September 16, 2024

City of Ottawa
Planning, Development, and Building Services Department
110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1

Attention: **Rochelle Fortier-Lesage**
Transportation Project Manager, Infrastructure Approvals

Reference: **5494, 5500, and 5510 Boundary Road**
Transportation Impact Assessment – Addendum Letter
Novatech File No.: 118168

1.0 INTRODUCTION

This letter has been prepared in support of a Site Plan Control application for the proposed truck transport terminal facility at 5494, 5500, and 5510 Boundary Road. A Transportation Impact Assessment (TIA) for the subject property was submitted to the City of Ottawa and Ministry of Transportation of Ontario (MTO) in April 2021, and resubmitted in December 2021. These TIA submissions were submitted in support of Official Plan Amendment and Zoning By-Law Amendment applications (City file numbers D01-01-21-0005 and D02-02-21-0036, respectively).

The MTO submission was related to modifications at the Highway 417 Westbound Ramps/Boundary Road intersection, which were required for Long Combination Vehicles (LCVs). We understand this has now been advanced by others.

Through previous correspondence (dated January 29, 2024 from City staff and subsequent Phase 1 pre-consultation notes), it is understood that this letter will suffice as an update to the previously accepted TIA, provided there are no significant changes to the proposed Site Plan since the previous submission in December 2021. This letter therefore includes a comparison of the previously accepted Concept Plan and the proposed Site Plan, outlining the changes in gross floor area, trailer docks, projected trip generation, parking spaces, and access dimensions. As requested, the Design Review components are also included in this letter (i.e. 4.1 Development Design, 4.2 Parking, and 4.4 Access Design). The Boundary Streets module is not included in this letter, as this was completed in the previous TIA, and all conclusions from that module remain valid. A Roadway Modifications Approval (RMA) application will be submitted for the proposed signalized access, under separate cover.

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2.0 PROPOSED SITE PLAN

The proposed site plan is included in **Attachment 1**. A right-of-way (ROW) protection of 30m is identified in the City's Official Plan for rural arterials. A widening is shown on the site plan. A comparison of the proposed plan and the conceptual plan submitted in December 2021 is included in the following table.

Table 1: Comparison of Development Statistics

Plan	Facility Gross Floor Area	Loading Docks	Tractor/Truck Parking	Trailer Parking	Vehicle Parking
2021	5,593 m^2	96 spaces	55 spaces	134 spaces	141 spaces
2024	4,400 m^2	72 spaces	84 spaces	139 spaces	90 spaces
Difference (% Change)	**-1,193 m^2 (-21%)**	**-24 spaces (-25%)**	**+29 spaces (+53%)**	**+5 spaces (+4%)**	**-51 spaces (-36%)**

From the previous table, the proposed development has been reduced by approximately 20-25%, based on floor area and number of loading docks, and the number of parking spaces has been reduced by approximately 36%. An approximately 53% increase in tractor/truck parking spaces and approximately 4% increase in trailer parking spaces are proposed.

For the 2021 TIA, the number of trips generated by the proposed development was provided by the proponent, in the form of hourly volumes for both employees and trucks arriving/departing the facility. The facility will operate with three shifts, day (8:00am to 5:00pm), evening (4:00pm to 12:00am), and night (12:00am to 8:00am). The 2021 TIA identified projected site-generated traffic volumes of 103 vehicles in the AM peak hour (consisting of 97 employee trips and six truck trips) and 99 vehicles in the PM peak hour (consisting of 91 employee trips and eight truck trips). The proponent has advised that the proposed development is now projected to generate volumes of 68 vehicles in the AM peak hour (consisting of 58 employee trips and ten truck trips) and 51 vehicles in the PM peak hour (consisting of 43 employee trips and eight truck trips), which is lower than what was previously considered.

3.0 DEVELOPMENT DESIGN

3.1 Design for Sustainable Modes

Pedestrian walkways will be provided on-site between the parking area and the building. Connectivity for pedestrians is not proposed to extend to Boundary Road, as there are no sidewalks on Boundary Road.

A total of four bicycle parking spaces are proposed adjacent to the northeast corner of the building. The City's *Zoning By-Law* (ZBL) does not identify a minimum bicycle parking requirement, as the subject site is located in Area D on Schedule 1 and 1A of the City's ZBL, but not within a village boundary.

A review of the *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* has been conducted. A copy of the TDM checklist is included in **Attachment 2**. Among the relevant measures, it is anticipated that all required TDM-supportive design and infrastructure measures are met.

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3.2 Circulation and Access

The proposed development will be served by a signalized full-movement access at the northern end of the site, and an unsignalized right-out access at the southern end. The fire route will enter from the signalized access, through the employee parking area and in front of the main entrance, and exit to Boundary Road via the right-out access.

Garbage collection will take place north of the proposed building. The route for garbage trucks is the same as any LCV or WB-20 trucks travelling to/from the gated area, and therefore, no garbage truck turning movements are included.

A loading space is proposed to the south of the main entrance. Vehicles using for the loading space and fire trucks are anticipated to follow the same general route, turning into the site at the signalized access, travelling through the parking lot, and departing the site at the right-out access. Turning movements for a Heavy Single Unit (HSU) design vehicle have been prepared to represent the largest vehicle anticipated to use the loading space, and turning movements for a Pumper Fire Truck have been prepared for the fire route. These movements are included in **Attachment 3**.

Turning movements for LCVs and WB-20 trucks entering and exiting the site at the proposed signalized access have also been included in **Attachment 3**. A concrete truck apron is proposed to accommodate LCVs, which will always perform a southbound right turn into the site.

4.0 PARKING

The subject site is located in Area D on Schedules 1 and 1A of the City's ZBL. Minimum vehicular parking and loading space rates for the proposed development are identified in the ZBL, and minimum accessible parking rates are identified in the City's *Accessibility Design Standards*. The minimum requirements and proposed supply are shown in the following table.

Table 2: Required and Proposed Parking

Land Use	Rate	Units	Required	Provided
Vehicle Parking				
Truck Transport Terminal	0.8 per 100 m^2 GFA	4,400 m^2	35	90
Accessible Parking				
4 spaces when total supply is between 76 and 100		90 spaces	4	4
Loading Spaces				
Truck Transport Terminal	1 for first 10,000 m^2 GFA	4,400 m^2	1	72

From the previous table, the minimum vehicle parking and loading space requirements are met by the proposed development. The *Accessibility Design Standards* indicate that a minimum of four accessible parking spaces are required, consisting of two Type A spaces (with a minimum width of 3.4m) and two Type B spaces (with a minimum width of 2.4m). Four accessible parking spaces are provided at the main entrance, meeting the requirement.

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5.0 ACCESS INTERSECTIONS

The proposed development will be served by two accesses. The north access is full-movement, with a width of approximately 20m at the protected ROW line of Boundary Road (narrowing to approximately 12m at the end of the curb radii). The south access is restricted to right-out only, with a width of approximately 6.7m at the ROW line of Boundary Road. The installation of traffic signals at the north access is proposed. Each site access has been evaluated for compliance with City's *Private Approach By-Law* and ZBL, as well as appropriate design guidelines.

Private Approach By-Law
Section 25(a) of the City's *Private Approach By-Law* identifies the maximum number of private approaches that can serve a development, based on the amount of frontage. For sites with 46m to 150m of frontage, a maximum of one two-way approach plus two one-way approaches or a maximum of two two-way approaches can be provided. For every additional 90m of frontage in excess of 150m, another two-way approach is permitted. The subject site has approximately 200m of frontage to Boundary Road. Therefore, the number of proposed approaches meets this requirement.

Section 25(c) of the *Private Approach By-Law* identifies a maximum width requirement of 9.0m for any two-way private approach, as measured at the street line. An exception for wider accesses is permitted under Section 25(e) for transport loading areas. Given the nature of the proposed development as a truck transport terminal, it is requested that the two-way approach be permitted to exceed the maximum width requirement, per Section 25(e).

Section 25(d) of the *Private Approach By-Law* identifies a maximum width requirement of 7.5m for any one-way private approach, as measured at the street line. The right-out egress meets this requirement, as it has a width of approximately 6.7m at the street line.

Section 25(k) of the *Private Approach By-Law* stipulates that all one-way private approaches shall be designated with suitable and visible signage to indicate the direction of traffic. Signage will be provided at the right-out egress to the satisfaction of the General Manager of the City's Department of Transportation, Utilities, and Public Works.

Section 25(m)(ii) of the *Private Approach By-Law* identifies a minimum separation distance of 15m for industrial developments that abut or are within 46m of an arterial roadway and include a total of 20 to 99 parking spaces, measuring between a two-way private approach and any other private approach to the same property. The proposed location of the private approaches are separated by approximately 95m, which meets these requirements.

Section 25(p) of the *Private Approach By-Law* identifies a minimum separation distance of 3m between a private approach and the nearest property line, measured from the street line. The full-movement access will be approximately 20m south of the northerly property line, and the right-out egress will be approximately 59m north of the southerly property line. Therefore, this requirement is met.

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Zoning By-Law
Section 107 (1)(a)(ii) of the ZBL identifies a minimum drive aisle width of 6.7m for the passenger vehicle parking area. All drive aisles will have a width of 6.7m or greater, meeting this requirement.

Clear Throat and Corner Clearance
Section 8.9.10 and Table 8.9.3 of the Transportation Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads* includes minimum clear throat length requirements for major driveways, based on land use, size of development, and the classification of roadway (collector or arterial). The land use most representative of the proposed truck transport terminal is the 'Light Industrial' land use. For light industrial development that are less that 10,000 m^2 GFA, the *Geometric Design Guide* identifies a minimum clear throat length of 15m. Measuring from the near edge of the passenger vehicle parking area to the property line, the full-movement access provides approximately 30m of clear throat length. Therefore, this requirement is met.

Section 8.8 and Figure 8.8.2 of the *Geometric Design Guide* includes minimum suggested corner clearances between accesses and major intersections. Different corner clearance requirements are outlined for different locations and types of accesses (i.e. accesses can be upstream or downstream of intersections, and accesses may or may not accommodate all movements). The corner clearance requirement for a restricted access downstream of a signalized intersection is 70m, measuring nearest edge to nearest edge. As the distance between the two proposed accesses is approximately 95m, this requirement is met.

6.0 FUNCTIONAL DESIGN OF SIGNALIZED ACCESS

An RMA application for the proposed signalized access will be submitted under separate cover. The associated roadway modifications to Boundary Road to accommodate the proposed signalized access include auxiliary northbound left turn and southbound right turn lanes for vehicles entering the proposed development. The proposed functional design of the signalized site access is included in **Attachment 4**.

The northbound left turn lane meets the MTO left turn lane warrant based on traffic projections included in the December 2021. The southbound right turn lane is warranted based on TAC's *Geometric Design Guide*, which states that a right turn lane is warranted 'when the volume of right turning traffic is 10% to 20% of the total approaching volume,' and this is anticipated during the AM peak hour. The auxiliary northbound left turn lane is proposed to have a parallel length of 70m and a taper length of 145m, and the auxiliary southbound right turn lane is proposed to have a parallel length of 70m and taper length of 75m.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this letter can be summarized as follows:

Proposed Site Plan
- The proposed development has been reduced by approximately 20-25%, based on floor area and number of loading docks, and the number of parking spaces has been reduced by approximately 36%. An approximately 53% increase in tractor/truck parking spaces and approximately 4% increase in trailer parking spaces are proposed.

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- The proponent has advised that the estimated trip generation of the proposed development is lower than previously considered in the 2021 TIA.

Development Design and Parking

- Pedestrian walkways will be provided on-site between the parking area and the building. Connectivity for pedestrians is not proposed to extend to Boundary Road, as there are no sidewalks on Boundary Road.

- A total of four bicycle parking spaces are proposed adjacent to the northeast corner of the building. The City's *Zoning By-Law* (ZBL) does not identify a minimum bicycle parking requirement, as the subject site is located in the rural area, but not within a village boundary.

- The proposed development will be served by a signalized full-movement access at the northern end of the site, and an unsignalized right-out access at the southern end. The fire route will enter from the signalized access, through the employee parking area and in front of the main entrance, and exit to Boundary Road via the right-out access.

- Garbage collection will take place north of the proposed building. The route for garbage trucks is the same as any LCV or WB-20 trucks travelling to/from the gated area. A loading space is proposed to the south of the main entrance. Vehicles using the loading space and fire trucks are anticipated to follow the same general route, turning into the site at the signalized access, travelling through the parking lot, and departing the site at the right-out access.

- The minimum parking space and loading space requirements outlined in the City's ZBL are met.

Access Design

- The proposed accesses comply with the relevant provisions of the City's *Private Approach By-Law* and ZBL, as well as the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.

Functional Design of Road Modifications

- The associated roadway modifications to Boundary Road to accommodate the proposed signalized access include auxiliary northbound left turn and southbound right turn lanes for vehicles entering the proposed development. The auxiliary northbound left turn lane is proposed to have a parallel length of 70m and a taper length of 145m, and the auxiliary southbound right turn lane is proposed to have a parallel length of 70m and taper length of 75m.

The proposed development continues to be recommended from a transportation perspective.

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NOVATECH
Engineers, Planners & Landscape Architects

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Attachment 1

Proposed Site Plan

1 A001 EXISTING KEY PLAN
SCALE N/A

LEGEND

- PROPERTY LINE
- YARD SETBACK
- 8ft HIGH CHAIN FENCE, REFER TO LANDSCAPE
- FH FIRE HYDRANT
- CB CATCH BASIN - SEE CIVIL
- MH MANHOLE - SEE CIVIL
- MAIN ENTRANCE/EXIT
- GARBAGE ENCLOSURE C/W 2m HIGH OPAQUE SCREEN
- UP EXISTING UTILITY POLE
- AN EXISTING ANCHOR
- EXTERIOR LIGHT POLE REFER TO ELEC.
- T.W.S.I.
- BR BIKE RACK FOR 4 BIKES 0.6 x 1.8 m SPACE PER BIKE
- FP FLAG POLE, REFER TO LANDSCAPE
- LANDSCAPED AREA REFER TO LANDSCAPE PLAN
- CONCRETE PAD AND SIDEWALK
- ASPHALT
- 6m WIDE FIRE ROUTE, REFER TO CIVIL
- PAVERS REFER TO LANDSCAPE PLAN
- LOADING SPACE PER ZBL, SECTION 113, TABLE 113B
- DC NEW DEPRESSED CURB
- NEW CURB
- B IN-GROUND BOLLARD, REFER TO DETAIL 1/A002
- BH BLOCK HEATER, REFER TO DETAIL 2/A002
- R RECEPTACLE, REFER TO DETAIL 1/A003
- C CONDUIT STUB UP FOR FUTURE ELEC. EQUIPMENT
- EV CHARGER, REFER TO DETAIL 11/A002

SIGNAGE LEGEND:

REFER TO SPEC SECTION 10 14 54 TRAFFIC SIGNAGE

- NO TRESPASSING
- FR FIRE ROUTE
- BF BARRIER-FREE PARKING
- ST STOP SIGN

PAINTED SIGN LEGEND:

REFER TO SPEC SECTION 32 17 23 PAINTING TRAFFIC LINES AND MARKINGS

- WHITE PAINTED BARRIER-FREE PARKING SYMBOL AND PARKING LINES (5.20, 3.40, 2.40, 1.50)
- WHITE PAINTED CAR PARKING LINES (5.20, 2.60)
- WHITE PAINTED SYMBOL FOR ELECTRIC CAR CHARGING STATION

PROJECT INFORMATION

TOPOGRAPHICAL PLAN INFORMATION:
SURVEY PROPERTY BOUNDARIES TAKEN FROM TOPOGRAPHICAL PLAN OF PART OF LOT 1 CONCESSION 9, GEOGRAPHIC TOWNSHIP OF GLOUCESTER; CITY OF OTTAWA, WEST OF BOUNDARY ROAD, PIN 04324-0177 AND PIN 04324-0161, PER PLAN 4R-13964

PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
DATED AUGUST 15, 2018

SITE ZONING AS PER OTTAWA ZONING BY-LAW 2008-250 SITE DESIGNATION
RG - RURAL GENERAL INDUSTRIAL ZONE
AREA "D" OF SCHEDULE 1, CITY OF OTTAWA

OWNER
DAY & ROSS INC.
358 MAIN STREET
HARTLAND, NB
E7P 1C6

SURVEYOR
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE, SUITE 500
NEPEAN, ON
K2E 7S6

CIVIL ENGINEER
NOVATECH
240 MICHAEL COWPLAND DRIVE, SUITE 200
OTTAWA, ON
K2M 1P6

ARCHITECT
N45 ARCHITECTURE INC.
ROBERT MATTHEWS
71 BANK STREET, 7TH FLOOR
OTTAWA, ON
K1P 5N2

BUILDING CLASSIFICATION:
THE BUILDING IS CLASSIFIED AND DESIGNED TO CONFORM TO THE ONTARIO BUILDING CODE 2020

OCCUPANCY:
GROUP F DIVISION 2 - UP TO 2 STOREYS, SPRINKLERED (3.2.2.72.)
GROUP D - UP TO 3 STOREYS, SPRINKLERED (3.2.2.54.)

BUILDING STATISTICS:
NUMBER OF STOREYS = 1
THE BUILDING IS SPRINKLERED

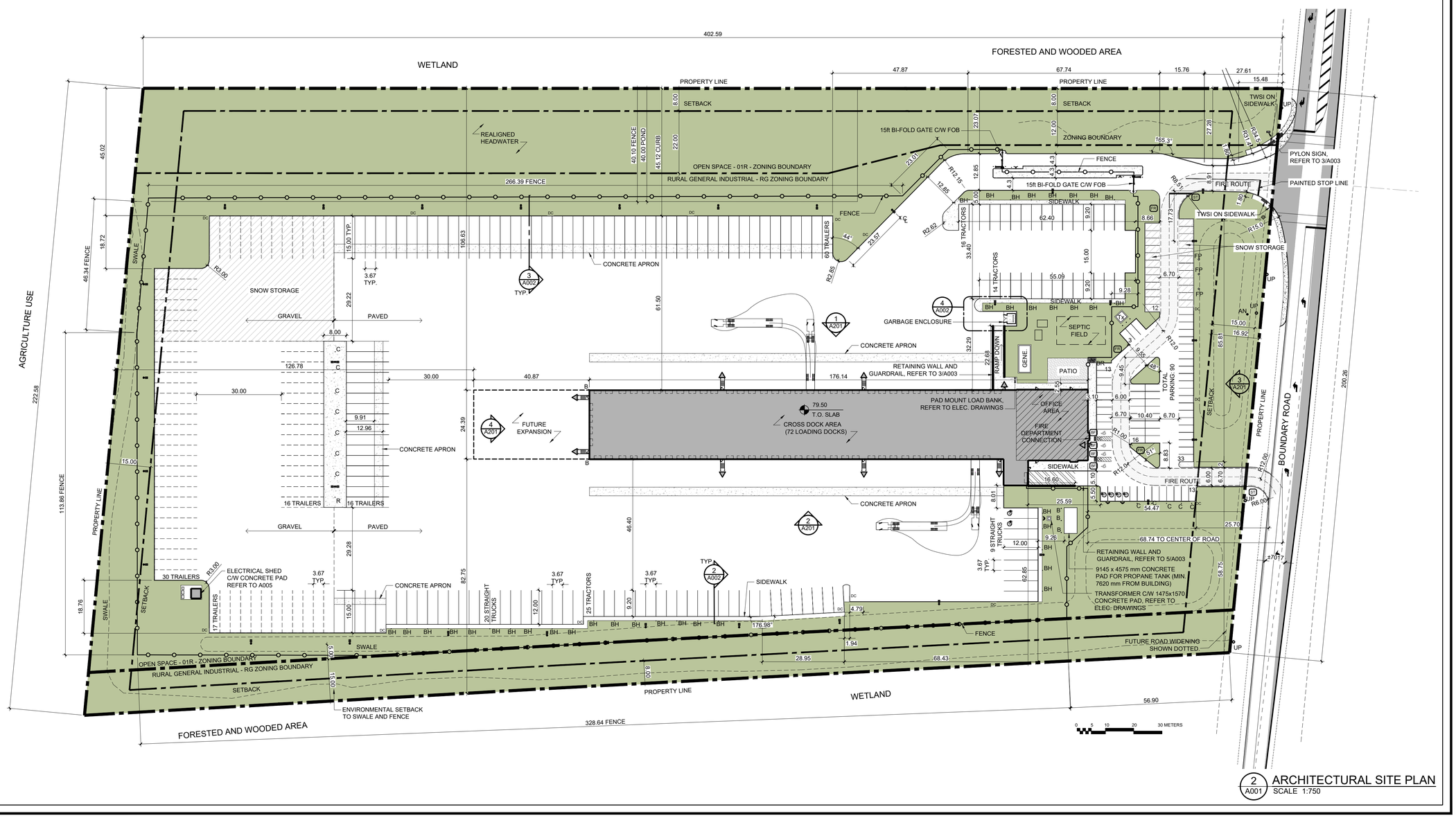
NUMBER OF ACCESS ROUTES REQUIRED = 1
NUMBER OF ACCESS ROUTES PROVIDED = 2

CONSTRUCTION TYPE = NON-COMBUSTIBLE CONSTRUCTION

ZONING INFORMATION

NOTE: ALL ZONING DEFINITIONS AND REQUIREMENTS AS PER CITY OF OTTAWA ZONING BY-LAW 2008-250

ZONING MECHANISM	REQUIRED	PROVIDED
ADDRESS	5494-5510 BOUNDARY ROAD GLOUCESTER, ON	TRUCK TRANSPORT TERMINAL AND CROSS DOCK
DEFINITION	RG RURAL GENERAL INDUSTRIAL ZONE	
MIN.LOT WIDTH	30 m	200 m
MIN. LOT AREA	4, 000 m^2	31,969.7 m^2
MIN. FRONT YARD SETBACK	15 m	54.47 m
MIN. CORNER SIDE SETBACK	12 m	N/A
MIN. INT. SIDE YARD SETBACK	8 m	62.9 m
MIN. REAR YARD SETBACK	15 m	167.7 m
MAX. LOT COVERAGE	50%	14%
MAX. BUILDING HEIGHT	15 m	±10 m
MIN. WIDTH OF LANDSCAPING	1.5 m	MIN. 3 m
STANDARD PARKING SPACE	2.6m x 5.2m (max 3.1m wide)	2.6m x 5.2m
ACCESSIBLE PARKING SPACE	3.6m x 5.2m	3.4m x 5.2m (TYPE A), 2.4 x 5.2m (TYPE B)
PARKING REQUIREMENTS AREA D: RURAL	46 OFFICE: 2.4 / 100 m^2 G.F.A CROSS DOCK: 0.8 / 100 m^2 G.F.A	90
BARRIER-FREE PARKING	3	2 (TYPE A) + 2 (TYPE B)
LOADING SPACES	1 (MIN. 3.5 m WIDE x 7 m LONG)	72
BICYCLE PARKING RATE	3 (1 / 2000 m^2 of G.F.A.)	4
GROSS FLOOR AREA		- m^2 (- s.f)
BUILDING AREA (FOOTPRINT)		4,400 m^2 (47,360 s.f)
OFFICE AREA		642 m^2 (6,910 s.f)
CROSS DOCK AREA		3,758 m^2 (40,450 s.f)



2 A001 ARCHITECTURAL SITE PLAN
SCALE 1:750

DAY & ROSS

no.	revision	date
03	ISSUE FOR SITE PLAN CONTROL APPLICATION	24 SEPT 2024
02	ISSUE FOR 60% SUBMISSION	15 AUG 2024
01	ISSUE FOR 30% SUBMISSION	27 JUNE 2024

N45 ARCHITECTURE INC.
71 Bank Street, 7th Floor - Ottawa, Ontario, K1P 5N2
tel. 613.224.0095 fax 613.224.9811

DAY & ROSS
5494-5510 BOUNDARY ROAD
GLOUCESTER, ON

Project North / True North

seal: ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT C. MATTHEWS — LICENCE 2966

drawing title: SITE PLAN

scale	drawn by
AS SHOWN	DL
date	checked by
FEB 2024	RM
project number 22-765	drawing number A001

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

DO NOT SCALE DRAWINGS

revision 03

CITY PLAN NO. XXXX

CITY'S FILE NUMBER: D07-XX-XX-XXXX

Attachment 2

Transportation Demand Management

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☐
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☐
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☐ - N/A
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑ on-site connectivity provided; no public sidewalks on Boundary Road

TDM-supportive design & infrastructure measures: *Non-residential developments*			Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☐ - N/A; no pedestrian or cycling facilities on Boundary Road
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☐
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☐
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☐
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☐
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☐ - no bicycle parking required
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☐ - no bicycle parking required
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☐ - N/A
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☐
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☐ - N/A
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	☐
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☐
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☐
	2.4	**Bicycle repair station**	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐

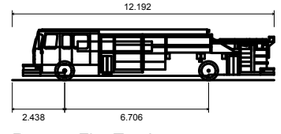
		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☐
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☐
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☐
	7.	**OTHER**	
	7.1	**On-site amenities to minimize off-site trips**	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☐

Attachment 3

Turning Movements

10+250
10+300
10+350
10+400
Pumper Fire Truck
BOUNDARY ROAD
EX 100mmØ WM
SITE ACCESS
OHW
OHW
OHW
5510
BOUNDARY RD
SEPTIC
FIELD
PATIO
OFFICE
FFE=79.50



Pumper Fire Truck

Overall Length	12.192m
Overall Width	2.489m
Overall Body Height	2.361m
Min Body Ground Clearance	0.200m
Track Width	2.489m
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

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5510 BOUNDARY ROAD

TURNING MOVEMENT (FIRE TRUCK)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE SEP 2024 | JOB 118168 | FIGURE FIGURE 1

SHT11X17.DWG - 279mmX432mm

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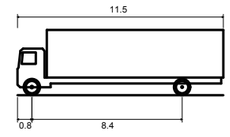

HSU - Heavy Single Unit Truck

Overall Length	11.500m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	14.100m

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5510 BOUNDARY ROAD

TURNING MOVEMENT (HSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE SEP 2024 | JOB 118168 | FIGURE FIGURE 2

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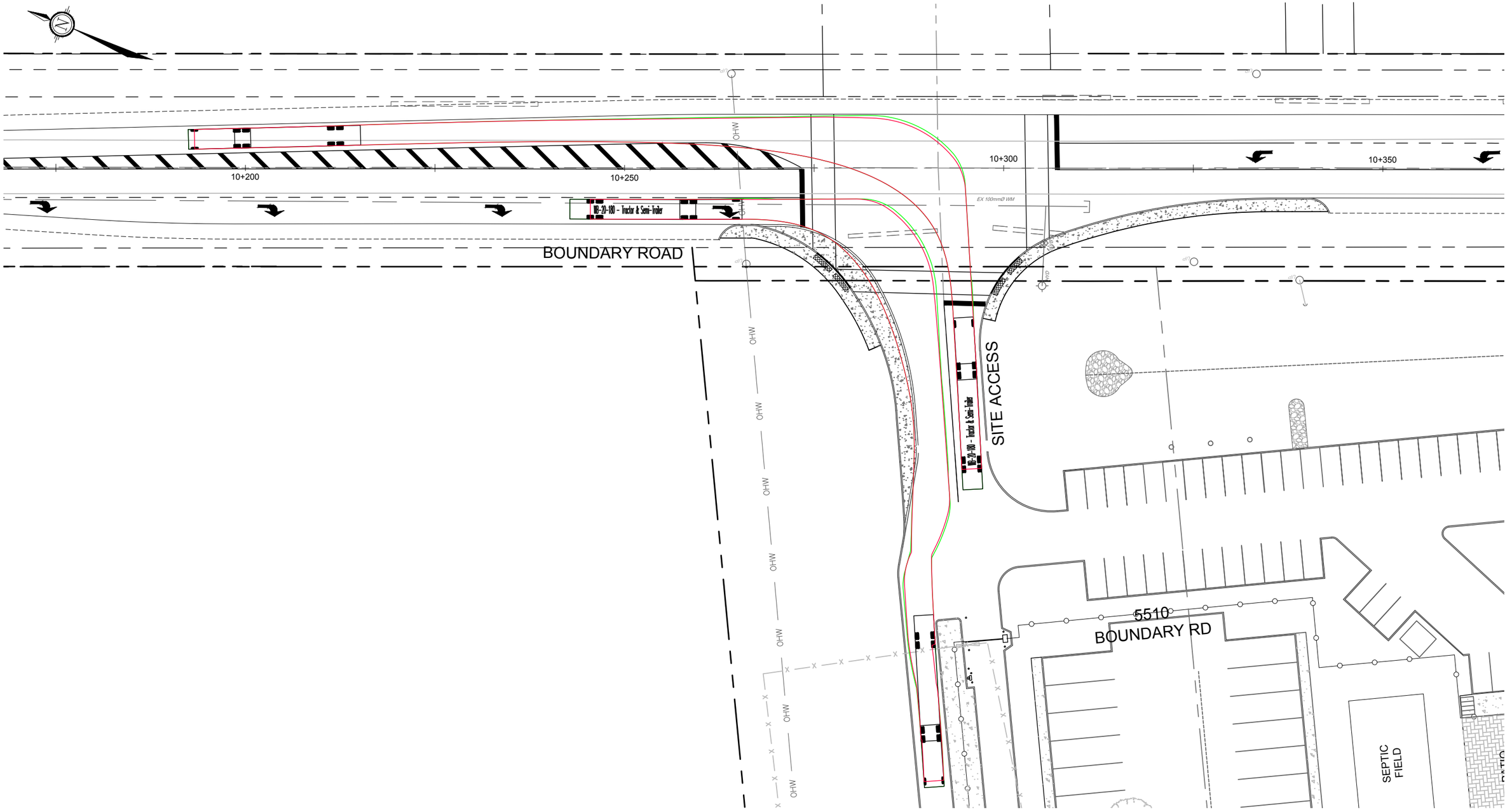
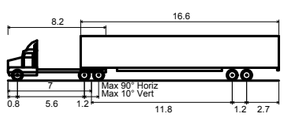
SHT11X17.DWG - 279mmX432mm





WB-20 - Tractor & Semi-Trailer

Overall Length	22.700m
Overall Width	2.600m
Overall Body Height	3.730m
Min Body Ground Clearance	0.435m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	14.300m

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5510 BOUNDARY ROAD

WB-20 TURNING MOVEMENT

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE SEP 2024 | JOB 118168 | FIGURE FIGURE 3

SHT11X17.DWG - 279mmX432mm

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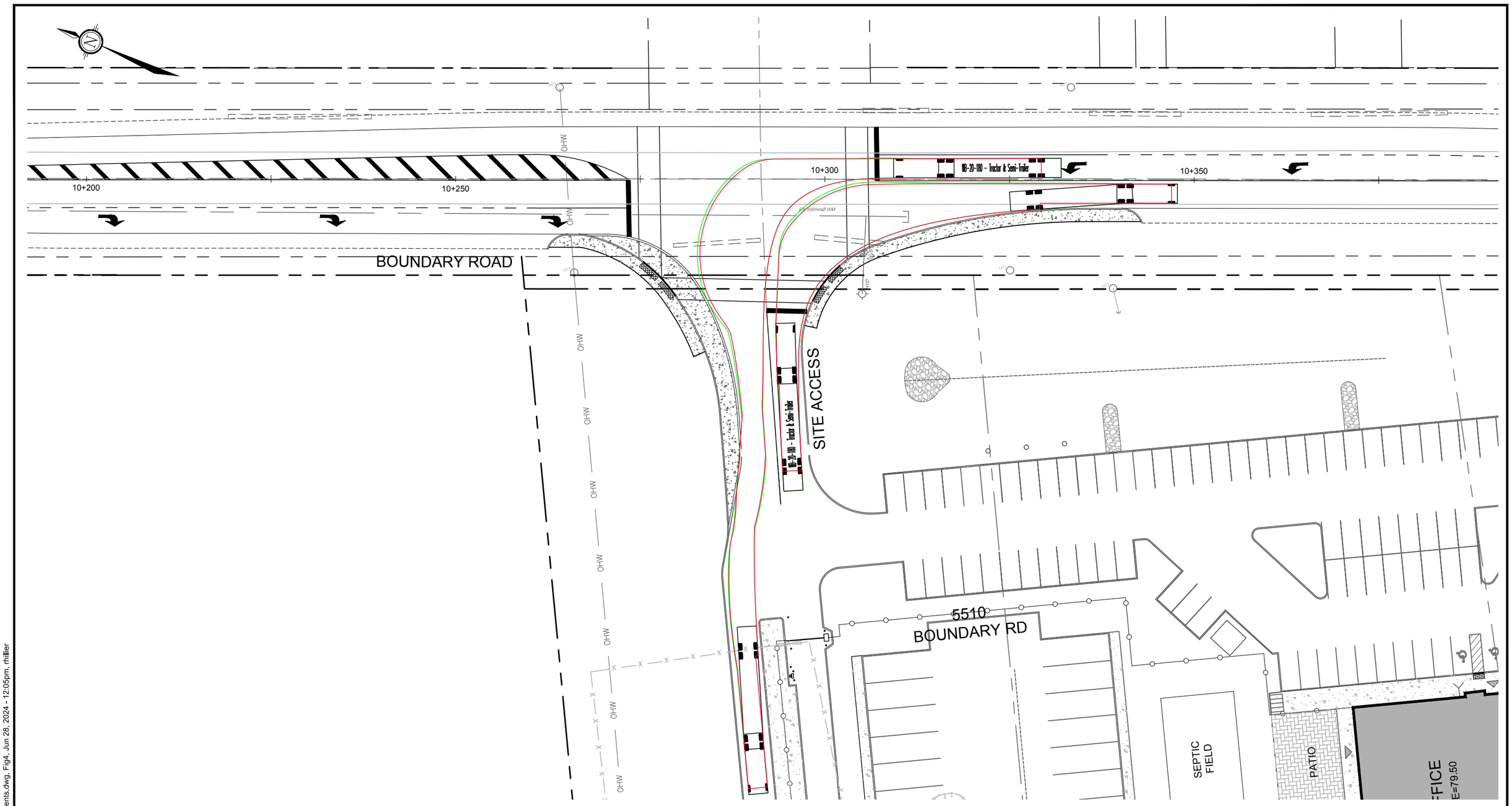

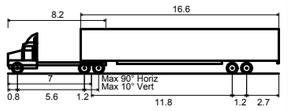

WB-20 - Tractor & Semi-Trailer

Overall Length	22.700m
Overall Width	2.600m
Overall Body Height	3.730m
Min Body Ground Clearance	0.435m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	14.300m

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5510 BOUNDARY ROAD

TURNING MOVEMENT (WB-20)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE SEP 2024 | JOB 118168 | FIGURE FIGURE 4

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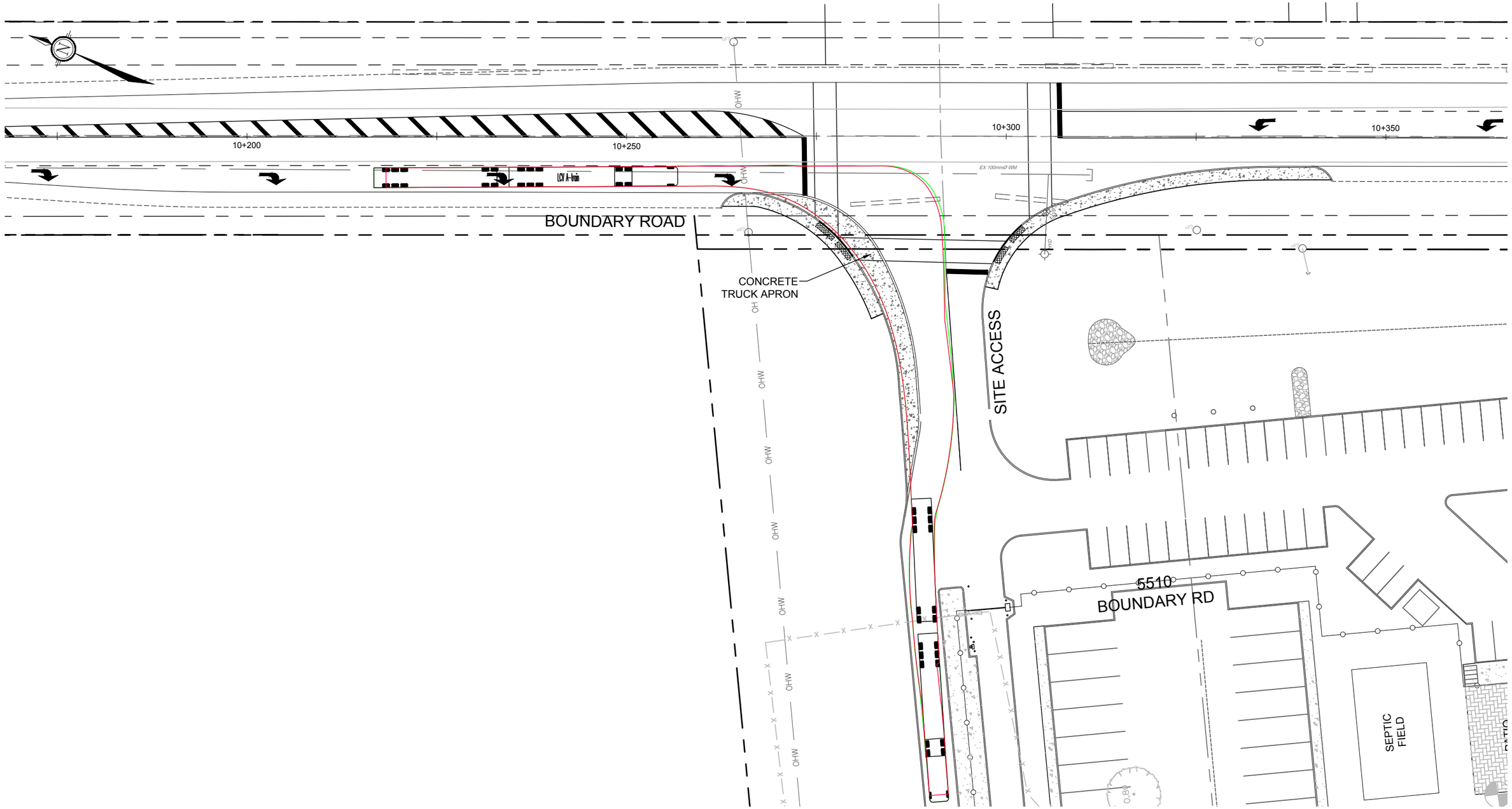
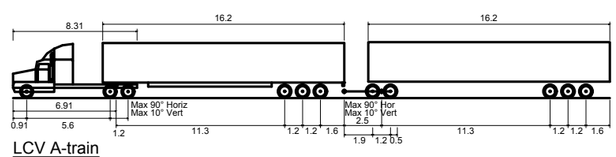
SHT11X17.DWG - 279mmX432mm





LCV A-train

Overall Length	40.010m
Overall Width	2.600m
Overall Body Height	3.755m
Min Body Ground Clearance	0.418m
Max Track Width	2.600m
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	40.00°

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5510 BOUNDARY ROAD

LCV TURNING MOVEMENT

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE SEP 2024 | JOB 118168 | FIGURE FIGURE 5

SHT11X17.DWG 279mm X 432mm

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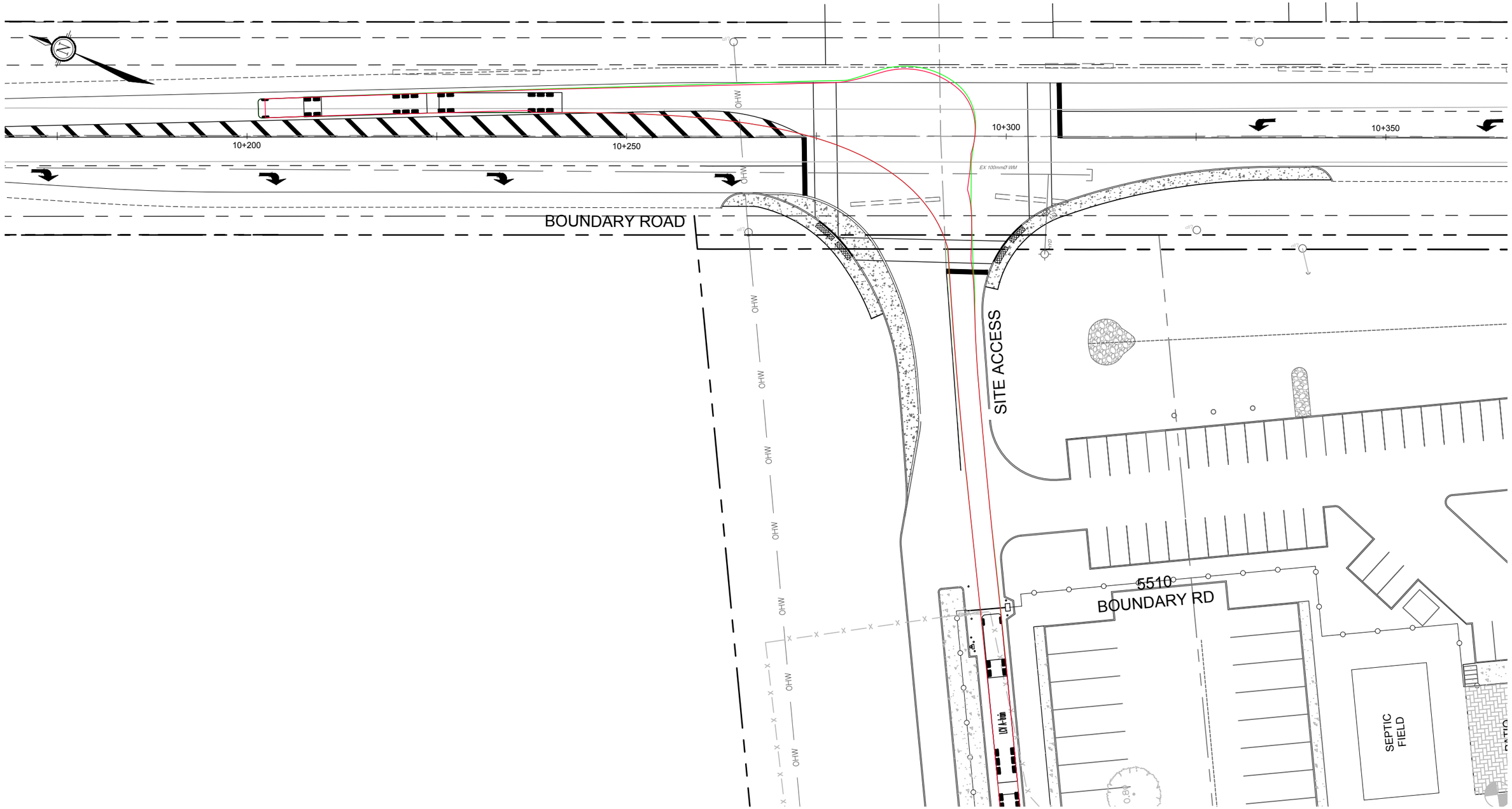

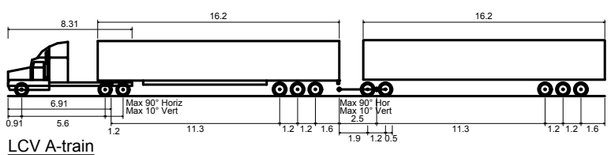

LCV A-train

Overall Length	40.010m
Overall Width	2.600m
Overall Body Height	3.755m
Min Body Ground Clearance	0.418m
Max Track Width	2.600m
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	40.00°

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5510 BOUNDARY ROAD

LCV TURNING MOVEMENT

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE SEP 2024 | JOB 118168 | FIGURE FIGURE 6

SHT11X17.DWG 279mmX432mm

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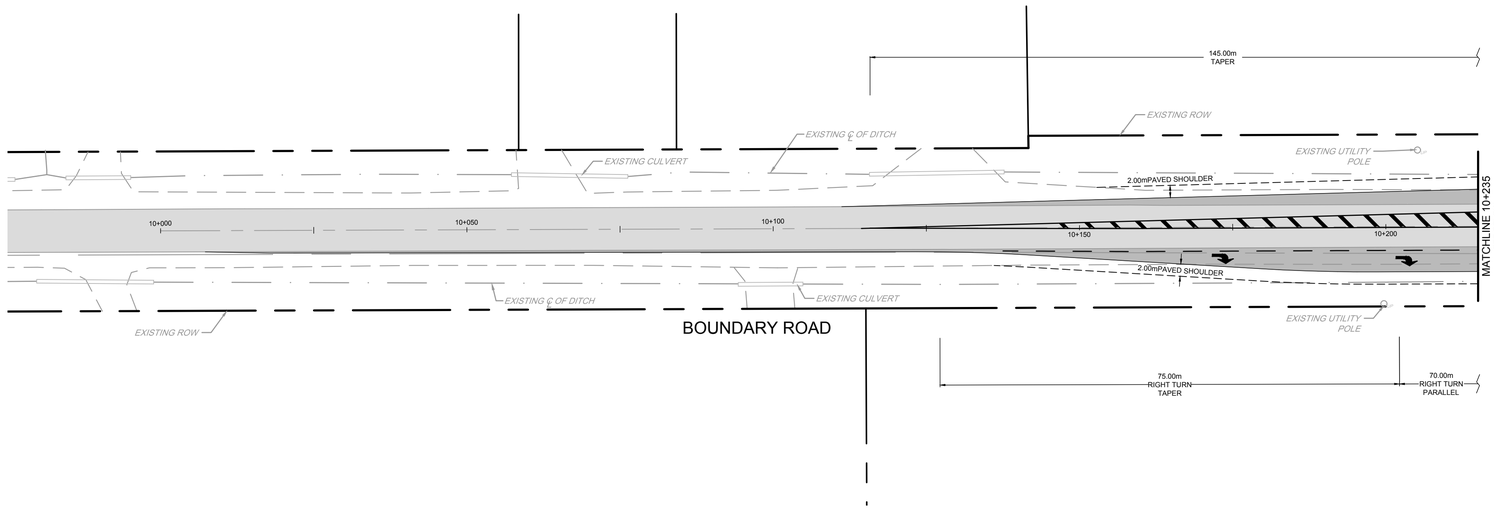
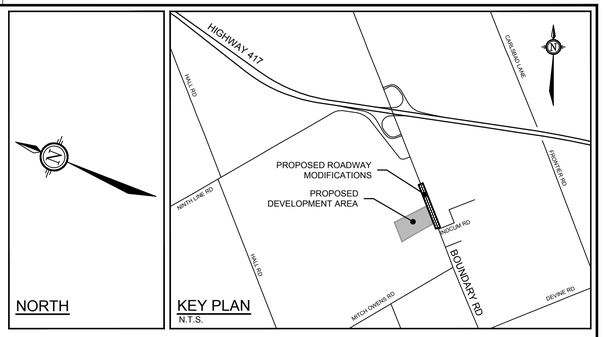
Attachment 4

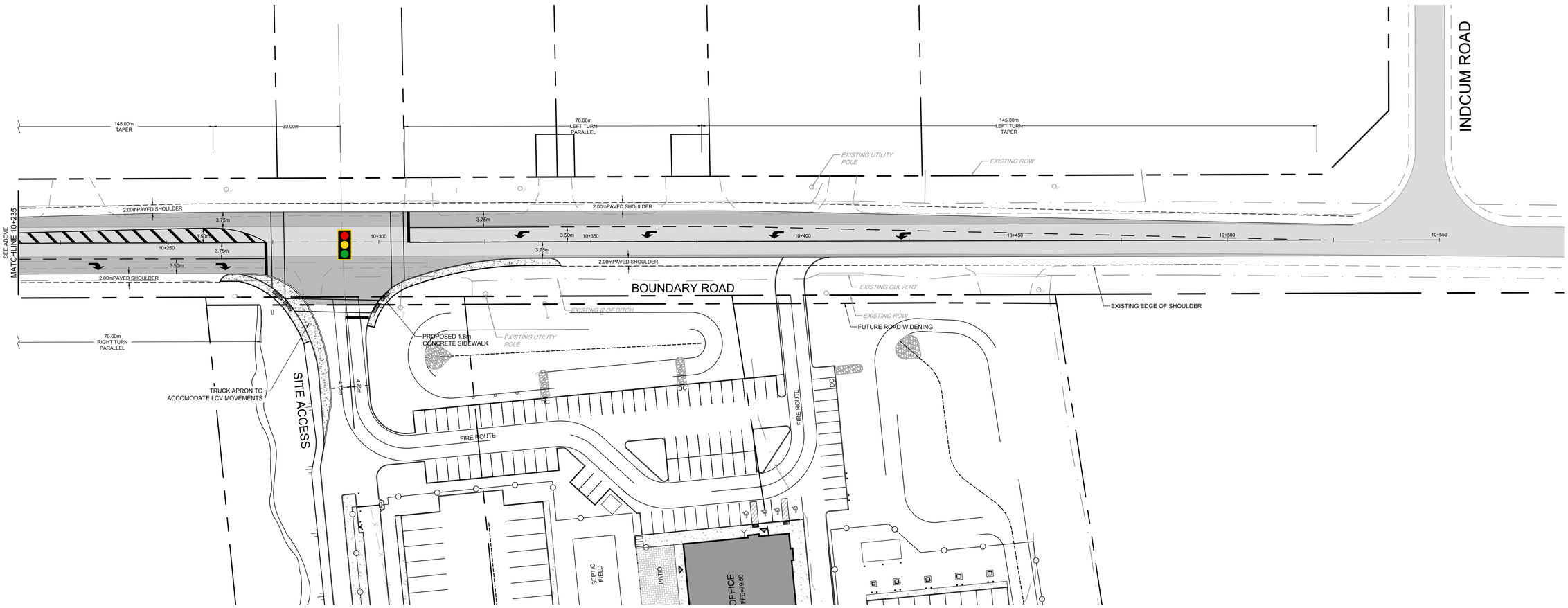
Functional Design





LEGEND

- EXISTING ASPHALT ROADWAY
- PROPOSED ASPHALT ROADWAY MODIFICATION



REFER TO _____ FOR ADDITIONAL NOTES

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

No.	REVISION	DATE	BY
3.	ISSUED FOR REVIEW	SEP 10/24	JLL
2.	ISSUED FOR REVIEW	JUN 28/24	JLL
1.	ISSUED FOR REVIEW	OCT 22/20	JLL

SCALE
1:500
1:500
0 5 10 15 20

DESIGN RCH
CHECKED JLL
DRAWN RCH
CHECKED JLS
APPROVED JLL

FOR REVIEW ONLY

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LOCATION
CITY of OTTAWA
5510 BOUNDARY ROAD

DRAWING NAME
FUNCTIONAL DESIGN

PROJECT No. 118168-0
REV # 3
DRAWING No. 118168-FD

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PLANA1.DWG - 841mmx594mm