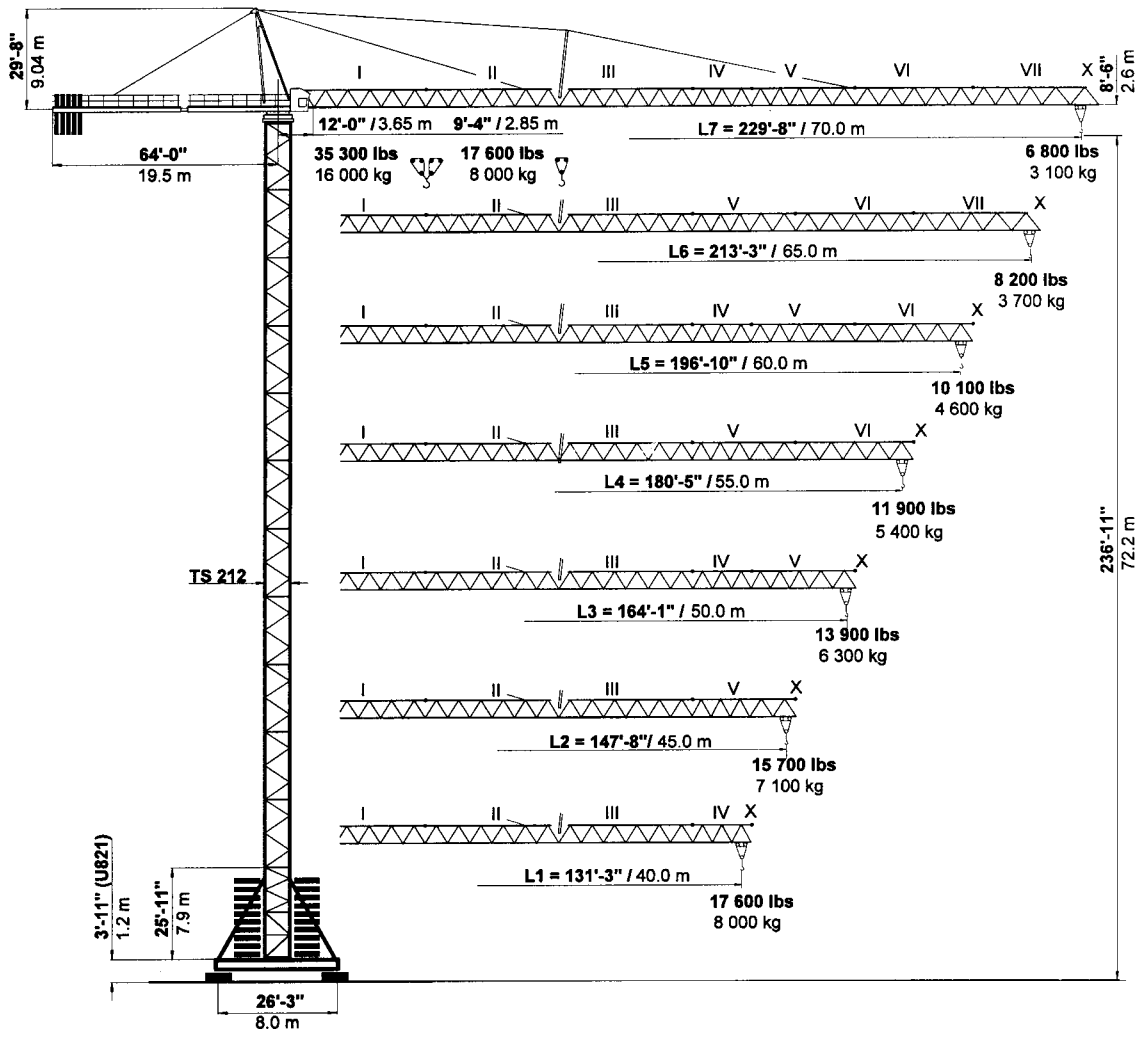


TEREX LIFTING

PEINER SK 315

Hammerhead Tower Crane
17,600-35,300 lbs. (8-16 mt) Lifting Capacity

SPECIFICATIONS

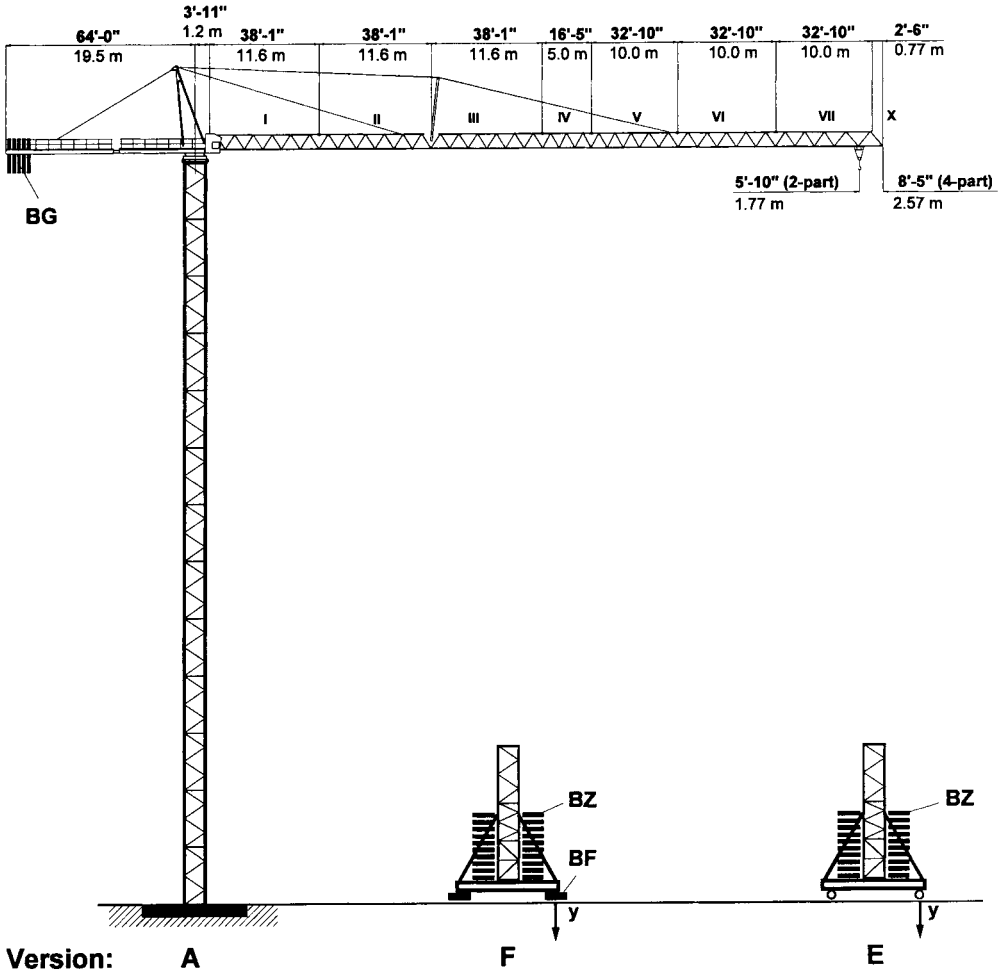


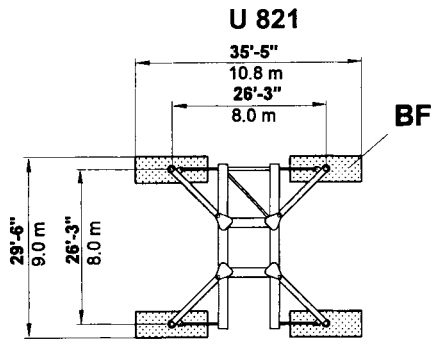
simple, available and cost effective™

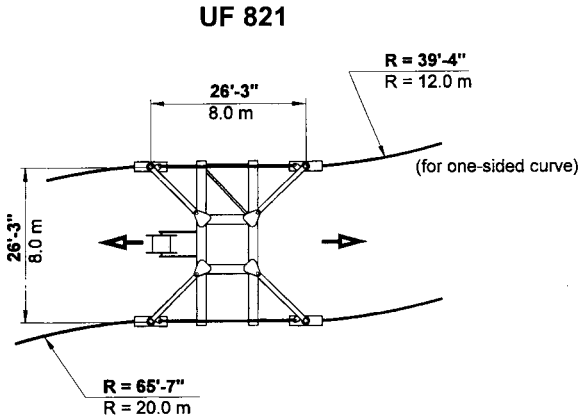
Machines shown may have optional equipment.

PEINER SK 315

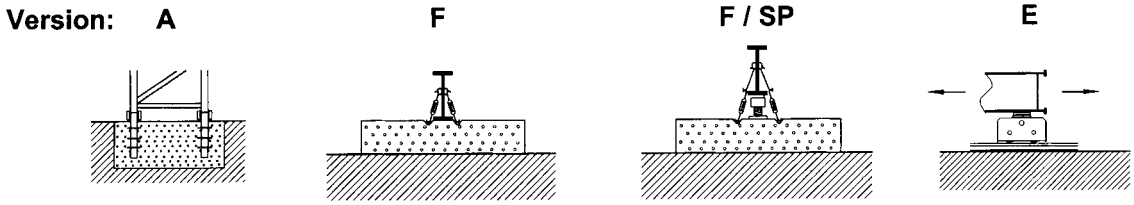
Combinations of tower section, hook heights, forces acting per corner, base ballast



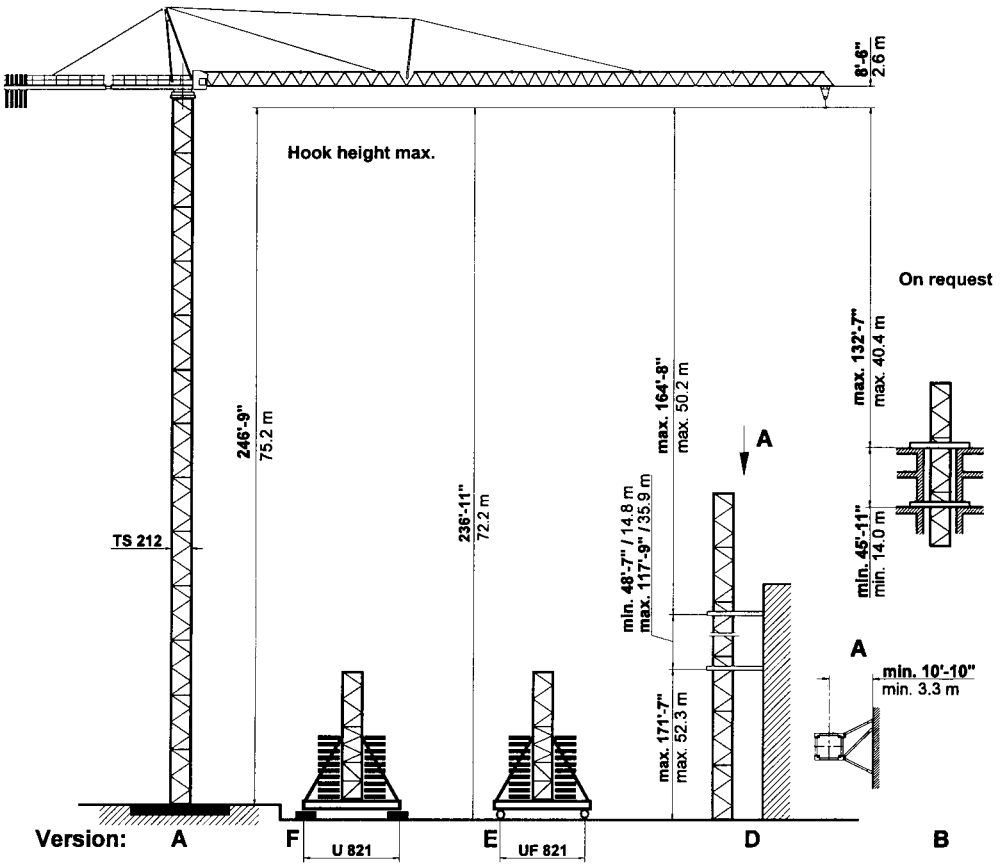




Ground support



PEINER SK 315 Tower TS 211



TS 212	Version A			Version F			Version E		
Tower TS 212.1	HH ft m	Tower TSV 212 TS 212.1	HH ft m	BZ + BF kips / t	y in service kips / kN	 out of service kips / kN	BZ kips / t	y in service kips / kN	 out of service kips / kN
13 x TS 212.1	246'-9"* 75.2*								
12 x TS 212.1	227'-4"* 69.3*	1 x TSV 212 11 x TS 212.1	236'-11"* 72.2*	212.0 96	204 909	279 1243	198.0 90	212 942	282 1253
11 x TS 212.1	208'-0"* 63.4*	1 x TSV 212 10 x TS 212.1	217'-6"* 66.3*	168.0 76	186 826	240 1066	154.0 70	192 856	242 1075
10 x TS 212.1	188'-8"* 57.5*	1 x TSV 212 9 x TS 212.1	198'-2" 60.4	146.0 66	173 770	203 901	132.0 60	179 797	204 909
9 x TS 212.1	169'4" 51.6	1 x TSV 212 8 x TS 212.1	178'-10" 54.5	124.0 56	161 715	169 751	88.0 40	161 715	169 754
8 x TS 212.1	149'-11" 45.7	1 x TSV 212 7 x TS 212.1	159'-5" 48.6	101.0 46	149 661	145 645	88.0 40	154 683	170 654
7 x TS 212.1	130'-7" 39.8	1 x TSV 212 6 x TS 212.1	140'-1" 42.7	101.0 46	142 633	128 569	66.0 30	141 629	124 553
6 x TS 212.1	111'-3" 33.9	1 x TSV 212 5 x TS 212.1	120'-9" 36.8	101.0 46	136 607	112 499	66.0 30	135 600	108 482
5 x TS 212.1	91'-10" 28.0	1 x TSV 212 4 x TS 212.1	101'-5" 30.9	101.0 46	131 582	98 435	66.0 30	129 573	94 418
4 x TS 212.1	72'-6" 22.1	1 x TSV 212 3 x TS 212.1	82'-0" 25.0	101.0 46	126 559	85 376	66.0 30	123 548	81 359
3 x TS 212.1	53'-2" 16.2	1 x TSV 212 2 x TS 212.1	62'-8" 19.1	101.0 46	120 536	80 356	66.0 30	118 523	75 335
2 x TS 212.1	33'-9" 10.3	1 x TSV 212 1 x TS 212.1	43'-4" 13.2	101.0 46	116 515	80 356	66.0 30	112 500	75 335
Foundation 25'-7" x 25'-7" x 5'-7" 7.8 x 7.8x 1.7 m				Stationary base U 821			Travelling base UF 821		
Anchor stools 4 x FF 212				BF 4 x 8.82 kips 4 x 4.0 t	BZ block 11.02 kips Block 5.0 t		Bogie Curve F 500		

If TSK 212 section is used the hook height is increased by **6'-7"** (2 m).
* Lower climbing section after erection.

TS 212.1 = 19'-4 ¼" / 5.9 m **TSV 212 = 25'-11"** / 7.9 m **TSK 212 = 6'-7"** / 2.0 m

PEINER SK 315 Radius and Capacity

Jib	Max. capacity max. 17,600 lbs 8.0 t	Radius – ft./m Capacity – lbs./mt 2-Part Line max. 17,600 lbs max. 8.0 t																
ft m		75'-6" 23	82'-0" 25	98'-5" 30	114'-10" 35	131'-3" 40	141'-1" 43	147'-8" 45	157'-6" 48	164'-1" 50	173'-11" 53	180'-5" 55	190'-3" 58	196'-10" 60	206'-8" 63	213'-3" 65	223'-1" 68	229'-8" 70
L7 229'-8" 70.0	9'-4" - 96'-9" 2.85 - 29.5 m	17600 8.0	17600 8.0	17400 7.9	14800 6.7	12800 5.8	11900 5.4	11200 5.1	10600 4.8	10100 4.6	9500 4.3	9000 4.1	8600 3.9	8200 3.7	7700 3.5	7500 3.4	7100 3.2	6800 3.1
L6 213'-3" 65.0	9'-4" - 105'-0" 2.85 - 32.0 m	17600 8.0	17600 8.0	17600 8.0	16100 7.3	13900 6.3	13000 5.9	12300 5.6	11500 5.2	11000 5.0	10400 4.7	9900 4.5	9300 4.2	8800 4.0	8600 3.9	8200 3.7		
L5 196'-10" 60.0	9'-4" -117'-9" 2.85 - 35.9 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	15700 7.1	14600 6.6	13900 6.3	13000 5.9	12300 5.6	11700 5.3	11200 5.1	10600 4.8	10100 4.6				
L4 180'-5" 55.0	9'-4" - 124'-8" 2.85 - 38.0 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	16800 7.6	15400 7:0	14800 6.7	13900 6.3	13200 6.0	12300 5.6	11900 5.4						
L3 164'-1" 50.0	9'-4" - 130'-11" 2.85 - 39.9 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	17600 8.0	16300 7.4	15400 7.0	14600 6.6	13900 6.3								
L2 147'-8" 45.0	9'-4" - 131'-11" 2.85 - 40.2 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	17600 8.0	16500 7.5	15700 7.1										
L1 131'-3" 40.0	9'-4" - 131'-3" 2.85 - 40.0 m	17600 8.0	17600 8.0	17600 8.0	17600 8.0	17600 8.0												
ft m	35,300 lbs 16.0 t	4-Part Line max. 35,300 lbs max. 16.0 t Radius - 2'-7" (- 0.8 m)																
L7 227'-0" 69.2	12'-0" - 48'-7" 3.65 - 14.8 m	21800 9.9	19600 8.9	16100 7.3	13200 6.0	11200 5.1	10400 4.7	9700 4.4	9000 4.1	8600 3.9	7900 3.6	7500 3.4	7100 3.2	6600 3.0	6200 2.8	6000 2.7	5500 2.5	5300 2.4
L6 210'-8" 64.2	12'-0" - 52'-2" 3.65 - 15.9 m	23800 10.8	21600 9.8	17400 7.9	14600 6.6	12600 5.7	11500 5.2	10800 4.9	9900 4.5	9500 4.3	8800 4.0	8400 3.8	7700 3.5	7500 3.4	6800 3.1	6600 3.0		
L5 194'-3" 59.2	12'-0" - 57'-9" 3.65 - 17.6 m	26900 12.2	24500 11.1	19800 9.0	16800 7.6	14300 6.5	13000 5.9	12300 5.6	11500 5.2	10800 4.9	10100 4.6	9700 4.4	9000 4.1	8600 3.9				
L4 177'-10" 54.2	12'-0" - 61'-0" 3.65 - 18.6 m	28700 13.0	26000 11.8	21200 9.6	17900 8.1	15200 6.9	14100 6.4	13200 6.0	12300 5.6	11700 5.3	10800 4.9	10400 4.7						
L3 161'-5" 49.2	12'-0" - 63'-8" 3.65 - 19.4 m	30200 13.7	27300 12.4	22300 10.1	18700 8.5	16100 7.3	14800 6.7	14100 6.4	12800 5.8	12300 5.6								
L2 145'-0" 44.2	12'-0" - 64'-0" 3.65 - 19.5 m	30400 13.8	27600 12.5	22500 10.2	19000 8.6	16300 7.4	15000 6.8	14100 6.4										
L1 128'-7" 39.2	12'-0" - 66'-3" 3.65 - 20.2 m	31700 14.4	28700 13.0	23600 10.7	19800 9.0	17000 7.7												

Speeds

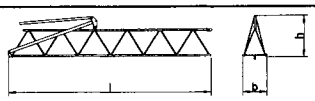
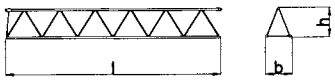
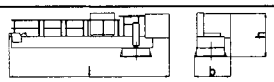
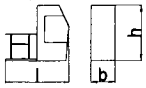
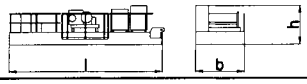
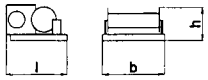
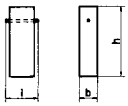
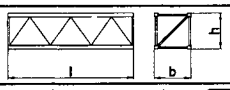
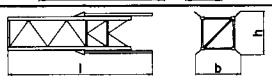
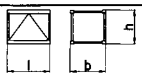
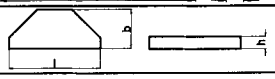
FU 8-160/4		v = 0 → ~290 fpm (88 m / min.)		10.2 HP 7.5 kW
SR 10-190/3		v = 0 → ~96 fpm (30 m / min.)		2 x 16.3 HP 2 x 12.0 kW
K WB 120/4		v = 0 → 0.9 rpm (min $^{-1}$)		2 x 11.4 HP 2 x 8.4 kW
		HK max. = 705' (215 m) 6 - layers		480 V / 60 Hz / 3 ph
Type SR WB 66-80/4F [108 HP] [79 kW]		2-Part Line: 444 fpm 134 m/min / 5 500 lbs 2 500 kg; 276 fpm 84 m/min / 9 300 lbs 4 200 kg; 180 fpm 54 m/min / 13 900 lbs 6 300 kg; 108 fpm 34 m/min / 17 600 lbs 8 000 kg	4-Part Line: 222 fpm 67 m/min / 11 000 lbs 5 000 kg; 138 fpm 42 m/min / 18 600 lbs 8 400 kg; 90 fpm 27 m/min / 27 800 lbs 12 600 kg; 54 fpm 17 m/min / 35 300 lbs 16 000 kg	Total motor output without SR 10-190/3 ~140 HP ~105 kW Connected power 170 kVA

Counterweight

Jib		L 1	L 2	L 3	L 4	L 5	L 6	L 7
Counterweight	BG	30 000 lbs 13 600 kg	32 200 lbs 14 600 kg	36 600 lbs 16 600 kg	39 150 lbs 17 750 kg	43 550 lbs 19 750 kg	41 350 lbs 18 750 kg	45 750 lbs 20 750 kg
	[lbs]	3 x 6 950 1 x 9 150	2 x 6 950 2 x 9 150	4 x 9 150	3 x 6 950 2 x 9 150	1 x 6 950 4 x 9 150	2 x 6 950 3 x 9 150	5 x 9 150
	[t]	3 x 3.15 1 x 4.15	2 x 3.15 2 x 4.15	4 x 4.15	3 x 3.15 2 x 4.15	1 x 3.15 4 x 4.15	2 x 3.15 3 x 4.15	5 x 4.15

PEINER SK 315 Dimensions and transport weights

See operating manual for mounting weights

	Designation			Dimensions (ft / m) l	b	h	Weight lbs / t	Volume ft³ / m³
1	**Jib** Section III			**39.01** 11.94	**4.99** 1.52	**7.09** 2.16	**4 200** 1.92	**1 386** 39.2
2	**Jib** Section I Section II Section IV Section V Section VI Section VII Jib tip X			**39.01** 11.89 **38.65** 11.78 **19.19** 5.85 **35.34** 10.77 **36.03** 10.98 **33.33** 10.16 **3.12** 0.95	**4.99** 1.52 **4.99** 1.52 **4.99** 1.52 **4.99** 1.52 **4.99** 1.52 **4.99** 1.52 **5.02** 1.53	**5.84** 1.78 **6.17** 1.88 **5.41** 1.65 **5.45** 1.66 **5.48** 1.67 **5.32** 1.62 **1.64** 0.50	**3 790** 1.72 **4 320** 1.96 **1 760** 0.80 **3 090** 1.40 **2 470** 1.12 **1 570** 0.71 **310** 0.14	**1 137** 32.2 **1 190** 33.7 **519** 14.7 **961** 27.2 **985** 27.9 **853** 25.0 **25** 0.7
3	**Turntable with slewing ring support and cabin**			**36.35** 11.08	**7.64** 2.33	**7.81** 2.38	**25 350** 11.50	**2 169** 61.4
	Turntable with slewing ring support			**31.99** 9.75	**7.64** 2.33	**7.81** 2.38	**24 030** 10.90	**1 911** 54.1
	Cabin with support and railing			**10.17** 3.10	**4.92** 1.50	**7.25** 2.21	**1 320** 0.60	**364** 10.3
4	**Counter jib with hoist winch**			**38.13** 11.62	**5.91** 1.80	**6.00** 1.83	**14 550** 6.60	**1 353** 38.3
	Hoist winch	**66 WB**		**7.51** 2.29	**5.45** 1.66	**3.28** 1.00	**5 400** 2.45	**134** 8.4
5	**Counterweight**	**BG**		**3.94** 1.20 **3.94** 1.20	**1.64** 0.50 **1.64** 0.50	**9.32** 2.84 **12.11** 3.69	**6 950** 3.15 **9 150** 4.15	**60** 1.4 **78** 1.7
6	**Tower section**	**TS 212.1**		**19.52** 5.95	**7.78** 2.37	**8.01** 2.45	**9 130** 4.14	**1 216** 34.4
		TSV 212 with struts		**31.17** 9.50	**9.84** 3.00	**10.00** 3.05	**20 330** 9.22	**3 067** 86.9
		TSK 212		**6.63** 2.02	**7.87** 2.40	**9.84** 3.00	**6 170** 2.80	**513** 14.5
7	**Travelling base, folded**	**UF 821**		**41.01** 12.5	**9.74** 2.97	**7.05** 2.15	**35 050** 15.90	**2 816** 79.8
8	**Stationary base, folded**	**U 821**		**34.55** 10.53	**9.06** 2.76	**2.79** 0.85	**17 130** 7.77	**873** 24.7
9	**Central ballast block**	**BZ**		**11.48** 3.50	**4.92** 1.50	**2.20** 0.67	**11 020** 5.00	**124** 3.5
10	**Foundation pad**	**BF**		**9.19** 2.80	**3.28** 1.00	**1.87** 0.57	**8 820** 4.00	**57** 1.6
11	**Accessories**						**4 800** 2.17	

For more information, product demonstration, or details on lease and rental plans, please contact your local Terex Towers Distributor.

Bigge Crane and Rigging Co.
10700 Bigge Avenue
San Leandro, CA 94577
Phone: (888) 337-BIGGE or (510) 638-8100
Fax: (510) 639-4053
Email: towers@bigge.com
Web site: www.biggetowercrane.com

TEREX TOWERS
202 Raleigh Street
Wilmington, NC 28412 USA
(910) 395-8500 • FAX: (910) 395-8547
E-mail: wilmington@terexlifting.com
www.terexlift.com

TT-106-1 Litho in U.S.A. 5K499J60